



2016 Annual

# Water Quality Report

East Windsor Municipal  
Utilities Authority

PWS ID: NJ1101002

## Our Commitment to Quality

Once again we proudly present our annual water quality report which details the results of water quality testing completed from January to December, 2015. The purpose of this report is to raise your understanding of drinking water and awareness of the need to protect our drinking water sources. Included in this report are details about where your water comes from, what it contains, and how our water quality results compare to federal and state standards.

We are pleased to tell you that we had no Safe Drinking Water Act violations in 2015. We are committed to delivering the best quality drinking water. To that end, we remain vigilant in meeting the challenges of source water protection, water conservation, and community education while continuing to serve the needs of all our water users.

We want you to be informed about your drinking water. For more information about this report, or for any questions relating to your drinking water, please call the East Windsor MUA at 609-443-6000.

## Public Participation – How Can I Get Involved?

If you have questions or would like to become involved in discussions about your water quality, the East Windsor MUA meets on the 3rd Thursday of each month at the Administration office, on 7 Wiltshire Dr. East Windsor NJ.

## How to Contact Us

The East Windsor MUA welcomes your comments and questions as they relate to the quality of your water. For more information about this report, or for any questions relating to your drinking water, please feel free to call 609-443-6000

**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.**

## Where Does Our Water Come From?

The East Windsor MUA Water Department is a public community water system consisting of 7 wells. This system's source water comes from the Potomac-Raritan-Magothy (PRM) aquifer formation.

## 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**.

## East Windsor MUA PWSID # 1101002

East Windsor MUA is a public community water system consisting of seven wells. None of the wells are under the influence of surface water. There are no surface water intakes and no ground water sources or surface water sources purchased. The system's source water comes from the following aquifers: middle Potomac-Raritan- Magothy aquifer and the upper Potomac-Raritan-Magothy aquifer. The system does not purchase water from any other water system.

## 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 East Windsor Municipal Utilities Authority Water Sources

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. Definitions, Source Water Assessment Reports and Summaries are available for public water systems at [www.state.nj.us/dep/swap/](http://www.state.nj.us/dep/swap/) or by contacting NJDEP's Bureau of Safe Drinking Water at (609) 292-5550.

	Pathogens			Nutrients			Pesticides			Volatile Organic Compounds			Inorganics			Radionuclides			Radon			Disinfection By-product Precursors		
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
Wells - 7		5	2	5		2		3	4	4		3	1	1	5	5		2		5	2	2	4	1
GUID - 0																								
Surface water intakes - 0																								

## 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 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 they all received a low rating.

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.

## 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. East Windsor Municipal Utilities Authority 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>.**

## Wise Water Use Tips

Wise water use is an important first step in protecting our water supply. Such measures not only save the supply of our source water, but can also save you money by reducing your water bill. Here are a few suggestions:

### Wise water tips you can use inside your home:

- Fix leaking faucets, pipes, toilets, etc.
- Replace old fixtures; install water-saving devices in faucets, toilets and appliances.
- Wash only full loads of laundry.
- Do not use the toilet for trash disposal.
- Take shorter showers.
- Do not let the water run while shaving or brushing teeth.
- Soak dishes before washing.
- Run the dishwasher only when full.

### Sources of Information:

- **U.S. Environmental Protection Agency Safe Drinking Water Hotline:** 1-800-426-4791
- **New Jersey Department of Environmental Protection Bureau of Safe Drinking Water:** (609) 292-5550

### How Do I Read the Table of Detected Contaminants?

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 shaded 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

- **Action Level:** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- **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 (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.
- **MRDLG (Maximum Residual Disinfectant 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 contamination.
- **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.
- **NA:** Not Applicable
- **ND:** Not Detected
- **90th Percentile Value:** Of the samples taken, 90% of the values of the results were below the level indicated in the table.
- **ppb (parts per billion):** One part substance per billion parts water (or micrograms per liter).
- **ppm (parts per million):** One part substance per million parts water (or milligrams per liter).
- **pCi/L (picoCuries per liter):** Measurement of the natural rate of disintegration.
- **AL = Action Level**
- **RUL:** Recommended upper limit

### Water Quality Statement

The data presented in the Table of Detected Contaminants is the same data collected to comply with U.S. EPA 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 preventive

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.

# Water Quality Results

## Vulnerable Populations Statement

Some people may be more vulnerable to contaminants in drinking water than the general population. Immune 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).

## Regulated Substances

Contaminant	Units	MCL	MCLG	Range Detected	Highest Level Detected	Compliance Achieved	Typical Source
<b>Inorganic Chemicals</b>							
Fluoride <sup>1</sup>	ppm	4	4	0.53 – 1.06	1.06	Yes	Erosion of natural deposits; Water additive which promotes strong teeth
Nitrate	ppm	10	10	ND to 0.037	0.037	Yes	Runoff from fertilizer use; Industrial or domestic wastewater discharges; Erosion of natural deposits.
Barium (2014)	ppm	2	2	0.02 – 0.084	0.084	Yes	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits. Runoff from cropland.
Aluminum (2014)	ppm	0.2	0.2	0.010 – 0.188	0.188	Yes	Occurs naturally in the environment.
Nickel (2014)	ppm	0.1	0	ND – 0.014	0.014	Yes	Naturally occurring: industrial electroplating, stainless steel and alloy production. Runoff from mining and refining operations.
Iron <sup>2</sup>	ppm	0.30	0	ND – 0.034	0.034	Yes	Occurs naturally in the environment.
Hardness (2014)	ppm	250	NLE	34-71.6	71.6	Yes	Occurs naturally in the environment
Sodium <sup>3</sup> (2014)	ppm	50	NLE	1.8-6.8	6.8	Yes	Occurs naturally in the environment
Zinc (2014)	ppm	5	5	ND – 0.033	0.033	Yes	Erosion from rocks and soils
Thallium (2014)	ppm	0.002	.002	ND - .0003	.00003	Yes	Naturally occurs in environment
Arsenic (2014)	ppm	0.005	0.005	ND – 0.001	0.001	Yes	Occurs naturally in rocks and soils
Chromium (2014)	ppm	0.1	0.1	ND – 0.001	0.001	Yes	Occurs naturally in rocks and soil
<b>Disinfectant Treatment By-products Stage-2</b>							
Total Trihalomethanes [TTHMs]	ppb	80	NA	ND – 8.3	8.3 <sup>4</sup>	Yes	By-product of drinking water disinfection.
Five Haloacetic Acids [HAA5]	ppb	60	NA	ND – 1.43	1.43 <sup>4</sup>	Yes	By-product of drinking water disinfection.
<b>Disinfectants</b>							
Chlorine	ppm	MRDL = 4	MRDLG = 4	0.14 to 0.6	0.6	Yes	Water additive used to control microbes.
Chlorine	ppm			Annual Average	0.385		
<b>Radiological Substances (2014)</b>							
Alpha Emitters <sup>5</sup>	pCi/L	15	0	ND – 13.63	13.63	Yes	Erosion of natural deposits.
Combined Radium 226 and 228 <sup>6</sup>	pCi/L	5 <sup>6</sup>	0	1.5 – 3.50	3.50	Yes	Erosion of natural deposits.
Contaminant	Units	Action Level	MCLG	Range	Homes Above Action Level	Compliance Achieved?	Typical Source
Copper	ppb	1300	0	ND – 78	0	Yes <sup>7</sup>	Corrosion of household plumbing systems
Lead	ppb	15	0	ND – 105	3	Yes <sup>8</sup>	Corrosion of household plumbing systems

## Unregulated Contaminant Monitoring Rule

East Windsor Municipal Utilities Authority 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.

### Unregulated Contaminants (UCMR3)

Unregulated Contaminant	Units	MCL	MCLG	Average Level Detected	Range of Values	Typical Source
Chlorate	ppb	NLE	NLE	61.6	ND - 106.199	Agricultural defoliant or desiccant; disinfection byproduct; and used in production of chlorine dioxide
Vanadium	ppb	NLE	NLE	.139	ND - .479	Naturally-occurring elemental metal; used as vanadium pentoxide which is a chemical intermediate and a catalyst
1,4 dioxane	ppb	NLE	NLE	.064	ND - .32058	Cyclic aliphatic ether; used as a solvent or solvent stabilizer in manufacture and processing of paper, cotton, textile products, automotive coolant, cosmetics and shampoos
Strontium	ppb	NLE	NLE	42.84	26.825 - 84.845	Naturally-occurring element; historically commercial use of strontium has been in the faceplate glass of cathode-ray tube televisions to block x-ray emissions
Chromium 6	ppb	NLE	NLE	.0228	ND - .071	Naturally-occurring element; used in making steel and other alloys; chromium-3 or-6 forms are used for chrome plating; dyes and pigments, leather tanning, and wood preservation
cobalt	ppb	NLE	NLE	1.76	ND - 8.8	Naturally- occurring element in rock, soil, water, plants, animals and air. Approximately 0.0025% of the earth's crust is comprised of cobalt.

NLE – No Level Established.

<sup>1</sup> Fluoride is added to the water.

<sup>2</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>3</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>4</sup> Compliance is based on locational running annual average (LRAA) of the four quarters of 2015. The highest LRAA for TTHMs was 5 ppb; for HAA5s the highest LRAA was 0.56 ppb.

<sup>5</sup> 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.

<sup>6</sup> Radium 226 and Radium 228 have a combined MCL of 5 pCi/L

<sup>7</sup> The 90<sup>th</sup> percentile (i.e. 90% of homes tested are less than the value) for copper is 63 ppb.

<sup>8</sup> The 90<sup>th</sup> percentile (i.e. 90% of homes tested are less than the value) for lead is 3.44 ppb.

Note: The State of New Jersey allows us to monitor for certain contaminants less than once a year because the concentrations are not expected to vary significantly from year to year. Some of the data, though representative, are more than one year old.