Annual Drinking Water Quality Report for 2015
Village of Fort Edward & Town of Fort Edward WD #2

118 Broadway, Fort Edward, NY 12828
Public Water Supply Identification Number NY5700119 & NY5730110

INTRODUCTION

To comply with State regulations, the Village of Fort Edward will be annually issuing 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. 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: *Mr. John Miller, Water Superintendent, Village of Fort Edward, 99 Reservoir Road, Fort Edward, NY 12828; Telephone (518) 792-0419.* 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 Village Board meetings. They are held on the 1st Monday of each month, 7:00 PM at the *Village Hall, 118 Broadway, Fort Edward, NY 12828*; Telephone *(518) 747-4023.*

WHERE DOES OUR WATER COME FROM?

The source of water for the Village of Fort Edward Water System consists of a watershed of roughly 720 acres. The watershed contains four (4) reservoirs, two (2) wells and three (3) spring collection boxes. Although all components of the water supply system are interconnected, they may be described as forming two distinct systems. The two reservoirs and two wells comprise one water system. The other system consists of two additional reservoirs and three spring collection boxes. The water from this second system is also pumped to the treatment plant. All the reservoirs in the watershed are fed either directly or indirectly by groundwater as well as surface runoff. In the early 1980's volatile organic compounds were discovered in one of the streams feeding the New Reservoir. Some of the compounds detected were trichloroethene and cis 1,2-dichloroethene. In order to remediate this problem a forced air stripper was constructed to remove any of the volatiles that may be present. The stripper removes volatile contaminants from water by contacting air and water to optimize transfer kinetics. We utilize a packed tower type stripper in which the water is pumped through the packing in the tower which increases the air to water ratio thus aerating the water and removing the volatile contaminants. The stripped water is returned to the stream feeding the New Reservoir and then into the water filtration facility. Volatile organic chemical samples are collected monthly to verify the air stripper is working properly. There have been no detected concentrations in the finished water for any of the 53 volatiles measured monthly. Copies of these reports may be obtained from the Village of Fort Edward.

The Village operates a state of the art water filtration facility capable of treating more than 1,250,000 gallons of water per day. The new facility is a DualSand™ system by Parkson Corporation. The DualSand system purifies water through the use of two continuously backwashed upflow sand filters in series. As raw water comes into the treatment facility it is chlorinated using sodium hypochlorite solution to kill bacteria and other microorganisms. Additionally, a small amount of coagulant (polyaluminum chloride- PCH180) is added at this stage of treatment to increase the removal of solids. Feed water is passed upwards through the first-stage, sand filter bed that is continuously cleaned. The coarse sand filters out larger, solid particles and keeps the sand filter clean. We also add sodium hydroxide for pH control of the finished water.

The water then flows over a weir to the second- stage, up-flow sand filter. The finer grain sand in this filter removes the smaller solids. After completing the second stage, 99% of the solids are removed. After filtration, sodium hydroxide is added to adjust the pH of the water and then chlorinated to prevent bacterial contamination.

With completion of this project the Village is able to store more than a million gallons of treated water, thus improving the ability to provide fire protection to Village residents.

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 and in some cases, radioactive material, and 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 EPA prescribe regulations, which limit the amount of certain contaminants in water, provided by public water systems. The State Health Department's and the FDA's regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

FACTS AND FIGURES

The Village provides water through approximately 1,325 residential services and approximately 12 industrial and commercial customers to a population of approximately 3,300 people. Fort Edward Water District #2 consists of approximately 34 residential services located on Rt. 4 across the Champlain Canal at the south end of the Village of Fort Edward is also supplied with water from the Fort Edward Water Treatment Plant. Our average daily demand is 287,671 gallons. Our single highest day was 813,000 gallons. The amount of water delivered to customers was 125,705,000 gallons. Metered sales accounted for 89,987,000 gallons. The ratio of water produced to the water billed averages 80%. Unmetered sales from filter backwashing and the municipal swimming pool contribute the amount of water not billed. Water used to flush mains, fight fires, and main breaks, old meters and leakage accounts for the remainder of that 20% not billed. *Industrial Customers-Monthly Billing* $2.75 per Thousand Gallons; *Residential Rates (Semi-Annual Billing)* 0-15,000 gallons-$50.00; over 15,000 gallons-$50.00 plus $2.80 for each 1,000 gallons thereafter; If the meter is broken or not working there will be a 40,000-gallon charge. Rates will be billed on a per unit basis (Multiple Dwellings).

ARE THERE CONTAMINANTS IN OUR DRINKING WATER?

In accordance with State regulations, the Village of Fort Edward 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 and the Fort Edward WD #2 does 1 coliform sample each month. The tables presented on pages 4 and 6 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 we 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 from the attached tables on pages 3 and 4, our water systems had no violations. We would like to note that our water is tested annually for sodium. Although there is no MCL for sodium there are several dietary warnings which are on page 4, footnote #4.

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.

IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?

During 2015, our system was in compliance with applicable State drinking water operating and monitoring requirements. We did not complete the certification for delivery of the 2014 Annual Water Quality Report and were issued a violation for this omission.

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 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, infants and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The Village of Fort Edward 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*

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 Village of Fort Edward 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

CAPITAL IMPROVEMENTS

There were no major capital improvements done in 2012.

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. Please call our office if you have questions.

TOWN OF FORT EDWARD WD #2 TABLE OF DETECTED CONTAMINANTS
Public Water Supply Identification Number NY5730110

Contaminant	Violation Y/N	Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Inorganic Contaminants						
Copper (Sample data from 8/31/15) Range of copper concentration	N	0.23[1] 0.03-0.27	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (Sample data from 8/31/15) Range of lead concentration	N	4 ND-7	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Disinfection Byproducts (sample from 8/3/15)						
Haloacetic Acids (HAA5)	N	27.8	ppb	N/A	60	By-product of drinking water chlorination
TTHM[Total Trihalomethanes]	N	42.1	ppb	N/A	80	By-product of drinking water chlorination

FOOTNOTES-

1. The level presented represents the 90th percentile of 5 test sites. The action level for copper was not exceeded at any of the 5 sites tested
2. The level presented represents the 90th percentile of 5 test sites. The action level for lead was not exceeded at any of the 5 sites tested

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. .
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
Action Level - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Treatment 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.
N/A-not applicable

VILLAGE OF FORT EDWARD TABLE OF DETECTED CONTAMINANTS Public Water Supply Identification Number NY5700119						
Contaminant	Violation Y/N	Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Microbiological Contaminants						
Turbidity [1] (Highest turbidity sample from 9/23/15)	N	0.11 100%	NTU	N/A	TT=1 NTU TT= 95% samples < 0.3	Soil runoff
Inorganic Contaminants (Sample data from 2/3/15 unless otherwise noted)						
Barium	N	6.1	ppb	5000	5000	Erosion of natural deposits
Chloride	N	60.4	ppm	N/A	250	Naturally occurring or indicative of road salt contamination.
Copper (Sample data from 8/28/15-9/1/15) Range of copper concentration	N	0.24[2] 0.03-0.41	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits;
Lead (Sample data from 8/28/15-9/1/15) Range of lead concentration	N	2[3] ND-5	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Nitrate (as Nitrogen)	N	3.93	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
pH	N	6.87	units		6.5-8.5	Geology; Naturally occurring
Sodium[4]	N	38	ppm	N/A	N/A	Naturally occurring; Road salt; Water softeners; Animal waste
Sulfate	N	10.6	ppm	N/A	250	Naturally occurring.
Stage 2 Disinfection Byproducts (Quarterly samples from 2/3/15, 5/4/15, 8/3/15 & 11/2/15)						
Haloacetic Acids (HAA5)[5] Range of Values for HAA5	N	18.6 8.2-30	ppb	N/A	60	By-product of drinking water disinfection
TTHM[Total Trihalomethanes](Average)[5] Range of values for Total Trihalomethanes	N	28.1 15.8-42.6	ppb	0	80	By-product of drinking water chlorination
Chlorine (average) [daily samples] Range	N	1.20 0.98-1.35	ppm	MRDLG N/A	MRDL 4	Used in the treatment and disinfection of drinking water
Total Organic Carbon (quarterly samples from 2/3/15, 5/4/15, 8/3/15 & 11/2/15)						
Raw Water (range of values) Treated Water (range of values)	N	1.04-1.83 0.67-0.98	ppm	NA	TT	Organic material both natural and man made; Organic pollutants, decaying vegetation.
Radiologic Contaminants						
Gross Alpha particles	N	2.62	pCi/L	0	15	Erosion of natural deposits

FOOTNOTES-

1. Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. Level detected represents the highest level detected. State regulations require that entry point turbidity must always be below 1.0 NTU. The .regulations also require that 95% of the turbidity samples collected have measurements below 0.3 NTU. Distribution system turbidity performed 5 times a week with 0.25 NTU being the average level detected.
2. 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.
3. 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.
4. Water containing more than 20 mg/l should not be consumed by persons on severely restricted sodium diet.
5. The average is based on a Locational Running Annual average. The average shown represents the highest LRAA for the 4 quarters in 2015. The 3rd quarter 2014 THM sample was collected but not counted in the average due to an error in the laboratory analyses. The highest HAA5 LRAA was in the 4th quarter of 2015 and The highest THM LRAA was in the 1st quarter of 2015.

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.
Nephelometric Turbidity Unit (NTU) - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
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.
Action Level - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Treatment Technique (TT) -A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.
Maximum Contaminant Level - The "Maximum Allowed" (MCL) is the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
Maximum Contaminant Level Goal - The "Goal" (MCLG) is the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water. 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.
Locational Running Annual Average (LRA): The LRA is calculated by taking the average of the four most recent samples collected at each individual site.
N/A-not applicable

Appendix A

New York State Sanitary Code Compliance Monitoring Requirements- Compounds Analyzed that were Below Limits of Detection

VILLAGE OF FORT EDWARD TEST RESULTS
Public Water Supply Identification Number NY5700119

CONTAMINANT	MONITORING FREQUENCY	CONTAMINANT	CONTAMINANT	MONITORING FREQUENCY
Asbestos	Every 9 years Sample from 5/2/11 No Asbestos pipe	**POC's (Volatile Organic Compounds)**		
		Benzene	Trans-1,3-Dichloropropene	Monitoring requirement is one sample annually Sample from 2/3/15 **Non-Detect** Monthly samples collected from the raw water after the air stripper Jan-Dec 2015
Antimony	Monitoring requirement is 1 sample annually Sample from 2/3/2015 **Non-Detect**	Bromobenzene	Ethylbenzene	
Arsenic		Bromochloromethane	Hexachlorobutadiene	
Beryllium		Bromomethane	Isopropylbenzene	
Cadmium		N-Butylbenzene	p-Isopropyltoluene	
Chromium		sec-Butylbenzene	Methylene Chloride	
Cyanide		Tert-Butylbenzene	n-Propylbenzene	
Fluoride		Carbon Tetrachloride	Styrene	
Mercury		Chlorobenzene	1,1,1,2-Tetrachloroethane	
Nickel		2-Chlorotoluene	1,1,2,2-Tetrachloroethane	
Selenium		4-Chlorotoluene	Tetrachloroethene	
Silver		Dibromethane	Toluene	
Thallium		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	
Color	Monitoring requirement is at State discretion Sample from 2/3/2015 **Non-Detect**	cis-1,2 Dichloroethene	1,2,4-Trimethylbenzene	
Iron		Trans-1,2-Dichloroethene	1,3,5-Trimethylbenzene	
Manganese		1,2 Dichloropropane	m-Xylene	
Odor		1,3 Dichloropropane	o- Xylene	
Zinc		2,2 Dichloropropane	p-Xylene	
		1,1 Dichloropropene	Vinyl Chloride	
		Cis-1,3-Dichloropropene	MTBE	
		Total Coliform / E. coli		Monitoring is 4 samples/ month **Non-Detect**
		Radiological Parameters		
		Gross Alpha	Samples from 12/10/14	Monitoring is 1 sample every 6-9 years **Non-Detect**
		Radium 226 & 228	Samples from 12/10/14	
Synthetic Organic Chemicals				
Synthetic Organic Chemicals (Group I)		Synthetic Organic Chemicals (Group II)		
Alachlor	Aldicarb	Aldrin	Benzo(a)pyrene	Monitoring requirement is 1 sample every 18 months; Sample from 11/3/14 **Non-Detect** ***State waiver does not require monitoring these compounds**
Aldicarb Sulfoxide	Aldicarb Sulfone	Butachlor	Carbaryl	
Atrazine	Carbofuran	Dalapon	Di(2-ethylhexyl)adipate	
Chlordane	Dibromochloropropane	Di(2-ethylhexyl)pthalate	Dicamba	
2,4-D	Endrin	Dieldrin	Dinoseb	
Ethylene Dibromide	Heptachlor	Diquat*	Endothall*	
Lindane	Methoxyhlor	Glyphosate*	Hexachlorobenzene	
PCB's	Toxaphene	Hexachlorocyclopentadiene	3-Hydroxycarbofuran	
2,4,5-TP (Silvex)		Methomyl	Metolachlor	
		Metribuzin	Oxamyl vydate	
		Pichloram	Propachlor	
		Simazine	2,3,7,8-TCDD (Dioxin)*	