



# Annual Drinking Water Quality Report

For 2021, Results From 2020  
PWSID# NJ1009001

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.

**This report shows our water quality and what it means.**

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).

| BOROUGH OF FLEMINGTON WATER DEPARTMENT<br>MONITORING RESULTS               |               |                                                                   |                      |       |        |                                                                                                                                    |
|----------------------------------------------------------------------------|---------------|-------------------------------------------------------------------|----------------------|-------|--------|------------------------------------------------------------------------------------------------------------------------------------|
| Please see page #2 for a list of terms and definitions used in this table. |               |                                                                   |                      |       |        |                                                                                                                                    |
| Contaminant                                                                | Violation Y/N | Level Detected                                                    | Units of Measurement | MCL G | MCL    | Likely Source of Contamination                                                                                                     |
| <b>Radioactive Contaminants:</b>                                           |               |                                                                   |                      |       |        |                                                                                                                                    |
| Alpha emitters<br>Test results Yrs. 2018 & 2020                            | N             | Range = ND – 4.6<br>Highest detect: 4.8                           | pCi/l                | 0     | 15     | Erosion of natural deposits                                                                                                        |
| Combined Radium<br>226 & 228<br>Test results Yrs. 2018 7 2020              | N             | Range = ND – 4.6<br>Highest detect: 4.6                           | pCi/l                | 0     | 5      | Erosion of natural deposits                                                                                                        |
| <b>Inorganic Contaminants:</b>                                             |               |                                                                   |                      |       |        |                                                                                                                                    |
| Arsenic<br>Test results Yr. 2020                                           | N             | Range = ND – 3.4<br>Highest detect = 3.4<br>Highest average = 2.9 | ppb                  | N/A   | 5      | Erosion of natural deposits;<br>runoff from orchards; runoff<br>from glass and electronics<br>production wastes                    |
| Barium<br>Test results Yr. 2018                                            | N             | Range = 0.06 – 0.2<br>Highest detect = 0.2                        | ppm                  | 2     | 2      | Discharge of drilling wastes;<br>discharge from metal refineries;<br>erosion of natural deposits                                   |
| Copper<br>Test results Yr. 2018<br>Result at 90 <sup>th</sup> Percentile   | N             | 0.49<br>No sample exceeded the<br>action level.                   | ppm                  | 1.3   | AL=1.3 | Corrosion of household<br>plumbing systems; erosion of<br>natural deposits; leaching from<br>wood preservatives                    |
| Lead<br>Test results Yr. 2018<br>Result at 90 <sup>th</sup> Percentile     | N             | 6.1<br>1 sample out of 20<br>exceeded the action<br>level.        | ppb                  | 0     | AL=15  | Corrosion of household<br>plumbing systems, erosion of<br>natural deposits                                                         |
| Nitrate<br>Test results Yr. 2020                                           | N             | Range = 1.0 – 1.9<br>Highest detect = 1.9                         | ppm                  | 10    | 10     | Runoff from fertilizer use;<br>leaching from septic tanks,<br>sewage; erosion of natural<br>deposits                               |
| Selenium<br>Test results Yr. 2018                                          | N             | Range = 0.8 – 2.4<br>Highest detect = 2.4                         | ppb                  | 50    | 50     | Discharge from petroleum and<br>metal refineries; erosion of<br>natural deposits; discharge from<br>mines                          |
| Fluoride<br>Test results Yr. 2018                                          | N             | Range = ND – 0.26<br>Highest detect = 0.26                        | ppm                  | 4     | 4      | Erosion of natural deposits;<br>water additive which promotes<br>strong teeth; discharge from<br>fertilizer and aluminum factories |
| <b>Disinfection Byproducts / Volatile Organic Contaminants:</b>            |               |                                                                   |                      |       |        |                                                                                                                                    |
| Haloacetic Acids<br>[HAA5s]<br>Test results Yr. 2020                       | N             | Range = 1 - 3<br>Highest LRAA = 2                                 | ppb                  | N/A   | 60     | Byproduct of drinking water<br>disinfection.                                                                                       |
| Total Trihalomethanes<br>[TTHMs]<br>Test results Yr. 2020                  | N             | Range = 7 - 46<br>Highest LRAA = 28                               | ppb                  | N/A   | 80     | Byproduct of drinking water<br>disinfection.                                                                                       |

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.

| <b>Regulated Disinfectants:</b>   |   |                                           |     |            |           |                                          |
|-----------------------------------|---|-------------------------------------------|-----|------------|-----------|------------------------------------------|
| Chlorine<br>Test results Yr. 2019 | N | Range = 0.4 – 0.7 ppm<br>Average = 0.5ppm | ppm | MRDLG<br>4 | MRDL<br>4 | Water additive used to control microbes. |

**Chlorine:** Water additive used to control microbes

The Borough of Flemington Water Department is committed to ensuring the quality of your water. Our eight wells are located within the Borough and neighboring Raritan Township, draw groundwater from the Brunswick Shale aquifer. The average depth of our supply wells is 415 feet. We also have the ability to purchase water on an as needed basis from New Jersey American Water Company, which uses treated water from the Raritan River, however we did not purchase any water during 2020.

**Monitoring Waivers / Older Data** - The Borough of Flemington Water Department routinely monitors for contaminants in your drinking water according to Federal and State laws. The above tables show the contaminants that were found in your drinking water during the period of January 1<sup>st</sup> to December 31<sup>st</sup>, 2020. 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. The Safe Drinking Water Act regulations allow monitoring waivers to reduce or eliminate the monitoring requirements for asbestos, volatile organic chemicals and synthetic organic chemicals. The Borough of Flemington Water Department received a monitoring waiver synthetic organic chemicals (pesticides).

**Definitions** - In the "Test Results" tables you may find some 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.

**Parts per trillion (ppt)** or nanogram per liter - one part per trillion corresponds to one minute in 20,000 years, or a single penny in \$100,000,000.

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

**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.

**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.

**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.

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

**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.

**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 Borough of Flemington Water Department is responsible for providing high quality drinking water but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking 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 at 1-800-426-4791 or at [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

**Water Sources and Contaminants** - 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.

**Treatment / Additives** - To ensure the continued quality of our water we add Sodium Hypochlorite, a more concentrated form of household bleach, to the water for disinfection and prevention of contamination by disease causing organisms. We also employ the use of an air stripper, a type of water aeration system, to remove levels of carbon tetrachloride, a volatile organic compound. At the air stripper site, we also add polyphosphate to the water to help reduce the build-up of calcium deposits due to hard water that could foul the air stripper and cause malfunction.

**Unregulated Contaminant Monitoring:** The Flemington Borough Water Department monitored for the following unregulated contaminants in 2020. Unregulated contaminants are those for which the US Environmental Protection Agency (EPA) or the New Jersey Department of Environmental Protection (NJDEP) has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist the EPA and NJDEP in determining the occurrence of unregulated contaminants in drinking water and whether regulation is warranted. Per- and polyfluoroalkyl substances (PFAS) are widely found in the environment. EPA has identified a health advisory level for two PFAS analytes, PFOA and PFOS 0.070 ppb either singly or combined, and NJDEP has adopted new drinking water standards (Maximum Contaminant Levels (MCLs)) for PFOA and PFOS of 14 ng/L (ppt) and 13 ng/L (ppt), respectively.

| Contaminant                         | Level Detected | Units of Measurement | Likely source                              |
|-------------------------------------|----------------|----------------------|--------------------------------------------|
| (PFOS)<br>Perfluorooctane Sulfonate | Range = 2 - 8  | ppt                  | Used in the manufacture of fluoropolymers. |
| (PFOA)<br>Perfluorooctanoic Acid    | Range = 5 - 10 | ppt                  | Used in the manufacture of fluoropolymers. |

#### What are PFOA and PFOS?

Perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS) are per- and polyfluoroalkyl substances (PFAS), previously referred to as perfluorinated compounds, or PFCs, that are man-made and used in industrial and commercial applications. PFOA was used as a processing aid in the manufacture of fluoropolymers used in non-stick cookware and other products, as well as other commercial and industrial uses based on its resistance to harsh chemicals and high temperatures. PFOS is used in metal plating and finishing as well as in various commercial products. PFOS was previously used as a major ingredient in aqueous film forming foams for firefighting and training, and PFOA and PFOS are found in consumer products such as stain resistant coatings for upholstery and carpets, water resistant outdoor clothing, and grease proof food packaging. Although the use of PFOA and PFOS has decreased substantially, contamination is expected to continue indefinitely because these substances are extremely persistent in the environment and are soluble and mobile in water. More information can be found at: [https://www.state.nj.us/dep/wms/bears/docs/2019-4-15-FAQs\\_PFOS-PFOA-websites-OLA%204-24-19SDM-\(003\).pdf](https://www.state.nj.us/dep/wms/bears/docs/2019-4-15-FAQs_PFOS-PFOA-websites-OLA%204-24-19SDM-(003).pdf)

**Source Water Assessment** - The New Jersey Department of Environmental Protection (NJDEP) has completed and issued the Source Water Assessment Report and Summary for this public water system, which is available at [www.state.nj.us/dep/swap](http://www.state.nj.us/dep/swap) or by contacting the NJDEP Bureau of Safe Drinking Water at (609) 292-5550. A copy of the Source Water Assessment and Summary may also be obtained at Flemington Borough Hall or by contacting the Borough of Flemington Water Department at 908-782-8840.

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 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 after the table. DEP considered all surface water highly susceptible to pathogens, therefore all intakes received a high rating for the pathogen category. For the purpose of the 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.

| Sources   | Pathogens |   |   | Nutrients |   |   | Pesticides |   |   | Volatile Organic Compounds |   |   | Inorganics |   |   | Radio-nuclides |   |   | Radon |   |   | Disinfection Byproduct Precursors |   |   |  |
|-----------|-----------|---|---|-----------|---|---|------------|---|---|----------------------------|---|---|------------|---|---|----------------|---|---|-------|---|---|-----------------------------------|---|---|--|
|           | 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 - 8 |           | 4 | 4 | 4         | 4 |   |            | 3 | 5 | 8                          |   |   | 4          | 4 |   | 8              |   |   | 8     |   |   |                                   | 8 |   |  |

**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.

**Contact / Meetings** - If you have any questions about this report or concerning your water utility, please contact Kathy Bianci at 908-782-8840. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled Borough Council meetings at Borough Hall, 38 Park Avenue. Meetings are held on the second and fourth Monday of each month at 7:30 p.m.

**We at the Borough of Flemington 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 any questions.**

## **IMPORTANT INFORMATION ABOUT OUR DRINKING WATER**

### **The Borough of Flemington Water Department Failed to Monitor for Combined Radium (226 & 228) and Gross Alpha Excl. Radon at two (2) of our Water Treatment Facilities in 2019**

Our water system violated a drinking water standard this past monitoring period. Even though this was not an emergency, 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. We were required to monitor for Combined Radium (226 & 228) and Gross Alpha Excl. Radon during the 2014 – 2019 monitoring period, at all four (4) of our Water Treatment Facilities, but we inadvertently only monitored at two (2). We only monitor for these contaminants every six years at one Treatment Facility and every three years at the other. We monitored for these contaminants at the other two (2) Treatment Facilities in May and June 2020. The monitoring results for all four (4) Treatment Facilities are listed in the “Monitoring Results” table.

Gross Alpha: Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.

Combined Radium (226/228): Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.

This past year we received Monitoring and Reporting (M&R) violations for missed 3<sup>rd</sup> quarter of 2020 monitoring results for 1,2,3 – Trichloropropane (123TCP) at two of our Treatment Facilities. Missed 2<sup>nd</sup> quarter of 2020 monitoring results for 1,2,3 – Trichloropropane (123TCP) at one of our Treatment Facilities. Missed 3<sup>rd</sup> quarter of 2020 monitoring results for Naphthalene at two of our Treatment Facilities and missed 3<sup>rd</sup> quarter monitoring results for Perfluorononanoic (PFNA) at one of our Treatment Facilities.

**All of these samples were taken correctly in the 2<sup>nd</sup> and 3<sup>rd</sup> quarter of 2020, according to our monitoring schedule. The laboratory inadvertently submitted the results late.**

**All test results were non-detectable. We do not believe this should be an actual violation.**

What should I do?

There is nothing you need to do at this time.

*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.*