Annual Drinking Water Quality Report for 2015

CITY OF ALBANY
DEPARTMENT OF WATER & WATER SUPPLY
10 NORTH ENTERPRISE DRIVE
(Public Water Supply ID# NY 0100 189)

Introduction

To comply with State regulations, the Albany Water Board issues an annual report describing the quality of your drinking water. The purpose of this report is to raise your understanding of drinking water and awareness of the need to protect our drinking water sources. Last year, your tap water met State drinking water health standards. We are proud to report that our system had no violations of maximum contaminant levels in the 2015 reporting year. This report provides an overview of last year's water quality, and includes details about where your water comes from, what it contains, and how it compares to State standards.

If you have any questions about this report or concerning your drinking water, please contact the City of Albany, Department of Water and Water Supply at 518-434-5300. If you want to learn more, please attend any of our regularly scheduled Albany Water Board meetings. The meetings are normally held the fourth Friday of each month at 9:30 A.M. at the 10 North Enterprise Drive offices of the Albany Water Department.

Where does our water come from?

In general, the sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and can pick up substances resulting from the presence of animals or from human activities. Atmospheric sources of contamination enter our water sources through rain and snowfall. 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 the EPA prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. State Health Department and FDA regulations also establish limits for contaminants in bottled water which must provide the same protection for public health.

Our water source is the Alcove Reservoir, which is surface water and is located on the Hannacroix Creek in the Town of Coeymans. This reservoir has a capacity of 13.5 billion gallons, an average depth of 25 feet and a maximum depth of 75 feet. The Basic Creek Reservoir, in the town of Westerlo, is a secondary source that may be used to augment flow into the Alcove Reservoir to maintain the Alcove elevation. During 2015, our system did not experience any restriction of your water usage.

The water source receives treatment including pre-oxidation, disinfection, addition of coagulants, sedimentation, pH and alkalinity adjustment, and filtration at the Feura Bush Filtration Facility. Chlorine is added as a residual disinfectant to maintain microbiological quality throughout the distribution system. Ultraviolet light disinfection is a supplemental disinfectant used at the Loudonville Reservoir.

Facts and Figures

Our water system serves over 98,000 City residents, commercial, institutional and industrial accounts through approximately 29,000 service connections, and the Towns of Bethlehem and Guilderland through purchase water agreements. The total water treated in 2015 was 7,227,985,017 gallons. The daily water production averaged 19,802,699 gallons, with maximum daily production of 23,552,324 gallons. This year the amount of water produced for customers was 7,162,103,517 gallons, allowing 65,881,500 gallons for filter washes and other filtration plant domestic use. In 2015, water customers were charged $2.67per 100 cubic feet of water, which equals $3.57 per 1000 gallons.

Are there contaminants in our drinking water?

As State regulations require, we routinely test your drinking water for numerous contaminants. These contaminants include: total coliform, turbidity, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds, total trihalomethanes, haloacetic acids, and synthetic organic compounds. 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, though all of our data represented here is from 2015 analysis.

It should be noted that all drinking water, including bottled drinking water, should 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 Safe Drinking Water Hotline at 800-426-4791 or the Albany County Health Department at 518-447-4620.

Table of Detected Contaminants

Contaminant	Violation Yes/No	Date of Sample	Level Detected (Avg.) (Range)	Unit of Measure	MCLG	Regulatory Limit (MCL, TT or AL)	Likely Source of Contamination
Total Coliform[1]	No	8//21/2015 9/11/2015	1 positive 1 positive	N/A	0	MCL 5% or more Positive of sites sampled per month	Naturally present in the environment.
Turbidity[2]	No	Six days per week	Max: 0.07 (0.03 – 0.07)	NTU	N/A	TT < 1.0 NTU	Soil runoff.
	No	Six times daily	100.0 % <0.3	NTU	N/A	TT 95% of samples <0.30	Soil runoff.
Color	No	Six days per week	1.1 (1.0-3.0)	Color units	N/A	15.0 Color units	Natural metallic ions, humic and fulvic acids and dissolved plant components.
Odor	No	Six days per week	1.9 (1-2)	Threshold units	N/A	3 Threshold units	Decaying vegetation and metabolites of microbiota.
Sodium[3]	No	11/2015	15.9	mg/L	NA	20.0 mg/L 270 mg/L	Occurs naturally in almost all waters.
Chloride	No	Six days per week	29.2 (25.70-31.2)	mg/L	N/A	MCL 250 mg/L	Soils, road salt.
Sulfate	No	Monthly	10.0 (9.1-11.3)	mg/L	N/A	MCL 250 mg/L	Occurs naturally in almost all waters.
Barium	No	11/2015	0.0045	mg/L	2	2 mg/L	Erosion of natural deposits.
Manganese	No	11/2015	0.0015	mg/L	0.1	0.3mg/L	Erosion of natural deposits, the most abundant metals in earth's crust, usually occurring with iron.
Chloromethane	No	11/2015	0.00054	mg/L		0.005mg/L	Natural Sources from Atmosphere/Combustion of grass, plants. Industrial release and Algae growth in water
Copper[4]	No	2015	0.05 (ND-0.08)	mg/L	1.3	AL 1.3 mg/L	Corrosion of pipes.
Lead[5]	No	2015	7.5 (ND-36.0)	µg/L	0	AL 15 µg/L	Corrosion of pipes.
Total Trihalomethane	No	Quarterly	47.1 (37.3-61.8)	µg/L	N/A	MCL 80 µg/L LRAA[6]	Disinfection by-products, resulting from chlorinating drinking water.
Haloacetic Acids	No	Quarterly	18.9 (16.1-21.7)	µg/L	N/A	MCL 60 µg/L LRAA	Disinfection by-products, resulting from chlorinating drinking water.
Total Organic Carbon	No	Monthly	1.6 (1.3-2.3)	mg/L	N/A	TT	Occurs naturally in almost all waters.
Chlorine Residual	No	Six times daily	1.01 0.93-1.54	mg/L	4.0 mg/l	MCL 4.0 mg/L	Added to drinking water to Inhibit microbial growth.

Contaminant	Violation Yes/No	Date of Sample	Level Detected (Avg.) (Range)	Unit of Measure	MCLG	Regulatory Limit (MCL, TT or AL)	Likely Source of Contamination
Radionuclides:							
Alpha particles	No	Bi-weekly	0.8 (ND-4.0)	pCi/L	NA	15 pCi/L	Erosion of natural deposits.
Beta particles	No	Bi-weekly	1.4 (ND-3.4)	pCi/L	NA	50 pCi/L[8]	Erosion of natural deposits.

Notes:

[1] Coliform are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful bacteria may be present. Total coliforms were detected only in 2 samples in 2015, in August, 1 out of 148 routine samples (Less than1.0%), and in September, 1 out of 143 routine samples (Less than1.0%). Additional samples were subsequently collected and total coliforms were not detected in those repeat samples. Since total coliforms were detected in less than 5% of the samples collected during the month, the system did not have a MCL violation. It should be noted that *E. coli*, associated with human and animal fecal waste, was not detected in any of the samples collected.

[2] Turbidity is a measure of the cloudiness of the water. We test it because it is a good indicator of the effectiveness of our filtration system. Our highest turbidity measurement for the year occurred on multiple days (0.07 NTU). State regulations require that 95% of the turbidity samples collected have measurements below 0.30 NTU.

[3] Water containing more than 20 mg/L of sodium should not be used for drinking water by people on severely restricted sodium diets. Water containing more than 270 mg/L of sodium should not be used for drinking by people on moderately restricted sodium diets.

[4] The level presented represents the 90th percentile of the 61 sites tested. 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 copper values detected at your water system. In this case, 61 samples were collected at your water system and the 90th percentile value was the 0.05 mg/L with the highest detected value of 0.085 mg/L. The action level for copper was not exceeded at any of the sites tested.

[5] The level presented (7.5µg/L) represents the 90th percentile of the samples collected. The action level for lead was exceeded at two (2) of the 61 sites tested. The highest level detected was 36 µg/L.

[6] Locational Running Annual Averages for total Trihalomethane and Haloaceteic acid.

[7] Distribution turbidity is a measure of the cloudiness of the water found in the distribution system. We monitor it because it is a good indicator of water quality. High turbidity can hinder the effectiveness of disinfectants. Our highest average monthly distribution turbidity measurement detected during the year (1.25 NTU) occurred in April 2015. This value is below the State maximum contaminant level.

[8] The State considers 50 pCi/L to be the level of concern for beta particles.

Definitions:

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLG as feasible.

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 allow for a margin of safety.

Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment, or other requirements which a water system must follow.

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

Non-Detects (ND): Laboratory analysis indicates that the constituent is below detection level or not present.

Nephelometric Turbidity Unit (NTU): A measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

Milligrams per Liter (mg/L): Corresponds to one part of liquid in one million parts of liquid (parts per million (ppm)).

Micrograms per Liter (µg/L): Corresponds to one part of liquid in one billion parts of liquid (parts per billion (ppb)).

Picocuries per Liter (pCi/L): A measure of radioactivity in water.

Non-Detected Contaminants

According to State regulations, the Albany Water Board routinely monitors your drinking water for various contaminants.

Contaminants that were analyzed for but were found to be below detection limits are not included in this report, however, all required testing was completed according to Local, State, and Federal laws. {A list of non-detected contaminants can be found on City of Albany, Department of Water and Water Supply Website.}

The contaminants that were detected in your drinking water are included in the Table of Detected Contaminants. Additionally, your water is tested for coliform bacteria five days per week.

What does this information mean?

As you can see by the table, our system had no violations in the reporting year 2015. We have learned through our testing that some contaminants have been detected; however, these contaminants were detected below New York State requirements.

The City of Albany Water Department has implemented a program to minimize lead levels in your drinking water. This program includes: 1) the adjustment of pH and alkalinity levels to minimize corrosion; 2) the replacement of lead service lines as distribution lines are replaced; and, 3) public education. The water department conducted lead and copper testing on select 61 residences in 2015, and the action level for lead was exceeded at only in two (2) of the 61 sites tested. The highest level detected was 36 µg/L.

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. The City of Albany Water Department is responsible for providing high quality drinking water, but cannot control a variety of materials used in plumbing components. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested. Also, you may flush your cold tap for 30 seconds to 2 minutes before using tap water for cooking or drinking. Additional information is available from the Safe Drinking Water Hotline at 1-800-426-4791 or at http://www.epa.gov.safewater.lead.

Is our water system meeting other rules that govern operations?

During 2015, our system was in compliance with applicable Local, State and Federal drinking water regulations: operating, monitoring and reporting requirements.

Information on Cryptosporidium

Cryptosporidium is a microbial pathogen found in surface water and groundwater under the influence of surface water. Although filtration removes Cryptosporidium, the most commonly used filtration methods cannot guarantee 100 percent removal. During 2015 as a part of our requirement and to improve the quality of your drinking water City of Albany , Water System has started a long term monitoring (24 months) of our source water for Cryptosporidium. In 2015 nine monthly samples were collected and analyzed for Cryptosporidium oocysts and none were detected.

Ingestion of Cryptosporidium may cause cryptosporidiosis, a gastrointestinal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people are at greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to consult their health care provider regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease and it may be spread through means other than drinking water.

Information on Giardia

Giardia is a microbial pathogen present in varying concentrations in many surface waters and groundwater under the influence of surface water. Giardia is removed/inactivated through a combination of filtration and disinfection or by disinfection. During 2015 as a part of our requirement and to improve the quality of your drinking water City of Albany , Water systems has started a long term monitoring (24 months) of our source water for Giardia. In 2015 nine monthly samples were collected and analyzed for Giardia cysts and none were detected.

Ingestion of Giardia may cause giardiasis, an intestinal illness. People exposed to Giardia may experience mild or severe diarrhea, or in some instances no symptoms at all. Fever is rarely present. Occasionally, some individuals will have chronic diarrhea over several weeks or a month, with significant weight loss. Giardiasis can be treated with anti-parasitic medication. Individuals with weakened immune systems should consult with their health care

providers about what steps would best reduce their risks of becoming infected with Giardiasis. Individuals who think that they may have been exposed to Giardiasis should contact their health care providers immediately. The Giardia parasite is passed in the feces of an infected person or animal and may contaminate water or food. Person to person transmission may also occur in day care centers or other settings where handwashing practices are poor.

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).

Why Save Water and How to Avoid Wasting It?

Although our system has an adequate amount of water to meet present and future demands, there are a number of reasons why it is important to conserve water:

- Saving water saves energy and some of the costs associated with both of these necessities of life.
- Saving water lessens the strain on the water system during a dry spell or drought helping to avoid severe water use restrictions so that essential fire fighting needs are met.
- You can play a role in conserving water by becoming conscious of the amount of water your household is using and by looking for ways to use less whenever you can. It is not hard to conserve water. Conservation tips include:
- Run only full loads in dishwashers and washing machines.
- 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 may 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 per 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.

System Improvements

Capital projects completed in 2015 included the Feura Bush Chemical Building Masonry and Roof Repairs and New Pumps and Drives at the Pine Bush Pump Station.

The current Capital Improvement Program includes rehabilitation of gates at the Alcove Reservoir; renovation of the Control Room, Operators Office Area and Laboratory at the Filtration Plant; upgrades to the hydrated lime feed system at the Filtration Plant; replacement of valves on transmission mains; Loudonville Basin repairs; upgrades to metering to cellular technology for the large users; and engineering study for a new booster pump station for the Upper Washington Corridor.

Closing

Thank you for allowing us to continue to provide your family with quality drinking water this year. We ask that all of our customers help us protect our water sources, which are the heart of our community. Please call our office at 518-434-5300 if you have questions concerning your drinking water.