



2019

ANNUAL DRINKING WATER QUALITY REPORT



OUR TOWN ANNUAL DRINKING WATER QUALITY REPORT RED BANK WATER DEPARTMENT RESULTS FROM THE YEAR 2018

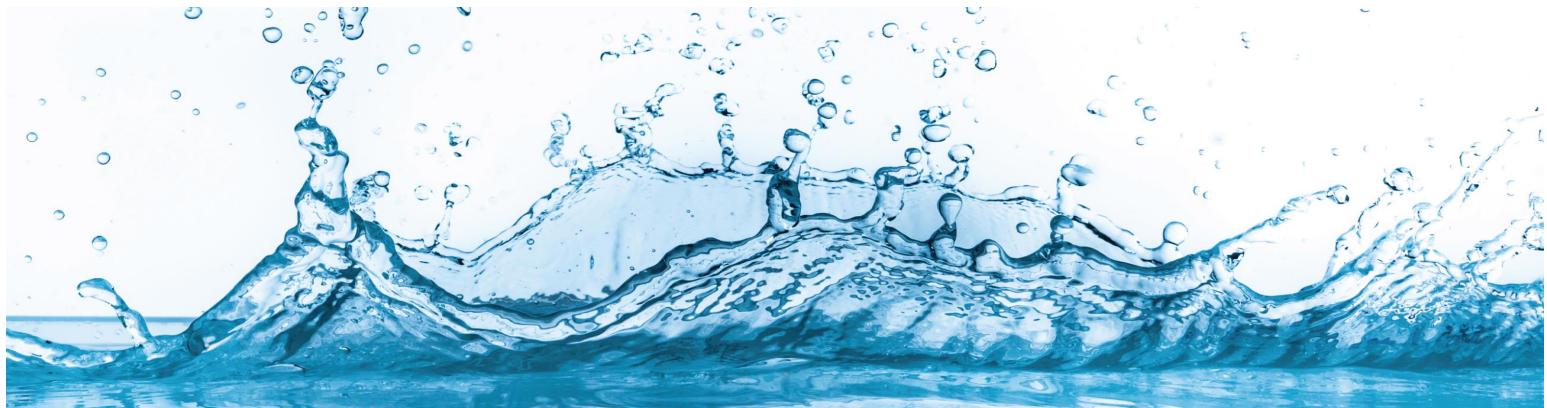
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This report contains important information about your drinking water. If you do not understand it, please have someone translate it for you. Este informe contiene información muy importante sobre su agua beber. Tradúzcalo o hable con alguien que lo 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 or by contacting NJDEP's Bureau of Safe Drink Water at (609) 292-5550.

During 2018 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, 2018. 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 at 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 <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 – 2018

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 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 ⁸	Yes	Naturally present in environment
Fluoride ²	ppm	2	2	ND to <0.1	<0.1	Yes	Erosion of natural deposits; Water additive which promotes strong teeth
Nitrate	ppm	10	10	0.10 to 0.30	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 ⁷	Yes	Discharge from steel and pulp mills; Erosion of natural deposits
Treatment By-Products Stage-2							
(LRAA)							
Total Trihalomethanes [TTHMs] Site DBP2-1	ppb	80	NA	2.2 to 27.9	0.15 ³	Yes	By-product of drinking water disinfection
Total Trihalomethanes [TTHMs] Site DBP2-2	ppb	80	NA	3.6 to 46.0	0.20 ³	Yes	By-product of drinking water disinfection
Total Trihalomethanes [TTHMs] Site DBP2-3	ppb	80	NA	2.8 to 51.2	0.16 ³	Yes	By-product of drinking water disinfection

Total Trihalomethanes [TTHMs] Site DBP2-4	ppb	80	NA	2.4 to 91.0	0.21 ³	Yes	By-product of drinking water disinfection
Total Haloacetic Acids [THAA5] Site DBP2-1	ppb	60	NA	2.9 to 36.0	0.13 ³	Yes	By-product of drinking water disinfection
Total Haloacetic Acids [THAA5] Site DBP2-2	ppb	60	NA	4.2 to 61.1	0.14 ³	Yes	By-product of drinking water disinfection
Total Haloacetic Acids [THAA5] Site DBP2-3	ppb	60	NA	9.7 to 18.6	0.11 ³	Yes	By-product of drinking water disinfection
Total Haloacetic Acids [THAA5] Site DBP2-4	ppb	60	NA	4.8 to 59.9	0.14 ³	Yes	By-product of drinking water disinfection
Disinfectants							
Chlorine	ppm	MRDL = 4	MRDLG = 4	0.2 to 2.0	1.1 ⁴	Yes	Water additive used to control bacteria

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

Contaminant	Units	Action Level	MCLG	Amount Detected (90 th %tile)	Homes Above Action Level	Compliance Achieved	Typical Source
Copper 2018	ppm	1.3	1.3	0.06	none	Yes	Corrosion of household plumbing systems
Lead 2018	ppb	15	0	3	none	Yes	Corrosion of household plumbing systems

Secondary Contaminants

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

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 not added to the water supply by the Red Bank Utilities water treatment process.

³ This level represents the Locational Running Average calculated from the data collected.

⁴ This level represents the annual quarterly average calculated from the data collected.

⁵ 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.

⁷ 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

⁸ Maximum percentage of positive samples

COASTAL NORTH MONMOUTH SYSTEM – PWS ID# NJ1345001 TABLE OF DETECTED CONTAMINANTS – 2018

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 Substances¹

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	0	NA	0.05 % ⁸	Yes	Naturally present in environment

		monthly samples					
Fluoride ²	ppm	2	2	ND to 0.87	0.87	Yes	Erosion of natural deposits; Water additive which promotes strong teeth
Nitrate	ppm	10	10	0.09 to 0.36	0.36	Yes	Runoff from fertilizer use; Industrial or domestic wastewater discharges; Erosion of natural deposits
Chromium	ppb	100	100	ND to 0.1.4	1.4 ⁷	Yes	Discharge from steel and pulp mills; Erosion of natural deposits
Treatment By-Products Stage-2							
Total Trihalomethanes [TTHMs] Site DBP2-1	ppb	80	NA	44.5 to 77.5	62.65 ³	Yes	By-product of drinking water disinfection
Total Trihalomethanes [TTHMs] Site DBP2-2	ppb	80	NA	43.0 to 73.1	59.20 ³	Yes	By-product of drinking water disinfection
Total Trihalomethanes [TTHMs] Site DBP2-3	ppb	80	NA	35.4 to 110	77.78 ³	Yes	By-product of drinking water disinfection
Total Trihalomethanes [TTHMs] Site DBP2-4	ppb	80	NA	38.0 to 100	73.58 ³	Yes	By-product of drinking water disinfection
Total Trihalomethanes [TTHMs] Site DBP2-6	ppb	80	NA	35.4 to 86.5	57.03 ³	Yes	By-product of drinking water disinfection
Total Trihalomethanes [TTHMs] Site DBP2-7	ppb	80	NA	39.7 to 81.8	60.65 ³	Yes	By-product of drinking water disinfection
Total Trihalomethanes [TTHMs] Site DBP2-9	ppb	80	NA	36.4 to 99.0	70.00 ³	Yes	By-product of drinking water disinfection
Total Trihalomethanes [TTHMs] Site DBP2-11	ppb	80	NA	41.9 to 71.0	59.18 ³	Yes	By-product of drinking water disinfection
Total Trihalomethanes [TTHMs] Site DBP2-12	ppb	80	NA	41.4 to 74.7	59.80 ³	Yes	By-product of drinking water disinfection
Total Haloacetic Acids [THAA5] Site DBP2-1	ppb	60	NA	11.0 to 75.0	29.23 ³	Yes	By-product of drinking water disinfection
Total Haloacetic Acids [THAA5] Site DBP2-2	ppb	60	NA	9.0 to 61.0	25.28 ³	Yes	By-product of drinking water disinfection
Total Haloacetic Acids [THAA5] Site DBP2-3	ppb	60	NA	9.7 to 18.6	14.35 ³	Yes	By-product of drinking water disinfection
Total Haloacetic Acids [THAA5] Site DBP2-4	ppb	60	NA	11.5 to 26.7	17.70 ³	Yes	By-product of drinking water disinfection
Total Haloacetic Acids [THAA5] Site DBP2-6	ppb	60	NA	10.0 to 48.9	21.40 ³	Yes	By-product of drinking water disinfection
Total Haloacetic Acids [THAA5] Site DBP2-7	ppb	60	NA	6.0 to 58.8	23.25 ³	Yes	By-product of drinking water disinfection
Total Haloacetic Acids [THAA5] Site DBP2-9	ppb	60	NA	11.4 to 19.2	15.75 ³	Yes	By-product of drinking water disinfection
Total Haloacetic Acids [THAA5] Site DBP2-11	ppb	60	NA	9.0 to 58.2	25.73 ³	Yes	By-product of drinking water disinfection
Total Haloacetic Acids [THAA5] Site DBP2-12	ppb	60	NA	8.9 to 58.8	24.00 ³	Yes	By-product of drinking water disinfection
Turbidity							
Turbidity ⁶	ntu	TT	NA	0.01 to 0.27	0.27	Yes	Soil runoff
Treatment By-products Precursor Removal							
Total Organic Carbon	ppm	TT	NA	0.72 to 2.84	2.84	Yes	Naturally present in the environment
Disinfectants							
Chloramines	ppm	MRDL = 4	MRDLG = 4	0.06 to 2.75	1.37 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 (90 th %tile)	Homes Above Action Level	Compliance Achieved	Typical Source
Copper 2018	ppm	1.3	1.3	0.132	none	Yes	Corrosion of household plumbing systems
Lead 2018	ppb	15	0	5	2	Yes	Corrosion of household plumbing systems

Secondary Contaminants

Contaminant	Units	RUL	Amount Detected
Sodium ⁵	ppm	50	27.6 to 62.7 ⁷
Hardness	ppm	250	92 to 100 ⁷
Aluminum	ppm	0.05	ND to 0.01 ⁷

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 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	
<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	

Unregulated Contaminant Monitoring⁷

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.
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

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
Metals - List AM1					
Manganese	ppb	0.4	9.7	ND to 9.7	Naturally present in the environment; used in steel production, fertilizer, batteries and fireworks; drinking water and wastewater treatment chemical
Brominated Haloacetic Acid (HAA) Group – List AM 2					

HAA6Br Group					By-product of drinking water disinfection
Bromoacetic 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
Bromoacetic 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	6.2	2.6 to 6.2	

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 This level represents the highest annual quarterly Locational Running Average calculated from the data collected.

⁴ This level represents the highest annual quarterly Average calculated from the data collected.

⁵ 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.

⁶ 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.

⁷ 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.

⁸ Maximum percentage of positive samples collected in any one month.