City of Mechanicville Annual Drinking Water Quality Report for 2005

36 North Main Street, Mechanicville, NY 12118
(Public Water Supply Identification Number NY4500166)

INTRODUCTION

To comply with State regulations, the City of Mechanicville, 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. We are very pleased to provide you with this year's Annual Water Quality Report. Last year, we conducted tests for over 80 contaminants. We detected 1 of those contaminants at a level higher than the State allows. As we told you at the time, our water temporarily exceeded a drinking water standard and we modified our treatment process to rectify this problem. This report is 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 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 Zullo; Water Superintendent of the Water Treatment Plant, City of Mechanicville Water Department, 33 George Thompson Road, Mechanicville, NY 12118; Telephone (518) 664-3751, Monday – Friday between the hours of 6:00 AM and 2:00 PM.* We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled meetings. They are held on the 1 st and 3rd Wednesday of each month, 7:00 PM at the Mechanicville Senior Citizen Center, 180 North Main Street, Mechanicville, NY 12118; telephone number (518) 664-9884.

WHERE DOES OUR WATER COME FROM?

The City of Mechanicville operates a surface water filtration plant. Two reservoirs feed this system: The Mechanicville Reservoir, located in Luther Woods has a storage capacity of 65 million gallons and is the primary source of water; The Terminal Reservoir, located approximately one mile downstream at George Thompson Road and the Treatment Plant has a 2.5 million gallon storage capacity. The Mechanicville Water Treatment Plant is a conventional treatment facility. The treatment process at Mechanicville consists of coagulation using polyaluminum chloride to cause small particles to stick together when the water is mixed, making larger heavier particles; sedimentation allows the newly formed larger particles to settle out naturally; rapid sand filtration removes smaller particles by trapping them in sand filters; and post chlorination to protect against contamination from harmful bacteria and other organisms. Finished water is pumped into the distribution system, a clearwell and two steel storage tanks with a combined capacity of 2.5 million gallons to meet consumer demand and to provide adequate fire protection.

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

Water is served through approximately 1,350 residential services to a population of approximately 8,000 persons. Water is also supplied to people in the Towns of Stillwater, Schaghticoke and Halfmoon, including one industrial customer in the Town of Halfmoon. Our average daily demand is 0.97 million gallons. Our single highest day was 1.38 million gallons. The total water produced in 2005 was 352,810,000 gallons. The amount of water delivered to customers was 246,967,000 gallons. The amount of water lost was 105,843,000 gallons or 30%. All services are metered. The ratio of water produced to the water billed averages 70.1%. Filter backwashing (cleaning) at the water treatment plant accounts for 14 % of the lost water. Water used to flush mains, fight fires and leakage accounts for the remaining 12.2%. The City of Mechanicville bills its customers semi-annually for the periods April through September and October through March. The residential water rate for those in the district is $2.34 per 100 cubic feet (cf) or $3.13 per 1000 gallons outside districts (Towns of Schaghticoke, Halfmoon and Stillwater) are billed at $4.20 per 100 cubic feet or $5.62 per 1000 gallons. Industrial customers are billed at $1.76 for the first 500,000 cubic feet then $1.52 after that. Industrial customers are billed quarterly.

ARE THERE CONTAMINANTS IN OUR DRINKING WATER?

In accordance with State regulations, the City of Mechanicville routinely monitors your drinking water for numerous contaminants. We test your drinking water for inorganic contaminants, lead and copper, nitrate, volatile organic contaminants, and synthetic organic contaminants and disinfection byproducts. We also sample for microbiological contaminants monthly. 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 New York State Department of Health Glens Falls District Office at (518) 793-3893.

CITY OF MECHANICVILLE TEST RESULTS
Public Water Supply Identification Number NY4500166

Contaminant	Violation Y/N	Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Microbiological Contaminants						
Turbidity [1] (sample from 6/27/2005)	N	0.30 100%	NTU	N/A	TT=1 NTU TT=95% samples < 0.3	Soil runoff
Total Coliform (samples from 9/18/05)	N	1 positive sample	N/A	0	Any positive sample	Naturally present in the enviroment
Total Coliform (samples from 10/19/05)[7]	Y	2 positive samples				
Inorganic Contaminants (samples from 2/23/05 unless otherwise noted)						
Barium	N	13	ppb	2000	2000	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chloride	N	20	ppm	N/A	250	Geology; Naturally occurring
Copper (data from 8/05) Range of copper concentrations	N	610[2] 40-1240	ppb	1300	AL=1300	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (data from 8/05) Range of lead concentrations	N	6[2] ND-14	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Odor	N	1	units	N/A	3	Organic or inorganic pollutants originating from municipal and industrial waste discharges: natural sources
pH	N	7.3	units		6.5-8.5	
Sodium[4]	N	8.5	ppm	N/A	N/A	Geology; Road Salt
Sulfate	N	14	ppm	N/A	250	Geology
Zinc	N	20	ppb	N/A	5000	Galvanized pipe; **corrosion inhibitor**
Disinfection Byproducts (Quarterly samples from 2/22/05, 5/27/05, 8/18/05 and11/18/05)						
Haloacetic Acids (HAA5)[3] Range of values for HAA5	N	37.5 14-55.5	ppb	N/A	60	By-product of drinking water chlorination.
TTHM[Total Trihalomethanes](Average)[5] Range of values for Total Trihalomethanes	N	60 24.66—90.7	ppb	0	80	By-product of drinking water chlorination
Chlorine Residual (average) range	N	1.68 1.12-2.33	ppm	MRDLG N/A	MRDL 4	Used in the treatment and disinfection of drinking water
Total Organic Carbon[6] (monthly samples from 2005)						
Raw Water Treated Water	N	2.9-7.0 1.6-3.2	ppm	NA	TT	Organic material both natural and man made; Organic pollutants, decaying vegetation.

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. Distribution system turbidity performed 5 times a week with 0.16 NTU being highest level detected and 0.11-0.45 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 diets; Water containing more than 270 mg/l should not be consumed by persons on moderately restricted sodium diets.
5. The average is based on a running annual average
6. The Interim Enhanced Surface Water Treatment Rule (IESWTR) requires monitoring of raw and finished water Total Organic Carbon (TOC). Depending on the raw water alkalinity value, proper water treatment should remove between 15% to 35% of the raw water TOC thus reducing the amount of disinfection byproducts produced
7. A violation occurs at systems collecting less than 40 samples per month when two or more samples are total coliform positive in one month. Coliform are bacteria that are naturally present in the environment and are used as an indicator that other, potentially –harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.

WHAT DOES THIS INFORMATION MEAN?

As you can see by the table on page 2, we had an MCL violation for total coliform. *During our October monitoring, two samples showed the presence of total coliform but not E. coli. We increased the amount of chlorine to the distribution system to correct the problem. Subsequent repeat samples on 10/20/05 were all coliform negative. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems. The presence of coliform in two samples for the month of October was a violation of the MCL for total coliform.*

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 2005, our system was in compliance with applicable 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).

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 has been completed by NYSDOH and attached to this report.

WATER CONSERVATION TIPS

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

- *Use water saving showerheads*
- *Repair all leaks in your plumbing system*
- *Water your lawn sparingly early morning or late evening*
- *Do only full loads of wash and dishes*
- *Wash your car with a bucket and hose with a nozzle*
- *Don't cut the lawn too short; longer grass saves water*

CAPITAL IMPROVEMENTS

The following improvements were made to the water system in 2005:

- Replaced 12 inch valve at Saratoga and Viall Ave.
- Replaced a 4 inch valve at Round Lake and Viall Ave.
- Installed a new 12 inch valve at Vial Ave. which will enable us to isolate water lines and continue water service and during watermain breaks.
- Continued construction of a new water filtration plant with completion expected in March 2006.

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. You will be informed of system improvements in future Annual Water Quality Reports. 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 question

Appendix A

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

CITY OF MECHANICVILLE TEST RESULTS

Public Water Supply Identification Number NY4500166

CONTAMINANT	MONITORING FREQUENCY	CONTAMINANT	CONTAMINANT	MONITORING FREQUENCY
Asbestos	Every 9 years **Waiver from monitoring** No asbestos pipe	**POC's (Volatile Organic Compounds)**		
		Benzene	Trans-1,3-Dichloropropene	Monitoring requirement is one sample annually. Sample from 2/23/05 **Non-Detect**
Antimony	Monitoring requirement is 1 sample annually Sample from 2/28/05 **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	
Nickel		Carbon Tetrachloride	Styrene	
Mercury		Chlorobenzene	1,1,1,2-Tetrachloroethane	
Selenium		2-Chlorotoluene	1,1,2,2-Tetrachloroethane	
Silver		4-Chlorotoluene	Tetrachloroethene	
Thalium		Dibromethane	Toluene	
Fluoride		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	
Color	Monitoring requirement is at State discretion Sample from 2/28/05 **Non-Detect**	1,2-Dichloroethane	Trichlorofluoromethane	
Iron		1,1 Dichloroethene	1,2,3-Trichloropropane	
Manganese		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	Methyl Tert Butyl Ether	
		Total Coliform / E. coli		Monitoring is 9 samples/ month **Non-Detect**
Turbidity Entry Point	See test results table footnotes	**Radiological Parameters**		
Turbidity Distribution System	See test results table footnotes	Gross Alpa/Beta particle activity		Monitoring is one sample every 4 years Sample from 2001 **Non-Detect**
		Radium 226 & 228	N/A	

Regulated & Unregulated 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 Sample from 12/8/05 **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)*	

Mechanicville City
PWSID NY4500166
AWQR SWAP Summary

The NYS DOH has evaluated this Public Water System's (PWS) susceptibility to contamination under the Source Water Assessment Program (SWAP), and their findings are summarized in the paragraph below. It is important to stress that these assessments were created using available information and only estimate the potential for source water contamination. Elevated susceptibility ratings do not mean that source water contamination has or will occur for this PWS. This PWS provides treatment and regular monitoring to ensure the water delivered to consumers meets all applicable standards.

This assessment found an elevated susceptibility to contamination for this source of drinking water. The amount of agricultural lands in the assessment area results in elevated potential for protozoa and pesticides contamination. However, there is reason to believe that land cover data may over estimate the percentage of pasture in the assessment area. No permitted discharges are found in the assessment area.

There are no noteworthy contamination threats associated with other discrete contaminant sources. Finally, it should be noted that hydrologic characteristics (e.g. basin shape and flushing rates) generally make reservoirs highly sensitive to existing and new sources of phosphorus and microbial 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.