



LIVINGSTON
NEW JERSEY

WATER DEPARTMENT

WATER QUALITY REPORT

2020 Results from the Year 2019

LIVINGSTON, NEW JERSEY

Lawn Watering Restrictions

In accordance with Township Ordinance 19-2016, the following water restrictions have been imposed and are enforceable year round:

Properties may water 3 days per week.

- Even: Tuesday, Thursday & Saturday
- Odd: Wednesday, Friday & Sunday
- No address: Tuesday, Thursday & Sunday

Hose or hose-end sprinkler

- Allowed: 6 p.m.—9 a.m.
- 30 minute max. per area per day

Automatic Conventional Irrigation System

- Allowed: 12 midnight—9 a.m.
- Mist: 15 minute max. per area per day
- Rotary sprinkler: 50 minute max. per area per day

**WaterSense certified
systems are exempt.**

We are pleased to present to you this year's Annual Drinking Water Quality Report. This report is designed to inform you about the quality water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources.

Vulnerable Populations Statement

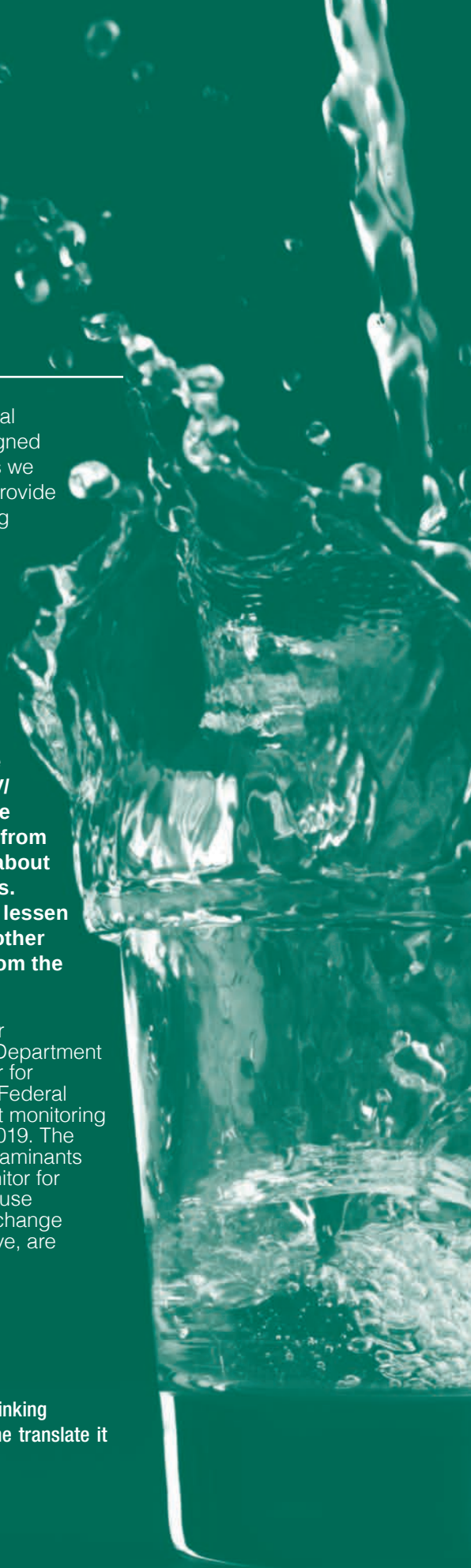
Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

EPA requires monitoring for over 80 drinking water contaminants. The Township of Livingston Water Department and New Jersey American Water routinely monitor for contaminants in your drinking water according to Federal and State laws. The tables show the results of that monitoring for the period of January 1st to December 31st, 2019. The contaminants listed in the tables are the only contaminants detected in your water. The state allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.

Water Department
Township of Livingston

IMPORTANT INFORMATION

This report contains important information about your drinking water. If you do not understand it, please have someone translate it for you.



The Township of Livingston's water supply is derived from fourteen production wells located within the Township and water purchased from New Jersey American Water (NJAW). The water purchased from NJAW is a blend of sources that includes groundwater from the Brunswick Shale Formations, the Buried Valley Aquifer System, the Gneiss Rock Formations, and surface water from the Canoe Brook Reservoirs, Passaic River, Raritan River and the Wanaque Reservoir.

The New Jersey Department of Environmental Protection (NJDEP) has completed and issued the Source Water Assessment Report and Summary for the Township of Livingston Water System and New Jersey American Water System which is available at www.nj.gov/dep/swap or by contacting NJDEP's Bureau of Safe Drinking Water at (609) 292-5550. You may also contact your public water system to obtain information regarding your water system's Source Water Assessment. Livingston Township's Water System's source water susceptibility ratings and a list of potential contaminant sources is included at the end of this report.

If you have any questions about this report or concerning your water, please contact the Township of Livingston Water Department at 973-535-7951 or at 357 S Livingston Avenue, Livingston, New Jersey 07039. We want our valued customers to be informed about their drinking water. If you want to learn more, please attend any of our regularly scheduled Township Council meetings at Municipal Building. For a meeting schedule please see the Township website at www.livingstonnj.org.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some

cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

- Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas projection, mining, or farming.

- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.

- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can, also come from gas stations, urban storm water runoff, and septic systems.

- Radioactive contaminants which can be naturally occurring or be the result of oil and gas production and mining activities.

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

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

Lead If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The Township of Livingston Water Department and New Jersey American Water 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 second to 2 minutes 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 from the Safe Drinking Water hotline or at <http://www.epa.gov/safewater/lead>.

Waivers The Safe Drinking Water Act regulations allow monitoring waivers to reduce or eliminate the monitoring requirements for asbestos, volatile organic chemicals and synthetic organic contaminants. Our system received monitoring waivers for asbestos and synthetic organic contaminants. **We at the Township of Livingston Water Department work hard to provide top quality water to every tap. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children's future. Please call our office if you have questions.**

DEFINITIONS

In the following table 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.

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 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.

Secondary Contaminant - Substances that do not have an impact on health. Secondary Contaminants affect aesthetic qualities such as odor, taste or appearance. Secondary standards are recommendations, not mandates.

Recommended Upper Limit (RUL) - Recommended maximum concentration of secondary contaminants. These reflect aesthetic qualities such as odor, taste or appearance. RUL's are recommendations, not mandates.

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

Total Organic Carbon (TOC) - We are required to remove a certain percentage of (TOC) from our drinking water on a monthly basis. Total Organic Carbon has no adverse health effects. However, TOC provides a medium for the formation of disinfection byproducts.

Turbidity - A measure of the particulate matter or "cloudiness" of the water. High turbidity can hinder the effectiveness of disinfectants.

Township of Livingston Test Results PWS ID # NJ0710001						
Contaminant	Violation Y/N	Level Detected	Units of Measurement	MCLG	MCL	Likely Source of Contamination
Inorganic Contaminants:						
Arsenic Test results Yr. 2017, 2019	N	Range = ND – 2.2 Highest detect = 2.2	ppb	0	5	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium Test results Yr. 2017, 2019	N	Range = 0.06 – 0.57 Highest detect = 0.57	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chromium Test results Yr. 2017, 2019	N	Range = ND – 3.5 Highest detect = 3.5	ppb	100	100	Discharge from steel and pulp mills; erosion of natural deposits
Copper Test results Yr. 2018 Result at 90 th Percentile	N	Highest detect = 0.154 No samples exceeded the action level	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits
Lead Test results Yr. 2018 Result at 90 th Percentile	N	Highest detect = 7.46 2 samples exceeded the action level	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Nitrate Test results Yr. 2019	N	Range = 0.738-2.48 Highest detect = 2.48	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium Test results Yr. 2017, 2019	N	Range = ND – 8.25 Highest detect = 8.25	ppb	50	50	Natural deposits Releases from copper smelting
Nickel Test results Yr. 2017, 2019	N	Range = ND – 70 Highest detect = 70	ppb	N/A	N/A	Erosion of natural deposits
Disinfection Byproducts¹:						
Total Trihalomethanes TTHM - SM1 Test results Yr. 2019	N	Range= 38-89.1 LRAA = 67	ppb	N/A	80	By-product of drinking water disinfection
Total Trihalomethanes TTHM - SM7 Test results Yr. 2019	N	Range= 11-28 LRAA = 18	ppb	N/A	80	By-product of drinking water disinfection
Total Trihalomethanes TTHM - Stage1-#4 Test results Yr. 2019	N	Range= 37-74.9 LRAA = 53	ppb	N/A	80	By-product of drinking water disinfection
Total Trihalomethanes TTHM - Stage1-11 Test results Yr. 2019	N	Range= 24.5-52.4 LRAA = 45	ppb	N/A	80	By-product of drinking water disinfection
Haloacetic Acids HAA5 - SM1 Test results Yr. 2019	N	Range= 28.7-43 LRAA = 34	ppb	N/A	60	By-product of drinking water disinfection
Haloacetic Acids HAA5 - SM7 Test results Yr. 2019	N	Range= 3.4-10 LRAA = 7	ppb	N/A	60	By-product of drinking water disinfection
Haloacetic Acids HAA5 - Stage1-#4 Test results Yr. 2019	N	Range =12.2-31.1 LRAA = 26	ppb	N/A	60	By-product of drinking water disinfection
Haloacetic Acids HAA5 - Stage1-11 Test results Yr. 2019	N	Range =3.6-15 LRAA = 8	ppb	N/A	60	By-product of drinking water disinfection
Radioactive Contaminants:						
Gross Alpha Test results Yr. 2017	N	Range = ND – 9.1 Highest detect = 9.1	pCi/1	0	15	Erosion of natural deposits
Uranium Test results Yr. 2017	N	Range = ND – 4.05 Highest detect = 4.05	ppb	0	30	Erosion of natural deposits
Regulated Disinfectants	Level Detected		MRDL	MRDLG	Likely Source of Contamination	
Chlorine	Range = ND – 2.20 ppm Average = 0.44 ppm		4.0 ppm	4.0 ppm	Water additive used to control microbes	

¹ Total Haloacetic Acids (HAA5) and Total Trihalomethanes (TTHM) compliance is based on a Locational Running Annual Average (LRAA), calculated at each monitoring location. The LRAA calculation is based on four yearly quarters of results. Some people who drink water containing trihalomethanes (TTHMs) in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

Township of Livingston - Secondary Compounds

Township of Livingston Test Results PWS ID # NJ0710001				
Secondary Compounds	Level Detected	Units of Measurement	RUL	Typical Source
Aluminum	Range = 0.002 - 0.168	ppm	0.2	Erosion of natural deposits
Chloride	Range = 95.9 - 273	ppm	250	Erosion of natural deposits
Hardness, Carbonate	Range = 250 - 440 Avg = 347	ppm	250	Erosion of natural deposits
Hardness, Carbonate	Range = 14.6 - 25.7 Avg = 20.3	GPG (Grains per Gallon)	14.6	Erosion of natural deposits
Sodium ¹	Range = 11.8 - 46.1	ppm	50	Erosion of natural deposits; Roadway salt runoff
Sulfate	Range = 22.3 - 45.2	ppm	250	Erosion of natural deposits
pH	Range = 6.65 - 7.7 Avg = 7.3	pH	6.5 to 8.5	Naturally occurring

¹ For healthy individuals, the sodium intake from water is not important, because a much greater intake of sodium takes place from salt in the diet. However, sodium levels above the recommended upper limit may be a concern to individuals on a sodium-restricted diet

Spruce Up Your Sprinkler System



Inspect

sprinkler heads.

A broken one can waste **25,000** gallons of water in six months!

Connect

hoses and pipes well.

A leak as small as the tip of a pen can waste **6,300** gallons of water per month!

Select

a WaterSense® labeled irrigation controller and water smarter.

Direct

spray on landscapes, not pavement!



epa.gov/watersense

Township of Livingston - Unregulated Contaminant Monitoring Rule (UCMR) The Township of Livingston Water participated in the UCMR program. Unregulated contaminants are those for which the EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist the EPA in determining the occurrence of unregulated contaminants in drinking water and whether regulation is warranted. Our results are listed below and available upon request.

Contaminant	Level Detected	Units of Measurement	Likely source
Manganese	Range = 0.437 - 11 Highest detect = 11	ppb	Naturally present in the environment; used in steel production, fertilizer, batteries, and fireworks; drinking water and wastewater treatment chemical

Contaminant	Level Detected	Units of Measurement	Likely source
Bromochloroacetic acid	Range = 0.592 – 2.8 Highest detect = 2.8	ppb	By-product of drinking water disinfection
Bromodichloroacetic acid	Range = 0.574 – 3.26 Highest detect = 3.26	ppb	By-product of drinking water disinfection
Chlorodibromoacetic acid	Range = 0.307 – 1.27 Highest detect = 1.27	ppb	By-product of drinking water disinfection
Dibromoacetic acid	Range = 0.379 – 3.11 Highest detect = 2	ppb	By-product of drinking water disinfection
Dichloroacetic acid	Range = 0.643 – 25.8 Highest detect = 25.8	ppb	By-product of drinking water disinfection
Monobromoacetic acid	Range = 0.362 – 0.469 Highest detect = 0.469	ppb	By-product of drinking water disinfection
Monochloroacetic acid	Range = ND Highest detect = ND	ppb	By-product of drinking water disinfection
Tribromoacetic acid	Range = ND - 2 Highest detect = 2	ppb	By-product of drinking water disinfection
Trichloroacetic acid	Range = 0.52 – 35.6 Highest detect = 35.6	ppb	By-product of drinking water disinfection

Township of Livingston - Additional Unregulated Substances

Contaminant	Level Detected	Units of Measurement	Likely source
1,1-Dichloroethane	Range = ND-0.06	ppb	Halogenated alkane; used as a solvent
1,4-Dioxane	Range = 0.094-2.5	ppb	Cyclic aliphatic ether; used as a solvent or solvent stabilizer in manufacturing and processing of paper, cotton, textile products, automotive coolant, cosmetics and shampoos
Chlorate	Range = ND – 1690	ppb	Agricultural defoliant or desiccant; disinfection byproduct; used in the production of chloride dioxide
Chromium (Total)	Range = ND – 3.0	ppb	Naturally-occurring element; used in the making of steel and other alloys; chromium -3 or -6 are used for chrome plating, dyes and pigments, leather tanning, and other wood preservation
Chromium (VI)	Range = ND – 2.8	ppb	Naturally-occurring element; used in the making of steel and other alloys; chromium -3 or -6 are used for chrome plating, dyes and pigments, leather tanning, and other wood preservation
Strontium	Range = 65 - 1180	ppb	Naturally-occurring element; historically commercial use of strontium has been in the faceplate glass of cathode-ray tube televisions to block x-ray emissions
Vanadium	Range = ND – 9.2	ppb	Naturally-occurring element metal; used as vanadium pentoxide which is a chemical intermediate and a catalyst
Perfluorobutanesulfonic acid (PFBS)	Range = ND-4.0 Highest detect = 4.0	ppt	Manmade chemical; used in products to make them stain, grease, heat and water resistant
Perfluoroheptanoic acid (PFHpA)	Range = ND-4.6 Highest detect = 4.6	ppt	Manmade chemical; used in products to make them stain, grease, heat and water resistant
Perfluorohexanesulfonic acid (PFHxS)	Range = ND-4.4 Highest detect = 4.4	ppt	Manmade chemical; used in products to make them stain, grease, heat and water resistant
Perfluorooctanesulfonic acid (PFOS)	Range = ND-9.6 Highest detect = 9.6	ppt	Manmade chemical; used in products to make them stain, grease, heat and water resistant
Perfluorooctanoic Acid (PFOA)	Range = 8.7-18 Highest detect = 18	ppt	Perfluorinated aliphatic carboxylic acid; used for its emulsifier and surfactant properties in or as fluoropolymers (such as Teflon), fire - fighting foams, cleaners, cosmetics, greases and lubricants, paints, polishes, adhesives and photographic films

Purchased Water from New Jersey American Water In addition to producing water from our own well water sources, the Township purchases water from New Jersey American Water (NJAW). Information about NJAW water quality results is summarized in the table below.

New Jersey American Water – Short Hills System - 2019 Test Results PWS ID # NJ0712001						
Contaminant	Violation Y/N	Level Detected	Units of Measurement	MC LG	MCL	Likely Source of Contamination
Microbiological Contaminants:						
Total Coliform Bacteria	N	Range = ND to 0.6% Highest detect = 0.6%	Positive monthly samples	0	5% of monthly samples	Naturally present in the environment
E. coli bacteria	N*	Range = ND to 1 Highest Detect = 1	Total number of positive samples	0	are positive	Human or animal fecal waste
* This system had one positive E. coli result out of 1826 samples collected in 2019. Follow up sampling including repeat and bracket samples, were all negative. No assessment or corrective action was required under the Revised Total Coliform Rule.						
Inorganic Contaminants:						
Arsenic	N	Range = ND – 1.1 Highest detect = 1.1	ppb	0	5	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium	N	Range = ND – ND - 0.3 Highest detect = 0.3	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Flouride ³	N	Range = ND- 0.3 Highest Detect = 0.3	ppm	4		
Copper ^{1,2} Result at 90 th Percentile June 1, 2019-Sept. 30, 2019, 53 Samples	N	Highest detect = 0.294	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits
Lead ^{1,2} Result at 90 th Percentile June 1,2019-Sept. 30, 2019, 53 Samples	N	Highest detect = 2	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Nickel	N	Range = ND – 17 Highest detect = 17	ppb	N/A	N/A	Erosion of natural deposits
Nitrate ⁴	N	Range = ND – 5.7 Highest level detected = 5.7	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Disinfection Byproducts^{5,6}:						
TTHM Total Trihalomethanes A1-2	N	Range = 9 – 15 Highest detect = 20	ppb	N/A	80	By-product of drinking water disinfection
TTHM Total Trihalomethanes A2-5	N	Range = 16 – 30 Highest detect = 29	ppb	N/A	80	By-product of drinking water disinfection
TTHM Total Trihalomethanes CWC34	N	Range = 12 – 25 Highest detect = 18	ppb	N/A	80	By-product of drinking water disinfection
TTHM Total Trihalomethanes CWC71	N	Range = 31 – 60 Highest detect = 51	ppb	N/A	80	By-product of drinking water disinfection
TTHM Total Trihalomethanes SHDBP2-A	N	Range = 9 – 15 Highest detect = 18	ppb	N/A	80	By-product of drinking water disinfection
TTHM Total Trihalomethanes SHDBP2-G	N	Range = 44 – 85 Highest detect = 76	ppb	N/A	80	By-product of drinking water disinfection
TTHM Total Trihalomethanes SHDBP2-M	N	Range = 18 – 28 Highest detect = 33	ppb	N/A	80	By-product of drinking water disinfection
TTHM Total Trihalomethanes SHDBP2-N	N	Range = 19 – 41 Highest detect = 32	ppb	N/A	80	By-product of drinking water disinfection
HAA5 Haloacetic Acids A1-2	N	Range = 2 – 6 Highest detect = 10	ppb	N/A	60	By-product of drinking water disinfection

HAA5 Haloacetic Acids A2-5	N	Range = 6 - 22 Highest detect = 13	ppb	N/A	60	By-product of drinking water disinfection
HAA5 Haloacetic Acids CWC34	N	Range = 5 - 9 Highest detect = 6	ppb	N/A	60	By-product of drinking water disinfection
HAA5 Haloacetic Acids CWC71	N	Range = 17 - 41 Highest detect = 26	ppb	N/A	60	By-product of drinking water disinfection
HAA5 Haloacetic Acids SHDBP2-A	N	Range = 2 - 6 Highest detect = 8	ppb	N/A	60	By-product of drinking water disinfection
HAA5 Haloacetic Acids SHDBP2-G	N	Range = 14 - 32 Highest detect = 26	ppb	N/A	60	By-product of drinking water disinfection
HAA5 Haloacetic Acids SHDBP2-M	N	Range = 7 - 15 Highest detect = 15	ppb	N/A	60	By-product of drinking water disinfection
HAA5 Haloacetic Acids SHDBP2-N	N	Range = 7 - 14 Highest detect = 13	ppb	N/A	60	By-product of drinking water disinfection

Radioactive Contaminants:

Gross Alpha ⁷ Test results Yr. 2018	N	Range = ND - 13 Highest detect = 13	pCi/1	0	15	Erosion of natural deposits
Combined Radium 228 & 226 Test results Yr. 2018	N	Range = ND - 3 Highest detect = 3	pCi/1	0	5	Erosion of natural deposits

Others ⁸ :	Violation Y/N	Level Detected	MCLG	Likely Source of Contamination	
Turbidity, NTU	N	Range = 0.04 – 0.32 Highest detect = 0.32	TT = 1 NTU	Soil runoff	
	N	99.99%	TT = % of samples <0.3 NTU (min 95% required)	Soil runoff	
Total Organic Carbon, %	N	42 – 68 (35 – 45 required)	TT = % Removal or Removal Ratio	Naturally present in the environment	
Regulated Disinfectants ⁹ :		Level Detected	MRDL	MRDLG	Likely Source of Contamination
Chlorine		Range = 0.1 – 2.4 Highest Detect = 1.8	4.0 ppm	4.0 ppm	Water additive used to control microbes
Chloramines		Range = ND – 3.2 ppm Highest Detect = 1.3	4.0 ppm	4.0 ppm	Water additive used to control microbes

¹ Action Level: The concentration of a contaminant which, if exceeded, triggers a treatment technique or other requirement, which a water system must follow.

² 90 percent of the samples tested below the indicated value.

³ Fluoride is added to the water at therapeutic levels (0.6-1.0 ppm) in certain areas. Please call us for more information about fluoride levels in your area.

⁴ Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from your health care provider.

⁵ The highest-level detected result represents the highest locational running annual average (LRAA) calculated quarterly from individual sites.

⁶ Some people who drink water containing Trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

⁷ Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.

⁸ Turbidity is a measure of the cloudiness of the water. Over 98 percent of the turbidity readings were below the treatment technique requirement of 0.3 ntu. We monitor it because it is a good indicator of the effectiveness of our filtration system.

⁹ Highest Detected Level is the maximum quarterly average detected. Range indicates the values detected in the distribution system.

Cryptosporidium: is a protozoan found in surface water throughout the United States. Although filtration removes Cryptosporidium, the most commonly used filtration methods cannot guarantee 100 percent removal. Ingestion of Cryptosporidium may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, people with severely weakened immune systems have a risk of developing a life-threatening illness. We encourage such people to consult their doctors regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease. It can also be spread through means other than drinking water. For additional information please speak with your personal health care provider.

New Jersey American Water - Secondary Compounds

New Jersey American Water – Short Hills System Test Results Year 2019 PWS ID # NJ0712001				
Secondary Compounds	Level Detected	Units of Measurement	RUL	Typical Source
Aluminum	Range = ND – 0.1	ppm	0.20	Erosion of natural deposits
Chloride	Range = 40 - 350	ppm	250	Erosion of natural deposits
Iron	Range = ND – 0.25	ppm	0.3	Naturally present in the environment
Manganese ¹	Range = ND – 0.21	ppm	0.05	Erosion of natural deposits
Sodium ²	Range = 14 – 129	ppm	50	Erosion of natural deposits; Roadway salt runoff
Zinc	Range = ND – 0.26	ppm	5	Erosion of natural deposits

¹ The recommended upper limit for Manganese is based on staining of the laundry. Manganese is an essential nutrient, and toxicity is not expected from levels which would be encountered in drinking water.

² For healthy individuals, the sodium intake from water is not important, because a much greater intake of sodium takes place from salt in the diet. However, sodium levels above the recommended upper limit may be a concern to individuals on a sodium-restricted diet

New Jersey American Water - Unregulated Contaminant Monitoring Rule (UCMR)

New Jersey American Water participated in the UCMR program. Unregulated contaminants are those for which the EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist the EPA in determining the occurrence of unregulated contaminants in drinking water and whether regulation is warranted. Our results are available upon request. For testing conducted in the Short Hills System, we found the substances listed.

Contaminant	Level Detected	Units of Measurement	Likely source
Manganese	Range = 0.4 - 46 Highest detect = 46	ppb	Naturally present in the environment; used in steel production, fertilizer, batteries, and fireworks; drinking water and wastewater treatment chemical
Germanium	Range = ND – 0.4 Highest detect = 0.4	ppb	Naturally occurring element; commercially available in combination with other elements and minerals; a byproduct of zinc ore processing; used in infrared optics; fiber-optic systems, electronics and solar applications
Contaminant	Level Detected	Units of Measurement	Likely source
Bromide	Range = 4 - 9 Highest detect = 4	ppb	By-product of drinking water disinfection
Bromochloroacetic acid	Range = 1 - 3 Highest detect = 3	ppb	By-product of drinking water disinfection
Bromodichloroacetic acid	Range = 1 - 3 Highest detect = 3	ppb	By-product of drinking water disinfection
Chlorodibromoacetic acid	Range = 0.4 - 2 Highest detect = 2	ppb	By-product of drinking water disinfection
Dibromoacetic acid	Range = ND - 2 Highest detect = 2	ppb	By-product of drinking water disinfection
Dichloroacetic acid	Range = 2 - 20 Highest detect = 20	ppb	By-product of drinking water disinfection
Monobromoacetic acid	Range = ND - 0.4 Highest detect = 0.4	ppb	By-product of drinking water disinfection

Monochloroacetic acid	Range = ND Highest detect = ND	ppb	By-product of drinking water disinfection
Tribromoacetic acid	Range = ND Highest detect = ND	ppb	By-product of drinking water disinfection
Trichloroacetic acid	Range = 0.6 - 25 Highest detect = 0.6	ppb	By-product of drinking water disinfection

New Jersey American Water – Additional Unregulated Substances

Contaminant	Level Detected	Units of Measurement	Likely source
Chlorate Test results Yrs. 2019	Range = ND – 413 Highest detect = 413	ppb	Agricultural defoliant or desiccant; disinfection byproduct; used in the production of chloride dioxide
Perfluorohexanesulfonic acid (PFHxA) Test results Yrs. 2019	Range = ND – 0.0065 Highest detect = 0.0065	ppb	Breakdown product of stain- and grease-proof coatings on food packaging and household products.
Perfluorohexanesulfonic acid (PFHxS) Test results Yrs. 2019	Range = ND – 0.0085 Highest detect = 0.0085	ppb	Manmade chemical; used in products to make them stain, grease, heat and water resistant
Perfluorooctanesulfonic acid (PFOS) Test results Yrs. 2019	Range = ND – 0.0086 Highest detect = 0.0086	ppb	Manmade chemical; used in products to make them stain, grease, heat and water resistant
Perfluorooctanoic Acid (PFOA) Test results Yrs. 2019	Range = ND – 0.015 Highest Detect = 0.015	ppb	Perfluorinated aliphatic carboxylic acid; used for its emulsifier and surfactant properties in or as fluoropolymers (such as Teflon), fire - fighting foams, cleaners, cosmetics, greases and lubricants, paints, polishes, adhesives and photographic films
Strontium Test results Yrs. 2019	Range = 0.1 – 0.9 Highest Detect = 0.9	ppm	Naturally-occurring element; historically commercial use of strontium has been in the faceplate glass of cathode-ray tube televisions to block x-ray emissions
1,4-Dioxane Test results Yrs. 2019	Range = ND – 0.7 Highest detect = 0.7	ppb	Cyclic aliphatic ether; used as a solvent or solvent stabilizer in manufacturing and processing of paper, cotton, textile products, automotive coolant, cosmetics and shampoos
Vanadium Test results Yrs. 2019	Range = ND – 0.5	ppb	Naturally-occurring element metal; used as vanadium pentoxide which is a chemical intermediate and a catalyst

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Efficient distribution systems get hot water to the tap fast so you save more time, water, and energy.

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WaterSense labeled fixtures ensure efficiency and performance.

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Livingston Township Division of Water - PWSID # NJ0710001

Livingston Township Division of Water is a public community water system consisting of 14 wells and 1 purchased surface water source. This system's source water comes from the following aquifer Brunswick Aquifer System, Glacial Sand and Gravel. This system purchases water from the following water system: NJ American Water / Short Hills System

Susceptibility Ratings for Livingston Township Division of Water Sources

The table below illustrates the susceptibility ratings for the seven contaminant categories (and radon) for each source in the system. The table provides the number of wells and intakes that rated high (H), medium (M), or low (L) for each contaminant category. For susceptibility ratings of purchased water, refer to the specific water system's source water assessment report.

The seven contaminant categories are defined at the bottom of this page. DEP considered all surface water highly susceptible to pathogens, therefore all intakes received a high rating for the pathogen category. For the purpose of Source Water Assessment Program, radionuclides are more of a concern for ground water than surface water. As a result, surface water intakes' susceptibility

to radionuclides was not determined and they all received a low rating.

If a system is rated highly susceptible for a contaminant category, it does not mean a customer is or will be consuming contaminated drinking water. The rating reflects the potential for contamination of source water, not the existence of contamination. Public water systems are required to monitor for regulated contaminants and to install treatment if any contaminants are detected at frequencies and concentrations above allowable levels. As a result of the assessments, DEP may customize (change existing) monitoring schedules based on the susceptibility ratings.

	Pathogens			Nutrients			Pesticides			Volatile Organic Compounds			Inorganics			Radionuclides			Radon			Disinfection Byproduct Precursors		
Sources	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L
Wells - 14		8	6	4	10			2	12	14			9	5		1	13		14			3	11	

We at the Township of Livingston Water Department work hard to provide top quality water to every tap. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children's future. Please call our office if you have questions.

Pathogens: Disease-causing organisms such as bacteria and viruses. Common sources are animal and human fecal wastes.

Nutrients: Compounds, minerals and elements that aid growth, that are both naturally occurring and man-made. Examples include nitrogen and phosphorus.

Volatile Organic Compounds: Man-made chemicals used as solvents, degreasers, and gasoline components. Examples include benzene, methyl tertiary butyl ether (MTBE), and vinyl chloride.

Pesticides: Man-made chemicals used to control pests, weeds and fungus. Common sources include land application and manufacturing centers of pesticides. Examples include herbicides such as atrazine, and insecticides such as chlordane.

Inorganics: Mineral-based compounds that are both naturally occurring and man-made. Examples include arsenic, asbestos, copper, lead, and nitrate.

Radionuclides: Radioactive substances that are both naturally occurring and man-made. Examples include radium and uranium.

Radon: Colorless, odorless, cancer-causing gas that occurs naturally in the environment. For more information go to <http://www.nj.gov/dep/rpp/radon/index.htm> or call (800) 648-0394.

Disinfection Byproduct Precursors: A common source is naturally occurring organic matter in surface water. Disinfection byproducts are formed when the disinfectants (usually chlorine) used to kill pathogens react with dissolved organic material (for example leaves) present in surface water.

6 SIMPLE STEPS TO SAVE WATER...BECAUSE REMEMBER, EVERY DROP COUNTS

Due to much lower than normal rainfall, New Jersey's water supply is dwindling. You can do your part to help avoid a drought emergency by taking these six simple steps to save water.



Don't let faucets run when brushing your teeth, shaving, or washing the dishes. Just turning off the water while you brush can save 200 gallons a month.

1

Run washing machines and dishwashers only when they are full, or select the properly sized wash cycle for the current laundry load.

2

Install water-saving showerheads and faucet aerators in the bathroom and kitchen (available at most home improvement stores and some supermarkets.)

3

Fix any leaking faucets –one drop every 2 seconds from a leaky faucet wastes 2 gallons of water every day – that's water – and money – down the drain.

4

Don't wash your car at home – a car wash uses much less water and recycles it, too.

5

With the end of the growing season, be sure to turn off automatic lawn and garden sprinkler systems.

6

EVERY
DROP
COUNTS

For more detailed information on how you can conserve water in and outside your home, visit njdrought.org.

Remember...every drop counts.