

Annual Drinking Water Quality Report

For the Year 2019

Village of Sharon Springs

Post Office Box 217

Sharon Springs, NY 13459

Public Water Supply ID# NY4700099

This report is designed to inform you about the quality water and services we deliver to you every day. Our constant goal is to provide you with 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 protect our water resources. We are committed to ensuring the quality of your water. Our water source is a large reservoir and a smaller reservoir on Mill Pond Road off Engleville Road. The water flows by gravity to the Filtration plant on France Street (State Route 10). The water is filtered in the plant to remove as much matter and harmful organisms in the water as possible. After filtration the water is disinfected by adding chlorine. A corrosion inhibitor is added to reduce lead and copper leaching into the water from lead soldered copper plumbing in your house and possibly any lead water service lines that remain. A deep well can be used in case of an emergency. When the deep well is used the tap water quality will change because the well has different water chemistry than the reservoir water. At first there will be a difference in taste and then the coatings in the water piping will break down and cause brown and black water. The coatings break down because the corrosion control treatment will not work with the well. Please call the Village if you notice these changes. Flushing may help but it will take a long time to completely remove the dissolved coating. The well is higher in hardness than the reservoirs. The hardness could cause milk and cream to curdle, detergents do not make suds, and cause scale on fixtures. In past years we have conducted tests for over 140 contaminants. We detected 14 of these contaminants from the reservoirs, filters and distribution on 2019. We detected 20 contaminants from the well. Our water system serves approximately 558 people year round through about 280 connections. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled meetings. They are held on the third Thursday of each month at the Village Hall at 129 Main Street Suite 2 starting at 7:00PM. T.D.D. 1-800-662-1220. "This is an equal Opportunity Program, 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 Avenue, SW, Washington, DC 20250-9410.

Water meters have been installed at services to more accurately track water usage. We urge you to repair leaking fixtures in your home/business as the cost will be based on usage. A small leak can cost a lot of money every three months. The minimum water service charge is \$55 per quarter for up to 6000 gallons. Rate for additional water usage is \$9.34 per 1000 gallons. Our plant capacity is approximately 250,000 per day with reservoir safe yield of 205,000 per day.

Total water production in 2019 at the plant was approximately 46,717,000 gallons, an average of 127,992 gallons per day.

Total water production in 2018 at the plant was approximately 42,879,800 gallons, an average of 117,478 gallons per day.

Total water production in 2017 at the plant was approximately 37,246,900 gallons, an average of 102,046 gallons per day.

Total water production in 2016 at the plant was approximately 35,574,100 gallons, an average of 97,197 gallons per day.

Total water production in 2015 at the plant was approximately 47,236,500 gallons, an average of 129,415 gallons per day.

Total water production in 2014 at the plant was approximately 61,943,487 gallons, an average of 169,708 gallons per day.

ARE THERE CONTAMINANTS IN OUR DRINKING WATER?

As the State regulations require, we routinely test your drinking water for numerous contaminants. The Village of Sharon Springs routinely monitors for constituents in your drinking water according to Federal and State laws. This table includes the results of our monitoring up to December 31, 2019. These contaminants are tested for: total coliform, turbidity, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds, total trihalomethanes, haloacetic acids and synthetic organic compounds (herbicides, pesticides and industrial waste compounds) and radionuclides. 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. We must collect at least one sample for total coliform bacteria each month. The filtration plant has continuous monitoring equipment that measures chlorine residual, and filtered water turbidity.

It should be noted that all drinking water, including bottled drinking 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. In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health. 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 Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791 or the Schoharie County Health Department at 518- 295-8382. The NYS DOH website <https://www.health.ny.gov/environmental/water/drinking/>

DO I NEED TO TAKE SPECIAL PRECAUTIONS?

Although our drinking water met most 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).

Source Water Assessment Summary

The NYS DOH has completed a source water assessment for this 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 to the reservoirs. 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 reservoirs. Agricultural land cover has a high potential impact to the reservoirs because of microbial contaminants, phosphorus, herbicides and pesticides.

The source water assessment has rated the reservoirs as having a high susceptibility to phosphorus, enteric bacteria and enteric viruses, and very high susceptibility to protozoa, because of agricultural land cover, beaver activity in the watershed, and a high natural sensitivity to these contaminants.

The source water assessment has rated the reservoirs as having a medium susceptibility to pesticides, herbicides, disinfection by-product precursors (natural organic matter), because of a medium natural sensitivity to them, and the agricultural land cover in the watershed.

The source water assessment has rated the reservoirs as having a low natural sensitivity to halogenated solvents, petroleum products and other industrial organics, metals because of potential for contamination. The source water assessment has rated the reservoirs as having a low natural sensitivity to nitrates, turbidity, sediments and cations/anions (salts, sulfate) because of low contaminant prevalence.

While the source water assessment rates our reservoirs as having a very high land use susceptibility rating to protozoa, high for enteric bacteria and enteric viruses, because of a high and medium contaminant prevalence rating. Please note that our water is filtered and disinfected to assure that the finished water delivered into your home and business meets New York State's drinking water standards for microbial contamination.

While nitrates (and other inorganic contaminants) were detected in our water, 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 from natural sources. The presence of contaminants does not necessarily indicate that the water poses a health risk. Normal background levels for nitrates in ground water wells in Schoharie County range between not detected to approximately 0.3 milligrams per liter. Surface water sources can vary seasonally but are rarely above 2 milligrams per liter in Schoharie County.

Organic contaminants (which are the disinfection by-products of total trihalomethanes and haloacetic acids) were detected in our water in the last sample analyzed for them. The reservoirs have a medium natural sensitivity to natural organic matter which is the precursor to the formation of the disinfection by-products. The presence of agricultural land cover in the watershed has an impact on the natural organic matter content of the water. The levels of disinfection by-product precursors have a medium contaminant prevalence rating, and accordingly, the sources are rated medium susceptibility to the natural organic matter.

The reservoirs are protected from contamination by watershed rules and regulations found in the New York State Sanitary Code, sewage treatment regulations of the Schoharie County Sanitary Code, and land use review by the Joint Planning Board and Zoning regulations. The Superintendent of Public Works routinely inspects the watershed.

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

In the table below you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we have provided the following definitions as required:

Non-Detects (ND) - laboratory analysis indicates that the constituent is not present.

Milligrams per liter (mg/l) - one part per million corresponds to one minute in two years or a single penny in \$10,000. Also known as *Parts per million (ppm)*.

Micrograms per liter (ug/l) - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000. Also known as *Parts per billion (ppb)*.

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.

Action Level - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow; 90% or more of samples must be less than or equal to the action level for lead and copper.

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, based upon a running annual average of the samples. 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.

N/A – means “not applicable” because there is no maximum contaminant level goal set, no maximum contaminant level set, the contaminant is a treatment technique, the chemical is an additive, or there are no units assigned to the contaminant.

Picocuries per liter (pCi/L): A measure of the radioactivity in water.

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.

The state allows us to monitor for some chemicals for periods longer than one year. Some of the data presented is representative but is older than one year. The dates are given.

Table of Detected Contaminants

Contaminant and date sampled	Violation Y/N	Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Chloride Sampled May 4, 2005	No	7	mg/l	N/A	250	Naturally occurring
Free Chlorine residual Sampled daily (continuous reading)	No	2.2 to 3.3 see below	mg/l	MRDL Goal < 4	4 MRDL	By-product of drinking water chlorination
Turbidity of filtered water Continuously monitored The limit for distribution turbidity is 5 NTU, no values reported exceeded. Monitored 5 days per week	No	All less than 0.3 NTU Range 0.02 to 0.24	NTU	N/A	0.3 in 95 % of samples every 4 hours, and 1.0 in readings taken 15 minutes apart	Turbidity is a measure of the cloudiness of the water. Turbidity has no health effects but can adversely affect good disinfection by shielding organisms from chlorine. We test it because it is a good indicator of the effectiveness of our filtration system. State regulations require that turbidity must always be below 5 NTU. Most turbidity in the raw water comes from soil run off.
Copper Sampled 08/09/2017	No	0.249	mg/l	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead Sampled 08/09/2017	No	Highest level 40.1	ug/l	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Sulfate Sampled on May 4, 2005	No	6	mg/l	N/A	250	Naturally occurring.
Halo Acetic Acids (HAA5) 03/14/2018 05/02/2018 08/08/2018 11/14/2018 02/13/2019 05/08/2019 08/14/2019 11/13/2019	No See below	19.4 22.1 67.1 51.9 19.5 33.8 72.6 25.4	ug/l	60	60	By-product of drinking water chlorination. Halo acetic acids are formed when the source water contains large amounts of organic matter.
TTHM 03/14/2018 05/02/2018 08/08/2018 11/14/2018 02/13/2019 05/08/2019 08/14/2019 11/13/2019	No See below	36.5 27 68.5 39.5 15.4 27.4 125.8 34.9	ug/l	80	80	By-product of drinking water chlorination. Chlorination is needed to kill harmful organisms. TTHMs are formed when the source water contains large amounts of organic matter.

Iron Sampled on raw water prior to filter 03/23/2005 and distribution system 05/04/2005	No See note below	Not detected	ug/l	300	N/A	Naturally occurring.
Manganese Sampled on March 23, 2005 raw water prior to filter	No see note below	140	ug/l	300	N/A	Naturally occurring, and is also added as a treatment for removal of naturally occurring organic matter in the water.
Sodium 03/30/2017 05/04/2005 See Health Effects below	No	12.0 3.6	mg/l	N/A	N/A	Naturally occurring. Added during disinfection process. Added during filtration as sodium bicarbonate and sodium permanganate to aid filtration.
Zinc 05/04/2005	No	Not detected	mg/l	N/A	5	Naturally occurring.
Barium 02/12/2010 2015 12/05/2018	No	0.05 ND 0.024	mg/l	2	2	Erosion of natural deposits.
Nitrate 05/08/2019 03/14/2018 03/30/2017 11/16/2016 11/25/2015 12/30/2013 12/12/2012	No	0.024 0.047 0.019 0.021 ND ND 0.051	mg/l	10	10	Naturally occurring. Runoff from fertilizer use; leaching from septic tanks, sewage.
Dalapon 08/14/2017 annual sample 09/13/2018 annual sample 07/10/2019 annual sample	No	1.36 2.77 ND	ug/l	N/A	50	Runoff from herbicide used on rights of way
Auxiliary Well Source						
Chloride Sampled 07/19/2011	No	110	mg/l	N/A	250	Naturally occurring or Indicative of Road salt contamination
Sulfate Sampled 2011	Yes	388	mg/l	N/A	250	Naturally occurring. See explanation and notice below
Sodium 05/08/2019 03/14/2018 03/30/2017 11/16/2016 11/25/2015 12/30/2013 See health effects below	No	67.6 79.2 89.2 55.1 57.5 100	mg/l	N/A	N/A	Naturally occurring; road salt; Water softeners; animal waste. Was nearly same in 2006 at 85.5 mg/l
Fluoride 11/26/2013 03/23/2016 10/01/2019	No	0.3 0.3 0.4	mg/l	2.2	2.2	Naturally occurring, erosion Of natural deposits.
Barium 11/26/2013 03/23/2016 10/01/2019	No	0.15 0.17 0.149	mg/l	2	2	Naturally occurring or Discharge from drilling wastes
Zinc Sampled 2011	No	0.023	mg/l	N/A	5	Naturally occurring.
Manganese sampled 2011	No	0.0009	mg/l	300	N/A	Naturally occurring.
Nickel Sampled 2011 10/01/2019	No	0.0008 ND	mg/l	0.1		Naturally occurring.

Nitrate 05/08/2019 03/14/2018 03/30/2017 11/16/2016 11/25/2015 12/30/2013	No	0.525 0.485 0.420 0.288 0.368 0.311	mg/l	10	10	Erosion of natural deposits; run off from fertilizer use; leaching from septic tanks and sewage.
Nitrite 2011	No	0.02	mg/l	1	1	Naturally occurring.
Gross Alpha Particle Activity Sampled 2011 04/26/2017	No	2.7 1.34 see below	pCi/l	Zero	15	Erosion of natural deposits. Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. This is naturally occurring in Schoharie County.
Combined Radium 226 and 228 04/25/2016	No	1.458	pCi/l	Zero	5	Erosion of natural deposits.
Antimony 2012	No	1.2	ug/l	NA	10	Erosion of natural deposits, solder.
Arsenic 2012	No	0.79	ug/l	NA	10	Erosion of natural deposits.
Chromium 2012	No	0.55	ug/l	100	100	Erosion of natural deposits.
Iron 2012	No	24	ug/l	300	300	Naturally occurring.
Selenium 2012	No	0.1	ug/l	50	50	Erosion of natural deposits, essential nutrient.
Silver 2012	No	0.02	ug/l	NA	100	Naturally occurring.
Uranium 2012	No	0.643	ug/l	zero	30	Naturally occurring.
Radon 2012	No	300	pCi/l	NA	NA	Naturally occurring.
Lead 10/01/2019	No	Not detected				Not detected in the well water

WHAT DOES THIS INFORMATION MEAN?

The table shows that our system detected some contaminants in very small amounts and others above maximum contaminant levels. There were violations for sulfate in the well and turbidity in the filters. All contaminants and violations will be explained in this report. We are providing health effects information on each, if you have a concern over the contaminant.

POTENTIAL HEALTH EFFECTS OF COMMON WATER CONTAMINANTS

LEAD AND COPPER: Lead: Infants and young children are typically more vulnerable to lead in drinking water than the general population. 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. If you are concerned about elevated lead levels in your home’s water, you must flush your tap for at least 2 minutes before using tap water. If you have more than 75 feet of service line to the water main, more than two minutes of flushing will be necessary. The level presented in the table represents the highest level detected and the compliance level is the 90th percentile of sites tested. The other samples were above the action level. No lead or copper has been detected in the source water (surface reservoir or well). Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight defects in attention span and learning abilities. Adults who drink water containing lead in excess of the action level could develop high blood pressure or kidney problems. If you wish to have your water tested, the Village may use your home as the sample site if approved by the Health Department. Additional information is available from the Safe Drinking Water Hot Line (1-800-426-4791). The Village is replacing lead service lines and has increased the level of phosphate (helps prevent lead and copper from dissolving in the water by coating the pipes). It is also recommended that residents use plastic piping if any plumbing is replaced, or at a minimum, lead free solder on copper pipes. We collected 10 samples for lead and copper as required on August 9, 2017. The results from highest to lowest in 2017: 40.1, ND, ND, ND, ND, ND, ND, ND, ND, ND. We intend to have the samples collected in the summer as required in the next round, summer 2020.

Copper: Copper is an essential nutrient to your health. Some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson’s Disease should consult their personal doctor. The limit for copper in a first draw tap sample is 1.3 mg/l. The table shows the highest level detected in 2017 was 0.249 mg/l and is below the action level of 1.3. Flush your tap as stated in the lead information above to remove it from the drinking water. The action level for copper was not exceeded at any of the tested sites in 2017. No lead or copper has been detected in the source water. Monitoring for lead and copper will be a continuing requirement in the system. The results from highest to lowest: 0.249, 0.246, 0.227, 0.214, 0.210, 0.147, 0.0502, 0.0212, 0.0170, 0.0098.

We did some lead and copper monitoring in 2016 at various sites in the Village to help determine if there are problem areas and help assess the effectiveness of the phosphate corrosion inhibitor to reduce leaching from lead and copper. Lead results of the 15 sites reported ranged from not detected to 4 ug/l all below the action level of 15. Copper results of the 15 sites reported ranged from 0.0371 to 0.603 mg/l all below the action level of 1.3.

Lead service lines from the water main to the corporation valve must be replaced when they are repaired. If the Village finds them we will notify you and you can decide if you wish to have the service line replaced from the valve to the water meter. We recommend you do this while the work is being done.

Sulfate – 6 mg/l in the reservoirs and 388 mg/l in the auxiliary well: The MCL for sulfate is 250 mg/l, our sulfate level is too low to cause observable health effects such as diarrhea. High concentrations of sulfate in drinking water have three effects: (1) water containing appreciable amounts of sulfate tends to form hard scales in boilers and heat exchangers; (2) sulfates cause taste effects; and (3) sulfates can cause laxative effects with excessive intake. The laxative effect of sulfates is usually noted in transient users of a water supply because people who are accustomed to high sulfate levels in drinking water have no adverse response. Diarrhea can be induced at sulfate levels greater than 500 mg/l but typically near 750 mg/l. The above notice shall serve as our notification requirement for 2014 and 2015 if the well is used. The well was used in 2011 from August 29 to October 5, 2011 and August 7 to October 2012.

Total Trihalomethanes and Haloacetic Acids (disinfection by-products) Haloacetic Acids

Haloacetic acids were detected above the MCL of 60 ug/l in our August (third quarter) sample. Stage 2 compliance for disinfection by-products is based on a running annual average of quarterly samples. The average for the first quarter was 40.15. The average for the second quarter was 43.075. The average for the third quarter was 44.45. The average for the fourth quarter was 37.825. All the quarterly averages were below 60 and the system is in compliance. Even though the quarterly averages for haloacetic acids were below the MCL we are presenting the following information on haloacetic acids in drinking water:

“Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.”

TTHM

Total Trihalomethanes were detected above the current MCL of 80 ug/l in the August (third quarter) sample. Stage 2 compliance for disinfection by-products is based on a running annual average of quarterly samples. The first quarter average was 37.5. The second quarter average was 37.7. The third quarter average was 52.025. The fourth quarter average was 50.875. All averages are less than the MCL and the system is in compliance. Even though the average total trihalomethanes are below the MCL we are presenting the following information on total trihalomethanes in drinking water:

“Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.”

The high result in August 2019 did not cause a violation because the average of the four quarters was less than the legal limit. We did have to complete an operational evaluation level report to help determine how and why the result was high. At that time filtration was excellent but high amounts of total dissolved carbon from poor summer water conditions combined with pre-chlorination to make the filtration effective was part of the problem.

Barium – The MCL for barium is 2 mg/l. Our barium level in the well is too low to have an observable health effect. Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.

Fluoride – Naturally occurring fluoride is found in the surface water sources and the auxiliary well, below the MCL of 2.2 mg/l but at levels too low to be of effective dental benefit. The water would need fluoride added at approximately 1 mg/l for good protection for teeth. Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Children could get mottled teeth at levels greater than the MCL over many years. This would never be the case even in water that has fluoride added to it.

Iron – Not monitored in the distribution system this year but has been in past years and was present summer of 2012. Iron has no adverse health effects. At 1000 ug/l a substantial number of people will note the bitter astringent taste of iron. Also, at this concentration, it imparts a brownish color to laundered clothing and stains plumbing fixtures with a characteristic rust color. Staining can result at levels of 50 ug/l, lower than those detectable to taste buds. Therefore, the MCL of 300 ug/l represents a reasonable compromise as adverse aesthetic effects are minimized at this level. Many multivitamins may contain 3000 or 4000 ug/l of iron per capsule. Iron was not detected in the well. There has been a persistent problem with high iron in the reservoirs. The treatment plant has been able to adequately remove iron so there is no brown water in the system except when the levels get too high. We monitor for iron with a field test kit at the plant for routine operational information and a laboratory is not required.

Manganese – 140 ug/l in the partially treated water prior to filtration, it is removed to acceptable levels after filtration therefore there was no violation. Potassium permanganate is added to the water which will increase the level of manganese in the water prior to filtration. Potassium permanganate is a strong oxidant that will aid in the removal of iron, manganese and naturally occurring organic matter in the water. The naturally occurring organic matter will combine with chlorine disinfectant to form other substances (see haloacetic acids and total trihalomethanes for further information). The Food and Nutrition Board of the National Research Council determined an estimated safe and adequate daily dietary intake of manganese to be between 2 and 5

milligrams per liter for adults. However, many people's diets lead them to consume even higher amounts of manganese, especially those who consume high amounts of vegetables or are vegetarian. The infant population is of greatest concern. If the water was too high in manganese it would be better if the drinking water were not used to make infant formula. There is no risk with infant formula because the amount is too low in the Village drinking water. Excess manganese produces a brownish color in laundered goods and impairs the taste of tea, coffee, and other beverages. Concentrations may form a coating on distribution pipes. These may slough off, causing brown blotches on laundered clothing or black particles in the water. The high levels of manganese were caused by problems with the reservoir in summer 2012. Manganese levels were higher in the raw water than the treated water in the distribution system. Manganese was detected at 30 ug/l in the well water in April 2006.

Gross alpha activity- 2.7 pCi/l was the level detected in 2011 and 1.34 in 2017. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer. These results are from the well water which is used only during emergencies and was last used August 29 to October 5, 2011 after run off from Hurricane Irene made the pond water impossible to treat adequately at that time. Monitoring of the well will continue.

Nitrate – Infants below the age of 6 months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome. Our nitrate is not close to the MCL and is safe for infants.

Dalapon – was detected in a sample collected by the Health Department on August 4, 2015. Quarterly sampling started in September and October had no Dalapon detected in those samples. These were confirmation samples done by the Health Department. More samples were collected in 2016 were not detected. The required annual samples in 2017 and 2018 detected it but it was not detected in July 2019. Annual sampling will continue to through 2020, 2021. No evidence of Dalapon use was observed in the watershed of Engleville Pond and the detection of a licensed herbicide cannot be explained. Some people who drink water containing Dalapon over the MCL over many years could experience minor kidney changes. The Health Department monitored for it on December 5, 2018 and it was not detected.

Radium 228- 1.4 pCi/l was the highest level detected and below the MCL of 5. The monitoring frequency is set at every 6 years at these levels. Some people who drink water containing radium 228 in excess of the MCL over many years may have an increased risk of getting cancer. These results are from the well water which is used only during emergencies.

Chloride- 110 mg/l in the well water: Chloride has no health effects. The level of chloride in the well water is too low to cause adverse taste effects and is a naturally occurring substance abundant in nature. The MCL for chloride is the level above which the taste of water may become objectionable. In addition to the adverse taste effects, high chloride concentration levels in the water contribute to the deterioration of domestic plumbing and water heaters. Chloride was 7 mg/l in the surface water in 2005.

Sodium –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. Well was not used so sodium was below 20.

Zinc –Zinc has no health effects unless detected in very high concentrations.

Barium – Detected at trace levels in the reservoir in 2010 and in the well in 2011. Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.

Chlorine residual: We add sodium hypochlorite to the water to kill harmful organisms and it is a mandatory treatment requirement for a water system with a surface water source. It must always be maintained in the drinking water. The highest level measured at the entry point of the system was 4. No violation occurred because the maximum residual disinfectant level of 4 mg/l is based upon a running annual average of monthly samples. Our goal for Chlorine residual leaving the plant is 2 to 3 mg/l. This assures that there is a free chlorine residual in all parts of the distribution system as required. There are areas of the system that have low chlorine residual problems. These areas are addressed by water main flushing and are on a regular schedule of flushing to maintain the required residual. The minimum residual goal is 1.3 at the treatment plant.

Radon – 300 pCi/l: Radon was found in the well water not the normal surface water source. It is a naturally occurring radioactive gas found in soil and outdoor air that may also be found in drinking water and indoor air. Some people exposed to elevated radon levels over many years in drinking water have an increased risk of getting cancer. The main risk is getting lung cancer from radon entering indoor air from soil under homes. For additional information contact the State radon program 1-800-458-1158 or EPA's radon hotline 1-800-SOS-Radon. Radon was sampled from the untreated well water in July 2011 and the well was used August 29 to October 5, 2011 after Hurricane Irene because the surface water supply could not be treated properly. There is no State standard for radon in water. The radon will dissipate some when it is held in the storage tanks. The surface water supply is normally used and there is no concern for radon when the surface water is used.

IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?

The Village is 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.

There are some cross-connections in the water system that must be addressed to prevent contamination of the system. Some services that are required to have a cross-connection control device do not have them. The Village will be working with those services to have them installed as required. They were not done in 2019 and we have a deficiency concerning them. Plans for a new storage tank and water main on Route 20 were approved and construction will begin soon. This will correct pressure deficiencies in the system.

Waivers

Our system has been granted a waiver from the monitoring requirements for the inorganics of antimony, arsenic, barium, beryllium, cadmium, chromium, cyanide, fluoride, mercury, nickel, selenium and thallium. The waiver is being issued because these contaminants have not been detected, or detected at naturally occurring trace levels that are reliably and consistently below the maximum contaminant levels for at least three rounds. The surface water source waiver is for 01/01/2019 to 12/31/2027. The well source waiver is from 01/01/2020 to 12/31/2028. The next sample is due by the expiration date of the waivers. Earlier monitoring may be required if circumstances change.

Our system has a waiver from the monitoring requirements for asbestos. Our source water is not vulnerable to naturally occurring asbestos contamination and the last asbestos cement water pipe in the system was replaced in 2008. We are no longer required to monitor for asbestos which is known to cause cancer. The nine-year waiver was renewed in 2013.

The Revised Total Coliform Bacteria Rule became effective April 2016. The Village complied with the Rule since all of our required bacteria water samples in the finished water that you drink were satisfactory and no level one or level two assessments were required because of unsatisfactory samples.

WHY SAVE WATER AND HOW TO AVOID WASTING IT?

Your water usage is now metered. If you have a leak inside your home, please repair it.

Voluntary water conservation measures should be taken whenever possible. Our reservoirs are full and are producing excess water. We have adequate supply and no mandatory restrictions are planned in the near future.

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, 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 to 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.

We plan on constructing a new water storage tank to replace the unusable 50,000 storage tank on Sawmill Road and the severely leaking 250,000 gallon tank. The new tank is 333,200 gallons and will increase pressure to eliminate low pressure problems along Route 20. This should correct the low pressure deficiency.

There are some water service pipes that are inside sewer manholes and this is a deficiency that must be corrected and corrections are planned with the funds associated with the water tank construction.

In our continuing efforts to maintain a safe and dependable water supply it may be necessary to make improvements in your water system. 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. If you experience problems with your water, please contact the Village so appropriate actions can be taken to correct the situation.