

# WATER QUALITY REPORT

2021 Results from the Year 2020  
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) and the East Orange Water Commission (EOWC). 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 water purchased from the EOWC is groundwater from the Buried Valley Aquifer System.

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](http://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  
357 S Livingston Avenue  
Livingston, New Jersey 07039  
Phone: 973-535-7951  
E-mail: [water@livingstonnj.org](mailto:water@livingstonnj.org)

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](http://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 contaminants 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.**

## 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](http://epa.gov/watersense)



## 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 - Well Water Sources

| Township of Livingston 2020 Test Results<br>PWS ID # NJ0710001                          |                  |                                                                      |                                |      |                                      |                                                                                                                 |
|-----------------------------------------------------------------------------------------|------------------|----------------------------------------------------------------------|--------------------------------|------|--------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| Contaminant                                                                             | Violation<br>Y/N | Level<br>Detected                                                    | Units of<br>Measure-<br>ment   | MCLG | MCL                                  | Likely Source of<br>Contamination                                                                               |
| <b>Inorganic Contaminant:</b>                                                           |                  |                                                                      |                                |      |                                      |                                                                                                                 |
| Arsenic<br>Test results Yr. 2020                                                        | N                | Range = ND – 1.71<br>Highest detect = 1.71                           | ppb                            | 0    | 5                                    | Erosion of natural deposits;<br>runoff from orchards; runoff<br>from glass and electronics<br>production wastes |
| Barium<br>Test results Yr. 2020                                                         | N                | Range = 0.011 – 0.434<br>Highest detect =<br>0.434                   | ppm                            | 2    | 2                                    | Discharge of drilling wastes;<br>discharge from metal<br>refineries; erosion of natural<br>deposits             |
| Chromium<br>Test results Yr. 2020                                                       | N                | Range = 0.9 – 2.08<br>Highest detect = 2.08                          | ppb                            | 100  | 100                                  | Discharge from steel and<br>pulp mills; erosion of natural<br>deposits                                          |
| Nitrate<br>Test results Yr. 2020                                                        | N                | Range = 0.7 – 2.4<br>Highest detect = 2.4                            | ppm                            | 10   | 10                                   | Runoff from fertilizer use;<br>leaching from septic tanks,<br>sewage; erosion of natural<br>deposits            |
| Selenium<br>Test results Yr. 2020                                                       | N                | Range = ND – 2.01<br>Highest detect = 2.01                           | ppb                            | 50   | 50                                   | Natural deposits<br>Releases from copper<br>smelting                                                            |
| Nickel<br>Test results Yr. 2020                                                         | N                | Range = ND – 4.87<br>Highest detect = 4.87                           | ppb                            | N/A  | N/A                                  | Erosion of natural deposits                                                                                     |
| <b>Organic Contaminant:</b>                                                             |                  |                                                                      |                                |      |                                      |                                                                                                                 |
| Perfluorononanoic acid<br>(PFNA)<br>Test results Yr. 2020                               | N                | Range = ND – 2.1<br>Highest detect = 2.1                             | ppt                            | 13   | 13                                   | Manmade chemical; used in<br>products to make them stain,<br>grease, heat and water<br>resistant                |
| <b>Distribution – Lead and Copper:</b>                                                  |                  |                                                                      |                                |      |                                      |                                                                                                                 |
| Copper<br>Test results Yr. 2018<br>Result at 90 <sup>th</sup> Percentile                | N                | Highest detect =<br>0.154<br>No samples exceeded<br>the action level | ppm                            | 1.3  | AL=1.3                               | Corrosion of household<br>plumbing systems; erosion of<br>natural deposits                                      |
| Lead<br>Test results Yr. 2018<br>Result at 90 <sup>th</sup> Percentile                  | N                | Highest detect = 7.46<br>2 samples exceeded<br>the action level      | ppb                            | 0    | AL=15                                | Corrosion of household<br>plumbing systems, erosion of<br>natural deposits                                      |
| <b>Distribution – Microbiological Contaminants<sup>1</sup> (Test results Yr. 2020):</b> |                  |                                                                      |                                |      |                                      |                                                                                                                 |
| Total Coliform Bacteria                                                                 | N                | 3 Total Coliform<br>positive samples in<br>July 2020 <sup>1</sup>    | Positive<br>monthly<br>samples | 0    | 5% of monthly<br>samples<br>positive | Naturally present in the<br>environment                                                                         |

| Disinfection Byproducts <sup>2</sup> (Test results Yr. 2020):   |                                             |                                            |         |         |                                         |                                           |
|-----------------------------------------------------------------|---------------------------------------------|--------------------------------------------|---------|---------|-----------------------------------------|-------------------------------------------|
| Total Trihalomethanes TTHM - SM1<br>Test results Yr. 2020       | N                                           | Range= 34 – 58<br>LRAA = 44                | ppb     | N/A     | 80                                      | By-product of drinking water disinfection |
| Total Trihalomethanes TTHM - SM7<br>Test results Yr. 2020       | N                                           | Range= 3.36 – 21.8<br>LRAA = 14            | ppb     | N/A     | 80                                      | By-product of drinking water disinfection |
| Total Trihalomethanes TTHM - Stage1-#4<br>Test results Yr. 2020 | N                                           | Range= 20.18 – 58<br>LRAA = 37             | ppb     | N/A     | 80                                      | By-product of drinking water disinfection |
| Total Trihalomethanes TTHM - Stage1-11<br>Test results Yr. 2020 | N                                           | Range= 9.39 – 40.7<br>LRAA = 24            | ppb     | N/A     | 80                                      | By-product of drinking water disinfection |
| Haloacetic Acids HAA5 - SM1<br>Test results Yr. 2020            | N                                           | Range=13.9 – 39.8<br>LRAA = 27             | ppb     | N/A     | 60                                      | By-product of drinking water disinfection |
| Haloacetic Acids HAA5 - SM7<br>Test results Yr. 2020            | N                                           | Range= 0 – 6.2<br>LRAA = 3                 | ppb     | N/A     | 60                                      | By-product of drinking water disinfection |
| Haloacetic Acids HAA5 - Stage1-#4<br>Test results Yr. 2020      | N                                           | Range =6.9 – 38<br>LRAA = 22               | ppb     | N/A     | 60                                      | By-product of drinking water disinfection |
| Haloacetic Acids HAA5 - Stage1-11<br>Test results Yr. 2020      | N                                           | Range =0 – 6.6<br>LRAA = 4                 | ppb     | N/A     | 60                                      | By-product of drinking water disinfection |
| Radioactive Contaminants:                                       |                                             |                                            |         |         |                                         |                                           |
| Gross Alpha<br>Test results Yr. 2017, 2020                      | N                                           | Range = ND – 6.25<br>Highest detect = 6.25 | pCi/L   | 0       | 15                                      | Erosion of natural deposits               |
| Uranium<br>Test results Yr. 2017                                | N                                           | Range = ND – 4.05<br>Highest detect = 4.05 | ppb     | 0       | 30                                      | Erosion of natural deposits               |
| Regulated Disinfectants                                         | Level Detected                              |                                            | MRDL    | MRDLG   | Likely Source of Contamination          |                                           |
| Chlorine<br>Test results Yr. 2020                               | Range = ND – 2.20 ppm<br>Average = 0.44 ppm |                                            | 4.0 ppm | 4.0 ppm | Water additive used to control microbes |                                           |

<sup>1</sup> Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments. During the past year we were required to conduct one Level 1 assessment(s). One Level 1 assessment(s) were completed.

<sup>2</sup> 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<br>PWS ID # NJ0710001   |                                  |                         |            |                                                     |
|-------------------------------------------------------------|----------------------------------|-------------------------|------------|-----------------------------------------------------|
| Secondary Compounds <sup>1</sup><br>(Test results Yr. 2020) | Level Detected                   | Units of Measurement    | RUL        | Typical Source                                      |
| Aluminum                                                    | Range = ND – 0.003               | ppm                     | 0.2        | Erosion of natural deposits                         |
| Chloride                                                    | Range = 62.5 – 310               | ppm                     | 250        | Erosion of natural deposits                         |
| Hardness, Carbonate (ppm)                                   | Range = ND - 428<br>Avg = 321.6  | ppm                     | 250        | Erosion of natural deposits                         |
| Hardness, Carbonate (GPG, grains per gallon)                | Range = ND - 25<br>Avg = 18.8    | GPG (Grains per Gallon) | 14.6       | Erosion of natural deposits                         |
| Sodium <sup>2</sup>                                         | Range =10.9 - 59.1               | ppm                     | 50         | Erosion of natural deposits;<br>Roadway salt runoff |
| Sulfate                                                     | Range = 22.4 - 59.1              | ppm                     | 250        | Erosion of natural deposits                         |
| pH                                                          | Range = 6.67 - 7.78<br>Avg = 7.3 | pH                      | 6.5 to 8.5 | Naturally occurring                                 |

<sup>1</sup> Compounds with Secondary MCLs do not have MCLGs; these limits are primarily established to address aesthetic concerns

<sup>2</sup> 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

**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<br>Test results Yr. 2019 | Range = ND – 2.55<br>Highest detect = 2.55 | ppb                  | Naturally-occurring elemental metal; largely used in aluminum alloy production. Essential dietary element. |

| Contaminant                                       | Level Detected                                | Units of Measurement | Likely source                             |
|---------------------------------------------------|-----------------------------------------------|----------------------|-------------------------------------------|
| Bromochloroacetic acid<br>Test results Yr. 2019   | Range = 0.592 – 2.8<br>Highest detect = 2.8   | ppb                  | By-product of drinking water disinfection |
| Bromodichloroacetic acid<br>Test results Yr. 2019 | Range = 0.574 – 3.26<br>Highest detect = 3.26 | ppb                  | By-product of drinking water disinfection |
| Chlorodibromoacetic acid<br>Test results Yr. 2019 | Range = 0.307 – 1.27<br>Highest detect = 1.27 | ppb                  | By-product of drinking water disinfection |
| Dibromoacetic acid<br>Test results Yr. 2019       | Range = ND – 4.8<br>Highest detect = 4.8      | ppb                  | By-product of drinking water disinfection |
| Dichloroacetic acid<br>Test results Yr. 2019      | Range = ND – 21.6<br>Highest detect = 21.6    | ppb                  | By-product of drinking water disinfection |
| Tribromoacetic acid<br>Test results Yr. 2019      | Range = ND - 2<br>Highest detect = 2          | ppb                  | By-product of drinking water disinfection |
| Trichloroacetic acid<br>Test results Yr. 2019     | Range = ND – 19.8<br>Highest detect = 19.8    | ppb                  | By-product of drinking water disinfection |

## Township of Livingston - Additional Unregulated Substances

| Contaminant                                                   | Level Detected                         | Units of Measurement | Likely source                                                                                                                                                                                                                                                |
|---------------------------------------------------------------|----------------------------------------|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1,4-Dioxane<br>Test results Yr. 2020                          | Range = ND -1.6                        | 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<br>Test results Yr. 2014, 2015                       | Range = ND – 1690                      | ppb                  | Agricultural defoliant of desiccant; disinfection byproduct; used in the production of chloride dioxide                                                                                                                                                      |
| Chromium (Total)<br>Test results Yr. 2014, 2015               | 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)<br>Test results Yr. 2014, 2015                  | 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<br>Test results Yr. 2014, 2015                      | 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<br>Test results Yr. 2014, 2015                       | Range = ND – 9.2                       | ppb                  | Naturally-occurring element metal; used as vanadium pentoxide which is a chemical intermediate and a catalyst                                                                                                                                                |
| Perfluorohexanoic acid (PFHxA)<br>Test results Yr. 2020       | Range = ND-6.7<br>Highest detect = 6.7 | ppt                  | Manmade chemical; used in products to make them stain, grease, heat and water resistant                                                                                                                                                                      |
| Perfluoroheptanoic acid (PFHpA)<br>Test results Yr. 2020      | Range = ND-7.5<br>Highest detect = 7.5 | ppt                  | Manmade chemical; used in products to make them stain, grease, heat and water resistant                                                                                                                                                                      |
| Perfluorooctanoic Acid (PFOA)<br>Test results Yr. 2020        | Range = 8-26<br>Highest detect = 26    | 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 |
| Perfluorobutanesulfonic acid (PFBS)<br>Test results Yr. 2020  | Range = ND-4.9<br>Highest detect = 4.4 | ppt                  | Manmade chemical; used in products to make them stain, grease, heat and water resistant                                                                                                                                                                      |
| Perfluorohexanesulfonic acid (PFHxS)<br>Test results Yr. 2020 | Range = ND-5.9<br>Highest detect = 5.9 | ppt                  | Manmade chemical; used in products to make them stain, grease, heat and water resistant                                                                                                                                                                      |
| Perfluorooctanesulfonic acid (PFOS)<br>Test results Yr. 2020  | Range =1.9-7.5<br>Highest detect = 7.5 | ppt                  | Manmade chemical; used in products to make them stain, grease, heat and water resistant                                                                                                                                                                      |

**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 - Test Results<br>PWS ID # NJ0712001                 |               |                                                      |                                  |       |                                |                                                                                                        |
|-----------------------------------------------------------------------------------------------------|---------------|------------------------------------------------------|----------------------------------|-------|--------------------------------|--------------------------------------------------------------------------------------------------------|
| Contaminant                                                                                         | Violation Y/N | Level Detected                                       | Units of Measurement             | MC LG | MCL                            | Likely Source of Contamination                                                                         |
| <b>Inorganic Contaminants:</b>                                                                      |               |                                                      |                                  |       |                                |                                                                                                        |
| Arsenic<br>Test results Yr. 2020                                                                    | N             | Range = ND – 2<br>Highest detect = 2                 | ppb                              | 0     | 5                              | Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes |
| Barium<br>Test results Yr. 2020                                                                     | N             | Range = ND – 0.3<br>Highest detect = 0.3             | ppm                              | 2     | 2                              | Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits             |
| Nickel<br>Test results Yr. 2020                                                                     | N             | Range = ND – 7<br>Highest detect = 7                 | ppb                              | N/A   | N/A                            | Erosion of natural deposits                                                                            |
| Nitrate <sup>4</sup><br>Test results Yr. 2020                                                       | N             | Range = ND – 0.3<br>Highest level detected = 0.3     | ppm                              | 10    | 10                             | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits            |
| <b>Volatile Organic Compounds:</b>                                                                  |               |                                                      |                                  |       |                                |                                                                                                        |
| 1,2,3-Trichloropropane<br>Test results Yr. 2020                                                     | N             | Range = ND – 0.010<br>Highest level detected = 0.010 | ppb                              | 0.030 | 0.030                          | Halogenated alkane; used as an ingredient in paint, varnish remover, solvents and degreasing agents.   |
| <b>Distribution System – Lead &amp; Copper:</b>                                                     |               |                                                      |                                  |       |                                |                                                                                                        |
| Copper <sup>2,3</sup><br>Result at 90 <sup>th</sup> Percentile<br>Test results Yr. 2020, 53 Samples | N             | Highest detect = 0.261                               | ppm                              | 1.3   | AL=1.3                         | Corrosion of household plumbing systems; erosion of natural deposits                                   |
| Lead <sup>2,3</sup><br>Result at 90 <sup>th</sup> Percentile<br>Test results Yr. 2020, 53 Samples   | N             | Highest detect = 3                                   | ppb                              | 0     | AL=15                          | Corrosion of household plumbing systems, erosion of natural deposits                                   |
| <b>Distribution System – Microbiological Contaminants (Test results Yr. 2020):</b>                  |               |                                                      |                                  |       |                                |                                                                                                        |
| Total Coliform Bacteria                                                                             | N             | Range = ND to 0.1%<br>Highest detect = 0.1%          | Positive monthly samples         | 0     | 5% of monthly samples positive | Naturally present in the environment                                                                   |
| E. Coli Bacteria                                                                                    | N             | Range = ND<br>Highest detect = ND                    | Total number of Positive Samples | 0     | 5% of monthly samples positive | Human or animal fecal waste                                                                            |
| <b>Disinfection Byproducts<sup>4,5</sup> (Test results Yr. 2020):</b>                               |               |                                                      |                                  |       |                                |                                                                                                        |
| TTHM<br>Total Trihalomethanes<br>A1-2                                                               | N             | Range = 7 – 14.9<br>LRAA = 10                        | ppb                              | N/A   | 80                             | By-product of drinking water disinfection                                                              |
| TTHM<br>Total Trihalomethanes<br>A2-5                                                               | N             | Range = 13 – 25<br>LRAA = 16                         | ppb                              | N/A   | 80                             | By-product of drinking water disinfection                                                              |
| TTHM<br>Total Trihalomethanes<br>CWC34                                                              | N             | Range = 8.8 – 16.7<br>LRAA = 12                      | ppb                              | N/A   | 80                             | By-product of drinking water disinfection                                                              |
| TTHM<br>Total Trihalomethanes<br>CWC71                                                              | N             | Range = 34 – 113<br>LRAA = 68                        | ppb                              | N/A   | 80                             | By-product of drinking water disinfection                                                              |
| TTHM<br>Total Trihalomethanes<br>SHDBP2-A                                                           | N             | Range = 8 – 18.5<br>LRAA = 11                        | ppb                              | N/A   | 80                             | By-product of drinking water disinfection                                                              |
| TTHM<br>Total Trihalomethanes<br>SHDBP2-G                                                           | N             | Range = 49 – 72.1<br>LRAA = 57                       | ppb                              | N/A   | 80                             | By-product of drinking water disinfection                                                              |
| TTHM<br>Total Trihalomethanes<br>SHDBP2-M                                                           | N             | Range = 11.2 – 37<br>LRAA = 20                       | ppb                              | N/A   | 80                             | By-product of drinking water disinfection                                                              |



|                                                       |                                |                                              |             |                                                  |              |                                           |
|-------------------------------------------------------|--------------------------------|----------------------------------------------|-------------|--------------------------------------------------|--------------|-------------------------------------------|
| TTHM<br>Total Trihalomethanes<br>SHDBP2-N             | N                              | Range = 11 – 20.2<br>LRAA = 16               | ppb         | N/A                                              | 80           | By-product of drinking water disinfection |
| HAA5<br>Haloacetic Acids<br>A1-2                      | N                              | Range = 1.3 – 5.3<br>LRAA = 3                | ppb         | N/A                                              | 60           | By-product of drinking water disinfection |
| HAA5<br>Haloacetic Acids<br>A2-5                      | N                              | Range = 3 - 7<br>LRAA = 5                    | ppb         | N/A                                              | 60           | By-product of drinking water disinfection |
| HAA5<br>Haloacetic Acids<br>CWC34                     | N                              | Range = 1.4 – 5<br>LRAA = 3                  | ppb         | N/A                                              | 60           | By-product of drinking water disinfection |
| HAA5<br>Haloacetic Acids<br>CWC71                     | N                              | Range = 1 – 31.2<br>LRAA = 22                | ppb         | N/A                                              | 60           | By-product of drinking water disinfection |
| HAA5<br>Haloacetic Acids<br>SHDBP2-A                  | N                              | Range = 1.4 – 5.5<br>LRAA = 4                | ppb         | N/A                                              | 60           | By-product of drinking water disinfection |
| HAA5<br>Haloacetic Acids<br>SHDBP2-G                  | N                              | Range = 14.8 – 22.8<br>LRAA = 18             | ppb         | N/A                                              | 60           | By-product of drinking water disinfection |
| HAA5<br>Haloacetic Acid<br>SHDBP2-M                   | N                              | Range = 3.3 – 15.3<br>LRAA = 9               | ppb         | N/A                                              | 60           | By-product of drinking water disinfection |
| HAA5<br>Haloacetic Acids<br>SHDBP2-N                  | N                              | Range = 2.8 - 6<br>LRAA = 5                  | ppb         | N/A                                              | 60           | By-product of drinking water disinfection |
| <b>Radioactive Contaminant:</b>                       |                                |                                              |             |                                                  |              |                                           |
| Gross Alpha <sup>6</sup><br>Test results Yr. 2020     | N                              | Range = ND – 15<br>Highest detect = 15       | pCi/L       | 0                                                | 15           | Erosion of natural deposits               |
| Combined Radium<br>228 & 226<br>Test results Yr. 2020 | N                              | Range = ND – 2<br>Highest detect = 2         | pCi/L       | 0                                                | 5            | Erosion of natural deposits               |
| <b>Others<sup>7</sup>:</b>                            | <b>Viola-<br/>tion<br/>Y/N</b> | <b>Level Detected</b>                        |             | <b>MCLG</b>                                      |              | <b>Likely Source of Contamination</b>     |
| Turbidity, NTU                                        | N                              | Range = 0.02 – 0.17<br>Highest detect = 0.17 |             | TT = 1 NTU                                       |              | Soil runoff                               |
|                                                       | N                              | 100%                                         |             | TT = % of samples<br><0.3 NTU (min 95% required) |              | Soil runoff                               |
| Total Organic Carbon, %                               | N                              | 50 – 68<br>(35 – 45 required)                |             | TT = % Removal or Removal Ratio                  |              | Naturally present in the environment      |
| <b>Regulated Disinfectants:</b>                       |                                | <b>Level Detected</b>                        | <b>MRDL</b> |                                                  | <b>MRDLG</b> | <b>Likely Source of Contamination</b>     |
| Chlorine <sup>8</sup>                                 |                                | Range = 0.7 – 1.5<br>Compliance Result = 0.7 | 4.0 ppm     |                                                  | 4.0 ppm      | Water additive used to control microbes   |

<sup>1</sup> 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.

<sup>2</sup> Action Level: The concentration of a contaminant which, if exceeded, triggers a treatment technique or other requirement, which a water system must follow.

<sup>3</sup> 90 percent of the samples tested below the indicated value.

<sup>4</sup> The highest-level detected result represents the highest locational running annual average (LRAA) calculated quarterly from individual sites.

<sup>5</sup> 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.

<sup>6</sup> Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.

<sup>7</sup> Turbidity is a measure of the cloudiness of the water. Over 99 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.

<sup>8</sup> Compliance Result is the lowest value entering the distribution system from the water treatment plant. Range indicates the daily chlorine residuals entering the system from the point of entry

***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 – Short Hills System - Test Results<br>PWS ID # NJ0712001 |                    |                      |      |                                                     |
|-------------------------------------------------------------------------------------|--------------------|----------------------|------|-----------------------------------------------------|
| Secondary Compounds <sup>1</sup><br>(Test results Yr. 2020)                         | Level Detected     | Units of Measurement | RUL  | Typical Source                                      |
| Aluminum                                                                            | Range = ND – 0.02  | ppm                  | 0.20 | Erosion of natural deposits                         |
| Chloride                                                                            | Range = 80         | ppm                  | 250  | Erosion of natural deposits                         |
| Manganese <sup>2</sup>                                                              | Range = ND – 0.113 | ppm                  | 0.05 | Erosion of natural deposits                         |
| Sodium <sup>3</sup>                                                                 | Range = 28 - 43    | ppm                  | 50   | Erosion of natural deposits;<br>Roadway salt runoff |

<sup>1</sup> Compounds with Secondary MCLs do not have MCLGs; these limits are primarily established to address aesthetic concerns

<sup>2</sup> 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.

<sup>3</sup> 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 = 2 - 47<br>Highest detect = 47    | ppb                  | Naturally-occurring elemental metal; largely used in aluminum alloy production. Essential dietary element. |
| Germanium   | Range = ND - 0.4<br>Highest detect = 0.4 | ppb                  | Naturally-occurring elemental metal; largely used in aluminum alloy production. Essential dietary element. |

| Contaminant              | Level Detected                           | Units of Measurement | Likely source                             |
|--------------------------|------------------------------------------|----------------------|-------------------------------------------|
| Bromide                  | Range = 4 - 9<br>Highest detect = 4      | ppb                  | By-product of drinking water disinfection |
| Bromochloroacetic acid   | Range = 1 - 3<br>Highest detect = 3      | ppb                  | By-product of drinking water disinfection |
| Bromodichloroacetic acid | Range = 1 - 3<br>Highest detect = 3      | ppb                  | By-product of drinking water disinfection |
| Chlorodibromoacetic acid | Range = 0.4 - 2<br>Highest detect = 2    | ppb                  | By-product of drinking water disinfection |
| Dibromoacetic acid       | Range = ND - 2<br>Highest detect = 2     | ppb                  | By-product of drinking water disinfection |
| Dichloroacetic acid      | Range = 1 - 20<br>Highest detect = 20    | ppb                  | By-product of drinking water disinfection |
| Monobromoacetic acid     | Range = ND - 0.4<br>Highest detect = 0.4 | ppb                  | By-product of drinking water disinfection |
| Trichloroacetic acid     | Range = ND - 25<br>Highest detect = 25   | ppb                  | By-product of drinking water disinfection |

## New Jersey American Water – Additional Unregulated Substances

| Contaminant                                                   | Level Detected                           | Units of Measurement | Likely source                                                                                                                                                                                                      |
|---------------------------------------------------------------|------------------------------------------|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Perfluorooctanesulfonic acid (PFOS)<br>Test results Yrs. 2020 | Range = ND – 7.4<br>Highest detect = 7.4 | ppt                  | Manmade chemical; used in products to make them stain, grease, heat and water resistant                                                                                                                            |
| Perfluorooctanic Acid (PFOA)<br>Test results Yrs. 2020        | Range = ND – 2.4<br>Highest Detect = 2.4 | ppt                  | 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 East Orange Water Commission

In addition to producing water from our own well water sources, the Township purchases water from East Orange Water Commission (EOWC). Information about EOWC water quality results is summarized in the table below.

| East Orange Water Commission - Test Results<br>PWS ID #NJ0705001                        |               |                                                    |                          |       |                                |                                                                                                                                     |
|-----------------------------------------------------------------------------------------|---------------|----------------------------------------------------|--------------------------|-------|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| Contaminant                                                                             | Violation Y/N | Level Detected                                     | Units of Measurement     | MC LG | MCL                            | Likely Source of Contamination                                                                                                      |
| <b>Inorganic Contaminant:</b>                                                           |               |                                                    |                          |       |                                |                                                                                                                                     |
| Antimony<br>Test results Yr. 2020                                                       | N             | Range = ND – <0.0004                               | ppm                      | 0.006 | 0.006                          | Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder                                                 |
| Arsenic<br>Test results Yr. 2020                                                        | N             | Range = ND – 1.07<br>Highest detect = 1.07         | ppb                      | 0     | 5                              | Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes                              |
| Barium<br>Test results Yr. 2020                                                         | N             | Range = ND - 0.0855<br>Highest detect = 0.0855     | ppm                      | 2     | 2                              | Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits                                          |
| Fluoride<br>Test results Yr. 2020                                                       | N             | Range = ND - <0.2<br>Highest Detect = <0.2         | ppm                      | 4     | 4                              | Erosion of natural deposits                                                                                                         |
| Cadmium<br>Test results Yr. 2020                                                        | N             | Range = ND - <0.0005<br>Highest Detect = <0.0005   | ppm                      | 5     | 5                              | Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints |
| Chromium<br>Test results Yr. 2020                                                       | N             | Range = ND - 0.00358<br>Highest Detect = 0.00358   | ppm                      | 100   | 100                            | Discharge from steel and pulp mills; erosion of natural deposits                                                                    |
| Total Beryllium<br>Test results Yr. 2020                                                | N             | Range = ND - <0.00025<br>Highest Detect = <0.00025 | ppm                      | 4     | 4                              | Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense purposes              |
| Cyanide<br>Test results Yr. 2020                                                        | N             | Range = ND - <0.01<br>Highest Detect = <0.01       | ppm                      | 200   | 200                            | Discharge from steel/metal factories; discharge from plastic and fertilizer factories                                               |
| Selenium<br>Test results Yr. 2020                                                       | N             | Range = ND - <0.006<br>Highest Detect = <0.006     | ppm                      | 50    | 50                             | Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines                                    |
| Total Thallium<br>Test results Yr. 2020                                                 | N             | Range = ND - <0.00025<br>Highest Detect = <0.00025 | ppm                      | 2     | 2                              | Leaching from ore-processing sites; discharge from electronics, glass, and drug factories                                           |
| Mercury<br>Test results Yr. 2020                                                        | N             | Range = ND - <0.0002<br>Highest Detect = <0.0002   | ppm                      | 2     | 2                              | Erosion of natural deposits; discharge from refineries; runoff from landfills and croplands                                         |
| Nickel<br>Test results Yr. 2020                                                         | N             | Range = ND- 7.39<br>Highest detect = 7.39          | ppb                      | N/A   | N/A                            | Erosion of natural deposits                                                                                                         |
| Nitrate <sup>1</sup><br>Test results Yr. 2020                                           | N             | Range = ND – 1.4<br>Highest level detected = 1.4   | ppm                      | 10    | 10                             | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits                                         |
| <b>Distribution System – Lead &amp; Copper</b>                                          |               |                                                    |                          |       |                                |                                                                                                                                     |
| Copper <sup>2,3</sup><br>Test results Yr. 2020<br>Result at 90 <sup>th</sup> Percentile | N             | Highest detect = 0.261                             | ppm                      | 1.3   | AL=1.3                         | Corrosion of household plumbing systems; erosion of natural deposits                                                                |
| Lead <sup>2,3</sup><br>Test results Yr. 2020<br>Result at 90 <sup>th</sup> Percentile   | N             | Highest detect = 3                                 | ppb                      | 0     | AL=15                          | Corrosion of household plumbing systems; erosion of natural deposits                                                                |
| <b>Distribution System – Microbiological Contaminants (Test results Yr. 2020):</b>      |               |                                                    |                          |       |                                |                                                                                                                                     |
| Total Coliform Bacteria                                                                 | N             | Range = ND to 0.1%<br>Highest detect = 0.1%        | Positive monthly samples | 0     | 5% of monthly samples positive | Naturally present in the environment                                                                                                |
| <b>Disinfection Byproducts<sup>4,5</sup> (Test results Yr. 2020):</b>                   |               |                                                    |                          |       |                                |                                                                                                                                     |
| TTHM<br>Total Trihalomethanes<br>DBP-1                                                  | N             | Range = 8.14 – 10.7<br>LRAA = 9                    | ppb                      | N/A   | 80                             | By-product of drinking water disinfection                                                                                           |
| TTHM<br>Total Trihalomethanes<br>DBP-2                                                  | N             | Range = 8.2 – 10.1<br>LRAA = 9                     | ppb                      | N/A   | 80                             | By-product of drinking water disinfection                                                                                           |
| TTHM<br>Total Trihalomethanes<br>DBP-3                                                  | N             | Range = 8.01 – 9.26<br>LRAA = 9                    | ppb                      | N/A   | 80                             | By-product of drinking water disinfection                                                                                           |
| TTHM<br>Total Trihalomethanes<br>DBP-4                                                  | N             | Range = 7.34 – 9.0<br>LRAA = 8                     | ppb                      | N/A   | 80                             | By-product of drinking water disinfection                                                                                           |
| TTHM<br>Total Trihalomethanes<br>DBP-5                                                  | N             | Range = 7.72 – 10.02<br>LRAA = 9                   | ppb                      | N/A   | 80                             | By-product of drinking water disinfection                                                                                           |

|                                                   |   |                                              |             |     |              |                                           |
|---------------------------------------------------|---|----------------------------------------------|-------------|-----|--------------|-------------------------------------------|
| TTHM<br>Total Trihalomethanes<br>DBP-6            | N | Range = 12.34 – 20.0<br>LRAA = 17            | ppb         | N/A | 80           | By-product of drinking water disinfection |
| TTHM<br>Total Trihalomethanes<br>DBP-7            | N | Range = 7.55 – 9.93<br>LRAA = 8              | ppb         | N/A | 80           | By-product of drinking water disinfection |
| TTHM<br>Total Trihalomethanes<br>DBP-8            | N | Range = 8.3 – 12.61<br>LRAA = 10             | ppb         | N/A | 80           | By-product of drinking water disinfection |
| HAA5<br>Haloacetic Acids<br>DBP-1                 | N | Range = 0.93 – 4.16<br>LRAA = 3              | ppb         | N/A | 60           | By-product of drinking water disinfection |
| HAA5<br>Haloacetic Acids<br>DBP-2                 | N | Range = 1.33 – 4.6<br>LRAA = 3               | ppb         | N/A | 60           | By-product of drinking water disinfection |
| HAA5<br>Haloacetic Acids<br>DBP-3                 | N | Range = 0.93 – 6.38<br>LRAA = 3              | ppb         | N/A | 60           | By-product of drinking water disinfection |
| HAA5<br>Haloacetic Acids<br>DBP-4                 | N | Range = 0.96 – 3.93<br>LRAA = 3              | ppb         | N/A | 60           | By-product of drinking water disinfection |
| HAA5<br>Haloacetic Acids<br>DBP-5                 | N | Range = 0.96 – 4.6<br>LRAA = 3               | ppb         | N/A | 60           | By-product of drinking water disinfection |
| HAA5<br>Haloacetic Acids<br>DBP-6                 | N | Range = 1.95 – 5.6<br>LRAA = 4               | ppb         | N/A | 60           | By-product of drinking water disinfection |
| HAA5<br>Haloacetic Acids<br>DBP-7                 | N | Range = 1.11 – 3.61<br>LRAA = 2              | ppb         | N/A | 60           | By-product of drinking water disinfection |
| HAA5 Haloacetic Acids<br>DBP-8                    | N | Range = 1.04 – 5.98<br>LRAA = 4              | ppb         | N/A | 60           | By-product of drinking water disinfection |
| <b>Radioactive Contaminant:</b>                   |   |                                              |             |     |              |                                           |
| Gross Alpha <sup>6</sup><br>Test results Yr. 2017 | N | Range = ND – 1.96<br>Highest detect = 1.96   | pCi/L       | 0   | 15           | Erosion of natural deposits               |
| Uranium<br>Test results Yr. 2017                  | N | Range = ND – 3.15<br>Highest detect = 3.15   | ppb         | 0   | 5            | Erosion of natural deposits               |
| <b>Regulated Disinfectants:</b>                   |   |                                              |             |     |              |                                           |
|                                                   |   | <b>Level Detected</b>                        | <b>MRDL</b> |     | <b>MRDLG</b> | <b>Likely Source of Contamination</b>     |
| Chlorine<br>Test results Yr. 2020                 |   | Range = 0.38 – 1.70<br>Annual Average = 0.96 | 4.0 ppm     |     | 4.0 ppm      | Water additive used to control microbes   |

<sup>1</sup> 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.

<sup>2</sup> Action Level: The concentration of a contaminant which, if exceeded, triggers a treatment technique or other requirement, which a water system must follow.

<sup>3</sup> 90 percent of the samples tested below the indicated value.

<sup>4</sup> The highest-level detected result represents the highest locational running annual average (LRAA) calculated quarterly from individual sites.

<sup>5</sup> 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.

<sup>6</sup> Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.

## East Orange Water Commission - Secondary Compounds

| East Orange Water Commission - Test Results<br>PWS ID # NJ0705001 |                      |                      |      |                                                          |
|-------------------------------------------------------------------|----------------------|----------------------|------|----------------------------------------------------------|
| Secondary Compounds <sup>1</sup><br>(Test results Yr. 2020)       | Level Detected       | Units of Measurement | RUL  | Typical Source                                           |
| Iron                                                              | Range = ND – <0.2    | ppm                  | 0.3  | Naturally present in the environment                     |
| Manganese                                                         | Range = ND – 0.00283 | ppm                  | 0.05 | Erosion of natural deposits                              |
| Sulfate                                                           | Range = ND – 44.8    | ppm                  | 250  | Runoff/leaching from natural deposits; industrial wastes |

<sup>1</sup> Compounds with Secondary MCLs do not have MCLGs; these limits are primarily established to address aesthetic concerns

## East Orange Water Commission – Additional Unregulated Substances

| Contaminant                                                   | Level Detected                               | Units of Measurement | Likely source                                                                                                                                                                                                      |
|---------------------------------------------------------------|----------------------------------------------|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Perfluorooctanesulfonic acid (PFOS)<br>Test results Yrs. 2020 | Range = 1.68 – 2.84<br>Highest detect = 2.84 | ppb                  | Manmade chemical; used in products to make them stain, grease, heat and water resistant                                                                                                                            |
| Perfluorooctanic Acid (PFOA)<br>Test results Yrs. 2020        | Range = 6.32 – 10.6<br>Highest Detect = 10.6 | ppb                  | 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 |



Where Your Water Comes From**Livingston Township Division of Water- PWSID # NJ0710001**

Livingston Township Division of Water is a public community water system consisting of 14 wells and 2 purchased surface water sources. 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 systems:

NJ American Water / Short Hills System PWS ID # NJ0712001 • East Orange Water Commission - PWS ID # NJ0705001

**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.

# IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

## Monitoring Requirements Not Met for Livingston Twp Division of Water

### Public Notice for Missed Sampling Violations<sup>1</sup>

Our water system violated drinking water requirements over the past year. Even though these were not emergencies, as our customers, you have a right to know what happened and what we did to correct these situations.

*We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During the 1st Quarter of 2020 we did not complete all the required sampling for 1,2,3-trichloroethane (1,2,3-TCP), 1,2-dibromo-3-chloropropane (DBCP), and ethylene dibromide (EDB).*

#### What should I do?

There is nothing you need to do at this time.

The table below lists the contaminants we did not properly test for during the last year, how often we are supposed to sample for 1,2,3-TCP, DBCP, and EDB, how many samples we are supposed to take, how many samples we took, when samples should have been taken, and the date on which follow-up samples were (or will be) taken.

| Contaminant | Required sampling frequency | Number of samples taken | When samples should have been taken | When samples were taken                    |
|-------------|-----------------------------|-------------------------|-------------------------------------|--------------------------------------------|
| 1,2,3-TCP   | 11 samples every quarter    | 0                       | 1st Quarter of 2020                 | 2nd Quarter of 2020 & 3rd Quarters of 2020 |
| DBCP        | 11 samples every quarter    | 0                       | 1st Quarter of 2020                 | 2nd Quarter of 2020 & 3rd Quarters of 2020 |
| EDB         | 11 samples every quarter    | 0                       | 1st Quarter of 2020                 | 2nd Quarter of 2020 & 3rd Quarters of 2020 |

#### What is being done?

These are newly regulated compounds and the testing requirement went into effect in the 1<sup>st</sup> Quarter of 2020. The missed samples in the 1<sup>st</sup> quarter of 2020 was an oversight and did not have any impact on public health and safety. Subsequent testing by the Livingston Twp Division of Water for the 2<sup>nd</sup> and 3<sup>rd</sup> Quarters of 2020 showed that all the samples for these compounds were **compliant** meaning that they met or were below NJDEP standards. In fact, all of these compounds have been found to be below the limit of detection in all subsequent samples.

For more information, please contact Livingston Twp Division of Water at 973-535-7951 or at [water@livingstonnj.org](mailto:water@livingstonnj.org) or at 357 South Livingston Avenue, Livingston, NJ 07039.

*\*Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.\**

This notice is being sent to you by the Livingston Twp Division of Water. PWSID: NJ0710001.

Date distributed: 6/3/2021

<sup>1</sup>For NJDEP Violation numbers: 137901, 137902, 137903, 137904, 137905, 137907, 137909, 137910, 137911, 137912, 137914, 137917, 137918, 137919, 137920, 137921, 137923, 137924, 137926, 137928, 137929, 137931, 137934, 137936, 137938

# 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**

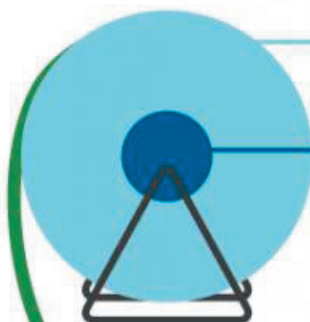


EVERY  
**DROP**  
COUNTS

For more detailed information on how you can conserve water in and outside your home, visit [njdrought.org](http://njdrought.org).  
Remember...every drop counts.

# SAVE WATER IN THE YARD THIS SUMMER

As temperatures rise in the summer, so does our outdoor water use, mostly on lawns and landscapes.



**29 billion gallons** of daily household water use across the U.S.

**9 billion gallons** come from daily residential outdoor water use, mainly for landscape irrigation.

Water use spikes in the summer!

Depending on the region, homeowners use **30-60%** of their water outdoors.



**50%** of that is wasted, in part, due to overwatering.



Average family's water use:

**320 gallons per day**



During the summer, can be up to

**1,000 gallons per day**



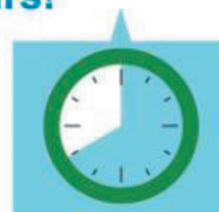
Some even use up to

**3,000 gallons per day**

= 100 gallons



—equal to leaving a garden hose running for nearly **8 hours!**



## Simple Things We Can All Do

### • Step on it:

Step on the lawn; if the grass springs back, it doesn't need water.

### • Leave it long:

Longer grass promotes a more drought-resistant lawn, reduced evaporation, and fewer weeds.

### • Take a sprinkler break:

Grass isn't really meant to be bright green in the summer.

