



2020  
**ANNUAL DRINKING  
WATER QUALITY REPORT**



OUR TOWN  
ANNUAL DRINKING WATER  
QUALITY REPORT RED BANK  
WATER DEPARTMENT RESULTS  
FROM THE YEAR 2019

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**This report contains important information about your drinking water. If you do not understand it, please have someone translate it for you. Este informe contiene informacion muy importante sobre su agua beber. Traduzcalo o hable con alguien que to entienda bien.**

The Red Bank Water Department is pleased to present to you this year's Annual Drinking Water Quality Report. This report is designed to inform you about the quality of 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.

We are committed to ensuring the quality of your water. Our ground water supply is obtained from four wells. Well #6 and #8 are located at the Red Bank Public Works Department on Chestnut Street. These wells are 700 feet deep and draw groundwater from the Raritan Aquifer Formation. Wells #5 and #7 are located in the Tower Hill area of Red Bank. These wells are 780 feet deep and also draw groundwater from the Raritan Aquifer Formation. The New Jersey Department of Environmental Protection (NJDEP) has prepared Source Water Assessment Reports and Summaries for all public water systems. Further information on the Source Water Assessment Program can be obtained by logging onto NJDEP's source water assessment web site at [www.state.nj.us/dep/swap](http://www.state.nj.us/dep/swap) or by contacting NJDEP's Bureau of Safe Drink Water at (609) 292-5550.

**During 2019 we purchased water from the New Jersey American Water Company. Their water quality test results are attached.**

We are pleased to report that our drinking water meets or is of higher quality than all federal and state safety requirements.

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 other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

The Red Bank Water Department routinely monitors for contaminants in your drinking water according to Federal and State laws. This table shows the results of our monitoring for the period of January 1st to December 31st, 2019. 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 NJDEP has completed Source Water Assessments for all community water systems such as the Borough of Red Bank. The Source Water Assessment Report and Summary for our system is available and can be found by visiting [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. The source water assessment performed on our two sources of groundwater supply determined that there was a low to medium susceptibility rating for each of the seven contaminant categories (and radon). The rating (high, medium, low) reflects the potential for contamination of source water, not the existence of contamination in a source of supply.

If you have any questions about this report or concerning your water utility, please contact Red Bank Public Works at 732-530-2770. 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. These meetings are usually held on the second and fourth Wednesday of each month. Please call 732-530-2740 to confirm dates and times.

The sources of drinking water (both tap 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 production, 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.

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 Red Bank 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 two 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 is available from the EPA Hotline or at [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

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 1-800-429-4791.

**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 Micrograms**

Micrograms 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 (ug/l) – 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 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 – 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 in 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 Goal - (MRDLG)The level of 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.

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. Our system received monitoring waivers for asbestos and synthetic organic chemicals.

To ensure the continued quality of our drinking water, we use Sodium Hypochlorite for disinfection and lime for Ph adjustment. We also use an aeration and filtration process to protect our water from possible harmful contaminants.

**We at the Red Bank 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 at 732-530-2770 if you have questions.**

## BOROUGH OF RED BANK– PWS ID# NJ1340001 TABLE OF DETECTED CONTAMINANTS – 2019

Towns Served by this system: Red Bank|Fair Haven|Little Silver

Those substances not listed in this table were not found in the treated water supply or results were below the TT requirement.

### Regulated Substances <sup>1</sup>

Contaminant	Units	MCL	MCLG	Range Detected	Highest Level Detected	Compliance Achieved	Typical Source
<b>Inorganic Chemicals</b>							
Total Coliform	cfu	Coliform detected no more than 5% of monthly samples	0	NA	0 <sup>8</sup>	Yes	Naturally present in environment
Fluoride <sup>2</sup>	ppm	2	2	ND to <0.1	<0.1	Yes	Erosion of natural deposits; Water additive which promotes strong teeth
Nitrate	ppm	10	10	ND to <0.1	0.30	Yes	Runoff from fertilizer use; Industrial or domestic wastewater discharges; Erosion of natural deposits
Chromium	ppb	100	100	ND to 0.01	0.01 <sup>7</sup>	Yes	Discharge from steel and pulp mills; Erosion of natural deposits
<b>Treatment By-Products Stage-2 (LRAA)</b>							
Total Trihalomethanes [TTHMs] Site DBP2-1	ppb	80	NA	2.3 to 29.2	0.02 <sup>3</sup>	Yes	By-product of drinking water disinfection
Total Trihalomethanes [TTHMs] Site DBP2-2	ppb	80	NA	3.0 to 32.1	0.01 <sup>3</sup>	Yes	By-product of drinking water disinfection
Total Trihalomethanes [TTHMs] Site DBP2-3	ppb	80	NA	1.4 to 35.8	0.02 <sup>3</sup>	Yes	By-product of drinking water disinfection

Total Trihalomethanes (TTHMs) Site DBP2-4	ppb	80	NA	1.7 to 37.2	0.02 <sup>3</sup>	Yes	By-product of drinking water disinfection
Total Haloacetic Acids (THAA5) Site DBP2-1	ppb	60	NA	1.8 to 28.2	0.02 <sup>3</sup>	Yes	By-product of drinking water disinfection
Total Haloacetic Acids (THAA5) Site DBP2-2	ppb	60	NA	1.5 to 26.3	0.01 <sup>3</sup>	Yes	By-product of drinking water disinfection
Total Haloacetic Acids (THAA5) Site DBP2-3	ppb	60	NA	1.4 to 20.1	0.01 <sup>3</sup>	Yes	By-product of drinking water disinfection
Total Haloacetic Acids (THAA5) Site DBP2-4	ppb	60	NA	4.7 to 29.9	0.02 <sup>3</sup>	Yes	By-product of drinking water disinfection

#### Disinfectants

Chlorine	ppm	MRDL = 4	MRDLG = 4	0.2 to 2.0	1.4 <sup>4</sup>	Yes	Water additive used to control bacteria
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#### Tap water samples were collected for lead and copper analysis from homes in the service area

Contaminant	Units	Action Level	MCLG	Amount Detected (90 <sup>th</sup> %tile)	Homes Above Action Level	Compliance Achieved	Typical Source
Copper 2019	ppm	1.3	1.3	0	none	Yes	Corrosion of household plumbing systems
Lead 2019	ppb	15	0	0	none	Yes	Corrosion of household plumbing systems

## Secondary Contaminants <sup>7</sup>

Contaminant	Units	RUL	Amount Detected
Sodium <sup>5</sup>	ppm	50	0.05 to 10.0 <sup>7</sup>
Iron	ppm	0.3	0.03
Hardness	ppm	250	40 to 84 <sup>7</sup>
Aluminum	ppm	0.05	ND to 0.04 <sup>7</sup>
Manganese	ppm	0.4	ND to 0.04

<sup>1</sup> 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.

<sup>2</sup> Fluoride is not added to the water supply by the Red Bank Utilities water treatment process.

<sup>3</sup> This level represents the Locational Running Average calculated from the data collected.

<sup>4</sup> This level represents the annual quarterly average calculated from the data collected.

<sup>5</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 of concern to individuals on a sodium-restricted diet

<sup>7</sup> The state of New Jersey allows us to monitor for some substances less than once per year because the concentrations of these substances do not change frequently. Some of our data, though representative, is more than one year old

<sup>8</sup> Maximum percentage of positive samples

## Pre- and Polyfluoroalkyl Substances

Pre- and 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 of perfluorononanoic acid (PFNA) in 2019. While all other PFAS are not regulated, Red Bank Water Department recognizes the importance of testing for these contaminants. Compounds detected are tabulated below along with typical sources.

#### Perfluorinated Compounds 2020

Parameter	Unit	Highest Level Detected	Range Detected	Typical Source
Perfluorooctanoic acid (PFOA)*	ppt	5.4	ND to 5.4	Used for its emulsifier and surfactant properties in or as fluoropolymers (such as Teflon) firefighting foams, cleaners, cosmetics, lubricants, paints, polishes, adhesives and photographic films

\*PFOA has a proposed MCL of 14 ppt

Perfluorohexanoic Acid (PFHxA)	ppt	1.8	ND TO 2.0	Manmade chemical; used in products for stain, grease, heat and water resistance
Perfluoropentanoic Acid (PFOS)**	ppt	2.2	ND to 2.2	Manmade chemical; used in products for stain, grease, heat and water resistance
**PFOS has a proposed MCL of 13 ppt				
Perfluorodecanoic Acid (PFDA)	ppt	1.9	ND to 1.9	Manmade chemical; used in products for stain, grease, heat and water resistance
Perfluorononanoic Acid (PFNA)	ppt	ND	ND	Manmade chemical; used in products for stain, grease, heat and water resistance
Perfluorohexanesulfonic Acid (PFHxS)	ppt	ND	ND	Manmade chemical; used in products for stain, grease, heat and water resistance
Perfluoroheptanoic Acid (PFHpA)	ppt	ND	ND	Manmade chemical; used in products for stain, grease, heat and water resistance
Perfluorobutanesulfonic Acid (PFBS)	ppt	ND	ND	Manmade chemical; used in products for stain, grease, heat and water resistance

## COASTAL NORTH MONMOUTH SYSTEM - PWS ID# NJ1345001 TABLE OF DETECTED CONTAMINANTS - 2019

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 <sup>1</sup>

Contaminant	Units	MCL	MCLG	Range Detected	Highest Level Detected	Compliance Achieved	Typical Source
<b>Inorganic Chemicals</b>							
Total Coliform	cfu	Coliform detected no more than 5% of monthly samples	0	NA	0 % <sup>13</sup>	Yes	Naturally present in environment
Fluoride <sup>2</sup>	ppm	2	2	ND to 0.71	0.71	Yes	Erosion of natural deposits; Water additive which promotes strong teeth
Nitrate	ppm	10	10	0.05 to 1.06	1.06	Yes	Runoff from fertilizer use; Industrial or domestic wastewater discharges; Erosion of natural deposits
<b>Treatment By-Products Stage-2</b>							
Total Trihalomethanes [TTHMs] Site DBP2-1	ppb	80	NA	20.8 to 84.3	48.25	Yes	By-product of drinking water disinfection
Total Trihalomethanes [TTHMs] Site DBP2-2	ppb	80	NA	21.0 to 76.5	45.95	Yes	By-product of drinking water disinfection
Total Trihalomethanes [TTHMs] Site DBP2-3	ppb	80	NA	32 to 84.4	54.90	Yes	By-product of drinking water disinfection
Total Trihalomethanes [TTHMs] Site DBP2-4	ppb	80	NA	36.0 to 81	54.70	Yes	By-product of drinking water disinfection
Total Trihalomethanes [TTHMs] Site DBP2-6	ppb	80	NA	17.0 to 73.8	39.7	Yes	By-product of drinking water disinfection
Total Trihalomethanes [TTHMs] Site DBP2-7	ppb	80	NA	21 to 82.1	47.38	Yes	By-product of drinking water disinfection
Total Trihalomethanes [TTHMs] Site DBP2-9	ppb	80	NA	35.5 to 81.2	54.28	Yes	By-product of drinking water disinfection
Total Trihalomethanes [TTHMs] Site DBP2-11	ppb	80	NA	18.0 to 74.8	43.28	Yes	By-product of drinking water disinfection

Total Trihalomethanes [THMs] Site DBP2-12	ppb	80	NA	20.0 to 74.7	43.48	Yes	By-product of drinking water disinfection
Total Haloacetic Acids [THAA5] Site DBP2-1	ppb	60	NA	9.0 to 10.8	9.36	Yes	By-product of drinking water disinfection
Total Haloacetic Acids [THAA5] Site DBP2-2	ppb	60	NA	6.5 to 10.9	8.7	Yes	By-product of drinking water disinfection
Total Haloacetic Acids [THAA5] Site DBP2-3	ppb	60	NA	5.0 to 8.1	5.33	Yes	By-product of drinking water disinfection
Total Haloacetic Acids [THAA5] Site DBP2-4	ppb	60	NA	6.4 to 10	8.13	Yes	By-product of drinking water disinfection
Total Haloacetic Acids [THAA5] Site DBP2-6	ppb	60	NA	6.3 to 10.0	7.03	Yes	By-product of drinking water disinfection
Total Haloacetic Acids [THAA5] Site DBP2-7	ppb	60	NA	7.3 to 13.4	10.4	Yes	By-product of drinking water disinfection
Total Haloacetic Acids [THAA5] Site DBP2-9	ppb	60	NA	5.8 to 9.7	8.05	Yes	By-product of drinking water disinfection
Total Haloacetic Acids [THAA5] Site DBP2-11	ppb	60	NA	7.2 to 10.0	8.53	Yes	By-product of drinking water disinfection
Total Haloacetic Acids [THAA5] Site DBP2-12	ppb	60	NA	6.6 to 10.8	8.85	Yes	By-product of drinking water disinfection

#### Turbidity <sup>5</sup>

Turbidity 2019 <sup>11</sup>	ntu	TT=1 NUT	NA	0.01 to 2.0	2	Yes	Soil runoff
		IT= percent of samples <0.3 ntu	NA	99.9%	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	19.1% to 70.5%	35% to 45%	0.79 to 1.86	1.21 to 1.40 <sup>15</sup>	Yes	Naturally present in the environment

#### Disinfectants

Chloramines	ppm	MRDL = 4	MRDLG = 4	0.15 to 2.89	1.48 <sup>4</sup>	Yes	Water additive used to control microbes
Chlorite <sup>9</sup>	ppm	1	0.8	ND to .096	0.69	Yes	By-product of drinking water disinfection
Chlorine Dioxide <sup>10</sup>	ppb	MRDL= 800	MRDLG = 800	20 to 430	430	Yes	Water additive used to control microbes

#### Organics

Carbon Tetrachloride <sup>14</sup> 2019	ppb			ND to 0.06	0.06	Yes	Discharge from chemical plants and other industrial activities
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#### Tap water samples were collected for lead and copper analysis from homes in the service area

Contaminant	Units	Action Level	MCLG	Amount Detected (90 <sup>th</sup> %tile)	Homes Above Action Level	Compliance Achieved	Typical Source
Copper 2019	ppm	1.3	1.3	0.14	none	Yes	Corrosion of household plumbing systems
Lead 2019	ppb	15	0	6	3	Yes	Corrosion of household plumbing systems

## Secondary Contaminants 2019

Contaminant	Units	RUL	Amount Detected
Iron <sup>6</sup>	ppm	0.3	ND
Manganese <sup>7</sup>	ppm	0.05	ND
Sodium <sup>8</sup>	ppm	50	28.4 to 74.9 <sup>12</sup>
Hardness	ppm	250	52 to 80 <sup>12</sup>
Aluminum	ppm	0.05	ND to 0.02 <sup>12</sup>

## Unregulated Contaminant Monitoring <sup>13</sup>

Contaminant	Units	NJDEP Guidance Level	Range Detected	Highest Level Detected	Use or Environmental Source
Chlorate	ppb	NA	ND to 760	760	Agricultural defoliant or desiccant; disinfection byproduct; and used in production of chlorine dioxide.
Hexavalent Chromium	ppb	NA	ND to 0.53	0.53	Major sources of Hexavalent Chromium (Chromium-6) in drinking water are discharges from steel and pulp mills, and erosion of natural deposits of chromium-3. Hexavalent Chromium is not currently regulated as an individual substance. NJ American Water voluntarily performed this monitoring based on recommendations from USEPA. For more information on Hexavalent Chromium (Chromium-6), please visit our web site.
Total Chromium	ppb	NA	ND to 1.4	1.4	Discharge from steel and pulp mills; Erosion of natural deposits
Strontium	ppb	NA	37.6 to 508.5	508.5	Naturally occurring element; commercial use of strontium has been in the faceplate glass of cathode-ray tube televisions to block x-ray emissions.
1,4-Dioxane	ppb	NA	ND to 0.50	0.50	Used as a solvent in manufacturing and processing of paper, cotton, textile products, automotive coolant, cosmetics and shampoos.

### Unregulated Contaminant Monitoring Rule 2018-2019

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.

Contaminant	Unit	MRL	Highest Level Detected	Range Detected	Use or Environmental Source
<b>Metals - List AM1</b>					
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	
<b>Brominated Haloacetic Acid (HAA) Group – List AM 2</b>					
<b>HAA6Br Group</b>					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	
<b>HAA9 Group</b>					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	





## Pre- and Polyfluoroalkyl Substances

Pre- and 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 of 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

Perfluorinated Compounds 2020				
Parameter	Unit	Highest Level Detected	Range Detected	Typical Source
Perfluorooctanoic acid (PFOA)*	ppt	5.8	ND to 5.8	Used for its emulsifier and surfactant properties in or as fluoropolymers (such as Teflon) firefighting foams, cleaners, cosmetics, lubricants, paints, polishes, adhesives and photographic films
*PFOA has a proposed MCL of 14 ppt				
Perfluorohexanoic Acid (PFHxA)	ppt	3.3	ND TO 3.3	Manmade chemical; used in products for stain, grease, heat and water resistance
Perfluoropentanoic Acid (PFOS)**	ppt	3.7	ND to 2.2	Manmade chemical; used in products for stain, grease, heat and water resistance
**PFOS has a proposed MCL of 13 ppt				
Perfluorodecanoic Acid (PFDA)	ppt	ND	ND to 1.9	Manmade chemical; used in products for stain, grease, heat and water resistance
Perfluorononanoic Acid (PFNA)	ppt	1.9	ND	Manmade chemical; used in products for stain, grease, heat and water resistance
Perfluorododecanoic Acid (PFDoA)	ppt	ND	ND	Manmade chemical; used in products for stain, grease, heat and water resistance
Perfluorotetradecanoic Acid (PFTA)	ppt	ND	ND	Manmade chemical; used in products for stain, grease, heat and water resistance
Perfluorotridecanoic Acid (PFTrDA)	ppt	ND	ND	Manmade chemical; used in products for stain, grease, heat and water resistance
Perfluoroundecanoic Acid (PFUnA)	ppt	ND	ND	Manmade chemical; used in products for stain, grease, heat and water resistance
Perfluorohexanesulfonic Acid (PFHxS)	ppt	1.4	ND to 1.4	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	2.7	ND to 2.7	Manmade chemical; used in products for stain, grease, heat and water resistance

**Foot Note:**

- <sup>1</sup> 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.
- <sup>2</sup> Fluoride is added to the water (Shrewsbury and Ocean County areas of Coastal North System).
- <sup>3</sup> Compliance is based on the Locational Running Annual Average (LRAA). Results in the table show the average of the 4 quarters of 2019.
- <sup>4</sup> This level represents the highest annual quarterly Average calculated from the data collected.
- <sup>5</sup> 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.
- <sup>6</sup> 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.
- <sup>7</sup> 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.
- <sup>8</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. sodium levels above the recommended upper limit may be of concern to individuals on a sodium-restricted diet.
- <sup>9</sup> Some infants and young children who drink water containing chlorite in excess of the MRDL could experience nervous system effects. Similar effect may occur in fetuses of pregnant women who drink water containing chlorite in excess of the MCL. Some people may experience anemia.
- <sup>10</sup> Some infants and young children who drink water containing chlorine dioxide in excess of the MRDL could experience nervous system efforts. Similar effects may occur in fetuses of pregnant women who drink water containing chlorine dioxide in excess of the MRDL. Some people may experience anemia.
- <sup>11</sup> New Jersey American Water routinely monitors your water for turbidity (cloudiness). This tells us whether we are effectively filtering the water supply. Normal turbidity levels at the Jumping Brook Treatment Plant are less than 0.3 turbidity units (NTU). Our water system violated the filtration requirements, specifically. Our turbidity exceeded 1 nephelometric Turbidity Units (NTU) in representative samples of Combined Filter Effluent (CFE) Water on September 2, 2019. The CFE is the water leaving all of the filters in the treatment plant.
- <sup>12</sup> The State of New Jersey allows us to monitor for some substances less than once per year because the concentrations of these substances do not change frequently. Some of our data, though representative, is more than one year old.
- <sup>13</sup> Maximum percentage of positive samples collected in any one month.
- <sup>14</sup> Some People who drink water containing carbon tetrachloride in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.
- <sup>15</sup> Annual average of ratio removal for Swimming River and Jumping Brook treatment Plant. Compliance based on annual present of ration removal.

**Our Water Research Efforts**

*Cryptosporidium* is a protozoan found in surface water throughout the U.S. Although filtration remove *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 health individuals can overcome the diseases 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 e 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 conduction 24 consecutive months of monitoring for *Cryptosporidium* in our raw water sources starting 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 out 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	Use or Environmental Source
<i>Cryptosporidium</i> , Oocysts/L	ND - 0.100	ND	ND	Microbial pathogens found in surface waters throughout the United States.
<i>Giardia</i> , Cysts/L	0-0.558	0-0.089	0-0.558	