ANNUAL DRINKING WATER QUALITY REPORT - 2018

FOR THE **VILLAGE OF UNION SPRINGS**

PREPARED AND WRITTEN BY WATER OPERATOR ROBERT J. KNEASKERN

Public Water System ID No.: 0501725
Number of Water Connections: 445

We are very pleased to provide you with the Annual Drinking Water Report. This is a requirement by the State of New York to inform you about our water supply.

This report will keep you informed about the excellent water and services we delivered to you over the past year and many to come. This report will be mailed to you each year on or before May 31st, starting in 2001. The information will cover any violations from Jan. 1st – Dec. 31st of the previous year. This report will inform you on upgrades on the system, location of system, phone numbers, personnel, testing, certification, and training. You may call us anytime with questions that you may have. Here is a list of current phone numbers and personnel to contact for information on this report or the water system. We encourage you to call anytime.

	Home	Work
Village Office		315-889-7341
Water Commissioner – Bill Boyd, Jr.	315-889-5692	
Water Operator – Robert Kneaskern	315- 889-5945	315-889-5680
Cayuga County Health Department		315-253-1405

You are welcome to come to Village Board meetings at anytime for information. The meetings are held in the Village Meeting Room at 26 Chapel Street on the lake on the third Tuesday of every month, unless posted otherwise.

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 supply is located on Route 90 in Union Springs across from the Union Springs High School. We have two drilled wells with a very good supply of water and two well houses, labeled North Well House and South Well House. All signals are sent from the water tanks to the pump house through the telephone lines.

We pump with 30 HP Goulds submersible pumps. In each pumping cycle, we alternate wells and pumps. Each cycle is recorded on a chart as well as the tank levels. We calculate a total of gallons pumped daily. The water then goes to the air stripper tower for the removal of the volatile organic contaminants (VOC's). Next it is chlorinated and the chlorine is checked once each day. The system is equipped with an alarm system. If there is any failure in the system, the alarm will dial out until someone answers the call. We have about eight miles of water mains in the Village. There are seven pressure reducing pits in the Village, 445 metered water customers, and two water storage tanks. The Center Street water tank has a 200,000 gallon capacity, and the Grove Street water tank has a 189,000 gallon capacity. Each tank has a control pit for the signal equipment. In recent years, the Village has expanded the water system to provide water to a portion of the Town of Springport. Overall you have an investment of $3,500,000 in the water system.

The NYS DOH has completed a source water assessment for our system, based on available information. Possible and actual threats to this drinking water source were evaluated. The state 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 for contamination of the source water. It does not mean that the water delivered to consumers is or will become

contaminated. See section "Are there contaminants in our drinking water?" for a list of the contaminants that have been detected. The source water assessments provide resource managers with additional information for protecting source waters into the future.

As mentioned before, our water is derived from two drilled wells. The source water assessment has rated these wells as having a high susceptibility to microbials, industrial organics, and petroleum products. These ratings are due primarily to the close proximity of gas wells and animal pastures in relation to the wells as well as the documentation of the presence of halogenated solvents and nitrates in the ground water. In addition, the wells draw from an unconfined aquifer with high hydraulic conductivity. Please note that, while the source water assessment rates our well as being susceptible to microbials, our water is disinfected to ensure that the finished water delivered into your home meets the New York State drinking water standards for microbial contamination.

County and state health department will use this information to direct future source water protection activities. These may include water quality monitoring, resource management, planning, and education programs. A copy of the assessment is available for review by calling the Cayuga County Health Department at 253-1405.

Are there contaminants in our drinking water?

The Village of Union Springs routinely monitors for contaminants in your drinking water according to Federal and State laws. We test the drinking water for 27 inorganic compounds, nitrate, nitrite, 60 volatile organic compounds, total trihalo methanes, and 52 synthetic organic compounds. In addition we test the water for coliform bacteria once a month and chlorine once a day. The table presented below depicts which compounds 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 do not change frequently. Therefore some of the data, though representative of the water quality, is more than one year old. See Chart A attached.

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 the 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 Cayuga County Health Department at 315-253-1405.

Definitions we use:

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 (MCL) – The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to MCLGs as feasible.

Maximum Contaminant Level Goal (MCLG) – The goal is the level of a contaminant in drinking water below which there is no known or expected health risk. MCLGs allow for a margin of safety.

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).

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 contaminants.

What Action Level means for Lead & Copper:

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, 0.28 mg/L. The action level for copper was not exceeded at any of the sites tested.
2. The level presented represents the 90th percentile of the samples collected. The action level for the lead was exceeded at 1 of the 10 sites tested.

The attached Chart A on Test Results will give you an idea of the numbers and definitions used in water testing. In the past, the Village of Union Springs has had violations in our V.O.C.'s. As the testing is done, the amounts of Cis-1, 2-Dichloroethene, and Trichloroethene vary. We have highs and lows. This is a by-product of manufacturing plants and it is used as a cleaning fluid or degreaser. Some people who drink water containing Cis-1, 2-Dichloroethene in excess of the MCL over many years could experience problems with their liver. Some people who drink water containing Trichloroethene in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer. Over the past few years we have tested many times. At the present time, we do four tests a year.

Nitrate:

As you can see by the table, our system had no violations, but we have learned through our testing that some contaminants have been detected; however, these contaminants were detected below New York State requirements. Although nitrate was detected below the MCL, it was detected at 5.0 which is greater than one-half of the MCL. Therefore, we are required to present the following information on nitrate in drinking water:

"Nitrate in drinking water at levels above 10 mg/l is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from your health care provider."

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 Union Springs 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.gove/safewater/lead.

During 2018 our system was in compliance with applicable State drinking water operating, monitoring, and reporting requirements.

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).

The Village of Union Springs added an air stripper tower to its water system in 2001. The job that the air stripper does will reflect in our contaminant levels listed in our Annual Drinking Water Quality Report. Since all water has to pass through the air stripper, those levels will be referred to as Raw Water and Finished Water for either well head. At the present time, the air stripper is doing a great job; hopefully, this will put many minds to rest. We will continue to sample quality and list the results in our Annual Drinking Water Quality Report. We would like to thank you for allowing us to continue to provide you with clean, quality water this year. 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.

CHART A North Well (N.W.) South Well (S.W.)							
Violation Test Results							
Contaminants	Y/N Violation	Date of Sample	Level Detected Max. Range	Unit Measure-ment	MCLG	MCL	Likely Source of Contamination
Inorganic Contaminants							
Barium	No	9-18-18	0.091	mg/L	2.0	2.0	Discharge of drilling waste, and metal refineries; erosion of natural deposits
Copper	No	8-8-18	0.28[1] 0.049-0.29	mg/L	1.3	AL= 1.3	Corrosion of household plumbing system; leaching from wood preservation; erosion of natural deposits
Fluoride	No	9-18-18	0.20	mg/L	N/A	2.2	Erosion of natural deposits; discharge from fertilizer & aluminum factories
Lead	No	8-8-18	3.1[2] <1-25	ug/L	0	AL= 15	Corrosion of household plumbing; erosion of natural deposits
Nitrate	No	2018	N.W. 2.82-4.66 Avg. 3.68	mg/L	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nitrate	No	2018	S.W. 2.74-4.63 Avg.3.56	mg/L	10	10	
Volatile Organic Contaminants RAW (before stripper) FINISHED (after stripper)							
			RAW Range				
Cis-1, 2 Dichloroethene	No	Jan.–Dec. 2018	3.20-5.30 Avg. 4.13 FINISHED Range ND Avg. ND	ug/L	N/A	5.0	Discharge from industrial chemical factories
Trichloroethene	No		RAW Range ND -0.64 Avg.0.16 FINISHED Range ND Avg. ND		0		Discharge from metal degreasing sites and other factories
Disinfection Byproducts							
Haloacetic Acid	No	8-15-18	29.10 & 13.40	ug/l	N/A	60	By-product of drinking water disinfection needed to kill harmful organisms
Total Trihalomethanes	No	8-15-18	11.66 & 28.10	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

Appendix D – Certification Form

CWS name: Village of Union Springs PWS I.D. No.: 0501725

The community water system named above hereby confirms that its Annual Drinking Water Quality Report has been distributed to customers (and appropriate notices of availability have been given). Further, the system certifies that the information contained in the report is correct and consistent with the compliance monitoring data previously submitted to the primary agency.

Certified by: Robert J. Kneaskern Title: Water Operator & Superintendent of Public Works
License No. NY0032030 Expiration Date: 5/31/19
Phone: (315)889-5680

CCR was distributed by mail on 5/31/19. "Good faith" efforts were used to reach non-bill paying customers on 5/31/19. Those efforts included the following methods as recommended by the primary agency: delivery of multiple copies to single bill addresses serving several persons such as: apartments, businesses, and large private employers.

Water District #1

Table of Detected Contaminants							
Contaminant	Violation Yes/No	Date of Sample	Level Detected (Avg/Max) (Range)	Unit Measure-ment	MCLG	Regulatory Limit (MCL, TT or AL)	Likely Source of Contamination
Copper	No	8/7/18-8/8/18	0.345 [1] 0.021-0.35	mg/L	1.3	AL=1.3	Corrosion of household plumbing systems; Erosion of natural deposits; leaching from wood preservatives.
Lead	No	8/7/18-8/8/18	<1 [2] <1-<1	ug/L	0	AL=15	Corrosion of household plumbing systems; Erosion of natural deposits.
Total Trihalomethanes	No	8/8/18	Avg= 26.075 Range 20-33.6	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.
Haloacetic Acids	No	8/8/18	Avg=6.425 Range 3.2-9.7	ug/L	N/A	60	By-product of drinking water disinfection needed to kill harmful organisms.

Notes:

1 – The level presented represents the 90th percentile of the 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, 10 samples were collected at your water system and the 90th percentile value was the second highest value (0.345 mg/L). The action level for copper was not exceeded at any of the sites tested.

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