

Annual Water Quality Report for 2016
Village of Fort Plain and Village of Nelliston
168 Canal Street, Fort Plain, NY 13339
(Public Water Supply Identification Number NY2800139 & NY2800141)

INTRODUCTION

To comply with State regulations, the Village of Fort Plain 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 drinking water met all State drinking water health standards. This report is a snapshot of last year's water quality. Included are details about where your water comes from, what it contains, and how it compares to New York State standards. Our constant goal is and always has been, to provide to you a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and to protect our water resources. If you have any questions concerning this report or concerning your drinking water please contact: *Mr. George Capece Jr., Chief Operator, Village of Fort Plain Water Department 168 Canal Street, Fort Plain, NY 13339; Telephone (518) 993-4271.* We want our valued customers to be informed about their drinking water. If you want to learn more, please attend any of our regularly scheduled meetings. They are held on the 3rd Tuesday of each month, 7:00 PM, at the Village Office Building, 168 Canal Street, Fort Plain, NY 13339; Telephone number (518) 993-4271; TDD# 1-800-662-1220.

WHERE DOES OUR WATER COME FROM?

The Village of Fort Plain operates a slow sand filtration plant. Our source of water is surface runoff and springs located in the Fulton County Town of Ephratah. This water is collected at the North Creek Dam and piped ten miles to Budnick Reservoir, which holds 14 million gallons. This is about a 20 day supply of water. From the reservoir the water flows by gravity feed to the water filtration plant located at Budnick Road in the Town of Palatine. The water is disinfected with chlorine to protect against contamination from harmful bacteria and other organisms; then filtered through sand to remove any small particles. After treatment, water is pumped to a new Wiles Park Standpipe with a 175,000 gallon capacity and Garfield Street Tank with a 287,000 gallon capacity. This allows us to store water and to provide adequate fire protection. We also have two wells located on Lincoln Street. Groundwater or well water is stored below the surface of the earth in deep, porous rocks called "aquifers." Groundwater is purified naturally as it filters through layers of soil, clay, rock and sand. This process, known as "percolation" takes years to complete. As a result, groundwater requires less treatment than surface water. During the recent summer draught we utilized the wells. The sample data presented in the table on page 2 shows excellent quality water. The two wells have a capacity of 500,000 gallons per day. We installed a Reverse Osmosis System (R/O) to treat our well water. Operationally, an R/O system functions as follows. Raw water from the wells is fed to a filter cartridge made up of a spirally wound semi permeable membrane. Some water migrates through the membrane and is collected. This is called the permeate water and is purer than the well water. The impurities which don't pass through the membrane is called the reject water and is discharged as wastewater. We have installed 2 carbon filters to remove organic compounds to help with THM & HAA5 reduction. These are on the post filtration side of our slow sand filtration plant. We are still in the experimental stages of determining at what proportion our filtered water is mixed with the carbon filtered water to achieve the desired disinfection byproduct levels and maximize the life and thus minimize the cost of the carbon filter replacement.

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 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

The Village of Fort Plain provides water through 780 service connections to a population of approximately 2,250 people. Our average daily demand is 229,000 gallons of water. Our highest single day was 305,000 gallons. The total water produced in 2016 was 9,690,000 gallons from the Lincoln Wells and 98,062,000 gallons from the surface supply.

ARE THERE CONTAMINANTS IN OUR DRINKING WATER?

In accordance with State regulations, the Village of Fort Plain routinely monitors your drinking water for numerous contaminants. We test your drinking water for inorganic contaminants, radiological contaminants, lead and copper, nitrate, volatile organic contaminants, and synthetic organic contaminants. In addition, we test 4 samples for coliform bacteria each month. The tables presented on pages 2 and 4 depict which contaminants were detected in your drinking water. The state allows us to monitor for certain contaminants less than once per year because the concentrations of

these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, 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 pose 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 New York State Department of Health, Herkimer District Office at (315) 866-6879.

VILLAGE OF FORT PLAIN LINCOLN STREET WELLS TABLE OF DETECTED CONTAMINANTS						
Public Water Supply Identification Number NY2800139						
Contaminant	Violation Y/N	Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Inorganic Contaminants (sample data 3/24/15 unless otherwise noted)						
Chloride	N	15.7	ppm	N/A	250	Naturally occurring or indicative of road salt contamination.
Nitrate (as Nitrogen) (sample from 2/3/16)	N	1.74	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
pH ¹	N	5.69	units		6.5-8.5	
Sodium ²	N	16	ppm	N/A	N/A	Geology; Road Salt
Sulfate	N	0.47	ppm	N/A	250	Geology
Zinc	N	14	ppb	5000	5000	Naturally occurring
NOTES-						
1. This represents the pH of the Reverse Osmosis effluent; after blending with the Budnick Road surface supply water the pH is raised to a value within acceptable limits.						
2. Water containing more than 20 mg/l should not be consumed by persons on severely restricted sodium diets.						

VILLAGE OF FORT PLAIN & VILLAGE OF NELLISTON TABLE OF DETECTED CONTAMINANTS						
Public Water Supply Identification Number NY2800139 & NY2800141						
Contaminant	Violation Y/N	Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Microbiological Contaminants						
Turbidity ¹ (sample from 3/4/16)	N	0.20 ¹	NTU		TT=5 NTU	Soil runoff
		100%			TT= % samples < 1.0	
Inorganic Contaminants (Sample data from 2/3/16 unless otherwise noted)						
Barium	N	7	ppb	2000	2000	Naturally occurring
Chloride (sample from 3/25/15)	N	13.8	ppm	N/A	250	Naturally occurring or indicative of road salt contamination.
Copper (sample data from 8/23/16-8/24/16)	Y	0.85 ²	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Range of copper concentration		0.05-1.64				
Iron (sample from 3/25/15)	N	19	ppb	N/A	300	Naturally occurring
Lead (sample data from 8/23/16-8/24/16)	N	8 ³	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Range of lead concentration		ND-8				
Nitrate as Nitrogen	N	0.266	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
pH (sample from 3/25/15)	N	7.6	units		6.5-8.5	
Sodium ⁴ (sample from 3/25/15)	N	9.8	ppm	N/A	N/A	Naturally occurring; Road salt; Water softeners; Animal waste.
Sulfate (sample from 3/25/15)	N	5.1	ppm	N/A	250	Geology
Stage 2 Disinfection Byproducts (Quarterly samples from 2/17/16, 5/17/16, 8/15/16 & 11/14/16)						
Haloacetic Acids (HAA5 Average) ⁵	N	7.2	ppb	N/A	60	By-product of drinking water disinfection
Range of Values for HAA5		2.8-18				
TTHM [Total Trihalomethanes] (Average) ⁵	N	36.7	ppb	0	80	By-product of drinking water chlorination
Range of values for TTHM		24.4-48.6				
Nelliston Stage 2 Disinfection Byproducts (Quarterly samples from 2/17/16, 5/17/16, 8/15/16 & 11/14/16)						
Haloacetic Acids (HAA5) (Average) ⁶	N	51.3	ppb	N/A	60	By-product of drinking water chlorination
Range of Values for HAA5		29-47				
TTHM Total [Trihalomethanes] (Average) ⁶	N	71.8	ppb	0	80	By-product of drinking water chlorination
Range of Values for TTHM		32-70.7				

Chlorine (average) Range of chlorine residuals (based on daily testing)	N	1.4 0.6-2.3	ppm	MRDLG N/A	MRDL 4	Used in the treatment and disinfection of drinking water
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FOOTNOTES-

- Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. Level detected represents the highest level detected. The regulations require 95% of the turbidity sample collected have measurements below 1.0 NTU. We met the regulation 100% of the time. Distribution system turbidity performed 5 times a week with 0.11 NTU being the highest level detected and 0.07 NTU being the average level detected.
- The level presented represents the 90th percentile of 10 test sites. The action level for copper was exceeded at 1 of the 10 sites tested.
- The level presented represents the 90th percentile of 10 test sites. The action level for lead was not exceeded at any of the 10 sites tested.
- Water containing more than 20 mg/l should not be consumed by persons on severely restricted sodium diets.
- The average is based on a Locational Running Annual Average (LRAA). The average shown is the highest LRAA for 2016. The highest LRAAs for the THM's was in the 1st quarter of 2016 while the highest HAA5 LRAA was in the 3rd quarter of 2016.
- The average is based on a Locational Running Annual Average (LRAA). The average shown is the highest LRAA for 2016. The highest LRAAs for the TTHM was in the 3rd quarter of 2016 while the highest HAA5 LRAA was in the 1st quarter of 2016

Non-Detects (ND) - laboratory analysis indicates that the constituent is not present.
Parts per million (ppm) or Milligrams per liter (mg/l) - one part per million corresponds to one minute in two years or a single penny in \$10,000.
Parts per billion (ppb) or Micrograms per liter - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.
Picocuries per liter (pCi/L) - picocuries per liter is a measure of the radioactivity in water.
Nephelometric Turbidity Unit (NTU) - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
90th Percentile Value - The values reported for lead and copper represent the 90th percentile. 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 and copper values detected at your water system
Action Level - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Treatment Technique (TT) - A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.
Maximum Contaminant Level - The "Maximum Allowed" (MCL) is the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
Maximum Contaminant Level Goal - The "Goal" (MCLG) is 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.
Locational Running Annual Average (LRAA): The LRAA is calculated by taking the average of the four most recent samples collected at each individual site
N/A-not applicable

WHAT DOES THIS INFORMATION MEAN?

As you can see by the table on pages 2 and 3, our system had no violations. We have learned through our monitoring and testing that some constituents have been detected; however, these compounds were detected below New York State requirements. MCL's are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?

During 2016, our system was in compliance with applicable State drinking water operating and reporting requirements. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards.

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 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 microbiological pathogens are available from the Safe Drinking Water Hotline (800-426-4791).

INFORMATION ON LEAD

If present, elevated levels of 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 Fort Plain 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 or at <http://www.epa.gov/safewater/lead>

WHAT IS THE SOURCE WATER ASSESSMENT PROGRAM (SWAP)?

To emphasize the protection of surface and ground water sources used for public drinking water, Congress amended the Safe Drinking Water Act (SDWA) in 1996. The amendments require that New York State Department of Health's Bureau of Public Water Supply Protection is responsible for ensuring that source water assessments are completed for all of New York's public water systems.

A source water assessment provides information on the potential contaminant threats to public drinking water sources:

- ◆ each source water assessment will: determine where water used for public drinking water comes from (delineate the source areas)
- ◆ Inventory potential sources of contamination that may impact public drinking water sources
- ◆ Assess the likelihood of a source water area becoming potential contaminated

A SWAP summary for our water supply is at the end of this report

WATER CONSERVATION TIPS

The Village of Fort Plain encourages water conservation. There are a lot of things you can do to conserve water in your own home. Conservation tips include:

- ◆ *Use water saving showerheads*
- ◆ *Repair all leaks in your plumbing system*
- ◆ *Water your lawn sparingly in the early morning or in the late evening*
- ◆ *Do only full loads of wash and dishes*
- ◆ *Wash your car with a bucket and hose with a nozzle*
- ◆ *Don't cut the lawn too short; longer grass saves water*

CLOSING

Thank you for allowing us to continue providing your family with clean, quality water this year. In order to maintain a safe and dependable water supply we sometimes need to make improvements that will benefit our customers. 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.

**Fort Plain Village Water Works
PWSID NY2800139
SWAP Summary**

The New York State Department of Health has evaluated this public water supply's (PWS) susceptibility to contamination under the Source Water Assessment Program (SWAP), and their findings are summarized in the paragraph(s) 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.

Our water is derived from two reservoirs. The assessment for the Budnick Reservoir source contains no discrete potential contamination sources, but agricultural land in the watershed for this source poses risks to drinking water quality. The greatest risks are associated with microbial contaminants, followed by pesticides, phosphorus, and disinfection-byproduct (DBP) precursors. The assessment for the North Creek Reservoir found potential risks to drinking water quality. The amount of pastureland in the assessment area results in high susceptibility for protozoa. While permitted discharges do not represent an important risk to water quality, there are elevated contamination risks associated with other discrete sources of contamination, including a landfill. It should be noted that reservoirs in general are highly sensitive to phosphorus and microbial contaminants.

Please note that our water is filtered and disinfected to ensure that the finished water delivered into your home meets New York State's drinking water standards for microbial contamination.

A copy of the assessment, including a map of the assessment area, can be obtained by contacting us, as previously noted.

The Village of Fort Plain is an equal opportunity provider and employer. Discrimination is prohibited by Federal Law. Complaints of discrimination may be filed with USDA, Director, Office of Civil Rights Room 326-W, Whitten Building, 14th and Independence Ave., SW, Washington, DC 20250-9410.