

Annual Drinking Water Quality Report

For the Calendar Year of 2017

For Water Customers in the Village and Town Water Districts of:

Mt. Morris, Leicester, Cuylerville, and the American Rock Salt/Groveland Water System

Public Water System Identification Numbers

Village of Mt. Morris 2501023
Town of Mt. Morris 2500703

ARS/Groveland 2530018
Town of Leicester 2501014

Village of Leicester 2501020

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Prepared by Chris M Young: Village of Mt. Morris Water Dept.

Introduction:

To comply with State regulations, the "parent" water system operated by the Village of Mt. Morris Water Department (which treats and distributes water to the purchasing systems listed above) annually issues 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. 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 with State standards.

If you have any questions about this report or concerning your drinking water, please feel free to contact Chris Young, Superintendent of public works/ Operator in responsible charge for the Village of Mt. Morris at (585) 658-2331. Mr. Young can also supply contact numbers for the purchasing systems. You may also contact the Livingston County Health Department at (585) 243-7280. We encourage our valued customers to become informed and to feel secure concerning the state of their drinking water. If you want to learn more, please attend any of our regularly scheduled village board meetings. Meetings are typically held once a month at 117 Main Street, on the third Monday of the month at 7:00 pm.

Where Does Our Water Come From?

In general, the sources of drinking water (both tap 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 activity. 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 your tap water is safe to drink, the State and the Environmental Protection Agency prescribe regulations that limit the number of certain contaminants in water provided by public water systems. The State Health Departments and the Federal Food and Drug Administration's regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Our water source is Silver Lake in Wyoming County. During 2017, our system did not experience any restriction of our water source. A pump station near the Silver Lake outlet intermittently delivers raw water to the 5 million- gallon reservoir at the Water Treatment Plant. Although late summer algae blooms create some taste and odor removal problems, the quality of raw water is very good. Turbidities of around 1.0 NTU and pH ranges of around 8.00 are optimal for our treatment processes. Copper sulfate is added at the Lake to discourage algae growth. Sodium hypochlorite is also added to the raw water at the Lake periodically to discourage zebra mussels. Water from the reservoir then enters the treatment plant. Our treatment processes include coagulation using a solution of aluminum chloride hydroxide sulfate (a coagulant), clarification, mixed media filtration (anthracite, sand, garnet), corrosion control using blended phosphates, and disinfection using sodium hypochlorite. Finished water turbidities ranged between .06-.26 NTU's (nephelometric turbidity units). 100% of our turbidity readings for the year 2017 were at or below the 0.3 NTU. Acceptable free available chlorine residuals (chlorine available to kill bacteria) are maintained in the clear well (storage tank) and throughout the entire distribution systems to ensure inactivation of giardia lamblia cysts and bacteria. Treated water enters the distribution systems from the 1 million-gallon clear well.

The NYS Department of Health has evaluated this Public Water System's susceptibility to contamination under the Source Water Assessment Program (SWAP), 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 the public water system. The Village of Mt. Morris provides treatment and regular monitoring to ensure water delivered to customers meets all applicable standards.

SWAP Executive Summary for Silver Lake:

This assessment found an elevated susceptibility to contamination for this source of drinking water. The amount of agricultural lands in the assessment area results in elevated potential for pesticide, DPB precursors, microbial and phosphorous contamination. In addition, the elevated density of CAFOs (Concentrated Animal Feeding Operations) in the assessment area very likely adds to the potential for contamination. No permitted discharges are found in the assessment area. There are no noteworthy contamination threats associated with other discrete contaminant sources. Additional sources of potential contamination include: An active railroad system and a golf course.

Facts and Figures

The water systems serve:

(Approximate)
Leicester Town/ Cuylerville: 562
Leicester Village 438
Mt. Morris Village 3500

Water Accountability:

(Approximate combined totals)
Amount of water treated 192,143,280 gallons
Amount of water sold (metered) 147,569,000 gallons
Amount of water unaccounted for 51,630,280gallons

Mt. Morris Town 328
 ARS/Groveland 382

It should be noted that a substantial amount of unaccounted water includes filter backwashes, months of hydrant flushing this year, meter failures, fire protection use, clear well flushing, draining and cleaning of tanks and the reservoir, process instrument supply, and other various Village uses. The remainder is leakage or unauthorized use.

In 2017, water customers were charged:

Within the Village of Mt. Morris Limits:

0-3,000 gallons per quarter = \$42.50 (base charge)
 \$2.75 for each additional 1,000 gallons

Wholesale rate Town of Mt. Morris & ARS/Groveland systems:
 \$4.25 per thousand gallons

Wholesale rate to the Village of Leicester:

\$3.45 per thousand gallons

Town of Mt. Morris Water District #1

0-3,000 gallons per quarter = \$41.35 (base charge)
 \$5.25 for each additional 1,000 gallons

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, halo acetic acids, synthetic organic compounds, asbestos, and radioactivity. 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.

It should be noted that all drinking water, including bottled water, may reasonably be 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 Water Hotline (1-800-426-4791 or the Livingston County Health Department (243-7280).

Contaminant	Violation Yes/No	Date of Sample	Level Detected	Unit measurement	MCLG	Regulatory Limit (MCL,TT, or AL)	Likely source of contamination
Microbiological Contaminants/Turbidity:							
*Turbidity	no	10/1/17	Max. - 0.26	NTU	N/A	<1.0 NTU (TT) ¹	Soil runoff
*Turbidity	no	2017 (4 daily)	100% compliance 2017	NTU	N/A	95%of monthly samples <0.3 NTU (TT) ¹	Soil runoff
*Distribution Turbidity ²	no	2017 (daily) 8/2017	Range .06-1.27 Highest monthly Avg. 0.41	NTU	N/A	MCL= 5 NTU ²	Soil runoff
<p>*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. Our highest single turbidity measurement for the year occurred on 10/1/2017 (0.26 NTU). State regulations require that turbidity must not exceed 1NTU and that 95% of the monthly turbidity samples collected must measure less than or equal to 0.3 NTU.</p> <p>¹ A treatment technique violation occurs if more than 5% of the composite filter effluent measurements taken each month exceed the performance standard values. A treatment technique violation occurs if the turbidity level of representative samples of the filtered water exceeds 1.0 NTU</p> <p>² Five distribution turbidity samples are required at five different locations each week. Turbidity values in the distribution system may not exceed 5 NTU.</p>							
Disinfection by Product Precursors/ Total Organic Carbon (TOC)							
TOC : Source Water	no	monthly	avg: 5.3 range: 4.4-6.1	mg/l	N/A	N/A	Disinfection by product precursor
TOC: entry point	no	monthly	Avg: 2.7 Range: <.1-3.5	mg/l	N/A	50.9% removal (TT)	Disinfection by product precursor

Lead and Copper:							
Detected Contaminant	Violation Yes/No	Date of Sample	Level Detected (Avg/Max) (range)	Unit measurement	MCLG	Regulatory Limit (MCL,TT or AL)	Typical source of Contaminant
Lead	no	6/12-14 2017	*0.0029 Range: <0.0010-0.0047	ug/l	0 ug/l	AL= 15 ug/l	Corrosion of household plumbing system; erosion of natural deposits
Copper	no	6/12-14 2017	0.29 Range: 0.0099-0.60	mg/l	1.3 mg/l	AL= 1.3 mg/l	Corrosion of household plumbing system; erosion of natural deposits
<p>*The level presented represents the 90th percentile of the 20 sites tested for lead and copper. 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(s). In this case, 20 samples were collected at your water system(s) and the 90th percentile value was the eighteenth highest value. The action level for lead and copper were not exceeded in any of the samples collected.</p>							

Detected Contaminant	Violation Yes/No	Date Of Sample	Level Detected (Avg/Max) (range)	Unit measurement	MCLG	Regulatory Limit (MCL, TT or AL)	Typical source of Contaminant
Radioactive:							
Radium 226	no	12/6/16	ND	pCi/l	0pCi/l	MCL=5pCi/l	Erosion of natural deposits
Radium 228	no	12/6/16	0.70	pCi/l	0pCi/l	MCL=5pCi/l	Erosion of natural deposits
Synthetic organic chemicals:							
Atrazine	no	10/17/17	.000017	mg/l	3	3	Run off from herbicide used on row crops
Bis(2-ethylhexyl)phthalate	no	10/17/17	0.00079	mg/l	6	0	Used in plastic products; pvc, toys, upholstery, adhesives and coatings. Also used in inks, pesticides, cosmetics and vacuum pump oil
Inorganics:							
Detected Contaminant	Violation Yes/No	Date Of Sample	Level Detected (Avg/Max) (range)	Unit measurement	MCLG	Regulatory Limit (MCL, TT or AL)	Typical source of Contaminant
Asbestos	no	7/18/17	0.197	MFL	7mfl	MCL=7mfl	Decay of asbestos cement water mains; erosion of natural deposits
Sodium* (below health effect language)	no	6/20/17	16.0	mg/l	N/A	No designated limits	Naturally occurring; road salt; water softeners; animal waste
Chloride	no	6/20/17	27.0	mg/l	N/A	MCL=250 mg/l	Naturally occurring or indicative of road salt contamination.
Barium	no	6/20/17	0.028	mg/l	2 mg/l	MCL=2 mg/l	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Nickel	no	6/20/17	0.0012	ug/l	N/A	N/A	N/A
Nitrate	no	6/20/17	0.78	mg/l	10/mg/l	MCL=10mg/l	Runoff from fertilizer use, leaching from septic tanks, sewage, erosion of natural deposits
*Water containing more than 20 mg/l of sodium should not be used for drinking by people on very 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							
Stage 2 Disinfection Byproducts: Village of Mt. Morris							
Detected Contaminant	Violation Yes/No	Date of Samples	Level Detected (Avg/Max) (range)	Unit measurement	MCLG	Regulatory Limit (MCL, TT or AL)	Typical source of Contaminant
Trihalomethane (TTHM) Site 1 Village Building Site 2 Wastewater Treatment Plant	no	5/17/16 8/16/16 11/9/16 2/7/17 5/16/17 8/15/17 11/14/17	Site 1: *Highest Avg. 63.5 Range: 45-84 Site 2: *Highest Avg. 66.75 Range: 28-85	ug/l	0 ug/l	MCL=80 ug/l	By-product of drinking water chlorination needed to kill harmful organisms. TTHMs are formed when water contains large amounts of organic matter.
Haloacetic acids- (HAA) Site 1 Village Building Site 2 Wastewater Treatment Plant	no	5/17/16 8/16/16 11/9/16 2/7/17 5/16/17 8/15/17 11/14/17	Site 1: *Highest Avg. 42.5 Range: 27-48 Site 2: *Highest Avg. 47.25 Range: 26-54	ug/l	0 ug/l	MCL=60 ug/l	By-product of drinking water disinfection needed to kill harmful organisms.
*Compliance is based on annual running average. The level presented is the highest running annual average of the data collected.							

Stage 2 Disinfection Byproducts: Town of Leicester							
Detected Contaminant	Violation Yes/No	Date of Samples	Level Detected (Avg/Max) (range)	Unit measurement	MCL G	Regulatory Limit (MCL,TT or AL)	Typical source of Contaminant
Total trihalomethanes-TTHM	no	5/3/16 8/2/16 11/9/16 2/7/17 5/23/17 8/15/17 11/7/17	*Highest Avg. 125.0 Range: 77-125	ug/l	0 ug/l	MCL= 80 ug/l	By-product of drinking water chlorination needed to kill harmful organisms. TTHMs are formed when water contains large amounts of organic matter.
Haloacetic acids-HAA	no	5/3/16 8/2/16 11/9/16 2/7/17 5/23/17 8/15/17 11/7/17	*Highest Avg 50.0 Range: 38-68	ug/l	0 ug/l	MCL= 60 ug/l	By-product of drinking water chlorination disinfection needed to kill harmful organisms.
*Compliance is based on annual running average. The level presented is the highest running annual average of the data collected. The town of Leicester system exceeded the maximum contaminant level in all four quarters of 2017. Health Effects: 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 system and may have an increased risk of getting cancer.							

Stage 2 Disinfection Byproducts: American Rock Salt (ARS), LCWSA							
Detected Contaminant	Violation Yes/No	Date of Samples	Level Detected (Avg/Max) (range)	Unit measurement	MCL G	Regulatory Limit (MCL,TT or AL)	Typical source of Contaminant
Microbiological Contaminants							
E.coli	No	5/9/17	1 positive sample	N/A	0	MCL= 2 or more positive samples	Naturally present in the environment
Total Coliform	No	5/9/17	1 positive sample	N/A	0	MCL= 2 or more positive samples	Naturally present in the environment
Total trihalomethanes-TTHM	no	5/17/16 8/17/16 11/16/16 2/15/17 5/17/17 8/15/17 11/21/17	*Highest Avg. 82.575 Range: 57-98.3	ug/l	0 ug/l	MCL= 80 ug/l	By-product of drinking water chlorination needed to kill harmful organisms. TTHMs are formed when water contains large amounts of organic matter.
Haloacetic acids-HAA	no	5/17/16 8/17/16 11/16/16 2/15/17 5/17/17 8/15/17 11/21/17	*Highest Avg. 38.50 Range: 6.23-53.2	ug/l	0 ug/l	MCL=60 ug/l	By-product of drinking water chlorination disinfection needed to kill harmful organisms.
*Compliance is based on annual running average. The level presented is the highest running annual average of the data collected. The ARS system exceeded the maximum contaminant level in the 3 rd quarter of 2017. Health Effects: 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 system and may have an increased risk of getting cancer.							

Stage 2 Disinfection Byproducts: Village of Leicester							
Detected Contaminant	Violation Yes/No	Date of Samples	Level Detected (Avg/Max) (range)	Unit measurement	MCL G	Regulatory Limit (MCL,TT or AL)	Typical source of Contaminant
Total trihalomethanes-TTHM	no	8/15/17 *11/7/17	*Highest Avg. To be determined Range: 60-97	ug/l	0 ug/l	MCL = 80 ug/l	By-product of drinking water chlorination needed to kill harmful organisms. TTHMs are formed when water contains large amounts of organic matter.
Haloacetic acids-HAA	no	8/15/17 11/7/17	*Highest Avg. To be determined Range: 47-51	ug/l	0 ug/l	MCL = 60 ug/l	By-product of drinking water chlorination disinfection needed to kill harmful organisms.
*The Village of Leicester was increased to quarterly monitoring due to a TTHM action level exceedance. The exceedance did not result in a violation. Compliance will be based on the annual running average after four quarters of samples are collected and analyzed.							

Additional Sampling Conducted

E. coli is a bacteria present in varying concentrations in many surface waters and is removed/inactivated through a combination of filtration and disinfection. From October, 2017 – October 2018, samples are required to be collected every two weeks as part of a special sampling plan. Samples are collected from pretreated (raw) water from the system’s water source. The samples are part of the Long Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR), whose purpose is to improve control of cryptosporidium in source water. These samples represent *E. coli* levels in the **raw** water and **not** water that has been filtered and treated at our water treatment plant. Results will be reported after the completion of the study in the 2018 Annual Water Quality Report.

Definitions: Due to the scientific nature of water quality analysis, these tables may contain unfamiliar terms and abbreviations. The following definitions are provided to help you better understand the tables’ content:

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to MCLGs as possible.

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

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 Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected health risk. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination.

Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system *must* follow.

Nephelometric Turbidity Unit (NTU): A measure of the clarity of the 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 the radioactivity in water.

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

What Does This Information Mean?

As you can see by the table, the Village of Mt. Morris, the Village of Leicester and the town of Mt. Morris had no violations. The ARS/Groveland Water System exceeded the maximum contaminant level for trihalomethanes in the 3rd quarter of 2017. The Town of Leicester Water System exceeded the maximum contaminant level for trihalomethanes in all four quarters of 2017. The Livingston County Water and Sewer Authority (LCWSA) and the town of Leicester are working diligently with the Village of Mount Morris on a flushing program to maintain fresh water in the system.

Water is tested for coliform bacteria four times per month in the Village of Mt. Morris, and once per month in the Village of Leicester, the Townships of Leicester and Mt. Morris, and the ARS/Groveland system. We have learned through our testing that other contaminants have been detected; however, these contaminants were detected below the level allowed by the State. The contaminants listed in the tables are only the constituents that were above *detectable* levels of the over 100 contaminants that were monitored and tested for.

Is Our Water System Meeting Other Rules That Govern Operations?

During 2017, our systems were in compliance with applicable State drinking water operating, monitoring and reporting with the exception of a water main break that occurred in the Village of Leicester. In July of 2017, the Village of Leicester had a water main break that resulted in a boil water notice until bacteriological testing could show that the water was safe to drink.

