

TOWN OF NORTH GREENBUSH **ANNUAL DRINKING WATER QUALITY REPORT** **FOR 2006**

Preface

The following Annual Water Quality Report (AWQR) is being published to comply with the requirements of Part 5 – 1.72 of the New York State Sanitary Code (10 NYCRR) and the federal Consumer Confidence Report regulation (40 CFR Part 141 Subpart O). The purpose of this report is to raise your understanding of drinking water and increase your awareness of the need to protect our drinking water sources. This report provides an overview of last year's water quality.

In the year 2006, the tap water provided by the Town of North Greenbush Utility Department to its customers met all New York State drinking water health standards. Included in this report are details about where your water comes from, what it contains and how it compares to State standards.

Description of the Water Source and its General Condition

The Town of North Greenbush Utility Department (283-2714) obtains all its water from the City of Troy's water system. The water source for the City of Troy is the Tomhannock Reservoir, a man made reservoir 6.5 miles northeast of the City. The reservoir is 5.5 miles long and holds 12.3 billion gallons when full. The quality of the water from the Tomhannock Reservoir is good to excellent. Water flows from the reservoir by gravity, first to the Melrose Chlorination Station, where the water is pre-disinfected with chlorine dioxide, and then on to the John P. Buckley Water Treatment Plant (WTP). The plant is a conventional water treatment plant utilizing the coagulation, flocculation, sedimentation, filtration, chlorination and fluoridation processes.

The New York State Health Department completed a Source Water Assessment for the Tomhannock Reservoir. It includes a susceptibility rating based on the risk posed by each potential source of contamination and how likely contaminants could enter the reservoir and is only an estimate of the potential for contamination. It does not mean that the water delivered to your home is or will become unsafe to drink. The 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 row crops in the assessment area. While there are some facilities present, permitted discharges do not likely represent an important threat to source water quality, based on their density in the assessment area. In addition, it appears that the total amount of wastewater discharged to surface water in this assessment area is not high enough to further raise the potential for contamination (particularly for protozoa). There is also noteworthy contamination susceptibility associated with other discrete contaminant sources, and these facility types include: mines and closed landfills. 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.

The Town of North Greenbush purchases City of Troy Tomhanock Reservoir water at several different locations throughout the Town. The City of Troy sells water to the Town via water mains on Pawling Avenue at the City/Town Line, at Winter Street Extension near the City/Town line and at US Route 4 near Williams Road.

The Town of North Greenbush also buys City of Troy Tomhanock Reservoir water from the Town of East Greenbush/City of Rensselaer Joint Facilities (36" water main) located along US Route 4 (North Greenbush Road). Several connections to the 36" water main exist along US Route 4. From these connections, the western portion of the Town of North Greenbush is provided with Troy water.

Population Served

The Town of North Greenbush Utilities Department serves water to approximately 5,100 residents of the Town, as well as several commercial and industrial customers within the Town. Most notable is the RPI Tech Park located off of US Route 4 in the western part of the Town.

In addition to the various Town of North Greenbush authorized Water Districts, there is one (1) private water company in the Town that supply water from underground wells to residential customers. This private water company supplies water to the Lake Meadows Subdivision located off Snyders Lake Road.

During 2006, the Town of North Greenbush purchased the former private water company supplying water to the Pond Hill Subdivision. This was accomplished by establishing Water District No. 18 and connecting it to the Town's municipal system with a connection point at Snyders Lake Road and Indian Pipe Drive and eventually disconnecting the former private wells that used to supply water to the approximate 85 homes in the Pond Hill Subdivision.

Water Rates

All residential, industrial and commercial customers pay the same water rate per Water District. See attached 2006 Water Rate Schedule.

In the year 2006 the Town of North Greenbush paid \$3.70 per 1,000 gallons of water purchased from the Town of East Greenbush / City of Rensselaer Joint Water District and \$3.588 per 1,000 gallons of water purchased directly from the City of Troy. The Town adds an additional \$0.45 to \$0.59 per 1,000 gallons of water usage, to its customer's water rate per 1,000 gallons to pay for flushing of fire hydrants and any other unaccounted water usage in the district.

Town of North Greenbush Year 2006 Water Rates/Costs

District	General Area	Source	Water Purchase Per 1,000 gal	Debt Service Per Unit	O & M	Water Usage Per 1,000 gal
1	East Ave, West Ave, Cameron Rd, Winter St	Troy	\$3.5880	\$0.00	\$48.46	\$4.18
1	Daniella Place Subd	Troy	\$3.5880	\$0.00	\$48.46	\$4.18
2	Wynantskill Area	Troy	\$3.5880	\$175.53 \$50.00 Super Fund \$70.26 Vacant	\$21.32	\$4.18
3	Glenmore Rd, Rt 4	Troy	\$3.5880	\$0.00	\$34.90	\$4.18
3	Hampton Place	Troy	\$3.5880	\$0.00	\$34.90	\$4.18
4	RPI Tech Park	EG/R	\$3.70	\$0.00	\$26.87	\$4.15
5	Van Allen Park	Renss	Billed by Renss	\$0.00	\$ N/A	\$ N/A
6	Meadow Dr, Crestwood Dr, Williams Rd	Troy	\$3.5880	\$258.60 \$103.53	\$46.88	\$4.18
6	Rensselaer County Manor Complex 169 Units	Troy	\$3.5880	\$258.60	\$0.50/ 1000 gal	\$3.5880
7	Rock Cut Road	Renss	\$3.70	\$0.00	\$76.00	\$4.15
8	Pruyn Slope Subd	EastG	\$3.70	\$0.00	\$414.20	\$4.15
9	Phoenix Home Life	EastG	Billed by EastG	\$0.00	\$ N/A	\$ N/A
10	Highway Garage, Greenhill Rd, Snyders Lake Rd, Bloomingrove	Troy	\$3.5880	\$0.00	\$83.34	\$4.18
10	NYS Route 4	EG/R	\$3.70	\$0.00	\$83.34	\$4.15
11	Sandra Dr, Hilda Ct, Rt 4, Wanda Ct, Birch St, Winter St Ext	Troy	\$3.5880	\$281.27 \$112.51 Vacant	\$45.85	\$4.18
12	Cameron,Albro,Hoyt, Whiteview,Winter St, Bloomingrove,Zelenke,Swiss,Dutch Acres	Troy	\$3.5880	\$337.84 \$135.14 Vacant	\$31.32 \$12.53Vac	\$4.18
13	Snyders Lake Area	Troy	\$3.5880	\$308.27 \$123.31 Vacant	\$31.32 \$12.53Vac	\$4.18
14	Wynantskill(south side)	Troy	\$3.5880	\$219.998 \$87.9992 Vacant	\$31.32 \$12.53Vac	\$4.18
16	Oak Hill & Bloomingrove	Troy	\$3.5880	\$0.00	\$41.32	\$4.18
RC W&S	Ryan Subd, Partridge Hills Apt, Valleyview Blvd	EG/R	\$3.70	\$0.00	\$35.00	\$4.15
Town Wide Water Area		N/A	N/A	\$ 0.319308	N/A	N/A

As of January 1, 2006

Water Usage

In 2006, the total estimated water usage billed to the Town of North Greenbush customers is as follows:

DISTRICT	PWS ID#	GALLONS PER YEAR	COMMERICAL CONNECTIONS	RESIDENTIAL CONNECTIONS
#1	4100059	7,295,540	1	78
#2	4130243	27,444,200	46	364
#3	4100063	11,414,495	8	43
#4	4130244	22,528,580	26	5
#5	Billed by City of Rensselaer		NA	NA
#6	4130253	9,847,260	3	197
#7	4130245	20,000	1	1
#8	4130246	441,500	2	0
#9	Billed by Town of East Greenbush		NA	NA
#10	4130270	526,000	3	10
#11	4130288	5,640,480	1	110
#12	4130305	28,633,831	1	618
#13	4130306	2,464,610	1	114
#14	4130307	1,217,530	1	402
#16	4130312	8,042,150	1	18
#18	4122875	New district no bills in 2006	1	82
RCW&SA		5,643,000	28	104
TOTAL		62,528,256	124	2,146

All services are metered at the individual customer location. Master water meters are located at connection points where the water is purchased from either the City of Troy or the Town of East Greenbush/City of Rensselaer Joint Water District Facilities. These connection points are as follows:

Water District # 1 - 1998 Meter Chamber - Cameron Road at Winter Street Extension. 12" feed from City of Troy.

Water District # 2 - 1997 Meter Chamber - Main Avenue at Troy City Line. 12" feed from City of Troy.

Water District # 3 - 1974 Meter Chamber - Bloomingrove Drive at Williams Road. 8" feed from City of Troy.

Water District # 3 - 1982 Meter Chamber - Glenmore Road at US Route 4. 12" main off-of the 36" transmission main for the Town of East Greenbush/City of Rensselaer Joint Water District. Provides water to HVCC as needed and for fire hydrants along part of Williams Road.

- Water District # 4 - 1982 Meter Chamber - Jordan Road at US Route 4. 12" main off-of the 36" transmission main for the Town of East Greenbush/City of Rensselaer Joint Water District. Provides water to RPI Tech Park

- Water District # 4 - 1999 Meter Chamber - Winter Street Extension at US Route 4. 12" main off-of the 36" transmission main for the Town of East Greenbush/City of Rensselaer Joint Water District. Provides water to Alexis Diner and adjacent house.

- Water District # 5 - Van Allen Park Subdivision. - Off of Washington Avenue Ext. The City of Rensselaer provides water to this district.

- Water District # 6 - 1998 Meter Chamber - Cameron Road at Winter Street Extension. 12" feed from City of Troy.

- Water District # 7 - Rock Cut Road (one home and one business). The City of Rensselaer provides water to this district.

- Water District # 8 - 1996 Meter Chamber - US Route 4, north of Grandview Drive. 12" main off-of the 30" main for the Town of East Greenbush/City of Rensselaer Joint Water District. Provides water to the Pruyn Slope Subdivision that includes the Northeastern Retail Lumber Association building and the Montessori School.

- Water District # 9 - 1996 Meter Chamber - Greenbush Commerce Park (Krey Boulevard at entrance to Phoenix Home Life Building). 8" feed from the Town of East Greenbush water system. Provides water to the Phoenix Home Life Building.

- Water District # 10 - 2000 Meter Chamber – US Route 4 opposite from the golf driving range. 12" feed off-of the 36" transmission main for the Town of East Greenbush/City of Rensselaer Joint Water District.

- Water District # 11 - 1998 Meter Chamber - Cameron Road at Winter Street Extension. 12" feed from City of Troy.

- Water District # 12 - 1998 Meter Chamber - Cameron Road at Winter Street Extension. 12" feed from City of Troy.

- Water District # 13 - 1998 Meter Chamber - Cameron Road at Winter Street Extension. 12" feed from City of Troy.

Water District # 14 - 1998 Meter Chamber - Cameron Road at Winter Street Extension. 12" feed from City of Troy and 1997 Meter Chamber - Main Avenue at Troy City Line. 12" feed from City of Troy.

Water District # 16 - 1998 Meter Chamber - Cameron Road at Winter Street Extension. 12" feed from City of Troy.

Water District # 18 - 1998 Meter Chamber - Cameron Road at Winter Street Extension. 12" feed from City of Troy.

Rensselaer County Water & Sewer Authority - 1995 Meter Chamber - US Route 4 at Valley View Boulevard. 12" main off-of the 36" main for the Town of East Greenbush/City of Rensselaer Joint Water District. Provides water to the Ryan Subdivision/Van Alstyne Business Park.

Some water, which is unaccounted for, is used to flush mains and fire hydrants each year, to train fire-fighting personnel, to fight fires and occasional leakage in the water system. The unaccounted for water is estimated to be approximately 10% in 2006.

Water Quality Testing Summary

Water quality testing is required of all public water systems by Part 5 of the New York State Sanitary Code. The City of Troy provides all water to the Town of North Greenbush, either through their mains or the Town of East Greenbush/City of Rensselaer Joint Water District.

The City of Troy complied with all the required testing in 2006. Samples are analyzed both in the laboratory at the John P. Buckley Water Treatment Plant and by private labs. Water quality sampling categories are Microbiological, Physical and Chemical Characteristics, Inorganic, chemicals, General Organic Chemicals and trihalomethans. The analytical results of the sampling done in 2006 meet all limits set by the New York State Health Department. See attached copy of the City of Troy's Annual Drinking Water Quality Report for 2006. A detailed summary is available for review at the Department of Public Utilities, 25 Water Plant Road, City of Troy Clerks Office at City Hall, One Monument Square, and the Troy Public Libraries.

In addition, the Town of North Greenbush Utility Department takes samples and has them analyzed by private laboratories. No violations were detected in 2006. Categories of samples tested are as follows:

<u>Test</u>	<u>Frequency</u>
Total Coliform (Bacteriological)	Monthly for each district
Nitrate	Annually for each district
Lead and Copper	Once every three years for each district
Trihalomethanes	Quarterly for each district
Haloacetic Acid	Quarterly for each district

Definitions

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 using the best available treatment technology.

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.

Water Treatment Summary

Prior to the water being released to the distribution system by the City of Troy, it receives full conventional treatment. Chlorine is added to the water for pre-disinfection and post disinfection. Pre-disinfection is before any other treatment while post-disinfection is at the effluent of the WTP or after all treatment. Coagulation is the process of adding a chemical such as aluminum sulfate, to the water to cause destabilization of the electrical charge on the particles in the water so they will come together to form larger, more settleable clumps called floc. The sedimentation process involves reducing the velocity of the water so the floc and suspended material may settle out of the water by gravity. Filtration involves removal of suspended matter by passing the water through a porous medium or filter, which at the Troy WTP is a dual media of anthracite and sand.

The Town of North Greenbush re-chlorinates the water supplied by the City of Troy in order to provide for acceptable chlorine residual in the water as required by New York State. There are two (2) chlorination stations located in Town, one on Winter Street Extension west of Cameron Road and the second one on Main Avenue east of the Troy City Line. The Snyders Lake Road Water Pump Station also has facilities to re-chlorinate the water if necessary.

Water System Improvements

The Town of North Greenbush implemented the following water system improvements:

December 15, 2005 – Snyders Lake Road Water Pumping Station became operational
December 28, 2005 – Water District No. 18 (Pond Hill Subd) established by Town Board
September 13, 2006 – Sharpe Road Water Pumping Station became operational
October 16, 2006 – Water District No. 18 (Pond Hill Subdivision) switched from private wells to the Town's municipal water system
November 1, 2006 – Water District No. 14 improvements substantially completed

Water System Maintenance

The Town of North Greenbush Utility Department is in charge of all maintenance on the water system. Routine maintenance such as fire hydrant flushing and repairs are preformed each year. Several fire hydrants are repainted on an annual basis and a program to color code with paint the tops and the outlet-nozzle caps of the fire hydrants (in accordance with their rated capacities as per AWWA recommendations) was started in 2006. Several water valve boxes are inspected and cleaned annually. The Utility Department personnel repair minor water leaks and any major leaks are repaired by outside contractors. No major leaks or main breaks were reported in 2006. Utility Department personnel are responsible for the operation and maintenance of the two chlorination stations and the two water-pumping stations.

Water Conservation Measures

There are many measures that customers can take to conserve water. The list would include retrofitting plumbing fixtures with new low flow water fixtures; minimizing lawn sprinkling and outside use of water; repairing water leaks within the home, including faucets and toilets; using water conserving appliances, such as dishwashers and washing machines, and operating them only when full. Use a water saving showerhead. Install faucet aerators on kitchen and bathroom faucets to reduce the water flow. The toilet is one of the most common sources of household water leaks. If left unchecked, your toilet could be wasting hundreds or even thousands of gallons of water each year. Most toilet leaks occur at the overflow pipe or at the plunger ball. Water saving tips as published by the NYSDEC are periodically sent out with the water bills.

Cryptosporidiosis and Giardiasis

The quality of water supplied by the City of Troy is excellent. Even so, New York State law requires all water suppliers to notify their customers about the risks of Cryptosporidiosis and Giardiasis. Cryptosporidiosis and Giardiasis are intestinal illnesses that are caused by microscopic parasites. Cryptosporidiosis can be very serious for people with weak immune systems, such as, chemotherapy, dialysis or transplant patients, or people with Crohn's disease, or HIV infection. People with weak immune systems should discuss the need to take precautions such as boiling water, using certified bottled water or a specially approved home filter with their health care provider. Individuals who think they may have Cryptosporidiosis and Giardiasis should contact their health care provider immediately. For additional information on Cryptosporidiosis, and Giardiasis, please contact the Rensselaer County Health Department at 270-2664.

Contaminants

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessary 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 (1-800-426-4791).

Some people may be more vulnerable to contaminants 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 about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

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 the water can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administrations establish limits for contaminants in bottled water that must provide the same protection for public health.

Nitrate: Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause

blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from your health care provider.

Arsenic: EPA is reviewing the drinking water standard for arsenic because of special concerns that it may not be stringent enough. Arsenic is a naturally occurring mineral known to cause cancer in humans at high concentrations.

Lead: infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (1-800-426-4791.)

Public Participation

The Town of North Greenbush encourages all residents to take an active role in the reviewing of this Annual Drinking Water Quality Report and its contents. The Town Board holds its regular monthly meetings at 7:00 PM on the 2nd Thursday of each month at the Town Hall located at 2 Douglas Street in Wynantskill, New York at which all Town residents are allowed to participate. In addition, any questions regarding this report can be discussed with the Utility Department personnel or the Town Engineer at Town Hall, (518) 283-2714.

Submitted by:

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