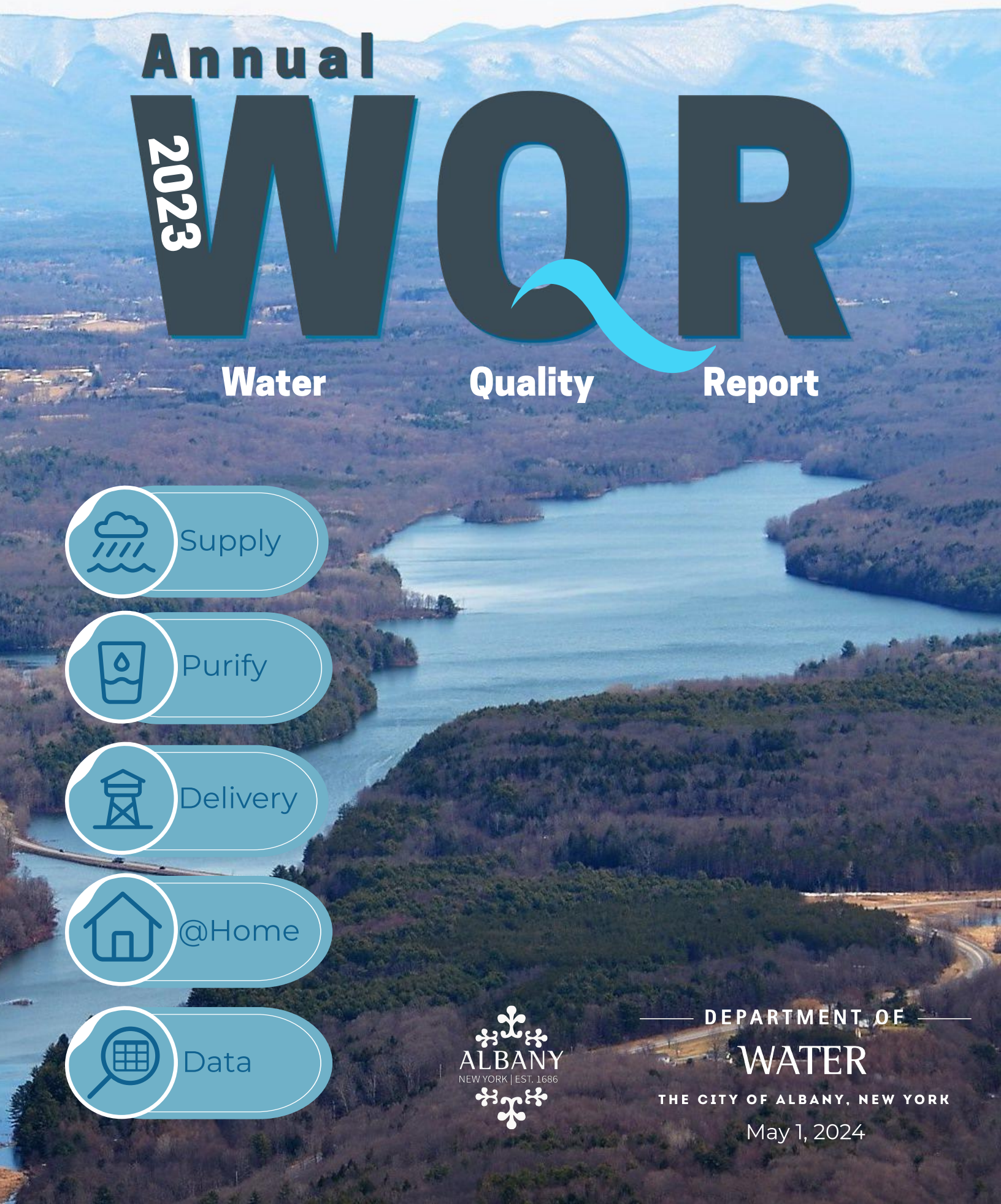
Annual 2023 WQR

Water Quality Report



ALBANY
NEW YORK | EST. 1686

DEPARTMENT OF
WATER
THE CITY OF ALBANY, NEW YORK

May 1, 2024

Alcove Reservoir

The Feura Bush filtration plant

Loudonville Reservoir

Nature's Best, Locally Delivered.

Water from our watershed is treated to state & federal standards.

Introduction

The Albany Water Board issues an annual report describing the quality of your drinking water to comply with state regulations. The purpose of this report is to raise your understanding of drinking water and awareness of the need to protect our drinking water sources. The City of Albany Department of Water and Water Supply (NYS Water System ID # NY0100189) found elevated levels of lead in drinking water in some homes and buildings. Lead can cause serious health problems, especially for pregnant women and young children. Please read this information closely to see what you can do to reduce lead in your drinking water. 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. We are pleased to provide you with this information because informed customers are our best customers.

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 @ 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 9:00 A.M. at the 10 North Enterprise Drive offices of the Albany Water Department. The schedule of Water Board meetings may be found @ our website; https://www.albanyny.gov/561/Albany-Water-Board

Message from the Commissioner

As your Water Commissioner I am entrusted with a duty that transcends words—a commitment to deliver high quality safe drinking water, reliability to your homes.

Water is life's essence, a resource we can't compromise on. At the City of Albany Department of Water & Water Supply, our mission is clear: exceed safety standards, providing you with affordable, high-quality water every moment, every day.

Our team of professionals works relentlessly, utilizing advanced technology to monitor and maintain our water supply. Yet, our commitment extends further—we are stewards of the environment, architects of sustainability and resilience, ensuring not just today's needs are met, but tomorrow's challenges are anticipated.

Join us in this journey; explore this report showcasing our dedication to excellence. Let's collectively ensure clean, safe water is not just a privilege but a promise—to you, our community, and generations to come.

Thank you for your trust and partnership.

Warm regards,

Joseph R. Coffey Jr. P.E.
Commissioner
City of Albany Department of Water & Water Supply

DEPARTMENT OF

WATER

THE CITY OF ALBANY, NEW YORK

View This Report Online

albanyny.gov/765/Water-Quality-Report

Sharing This Report

Please share this report with all people who drink our city's water, especially those who may not have received this report directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this link in a public place or distributing copies by hand and mail.

To receive a printed copy of this report, please email us: water@albanyny.gov

People with Special Health Concerns

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, and some elderly people and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers.

U.S. Environmental Protection Agency (EPA)/Centers for Disease Control CDC guidelines on appropriate means to lessen the risk of drinking water contaminants are available from the Safe Drinking Water Hotline (800) 426-4791

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How this document is organized

This story follows our water quality work from **source** and **treatment** through **delivery** to your **home**.

Supply

Albany's primary water source is the Alcove Reservoir and what we do to keep your drinking water safe

Pgs: 6 - 7

Purification

Purifying Albany's source water supply through multiple means.

Pgs: 8 - 9

Delivery

Delivering Albany's filtered water through 362 miles of pipeline to your home.

Pgs: 10 - 11

@Home

Educating the community on the importance of your property's plumbing and the key role it takes for keeping your water safe.

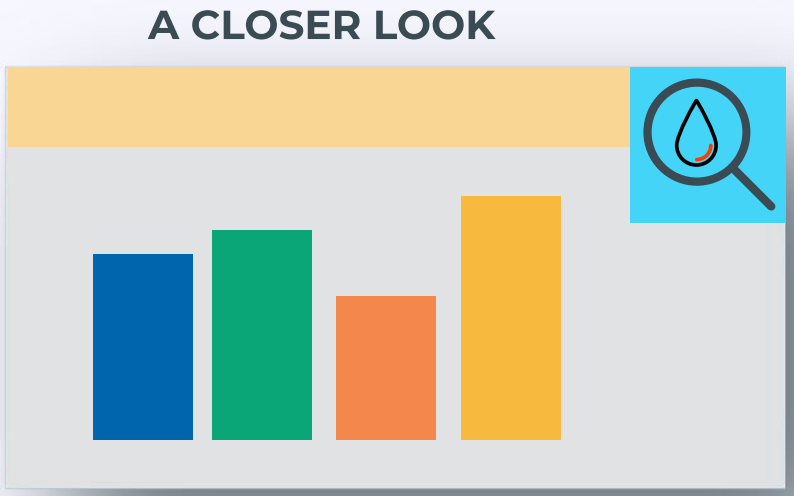
Pgs: 12 - 13

Data & More

Tables and Charts highlighting technical lab data and activities adhering to EPA standards.

Pgs: 14-24

Look for these quick guides throughout the report



Charts and graphs let you see the data in a new way.

Handwritten notes explain how and why we do these tests.

Source & Treatment


Loudonville Reservoir

Your water begins in freshwater streams.

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 2023, our system did not experience any restriction of your water usage due to lack of source water or any other reason.

The water source receives treatment including pre-oxidation, disinfection, coagulation, sedimentation, filtration and pH and alkalinity adjustment for corrosion control 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.

Protection starts @ the source

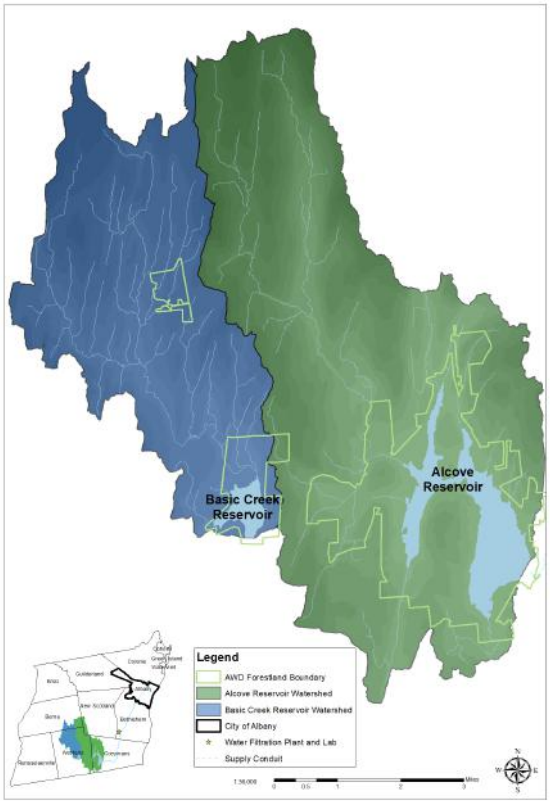
We take a holistic approach, beginning with Albany's water supply. We monitor our waterways across the watershed and look for potential sources of contamination. We keep track of water availability and flow.


A. Ashby - Watershed Forester

Albany Source Watershed

Basic Creek Watershed.....

Alcove Reservoir Watershed.....



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Alcove Reservoir

Our wide range of tools for protecting your water source includes:

Monitoring:
- Water quality sampling to understand current and long-term trends.
- Phytoplankton identification and counts to help predict taste and odor issues & potential harmful algae blooms.
- Routine watershed sanitation inspections to identify sources of contamination.

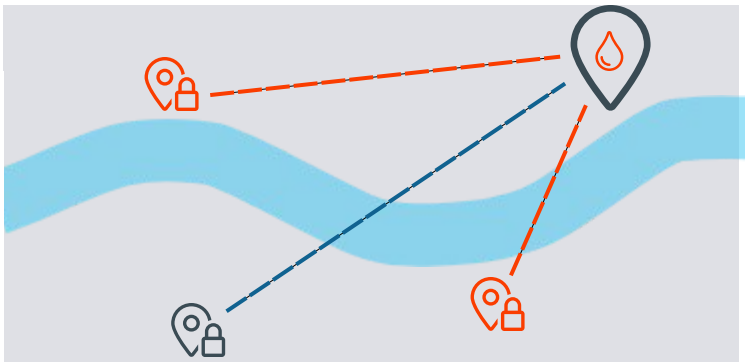
Field Projects:
- Annual stream macroinvertebrate surveys
- Watershed culvert assessments & replacements
- Invasive species monitoring & management
- Native tree planting

Partnerships:
- Sustainable forest management
- release of bio-control agents to combat the hemlock woolly adelgid invasion with Cornell University

INVASIVE SPECIES MANAGEMENT CAPITAL REGION

CORNELL UNIVERSITY FOUNDED A.D. 1865

Did You Know:
that our watershed surface area is over 1,600 acres? Which is almost twice the size of Central Park in New York City!



SECURITY SPOTLIGHT:

The Albany Water Department deploys a robust security staff to monitor and patrol our water source and supply system. This includes 17 miles of shoreline of the Alcove Reservoir which contains 13.5 billion gallons of raw drinking water and 4,316 acres of watershed forest land. Security staff also protect the filtration plant and the finished water reservoir in Loudonville, along with 20 miles of transmission pipeline right of way.

Drinking Water Treatment Plant:

An important early step in water's journey.

Feura Bush Filtration Plant opened:
November 10th 1932

Plant Operations Staff (L to R)

J. Rysedorph (Chief Operator), J. DeGiovine (Facilities Manager), R. Hussain (Lab Director), E. Hurley (Sr. Operator), T. Shaver (Maintenance Supervisor), R. Smith (Asst. Chief Operator)

Feura Bush Water Filtration Plant

Water from the Alcove Reservoir is delivered to the City of Albany via the 48-inch diameter cast iron pipe known as the Supply Conduit. The water travels about eight miles to a filtration plant located between the villages of Feura Bush and South Bethlehem. The treatment process includes aeration, chemical treatment with Sodium Permanganate and Polyaluminum chloride, settling basins, chlorine addition, and filtration through eight rapid sand filters, ultimately ensuring the delivery of pure water to the city.

Our treatment process:

These are some of the stages water goes through during normal operating conditions.

How long does it take for the water to get from the reservoir to the city?

Aeration
225 aeration nozzles to break apart contaminants coming from the reservoir.

Mixing
Mixing basins to distribute PCH-180 to form floc so heavy organic & inorganic matter settles .

Settling
Settling Basins to allow H20 to rest and allow floc to settle for 4-5 hours.

Filtration
Filtration through 8 rapid sand filters, with the capacity to filter 32 million gallons per day.

Additives
Chlorine, hydrated lime & other additives to ensure disinfection & corrosion control through passage to & throughout the system.

Storage
Two-million gallon clearwell to release water to the 48 inch water main that supplies the city.

Delivery
382 miles of pipeline delivering H20 to your homes, businesses, schools and everything in-between.

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R. Adams: Sr. Lab Tech

Testing, Testing, Testing

The City of Albany's Department of Water and Water supply consistently meets regulatory standards by conducting over 100 total coliform samples each month. Each sample includes tests for chlorine residuals and turbidity and pH at various locations. On average, we collect between 110 to 140 samples per month. We also monitor 4 days a week water samples from our Loudonville Reservoir.

Additionally we collect City Tap samples from 1-2 locations daily for other chemical parameters like Alkalinity, Chloride, hardness and organic carbons etc. to ensure best water quality for our customers.

Final Touches

Chlorine

Added to filtered water to kill any bacteria, especially of the "coliform type" which may have passed through the filters.

Corrosion Control

Added to prevent pipes from corroding and releasing metals or chemicals into the water, which can affect water quality and pose health risks. This is especially important for lead water service pipes.

Ultraviolet Disinfection

Added at our Loudonville Reservoir to kill or inactivate harmful microorganisms, like bacteria and viruses, in water by exposing it to UV light.

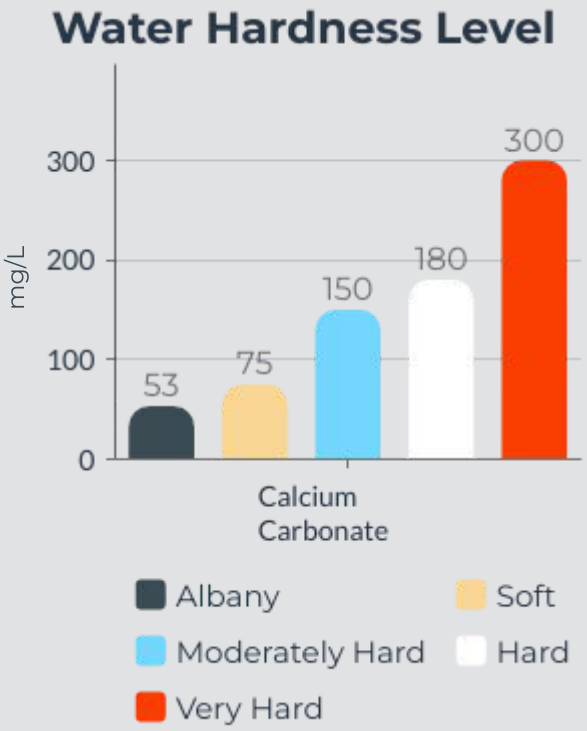
A closer look

Hardness

The hardness of water is determined by the minerals naturally dissolved in it.

Hardness can vary based on natural conditions - for example, a drought can impact hardness.

Hardness matters if you use your water for an activity, such as brewing beer or keeping a home aquarium. Customers often ask about hardness when researching appliances like dishwashers.



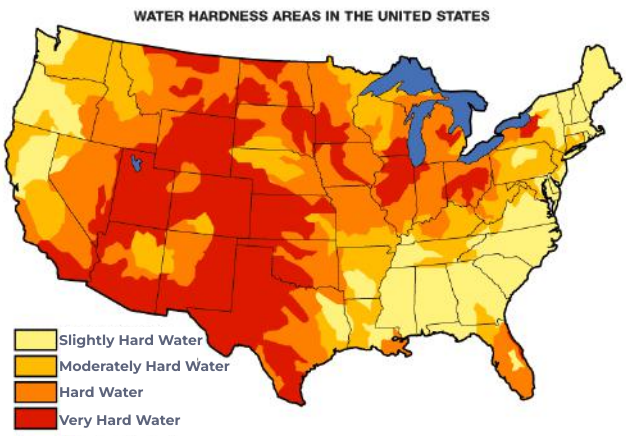
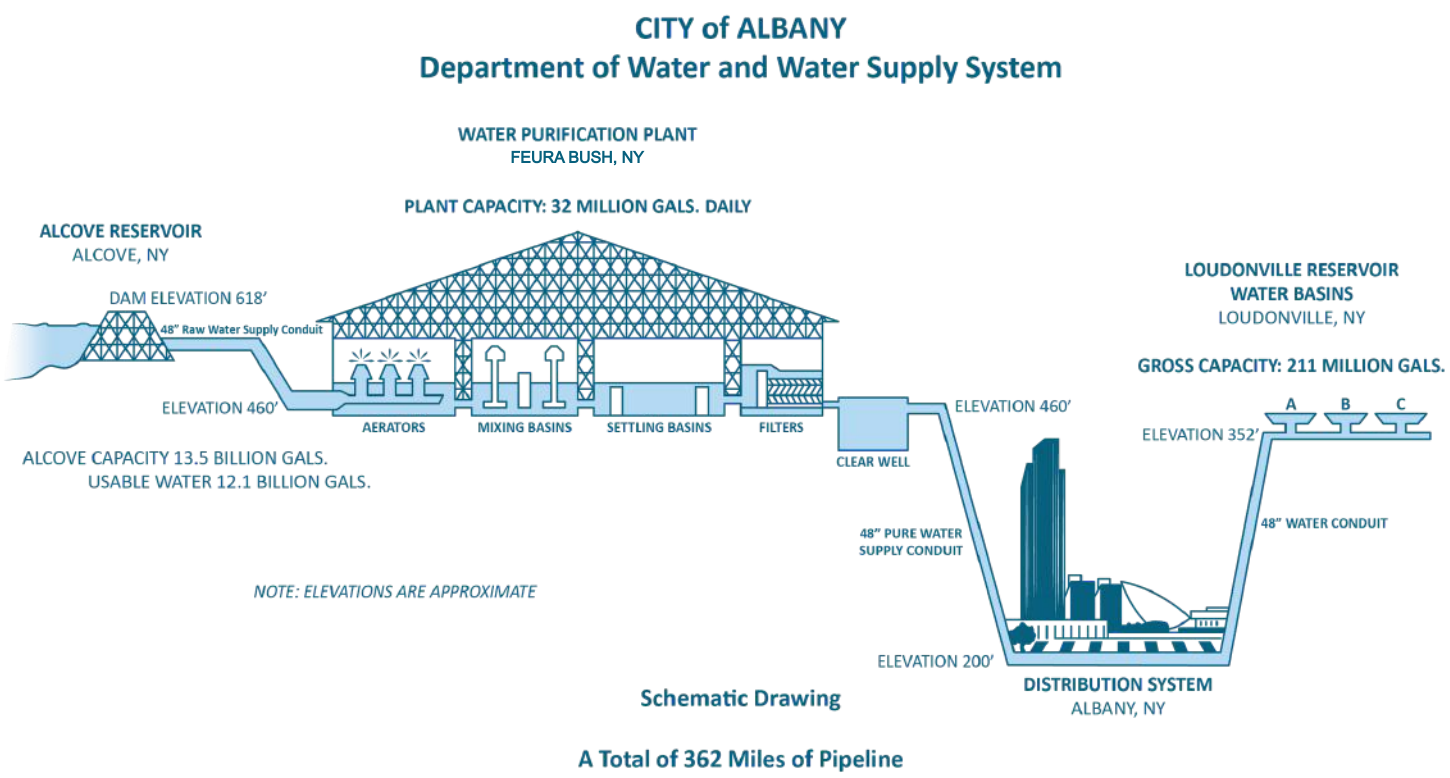


Table adapted from and prepared by the United States Geological Survey

Delivery


Aeration Room



1926:
The Board of Water Supply was established which recommended a gravity supply system utilizing Hannacroix, Basic, and Catskill Creeks. Reservoirs on Hannacroix Creek (Alcove Reservoir) and Basic Creek (Basic Creek Reservoir) were built with a Filtration Plant in Feura Bush.

1932:
The present system of supply was completed, and on November 10, 1932, the new gravity fed water supply was placed in service. The filter plant and it's functions have essentially remained unchanged to this day with upgrades in facilities improvements and technology monitoring.

If you would like info on School Field Trips and Adult Tours please visit:
http://albanyny.go/2264/Tours-Field-Trips

Delivery Continued


Loudonville Reservoir

A safe path through the system

Upon completion of the treatment process, the water is now ready for the trip to your home.

From the Water Filtration Plant, traveling roughly 22 miles, the water supply conduit travels to the Town of Bethlehem through the Normanskill Creek eventually entering the city just south of Whitehall Road. The conduit next travels northernly across the City of Albany through Tivoli Hollow to Loudonville Reservoir.

Other large water mains are fed from the supply conduit before it reaches Loudonville. These mains are known as feeder mains, and in the City of Albany system, are 16", 20", 24" and 30" in diameter. The purpose of the feeder mains is to carry large quantities of water to various parts of the city.

The feeder system then branches into a smaller system of watermains known as distribution mains. It's these smaller mains, 6", 8" and 12" in diameter, which actually carry the water to the individual homes and businesses.


Pine Bush Distribution System

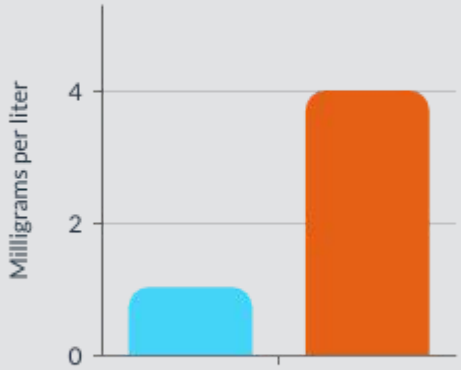
A closer look

Residual Chlorine

This test is done throughout the system. It checks that the chlorine added at the Feura Bush Filtration Plant remains at levels that keep water fresh and safe while staying within regulations.

Avg. Chlorine in H20

*according to the water quality association



in 2023 we measured 6 times per day with an average range of 0.90 mg/L to 1.02 mg/L, and a max mg/L at 1.24. The (MRDL) maximum residual disinfectant level allowed is 4.0 mg/L

Albany MRDL

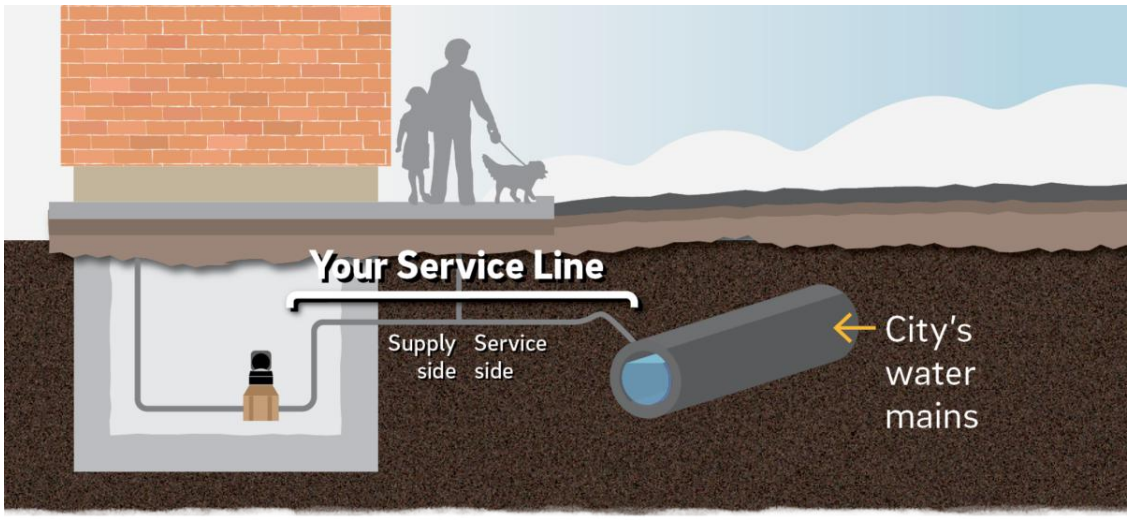
what this means for you

We travel the city to collect samples of drinking water from fire and police stations, pumping stations and more.

We do between 100 - 150 of these tests every month!

Meet your service line

You and your property's plumbing play a role in keeping water safe.



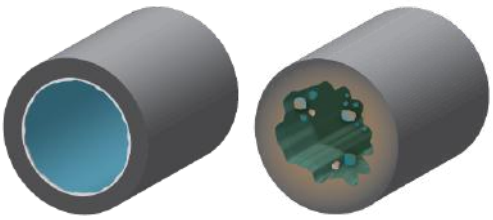
The service line is a pipe that carries clean water from the city's water mains into your home. It's a part of your property's plumbing.

The service line is the property owner's responsibility

Corrosion Control

Reducing risks from lead in a property's plumbing

We use special treatment methods to stop lead from seeping into our water through old pipes, a technique known as **corrosion control**. Testing in homes with lead plumbing confirms that this method effectively keeps lead levels within safe limits set by state and federal guidelines.



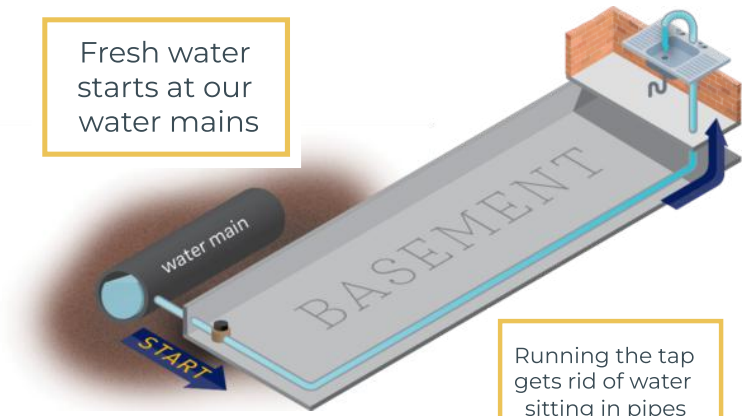
With corrosion control

Without corrosion control

What do we mean by "Flushing your pipes?"

Flushing pushes the water that is sitting in pipes out and down your drain until fresh water comes through the tap. When pipes are disturbed during construction or repairs, they might require flushing.

Fresh water starts at our water mains



Running the tap gets rid of water sitting in pipes

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ALB@Home

Healthy home habits

If you haven't used water for 6 hours or more: Run your cold water for 2-3 minutes. This will flush out water that's been sitting in your pipes ensuring that any sediment settles out.

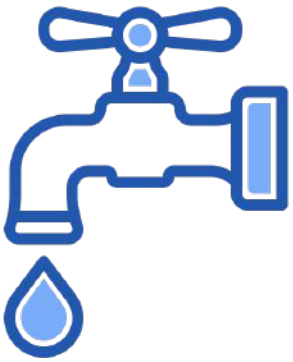
It only costs a penny or two to ensure top-quality and can really improve the quality and taste.

A Water Household Can Conserve Water By:

- Fix leaky faucets and running toilets
- Turn off faucets when brushing teeth
- Store water in clean and covered containers
- Install water-saving devices such as low-flow showerheads and aerators on faucets
- Insulate hot water pipes to reduce heat loss from the hot water heater.
- Use a timer on sprinklers
- Upgrade to water-efficient appliances, such as toilets with dual flush options and EnergyStar rated washing machines

Talking about tap water

Albany's tap water, is a source of pride for the Albany Water Department. Renowned for quality and cost-effectiveness, using tap water curbs plastic pollution. In Albany neighborhoods, safe drinking water is a priority. Residents, surprised by its affordability, turn on the tap and say no to plastic. Albany's tap water is superior in quality and we pride ourselves on being eco-friendly, and fostering a greener, healthier community.



If lead is detected in drinking water, it comes from a property's plumbing.

A home's older fixtures & valves:

It could be in fixtures, valves, and solder.
Lead was prohibited from plumbing materials in 1986

Service Line:

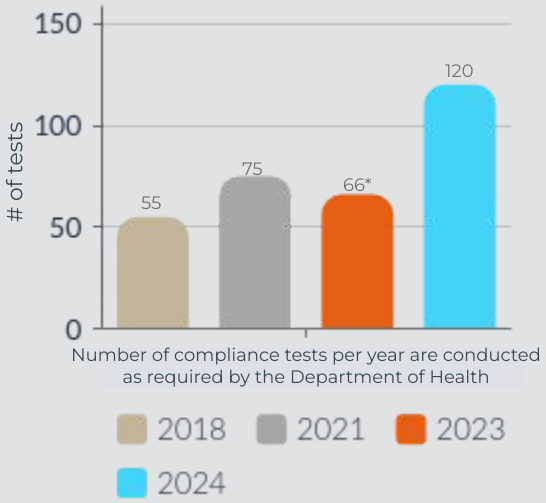
This pipe connects a property's plumbing to the water main in the street.
Homes built from 1960 or earlier may still have lead in sections of the service line.

LET'S TAKE A PEEK

Health Effects of Lead

Exposure to lead in drinking water can cause serious health effects in all age groups. Infants and children can have decreases in IQ and attention span. Lead exposure can lead to new learning and behavior problems or exacerbate existing learning and behavior problems. The children of women who are exposed to lead before or during pregnancy can have increased risk of these adverse health effects. Adults can have increased risks of heart disease, high blood pressure, kidney or nervous system problems.

Lead Testing



Number of compliance tests per year are conducted as required by the Department of Health

*tested in 2023 from July-Dec. due to rule changes

What this means for you

The EPA is updating guidelines for sampling. This will impact future results. We support this effort to make sure sampling is accurate, and to help identify homes with lead plumbing issues.

US EPA Guidelines

The EPA requires public water providers like the City of Albany Department of Water & Water Supply to monitor drinking water for lead at customer taps. If lead levels are higher than 15parts per billion (ppb) in more than 10% of taps sampled, water providers must inform customers and take steps to reduce lead in water.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lean in drinking water is primarily from material and components with service lines and home plumbing.

The City of Albany Water Department and Water Supply is responsible for providing safe drinking water but cannot control the variety of material used in plumbing components. If you haven't turned on your tap for several hours, you can minimize the potential for lead exposure by flushing your tap before using water for drinking and 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 at: https://albanyny.gov/444/Lead-Drinking-Water

Lead Line Replacement Grants Available

Grant funding available up to $2000, to learn more go to **albanyny.gov/lead**

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What we test for and how

Public drinking water systems monitor their treated drinking water for approximately 100 regulated contaminants. These regulatory parameters are defined within federal rules such as the Revised Total Coliform Rule, Surface Water Treatment Rule, Disinfectants and Disinfection Byproducts Rules, Lead and Copper Rule, and the Radionuclides Rule.

We monitor for the regulated parameters listed below.

Any contaminants found are noted in the tables on the following pages: 17 - 22

Microbiological Contaminants:

Total Coliform
Combined Filter - Effluent Turbidity
Distribution Turbidity

Inorganic Contaminants:

Alkalinity
Total Hardness
Calcium Hardness as CaC03
Chloride
Sodium
Sulfate
Arsenic
Barium
Chromium
Nickle
Thallium
Calcium
Copper
Lead
Dalapon
Pentachlorophenol

Disinfection Byproducts:

Total Trihalomethane
Haloacetic Acids
Total Organic Carbon
Chlorine Residual

Radionuclides

Alpha particles
Beta particles

Other factors that can impact drinking water Appealing

We work to ensure your water **looks,** tastes and smells the way it should.

To meet all water quality **taste and odor** guidelines, we test for the following: alkalinity, aluminum, chloride, color, hardness, iron, manganese, odor, pH, silver, sodium, sulfate, surfactants, total dissolved solids, turbidity, and zinc.

Temperature and Cloudiness
The temperature of the Alcove Reservoir varied seasonally in 2023 from approximately 34°–88° Fahrenheit. PWD does not treat the water for temperature.

Cloudiness in tap water most commonly happens when the cold water **from the water main is warmed up quickly in household plumbing.** Cold water and water under pressure can hold more air than warmer water and water open to the atmosphere.

When cold water comes out of your tap, it's simultaneously warming up and being relieved of the pressure it was under inside the water main and your plumbing. The milky white color is actually just tiny air bubbles. If you allow the glass to sit undisturbed for a short period, you will see it clear up.

Facts & Figures

City of Albany Population: **101,866**

Number of Service Connections: 25,000

2023 residential customers charged $3.11 per 100 cubic feet

$4.16 per 1000 Gallons

3,699,933,292
Billion **Gallons Metered in 2023**

2,423,708,915
Billion **Gallons unmetered in 2023**

16,959,436 million gallons
Average Daily Production

20,536,000
MAX Daily Production in gallons

39.1
% of the total amount produced

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, metals including lead and copper, volatile organic compounds, total trihalomethanes, haloacetic acids, synthetic organic compounds and radioactive materials like Uranium and Radium. 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 most of our data represented here is from 2023 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/ MRDLG	Regulatory Limit (MCL, MRDL,TT or AL)	Likely Source of Contamination
Microbiological Contaminants:							
Total Coliform[1]	No	3/13/2023 &9/13/2023	Two Positive sample	N/A	0	MCL 5% or more Positive of sites sampled per month	Naturally present in the environment.
Combined Filter Effluent Turbidity[2]	No	Five days per week	0.05 (0.03 – 0.13)	Yearly Avg. (Min-Max) NTU	N/A	TT < 1.0 NTU	Soil runoff.
	No	Six times daily	100 % <0.3	NTU	N/A	TT 95% of samples <0.30	Soil runoff.
Distribution Turbidity[3]	No	6/5/2023	0.38 (0.07 -2.94)	Yearly Avg. (Min-Max) NTU	NA	MCL 5 NTU	Soil run off
Inorganic Contaminants:							
Color	No	Five days per week	3.03 (1.0-7.0)	Color units	N/A	15.0 Color units	Natural metallic ions, humic and fulvic acids, dissolved plant components and treatment chemicals.
Odor	No	Five days per week	1.84 (1-3)	Threshold units	N/A	3 Threshold units	Decaying vegetation and metabolites of microbiota and disinfectants.
Alkalinity	No	Five days per week	44.3 (38.6-53.0)	mg/L of CaCO3	N/A	N/A	Naturally occurring
*Total Hardness	No	Five days per week	50.3 (44.2-58.8)	mg/L of CaCO3	N/A	N/A	Sedimentary rocks (lime stone) seepage, runoff from soil and treatment process.
Chloride	No	Five days per week	27.7 (23.8-29.8)	mg/L	N/A	MCL 250 mg/L	Soils, road salt.
Sodium[4]	No	11/28/2023	14.8	mg/L	NA	20.0 mg/L 270 mg/L	Occurs naturally in almost all waters.
Sulfate	No	Monthly	6.38 (5.24-7.28)	mg/L	N/A	MCL 250 mg/L	Occurs naturally in almost all waters.
Nitrate-Nitrogen (as N)	No	11/28/2023	0.109	mg/L	10 mg/L	10mg/L	Runoff from fertilizer use; leaking from septic tanks, sewage; erosion of natural deposits
Barium	No	11/28/2023	0.0034	mg/L	2	2 mg/L	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Calcium	No	11/28/24	18.7	mg/L	N/A	N/A	
Copper[5]	No	2023	29.1 (1.05- 62.4)	µg/L	ND	AL 1300 µg/L	Corrosion of household plumbing systems; Erosion of natural deposits

Lead[6]	No	2023	16.6 (0.02-196)	µg/L	0	AL 15 µg/L	Corrosion of household plumbing systems; Erosion of natural deposits
Dalapon	No	12/05/2022	0.30 J	µg/L	NA	200 µg/L	Runoff from herbicide use in crop application
Pentachlorophenol	No	12/05/2022	0.0041 J	µg/L	NA	1.0 µg/L	Runoff from pesticide use
Disinfection Byproducts:							
Total Trihalomethane	No	Quarterly	58.5 (35.4-58.5)	µg/L	N/A	MCL 80 µg/L LRAA[7]	By-product of drinking water chlorination.
Total Haloacetic Acids	No	Quarterly	18.4 (13.2-18.4)	µg/L	N/A	MCL 60 µg/L LRAA	By-product of drinking water chlorination
Haloacetic Acids HAA5	No	2019-2020	19.5 (13.9-34.0)	µg/L	N/A	Not Regulated	UCMR4[9] Disinfection by-products,
Haloacetic Acids HAA6	No	2019-2020	2.20 (1.15-34.0)	µg/L	N/A	Not Regulated	UCMR4 Disinfection by-products,
Haloacetic Acids HAA9	No	2019-2020	21.7 (15.4-37.1)	µg/L	N/A	Not Regulated	UCMR4 Disinfection by-products,
Total Organic Carbon	No	2-3 days per week	1.74 (1.39-2.2.16)	mg/L	N/A	TT	Naturally present in the environment
Chlorine Residual Entry Point	No	Six times daily	1.02[10] (0.90-1.24)	mg/L	N/A	4.0 (MRDL)	Added to drinking water to inhibit microbial growth.
Radionuclides:							
Alpha particles	No	Weekly	0.42 (ND-1.2)	pCi/L	NA	15 pCi/L	Erosion of natural deposits.
Beta particles	No	Weekly	0.97 (ND-2.3)	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 two samples in 2023, one sample on March 13th 1 out of 120 routine samples, less than 1.0% of the total samples for that month, and the second sample on September 13th, one out of 118 routine sample, less than 1% of the total samples for that month. Additional samples were subsequently collected and total coliforms were not detected in any of 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 0.13 NTU occurred on 9/25/23 with annual average 0.07 NTU (min 0.03 – max 0.13NTU). State regulations require that 95% of the turbidity samples collected have measurements below 0.30 NTU.

[3] Distribution turbidity is a measure of the cloudiness of the water found in the distribution system. We monitor it as high turbidity can hinder the effectiveness of disinfectants and it is a good indicator of water quality. A distribution system turbidity violation occurs when the monthly average of the results of all distribution samples collected in any calendar month exceeds the MCL. Our single highest distribution turbidity measurement detected was 2.94 NTU on June 5th 2023 with monthly average 0.95 NTU, which was far below the state maximum contaminant level.

[4] 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.

[5] The level presented represents the 90th percentile of the 66 sites tested in 2023. 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, 66 samples were collected at your water system and the 90th percentile value was 29.1µg/L with the highest detected value of 62.4µg /L. The action level (1300µg/L) for copper was not exceeded at any of the sites tested.

Notes Continued:

[6] The level presented 16.6µg /L represents the 90th percentile of the 66 samples collected July-December in 2023. The action level (15µg/L) for lead was exceeded at seven (7) of the 66 sites tested. The highest level detected was 196 µg/L.
[7] Locational Running Annual Averages for total Trihalomethane and Haloaceteic acid.
[8] The State considers 50 pCi/L to be the level of concern for beta particles.
[9] Unregulated contaminants Monitoring Rule 4
[10]Compliance is based on a running arithmetic average, computed quarterly, of monthly averages of all samples collected by the system. If the running annual average exceeds the MRDL, the system is in violation and must notify the public.
[11] J. Notifies estimated concentration above the method detection limit but below the reporting limit.
[12] Unregulated Perfluoroalkyl Substances.
[*] Not certified

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.

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. MRDLG's do not reflect the benefits of the use of disinfectants for control of microbial contaminants.

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)).

Nanograms per liter (ng/l): corresponds to one part of liquid to one trillion parts of liquid (parts per trillion - ppt).

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 from various locations in the distribution system for coliform bacteria four days per week along with free chlorine residuals and turbidities.

What does this information mean?

As you can see in the table, our system had no violations in the reporting year 2023. 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) adjusting pH and alkalinity levels to minimize corrosion; 20 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 66 residences in 2023. Most of the residences for 2023 testing were included from the 2021 lead and copper compliance list and remainder locations were picked after a survey to include houses from all wards in the City of Albany and were confirmed with Lead present at their meters. The 90th percentile of the samples collected was 16.6 µg /L for lead, exceeded the action level of (15µg/L) with total seven (7) locations above action level of the 66 sites tested. The highest level detected was 196 µg/L at one location due to not properly following the sampling instructions.

Exposure to lead in drinking water can cause serious health effects in all age groups. Infants and children can have decreases in IQ and attention span. Lead exposure can lead to new learning and behavior problems or exacerbate existing learning and behavior problems. The children of women who are exposed to lead before or during pregnancy can have increased risk of these adverse health effects. Adults can have increased risks of heart disease, high blood pressure, kidney or nervous system problems. If you are concerned about lead in your water and wish to have your water tested contact the City of Albany Water Quality Laboratory Director @ 518-635-4408. Information on lead drinking water, testing methods, and steps you can take to minimize exposure is available @ ***http://www.epa.gov/safewater/lead***

According to EPA and NYS Regulations the City of Albany, being a large water system, requires standard monitoring of lead and copper from 60 single-family homes with LSLs twice a year starting in July 2023. This effort will provide the Water Department with information to help us direct our lead service replacement program most effectively.

In 2023, **350** lead water services were replaced, and Albany Water Board provided **205** grants totaling **$322,800** to property owners replacing lead water lines. The remaining were performed with ARPA grand funding or by AWD staff. Inventory efforts continue, and the public-facing inventory map of water service line materials was published in 2023. The Albany Water Board continues to pursue state and federal grant funding to enhance both inventory and replacement programming in 2024.

Is our water system meeting other rules that govern operations?

We are required to continually monitor your drinking water daily, monthly, quarterly, annually, or after multiple years for different contaminants and report to Local, State, and Federal authorities. During 2023, our system complied with applicable operating, monitoring, and reporting requirements for drinking water regulations.

In 2020 NYS adopted new Mazimum Contaminant Levels (MCLs) for Perfluorooctanoic acid (PFOA), Perfluorooctane Sulfonate (PFOS), and 1,4-Dioxane. Initially, we were required to monitor your drinking water for these contaminants quarterly for one year. All the results for this initial monitoring were below detection limits for all three contaminants and are an indicator that your drinking water meets all health standards.

Information on Unregulated Contaminants

The Safe Drinking Water Act (SDWA) establishes periodic monitoring (almost every 5 years) through the Unregulated Contaminants Monitoring Rule (UCMR) to assess the occurrence of select constituents from the Contaminant Candidate list for potential regulatory consideration. UCMR4 the 4th cycle of UCMR monitoring, in 2019-2020 we were required to collect and analyze drinking water samples for 30 unregulated contaminants. Most of the contaminants were below detection level except some of the new Brominated Haloacetic acids which were monitored for 4 quarters from 8 different distribution locations the averages with Minimum and Maximum values are listed in the detected contaminants table. If you are interested and want to learn more you may contact Laboratory Director Dr. Rifat Hussain @ 518-635-4408.

In 2022 our system also performed additional monitoring (outside of EPA's UCMR program) for unregulated Perfluoroalkyl and Polyfluoroalkyl Substances requested by the State. Unregulated perfluoroalkyl substances that were detected as part of POFA/PFAS sampling are reported in the table below.

Unregulated Perfluoroalkyl Substances

Contaminants	Violation Yes/No	Date of Sample	Level Detected (Avg.) (Range)	Unit Measurement	MCLG/ MRDLG	Regulatory Limit (MCL, MRDL,TT or AL)	Likely Source of Contamination
Perfluorohexanoic acid	No	12/08/2022	0.46 J[1]	ng/L	NA	Not Regulated	Released into the environment from widespread use in commercial and industrial applications.
Perfluorobutanoic acid	No	12/08/2022	0.68 J	ng/L	NA	Not Regulated	
Perfluoropentanoic acid	No	12/08/2022	0.32 J	ng/L	NA	Not Regulated	
Perfluorooctanoic acid	No	12/08/2022	0.68 J	ng/L	NA	Not Regulated	

1 J. Notifies estimated concentration above the method detection limit but below the reporting limit.

Starting in September 2023, the Albany Water system is monitoring a new set of unregulated 29 PFAs and a metal lithium under UCMR5 for four (4) quarters to determine if any FPAS are present and at what level in your water. So far in 2 / 4 quarters monitoring have been completed and none of the unregulated PFAs or Lithium has been detected in your drinking water.

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. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone or an 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 & 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 firefighting 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, it moved, you have a leak.

2023 System Improvements

Supply Reservoirs

Construction was completed on a new office building and garage buildings for watershed staff. Design work proceeded for dam safety improvements at the Basic Creek Reservoir and Rensselaer Lake.

Feura Bush Filtration Plant

Construction began for replacement of filter valves and actuators. This work will be proceeding in 2024. Projects now under design include rehabilitation of the Aeration Building, rehabilitation of the Mixing Basins, replacement of the Hydrated Lime feed system, and a new Maintenance Building.

Distribution System

Water mains were replaced on Krumkill Rd.

Loudonville Reservoir

The new UV equipment was purchased and an installation contract was let. The completion of all installation has occurred in 2024

Water Pumping Station Tanks

New equipment was purchased to replace the pumps and piping at the Upper Service Pump Station. The equipment was installed in 2023.

35 Erie Boulevard

Major improvements have been completed at 35 Erie Boulevard. The old office buildings and sheds were demolished and new buildings and sheds have been constructed. This location is where we store pipe, backfill material, blacktop, precast materials, and castings. This work was completed in 2023.

Grants & Financing

The Department has made applications for funding to New York State EFC (Environmental Facilities Corporation), and has been awarded grants for upcoming projects amounting to 75% of project costs with zero percent interest.
Applications have been made for grants and financing for Lead Service Line Replacement.

References:

- Water Hardness Map: Table adapted from h2odistributors.com *Water Treatment Fundamentals*, prepared and distributed by the https://www.h2odistributors.com/info/hard-water-map/
- https://www.usgs.gov/special-topics/water-science-school/science/hardness-water | https://wqa.org/learn-about-water/#What%20is%20hard%20water?
- Average Residual Chlorine Levels: Water Quality Association; https://wqa.org/wp-content/uploads/2022/09/2014_Chloramine.pdf
- Front Cover Photo of Alcove Reservoir Courtesy of LightHawk

Closing

Thank you for allowing us to continue to provide you and your family with quality drinking water with no water quality violation in year 2023. We continually undertaking measures to maintain and improve our water quality through our treatment and monitoring processes. 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.
Should you have any other questions concerning your water quality, you can contact the **Albany County Health Department at (518) 447-4620**

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DEPARTMENT OF

WATER

THE CITY OF ALBANY, NEW YORK

10 North Enterprise Drive Albany N.Y. 12204
518-434-5300
water@albanyny.gov

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@AlbanyWater

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