

# your water quality information

consumer confidence report



issued june 2016

SUEZ | Rahway Operations

PWSID # NJ2013001

This report contains important information about your drinking water.  
Este informe contiene información muy importante sobre su agua potable.  
Tradúzcalo ó hable con alguien que lo entienda bien.



# our commitment to you



**"We take great pride in our ability to provide you with drinking water that meets or surpasses all state and federal standards."**

Dear Customer,

On September 29, 1999 the City of Rahway and SUEZ formed a new partnership. Through this partnership, the City retains ownership of all the water facilities including the treatment plant and distribution system. The City is also responsible for setting the water rates. SUEZ, as contract operator, provides the day to day management of the water system. This includes the treatment plant and distribution system, water quality, billing and collections, customer service and emergency service. This partnership will save the City about \$1.6 million a year and up to \$32 million over the life of the 20 year contract.

The City of Rahway and SUEZ work together to provide you with water that meets all the health and safety standards set by the United States Environmental Protection Agency (EPA) and the New Jersey Department of Environmental Protection (NJDEP). These agencies require water suppliers to provide an annual Consumer Confidence Report (CCR) for their customers.

This CCR contains important information about your drinking water. Please read it carefully. If you have specific questions about your water as it relates to your personal health, we suggest that you contact your health care provider. You can also call the EPA Safe Drinking Water Hotline at 800.426.4791. If you have questions about your water or your water service, please feel free to call our customer service center toll free at 877.303.2435 or write us at 69 DeVoe Place, Hackensack, NJ 07601. If you would like to discuss your water-related matters with the Rahway Municipal Council, please call the City Clerk's Office at 732.827.2100 for a schedule of meetings.

Sincerely,

A handwritten signature in black ink, appearing to read 'Chris Riat', written over a white background.

**Chris Riat**  
Senior Director, Contract Operations

## where does your water come from

The majority of Rahway's water supply comes from the Rahway River. This type of water is called surface water because it is stored on the earth's surface. The Rahway River Watershed comprises over 40 square miles. From time to time, we supplement this supply by purchasing treated water from Middlesex Water Company and New Jersey American Water Company. In 2015, treated water was purchased from additional sources. Please see the Supplemental Source of Supply Data on page 7 & 8 for more information.

## about your water supply

The City of Rahway receives its water primarily from the North Branch of the Rahway River. The river is located in the North Branch Watershed which encompasses 40 square miles in Union and Essex counties and includes such densely populated municipalities as Orange, Maplewood, Irvington, Union, Springfield, Westfield, Cranford and Clark. We sometimes supplement this supply by purchasing treated water from Middlesex Water Company and the New Jersey American Water Company.

*EPA Safe Drinking Water Hotline: 800.426.4791*

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## about the treatment process

On a typical day, we pump 4.85 million gallons of purified water to about 26,500 residents in our community. We use several processes to provide you with water that meets all safety standards. We begin by pumping water from the Rahway River into our Westfield Avenue Water Treatment Plant. This “raw” water is pumped to an aeration station that removes volatile organic compounds (VOCs) which may be present. Next, we add coagulants and polymer to remove any silt or small particles. The water then slowly flows through two sedimentation basins where this particulate matter settles out. Water is then filtered through sand, anthracite and activated charcoal to remove any remaining particles and improve taste. During the next step, we add liquid chlorine to destroy any bacteria or viruses that may be present. We also add a corrosion inhibitor to reduce the risk of copper or lead dissolving into your drinking water from household plumbing. Before the finished water leaves the plant, we add a small amount of fluoride to promote dental health as it travels through our 96 miles of mains to homes and businesses throughout the city.

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## sodium information

We routinely monitor the drinking water to ensure that it meets the standards set by United States Environmental Protection Agency (EPA) and the New Jersey Division of Environmental Protection (DEP). While the EPA does not have a maximum level for sodium in drinking water, the NJDEP has a recommended upper limit (RUL) of 50 parts per million (ppm).

2015 results showed that the City of Rahway exceeded the recommended upper limit for sodium. The highest running annual average at the Rahway Water Treatment Plant was 106 ppm, with a range of monthly average results of 31 ppm to 441 ppm.

The first two months of 2016 test results show that Rahway exceeded the recommended upper limit for sodium with a range of monthly average results of 45 ppm to 301 ppm.

According to the DEP, 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, elevated levels of sodium may be a concern for persons on a sodium restricted diet. If you have any concerns, please consult your health care provider.

For more information, please call 1.877.303.2435.

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## waiver information

The Safe Drinking Water Act allows 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.

# drinking water quality

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 infections by cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline at 800.426.4791. The table below shows how the quality of your drinking water in 2015 compared to the standards set by the NJDEP.

## primary standards - directly related to the safety of drinking water.

Inorganic Chemicals	MCLG	MCL	Highest* Result	Range of Results	Violation	Likely Source
Barium ppm	2	2	0.083	NA	No	Erosion of natural deposits; discharge of drilling wastes; discharge from metal refineries Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Fluoride ppm	4	4	0.66	NA	No	
Nitrate as nitrogen ppm	10	10	1.01	NA	No	
Organic Disinfection By-Product - Stage 2	MCLG	MCL	Highest Result LRAA	Range of Results#	Violation	Likely Source
HAA5 ppb (HAA5: dibromoacetic acid, dichloroacetic acid, monobromoacetic acid, monochloroacetic acid, trichloroacetic acid)	NA	60	34.8	4.1 - 48.8	No	By-product of drinking water disinfection
Total THMs ppb (THMs: bromoform, bromodichloromethane, chlorodibromomethane, chloroform)	NA	80	67.5	16.3 - 105.9	No	By-product of drinking water disinfection
Copper and Lead	MCLG	AL	90th Percentile	Samples > AL	Violation	Likely Source
Copper ppm	1.3	1.3	0.24	0	No	Corrosion of household plumbing
Lead ppb	0	15	3.0	0	No	Corrosion of household plumbing; erosion of natural deposits
Turbidity	MCLG	MCL	Level Found	Range of Detections	Violation	Likely Source
Turbidity NTU^ (monthly avg. plant)	NA	TT=1NTU TT=95% <0.3NTU	0.00 100.0%	0.03 - 0.23 NA	No	Soil run-off
^Turbidity is a measure of cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system.						
Disinfectant Residual	MRDLG	MRDL	Highest Result RAA	Range of Results#	Violation	Likely Source
Chlorine ppm Note: Disinfectant Residual range of results are site specific.	4	4.0	0.95	ND - 1.98	No	Water additive used to control microbes
TOC Removal	MCLG	MCL	Lowest Ratio RAA	Range of Ratio (Monthly Ratio)	Violation	Likely Source
TOC Removal Ratio (RAA)	NA	NA	1.45	1.11 - 1.93	No	Natural present in the environment
Organic Chemicals (volatile)	MCLG	MCL	Highest Result	Range of Results	Violation	Likely Source
MTBE ppb	NA	70	1.0	ND - 1.0	No	A fuel additive, leakage from underground fuel storage tank

RAA=Running Annual Average

LRAA = Locational Running Annual Average is the yearly average of all the results at each specific sampling site in the distribution system.

\*Highest results are based upon the highest single sample.

#The Range of Results represent the lowest and highest detection during the monitoring year.

## secondary standards – water quality parameters related to the aesthetic quality of drinking water.

Substance	NJ RUL	Highest Result*	Range of Results	Likely Source
Alkalinity ppm	NA	90	NA	Natural mineral
Aluminum ppb	200	125	ND - 125	Treatment process
Calcium ppm	NA	47	NA	Natural mineral
Chloride ppm	250	129	NA	Natural mineral, road salt
Color CU	10	3	NA	Natural characteristic
Corrosivity	Non-corrosive	-0.68	NA	Natural mineral, road salt, <b>(a phosphate corrosion inhibitor is applied)</b>
Hardness (as CaCO <sub>3</sub> ) ppm	250	187	NA	Natural mineral
Odor TON	3	1C	NA	Naturally Occuring, Chlorine
pH	6.5 - 8.5	7.10	NA	Treatment process
Sodium ppm#	50	106	31 - 441	Natural mineral, road salt
Specific Conductance, umhos	NA	654	NA	Natural mineral
Sulfate ppm	250	26	NA	Natural mineral
Total Dissolved Solids ppm	500	401	NA	Natural mineral

Note: Secondary standards are non-mandatory guidelines to assist public water systems in managing their drinking water for aesthetic considerations, such as taste, color and odor. These contaminants are not considered to present a risk to human health.

\* Highest results are based upon the highest single sample.

# Rahway was above New Jersey's Recommended Upper Limit (RUL) for sodium. 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 RUL may be of concern to individuals on a sodium restricted diet. Highest Result are based on the Running Annual Average (RAA), due to multiple samples collected for sodium during 2015. Please see additional sodium information on page 3.

## unregulated substances – for which the epa requires monitoring.

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 and DEP in determining the occurrence of unregulated contaminants in drinking water and whether regulation is warranted.

Substance (2014)	MCLG	MCL	Highest Result*	Range of Results	Violation	Likely Source
Chromium ppb	NA	100	0.71	ND - 0.71	No	Prevalent natural element
Molybdenum ppb	NA	NA	1.3	ND - 1.3	No	Common sources of molybdenum include legumes and lentils, grains, leafy vegetables, liver and nuts
Strontium ppb	NA	NA	430	200 - 430	No	Naturally occurring element
Vanadium ppb	NA	NA	1.6	0.38 - 1.6	No	Naturally occurring element
1,4 Dioxane ppb	NA	NA	0.19	ND - 0.19	No	Used as a solvent, cleaning agent, chemical stabilizer, surface coating, adhesive agent, and an ingredient in chemical manufacture
Chlorate ppb	NA	NA	380	130 - 380	No	known byproduct of the drinking water disinfection process, forming when sodium hypochlorite or chlorine dioxide are used in the disinfection process.
Chromium (VI) ppb	NA	NA	0.33	0.10 - 0.33	No	Industries that process or use chromium, chromium compounds, or chromium processes
Perfluoro-octanoic acid - PFOA ppb	NA	NA	0.03	0.02 - 0.03	No	Perfluorinated compounds (PFCs) are man-made compounds used in the manufacture of stain, oil, and water resistant consumer products. They are also found in products such as firefighting foams, cleaners, cosmetics, paints, adhesives and insecticides.

Additional information about unregulated contaminants can be found at the following link, courtesy of American Water Works Association:  
<http://www.drinktap.org/home/water-information/water-quality/ucmr3.aspx>

## definitions

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

**CU:** Color unit.

**Maximum Contaminant Level (MCL):** 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.

**Maximum Contaminant Level Goal (MCLG):** 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.

**Maximum Residual Disinfectant Level (MRDL):** The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of disinfectant is necessary for control of microbial contaminants.

**Maximum Residual Disinfectant Level Goal (MRDLG):** 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 disinfectant to control microbial contamination.

**NA:** Not applicable.

**ND:** Not detected.

**NJ RUL:** New Jersey Recommended Upper Limit

**NTU:** Nephelometric Turbidity Unit.

**ppb Parts per billion:** The equivalent of one second in 32 years.

**ppm Parts per million:** The equivalent of one second in 12 days

**ppt Parts per trillion:** The equivalent of one second in 32,000 years.

**pCi/L Picocuries per liter:** The equivalent of one second in 32 million years.

**Primary Standards:** Federal drinking water regulations for substances that are health-related. Water suppliers must meet all primary drinking water standards.

**Secondary Standards:** Federal drinking water measurements for substances that do not have an impact on health. These reflect aesthetic qualities such as taste, odor and appearance. Secondary standards are recommendations, not mandates.

**TON:** Threshold Odor Number.

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



## Supplement Source of Supply Data

In 2015, the City of Rahway purchased water from neighboring Middlesex Water Company and New Jersey American Water Company to supplement its source of supply. The following data tables contain the water quality data from those sources. Additional information about these supplement supply sources can be found by visiting the following water company websites: [www.middlesexwater.com](http://www.middlesexwater.com) or [www.amwater.com](http://www.amwater.com).

<i>Middlesex Water Company</i>		<i>PWSID #1225001</i>		<i>2015 WATER QUALITY TEST RESULTS</i>		
<i>Parameter</i>	<i>Units</i>	<i>MCL</i>	<i>MCLG</i>	<i>Highest Detected Level</i>	<i>Range</i>	<i>MCL Violation Yes/No</i>
<b>INORGANIC CHEMICALS (Note 1)</b>						
Arsenic (Note 2)	ppb	5	N/A	4.7	1.5 – 4.7	No
Barium	ppm	2	2	0.18	0.03–0.18	No
Chromium	ppb	100	100	0.9	ND – 0.9	No
Nickel	ppb	No MCL	N/A	1.8	ND – 0.9	No
Mercury	ppb	2	2	0.2	ND – 0.2	No
Fluoride	ppm	4	4	0.15	0.07-0.15	No
Nitrate	ppm	10	10	3.6	1.2-3.6	No
Selenium	ppb	50	50	2.3	1.4-2.3	No
<b>VOLATILE ORGANIC CHEMICALS</b>						
Toluene	ppm	1	1	0.0006	ND – 0.0006	No
Trichloroethylene (Note 2)	ppb	1	0	0.6	ND – 0.6	No
<b>TURBIDITY</b>						
TURBIDITY	NTU's	TT =1 NTU TT=95% of Samples <0.3 NTU	0 N/A	0.3 100%	N/A N/A	No
<b>RADIOLOGICAL (Note 3)</b>						
Radium 226 & 228	pCi/l	5	0	1.1	N/A	No
Beta & Photon emitters (Note 5)	pCi/l	50	0	4.3	N/A	No
Alpha emitters (Note 4)	pCi/l	15	0	12.2	N/A	No
Uranium	ppb	30	0	12.3	N/A	No
<i>Parameter</i>	<i>Units</i>	<i>MCL</i>	<i>MCLG</i>	<i>Highest Detected Level</i>	<i>Range</i>	<i>MCL Violation Yes/No</i>
<b>ADDITIONAL MONITORING</b>						
<b>Additional contaminants for which we monitor that are currently not regulated by the EPA</b>						
Perchlorate		CNR	N/A	1.3	0.6-1.3	N/A
Strontium	ppm	CNR	N/A	2.0	1.2-2.0	N/A
N-nitrosopyrrolidine (NPYR) (Note 6)	ppt	CNR	N/A	3.3	ND–3.3	N/A
<b>UCMR3 ( Unregulated Contaminant Monitoring Rule) (Note 7)</b>						
1,4-dioxane	ppb	CNR	N/A	0.2	ND-0.2	N/A
Chromium (total)	ppb	CNR	N/A	0.5	ND-0.5	N/A
Molybdenum	ppb	CNR	N/A	16	1-16	N/A
Vanadium	ppb	CNR	N/A	13	4-13	N/A
Chromium-6	ppb	CNR	N/A	0.6	0.03-0.6	N/A
Chlorate	ppb	CNR	N/A	46	ND-46	N/A
1,1-dichloroethane	ppb	CNR	N/A	0.08	ND-0.08	N/A
Chlorodifluoromethane (HCFC-22)	ppb	CNR	N/A	0.7	ND-0.7	N/A
Perfluorooctanoic acid	ppt	CNR	N/A	22	ND-22	N/A

- Notes:
- Note 1 Middlesex Water Company is on reduced monitoring; once per three-year cycle. The listed Inorganic concentrations are from 2014.
  - Note 2 The MCLs for these chemicals were set by the NJDEP below those set by the EPA.
  - Note 3 Radiological Results are from 2014.
  - Note 4 The Alpha emitter compliance is determined minus the Radon and Uranium contribution. Middlesex Water Company is currently on 3 to 6 year sample cycle depending on source.
  - Note 5 The MCL for Beta Particles is 4 mrem/yr. The EPA considers 50 pCi/l to be the level of concern for Beta Particles.
  - Note 6 Reaction of precursor amines with nitrosating agents (nitrate and related compounds), or by action of nitrate-reducing bacteria. Results are from 2012.
  - Note 7 The purpose of the UCMR monitoring is to provide the EPA Administrator with data to support decisions concerning whether or not to regulate these contaminants. Chromium (total), even though it is already regulated, is measured as part of the UCMR3 to determine its relationship to Chromium-6 and has a lower detection limit. Results are from 2014.

Additional information about unregulated contaminants can be found at the following link, courtesy of American Water Works Association: <http://www.drinktap.org/home/water-information/water-quality/ucmr3.aspx>

Contaminant	Unit	MCL	MCLG	Highest Level Detected	Range	Compliance Achieved	Major Sources in Drinking water
<b>Turbidity</b>							
Turbidity (2)	NTU	TT=1 NTU TT= percent of samples < 0.3 NTU	NA NA	0.3 100%	0.06 - 0.29	yes	Soil Runoff
<b>Treatment By-Products Precursor Removal</b>							
Total Organic Carbon	ppm	TT	N/A	2.5	1.0 - 2.5	yes	Naturally present in the environment
<b>Inorganic Contaminants</b>							
Nitrate	ppm	10	10	1.7	0.5 - 1.7	yes	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

FOOTNOTES

- (1) Maximum percentage of positive samples collected in any one month.
- (2) 100% of the turbidity readings were below the treatment technique requirement of 0.3 NTU. Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of water quality. High turbidity can hinder the effectiveness of disinfectants.
- (3) Highest level detected is the maximum quarterly average. Range indicates the monthly averages detected.

**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 Raritan System, the following substances were found.

Contaminant (1)	Units	NJDEP Guidance Level	Highest Level Detected	Range Detected	Use or Environmental Source
Chromium (total)	ppb	0.2	1	ND - 1	See Chromium - 6. Though the amount measured when analyzing for "total chromium" is the sum of chromium in all of its valence states. The MCL for EPA's current total chromium regulation was determined based upon the health effects of chromium-6
Strontium	ppb	0.3	175.9	78.9 - 175.9	Naturally-occurring element; historically, commercial use of strontium has been in the faceplate glass of cathode-ray tube televisions to block x-ray emissions
Vanadium	ppb	0.2	0.5	ND - 0.5	Naturally-occurring elemental metal; used as vanadium pentoxide which is a chemical intermediate and a catalyst Associated with altered kidney function indicated by increased blood urea and mild tissue changes molybdenum 7439-98-7 1 Naturally-occurring element found in ores
Chromium - 6	ppb	0.03	0.75	0.05 - 0.75	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
Chlorate	ppb	20	310	ND - 310	Agricultural defoliant or desiccant; disinfection byproduct; and used in production of chlorine dioxide

Additional information about unregulated contaminants can be found at the following link, courtesy of American Water Works Association:  
<http://www.drinktap.org/home/water-information/water-quality/ucmr3.aspx>

## tap water or bottled 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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA Safe Drinking Water Hotline at 800.426.4791.

The sources of drinking water (for 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 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 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 byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater 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 the water is safe to drink, the 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. So, what's the bottom line? If bottled and tap water meet the federal standards, they are both safe to drink. However, your tap water is substantially less expensive than bottled water.