

Annual Drinking Water Quality Report 2015

Latham Water District • 347 Old Niskayuna Road • Latham, NY 12110

(Public Water Supply ID# 100198)

American Water Works Association member since 1952

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INTRODUCTION

To comply with State and Federal regulations, Latham Water District is annually issuing a report describing the quality of your drinking water. The purpose of this report is to raise your awareness of drinking water and understanding of the need to protect our drinking water sources. Last year, your tap water met all State drinking water health standards. We are proud to report that our system did not exceed any maximum contaminant level or violate any other water quality standard. 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 to State standards.

If you have any questions about this report or your drinking water, please contact the Superintendent of the Division of Latham Water is John W. Frazer, Jr., P.E. at 518-783-2750. This report can also be found on our website – www.colonie.org/lathamwater. We want you to be informed about your drinking water and the public is invited to participate in the decisions that affect the Division of Latham Water. These decisions are made by the Town Board at their regularly scheduled meetings or at special public hearings. Town Board member Paul L. Rosano is Latham Water's liaison to the Board. Public notice of all meetings is printed in the Colonie Spotlight. Generally, Town Board meetings are held on the 2nd and 4th Thursdays of each month.

WHERE DOES OUR WATER COME FROM?

In general, the sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals can pick up substances resulting from the presence of animals or from human activities. Contaminants that may be present in source water include: microbial contaminants; inorganic contaminants; pesticides and herbicides; organic chemical contaminants; and radioactive contaminants. In order to ensure that tap water is safe to drink, the State and the EPA prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. The State Health Departments and the FDA's regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Latham's raw water sources are a blend of the Mohawk River and five (5) wells located on Onderdonk Avenue. The Stony Creek Reservoir continues to be utilized as an emergency raw water source.

The Stony Creek Reservoir is located in the Town of Clifton Park, NY and was not used in 2015 as a raw water source. Although there has been no recorded contamination of the Reservoir, potential sources can include highway runoff (de-icing chemicals and sand), residential lawn care runoff, agricultural runoff and accidental spills.

The wells are located on the treatment plant property and are used year-round. One of the wells is used at all times in an effort to "cycle" recharge to the groundwater table. Although there has been no recorded contamination of the wells, potential sources can include agricultural runoff, industrial discharges and accidental spills.

The quality of our sources before treatment is good and the treatment plant finishes the job by removing any solids, metals (primarily iron and manganese), color-producing compounds or other organic and inorganic compounds. At the treatment plant, we continuously monitor the clarity and disinfectant level to ensure the bacteriological safety of the water. Chemical treatment consists of oxidation, coagulation, chlorination and pH adjustment. Physical treatment consists of flocculation, settling and filtration.

SOURCE WATER ASSESSMENTS

The NYS DOH has completed a Source Water Assessment for the Mohawk River upstream of the Latham Water intake and the Stony Creek Reservoir. The assessments are summarized below. The assessments have identified potential contamination. It does not mean that the water delivered to your home is or will become unsafe to drink.

The assessment of the Mohawk River found that the amount of pasture in its watershed results in a potential for protozoa contamination. While there are many facilities present along the Mohawk that are permitted to discharge, they do not represent an important threat to source water quality.

The assessment of the Stony Creek Reservoir found that the amount of agricultural lands and the golf course in its watershed results in a potential for protozoa, phosphorus and pesticide contamination.

Latham's water treatment plant performs multi-level treatment to insure you receive safe drinking water. Additionally, as this annual report shows, your water is routinely monitored for a great number of potential contaminants.

FACTS AND FIGURES

The total water produced in 2015 was over 4.01 billion gallons. Our water system serves approximately 82,000 people through 24,398 service connections, virtually, all of this water is sold through metered connections. A small portion of the water produced by the treatment plant, however, is not billed to our customers. Unbilled water is used for treatment plant operations water main testing, fire hydrant flushing, firefighting, water main breaks, etc. We estimate this "unbilled" amount of water to be 10.5% of water produced. The daily average of water treated and pumped into the distribution system is 10,982,288 gallons per day. In 2015, customers were charged \$3.35 per 1,000 gallons of water for an average annual charge, per residential user, of \$263.70.

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, haloacetic acids, radiological and synthetic organic compounds. 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.

It should be noted that all drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800-426-4791) or the Albany County Health Department at 518-447-4620.

Latham Water District routinely tests your drinking water for numerous contaminants. Bacteriological and total coliform testing is performed a minimum of 80 times per month and routine physical and chemical testing is performed every day, sometimes as often as every 4 hours.

Turbidity and chlorine residual monitoring is performed continuously, using automated on-line measuring devices. Other contaminants tested for include: turbidity, inorganic compounds, synthetic and naturally occurring organic compounds, nitrate, lead and copper, volatile organic compounds, total trihalomethane and haloacetic acids. None of the compounds we analyzed for were detected in your drinking water above the maximum contaminant level as defined by the State drinking water standards.

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TABLE OF DETECTED CONTAMINANTS

CONTAMINANT	VIOLATION Yes/No	DATE OF SAMPLE	LEVEL DETECTED	AVG MAX/MIN RANGE	UNIT MEASUREMENT	REGULATORY LIMIT MCL, MRDL, AL OR TT	MCGL	LIKELY SOURCE OF CONTAMINATION
Microbiological Contaminants								
Distribution System Turbidity (1)	No	Daily Testing	0.19	Avg	NTU	5.0 (MCL)	N/A	Soil Run-Off.
			7.70	Max				
			0.05-7.7	Range				
Turbidity (1) Combined Filter Effluent High Sample From 10/15/15	No	Continuous	0.07	Avg	NTU	TT=95% Of Samples<=0.3 NTU	N/A	Soil Run-Off.
			0.04	Min				
			0.17	Max				
Total Coliform (2)	No	3-4 Days Per Week	No Positive Samples	0.08	N/A	Any Positive Sample	>5% Positive Samples In Any Mth	Naturally present in the environment.
Inorganic Contaminants								
Copper (3)	No	Sept 2015	0.11	Avg	mg/L	1.3 (AL)	1.3	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching.
			0.03-0.55	Range				
Lead (4)	No	Sept 2015	2	Avg	ug/L	15 (AL)	0	Corrosion of household plumbing systems; Erosion of natural deposits.
			<1.0-24	Range				
Sodium (5)	No	10/6/15	41.6		mg/L	See Note 5		Naturally occurring; Road salt; Water softeners; Animal waste.
Nitrate	No	10/6/15	0.7		mg/L	10.0 (MCL)	10.0	Run-off from fertilizer use; Erosion of natural deposits.
Color (range)	No	Daily	0-5	Range	Units	15 (MCL)	N/A	Color has no health effects. It's presence is aesthetically objectionable.
Chloride	No	Weekly	42.4	Avg	ppm	250.0 (MCL)	N/A	No health effects. Naturally occurring or indicative of road salt contamination.
			28.4-111	Range				
Hardness	No	Weekly	128.1	Avg	ppm	No MCL	N/A	No health effects. Naturally occurring minerals.
			104.6-175.8	Range				
Sulfate	No	10/6/15	68.0		mg/L	250 (MCL)	N/A	Geology.
Barium	No	10/6/2015	0.0276		mg/L	2.0 (MCL)	N/A	Discharge of drillings wastes; Discharge from metal refineries; Erosion of natural deposits.
Radiologicals								
Gross Alpha	No	Monthly On Raw Water	0.64	Avg	pCi/L	15.0 pCi/L	0	Decay of natural deposits and man-made emissions.
			0.25-4.0	Range				
Gross Beta (6)	No	Monthly On Raw Water	2.05	Avg	pCi/L	50.0 pCi/L	0	Decay of natural deposits and man-made emissions.
			0.60-3.3	Range				
Tritium	No	Monthly On Raw Water	47.28	Avg	pCi/L	20,000 pCi/L	0	Decay of natural deposits and man-made emissions.
			30-60	Range				
Disinfection Byproducts								
Total Trihalomethanes (7)	No	Quarterly 2/4/15; 5/6/15; 8/5/15; 11/4/15	59.7 - Highest Locational Running Annual Avg	Max	ug/L	80 ug/L	N/A	By-products of drinking water chlorination. TTHM's are formed when source water contains large amounts of organic matter.
			29.4-82.3 - Annual Range For All Locations	Range				
Total Haloacetic Acids (7)	No	Quarterly 2/4/15; 5/6/15; 8/5/15; 11/4/15	35.5 - Highest Locational Running Annual Avg	Max	ug/L	60 ug/L	N/A	By-products of drinking water chlorination.
			10.0-48.0 - Annual Range For All Locations	Range				
Total Organic Carbon (8)	No	Daily Testing	1.66	Avg	ppm	TT	N/A	Naturally present in the environment.
			1.08-2.69	Range				
Free Chlorine Residual @ Entry Point (9)	No	Continuous	2.01	Avg	mg/L	4.0 (MRDL)	N/A	Used in the disinfection and treatment of drinking water.
			1.05-2.4	Range				
Free Chlorine Residual Distribution System	No	5 Days Per Week	1.34	Avg	ppm	4.0 (MRDL)	N/A	A measurable residual is required by NYSDOH.
			0.05-2.3	Range				
Chlorine Dioxide Residual (range)	No	Daily Testing	0.03	Avg	mg/L	0.8 (MRDL)	N/A	By-product of drinking water disinfection at treatment plants using Chlorine Dioxide.
			<0.01-0.19	Range				
Chlorite	No	Daily Testing	0.27	Avg	mg/L	1.0 (MCL)	N/A	By-products of drinking water chlorination.
			0.05-0.63	Range				
Organics								
Total Glycol	No	Weekly During Airport Deicing	72	Avg	ug/L	1,000	N/A	Albany International Airport deicing operations.
			<50-360	Range				

Analysis performed by reviewed by ELAP ID# 10000

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NOTES:

1. 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. State regulations require that 95% of the combined filter effluent turbidity samples collected have measurements below 0.30 NTU. Distribution system turbidity is collected a minimum of five times a week. A distribution system turbidity violation occurs when the monthly average of the results of all distribution samples collected in any calendar month exceeds the MCL. Our average distribution system turbidity was 0.19 NTU with a single high turbidity measurement of 7.7 NTU. All levels recorded were well below the acceptable range allowed and did not constitute a treatment technique violation.
2. A violation occurs when more than 5% of the total coliform samples collected in a month are positive.
3. The level presented represents the 90th percentile of the sites tested. A percentile is a value on a scale of 100 that indicates the percent of a distribution that is equal to or below it. The 90th percentile is equal to or greater than 90% of the copper values detected at your water system. In this case, 30 samples were collected at your water system and the 90th percentile value was the fourth highest sample with a level of 0.20 mg/L.
4. The level presented represents the 90th percentile of the 30 samples collected. The action level for lead was exceeded at 1 of the 30 sites tested.
5. 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.
6. The State considers 50 pCi/L to be the level of concern for beta particles.
7. The level presented represents the maximum locational running annual average calculated from the samples collected.
8. Total Organic Carbon itself is not regulated, but its calculated removal and compliance ratio must equal or exceed performance requirements established by USEPA. All levels recorded were well below the acceptable range allowed and did not constitute a treatment technique violation.
9. Compliance is based on a running arithmetic average, computed quarterly, of monthly averages of all samples collected by the system. If the running annual average exceeds the MRDL, the system is in violation and must notify the public.

DEFINITIONS:

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

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLG's as feasible.

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG's 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. MRDLG's do not reflect the benefits of the use of disinfectants for control of microbial contaminants.

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

Nephelometric Turbidity Unit (NTU): A measure of the optical clarity of 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.

IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?

The results of Latham Water District's water quality testing shows that we were in compliance with all applicable State and Federal drinking water quality requirements. However, we are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards.

WHAT DOES THIS INFORMATION MEAN?

As you can see by the table, our system had no violations of the State Sanitary Code. We have learned through our testing that some contaminants have been detected however, these contaminants were detected below New York State requirements.

DO I NEED TO TAKE SPECIAL PRECAUTIONS?

Although our drinking water met or exceeded 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).

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:

- ◆ 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 firefighting 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.

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• Use your water meter to detect hidden leaks. Simply turn off all taps and water using appliances. Then check the meter after 15 minutes, if it moved, you have a leak.

Engineering for the rehabilitation began in April of 2016 with plans and specifications being made available to contractors for bid in the spring of 2016. Latham Water District anticipates that the rehabilitation will begin in the summer of 2016 and be completed by the fall of 2016.

2015 CAPITAL IMPROVEMENTS

◆ MOHAWK VIEW HIGH LIFT PUMP STATION

The Mohawk View High Lift Pump Station was constructed in 1964 and most of the mechanical and electrical components such as pumps, motors and electrical distribution equipment and control valves were near or beyond their expected useful life. Barton and Loguidice D.P.C. were awarded the engineering proposal to design and inspect construction of the new electrical and mechanical components. The project was bid in the fall of 2014. The general and electrical contracts were awarded to W.M. Schultz Construction and O'Connell Electric respectively. The work began in February of 2015 and was completed in the winter of 2015. Five new pumps and motors with state of the art electrical drives were installed and tested during the winter of 2015; all five surpassed expectations and will be used to pump water into our distribution system for years to come. Mechanical and electrical system upgrades will make this pump station more dependable and efficient as time passes and has already benefited the Town of Colonie by qualifying for an electrical efficiency refund of over \$70,000.

◆ LATHAM WATER DISTRICT SECURITY UPGRADE PROJECTS

In the early 2000s Latham Water District initiated a review of its vulnerabilities and began an ongoing effort to improve the security of the water system. One of the outcomes of this effort was a 2002 Vulnerability Assessment Report and its' update in 2007 to reflect improvements implemented to date and current needs. The firm of O'Brien and Gere Engineers was selected to develop plans and specifications for the first phase of our security upgrade project and that project was bid in the winter of 2014 with the general and electrical contracts awarded to Stephen Miller General Contractors and Brunswick Electric respectively. Work began in the spring of 2015 and continued through the winter of 2015 with substantial completion achieved in the winter of 2015. With the completion of this project and ongoing security evaluation we expect to provide safe and secure water system facilities and infrastructure into the future.

PLANNED CAPITAL IMPROVEMENTS FOR 2016

As part of our continued commitment to quality and service, the Division of Latham Water plans and implements a number of different projects each year. Construction of new water mains and tank rehabilitation are perhaps the most visible sign of our commitment. New water mains are designed to improve water quality flow and pressure within the distribution system. Increased levels of system reliability, fire protection and a reduction in unplanned shutdowns are added benefits as well. In 2016, we expect to complete the following planned capital improvement projects:

◆ RIVER ROAD HIGH LIFT PUMP STATION

The River Road High Lift Pump Station was constructed in 1987 and many of the mechanical components such as pumps and control valves are at or near their expected useful life. The Latham Water District issued a Request For Proposal for engineering services in 2015 to update the District's hydraulic model, develop a basis of design report recommending pump configurations that meet the District's hydraulic demands while maximizing its electrical savings, evaluate 3rd party electrical incentives such as NYSEDA or National Grid funding, and to develop plans and specifications for bidding. O'Brien and Gere Engineers (OBG) was awarded the engineering proposal. The project is currently under design and will be bid in the Spring of 2016. The work is expected to begin the Fall of 2016 and is expected to be completed by the Spring of 2017.

◆ OSBORNE ROAD 0.5 MILLION GALLON ELEVATED AND 2.2 MILLION GALLON WATER STORAGE TANK REHABILITATION

The Latham Water District issued a Request for Proposal for engineering services to prepare specifications for a complete rehabilitation of the Osborne Road 0.5 Million Gallon Elevated Water Storage Tank and the 2.2 Million Gallon Water Storage Tank. CT Male was awarded the engineering proposal.

◆ VISTA AND PARK AVENUE WATER MAIN REPLACEMENT PROJECT

The Latham Water District issued a Request for Proposal for engineering services in connection with our Vista Avenue and Park Avenue Water Main Replacement Project. This project will replace existing 6-inch mains along these streets that have shown a significant increase in water main breaks. Latham Water District will replace these mains with 8" ductile iron pipe improving reliability and the available fire flow to these areas of the water distribution system. CT Male was awarded the engineering proposal in the spring of 2015. The project originally included the replacement of approximately 1,300 feet of water main along Park Avenue from Clinton to Old Loudon Road and 700 feet of water main along Vista Avenue from Troy Schenectady Road to Oakland St. The project was put out to bid in the fall of 2015 and the bid prices exceeded the project budget. The project was rebid in January of 2016 with the base bid including the replacement of water main along Park Avenue and a bid alternate for the replacement of water main along Vista Avenue. The bids were received in February of 2016 and after reviewing the bids, the Town was only able to award the base bid for the Park Avenue portion of the project to stay within the approved budget. The base bid was awarded to Gallo Construction and Latham Water District anticipates that the rehabilitation will begin in April of 2016 and be completed by June of 2016.

ONLY TAP WATER DELIVERS

How often do you think about your tap water? If you're like most, probably not often. Tap water delivers so many things that no other water can deliver.

- It delivers public health.
- It delivers fire protection.
- It delivers economic development.
- It delivers quality of life

For more information go to

www.awwa.org and/or www.drinktap.org/consumerdnn

CLOSING

Latham Water District delivered safe water in 2015 with no water quality violations. We continually strive to improve our water quality by improving our treatment processes and by implementing capital improvement projects. This water supply statement is being prepared for our customers in accordance with New York State Public Health Law. Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail. This report is being sent to you by the Superintendent of the Division of Latham Water, John W. Frazer, Jr., and P. E. Any questions about this report (or the system in general) should be directed to him at 518-783-2750.