

*Annual Drinking Water Quality Report for 2016*  
*Village of Goshen Water Supply System*  
*276 Main Street, Goshen, NY 10924*  
*Public Water Supply ID #3503528*

## **INTRODUCTION**

To comply with State and Federal regulations, the Village of Goshen 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. 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 **Cynthia Cecconello, Chief Operator** at (845) 294-5991. We want you to be informed about your drinking water. If you would like to attend any of our regularly scheduled Village Board Meetings, they are held at 7:00 PM every 2nd and 4th Monday each month at the Village Hall, 276 Main Street, Goshen, New York.

## **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 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 Departments and the FDA's regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Our normal water source is Prospect and Green Hill Reservoirs. Prospect Reservoir is located along Reservoir Road and Green Hill Reservoir is located off Conklingtown Road. Glenmere Lake is approved emergency source supply. The Crystal Run Wells were approved on November 26, 2014 as a permanent water source which is located in the Town of Wallkill.

The Reservoir Treatment Plant and Crystal Run Wells were operated in a normal mode. Water from Green Hill Reservoir was pumped into Prospect Reservoir during the summer and fall. From Prospect Reservoir, water flows by gravity to the Village's water filter plant. After filtration, disinfection, PH adjustment and corrosion control treatment, the treated water enters the distribution system, which includes four water storage tanks. Although the region experienced a drought, the Village's water supply was adequate. Water restrictions were not necessary.

## **FACTS AND FIGURES**

Our water system serves approximately 5,600 people in the Village of Goshen through 1,820 service connections. The total water produced from all sources in 2016 was 227 million gallons. The daily average of water treated from all sources was 621,201 gallons per day. Our highest single day of water consumption was 764,600 gallons. The amount of water delivered to customers was 208 million gallons. This leaves an unaccounted total of 19 million gallons. This water was used to flush mains, fight fires, leakage, filter backwash and unaccounted losses. In 2016, the average annual charge per 1,000 gallons was \$4.80.

## **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, total organic carbon, synthetic organic compounds, pesticide/PCB organics, herbicide organics, methylcarbanate pesticides, PCBs and radioactive 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 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 County of Orange Health Department at (845) 291-2331.

## Table of Detected Contaminants

| FILTER PLANT                                          |                  |                |                                            |                  |      |                                              |                                                                             |
|-------------------------------------------------------|------------------|----------------|--------------------------------------------|------------------|------|----------------------------------------------|-----------------------------------------------------------------------------|
| Contaminant                                           | Violation Yes/No | Date of Sample | Level Detected Contaminants                | Unit Measurement | MCLG | Regulator Limit (MCI, TT or AL)              | Likely Source of Contamination                                              |
| Turbidity <sup>1</sup>                                | No               | 08/22/16       | 0.18 (max)                                 | NTU              | N/A  | TT=<1.0 NTU                                  | Soil runoff                                                                 |
| Turbidity <sup>1</sup>                                | No               | 08/16          | 100%                                       | NTU              | N/A  | TT= 95% of samples ≤0.3 NTU                  | Soil runoff                                                                 |
| Copper <sup>2</sup>                                   | No               | 06/17/15       | 90 <sup>th</sup> = 0.12<br>Range 10 to 200 | ug/l             | 1.3  | 1.3 AL                                       | Corrosion of household plumbing                                             |
| Lead <sup>3</sup>                                     | No               | 06/17/15       | 90 <sup>th</sup> = 3<br>(ND to 2.6)        | ug/l             | 15   | 15 AL                                        | Corrosion of household plumbing                                             |
| Trihalomethanes <sup>4</sup><br>(Distribution System) | No               | Quarterly      | Ave = 48<br>Range 17 to 82                 | ug/l             | N/A  | 80 MCL                                       | By-products of drinking water-chlorination needed to kill harmful organisms |
| Sodium <sup>5</sup>                                   | No               | 01/06/16       | 45                                         | mg/l             | N/A  | See Note 5                                   | Naturally occurring                                                         |
| Sulfate                                               | No               | 01/06/16       | 13                                         | mg/l             | N/A  | 250                                          | Naturally occurring                                                         |
| Haloacetic Acids <sup>6</sup>                         | No               | Quarterly      | Ave = 37.5<br>Range 22 to 44               | ug/l             | N/A  | 60 MCL                                       | By-products of drinking water-chlorination needed to kill harmful organisms |
| Nickel                                                | No               | 01/06/16       | 0.001                                      | mg/l             | 100  | MCL = 100                                    | Erosion of natural deposits                                                 |
| Barium                                                | No               | 01/06/16       | 0.011                                      | mg/l             | 2    | MCL = 2                                      | Erosion of natural deposits                                                 |
| Nitrate                                               | No               | 01/06/16       | 0.25                                       | mg/l             | 10   | MCL = 10                                     | Erosion of natural deposits                                                 |
| CRYSTAL RUN WELL                                      |                  |                |                                            |                  |      |                                              |                                                                             |
| Contaminant                                           | Violation Yes/No | Date of Sample | Level Detected Contaminants                | Unit Measurement | MCLG | Regulator Limit (MCI, TT or AL)              |                                                                             |
| Barium                                                | No               | 01/11/16       | 0.21                                       | mg/l             | 2    | MCL = 2                                      | Erosion of natural deposits                                                 |
| Arsenic                                               | No               | 01/11/16       | 3.8                                        | ug/l             | N/A  | MCL = 10                                     | Erosion of natural deposits                                                 |
| Nickel                                                | No               | 01/11/16       | 3.3                                        | ug/l             | 100  | MCL = 100                                    | Erosion of natural deposits                                                 |
| Chromium                                              | No               | 01/11/16       | 8.7                                        | ug/l             | 100  | MCL = 100                                    | Erosion of natural deposits                                                 |
| Sulfate                                               | No               | 01/11/16       | 67                                         | mg/l             | N/A  | MCL = 250                                    | Naturally occurring                                                         |
| Sodium                                                | No               | 01/11/16       | 12                                         | mg/l             | N/A  | See note 5                                   | Naturally occurring                                                         |
| Coliform                                              | No               | 09/01/16       | 11 positive                                | N/A              | 0    | MCL = 2 positive Confirmed samples per month | Naturally Present in the Environment                                        |
| E-Coli                                                | Yes              | 12/19/16       | 3 positive                                 | NA               | 0    | MCL=4 positive                               | Naturally Present in the Environment                                        |
| Uranium                                               | No               | 01/11/16       | 0.933                                      | pCi/l            | 0    | MCL=20                                       | Erosion of natural deposits                                                 |

1 - Turbidity is a measure of the cloudiness of the water. We test it because it is a good indicator of the effectiveness of our filtration system. Effluent turbidity varied between 0.02 to 0.18 NTU. Our highest single turbidity measurement for the year occurred on 08/22/16 (0.18 NTU). State regulations require that turbidity must always be below 1 NTU. The regulations require that 95% of the turbidity samples collected have measurements below 0.3 NTU. In our case, 100% of the samples collected were below 0.3 NTU.

2 - The level presented represents the 90th percentile of the 25 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 90<sup>th</sup> percentile is equal to or greater than 90% of the copper values detected at your water system. In this case, 25 samples were collected at your water system and the copper did not exceed in any of the samples. The action level for copper was not exceeded at any of the sites tested.

3 - The level presented represents the 90<sup>th</sup> percentile of the 25 samples collected. The action level for lead was not exceeded at any of the 25 sites tested.

4 - This level represents the annual quarterly average calculated from data collected.

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.

### **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 (CLG):** 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.

**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).

**Picocuries per liter (pCi/L):** A measure of 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.

### **WHAT DOES THIS INFORMATION MEAN?**

We have learned through our testing that some contaminants have been detected; however, these contaminants were detected below New York State requirements.

### **IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?**

As part of our Disinfection By-Products rule we routinely monitor for removal of Total Organic Carbon (TOC) in our filters. The running annual average of test results ending in the month of June 2016 showed removal levels of TOC at 0.987 (a removal of 1.0 is required). Therefore, our supply was in violation.

### **INFORMATION ON TOC**

Total organic carbon has no health effects. However, total organic carbon provides a medium for the formation of disinfection byproducts. These byproducts include trihalomethanes and haloacetic acids. Drinking water containing these byproducts in excess of the maximum contaminant level may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increase risk of getting cancer.

### **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, filtration systems, pumping systems chemicals and water towers
- 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 15-20 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.
- Use your water meter to detect hidden leaks. Simply turn off all taps and water using appliances. Then check the meter after 15 minutes; if moved, you have a leak.

## **SWAP SUMMARY BY NYSDOH**

The NYSDOH has evaluated this PWS's susceptibility to contamination under the Source Water Assessment Program (SWAP), and their findings are summarized in the paragraph below. It is important to stress that these assessments were created using available information and only estimate the potential for source water contamination. Elevated susceptibility ratings do not mean that source water contamination has or will occur for this PWS. This PWS provides treatment and regular monitoring to ensure the water delivered to consumers meets all applicable standards.

The assessment area for this drinking water source from Greenhill Reservoir and Prospect Reservoir contains no discrete PCSs, and only the pastureland cover contaminant prevalence ratings is greater than low. This results in a high susceptibility rating for protozoa. However, the high mobility of microbial contaminants in reservoirs results in this drinking water intake also having medium-high susceptibility ratings for enteric bacteria and viruses. Furthermore, reservoirs are highly susceptible to water quality problems caused by phosphorus additions. A copy of the assessment, including a map of the assessment area, can be obtained by contacting us, as noted in the report.

## **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; our way of life and our children's future. Please call our office if you have questions.