

CONSUMER CONFIDENCE REPORT

Riverdale Water Department

PWSID# NJ1433001

Reporting Period - January 1, 2018 to December 31, 2018

The Riverdale Water Department is located at the DPW Building on Dalton Drive, and the administrative offices are located in the Borough Hall at 91 Newark Pompton Turnpike. Questions concerning this report should be directed to Mr. Steve Schotanus, Water Operator, at (973) 835-6077. The Borough Council holds regular public meetings every first and third Monday of the month at 7:30 P.M., at the Borough Hall. Included in this report are details about where your water comes from, what it contains, and how it compares to Environmental Protection Agency (EPA) and State standards. As always, we are committed to providing you with the highest quality drinking water and service. Please do not hesitate to contact us at any time.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immune-compromised persons such as persons with cancer undergoing chemo-therapy, 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 contaminants are available from the Safe Drinking Water Hotline 1-(800) 426-4791.

Water for the Riverdale system is derived from a production well located on Dalton Drive. The Borough also purchases water from the Passaic Valley Water Commission (PVWC). Approximately 75% of the total water used by the homes and businesses in Riverdale is derived from the Borough's well. A copy of the Consumer Confidence Report from PVWC is appended to this report.

Source Water Assessments: The New Jersey Department of Environmental Protection (NJDEP) has completed and issued the Source Water Assessment Report and Summary for the Riverdale water system, which is available at www.state.nj.us/dep/swap or by contacting NJDEP's Bureau of Safe Drinking Water at (609) 292-5550. Riverdale monitors its water sources for

regulated contaminants in accordance with NJDEP requirements.

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 1-(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.

Contaminants that may be present in source water before we treat it include:

Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wild life.

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 and residential uses.

Radioactive contaminants, which are naturally occurring.

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 station, urban stormwater runoff, and septic systems.

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. We treat our water according to EPA's regulations. Food and Drug Administrations (FDA) establish limits of contaminants in bottled water, which must provide the same protection for public health.

WATER QUALITY DATA

The table below lists all the drinking water contaminants that we detected during the 2018 calendar year. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing performed between January 1, 2018 and December 31, 2018. The State of New Jersey requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Therefore, some of the data, though representative of the water quality, is more than one year old.

Terms & abbreviations used below:

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. MCLG's 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 a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant 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 disinfectants to control microbial contamination

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.

Primary Contaminants: substances that are health-related. Water suppliers must meet all primary drinking water standards.

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.

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

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

n/a: not applicable; **nd:** not detectable at testing limit; **ppb** parts per billion or micrograms per liter; **ppm:** parts per million or milligrams per liter; **pCi/l:** picocuries per liter (a measure of radiation).

	MCL	MCLG	Riverdale Water	Range of Detections	Sample Date	Violation Y or N	Typical Source of Contaminant
Microbiological Contaminants							
Total Coliform Bacteria	1	0	0	0	2018	N	Naturally present in the environment
Fecal coliform and E. coli	0	0	0	0	2018	N	Human and animal fecal waste
Secondary Contaminants							
Foaming Agents (ppm)	500	500	0	nd	06-12-18	N	Synthetic detergents
Aluminum (ppb)	200	200	9.5	9.5	06-12-18	N	Naturally occurring element
Chloride (ppm)	250	250	69.2	69.2	06-12-18	N	Erosion from natural deposits; Discharge of human and animal wastes; Discharge from industry
Color (Color Units)	10	10	0	n/d	06-12-18	N	Physical characteristic
Corrosivity	+/-1.0	-	0.24	0.24	06-12-18	N	Physical characteristic
Hardness (ppm)	250	250	218	218	06-12-18	N	Naturally occurring minerals
Iron (ppb)	300	300	0	nd	06-12-18	N	Naturally occurring element
Manganese (ppb)	50 RUL	50 RUL	89.5	89.5	06-12-18	N	Naturally occurring element
Odor (Threshold Number)	3 RUL	3 RUL	6	6	06-12-18	N	Physical characteristic
pH (Standard Units)	6.5 - 8.5	6.5 - 8.5	8.1	8.1	06-12-18	N	Physical characteristic
Silver (ppb)	100	100	0	nd	06-12-18	N	Naturally occurring element
Total Dissolved Solids (ppm)	500	500	385	385	06-12-18	N	Erosion of natural mineral deposits
Zinc (ppb)	5000	5000	2.01	2.01	06-12-18	N	Naturally occurring element
Lead and Copper							
Lead (ppb)	AL=15	15	12.02	0 - 31.09	06-20-18	N	Corrosion of household plumbing systems; Erosion of natural deposits
Copper (ppm)	AL=1.3	1.3	0.199	.13- .308	06-20-18	N	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives

WATER QUALITY DATA

Contaminants (units)	MCL	MCLG	Riverdale Water	Range of Detections	Sample Date	Violation Y or N	Typical Source of Contaminant
Inorganic Contaminants							
Antimony (ppb)	6	6	0	nd	06-12-18	N	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
Arsenic (ppb)	5	0	2.38	2.38	06-12-18	N	Erosion from natural deposits; Runoff from orchards; Runoff from glass and electronics productions wastes
Barium (ppb)	2	2	68.98	68.98	06-12-18	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Beryllium (ppb)	4	4	0	nd	06-12-18	N	Discharge of metal refineries and coal-burning factories; Discharge from electrical, aerospace, and defense
Cadmium (ppb)	5	5	0	nd	06-12-18	N	Corrosion of galvanized pipes; Erosion of natural deposits; Discharge from metal refineries; Runoff from waste batteries and paints
Chromium (ppb)	100	100	0	nd	06-12-18	N	Discharge from steel and pulp mills; Erosion of natural deposits
Cyanide (ppb)	200	200	0	nd	06-12-18	N	Discharge from steel /metal factories; Discharge from plastic and fertilizer factories
Fluoride (ppm)	4.0	4	0.08	0.08	06-12-18	N	Erosion from natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Mercury (ppb)	2	2	0	nd	06-12-18	N	Discharge from steel /metal factories; Discharge from plastic and fertilizer factories
Nickle (ppb)	100	100	0.93	0.93	06-12-18	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Nitrate (ppm)	10	10	0	nd	03-06-18	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Selenium (ppb)	50	50	0	nd	06-12-18	N	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines
Sodium (ppm)	RUL 50	RUL 50	28.9	28.9	06-12-18	N	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines
Sulfate (ppm)	RUL 250	RUL 250	65.9	65.9	06-12-18	N	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines
Thallium (ppb)	2	0.5	0	nd	06-12-18	N	Leaching from ore-processing sites; Discharge from electronics, glass, and drug factories
Regulated Disinfectants							
TTHM Total Trihalomethanes (ppb)	80	-	42	6.0- 91.5	2018	N	By-product of drinking water disinfection
HAA5 Haloacetic Acids (ppb)	60	-	18	1.12- 33.67	2018	N	By-product of drinking water disinfection
Chlorine (ppm) 2018	Levels Detected - Average & Highest			MRLD		MRDLG	
	0.45		0.56		4.0 ppm		4.0 ppm

WATER QUALITY DATA

Contaminants (units)	MCL	MCLG	Riverdale Water	Range of Detections	Sample Date	Violation Y or N	Typical Source of Contaminant
Volatile Organic Contaminants							
Methyl tertiary-butyl ether MTBE (ppb)	70	70	0.31	0.31	02-06-18	N	Leaking from underground gasoline and fuel oil tanks, gasoline and fuel oil spills
Unregulated Contaminants							
None Detected	NO MCL's ESTABLISHED						
Radioactive Contaminants							
Total Alpha (pCi/l)	15	0	3.27	3.27	08-11-15	N	Erosion of natural deposits
Radium 226/228 (pCi/l)	5	0	0	0	08-11-15	N	Erosion of natural deposits
Uranium (ppb)	30	0	0	0	08-11-15	N	Erosion of natural deposits

Water Standards Information

Is your drinking water in compliance with all regulations? The Borough of Riverdale is proud of the fact that our water complies with all drinking water standards for chemical and organic contaminants as set by the State of New Jersey and the U.S. EPA.

Regarding the manganese test results, the average manganese level of 89.5 ppb exceeds the State's recommended upper limit (RUL) of 50 ppb. Manganese is a naturally occurring element in most well waters. The recommended upper limit for manganese is based on staining of laundry, and toxicity is not expected from levels which would be encountered in drinking water.

Regarding New Standards for Arsenic. Riverdale's water meets the EPA's standard of 5 parts per billion for arsenic.

Regarding Asbestos, Nitrite and Synthetic Organic Compounds. As permitted under the Safe Drinking Water Act, the State of New Jersey has issued waivers to the Borough of Riverdale for testing of asbestos, nitrite and synthetic organic compounds. These waivers were given after careful review of prior negative testing, and consideration of factors which indicate low susceptibility to these types of contaminants.

Special Considerations Regarding Children, Pregnant Women, Nursing Mothers, and Others

Children may receive a slightly higher amount of a contaminant present in the water than do adults, on a body weight basis, because they may drink a greater amount of water per pound of body weight than do adults. For this reason, reproductive or developmental effects are used for calculating a drinking water standard if these effects occur at lower levels than other health effects of concern. If there is insufficient toxicity information for a chemical (for example, lack of data on reproduction or developmental effects), an extra uncertainty factor may be incorporated into the calculation of the drinking water standard, thus making the standard more stringent, to account for additional uncertainties regarding these effects. In the cases of lead and nitrate, effects on infants and children are the health endpoints upon which the standards are based.

Nitrate: Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for a infant, you should ask advise from your health care provider.

Lead: 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. Riverdale 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 is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

PASSAIC VALLEY WATER COMMISSION (PVWC) PWS ID NJ1605002 - 2018 WATER QUALITY DATA

PRIMARY CONTAMINANTS	Compliance Achieved	MCLG	MCL	Water Treatment Plant Results		TYPICAL SOURCE
				NJDWSC Wanaque WTP PWS ID NJ1613001		
TURBIDITY AND TOTAL ORGANIC CARBON				Highest Result (Average)		
Turbidity, NTU*	Yes	NA	TT = 1	0.41 (0.06)		Soil runoff.
	Yes	NA	TT = percentage of samples <0.3 NTU (min 95% required)	Lowest Monthly Percentage of Samples Meeting the Turbidity Limits 99.9%		
* Turbidity is a measure of the cloudiness of the water, and is monitored as an indicator of water quality. High turbidity can hinder the effectiveness of disinfectants.						
Total Organic Carbon, %	Yes	NA	TT = removal ratio	Removal Ratio		Naturally present in the environment.
				1.1 (RAA) 1.0 - 1.3		
INORGANIC CONTAMINANTS				Highest Result		
Barium, ppm	Yes	2	2	0.0145		Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Nitrate, ppm	Yes	10	10	0.351		Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.

WAIVER INFORMATION

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. NJDWSC was granted a monitoring waiver for synthetic organic chemicals for the 2017-2019 monitoring period.

SOURCE WATER ASSESSMENT

NJDEP has prepared Source Water Assessment reports and summaries for all public water systems. The Source Water Assessment for the NJDWSC system (PWS ID 1613001) can be obtained by accessing NJDEP's source water assessment web site at <http://www.nj.gov/dep/watersupply/swap/index.html> or by contacting NJDEP's Bureau of Safe Drinking Water at 609-292-5550. If a system is rated highly susceptible for a contamination category, it does not mean a customer is – or will be – consuming contaminated water. The rating reflects the potential for contamination of a source water, not the existence of contamination. Public water systems are required to monitor for regulated contaminants and to install treatment if any of those contaminants are detected at frequencies and concentrations above allowable levels. The source water assessments performed on the intakes for each system list the following susceptibility ratings for a variety of contaminants that may be present in source waters:

Intake Susceptibility Ratings	Pathogens	Nutrients	Pesticides	Volatile Organic Compounds	Inorganic Contaminants	Radionuclides	Radon	Disinfection Byproduct Precursors
NJDWSC 5 Surface Water	5-High	5-High	2-Medium, 3-Low	5-Medium	5-High	5-Low	5-Low	5-High

SECONDARY PARAMETERS – TREATMENT PLANT EFFLUENT

Contaminant	N.J. Recommended Upper Limit (RUL)	NJDWSC - Wanaque WTP PWSID NJ1613001	
		Result	RUL Achieved
Alkalinity, ppm	NA	38	NA
Aluminum, ppb	200	60	Yes
Chloride, ppm	250	71	Yes
Color, CU	10	2	Yes
Corrosivity	Non-Corrosive	Non-Corrosive	Yes
Hardness (as CaCO ₃), ppm	250	52	Yes
Hardness (as CaCO ₃), grains/gallon	15	3	Yes

Iron, ppb	300	12	Yes
Manganese, ppb	50	2	Yes
pH	6.5 to 8.5 (optimum range)	8.0	Yes
Sodium, ppm	50	40	Yes
Sulfate, ppm	250	8	Yes
Total Dissolved Solids, ppm	500	177	Yes
Zinc, ppb	5,000	16	Yes

DEFINITIONS of TERMS and ACRONYMS

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

CDC: United States Centers for Disease Control and Prevention

CU: Color unit

Disinfection By-product Precursors: A common source is naturally-occurring organic material in surface water. Disinfection by-products are formed when the disinfectants (usually chlorine) used to kill pathogens react with dissolved organic material (DBP precursors) present in surface water.

EPA: United States Environmental Protection Agency

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.

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.

Microbial Contaminants/Pathogens: Disease-causing organisms such as bacteria, protozoa, and viruses, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife. Common sources are animal and human fecal wastes. These contaminants may be present in source water.

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.

MRDLG: Maximum Residual Disinfectant Level Goal; the level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contamination.

NA: Not applicable

ND: Not detected above the minimum reporting level.

NJDEP: New Jersey Department of Environmental Protection

NJDWSC: North Jersey District Water Supply Commission

NTU: Nephelometric Turbidity Unit

Nutrients: Compounds, minerals and elements that aid growth, which can be either naturally occurring or man-made. Examples include nitrogen and phosphorus.

ppb: parts per billion (approximately equal to micrograms per liter)

ppm: parts per million (approximately equal to milligrams per liter)

PWS ID: Public Water System Identification

PVWC: Passaic Valley Water Commission

RAA: Running Annual Average

Radon: Colorless, odorless, cancer-causing gas that occurs naturally in the environment.

RUL: Recommended Upper Limit; the highest level of a constituent of drinking water that is recommended in order to protect aesthetic quality.

RUL Achieved: A "YES" entry indicates the State-recommended upper limit was not exceeded. A "NO" entry indicates the State-recommended upper limit was exceeded.

TON: Threshold Odor Number

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

WTP: Water Treatment Plant

ADDITIONAL INFORMATIONAL RESOURCES

EPA Drinking Water website: www.epa.gov/safewater

NJDEP Water Supply website: www.nj.gov/dep/watersupply

American Water Works Association (AWWA) website: www.awwa.org

EPA Safe Drinking Water Hotline: 800-426-4791

NJDEP Bureau of Safe Drinking Water: 609-292-5550

AWWA New Jersey Section website: www.njawwa.org