Annual Drinking Water Quality Report for 2015

East Greenbush General Water District

225 Columbia Turnpike, East Greenbush, NY 12061
Public Water Supply Identification Number NY4100051

INTRODUCTION

To comply with State regulations, East Greenbush General Water District 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, 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. Tom Kennedy, Water Foreman, Town of East Greenbush, East Greenbush General Water District, 69 Gilligan Road, East Greenbush, NY 12061; Telephone (518) 477-6103.* 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 Town Board meetings. They are held on the 3rd Wednesday of each month, 7:00 PM at the *Town Hall, 225 Columbia Turnpike, East Greenbush, NY 12061; Telephone (518) 477-4775.*

WHERE DOES OUR WATER COME FROM?

The East Greenbush General Water District purchases its water from the City of Troy. The City of Troy draws its water from a "surface water" supply, the spring fed Tomhannock Reservoir. It is located to the northeast of the City of Troy. Water flows from the Tomhannock Reservoir to the Troy Water Treatment Plant (TWTP), a complete treatment facility. In an effort to lower the formation of disinfection byproducts (DBPs), TWTP adds potassium permanganate at the Tomhannock Reservoir. Potassium permanganate is a strong oxidant that is used to oxidize iron and manganese, but does not produce the DBPs that chlorine does. Potassium permanganate is being fed seasonally from mid-June to about September or October depending on the iron and manganese levels in the raw water. Additionally chlorine dioxide is added at Melrose Station to oxidize the organic material that leads to the formation of DBPs when it reacts with chlorine but unlike chlorine, chlorine dioxide does not form DBPs. Chlorine dioxide is fed year-round. The treatment process at Troy consists of; coagulation using aluminum sulfate (alum) 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; filtration removes smaller particles by trapping them in sand filters; pH adjustment for corrosion control; and final post chlorination to maintain a chlorine residual in the distribution system to prevent bacterial contamination and fluoridation at low levels to protect teeth. The water purchased by East Greenbush is pumped through the Cross Street Pump Station. A 36 inch water main along route 4 through North Greenbush carries water to our two 5 million storage tanks at the top of Grandview Drive. This tank distributes water throughout the General Water District. The supply system is jointly owned with the City of Rensselaer.

The NYS DOH has completed a Source Water Assessment for the Tomhannock Reservoir. The assessment is summarized below. The assessment includes a susceptibility rating based on the risk posed by each potential source of contamination and how likely contaminants could enter the reservoir(s). The susceptibility rating is 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. See section "Are there contaminants in our drinking water?" of this report, for information concerning low levels of contaminants in your water.

The assessment found the amount of pasture in the assessment area results in a potential for protozoa contamination. There is also possible contamination susceptibility associated with landfills in the assessment area. It should be noted that hydrologic characteristics (e.g. basin shape and flushing rates) generally make reservoirs 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 the Rensselaer County Health Department at the number provided in this report.

FACTS AND FIGURES

The East Greenbush General Water District provides water through 4,364 service connections to a population of approximately 11,200 residential and commercial customers. Our average daily demand is 3,500,000 gallons. Our single highest day was 6,562,000 gallons. The total water purchased in 2015 was 1,222,554,000 gallons. The average annual charge for water in 2015 was $3.70 per 1000 gallons. The difference (3.0%) between the volume billed and the total volume purchased is water used fire fighting, flushing of the water distribution system, errors in water meters and water lost to leaks.

ARE THERE CONTAMINANTS IN OUR DRINKING WATER?

As the State regulations require, we routinely test your drinking water for numerous contaminants. These contaminants include: inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds, total trihalomethanes, haloacetic acids, radiological and synthetic organic compounds In addition, we test 2 samples for coliform bacteria monthly. The table presented below depicts which compounds were detected in your drinking water. The State allows us to test for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.

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 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 800-426-4791 or the Rensselaer County Health department at (518) 270-2626.

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 contaminants, 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.

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 microbial pathogens are available from the Safe Drinking Water Hotline (800-426-4791) or at http://www.epa.gov/safewater.

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 East Greenbush General Water District 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*

WHY SAVE WATER AND HOW TO AVOID WASTING IT?

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:

- Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.
- Turn off the tap when brushing your teeth.
- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.
- Check your toilets 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. It is not uncommon to lose up to 100 gallons a day from one of these otherwise invisible toilet leaks. Fix it and you save more than 30,000 gallons a year.
- Use your water meter to detect hidden leaks. Simply turn off all taps and water using appliances, then check the meter after 15 minutes. If it moved, you have a leak.

CLOSING: Thank you for allowing us to continue to provide your family with quality drinking water this 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.

TABLE OF DETECTED CONTAMINANTS EAST GREENBUSH GENERAL WATER DISTRICT PWS ID# NY4100051							
Contaminant	**Violation Yes/No**	**Date of Sample**	**Level Detected**	**Unit Measurement**	**MCLG**	**Regulatory Limit (MCL, TT or AL)**	**Likely source of Contamination**
Inorganic Contaminants							
Copper	**N**	**6/27/13-8/7/13**	**0.07 ND-0.14**	**ppm**	**1.3**	**AL=1.3**	**Corrosion of household plumbing systems; erosion of natural deposits;**
Lead	**N**	**6/27/13-8/7/13**	**4 ND-6**	**ppb**	**0**	**AL=15**	**Corrosion of household plumbing systems; erosion of natural deposits;**
Disinfection Byproducts (samples quarterly from 2/10/15, 5/6/15, 8/3/15 & 11/9/15 from 4 sites)							
Chlorine Residual (average) Range	**N**	**Daily**	**0.74 0.46-0.99**	**ppm**	**MRDLG N/A**	**MRDL 4**	**Used in the treatment and disinfection of drinking water**
Total Trihalomethanes (TTHM) Range of values	**N**	**Quarterly**	**64.4[3] 4.9-10.9**	**ppb**	**0**	**80**	**By-product of drinking water chlorination**
Haloacetic Acids (HAA5) Range of values	**N**	**Quarterly**	**42.5[3] ND-2.1**	**ppb**	**N/A**	**60**	**By-product of drinking water chlorination**

Notes:

1 – The level presented represents the 90th percentile of the 30 samples collected. The action level for copper was not exceeded at any of the 30 sites tested.

2 – The level presented represents the 90th percentile of the 30 samples collected. The action level for lead was not exceeded at any of the 30 sites tested.

3 – The average shown is the highest LRAA for the THM & HAA5.

Glossary

Non-Detects (ND) - laboratory analysis indicates that the constituent is not present.

Action Level - the concentration of a contaminant, which, if exceeded, triggers treatment, or other requirements, which a water system must follow.

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.

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.

Picocuries per liter (pCi/L) - picocuries per liter is a measure of the radioactivity in water.

Locational Running Annual Average (LRAA): The LRAA is calculated by taking the average of the four most recent samples collected at each individual site

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

Treatment Technique (TT) -A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

N/A-Not applicable

CITY OF TROY TABLE OF DETECTED CONTAMINANTS Public Water Supply Identification Number NY4100050						
Contaminant	**Violation Y/N**	**Level Detected**	**Unit Measurement**	**MCLG**	**MCL**	**Likely Source of Contamination**
Microbiological Contaminants						
Turbidity (Highest turbidity sample from Troy WTP)	**N**	**6.20 100%**	**NTU**	**N/A**	**TT=1.0 NTU TT= 95% samples < 0.3**	**Soil runoff**
Inorganic Contaminants						
Barium (sample from 12/30/15)	**N**	**29**	**ppb**	**2000**	**2000**	**Erosion of natural deposits**
Chloride (sample from 12/30/15)	**N**	**24.4**	**ppm**	**N/A**	**250**	**Geology; Naturally occurring**
Color (average of daily samples) range	**N**	**3 0-12**	**units**	**N/A**	**15**	**Large quantities of organic chemicals, the presence of metals such as copper, iron and manganese; Natural color may be caused by decaying leaves, plants, and soil organic matter.**
Fluoride (average of daily samples) Range	**N**	**810 120-1120**	**ppb**	**N/A**	**2200**	**Water additive which promotes strong teeth**
Iron (average of weekday samples) range	**N**	**10 ND-70**	**ppb**	**N/A**	**300**	**Geology; Naturally occurring**
Manganese(average of weekday samples) range	**N**	**20 ND-50**	**ppb**	**N/A**	**300**	**Geology; Naturally occurring**
pH (average of daily samples) range	**N**	**8.55 6.62-9.042**	**units**		**6.5-8.5**	
Sodium[2] (sample from 12/30/15)	**N**	**13.20**	**ppm**	**N/A**	**N/A**	**Geology; Road Salt**
Sulfate (sample from 12/30/15)	**N**	**20.4**	**ppm**	**N/A**	**250**	**Geology**
Zinc (sample from 12/30/15)	**N**	**46**	**ppb**	**N/A**	**5000**	**Naturally occurring**
Synthetic Organic Chemicals						
Dalapon (sample from 8/12/15)	**N**	**1**	**ppb**	**200**	**200**	**Runoff from herbicide**
Disinfection Byproducts						
Chlorine Dioxide Residual (average daily testing)range	**N**	**ND ND-0.08**	**ppm**	**N/A**	**0.8**	**Used in the treatment and disinfection of drinking water**
Chlorate (average daily testing) range	**N**	**0.12 ND-0.21**	**ppm**	**N/A**	**N/A**	**Byproduct of chlorine dioxide used in disinfection**
Chlorite (average based on monthly testing) range	**N**	**0.55 0.43-0.71**	**ppm**	**N/A**	**1.0**	**Byproduct of chlorine dioxide used in disinfection**
Chlorine	**N**	**0.80 0.22-1.09**	**ppm**	**MRDLG N/A**	**MRDL 4**	**Used in the treatment and disinfection of drinking water**

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.**
2. **Water containing more than 20 ppm should not be consumed by persons on severely restricted sodium diets.**

As illustrated in the table above, Troy's monitoring and testing detected some contaminants; all other contaminants were below the maximum levels permitted by the State, known as the maximum contaminant levels (MCL). Many of the test results were NON DETECTABLE. The type/group (number of contaminants in each group) tested for were as follows: volatile organic compounds (52) +MTBE, synthetic organic compounds (37), asbestos. The inorganic contaminants tested for and non-detectable were, arsenic, cadmium, chromium mercury, silver, selenium, antimony, beryllium, thallium, nickel, nitrite, nitrate and cyanide.