

Matawan Water Department

2018 Water Quality Report

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The Matawan Department of Public Works is pleased to present this summary of the water quality delivered to our customer's during 2018. 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 may go to www.matawanborough.com or <http://amwater.com/njaw/water-quality/water-quality-reports/coastal-north>.

The principal difference between our water sources is the water supplied by the Matawan plant May through October is ground water taken from the Potomac-Raritan-Magothy Aquifer, and the water received from New Jersey American April through November is surface water received primarily from the Swimming River Reservoir, located on the border of Lincroft and Tinton Falls.

We are pleased to report that during 2018 the water delivered to our customers from each of these sources met, or exceeded, all state and federal water quality standards.

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. In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount 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.

Do I need to take special precautions?

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).

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 <http://www.epa.gov/safewater/lead>.

Every three years, Matawan tests for the presence of lead inside of 20 pre-designated homes within the distribution system. These sites are serviced by a lead service line, or lead solder may have been used when joining copper pipes, placing them at an elevated risk for lead contamination. The most recent round of sampling took place during 2017 with all of the samples returning results below the action level for lead.

Additional Information for Nitrate

Nitrate in drinking water above 10 ppm is a health risk for infants of less than six months old. High levels of nitrate can cause a condition known as blue baby syndrome. 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.

How can I get involved?

Contact information for all the members of Matawan's governing body and department heads are on the Matawan web site, www.matawanborough.com. If you would like to discuss particular 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.

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.

Water Conservation Tips

Did you know that the average U.S. household uses approximately 400 gallons of water per day or 100 gallons per person per day? Luckily, there are many low-cost and no-cost ways to conserve water. Small changes can make a big difference - try one today and soon it will become second nature.

- Take short showers a 5-minute shower uses 4 to 5 gallons of water compared to up to 50 gallons for a bath.
- Shut off water while brushing your teeth, washing your hair and shaving and save up to 500 gallons a month.
- Use a water-efficient showerhead. They're inexpensive, easy to install, and can save you up to 750 gallons a month.
- Run your clothes washer and dishwasher only when they are full. You can save up to 1,000 gallons a month.
- Water plants only when necessary.
- Fix leaky toilets and faucets. Faucet washers are inexpensive and take only a few minutes to replace. To check your toilet for a leak, place a few drops of food coloring in the tank and wait. If it seeps into the toilet bowl without flushing, you have a leak. Fixing it or replacing it with a new, more efficient model can save up to 1,000 gallons a month.
- Adjust sprinklers so only your lawn is watered. Apply water only as fast as the soil can absorb it and during the cooler parts of the day to reduce evaporation.
- Teach your kids about water conservation to ensure a future generation that uses water wisely. Make it a family effort to reduce next month's water bill!
- Visit www.epa.gov/watersense for more information.

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.state.nj.us/dep/swap or by contacting the NJDEP's Bureau of Safe Drinking Water (609) 292-5550.

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:

	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.
- If you have your own septic system, properly maintain your system to reduce leaching to water sources or consider connecting to a public sewer system.
- 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.

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)

About the Water Quality Table

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of contaminants in water provided by public water systems. The table below lists all of 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 actually 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

Matawan's Table of Detected Contaminants								
Contaminant	Year Sampled	Units	MCL	MCLG	Analytical Result	Compliance Achieved	Typical Source	
Inorganic Chemicals								
Sulfate	2018	ppm	250	NA	16	Yes	Naturally occurring	
Chloride	2018	ppm	250	NA	6.7	Yes	Naturally occurring	
Zinc	2018	ppm	0.4	NA	0.2	Yes	Naturally occurring	
Radiological Substances								
Combined Radium 226 and 228	2018	pCi/L	5	0	1.5	Yes	Erosion of natural deposits	
Lead and Copper Distribution Sampling								
Copper	2017	ppm	1.3	1.3	Detected at 90 th percentile 0.1	Yes	Corrosion of household plumbing	
Lead	2017	ppb	15	0	Detected at 90 th percentile <2	Yes	Corrosion of household plumbing	
Disinfectants								
Chlorine	2018	ppm	MRDL = 4	MRDLG =4	Range Detected .40 - 1.6	Yes	Water additive to control microbes	
Microbiological								
Total Coliform	2018	cfu	No more than one positive sample per month	0	1 positive	Yes	Naturally present in the environment	
Contaminant	Year Sampled	Units	MCL	MCLG	Highest LRAA	Range Detected	Compliance Achieved	Typical Source
Disinfection By Products Stage 2								
Total Trihalomethanes	2018	ppb	80	NA	59	11 - 177	Yes	By product of disinfection process
Total Haloacetic Acids	2018	ppb	60		47.1	0 -77	Yes	By product of disinfection process

New Jersey American Detected Contaminants							
Contaminant	Year Sampled	Units	MCL	MCLG	Range Detected	Compliance Achieved	Typical Source
Inorganic Chemicals							
Total Chromium	2017	ppb	100	100	ND TO 1.4	Yes	Erosion of natural deposits
Fluoride	2017	ppm	4	4	0.1 to 0.84	Yes	Water additive to promote dental health
Nitrate	2017	ppm	10	10	0.09 to 0.35	Yes	Fertilizer runoff. Erosion of natural deposits
Disinfection Byproducts							
Total Trihalomethanes	2017	ppb	80	NA	4.3 to 89.7	Yes	By-product of water disinfection
Total Haloacetic Acids	2017	ppb	60	NA	ND to 41	Yes	By-product of water disinfection
	Year	Units	MCL	MCLG	Range	Compliance Achieved	Typical Source
Turbidity	2017	ntu	TT	NA	0.07 to 0.28	Yes	Soil runoff
Treatment Byproduct Precursor Removal							
Total Organic Carbon	2017	ppm	TT	NA	0.84 to 2.07	Yes	Naturally occurring
Disinfectants							
Chloramines	2017	ppm	MRDL=4	MRDLG=4	0.09 to 2.85	Yes	Water additive to control microbes
Organics							
Unregulated Contaminants							
Chlorate	2017	ppb	NA	NA	ND TO 760	NA	Agricultural defoliant, disinfection byproduct
Hexavalent Chromium	2017	ppb	NA	NA	ND TO 0.53	NA	Industrial discharge
Strontium	2017	ppb	NA	NA	37.6 to 508.5	NA	Natural occurring element. Industrial discharge
1,4 Dioxane	2017	ppb	NA	NA	ND TO 0.50	NA	Industrial discharge
Secondary Contaminants							
	Year	Units	RUL	Amount Detected			
Sodium	2017	ppm	50	25.5 to 48.6			
Hardness	2017	ppm	250	76 to 84			
Aluminum	2017	ppm	0.05	ND to 0.02			

A copy of NJ American's complete water quality report may be found at the following web site:

<http://amwater.com/njaw/water-quality/water-quality-reports/coastal-north>

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.
Variations and Exemptions	Variations and Exemptions: State or EPA permission not to meet an MCL or a treatment technique under certain conditions.
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

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 Watch https://www9.state.nj.us/DEP_WaterWatch_public/
 NJ American Water-<https://amwater.com/njaw/>