Annual Water Quality Report for 2013

Village of Scotia
4 Ten Broeck Street, Scotia, NY 12302
(Public Water Supply Identification Number NY4600071)

INTRODUCTION

To comply with New York State regulations the Village of Scotia issues an annual report describing the quality of your drinking water. The purpose of this report is to inform you about your drinking water and increase awareness of the importance of protecting our drinking water sources. Last year, your drinking water met all New York State drinking water health standards. 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 residents with a safe and dependable supply of drinking water. We want you to understand the efforts we take to continually improve the water treatment process and protect our water resources. If you have any questions concerning this report or your drinking water please contact: *Andrew Kohout, Superintendent of Public Works, 4 Zoar Court, Scotia, NY 12302; Telephone (518) 393-2159.* We want you to be informed about your drinking water. If you would like to learn more, please call the above referenced telephone number.

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 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.

The Village of Scotia draws its water from the Great Flats Aquifer which is sometimes referred to as the Schenectady Aquifer. Groundwater or well water is stored below the surface of the earth in deep porous rocks called "aquifers." The water 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. The Village is served by four drilled wells with a total capacity of 2 million gallons per day. Treatment of the raw water produced by the wells consists of gas chlorination, which is used for disinfection to protect against contamination from harmful bacteria and other organism. Additionally, fluoride is added at low levels to protect teeth. After treatment the water is pumped directly into the Village distribution system. Any excess water goes to a 2.4 million gallon underground concrete reservoir on Spring Road. The reservoir allows us 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. 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

Our water system serves approximately 12,800 people through 3,850 service connections. The total water produced in 2013 was 456,434,000 gallons. Our average daily demand was 1,250,504 gallons per day. Our single highest day was 1,658,000 gallons. A new water meter system was just installed in 2013, therefore the amount of water lost or un-accounted for cannot be calculated at this time. A more accurate number can be calculated next year once we have collected more consumption data. Effective July 1, 2013 water customers living in the Village of Scotia were charged a minimum bill of $113.34 for 6,000 cf of water. For water customers living outside the Village of Scotia, the minimum bill was $154.14 for 6,000 cf of water. A detailed water user's rate schedule is available at the Village of Scotia Department of Public Works, 4 Zoar Court, Scotia, NY 12302.

ARE THERE CONTAMINANTS IN OUR DRINKING WATER?

In accordance with State regulations, the Village of Scotia 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, haloacetic acids, trihalomethanes and synthetic organic contaminants. In addition, each month we test 10 samples for coliform bacteria. The table presented below depicts 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 Schenectady County Health Department at (518) 386-2818.

WHAT DOES THIS INFORMATION MEAN?

As you can see by the table, our system had no violations. We have learned through our monitoring and testing that some contaminants 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 2013, our system was in compliance with applicable New York State drinking water operating, monitoring and reporting 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 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 Village of Scotia 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 ON FLUORIDE ADDITION

Our system is one of the many drinking water systems in New York State that provides drinking water with a controlled, low level of fluoride for consumer dental health protection. According to the United States Centers for Disease Control, fluoride is very effective in preventing cavities when present in drinking water at a properly controlled level. To ensure that the fluoride supplement in your water provides optimal dental protection, we monitor fluoride levels on a daily basis to make sure fluoride is maintained at a target level of 1.0 mg/l During 2013 monitoring showed that fluoride levels in your water were within 0.2 mg/l of the target level for 90% of the time. None of the monitoring results showed fluoride at levels that approach the 2.2 mg/l MCL for fluoride.

WHY SAVE WATER AND HOW TO AVOID WASTING IT?

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

- *Repairing all leaks in your plumbing system; leaking toilets can waste 100 gallons per day*
- *Watering your lawn sparingly in the early morning or in the late evening*
- *Doing only full loads of wash and dishes*
- *Washing your car with a bucket and hose with a nozzle*

- *Not cutting the lawn too short; longer grass saves water.*
- *Using water saving showerheads*

You can use your water meter to detect hidden leaks. Simply turn off taps and water using appliances; then check the meter after 15 minutes; if it moves, you have a leak.

SYSTEM IMPROVEMENTS

During 2013 the following improvements were made to the water system:

- Well Pump #3 was removed for servicing. The pump and column will be replaced. The motor will be serviced and re-rated to use less energy. A soft starter will be installed to also save energy. Well #3 was TV'd and found to be in good condition. The motor and pump will be re-installed in the spring of 2014.
- All water meters were replaced with new meters utilizing AMR (drive-by) reading technology.
- All municipal owned building had water meters installed.
- All master meters at the water pump station were replaced
- A permanent leak detection system was also installed.

Future projects include energy saving upgrades at the water pump station as well as replacing several old fire hydrants that are prone to leaking.

CLOSING

Thank you for allowing us to provide your family with quality water this past year. 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.

Scotia Village
NY4600071
Source Water Assessment Summary

The NYSDOH 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. The section of the report entitled, "Are there contaminants in our drinking water?" provides a list of the contaminants that have been detected.

As mentioned earlier in this report, our drinking water is derived from 4 drilled wells. The source water assessment has rated these wells as having an elevated susceptibility. In addition, the wells draw from an unconfined aquifer and the overlying soils are *not* known to provide adequate protection from potential contamination.

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.

While the source water assessment rates our well(s) as being susceptible to microbials, please note that our water is disinfected to ensure that the finished water delivered into your home meets New York State's drinking water standards for microbial contamination.

The Village of Scotia recognizes the importance of watershed protection by implementing Watershed Rules and Regulations along with zoning restrictions.

VILLAGE OF SCOTIA TABLE OF DETECTED CONTAMINANTS Public Water Supply Identification Number NY4600071						
Contaminant	Violation Y/N	Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Inorganic Contaminants (sample data from 10/14/11 unless otherwise noted)						
Barium	N	28	ppb	2000	2000	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Chloride (sample from 8/19/13)	N	93	ppm	N/A	250	Naturally occurring or indicative of road salt contamination.
Copper (samples from 9/15/11-9/19/11) Range of copper concentrations	N	0.19[1] 0.02-0.34	ppm	1.3	AL=1.3	Corrosion of household plumbing systems
Fluoride	N	0..81	ppm	N/A	2.2	Water additive which promotes strong teeth
Lead (samples from 9/15/11-9/19/11) Range of lead concentrations	N	14[2] 1-16	ppb	0	AL=15	Corrosion of household plumbing systems
Nickel	N	2.3	ppb	N/A	100	Discharge from steel/metal factories
Nitrate (as Nitrogen) (sample from 8/19/13)	N	1.2	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Odor	N	1	units	N/A	3	Natural sources
pH (sample from 8/19/13)	N	7.5	units		6.5-8.5	
Sodium[3] (sample from 8/19/13)	N	62.8	ppm	N/A	N/A	Naturally occurring; Road salt; Water softeners; Animal waste.
Sulfate (sample from 8/19/13)	N	20	ppm	N/A	250	Geology;
Zinc	N	20	ppb	N/A	5000	Galvanized pipe; **corrosion inhibitor**
Disinfection Byproducts (samples from 8/9/13)						
Chlorine Residual (average) daily samples range	N	0.51 0.49-0.55	ppm	MRDLG N/A	MRDL 4	Used in the treatment and disinfection of drinking water
Total Trihalomethanes [TTHM]	N	9.5	ppb	0	80	By-product of drinking water chlorination

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
2. The level presented represents the 90th percentile of 20 test sites. The action level for lead was exceeded at 2 of the 20 sites tested
3. Water containing more than 20 ppm 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.
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.
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

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

VILLAGE OF SCOTIA TEST RESULTS PUBLIC WATER SUPPLY IDENTIFICATION NUMBER NY4600071					
CONTAMINANT	MONITORING FREQUENCY		CONTAMINANT	CONTAMINANT	MONITORING FREQUENCY
Asbestos	No Asbestos Pipe No Monitoring Required		**POC'S (VOLATILE ORGANIC COMPOUNDS)**		
			Benzene	Trans-1,3-Dichloropropene	Monitoring requirement is one sample annually Sample results from 8/19/13 **NON DETECT**
Antimony	Monitoring requirement is one sample every 3 years Sample results from 10/14/11 **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	
Mercury			Carbon Tetrachloride	Styrene	
Selenium			Chlorobenzene	1,1,1,2-Tetrachloroethane	
Thalium			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	
	Monitoring requirement is at State discretion Sample results from 8/19/13 **NON DETECT**		1,2-Dichloroethane	Trichlorofluoromethane	
Color			1,1 Dichloroethene	1,2,3-Trichloropropane	
Iron			cis-1,2 Dichloroethene	1,2,4-Trimethylbenzene	
Manganese			Trans-1,2-Dichloroethene	1,3,5-Trimethylbenzene	
Silver			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	
			Radiological Parameters		
			Gross Alpha	samples 4/20/07 & 8/2/07	Gross Alpa & Radium 226 & 228 every 9 years
			Radium 226 & 228	samples 4/20/07 & 8/2/07	
Synthetic Organic Chemicals					
Synthetic Organic Chemicals (Group I)			Synthetic Organic Chemicals (Group II)		
Alachlor	Aldicarb		Aldrin	Benzo(a)pyrene	Monitoring requirement is every 18 months **NON DETECT** Sample 5/20/13 ***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)*	