

Town of Guilderland

Department of Water and Wastewater Management

2013
Annual Report

**ANNUAL WATER QUALITY REPORT
2013**

**TOWN OF GUILDERLAND DEPARTMENT OF
WATER AND WASTEWATER MANAGEMENT**

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Town Supervisor
Kenneth Runion

Water Superintendent
Timothy McIntyre

Water Treatment Plant Supervisor
Peter G. Letko

A word from the Water Superintendent

Dear Customer,

We are pleased to provide you with our annual Water Supply Statement as required by New York State Public Health Law in compliance with 10 NYCRR, Subpart 5-1.72(e) to (I) and National Primary Drinking Water Regulations Part 141. It is requested that apartment complex owners and managers provide a copy of this report to all its tenants.

The Guilderland Water District and its professional staff are continually striving to provide you, our customers, with drinking water that is safe in quality, adequate in quantity, which meets and exceeds all state and federal standards. We are continuously developing plans for improvements to our water production facilities including water sources, distribution and storage. If you have any questions about this report or concerning your water utility, please contact me at the Water District Office at 456 - 6474. We want you, our customers to be informed about your water utility.

Timothy McIntyre
Superintendent

Description and Condition of Water Source

The Guilderland Water District's system is very large and complex. We maintain piping up to twenty inches in diameter. Pipe materials include ductile iron, cast iron, asbestos cement, copper and synthetic materials. The Town draws water from three different sources: The Watervliet Reservoir, processed at The Town of Guilderland Water Treatment Plant (W.T.P.); three Town owned wells; and fully treated water from The City of Albany which obtains its raw water from the Alcove Reservoir. In addition, we also have four storage tanks, Relyea [2.0 million gallons]; Westmere [1.0 million gallons]; Fort Hunter [1.0 millions gallons]; and Guilderland Water Treatment Plant Clearwell [1.0 millions gallons].

The Watervliet Reservoir is the primary source of raw water for the Guilderland Water District. The Town of Guilderland is permitted to use 5 MGD from the reservoir. The reservoir is located in the Town of Guilderland but is owned by the City of Watervliet. The reservoir has an impoundment area of 620 acres that captures water from a 113 square mile basin drained by the Norman's Kill, Bozen Kill and Black Creek.

The W.T.P. laboratory personnel, on a daily basis test raw water from the Watervliet reservoir. The tests conducted are for Chlorine level (+/- 1.5 mg/L), Turbidity (less than 0.3 unit), pH (+/- 7.7), Fluoride (+/- 1.0). Results of these tests are used to ensure proper dosing determination of treatment chemicals used at the W.T.P. Additionally, the City of Watervliet regularly tests the raw water quality of the reservoir and feeder streams to detect potential contamination. A summary of these tests is available for viewing at the Water District Office and at the Guilderland Public Library

Water Treatment

The Guilderland Filtration Plant is an automated facility designed to operate at a capacity of 5.0 million gallons per day (MGD). Raw water is pumped from the Watervliet Reservoir at the raw water pumping station. As the water enters the plant, Polyaluminumchloride (PAC) is added as a primary coagulant. Flocculation takes place in a series of stepped type units for a period of approximately 30 minutes. Then water flows from 60-degree tube settlers into mixed media filters. After the water is filtered through the mixed media filter, it is again filtered through the Granulated Activated Carbon (GAC) system. Final treatment of filtered water includes disinfection with chlorine, pH adjustment with caustic soda and the addition of sodium fluoride for dental protection. Parents should advise their dentist and pediatrician that the water supply is fluoridated.

Three wells are currently in use to supplement the reservoir supply. Wells 1 and 2 are located adjacent to Kaikout Kill near the intersection of State Farm Road and Nott Road. Well 3 is located adjacent to Blockhouse Creek south of wells 1 and 2. The New York State Department of Environmental Conservation (NYSDEC) has mandated that the total withdrawal rate from the wells not exceed 0.5 MGD on an annual basis. When Well water is used it is treated with chlorine and sodium fluoride. The Albany Emergency Interconnect is on the East Side of New Karner Road at the intersection of Charles Park Boulevard. A permanent Albany-Guilderland interconnect is located near the intersection of Gipp and Rapp Roads. A contractual agreement between the Town of Guilderland and the City of Albany allows for the transfer of up to 2MGD of water daily from this new facility. When Albany water is used, the Town of Guilderland adds chlorine and fluoride at the Interconnect.

Population Served

During 2013, The Guilderland Water District served an estimated population of **26,315**.

Water Usage

During 2013, the Guilderland Water District produced **1,380,835,000** gallons of water (**1.38 billion gallons**), **1,163,033,000** gallons from plant production, **50,627,000** million gallons from City of Albany and **167,175,000** gallons from the Wells. The Water District is approximately 100 percent metered. Metered water use of **931,881,734** in addition to the **228,300,000** other accounted for water use equaled **1,160,181,734** total gallons of accounted for water usage for 2013. Based on an audit of production versus total accounted for water usage, the estimated unaccounted water is **16** percent of total production. Unaccounted for or lost water is water lost due to leaks, water main breaks, flushing, fires and meter inaccuracy within the transmission and distribution system.

Water Sources Restricted, Removed or Otherwise Limited in Use

During 2013, none of the Water District sources were restricted, removed from service or otherwise limited in use.

2014 Water Rates

The following annual charges were effective on January 1, 2014:

Ad Valorem Tax is \$1.0876 per \$1,000.00 of assessed evaluation.

Winter Cycle

00 - 30,000 gallons, \$ 1.25 per thousand
30 - 50,000 gallons, \$ 1.45 per thousand
over 50,000 gallons, \$ 1.50 per thousand

Summer Cycle

00 - 30,000 gallons, \$ 1.25 per thousand
50 - 60,000 gallons, \$ 1.95 per thousand
over 60,000 gallons, \$ 3.05 per thousand

A typical home in Guilderland uses 90,000 gallons of water annually. Based on the average assessment of \$175,000 for a single family home the annual water bill is:

Annual Ad Valorem	\$ 190.33
Annual Water Usage Cost	<u>\$ 135.00</u>
Annual Average cost Total	\$ 325.33

Conservation Tips from the Water Department

- **Follow Sprinkling Regulations - May 1 - Sept 15 (Regulations enclosed)Odd - Even Rule Applies**
- Run dishwasher with full loads only.
- Check home plumbing and fixtures for leaks.
- Use water - saving showerhead.
- Install faucet aerators on kitchen and bathroom faucets to reduce flow from 4 to 2.5 gallons per minute.
- Install and maintain automatic sprinkler system shutoff devices including rain shutoffs.
- Install and maintain other water saving devices.
- Use outdoor water wisely - only water when necessary - minimize duration of sprinkling - recommend one inch.
- Don't leave hoses running.
- Avoid washing the driveway - sweep instead.
- For proper operation and maintenance of your hot water heater, follow manufacturer's recommendations (owner's manual).
- If every person in the Town conserved 10 gallons of water a week, we could save 14 million gallons of water annually.
- Use water wisely. Do not waste it!
- Rain barrels are a convenient and efficient way to collect rainwater that can be used for irrigation. Catch those springs and summer showers and recycle nature's way.
- Build a "Rain Garden". A rain garden allows 30% more water to infiltrate into the ground than a conventional lawn.

For your information:



	SIZE OF LEAK	WATER WASTED IN THREE MONTHS
+	1/32" drip	18,500 gallons
•	1/16" trickle	74,000 gallons
●	1/8" stream	296,500 gallons
●	1/4" stream	1,181,000 gallons

Water Distribution System Maintenance and Capital Improvement Summary

The water distribution system and treatment plant personnel provide daily maintenance which includes, but is not limited to, new service inspections, meter installation, meter readings, bi-annual flushing and repairs to water mains, pump repairs, investigation of leaks and repair or replacement of inoperable fire hydrants. The 2013 Capital improvements program projects included:

In 2013, The Guilderland Water District completed the Well 3 upgrade. The upgrade included variable speed control of the pump motor and replacing several valves. The cost of the project was approximately \$20,000.00. The raw water pump VFD was replaced at a cost of \$12,000.00. A replacement high service pump was installed at a cost of \$16,000.00. In 2013 we began planning Phase 1 of a water extension and interconnect along route 158. In 2014 replacement of Water Plant Filter Mixed media and upgrades to Well 2 will commence.

Guilderland Water District Things You Should Know

Water-powered sump pumps are normally used to back up conventional electric sump pumps in the event that the building loses electrical power. They are powered by municipal water pressure, and most units pump 2 gallons out of a basement sump for every 1 gallon of municipal water used. While an effective backup system, it should be noted that the system uses that additional water and will be reflected on your next water bill. This should not be used as your primary source of power for the system.

Pursuant to Local Law Article 271.11 – 271.17 these types of connections constitute a cross-connection and require the use of an appropriate backflow device. For further information please contact the Water District office at 456-6474.

Pursuant to the New York State Code section 1191.2 paragraph 4, it is illegal to “place or permit objects or materials to obscure or obstruct the use of fire hydrants and fire department connections”.

In many cases landscaping around or near fire hydrants can cause them to become obscured and not readily seen or useable by your local Fire Department. This could affect their ability to effectively fight a fire thereby increasing the potential for life hazard and property damage

Trees, shrubs, retaining signs, fence posts etc. should be placed well back and to the sides of hydrants. If you have an existing situation or are planning a landscaping project, please call the Water District Office at 456-6474 for more details on required hydrant clearances. In cases where this situation is determined a problem, The Town will clear or correct the problem. Please be advised, if a property owner causes the problem, the owner may be liable for all costs.

Guilderland Sewer District Things You Should Know

As per the Districts sewer use ordinance (Local Law Number 2 of 1980), it is illegal for sump pumps, roof drains, storm drains or water that is not considered sewage to enter sanitary sewer system. The cost of treatment and the potential of creating a public health hazard are greatly increased when additional water is added to the collection system. Please check your sewer for such connections and, if necessary, disconnect. If you have any questions or need to know where such connections can be discharged, please contact the Sewer District Office at 456 – 6474.

Town of Guilderland's Wells Source Water Assessment Summary

The NYS DOH has completed a Source Water Assessment for the Watervliet Reservoir and Guilderland's well. The assessments are 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 or the well's aquifer. The susceptibility rating is an estimate of the potential for contamination. It does not mean the water delivered to your home is or will become unsafe to drink. See section, "Are there contaminants in our water?" of this report for information concerning low levels of contaminants in your water.

Guilderland Wells

The potential impact of a chemical or microbes on a well (Susceptibility) is based on aquifer characteristics, proximity of potential contaminant sources and chemical and biological characteristics of the contaminant.

The assessment has determined that Well's # 1 & 2 are susceptible to nitrates. In the past, levels of nitrates in these two wells have been very low to non-detectable. Well # 3 is located in a more remote area. Due to this, the assessment has determined that this well has low susceptibility to all contaminant types.

Watervliet Reservoir

The assessment found the amount of agricultural lands in our Reservoir assessment area results in a potential for protozoa contamination. Other facilities such as landfills and golf courses could release other contaminants, such as pesticides and phosphorous.

Guilderland's water treatment plant performs multi level treatment to ensure you receive safe drinking water. Additionally, as the annual report shows, your water is routinely monitored for a great number of potential contaminants.

2014 Lawn Sprinkling Regulations

6.8 In order to maintain sufficient water supply and pressure at all times for fire protection and household use, from **May 1st through September 15th** lawn sprinkling, garden sprinkling and other use of public water supply shall be restricted to the following days and times:

A. Automatic Lawn Sprinkler Systems

1. All dwellings, buildings, structures, lots, pieces or parcels of land connected to the public water supply, with even numbered addresses, and with automatic lawn sprinkler systems serviced by the municipal supply, may use the public water supply for outside lawn & garden sprinkling on even numbered calendar days 1:00 A.M. to 4:00 A.M. regardless of the nature of use of premises.
2. All dwellings, buildings, structures, lots, pieces or parcels of land connected to the public water supply, with odd numbered addresses, and with automatic sprinkling systems serviced by the municipal water supply, may use the public water supply for outside lawn & garden sprinkling on odd numbered calendar days 1:00 A.M. to 4:00 A.M. regardless of the nature of use of premises.
3. All dwellings, buildings, structures, lots, pieces or parcels of land connected to the public water supply, with automatic lawn & garden sprinkling systems serviced by the municipal supply, shall not be permitted to use manually placed and/or handheld lawn sprinklers outside of the times specified in (1.) and (2.) of this subparagraph.

B. Manually Placed Lawn Sprinklers or Handheld Watering

1. All dwellings, buildings, structures, lots, pieces or parcels of land connected to the public water supply, with even numbered street addresses, and without automatic lawn sprinkling systems serviced by the municipal supply, may use the public water supply for outside lawn & garden sprinkling on even numbered calendar days 6:30a.m. to 8:00a.m. and 6:30pm to 8:00pm regardless of the nature of use of the premises.
 2. All dwellings, buildings, structures, lots, pieces or parcels of land connected to the public water supply, with odd numbered street addresses, and without automatic lawn sprinkler systems serviced by the municipal supply, may use the public water supply for outside lawn & garden sprinkling on odd numbered calendar days 6:30a.m. to 8:00a.m. and 6:30pm to 8:00pm regardless of the nature of use of premises.
- C. The restrictions contained in subparagraphs (A) and (B) above shall not apply to hand sprinkling of outdoor gardens used for the growing of non-commercial foodstuffs and flower gardens.
- D. In the event of a fire or other water emergency, the Supervisor, upon the recommendations of the Superintendent of the Department of Water and Wastewater Management, may modify or suspend any or all of the regulations relating to sprinkling for the duration of the emergency. The Department of Water and Wastewater management shall notify the public by publication or other appropriate manner of any modification or suspension of sprinkling as a result of such emergency.
- E. Upon application of any person, the Supervisor, or his/her designee, may vary or modify the restrictions contained herein upon such terms and conditions as he/she deems appropriate. There shall be no appeal from the decision of the Supervisor on an application made under this subparagraph.
- F. Nothing contained herein shall restrict the use of private wells for outside watering purposes, provided that a sign stating PRIVATE WELL must be displayed on the dwelling readable from the right-of-way. All private wells' water faucets must be permanently labeled. No interconnection of the private well with the public water system shall be permitted.
- G. No person shall fill a swimming pool from the public water supply at any time without the approval of the Superintendent of the Department of Water and Wastewater Management. The Superintendent shall specify the quantity, time and method for filling of swimming pools.
- H. Any person who violates these regulations shall be guilty of a violation and may be punishable by fine of not less than \$50.00 for the first offense, and not less than \$100.00 for any second or subsequent offense committed within the same calendar year.

Water Treatment Plant

Volatile Organic Compounds (VOC/POC) (53 Solvents and Petroleum Products) tests were completed in the first quarter of 2013. All results were below the associated MCL's. Synthetic Organic Chemicals were collected in the second quarter of 2011. All results were below the MCL's Inorganic Compounds (IOC + Nitrate) analyses were completed in the first quarter of 2013 for NEIP. All results were below the MCLs. Unregulated Contaminant Monitoring Regulation 3 was conducted in all four quarters of 2013

Well #1

Nitrate analysis was completed in the fourth quarter of 2013. All results were below the MCLs. Volatile Organic Compounds (VOC/POC) (53 Solvents and Petroleum Products) tests were completed in the fourth quarter of 2013. All results were below the associated MCL's. Unregulated Contaminant Monitoring Regulation 3 was conducted in the first and third quarters of 2013

Well # 2

Nitrate analysis was completed in the fourth quarter of 2013. All results were below the MCLs. Volatile Organic Compounds (VOC/POC) (53 Solvents and Petroleum Products) tests were completed in the fourth quarter of 2013. All results were below the associated MCL's. Unregulated Contaminant Monitoring Regulation 3 was conducted in the first and third quarters of 2013

Well # 3

Nitrate analysis was completed in the fourth quarter of 2013. All results were below the MCLs. Volatile Organic Compounds (VOC/POC) (53 Solvents and Petroleum Products) tests were completed in the fourth quarter of 2013. All results were below the associated MCL's. Unregulated Contaminant Monitoring Regulation 3 was conducted in the first and third quarters of 2013

Transmission and Distribution

Total Trihalomethane (TTHM) testing was done at 4 sites quarterly in 2013 Stage 2 Monitoring began in April 2012 which requires a Locational Running Annual Average (LRAA) to be calculated for each individual site. The LRAA at each site was below the MCL.

Haloacetic Acid (HAA5) testing was done at 4 sites quarterly in 2013. The test included average, high and low levels. Similarly, this is also Stage 2 Monitoring. The LRAA for each site was below the MCL. Analysis for (Total Coliform/ *E. coli*) was conducted on a weekly basis. We collect 30 samples per month. One sample was total coliform positive in 2013 and all samples were *E. coli* negative in 2013.

Unregulated Contaminant Monitoring Regulation 3 was conducted in all four quarters of 2013

Albany Interconnect

The water purchased from the City of Albany is tested in accordance with Part 5, New York Sanitary Code. A summary of the Albany testing is available at the Guilderland Water Office and the Guilderland Public Library.

Summary

During 2013 our system was in compliance with applicable state drinking water operating, monitoring and reporting requirements. Within the Guilderland Water District, all tests for compounds as required by Part 5, New York Sanitary Code and National Primary Drinking Water Regulations were completed although no compounds were above the MCLs. Additionally the iron on Well #1 exceeded the MCL but the well has not been put online.

A complete set of analytical tests performed in 2012 can also be reviewed at the Guilderland Water Office and the Guilderland Public Library.

Thank you for allowing us to continue providing your family with clean, quality water this year. We ask that all our customers help us protect our water system.

For further information, contact the Guilderland Water Office (456-6474), or the Albany County Department of Health (447-4625).

Summary of Water Quality Analytical Testing

A summary of each analytical test performed in 2013 is attached and can also be reviewed at the Guilderland Water Office and the Guilderland Public Library. For further information, contact the Guilderland Water Office (456-6474), the Albany County Department of Health (447-4625), or the EPA Hotline (800-426-4791).

In the tables you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

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.

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

Nephelometric Turbidity Unit (NTU) - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average 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.

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

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

Running Annual Average (RAA): The RAA is calculated each quarter by taking the average of the four most recent samples collected.

N/A-not applicable

Health Effects Information

Additionally we are a required to furnish the following information:

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 Albany County Health Department at (518) 447-4620.

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 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).

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 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 2011 monitoring showed fluoride levels in your water were in the optimal range 95 % of the time. None of the monitoring results showed fluoride at levels that approach the 2.2 mg/l MCL for fluoride.

Although our water system was in compliance with the lead and copper regulation, we are required to furnish the following information. 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 Town of Guilderland 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>.

TOWN OF GUILDERLAND WATER TREATMENT PLANT TABLE OF DETECTED CONTAMINANTS *

Public Water Supply Identification Number NY0100205

Contaminant	Violation Y/N	Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Microbiological Contaminants						
Total Coliform (sample from 6/5/13)	N	1 positive sample	N/A	0	Any positive sample	Naturally present in the environment
Turbidity ¹ (Highest sample from 9/21/13)	N	0.15	NTU	N/A	TT=1 NTU	Soil runoff
Turbidity	N	100%			TT= 95% samples < 0.3	
Inorganic Contaminants (Sample data 2/12/13 unless otherwise noted)						
Copper (sample data from 6/17/11-7/20/11) Range of copper concentration	N	0.35 ² ND-0.67	ppm	1.3	AL=1.	3Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Chloride	N	77	ppm	N/A	250	Geology; Naturally occurring
Fluoride	N	796 ³	ppb	N/A	2200	Water additive which promotes strong teeth; erosion of natural deposits
Lead (sample data from 6/17/11-7/20/11) Range of lead concentration	N	4 ⁴ ND-8	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Nickel	N	1.8	ppb	NA	100	Discharge from steel/metal factories
Nitrate (as Nitrogen)	N	0.5	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; 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	7.5	units		6.5-8.5	
Sodium ⁵	N	50.8	ppm	N/A	N/A	Geology; Road Salt
Sulfate	N	24	ppm	N/A	250	Naturally Occurring,
Stage 2 Disinfection Byproducts (samples from 2/12/13, 5/14/13, 8/13/13 & 11/12/13)						
Haloacetic Acids [HAA5] (LRAA) ⁵ Range of values for HAA5	N	40.4 12.8-76.3	ppb	N/A	60	By-product of drinking water chlorination
Trihalomethanes [TTHM] (LRAA) ⁶	N	63.7 25.8-79.3	ppb	0	80	By-product of drinking water chlorination
Chlorine Range of chlorine residual	N	1.4 0.80-1.8	ppm	MRDLG N/A	MRDL 4	Used in the treatment and disinfection of drinking water
Total Organic Carbon⁷ -Control of Disinfection Byproducts (monthly samples from 2013)						
Raw Water Treated Water	N	2.9-5.9 1.7-3.2	ppm	NA	TT ⁷	Organic material both natural and man made; Organic pollutants, decaying vegetation,
Unregulated Contaminant Monitoring Regulation 3 (samples from 1/15/13, 4/2/13, 7/23/13 & 10/2/13)						
Strontium range of values	N	189-248	ppb	N/A	N/A	Erosion of natural deposits
Chromium Total range of values from 3 rd & 4 th qtrs.	N	0.2-0.3	ppb	100	100	Erosion of natural deposits
Vanadium	N	0.7	ppb	N/A	N/A	Erosion of natural deposits

FOOTNOTES:-

- 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. The regulations require that 95% of the turbidity samples collected have measurements below 0.3 NTU. We achieved 100% of the measurements below 0.3 NTU. Distribution system turbidity performed 5 times a week with 0.02 NTU being the lowest level detected and 1.4 NTU being the highest level detected and 0.45 NTU being the average.
- The level presented represents the 90th percentile of 30 test sites. The action level for copper was not exceeded at any of the 30 sites tested.
- See Information Concerning Fluoride under Health Effects Information on page 2.
- The level presented represents the 90th percentile of 30 test sites. The action level for lead was not exceeded at any of the 30 sites tested. See Information Concerning Lead on page 2
- Water containing more than 20 ppm should not be consumed by persons on severely restricted sodium diets.
- The LRAA represents the highest LRAA for 2013 The highest THM & HAA5 LRAAs were in the 4th qtr.
- 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
- Unregulated Contaminant Monitoring 3 was conducted during 2013. This is a requirement of the 1996 Safe Drinking Water Act amendments. This monitoring provides a basis for future regulatory action to protect the public health. The number in parentheses refers to the number of analytes measured for a total of 21 analytes. The breakdown of analytes is as follows: volatile organic chemicals (7), synthetic organic compounds (1), metals (6), oxyhalide anion (1) and perfluorinated compounds (6). We have listed those compounds that were detected in the table of Detected Contaminants for Niskayuna. For some parameters there are no associated MCL's for these compounds at this time.

TOWN OF GUILDERLAND WELL 1 TABLE OF DETECTED CONTAMINANTS

Public Water Supply Identification Number NY0100205

Contaminant	Violation Y/N	Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Inorganic Contaminants (sample from 8/22/12 unless otherwise noted)						
Barium	N	34.6	ppb	2000	2000	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chloride	N	13	ppm	N/A	250	Geology; Naturally occurring
Fluoride	548	0.46	ppb	N/A	2200	Erosion of natural deposits; water additive that promotes strong teeth
Iron ¹	<i>Y</i>	840	ppb	N/A	300	Geology; Naturally occurring
Manganese	<i>N</i>	220	ppb	N/A	300	Geology; Naturally occurring
Nickel	<i>N</i>	2.7	ppb	N/A	100	Discharge from steel/metal factories
pH	N	7.6	units		6.5-8.5	
Sodium ²	N	33.3	ppm	N/A	N/A	Geology; Road Salt
Sulfate	<i>N</i>	126	ppm	N/A	250	Geology
Unregulated Contaminant Monitoring Regulation 3 (samples from 1/15/13 & 7/23/13) Blend of Wells 1 & 2						
Molybdenum range of values	<i>N</i>	9.7-12.9	ppb	N/A	N/A	Erosion of natural deposits
Strontium range of values	<i>N</i>	488-617	ppb	N/A	N/A	Erosion of natural deposits
Chlorate range of values	<i>N</i>	ND-222	ppb	N/A	1000	By-product of drinking water disinfection at treatment plants using Hypochlorite Solutions
Chromium Total range of values	<i>N</i>	ND-0.2	ppb	100	100	Erosion of natural deposits

FOOTNOTES:

1. Iron has no health effects. At 1000 ug/l a substantial number of people will note the bitter astringent taste of iron. Also, at this concentration, it imparts a brownish color to laundered clothing and stains plumbing fixtures with a characteristic rust color. Staining can result at levels of 50 ug/l, lower than those detectable to taste buds. Therefore, the MCL of 300 ug/l represents a reasonable compromise as adverse aesthetic effects are minimized at this level. Many multivitamins may contain 3000 or 4000 ug/l of iron per capsule.
2. Water containing more than 20 ppm of sodium should not be used for drinking by people on severely restricted sodium diets.

TOWN OF GUILDERLAND WELLS 2 & 3 TABLE OF DETECTED CONTAMINANTS*

Public Water Supply Identification Number NY0100205

Contaminant	Violation Y/N	Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Inorganic Contaminants (samples from 10/24/11 unless otherwise noted)						
Barium (average 2 wells) range	N	110 ND-170	ppb	2000	2000	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chloride (average 2 wells) range	N	14 10-18	ppm	N/A	250	Geology; Naturally occurring
Fluoride (range) (average 2 wells) range	N	0.23 ND-0.46	ppb	N/A	2.2	Erosion of natural deposits; water additive that promotes strong teeth
Iron (average 2 wells) range	<i>N</i>	320 180-460	ppb	N/A	300	Geology; Naturally occurring
Manganese (average 2 wells) Range	N	135 80-190	ppb	N/A	300	Geology; Naturally occurring
Nickel (average 2 wells) range	N	1.0 0.6-1.4	ppb	N/A	100	Discharge from steel/metal factories
pH	N	7.5-7.7	units		6.5-8.5	
Sodium ¹ (average 2 wells) range	N	40.2 35.6-44.8	ppm	N/A	N/A	Geology; Road Salt
Sulfate (average 2 wells) range	<i>N</i>	86.5 30-143	ppm	N/A	250	Geology;
Radiological Contaminants (samples from 1/2/08 & 4/22/08)						
Radium 228 (average 2 wells) range	<i>N</i>	0.42 ND-0.76	pCi/L	0	5	Erosion of natural deposits
Unregulated Contaminant Monitoring Regulation 3 (samples from 1/15/13 & 7/23/13) Well 3 Only						
Molybdenum range of values	<i>N</i>	10.8-14.7	ppb	N/A	N/A	Erosion of natural deposits
Strontium range of values	<i>N</i>	987-1030	ppb	N/A	N/A	Erosion of natural deposits
Chlorate range of values	<i>N</i>	ND-264	ppb	N/A	1000	By-product of drinking water disinfection at treatment plants using Hypochlorite Solutions
Chromium Total	<i>N</i>	ND-0.3	ppb	100	100	Erosion of natural deposits

FOOTNOTES:

1. Water containing more than 20 ppm of sodium should not be used for drinking by people on severely restricted sodium diets.

CITY OF ALBANY TABLE OF DETECTED CONTAMINANTS*						
Public Water Supply Identification Number NY0100189						
Contaminant	Violation Y/N	Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Microbiological Contaminants						
Total Coliform (samples from 6/13, 7/13, 8/13 & 9/13)	N	6 positive samples total	N/A	0	5% or more positive samples of sites sampled per month	Naturally present in the environment
Turbidity (highest level detected at various times)	N	0.08	NTU	N/A	TT=1 NTU	Soil runoff
		100%			TT= 95% samples < 0.3	
Inorganic Contaminants (Daily and weekly samples from 2013 unless otherwise noted)						
Barium (sample from 10/31/13)	N	3.6	ppb	2000	2000	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chloride (average) (range) based on daily samples	N	22.4 19.8-25.7	ppm	N/A	250	Geology; Naturally occurring
Color (average/maximum) (range) based on daily samples	N	1.0 1.0-2.0	units	N/A	15	Large quantities of organic chemicals, inadequate Natural color may be caused by decaying leaves, plants, and soil organic matter.
Nickel (sample from 10/31/13)	N	0.8	ppb	N/A	100	Discharge from steel/metal factories
Odor [daily samples] (average/maximum) (range) based on daily samples	N	2 1-3.3	units	N/A	3	Organic or inorganic pollutants originating from municipal and industrial waste discharges: natural sources
Sodium ²	N	13.7	ppm	N/A	N/A	Geology; Road Salt
Sulfate (average) (range) based on monthly samples	N	10.2 9.4-11.7	ppm	N/A	250	Naturally Occurring,
Total Organic Carbon (Daily samples from 2013)						
Treated Water (average) (range Low, High)	N	1.84 1.66-1.94	ppm	NA	TT	Organic material both natural and man made; Organic pollutants, decaying vegetation,
Disinfection Byproducts						
Chlorine (based on daily samples)	N	0.42 – 1.63	ppm	MRDLG	MRDL	Used in the treatment and disinfection of drinking water
Range of chlorine residual				N/A	4	
Radionuclides (bi-weekly sample data from 2013 unless otherwise noted)						
Alpha Particles (average) (range)	N	0.5 0.2-0-3.5	pCi/L	0	15	Erosion of natural deposits
Beta particles (average) (range)	N	1.2 0.3-4.1	pCi/L	0	50 ³	Decay of natural deposits and man-made emissions
Radium 226 & 228 (average) range of values Bi-yearly samples from 2010	N	0.68 ND-0.85	pCi/L	0	5	Erosion of natural deposits
FOOTNOTES-						
<ol style="list-style-type: none"> 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. Our highest single turbidity measurement for the year was (0.08 NTU). State regulations require that entry point turbidity must always be below 1.0NTU. 2. 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. 3. The state considers 50 pCi/L to be the level of concern for beta particles <p>*The tables presented for City of Albany depict only those analytes that were detected. Many of the test results were NOT DETECTABLE. The type/group (number of contaminants in each group) tested for were as follows: volatile organic compounds (53) +MTBE, synthetic organic compounds (38) , asbestos, color & odor. The inorganic contaminants tested for and not detected were: arsenic, cadmium, chromium, mercury, silver, selenium, antimony, beryllium, thallium, iron, manganese, fluoride and cyanide; microbiological contaminants E. coli.</p>						

Glossary of Terms Used in Data Tables

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.

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

Nephelometric Turbidity Unit (NTU) - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average 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.

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

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.

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

N/A-not applicable