

Annual Water Quality Report for 2009
Village of Scotia
4 Ten Broeck Street, Scotia, NY 12302
(Public Water Supply Identification Number NY4600071)

INTRODUCTION

To comply with State regulations, the Village of Scotia, 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. Jeffrey Stuart, Superintendent of Public Works, Village of Scotia Department of Public Works, 4 Zoar Court, Scotia, NY 12302; Telephone (518) 393-2159.* We want you to be informed about your drinking water.

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 a ground water source. Our water source is 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, we add fluoride at low levels to protect teeth. After treatment the water is pumped directly into the Village distribution system. Any excess water goes to our Spring Road underground concrete vault reservoir which has a capacity of 2.4 million gallons. This allows us to meet consumer demand and to 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 10,000 people through 3,000 service connections. The total water produced in 2009 was 430,174,000 gallons. Our "average daily demand" was 1,178,559 gallons per day. Our single highest day was 1,623,000 gallons. Effective July 1, 2009 water customers in the Village of Scotia were charged \$113.34 for the first 6,000 cubic feet (cf) consumed. Those who exceed 6000 cf are additionally charged \$15.11 per thousand gallons for consumption between 6,001-18,000 cf. For water customers outside the Village of Scotia, the minimum charge for the first 6,000 cf was \$154.14. Those residents outside the Village are additionally charged \$20.54 per thousand gallons for consumption between 6,001-18,000 cf. For users inside the Village and outside the Village who exceed 18,000 cf, additional charges are applied on a graduated basis. A complete detailed water user's rate schedule is available from the Village of Scotia Clerk's Office, 4 North Ten Broeck Street, 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, and synthetic organic contaminants. In addition, we test 10 samples for coliform bacteria each month. 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 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 two 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 2009, our system was in compliance with applicable State drinking water monitoring and reporting requirements.

DO I NEED TO TAKE SPECIAL PRECAUTIONS?

Some people may be more vulnerable to disease causing microorganisms or pathogens in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice 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 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. Systems that purchase fluoridated water may want to add: Fluoride is added to your water by the Village of Scotia before it is delivered to us. According to the United States Centers for Disease Control, fluoride is very effective in preventing cavities when present in drinking water at an optimal range from 0.8 to 1.2 mg/l (parts per million). To ensure that the fluoride supplement in your water provides optimal dental protection, the State Department of Health requires that we monitor fluoride levels on a daily basis. During 2009 monitoring showed fluoride levels in your water were in the optimal range 100 % 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. 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 reduces some of the costs associated with treating your water.*
- ◆ *Saving water reduces the cost of energy required to pump water. Both of these items directly affect your water rates.*
- ◆ *Saving water lessens the strain on the water system during a dry spell or drought, helping to avoid water use restrictions so that essential fire fighting 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:

- ◆ *Repairing all leaks in your plumbing system.*

- ◆ *Check your toilet for leaks by putting a few drops of food coloring in the tank, watch for a few minutes to see if the color shows up in the bowl. Leaking toilets can waste up to 100 gallons per day or more than 30,000 gallons a year.*
- ◆ *Check every faucet in your home for leaks. Just a slow drip can waste 15-20 gallons per day or 6,000 gallons per year.*
- ◆ *Watering your lawn 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.*
- ◆ *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 2009, no significant changes were made to the water system. No system improvements or modifications are planned for 2010.

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 5/12/08 unless otherwise noted)						
Chloride	N	76	ppm	N/A	250	Naturally occurring or indicative of road salt contamination.
Copper (samples from 8/20/08- 8/27/08)	N	0.12 ¹	ppm	1.3	AL=1.3	Corrosion of household plumbing systems
Range of copper concentrations		ND-0.15				
Fluoride(average of monthly samples) range of samples	N	0.9 0.6-1.0	ppm	N/A	2.2	Water additive which promotes strong teeth
Lead (samples from 8/20/08- 8/27/08) Range of lead concentrations	N	4 ² ND-9	ppb	0	AL=15	Corrosion of household plumbing systems
Manganese	N	10	ppb	N/A	300	Geology; Naturally occurring
Nickel	N	2.5	ppb	N/A	100	Discharge from steel/metal factories
Nitrate (as Nitrogen) – sample from 05/07/09	N	0.5	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
pH	N	7.4	units		6.5-8.5	
Sodium ³	N	40.3	ppm	N/A	N/A	Naturally occurring; Road salt; Water softeners; Animal waste.
Sulfate	N	18	ppm	N/A	250	Geology;
Zinc	N	30	ppb	N/A	5000	Galvanized pipe; corrosion inhibitor
Disinfection Byproducts						
Chlorine Residual (average) daily samples	N	0.51	ppm	MRDLG	MRDL	Used in the treatment and disinfection of drinking water
Range		0.49-0.55		N/A	4	

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 not exceeded at any of the 20 sites tested
3. Water containing more than 20 mg/l should not be consumed by persons on severely restricted sodium diets.
4. The average is based on a running annual average

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

