



2014 Annual Water Quality Report

Coastal North System
PWS ID: NJ1345001



A Message from the New Jersey American Water President

To Our Valued Customer:

New Jersey American Water is proud to be your local water service provider, and I am pleased to share some very good news about the quality of your drinking water. As you read through our Annual Water Quality Report, you will see that we continue to supply water that meets or surpasses all state and federal water quality standards.

This is an exceptional value when you consider the facilities and technology needed to draw water from the source and treat it, along with the miles and miles of pipeline hidden below the ground to bring water to your tap. What's more, our plant operators, water quality experts, engineers, and maintenance crews work around the clock to make sure that quality water is always there when you need it.

Delivering reliable, high-quality water service also requires significant investment to maintain and upgrade aging facilities. **In 2014 alone, we invested approximately \$238 million in system improvements across the state.**

Because water is essential for public health, fire protection, economic development, and overall quality of life, New Jersey American Water's employees are committed to ensuring that quality water keeps flowing not only today but well into the future. We hope you agree that your water service is worth every penny.

Please take the time to review this report. It provides details about the source and quality of your drinking water using data from water quality testing conducted for your local system between January and December 2014

Sincerely,

William M. Varley

President, New Jersey American Water

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 potable. Tradúzcalo o hable con alguien que lo entienda bien.

આ અહેવાલ માં તમારા પીવાના પાણી વિષે અગત્ય ની જાણકારી આપવા માં આવી છે. એનો અનુવાદ કરો અથવા જેને સમજાવી પડતી ભાષા લેવા આર્થે બાત કરો

本报告与您的饮用水有关。如果您不了解其内容，应请别人为您翻译解说。

이 보고서에는 귀하께서 사용하고 계시는 식수에 관한 정보가 들어있습니다. 만약에 이해를 못하시면 누군가에게 번역을 의뢰하십시오.

Share This Report:

Landlords, businesses, schools, hospitals and other groups are encouraged to share this important water quality information with water users at their location who are not customers. Additional copies of this report are available by contacting customer service at 1-800-272-1325.

Partnership for Safe Drinking Water Program

New Jersey American Water is a member of the Environmental Protection Agency (EPA) Partnership for Safe Water Program (an association of water utilities and government) which is committed to voluntarily providing drinking water of a quality far better than required by federal regulations. The Partnership recognized New Jersey American Water for our commitment to provide the best water quality by presenting the prestigious "Director's Award" for our surface water treatment plant in Tinton Falls (Monmouth County) and in Neptune (Monmouth County). These plants once again earned the "Director's Award" in 2014 under the Partnership for Safe Water program administered by the U.S. EPA, New Jersey Department of Environmental Protection, and other water related organizations. The award honors water utilities for achieving operational excellence, by



voluntarily optimizing their treatment facility operations and adopting more stringent performance goals than those required by federal and state drinking water standards.

About New Jersey American Water

New Jersey American Water, a subsidiary of American Water (NYSE: AWK), is the largest investor-owned water utility in the state, providing high-quality and reliable water and/or wastewater services to approximately 2.6 million people.

About American Water

Founded in 1886, American Water is the largest publicly traded U.S. water and wastewater utility company. With headquarters in Voorhees, N.J., the company employs approximately 6,400 dedicated professionals who provide drinking water, wastewater and other related services to an estimated 15 million people in more than 45 states and parts of Canada. More information can be found by visiting www.amwater.com.

How to Contact Us

Thank you... for allowing us to continue to provide your family with quality drinking water this year. We ask that all our customers protect our water sources. Please call our Customer Call Center toll-free at 1-800-272-1325 if you have questions:

New Jersey American Water

131 Woodcrest Road

P.O. Box 5079

Cherry Hill, NJ 08034

www.amwater.com

Water Information Sources

New Jersey Department of Environmental Protection,

Bureau of Safe Drinking Water:

(609) 292-5550 • www.state.nj.us/dep

New Jersey Board of Public Utilities:

(973) 648-2350 • Two Gateway Center, Newark, NJ 07102

Division of Customer Relations:

1-800-624-0241 • www.state.nj.us/bpu

US Environmental Protection Agency:

www.epa.gov/safewater

Safe Drinking Water Hotline: 1-800-426-4791

American Water Works Association: www.awwa.org

Centers for Disease Control and Prevention: www.cdc.gov

Public Participation

How You Can Get Involved

Customers can participate in decisions that may affect the quality of water by:

- Reading the information provided in bill inserts and special mailings
- Contacting the company directly with questions or to discuss issues
- Responding to company requests for participation in focus groups and roundtables
- Attending open houses conducted by the company
- Responding to survey requests

Where Your Water Comes From

Your drinking water comes from a blend of sources that may include:

Coastal North System – PWSID # NJ1345001

Shrewsbury area of system-Groundwater from the Potomac-Raritan-Magothy Aquifer (PRM) and surface water from the Glendola Reservoir, the Manasquan River/Reservoir, the Shark River, and the Swimming River/Reservoir.

Lakewood/Howell area of system-14 wells, 1 surface water supply. This system's source water comes from the Englishtown aquifer, Kirkwood-Cohansey aquifer, Mount Laurel-Wenonah aquifer, Potomac-Raritan-Magothy aquifer, upper Potomac-Raritan-Magothy aquifer, and Vincentown aquifer.

Ocean County area of system-5 wells and 1 purchased ground water source. This system's source water comes from the Englishtown aquifer system, Potomac-Raritan-Magothy aquifer, and upper Potomac-Raritan-Magothy aquifer. Also, bulk transfer of surface water from Jumping Brook Treatment Plant.

Protecting Your Water Source

What is S.W.A.P.

SWAP (Source Water Assessment Program) is a program of the New Jersey Department of Environmental Protection (NJDEP) to study existing and potential threats to the quality of public drinking water sources throughout the state. Sources are rated depending upon their contaminant susceptibility.

Susceptibility Ratings for New Jersey American Water — Coastal North

The table below illustrates the susceptibility ratings for the seven contaminant categories (and radon) for each source in the system. The table provides the number of wells and intakes that rated high (H), medium (M), or low (L) for each contaminant category. For susceptibility ratings of purchased water, refer to the specific water system's source water assessment report. Source Water Assessment Reports and

Summaries are available for public water systems at www.state.nj.us/dep/swap/ or by contacting the NJDEP's Bureau of Safe Drinking Water at (609) 292-5550.

Contaminant Categories

DEP considered all surface water highly susceptible to pathogens, therefore all intakes received a high rating for the pathogen category. For the purpose of the Source Water Assessment Program, radionuclides are more of a concern for ground water than surface water. As a result, surface water intakes' susceptibility to radionuclides was not determined and a low rating was assigned.

If a system is rated highly susceptible for a contaminant category, it does not mean a customer is or will be consuming contaminated drinking water. The rating reflects the potential for contamination of source water, not the existence of contamination. Public water systems are required to monitor for regulated contaminants and to install treatment if any contaminants are detected at frequencies and concentrations above allowable levels.

As a result of the assessments, DEP may customize (change existing) monitoring schedules based on the susceptibility ratings.

Source water protection is a long-term dedication to clean and safe drinking water. It is more cost effective to prevent contamination than to address contamination after the fact. Every member of the community has an important role in source water protection. NJDEP recommends controlling activities and development around drinking water sources whether it is through land acquisition, conservation easements or hazardous waste collection programs. We will continue to keep you informed of SWAP's progress and developments.

Susceptibility Chart Definitions

Pathogens: Disease-causing organisms such as bacteria and viruses. Common sources are animal and human fecal wastes.

- **Nutrients:** Compounds, minerals and elements that aid growth, that are both naturally occurring and man-made. Examples include nitrogen and phosphorus.
- **Volatile Organic Compounds:** Man-made chemicals used as solvents, degreasers, and gasoline components. Examples include benzene, methyl tertiary butyl ether (MTBE), and vinyl chloride.
- **Pesticides:** Man-made chemicals used to control pests, weeds and fungus. Common sources include land application and manufacturing centers of pesticides. Examples include herbicides such as atrazine, and insecticides such as chlordane.
- **Inorganics:** Mineral-based compounds that are both naturally occurring and man-made. Examples include arsenic, asbestos, copper, lead, and nitrate.
- **Radionuclides:** Radioactive substances that are both naturally occurring and man-made. Examples include radium and uranium.
- **Radon:** Colorless, odorless, cancer-causing gas that occurs naturally in the environment. For more information go to <http://www.nj.gov/dep/rpp/radon/index.htm> or call (800) 648-0394.
- **Disinfection By-product Precursors:** A common source is naturally occurring organic matter in surface water. Disinfection by-products are formed when the disinfectants (usually chlorine) used to kill pathogens react with dissolved organic material (for example leaves) present in surface water.

		Pathogens			Nutrients			Pesticides			Volatile Organic Compounds			Inorganics			Radionuclides			Radon			Disinfection By-product Precursors		
Area	Sources	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L
	Shrewsbury Area	Wells - 10			10			10			10			10		8	2		9	1			10		8
GUDI - 0																									
Surface water intakes - 5		5			1	4			2	3		5		3	2				5			5	5		
Lakewood Area	Wells - 14		1	13	4		10			14	4		10	4	6	4	1	6	7		5	9	1	13	
	GUDI - 0																								
	Surface water intakes - 1	1				1				1		1			1				1			1	1		
Ocean County Area	Wells - 5			5			5			5			5		4	1		3	2			5		5	
	GUDI - 0																								
	Surface water intakes - 0																								

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. Researchers with American Water have developed a new, more accurate test for *Cryptosporidium* in water. For additional information regarding cryptosporidiosis and how it may impact those with weakened immune systems, please contact our customer service center at 1-800-272-1325 or speak with your personal health care provider.

Lead Education Statement

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. New Jersey American Water is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 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 <http://www.epa.gov/safewater/lead>.

Unregulated Contaminant Monitoring Rule 3 (UCMR3)

During 2013 and 2014, our Company 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, the substance found are listed in the table below.

What's in the Source Water Before We Treat It?

In general, 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 can pick up substances

resulting from the presence of animals or from human activities.

Substances That May Be Present in Source Water Include:

Microbiological Contaminants: such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations or wildlife.

Inorganic Contaminants: such as salts and metals which can be naturally occurring or may 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 may also come from gas stations, urban stormwater runoff and septic systems.

Radioactive Contaminants: which can be naturally occurring or may be the result of oil and gas production and mining activities.

For more information about contaminants and potential health effects, call the EPA's Safe Drinking Water Hotline at 1-800-426-4791.

What is Radon?

Radon is a radioactive gas that occurs naturally in some groundwater. It may pose a health risk when the gas is released from water into air, as occurs while showering, washing dishes and performing other household activities. Radon can move up through the ground and into a home through cracks in the foundation. Compared to radon entering the home through soil, radon entering through tap water is, in most cases, a small source of radon in indoor air. Inhalation of radon gas has been linked to lung cancer, however the effects of radon ingested in drinking water are not yet clear. If you are concerned about radon in your home, tests are available to determine the total exposure level.

During testing, our water showed radon levels ranging from ND to 218 pCi/L in the Lakewood/Howell area of the Coastal North System. Radon was not detected in the Ocean County area of the Coastal North System. The EPA is developing regulations to reduce radon in drinking water. Radon in the air is inexpensive to test and easy to correct. For additional information, call the EPA's Radon Hotline at 1-800-SOS-RADON.

Do I Need to Take Special Precautions?

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish

limits for contaminants in bottled water, which must provide the same protection for public health.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at 1-800-426-4791.

How Do I Read the Table of Detected Contaminants?

First, determine which table you should read by finding your town in the Towns Served by this System. Starting with the **Contaminant**, read across from left to right. A "**Yes**" under **Compliance Achieved** means the amount of the substance met government requirements. The column marked **MCLG, Maximum Contaminant Level Goal**, 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. The shaded column marked **MCL, Maximum Contaminant Level**, is the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology. The column marked **Range Detected** shows the highest and lowest test results for the year. The column marked **Highest Level Detected** shows the highest test results during the year. **Typical Source** shows where this substance usually originates. Compare the Range Detected values with the MCL column. To be in compliance, the Highest Level Detected must be lower than the MCL standard. Those substances not listed in the table were not found in the treated water supply.

As you can see from the table, our system had no MCL violations again this year. The footnotes and the definitions below will help you interpret the data presented in the Table of Detected Contaminants.

Table Definitions

90th Percentile Value: Of the samples taken, 90 percent of the values of the results were below the level indicated in the table.

Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

MRDL (Maximum Residual Disinfectant Level): The highest level of disinfectant allowed in drinking water. There is

convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG (Maximum Residual Disinfectant Level Goal): 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.

NA: not applicable

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of the water.

ND (None Detected): Laboratory analysis indicates that the constituent is not present.

ppb (parts per billion): Corresponds to one part substance in one billion parts of water.

ppm (parts per million): Corresponds to one part substance in one million parts of water.

pCi/L (picoCuries per Liter): A measure of the radioactivity in water.

RUL: Recommended Upper Limit

TT (Treatment Technique): A required process intended to reduce the level of a contaminant in drinking water.

Water Quality Statement

The data presented in the Table of Detected Contaminants is the same data collected to comply with U.S. Environmental Protection Agency and New Jersey state monitoring and testing requirements. We have learned through our testing that some contaminants have been detected, however, these contaminants were detected well below the levels set by the EPA to protect public health. To assure high quality water, individual water samples are taken each year for chemical, physical and microbiological tests. Tests are done on water taken at the source, from the distribution system after treatment and, for lead and copper monitoring, from the customer's tap. Testing can pinpoint a potential problem so that preventative action may be taken. 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 has received monitoring waivers for synthetic organic chemicals.

Vulnerable Populations Statement

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial pathogens are available from the Safe Drinking Water Hotline (1-800-426-4791).

Coastal North System – PWS ID# NJ1345001

Table of Detected Contaminants – 2014

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 | Lakewood/Howell area of system-Freehold in part | Howell Township | Lakewood | Ocean County area of system-Bay Head | Brick Township in part | Dover in part | Lavallette in part | Mantoloking

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							
Fluoride ²	ppm	4	4	ND to 0.72	0.72	Yes	Erosion of natural deposits; Water additive which promotes strong teeth
Nitrate	ppm	10	10	ND to 0.54	0.54	Yes	Runoff from fertilizer use; Industrial or domestic wastewater discharges; Erosion of natural deposits
Total Chromium	ppb	100	100	ND to 1.4	1.4	Yes	Discharge from steel and pulp mills; Erosion of natural deposits
Treatment By-Products Stage-2							
Total Trihalomethanes [TTHMs]	ppb	80	NA	18.9 to 91.1	78.3 ⁴	Yes	By-product of drinking water disinfection
Total Haloacetic Acids [THAA ₅]	ppb	60	NA	4.1 to 53.9	35.2 ⁴	Yes	By-product of drinking water disinfection
Turbidity							
Turbidity ¹³	ntu	TT	NA	0.05 to 0.29	0.29	Yes	Soil runoff
Treatment By-products Precursor Removal							
Total Organic Carbon	ppm	TT	NA	1.04 to 3.02	3.02	Yes	Naturally present in the environment
Microbiologicals							
Total Coliform	cfu	No more than 5% of monthly samples	0	NA	0.05% ³	Yes	Naturally present in the environment
Disinfectants							
Chloramines	ppm	MRDL = 4	MRDLG = 4	0.0 to 3.1	1.38 ⁵	Yes	Water additive used to control microbes
Chlorite ¹¹	ppm	1	0.8	ND to 0.67	0.67	Yes	By-product of drinking water disinfection
Chlorine Dioxide ¹²	ppb	MRDL = 800	MRDLG = 800	70 to 720	720	Yes	Water additive used to control microbes
Radiological Substances							
Alpha Emitters ¹⁰	pCi/L	15	0	ND to 5.9	5.9	Yes	Erosion of natural deposits
Combined Radium 226 and 228	pCi/L	5 ⁶	0	ND to 1.54	1.54	Yes	Erosion of natural deposits
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 2014	ppm	1.3	1.3	0.234	none	Yes	Corrosion of household plumbing systems
Lead 2014	ppb	15	0	3	1	Yes	Corrosion of household plumbing systems

Secondary Contaminants

Contaminant	Units	RUL	Amount Detected
Iron ⁷	ppm	0.3	ND to 0.32
Manganese ⁸	ppm	0.05	ND to 0.054
Sodium ⁹	ppm	50	ND to 94.6
Hardness	ppm	250	44 to 136

Unregulated Contaminant Monitoring

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.

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 Maximum percentage of positive samples collected in any one month.

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

⁵ This level represents the highest annual quarterly Average calculated from the data collected.

⁶ Radium 226 and Radium 228 have a combined MCL of 5 pCi/L.

⁷ 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.

⁸ 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.

⁹ 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.

¹⁰ Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.

¹¹ Some infants and young children who drink water containing chlorite in excess of the MRDL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorite in excess of the MCL. Some people may experience anemia.

¹² Some infants and young children who drink water containing chlorine dioxide in excess of the MRDL could experience nervous system effects. 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.

¹³ 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.