Annual Drinking Water Quality Report for 2020
Town of Lake Luzerne & Hudson Grove Water District
539 Lake Avenue, Lake Luzerne, NY 12846
(Public Water Supply Identification Numbers NY5600108 & NY5603495)

INTRODUCTION

We are very pleased to provide you with this year's Annual Drinking Water Quality Report. The purpose of this report is to raise your understanding of drinking water and awareness of the need to protect our drinking water sources. Last year, your drinking water met all State drinking water health standards. This report is a snapshot of last year's water quality. Included are details about where your water comes from, what it contains, and how it compares to New York State standards. Our constant goal is and always has been, to provide to you a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and to protect our water resources. If you have any questions concerning this report or concerning your drinking water please contact: *Theresa Rivers, Water Treatment Plant Operator, Town of Lake Luzerne, 539 Lake Avenue, Lake Luzerne, NY 12846; Telephone (518) 696-3588, (518) 744-4919.* We want our valued customers to be informed about their water service. If you want to learn more, please attend any of our regularly scheduled Town Board meetings. They are held on the 2nd Monday of each month, 7:00 PM at the Town Hall, 539 Lake Avenue; *Telephone (518) 696-2711.*

WHERE DOES OUR WATER COME FROM?

Lake Luzerne WD

The Town of Lake Luzerne draws its water from a ground water source. Groundwater or well water is stored below the surface of the earth in deep, porous rocks called "aquifers." Groundwater is purified naturally as it filters through layers of soil, clay, rock and sand. This process, known as "percolation" takes years to complete. As a result, groundwater requires less treatment than surface water. Our water comes from two 12-inch diameter drilled wells, designated Well #1 and Well #2, each approximately 103 feet deep, each having a 75-horsepower pump deliver 550 gallons per minute. The wells are programmed to alternate automatically. Treatment of the raw water produced by the wells consists of chlorination using a sodium hypochlorite solution, which is used for disinfection to protect against contamination from harmful bacteria and other organisms. Both wells are located in a fenced in area approximately 120 yards east of our new pumphouse behind the Old Town Garage off East River Drive. We have a 500,000-gallon concrete storage tank located on a hill on the north side of Rte. 9N just before Tower Road to meet consumer demand and to provide adequate fire protection. The tank provides gravity storage to the distribution system. The tank was inspected in 2019 and found to be in good condition.

HUDSON GROVE WD

Water for the Hudson Grove WD is supplied by the Village of Corinth. The Village of Corinth draws its water from two drilled wells located on Hamilton Avenue. Well #1 represents the primary production well for the Village water supply and consists of a drilled well 71-feet in depth with an 18-inch casing. The well was developed and first used by the Village in 1963. Well #2 was developed in 1992 and consists of a drilled well 73-feet in depth with an 18-inch casing. Pumping capacity for each well is approximately 825 gallons per minute. The Village of Corinth operates a water treatment plant that utilizes micron cartridge filters and chlorination. After the water is filtered it flows to a 90,000-gallon clearwell foundation under the filtration plant for chlorine mixing and proper contact time to adequate disinfection. We have a 500,000-gallon concrete storage tank located on County Route 10 West Mountain Road to meet consumer demand and provide adequate fire protection.

The source water assessment performed by the New York State Health Department has rated our source water as having an elevated susceptibility to microbial contamination and nitrates. It should be noted that the SWAP looks at the untreated water only. Our water is treated to minimize the potential sources of contamination. The SWAP summary for our water supply is attached to this report.

FACTS AND FIGURES

The Town of Lake Luzerne provides water through 858 service connections to a total population of approximately 2,500 people. The Hudson Grove Water District accounts for an additional 115 service connections. Water for the Hudson Grove Water District is purchased from the Village of Corinth. Our average daily demand 287,000 gallons. Our single highest day was 470,000 gallons. The total water produced in 2020 was 344,900,000 gallons. Customers are billed at $125.00 per 60,000 gallons of water and $2.75 per thousand gallons for 60,001 gallons and up. Customers in the Hudson Grove WD are billed a flat rate of $500.00.

ARE THERE CONTAMINANTS IN OUR DRINKING WATER?

In accordance with State regulations, the Town of Lake Luzerne routinely monitors your drinking water for numerous contaminants. We test your drinking water for inorganic contaminants, radiological contaminants, lead and copper, nitrate, volatile organic contaminants, and synthetic organic contaminants. In addition, we test 4 samples for coliform bacteria each month. The tables presented on pages 3 and 4 depict which contaminants were detected in your drinking water. The state allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, is more than one year old and is noted. For a listing of the parameters analyzed, that were not detected, along with the frequency of testing for compliance with the NYS Sanitary Code, see Appendix A.

It should be noted that all drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily pose a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800-426-4791) or the New York State Department of Health, Glens Falls District Office at (518) 793-3893.

What does this information mean?

As you can see by the tables on pages 3 and 4, neither the Lake Luzerne WD nor the Village of Corinth/Hudson Grove WD system had any violations. We have learned through our monitoring and testing that some constituents have been detected; however, these compounds were detected below New York State requirements. MCL's are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

New York State has adopted the first in the nation drinking water standard for 1,4-Dioxane along with one of the lowest maximum contaminant levels for PFOA and PFOS. Public Water Supplies in NYS are required to test for PFOA, PFOS and 1,4-Dioxane. PFOA and PFOS have Maximum Contaminant Levels (MCL) of 10 parts per trillion each while 1,4-Dioxane has an MCL of 1.0 parts per billion. The Town of Lake Luzerne along with the Village of Corinth have completed their 1st quarter monitoring with no detects for PFOA,PFOS &1,4-Dioxane.

Is our water system meeting other rules that govern operations?

Lake Luzerne WD

During 2020, the Lake Luzerne WD was required to collect 10 lead and copper samples from sites on the approved monitoring plan. Only 8 of the 10 sites sampled were valid sample sites. Samples from 10 approved sites will be collected during 2021.

Hudson Grove WD

During 2020, the Lake Luzerne WD was in compliance with State drinking water operating, monitoring and reporting requirements.

Is our water safe for everyone?

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 provider about their drinking water. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium, Giardia and other microbiological pathogens are available from the Safe Drinking Water Hotline (800-426-4791).

Information on lead

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The Lake Luzerne and Hudson Grove Water Districts are responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at *http://www.epa.gov/safewater/lead*

What is the source water assessment program (SWAP)?

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

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

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

A SWAP summary for our water supply is attached to this report.

Water Conservation tips

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

- Only run the dishwasher and clothes washer when there is a full load
- Use water saving showerheads
- Install faucet aerators in the kitchen and the bathroom to reduce the flow from 4 to 2.5 gallons per minute
- Water gardens and lawn for only a couple of hours after sunset
- Check faucets, pipes and toilets for leaks and repair all leaks promptly
- Take shorter showers

Capital improvements

During 2020, improvements were made to Pine Road extension to North Road

Closing

Thank you for allowing us to continue providing your family with clean, quality water this year. In order to maintain a safe and dependable water supply we sometimes need to make improvements that will benefit our customers. We ask that all our customers help us protect our water sources, which are the heart of our community. Please call our office if you have questions.

Table 1

LAKE LUZERNE TEST RESULTS TABLE OF DETECTED CONTAMINANTS
Public Water Supply Identification Number NY5600108

Contaminant	Violation Y/N	Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Inorganic Contaminants (sample data from 8/3/20 from the Treatment Plant)						
Chloride	N	12.9	ppm	N/A	250	Geology; Naturally occurring
Copper (samples 7/31/20-8/2/20) Range of copper concentration	N	0.52 0.064-0.576	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (samples 7/31/20-8/2/20) Range of lead concentration	N	4.9[2] ND-7.3	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Odor	N	1	units	N/A	3	Natural sources
pH	N	6.80	units		6.5-8.5	
Sodium[3]	N	5.57	ppm	N/A	N/A	Geology; Road Salt
Sulfate	N	6.66	ppm	N/A	250	Geology;
Zinc	N	5.7	ppb	N/A	5000	Naturally occurring, corrosion inhibitor
Disinfection Byproducts						
Chlorine (average) [daily samples] Range	N	0.9 0.4-1.2	ppm	MRDLG N/A	MRDL 4	Used in the disinfection and treatment of drinking water

FOOTNOTES-

1. The level presented represents the 90th percentile of 8 test sites. The action level for copper was not exceeded at any of the 8 sites tested.
2. The level presented represents the 90th percentile of 8 test sites. The action level for lead was not exceeded at any of the 8 sites tested.
3. Water containing more than 20 mg/l should not be consumed by persons on severely restricted sodium diets.

Non-Detects (ND) - laboratory analysis indicates that the constituent is not present.
Parts per million (ppm) or Milligrams per liter (mg/l) - one part per million corresponds to one minute in two years or a single penny in $10,000.
Parts per billion (ppb) or Micrograms per liter - one part per billion corresponds to one minute in 2,000 years, or a single penny in $10,000,000.
Picocuries per liter (pCi/L) - picocuries per liter is a measure of the radioactivity in water.
90th Percentile Value- The values reported for lead and copper represent the 90th percentile. A percentile is a value on a scale of 100 that indicates the percent.
Action Level - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Maximum Contaminant Level - The "Maximum Allowed" (MCL) is the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
Maximum Contaminant Level Goal - The "Goal" (MCLG) is the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination.
N/A-not applicable

Table 2

VILLAGE OF CORINTH DETECTED CONTAMINANTS
Public Water Supply Identification Number NY4500164

Contaminant	Violation Y/N	Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Inorganic Contaminants (samples from 3/2/20 unless otherwise noted)						
Chloride	N	27.6	ppm	N/A	250	Geology; Naturally occurring
Copper (samples from 6/6/18-6/11/18) Range of copper concentrations	N	0.73[1] 0.03-1.23	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits
Lead (samples from 6/6/18-6/11/18) Range of lead concentrations	N	4[2] ND-9	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Nitrate	N	0.235	ppm	N/A	10	Erosion of natural deposits
Odor	N	1	units	N/A	3	Naturally occurring
pH	N	7.21	units		6.5-8.5	
Sodium[3]	N	13.0	ppm	N/A	N/A	Geology
Sulfate	N	6.03	ppm	N/A	250	Geology
Zinc	N	12.9	ppb	N/A	5000	Galvanized pipe; corrosion inhibitor
Disinfection Byproducts						
Total Trihalomethanes 421 Mill Street (from 8/3/20)	N	4.45	ppb	0	80	By-product of drinking water chlorination
Total Trihalomethanes Barbara Mac D Drive (from 8/3/20)	N	1.70				
Total Trihalomethanes Eastern Ave WD (from 8/3/20)	N	9.54				
Total Trihalomethanes Beach Street (from 8/3/20)	N	2.53				
Haloacetic Acids 421 Mill Street (from 8/3/20)	N	1.62	ppb	N/A	60	By-product of drinking water chlorination

Haloacetic Acids Eastern Ave WD (from 8/3/20)	N	1.54				
Chlorine Residual (average) (range) (based on daily samples)	N	0.72 0.29-1.16	ppm	MRDLG N/A	MRDL 4	By-product of drinking water chlorination
Microbiological Contaminants						
Turbidity (sample from 7/19/20)	N 100%	1.30[4]	NTU	N/A	TT=5 TT=95% of samples <1.0 NTU	Soil runoff

FOOTNOTES-

1. The level presented represents the 90th percentile of 20 test sites. The action level for copper was not exceeded at any of the 20 sites tested in June 2018.
2. The level presented represents the 90th percentile of 20 test sites. The action level for lead was not exceeded at any of the 20 sites tested in June 2018.
3. Water containing more than 20 mg/l should not be consumed by persons on severely restricted sodium diets.
4. 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 1.30 NTU) for the year occurred on 7/19/20. The regulations require that 95% of the turbidity samples collected have measurements below 1.0 NTU for system with cartridge filtration.

Non-Detects (ND) - laboratory analysis indicates that the constituent is not present.
Parts per million (ppm) or Milligrams per liter (mg/l) - one part per million corresponds to one minute in two years or a single penny in $10,000.
Parts per billion (ppb) or Micrograms per liter - one part per billion corresponds to one minute in 2,000 years, or a single penny in $10,000,000.
Picocuries per liter (pCi/L) - picocuries per liter is a measure of the radioactivity in water.
Action Level - the concentration of a contaminant, which, if exceeded, triggers treatment, or other requirements, which a water system must follow.
90th Percentile Value- The values reported for lead and copper represent the 90th percentile. A percentile is a value on a scale of 100 that indicates the percent of a distribution that is equal to or below it. The 90th percentile is equal to or greater than 90% of the lead and copper values detected at your water system.
Maximum Contaminant Level - The "Maximum Allowed" (MCL) is the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
Maximum Contaminant Level Goal The "Goal" (MCLG) is the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health.
Locational Running Average (LRAA) - The LRA is calculated by taking the average of the four most recent samples collected at each individual site.
N/A-Not applicable

Appendix

New York State Sanitary Code Compliance Monitoring Requirements

VILLAGE OF CORINTH TEST RESULTS

Public Water Supply Identification Number NY4500164

CONTAMINANT	MONITORING FREQUENCY
Asbestos	1 sample every 9 years Sample from 8/3/20 **Non-Detect**
Antimony	Monitoring requirement is 1 sample every year Non-Detect Sample from 3/2/20
Arsenic	
Barium	
Beryllium	
Cadmium	
Chromium	
Cyanide	
Mercury	
Selenium	
Thallium	
Fluoride	
Nickel	
Silver	
Nitrate	
Color	Monitoring requirement is at State discretion Non-Detect 3/2/20
Iron	
Chloride	
Manganese	
Sodium	
Zinc	
Silver	
Sulfate	

CONTAMINANT	CONTAMINANT	MONITORING FREQUENCY
POC's (Volatile Organic Compounds)		
Benzene	Trans-1,3-Dichloropropene	Monitoring requirement is one sample every 3 years Non-Detect Sample from 3/2/20
Bromobenzene	Ethylbenzene	
Bromochloromethane	Hexachlorobutadiene	
Bromomethane	Isopropylbenzene	
N-Butylbenzene	p-Isopropyltoluene	
sec-Butylbenzene	Methylene Chloride	
Tert-Butylbenzene	n-Propylbenzene	
Carbon Tetrachloride	Styrene	
Chlorobenzene	1,1,1,2-Tetrachloroethane	
2-Chlorotoluene	1,1,2,2-Tetrachloroethane	
4-Chlorotoluene	Tetrachloroethene	
Dibromethane	Toluene	
1,2-Dichlorobenzene	1,2,3-Trichlorobenzene	
1,3-Dichlorobenzene	1,2,4-Trichlorobenzene	
1,4-Dichlorobenzene	1,1,1-Trichloroethane	
Dichlordifluoromethane	1,1,2-Trichloroethane	
1,1-Dichloroethane	Trichloroethene	
1,2-Dichloroethane	Trichlorofluoromethane	
1,1 Dichloroethene	1,2,3-Trichloropropane	
cis-1,2 Dichloroethene	1,2,4-Trimethylbenzene	
Trans-1,2-Dichloroethene	1,3,5-Trimethylbenzene	
1,2 Dichloropropane	m-Xylene	
1,3 Dichloropropane	o- Xylene	
2,2 Dichloropropane	p-Xylene	
1,1 Dichloropropene	Vinyl Chloride	
Cis-1,3-Dichloropropene	MTBE	
Total Coliform		Monitoring is 4 samples a month Non-Detect
E. coli		
Radiological Parameters		
Gross Alpha		Monitoring requirement is every 6 years 4/1/19
Radium 226, Radium 228		

Regulated & Unregulated Synthetic Organic Chemicals

Synthetic Organic Chemicals (Group I)	
Alachlor	Aldicarb
Aldicarb Sulfoxide	Aldicarb Sulfone
Atrazine	Carbofuran
Chlordane	Dibromochloropropane
2,4-D	Endrin

Synthetic Organic Chemicals (Group II)		
Aldrin	Benzo(a)pyrene	Monitoring requirement is one sample every 18 months
Butachlor	Carbaryl	
Dalapon	Di(2-ethylhexyl) adipate	
Di(2-ethylhexyl) pthalate	Dicamba	
Dieldrin	Dinoseb	

Ethylene Dibromide	Heptachlor	Diquat*	Endothall*	**Non-Detect** Sample from 10/5/20 ***State waiver does not require monitoring these compounds**
Lindane	Methoxyhlor	Glyphosate*	Hexachlorobenzene	
PCB's	Toxaphene	Hexachlorocyclopentadiene	3-Hydroxycarbofuran	
2,4,5-TP (Silvex)	1,4-Dioxane	Methomyl	Metolachlor	
PFOA	PFOS	Metribuzin	Oxamyl vydate	
		Pichloram	Propachlor	
		Simazine	2,3,7,8-TCDD (Dioxin)*	

Lake Luzerne Water District
PWSID# NY5600108
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 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, if any. The source water assessments provide resource managers with additional information for protecting source waters into the future.

The source water assessment has rated our water source as having an elevated susceptibility to microbiological contamination. While no significant potential sources of contamination were identified, with the exception of some low intensity residential land use, the wells are high yielding wells that draw from an unconfined aquifer. An unconfined aquifer is a shallow aquifer that occurs immediately below the ground surface and has no overlying protective layer for protection from potential sources of contamination. While the source water assessment rates our wells as being susceptible to microbials, please note that our water is disinfected to ensure that that the finished water delivered into your home meets New York State's drinking water standards for microbial contamination.

The county and state health departments 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 full Source Water Assessment, including a map of the assessment area, is available for review by contacting us at the number provided in this report.

Corinth Village
PWSID# NY4500164
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 source water assessment includes a susceptibility rating based on the risk posed by each potential source of contamination and how rapidly contaminants can move through the subsurface to the wells. The susceptibility of a water supply well to contamination is dependent upon both the presence of potential sources of contamination within the well's contributing area and the likelihood that the contamination can travel through the environment to reach the well. 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.

The source water assessment has rated our water source as having an elevated susceptibility to microbials and nitrates. These ratings are due primarily to close proximity of the wells to permitted discharge facilities (industrial/commercial facilities that discharge wastewater into the environment and are regulated by the state and/or federal government) and the associated industrial activity in the assessment area. In addition, the wells are located in an area which is prone to flooding. While the source water assessment rates our wells as being susceptible to microbials, please note that our water is disinfected to ensure that that the finished water delivered into your home meets New York State's drinking water standards for microbial contamination.

The county and state health departments 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 full Source Water Assessment, including a map of the assessment area, is available for review by contacting us at the number provided in this report.