# Matawan Water Department 2021 Water Quality Report

## For 2020 Analytical Results

## Public Water System Identification Number: 1329001

The Matawan Department of Public Works is pleased to present this summary of the water quality delivered to our customer's during 2020. The Safe Drinking Water Act requires that water utilities issue an Annual Water Quality Report (Consumer Confidence Report) and any other notices that affect the quality of water produced by Matawan's ground water treatment plant or delivered by New Jersey American Water. This report is designed to provide details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies.

### Please Distribute This Report

Landlords, businesses, schools, and health care facilities are encouraged to share this report with other water users at their establishments. Additional copies may be obtained by calling 732-290-2015.

### Where does my water come from?

Matawan's ground water treatment plant produces an average of 150 million gallons of water each year, and another 120 million gallons is purchased from New Jersey American Water. In the Table of Detected Contaminants, you will find contaminants that were identified in the water produced by the Matawan plant and purchased from New Jersey American. Customers wishing to view the entire New Jersey American Report can follow a link on www.matawanborough.com or go directly to New Jersey American's web page https://www.amwater.com/ccr/coastalnorth.pdf

The source of the ground water produced by the Matawan Water Plant is the Old Bridge Sands Strata of the Potomac-Raritan-Magothy (PRM) Aquifer. Water received from New Jersey American may be a blend of water taken from the PRM or surface water from the Manasquan or Swimming River Reservoirs.

We are pleased to report that during 2020 the water delivered to our customers from each of these sources met, or exceeded, all state and federal water quality standards.

### Is my water fluoridated?

Fluoride is not added to the water produced by the Matawan Treatment Plant, April through October. Water received from the New Jersey American System, November through March, is fluoridated to 0.7 parts-per-million. If you have any questions regarding fluoride, please call American Water's Customer Service Center at 1-800-272-1325.

### Description of Water Treatment Process

Your water is treated in a "treatment train" (a series of processes applied in a sequence) that includes coagulation, flocculation, sedimentation, filtration, and disinfection. Coagulation removes dirt and other particles suspended in the source water by adding chemicals (coagulants) to form tiny sticky particles called "floc," which attract the dirt particles. Flocculation (the formation of larger flocs from smaller flocs) is achieved using gentle, constant mixing. The heavy particles settle naturally out of the water in a sedimentation basin. The clear water then moves to the filtration process where the water passes through sand, gravel, charcoal, or other filters that remove even smaller particles. A small amount of chlorine or other disinfection method is used to kill bacteria and other microorganisms (viruses, cysts, etc.) that may be in the water before it is stored and distributed to homes and businesses in the community.

### Why are there contaminants in my drinking water?

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 water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's (EPA) Safe Drinking Water Hotline (800-426-4791). 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. Microbial contaminants, such as viruses and bacteria, that 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 stormwater runoff, industrial, or domestic wastewater discharges, oil and gas production, mining, or farming; pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses; organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems; and radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities. To ensure that tap water is safe to drink, EPA prescribes regulations that limit the number of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

### Lead in Drinking Water

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. Matawan 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 or 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 https://www.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water.

### 2020 Analytical Results

Drinking water samples were collected from 20 homes serviced by water lines partially comprised of lead, placing them at elevated risk for lead contamination. All the sample results were well below the Action Level for lead.

### Additional Information for Nitrate

Nitrate in drinking water above 10 ppm is a health risk for infants less than six months old. High levels of nitrate can cause a condition known as Blue Baby Syndrome, a condition that can interfere with the capacity of the infant's blood to carry oxygen. Nitrate levels may rise quickly for short periods because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from your health care provider.

The Matawan System is required to test annually for the presence of nitrate. The analytical results consistently indicate that nitrate is not detectable or at levels well below the maximum contaminant level.

### Monitoring Requirement Not Met

Our water system violated a drinking water requirement over the past year. Even though this was not an emergency, as our customer, you have a right to know what happened and what we are doing to correct the situation.

*We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether our drinking water meets health standards. During the 07/01/2020 to 12/31/2020 water quality parameter monitoring period, we are required to obtain six distribution system samples that are analyzed for pH, alkalinity and orthophosphate. We obtained only three samples, and therefore, cannot be sure of the quality of your drinking water during that time.*

### What should I do?

There is nothing you need to do.

### What happened?

After the installation of corrosion control treatment, water systems are required to regularly monitor for certain water quality control parameters. The Matawan System must obtain six samples bi-annually to be analyzed for pH, alkalinity, and orthophosphate.

During the 7/01/2020 to 12/31/20 sampling period, we are required to obtain six distribution water quality parameter samples. We only collected three samples.

### What is being done?

Six water quality parameter follow-up samples have been collected during the January 1, 2021, and July 1, 2021 sampling period.

Residents with additional questions or concerns may contact the licensed operator for the Matawan system, John Applegate, at 732-**290-2015 or john.applegate@ matawanborough.com** or the New Jersey Department of Environmental Protection at **609-292-2550**

## How can I get involved?

Contact information for all the members of Matawan's governing body and department heads may be found on the Matawan web site, www.matawanborough.com. If you would like to discuss issues in person, the regular meeting of the mayor and council typically takes place the first and third Tuesday of every month.

Specific questions or concerns about the water system can be directed to John Applegate. 732 290 2015 or john.applegate@matawanborough.com.

## Source Water Assessment

The New Jersey Department of Environmental Protection (NJDEP) has completed and issued the Source Water Assessment Report and Summary for the Matawan system, which is available at www.nj.gov/dep/watersupply/swap/index.html or by contacting the NJDEP's Bureau of Safe Drinking Water (609) 292-5550 or watersupply@dep.nj.gov.

## Susceptibility Rating for Matawan's Source Water

Matawan's source water comes from the upper Potomac-Raritan-Magothy Aquifer. The table below illustrates the susceptibility rating for the seven contaminant categories (and radon) for each source. The table provides the number of wells that rated High (H), Medium (M) or Low (L) for each contaminant category.

## Chart Definitions

- **Pathogens:** Disease-causing organisms. Animal and human fecal waste.
- **Nutrients:** Elements that aid growth such as nitrogen and phosphorus
- **VOC's:** Synthetic chemicals such as degreasers, gasoline, benzene, and vinyl chloride.
- **Pesticides:** Synthetic chemicals to control pests, weeds, and fungus.
- **Inorganics:** Mineral-based compounds both naturally occurring and synthetically produced such as arsenic, asbestos copper and lead.
- **Radionuclides:** Radioactive substances naturally occurring and man-made such as radium and uranium.
- **Radon:** Colorless, odorless naturally occurring cancer-causing gas.

| | Pathogens | Nutrients | Pesticides | Inorganics |
|---|---|---|---|---|
| Source | H M L | H M L | H M L | H M L |
| Wells 2 | 2 | 2 | 2 | 2 |
| | VOC * | Radio Nuclides | Radon | DBP ** |
| Source | H M L | H M L | H M L | H M L |
| Wells 2 | 2 | 2 | 2 | 2 |

* Volatile Organic Chemicals ** Disinfection By-product Precursors

## Source Water Protection Tips

Protection of drinking water is everyone's responsibility. You can help protect your community's drinking water source in several ways:

- Eliminate excess use of lawn and garden fertilizers and pesticides. They contain hazardous chemicals that can reach your drinking water source.
- Pick up after your pets.
- Properly dispose of pharmaceuticals.
- Dispose of chemicals properly; take used motor oil to a recycling center.
- Volunteer in your community. Find a watershed or wellhead protection organization in your community and volunteer to help. If there are no active groups, consider starting one. Use EPA's Adopt Your Watershed to locate groups in your community or visit the Watershed Information Network's How to Start a Watershed Team.
- Organize a storm drain stenciling project with your local government or water supplier. Stencil a message next to the street drain reminding people "Dump No Waste - Drains to River" or "Protect Your Water." Produce and distribute a flyer for households to remind residents that storm drains dump directly into your local water body.

## Information Regarding PFOA/PFOS

Perfluorooctanoic acid (PFOA) and Perfuorooctanesulfonic acid (PFOS) are fluorinated organic chemicals that are part of a larger group of chemicals commonly referred to as per-and poly-fluoroalkyl substances (PFASs). These chemicals are widely used throughout industry and used in the manufacture of many consumer products such as carpets, furniture, waterproofing materials, and cookware.

Exposure to PFOA and PFOS over certain levels may have undesirable health effects. The primary exposure route is through food and consumer products, but because of the chemical's ability to accumulate in ground water, NJDEP has established Maximum Contaminant Levels (MCLs) for PFOS at 13 ppt and 14 ppt for PFOA.

## About the Water Quality Table

To ensure that tap water is safe to drink, EPA prescribes regulations which limit the number of contaminants in water provided by public water systems. The table below lists all the drinking water contaminants that we detected during the calendar year of this report. Although many more contaminants were tested, only those substances listed below were found in your water. All sources of drinking water contain some naturally occurring contaminants. At low levels, these substances are generally not harmful in our drinking water. Removing all contaminants would be extremely expensive, and in most cases, would not provide increased protection of public health. A few naturally occurring minerals may improve the taste of drinking water and have nutritional value at low levels. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report. The EPA or the State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. As such, some of our data, though representative, may be more than one year old. In this table you will find terms and abbreviations that might not be familiar to you. To help you better understand these terms, we have provided the definitions below the table.

# Water Quality Data Table

**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/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Water Drinking Hotline (800-426-4791).**

## Matawan's Table of Detected Contaminants

| Contaminant | Year Sampled | Units | MCL | MCLG | Analytical Result | Compliance Achieved | Typical Source |
|---|---|---|---|---|---|---|---|
| **Inorganic Chemicals** | | | | | | | |
| Sulfate | 2020 | ppm | 250 | NA | 16 | Yes | Naturally occurring |
| Chloride | 2020 | ppm | 250 | NA | 6.7 | Yes | Naturally occurring |
| Zinc | 2019 | ppm | 0.4 | NA | 0.2 | Yes | Naturally occurring |
| Nitrate | 2019 | ppm | 10 | 10 | 0.3 | Yes | Fertilizer runoff. Naturally occurring |
| **Radiological Substances** | | | | | | | |
| Combined Radium 226 and 228 | 2018 | pCi/ L | 5 | 0 | 1.5 | Yes | Erosion of natural deposits |

| | Year Sample | Units | Action Level | MCLG | Results | Compliance Achieved | Typical Source |
|---|---|---|---|---|---|---|---|
| **Lead and Copper** | | | | | | | |
| Copper | 2020 | ppm | 1.3 | 1.3 | Detected at 90th percentile 0.1 | Yes | Corrosion of household plumbing |
| Lead | 2020 | ppb | 15 | 0 | Detected at 90th percentile <2 | Yes | Corrosion of household plumbing |
| **Disinfectants** | | | | | | | |
| Chlorine | 2020 | ppm | MRDL = 4 | MRDLG =4 | Range Detected .04 - 1.5 | Yes | Water additive to control microbes |
| Chloramines | 2020 | ppm | MRDL = 4 | MRDLG =4 | Range Detected .20 to 1.6 | Yes | Water additive to control microbes |

| **Disinfection By Products** | | | | | | | |
|---|---|---|---|---|---|---|---|
| Contaminant | Sample Year | Units | MCL | | LRAA | Compliance Achieve | Typical Source |
| Total Haloacetic Acids (Dock St Site) | 2020 | ppb | 60 | | 19.27 Range: 8 to 27 | Yes | Byproduct of drinking water disinfection |
| Total Haloacetic Acids (Danemar Site) | 2020 | ppb | 60 | | 12.23 Range: 9 to 25.3 | Yes | Byproduct of drinking water disinfection |
| Total Trihalomethanes (Dock St. Site) | 2020 | ppb | 80 | | 51.57 Range: 35 to 67 | Yes | Byproduct of drinking water disinfection |
| Total Trihalomethances (Danemar Site) | 2020 | Ppb | 80 | | 31.48 Range: 9.2 to 65 | Yes | Byproduct of drinking water disinfection |

**PFOA/PFOS**

| Contaminant | Sample Year | Units | MCL | Range Detected | Typical Source |
|---|---|---|---|---|---|
| Perfluorooctanoic acid (PFOA) | 2020 | ppt | 13 | ND to 8.4 | Used in firefighting chemicals, cleaners, cosmetics, lubricants, paints, polishes, adhesives and photographic films |
| Perfluoropentanoic Acid (PFOS) | 2020 | ppt | 14 | ND to 3.1 | Synthetic chemical used in stain, grease, heat, and water-resistant materials |

## Explanation of Table Abbreviations

| **Unit Descriptions** | |
|---|---|
| **Term** | **Definition** |
| ppm | ppm: parts per million, or milligrams per liter (mg/L) |
| ppb | ppb: parts per billion, or micrograms per liter (µg/L) |
| pCi/L | pCi/L: picocuries per liter (a measure of radioactivity) |
| NA | NA: not applicable |
| ND | ND: Not detected |
| NR | NR: Monitoring not required, but recommended. |
| NTU | Nephelometric Turbidity Units. (measurement of water clarity) |
| RUL | Recommended Upper Limit |
| MCLG | MCLG: Maximum Contaminant Level Goal: 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. |
| MCL | MCL: Maximum Contaminant Level: 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. |
| TT | TT: Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water. |
| AL | AL: Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow. |
| Variances and Exemptions | Variances and Exemptions: State or EPA permission not to meet an MCL or a treatment technique under certain conditions. |
| ppt | Parts per trillion |
| MRDLG | MRDLG: Maximum residual disinfection level goal. 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 contaminants. |
| MRDL | MRDL: Maximum residual disinfectant level. 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. |
| MNR | MNR: Monitored Not Regulated |
| MPL | MPL: State Assigned Maximum Permissible Level |
| LRAA | Locational Running Annual Average |
| RAA | Running Annual Average |

For additional information, please contact: Contact Name: John J. Applegate
Address: 201 Broad Street
Matawan, NJ 07747
Phone: 732 290 2015 or john.applegate@matawanborough.com

**Additional Informational Resources for Drinking Water Information**
NJDEP – 609-292-5550 www.state.nj.us/dep
USEPA – 1-800-426-4791 www.epa.gov/safewater
Center for Disease Control and Prevention – cdc.gov
NJDEP Drinking Water Watchhttps://www9.state.nj.us/DEP_WaterWatch_public/
NJ American Water-https://amwater.com/njaw/

NEW JERSEY
AMERICAN WATER

# Coastal North: Monmouth System – PWS ID# NJ1345001
# Table of Detected Contaminants – 2020

**Towns Served by this system: Shrewsbury area of system-Aberdeen | Allenhurst | Asbury Park | Bradley Beach | Colts Neck in part | Deal | Eatontown | Elberon | Fair Haven | Highlands Borough | Holmdel | Interlaken | Little Silver | Loch Arbor | Long Branch | Middletown | Monmouth Beach | Neptune | Neptune City | Ocean Grove | Oceanport | Ocean Township | Red Bank | Rumson | Sea Bright | Shrewsbury Borough | Shrewsbury Township | Tinton Falls | Wanamassa | West Long Branch**

**Those substances not listed in this table were not found in the treated water supply.**

## Regulated Substances [1]

| Contaminant | Units | MCL | MCLG | Range Detected | Highest Level Detected | Compliance Achieved | Typical Source |
|---|---|---|---|---|---|---|---|
| Inorganic Chemicals | | | | | | | |
| Total Coliform | cfu | Coliform detected no more than 5% of monthly samples | 0 | NA | 0 % [10] | Yes | Naturally present in environment |
| Fluoride [2] | ppm | 2 | 2 | ND to 0.76 | 0.76 | Yes | Erosion of natural deposits; Water additive which promotes strong teeth |
| Nitrate | ppm | 10 | 10 | 0.14 to 0.62 | 0.62 | Yes | Runoff from fertilizer use; Industrial or domestic wastewater discharges; Erosion of natural deposits |
| Treatment By-Products Stage-2 | | | | | | | |
| **Contaminant** | **Units** | **MCL** | **MCLG** | **Range Detected** | **LRAA[3]** | **Compliance Achieved** | **Typical Source** |
| Total Trihalomethanes [TTHMs Site DBP2-1 | ppb | 80 | NA | 36.2 to 64.1 | 44.35 | Yes | By-product of drinking water disinfection |
| Total Trihalomethanes [TTHMs] Site DBP2-2 | ppb | 80 | NA | 35.6 to 63.0 | 48.83 | Yes | By-product of drinking water disinfection |
| Total Trihalomethanes [TTHMs] Site DBP2-3 | ppb | 80 | NA | 33.5 to 77.5 | 51.38 | Yes | By-product of drinking water disinfection |
| Total Trihalomethanes [TTHMs] Site DBP2-4 | ppb | 80 | NA | 31.0 to 62 | 47.18 | Yes | By-product of drinking water disinfection |
| Total Trihalomethanes [TTHMs] Site DBP2-6 | ppb | 80 | NA | 32.0 to 59.3 | 42.48 | Yes | By-product of drinking water disinfection |
| Total Trihalomethanes [TTHMs] Site DBP2-7 | ppb | 80 | NA | 29.4 to 40.2 | 36.23 | Yes | By-product of drinking water disinfection |
| Total Trihalomethanes [TTHMs] Site DBP2-9 | ppb | 80 | NA | 28.0 to 66.0 | 48.60 | Yes | By-product of drinking water disinfection |
| Total Trihalomethanes [TTHMs] Site DBP2-11 | ppb | 80 | NA | 32.4 to 60.0 | 42.38 | Yes | By-product of drinking water disinfection |
| Total Trihalomethanes [TTHMs] Site DBP2-12 | ppb | 80 | NA | 36.0 to 56.3 | 43.80 | Yes | By-product of drinking water disinfection |
| Total Haloacetic Acids [THAA5] Site DBP2-1 | ppb | 60 | NA | 7.6 to 16.7 | 10.85 | Yes | By-product of drinking water disinfection |
| Total Haloacetic Acids [THAA5] Site DBP2-2 | ppb | 60 | NA | 2.7 to 15.8 | 9.98 | Yes | By-product of drinking water disinfection |
| Total Haloacetic Acids [THAA5] Site DBP2-3 | ppb | 60 | NA | 5.0 to 16.1 | 10.38 | Yes | By-product of drinking water disinfection |
| Total Haloacetic Acids [THAA5] Site DBP2-4 | ppb | 60 | NA | 6.0 to 16 | 11.0 | Yes | By-product of drinking water disinfection |
| Total Haloacetic Acids [THAA5] Site DBP2-6 | ppb | 60 | NA | 6.7 to 13.8 | 10.63 | Yes | By-product of drinking water disinfection |
| Total Haloacetic Acids [THAA5] Site DBP2-7 | ppb | 60 | NA | 5.0 to 18.5 | 10.58 | Yes | By-product of drinking water disinfection |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Total Haloacetic Acids [THAA5] Site DBP2-9 | ppb | 60 | NA | 6.8 to 10.6 | 9.50 | Yes | By-product of drinking water disinfection |
| Total Haloacetic Acids [THAA5] Site DBP2-11 | ppb | 60 | NA | 8.0 to 17.1 | 11.88 | Yes | By-product of drinking water disinfection |
| Total Haloacetic Acids [THAA5] Site DBP2-12 | ppb | 60 | NA | 10.9 to 16.0 | 12.73 | Yes | By-product of drinking water disinfection |

| Contaminant | Units | MCL | MCLG | Range Detected | Highest Level Detected | Compliance Achieved | Typical Source |
|---|---|---|---|---|---|---|---|
| Turbidity [5, 9] | | | | | | | |
| Turbidity 2020 | ntu | TT = 1 NTU | NA | 0.01 to 0.29 | 0.29 | Yes | Soil runoff |
| | | TT = percent of Samples <0.3 ntu | NA | 100% | NA | | |
| Treatment By-products Precursor Removal | | | | | | | |
| Total Organic Carbon | MCLG | Percent (%) Removal Range | Percent (%) Removal Required | Removal Ratio Range | RAA (%) Removal Ration | Compliance Achieved | Typical Source |
| | RAA (%) Removal Ratio | 14.1% to 56.52% | 35% | 0.91 to 1.82 | 1.09 to 1.29 [11] | Yes | Naturally present in the environment |
| Disinfectants | | | | | | | |
| Chloramines | ppm | MRDL = 4 | MRDLG = 4 | 0.06 to 3.00 | 1.36[4] | Yes | Water additive used to control microbes |

**Tap water samples were collected for lead and copper analysis from homes in the service area**

| Contaminant | Units | Action Level | MCLG | Amount Detected (90th %tile) | Homes Above Action Level | Compliance Achieved | Typical Source |
|---|---|---|---|---|---|---|---|
| Copper 2020 | ppm | 1.3 | 1.3 | 0.23 | none | Yes | Corrosion of household plumbing systems |
| Lead 2020 | ppb | 15 | 0 | 3 | none | Yes | Corrosion of household plumbing systems |

## Secondary Contaminants 2020

| Contaminant | Units | RUL | Amount Detected |
|---|---|---|---|
| Iron [6] | ppm | 0.3 | ND to 0.02 |
| Manganese [7] | ppm | 0.05 | ND |
| Sodium [8] | ppm | 50 | 27.4 to 46 |
| Hardness | ppm | 250 | 76 to 84 |
| Aluminum | ppm | 0.05 | ND |

## Unregulated Contaminant Monitoring 2020

| Contaminant | Units | NJDEP Guidance Level | Range Detected | Highest Level Detected | Use or Environmental Source |
|---|---|---|---|---|---|
| 1,4-Dioxane | ppb | NA | 0.12 to 0.21 | 0.21 | Used as a solvent in manufacturing and processing of paper, cotton, textile products, automotive coolant, cosmetics and shampoos. |

| Unregulated Contaminant Monitoring Rule 2018-2020 | | | | | |
|---|---|---|---|---|---|
| New Jersey American Water participated in the Unregulated Contaminant Monitoring Rule. 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. For testing conducted in the Coastal North System, the following substances were found.[1] | | | | | |
| **Contaminant** | **Unit** | **MRL** | **Highest Level Detected** | **Range Detected** | **Use or Environmental Source** |
| **Metals - List AM1** | | | | | |
| Manganese | ppb | | 73 | ND to 73 | Naturally present in the environment; used in steel production, fertilizer, batteries and fireworks; drinking water and wastewater treatment chemical |
| Germanium | ppb | | 0.32 | ND to 0.32 | |
| **Brominated Haloacetic Acid (HAA) Group – List AM 2** | | | | | |
| **HAA6Br Group** | | | | | By-product of drinking water disinfection |
| Bromochloroacetic Acid | ppb | N/A | 2.6 | 0.68 to 2.6 | |
| Bromodichloroacetic Acid | ppb | N/A | 1.7 | ND to 1.7 | |
| Dibromoacetic Acid | ppb | N/A | 0.85 | ND to 0.85 | |
| Monobromoacetic Acid | ppb | N/A | 0.52 | ND to 0.52 | |
| Tribromoacetic Acid | ppb | N/A | ND | ND | |
| Chlorodibromoacetic Acid | ppb | N/A | 2.5 | ND to 2.5 | |
| **HAA9 Group** | | | | | By-product of drinking water disinfection |
| Bromochloroacetic Acid | ppb | N/A | 2.6 | 0.68 to 2.6 | |
| Bromodichloroacetic Acid | ppb | N/A | 1.7 | ND to 1.7 | |
| Dibromoacetic Acid | ppb | N/A | 0.85 | ND to 0.85 | |
| Monobromoacetic Acid | ppb | N/A | 0.52 | ND to 0.52 | |
| Tribromoacetic Acid | ppb | N/A | ND | ND | |
| Chlorodibromoacetic Acid | ppb | N/A | 2.5 | ND to 2.5 | |
| Dichloroacetic Acid | ppb | N/A | 8.8 | 2.9 to 8.8 | |
| Monochloroacetic Acid | ppb | N/A | ND | ND | |
| Trichloroacetic Acid | ppb | N/A | 8.8 | 1.6 to 8.8 | |

## Per- and Polyfluoroalkyl Substances

Per- or polyfluoroalkyl substances (PFAS) are man-made substances used in a variety of products, such as: stain resistant fabric, non-stick coatings, firefighting foam, paints, waxes, and cleaning products. They are also components in some industrial processes like electronics manufacturing and oil recovery. The New Jersey Department of Environmental Protection (NJDEP) has

begun regulating some of these compounds, establishing a Maximum Contaminant Level for perfluorononanoic acid (PFNA) in 2019. While all other PFAS are not regulated, New Jersey American Water recognizes the importance of testing for these contaminants. Compounds detected are tabulated below, along with typical sources.

| Perfulorinated Compounds 2020 | | | | |
|---|---|---|---|---|
| Parameter | Unit | Highest Level Detected | Range Detected | **Use or** Typical Source |
| Perfluorooctanoic acid (PFOA) | ppt | 6.0 | 3.3 to 6.0 | Used for its emulsifier and surfactant properties in or as fluoropolymers (such as Teflon) fire- fighting foams, cleaners, cosmetics, lubricants, paints, polishes, adhesives and photographic films |
| Perfluoropentanoic Acid (PFOS) | ppt | 4.4 | ND to 4.4 | Manmade chemical; used in products for stain, grease, heat and water resistance |
| Perfluorononanoic Acid (PFNA) | ppt | 2.0 | ND to 2.0 | Manmade chemical; used in products for stain, grease, heat and water resistance |
| Perfluorohexanoic Acid (PFHxA) | ppt | 3.6 | 2.3 to 3.6 | Manmade chemical; used in products for stain, grease, heat and water resistance |
| Perfluoroundecanoic Acid (PFUnA) | ppt | 2.6 | ND to 2.6 | Manmade chemical; used in products for stain, grease, heat and water resistance |
| Perfluorohexanesulfonic Acid (PFHxS) | ppt | 2.5 | ND to 2.5 | Manmade chemical; used in products for stain, grease, heat and water resistance |
| Perfluoroheptanoic Acid (PFHpA) | ppt | 2.0 | ND to 2.0 | Manmade chemical; used in products for stain, grease, heat and water resistance |
| Perfluorobutanesulfonic Acid (PFBS) | ppt | 3.0 | ND to 3.0 | Manmade chemical; used in products for stain, grease, heat and water resistance |
| hexafluoropropylene oxide dimer acid (HFPO-DA) | ppt | 2.2 | ND to 2.2 | Manmade chemical; used in products for stain, grease, heat and water resistance |

**Foot Note:**

1. Under a waiver granted by the State of New Jersey Department of Environmental Protection, our system does not have to monitor for synthetic organic chemicals/pesticides because several years of testing have indicated that these substances do not occur in our source water. The SDWA regulations allow monitoring waivers to reduce or eliminate the monitoring requirements for volatile organic chemicals and synthetic organic chemicals. Our system received monitoring waivers for synthetic organic chemicals.
2. Fluoride is added to the water (Shrewsbury and Ocean County areas of Coastal North System).
3. Compliance is based on the Locational Running Annual Average (LRAA). Results in the table show the average of the 4 quarters of 2020.
4. This level represents the highest annual quarterly Average calculated from the data collected.
5. Turbidity is a measure of the cloudiness of the water. 100% % 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
6. The recommended upper limit for iron is based on unpleasant taste of the water and staining of laundry. Iron is an essential nutrient, but some people who drink water with iron levels well above the recommended upper limit could develop deposits of iron in a number of organs of the body.
7. The recommended upper limit for manganese is based on staining of laundry. Manganese is an essential nutrient, and toxicity is not expected from high levels which would be encountered in drinking water.
8. 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 of concern to individuals on a sodium restricted diet.
9. Our water system violated a drinking water monitoring requirement during the past year. Even though this was not an emergency or danger to public health, as our customer, you have the right to know what happened and what we did to correct the situation. There is nothing you need to do at this time. New Jersey American Water routinely monitors your water for turbidity (cloudiness). This tells us whether we are effectively filtering the water supply. Our water system violated the turbidity monitoring requirement, specifically, failed to collect a grab sample at least once every four hours during a turbidimeter failure at the Swimming River TP CFE. No grab sample was collected between 3:43 AM and 09:05 AM on 05/03/2020.
10. Maximum percentage of positive samples collected in any one month.
11. Annual average of ratio removal for Swimming River and Jumping Brook treatment Plant. Compliance based on annual present of ratio removal.

## Our Water Research Efforts

*Cryptosporidium* is a protozoan found in surface water throughout the U.S. 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 regarding cryptosporidiosis and how it may impact those with weakened immune systems, please contact your personal health care provider.

The U.S. EPA issued a rule in January 2006 that requires systems with higher *Cryptosporidium* levels in their source water to provide additional treatment. To comply with this rule, New Jersey American Water once again began conducting 24 consecutive months of monitoring for *Cryptosporidium* in our raw water sources starting in in 2015. The monitoring to date indicates the presence of these organisms in the source water. The samples were collected from the source before the water was processed through our treatment plants. We continued monitoring until April 2017. The data collected is presented in the Source Water Monitoring table below.

## Source Water Monitoring

| Contaminant | Swimming River source water | Jumping Brook source water | Oak Glen source Water | |
|---|---|---|---|---|
| *Cryptosporidium*, Oocysts/L | ND – 0.100 | ND | ND | Microbial pathogens found in surface waters throughout the United States. |
| *Giardia*, Cysts/L | 0 – 0.558 | 0 – 0.089 | 0 – 0.558 | |

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