Annual Drinking Water Quality Report

For the Calendar Year of 2018

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

Issued: 5/7/19

Village of Mt. Morris 2501023
ARS/Groveland 2530018
Village of Leicester 2501020
Town of Mt. Morris 2500703
Town of Leicester 2501014

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

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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 6:00 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 2018, 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 .02-.28 NTU's (nephelometric turbidity units). 100% of our turbidity readings for the year 2018 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. The treatment process is completed as water exits the 1 million gallon clear well and enters the distribution system.

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
Mt. Morris Town	328
ARS/Groveland	382

Water Accountability:

(Approximate combined totals)

Amount of water treated	191,981,000 gallons
Amount of water sold (metered)	165,081,000 gallons
Amount of water unaccounted for	26,900,000 gallons (14%)

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 2018, 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).

Detected Contaminant	Violation Yes/No	Date Of Sample	Level Detected (Avg/Max) (range)	Unit measure-ment	MCLG	Regulatory Limit (MCL,TT, MRDL or AL)	Typical source of Contaminant
Chlorine Residuals Measured in Distribution:							
Chlorine Residual	**No**	Monthly	Range (0.79-1.7)	mg/l	N/A	MRDL=4.0	Water additive used to control microbes
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
Inorganics:							
Detected Contaminant	**Violation Yes/No**	**Date Of Sample**	**Level Detected (Avg/Max) (range)**	**Unit measure-ment**	**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	6/19/18	25.0	mg/l	N/A	No designated limits	Naturally occurring; road salt; water softeners; animal waste
Chloride	no	6/19/18	40.0	mg/l	N/A	MCL= 250 mg/l	Naturally occurring or indicative of road salt contamination.
Barium	no	10/9/18	0.022	mg/l	2 mg/l	MCL= 2 mg/l	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chromium	no	10/9/18	0.0019	ug/l	100 ug/l	MCL= 300 ug/l	Discharge from steel and pulp mills; erosion of natural deposits
Nickel	no	10/9/18	0.00076	ug/l	N/A	N/A	N/A
Nitrates	no	6/19/18	0.67	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 measure-ment	MCLG	Regulatory Limit (MCL,TT or AL)	Typical source of Contaminant
Trihalomethane (TTHM) Site 1 Village Building Site 2 Wastewater Treatment Plant	no	5/16/17 8/15/17 11/14/17 2/13/18 5/8/18 8/14/18 11/13/18	**Site 1:** *Highest Avg. 57 Range 40-84 **Site 2:** *Highest Avg. 59.57 Range: 42-85	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	5/16/17 8/15/17 11/14/17 2/13/18 5/8/18 8/14/18 11/13/18	**Site 1:** *Highest Avg. 44.25 Range: 40-48 **Site 2:** *Highest Avg. 48.25 Range: 41-54	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.

Lead and Copper:

Detected Contaminant	Violation Yes/No	Date of Sample	Level Detected (Avg/Max) (range)	Unit measure-ment	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

*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.

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	6/13/18	Max. - 0.28	NTU	N/A	<1.0 NTU (TT)[1]	Soil runoff
*Turbidity	no	2018 (4 daily)	100% compliance 2018	NTU	N/A	95%of monthly samples <0.3 NTU (TT)[1]	Soil runoff
*Distribution Turbidity[2]	no	2018 (daily) 9/2018	Range .04-.87 Highest monthly Avg. .34	NTU	N/A	MCL= 5 NTU[2]	Soil runoff

*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 6/13/18 (0.28 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.

[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

[2] Five distribution turbidity samples are required at five different locations each week. Turbidity values in the distribution system may not exceed 5 NTU.

Disinfection by Product Precursors/ Total Organic Carbon (TOC)

TOC : Source Water	no	monthly	avg: 5.1 range: 4.5-6.3	mg/l	N/A	N/A	Naturally present in the environment

TOC: entry point	no	monthly	Avg: 3 Range: 2.5-3.7	mg/l	N/A	42.1% removal (TT)	Naturally present in the environment

Town of Leicester

Detected Contaminant	Violation Yes/No	Date of Samples	Level Detected (Avg/Max) (range)	Unit measure-ment	MCL G	Regulatory Limit (MCL,TT or AL)	Typical source of Contaminant
Stage 2 Disinfection Byproducts							
Total trihalomethanes-TTHM	no	5/23/17 8/15/17 11/7/17 2/6/18 5/8/18 8/14/18 11/13/ 18	*Highest Avg. 88.25 Range: 62-125	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	5/23/17 8/15/17 11/7/17 2/6/18 5/8/18 8/14/18 11/13/18	*Highest Avg. 59 Range: 13-68	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 TTHM maximum contaminant level in two of four quarters of 2018. 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.							
Microbiological contaminants							
Total Coliform Bacteria (Town of Leicester)	no	8/9/18	positive	n/a	0	TT= 2 or more positive samples	Naturally present in the environment.

Stage 2 Disinfection Byproducts: American Rock Salt (ARS), LCWSA

Detected Contaminant	Violation Yes/No	Date of Samples	Level Detected (Avg/Max) (range)	Unit measure -ment	MCL G	Regulatory Limit (MCL,TT or AL)	Typical source of Contaminant
Total trihalomethanes-TTHM	no	5/17/17 8/15/17 11/21/17 2/13/18 5/9/18 8/17/18 11/14/18	*Highest Avg. 67.5 Range: 50-102	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	5/17/17 8/15/17 11/21/17 2/13/18 5/9/18 8/17/18 11/14/18	*Highest Avg. 48.5 Range: 17-52	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.							

Stage 2 Disinfection Byproducts: Town of Mt. Morris

Total trihalomethanes-TTHM	no	5/9/17 8/15/17 11/14/17 2/13/18 5/8/18 8/14/18 11/13/18	*Highest Avg. 66.5 Range: 49-92	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	5/9/17 8/15/17 11/14/17 2/13/18 5/8/18 8/14/18 11/13/18	*Highest Avg. 58 Range: 45-68	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.

Stage 2 Disinfection Byproducts: Village of Leicester

Detected Contaminant	Violation Yes/No	Date of Samples	Level Detected (Avg/Max) (range)	Unit measure-ment	MCLG	Regulatory Limit (MCL,TT or AL)	Typical source of Contaminant
Total trihalomethanes-TTHM	no	8/15/17 11/7/17 2/6/18 5/8/18 8/14/18 11/13/18	*Highest Avg. 68.33 Range: 48-97	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 2/6/18 5/8/18 8/14/18 11/13/18	*Highest Avg. 49.75 Range: 40-55	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 the annual running average. The level presented is the highest running annual average of the data collected.

Additional Sampling Conducted

Long Term 2 Enhanced Surface Water Treatment Rule:

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. The results are below.

Regulatory Contaminant	Violation Yes/No	Date of Sample	Level Detected (Avg) (Range)	Unit Measure-ment	MCLG	Regulatory Limit (MCL,TT or AL)	Typical source of Contaminant
Escherichia coli (E. coli)	**No**	**Every Two Weeks**	**Avg** 4.88 **Range** <1-40	**cfu/100ml**	**0**	Yearly average over 100	**Contamination naturally present in the environment**

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.
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.
Haloacetic acids (five) (HAA5): means the sum of the concentrations in milligrams per liter of five specific haloacetic acid compounds.
Total Trihalomethane (TTHM): means the sum of the concentration of trichloromethane (chloroform), dibromochloromethane, bromodichloromethane and tribromomethane (bromoform)
Colony forming unit(cfu) : Measurement of a colony of cells

What Does This Information Mean?

As you can see by the table, the Village of Mt. Morris, the Village of Leicester had no violations~~.~~The Town of Leicester Water System exceeded the maximum contaminant level for trihalomethanes in the first two quarters of 2018-All purchase water systems 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 each of the purchase water systems 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 2018, 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 Mt Morris. In May of 2018, the Village of Mt Morris had a water main break on a portion of Sullivan Street (Tony's Trailer Park) that resulted in a boil water notice until bacteriological testing could show that the water was safe to drink.

💧 *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 advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium, Giardia and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

💧 *Information on Lead in Drinking Water*

In 2017 lead was not detected in the water leaving the treatment plant. It is possible for water to pick up lead from home plumbing solder or fixtures if it sits in the pipes for a long time but our testing indicates this is not a problem for our customers. However, due to problems some water suppliers have had with drinking water lead levels, the USEPA is requiring all water suppliers to include the following educational text in their annual water quality reports:

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. Our water system 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.

💧 *Information For Non-English Speaking Residents (Spanish)*

Este informe contiene información muy importante sobre agua beber. Tradúzcalo ó hablecon alguien que lo entienda bien. This report contains very important information about your drinking water. Translate it or speak with someone who understands it.

💧 *Why Save Water and How to Avoid Wasting It?*

Although our system has an adequate amount of water to meet present and future demands, there are a number of reasons why it is important to conserve water:

- The need to conserve our natural resources is essential to the survival of human life and preservation of nature's ecosystem.
- Saving water reduces the cost of energy required to acquire and treat water.
- Saving water lessens the strain on the water system during dry spells, helping to avoid restrictions and meet fire fighting needs.

Here are but a few of the suggestions for water users to take an active role. You'll be surprised at how much you can save without hardship right in your own home.

- Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So it's wise to load it to capacity.
- Turn off the water while shaving and/or brushing your teeth.
- Check faucets for leaks. A repaired slow drip can save almost 6,000 gallons per year.
- Check your toilet 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. Losing around 100 gallons a day is common for these invisible toilet leaks.

💧 *System Improvements*

- The Silver Lake intake structure was inspected and cleaned.

- A new residential water metering system is in use and meter replacements are completed. 230 Meters were installed in 2018.
- The Village of Mt. Morris and their purchase water systems coordinated flushing twice per year.
- The Village of Mt Morris used an auto flusher for 2018. Was installed at Sickles ave hydrant and flushed twice weekly throughout the summer months to keep water fresh and chlorine residual levels maintained.
- The Village of Mount Morris replaced 2 Hydrants.
- The reservoir was inspected and the intake bubbler at the reservoir and at the lake was repaired.
- The clear well was inspected and repairs were made.

Closing

Thank you for supporting your water department(s). We have been very successful in complying with ever increasingly stringent water quality standards. Our history of compliance and even a few taste contest victories are certainly indicative of the aesthetic quality of the water. The Mt. Morris Water Department has an open-door policy and encourages community input.

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Feel free to call:
Mt. Morris Water Treatment Plant: (585) 658-2331 Village of Mt. Morris:(585) 658-4160 Town of Leicester (585) 382-3231
Livingston Co. Dept. of Health: (585) 243-7280 Village of Leicester:(585) 382-3699 Town of Mt. Morris (585) 658-3375
Liv. Co. Water/Sewer Authority: (585) 346-3523