# 2016 Annual Drinking Water Quality Report

# **Ridgewood Water Department**

# **Results from the Year 2015**

We are pleased to present to you this year's Annual Drinking Water Quality Report, which is designed to inform you about the quality of the water supplied to your premises. Our goal is to provide you with a safe, continuous, and dependable supply of drinking water. We are committed to ensuring the quality of your water and routinely monitor and test the water for a host of parameters. The results of some of this monitoring and testing are presented in this report and to you as required by the New Jersey Department of Environmental Protection (NJDEP). Some of the language in this report is prescribed by the NJDEP and much of the information is rather technical. If you have any questions about this report or Ridgewood Water, please contact us at 201-670-5520. We want our customers to be informed about their water utility. You may also choose to attend the regularly scheduled Village Council meetings at 131 North Maple Avenue. Meetings are held on the second Wednesday of each month at 8:00 p.m.

Ridgewood Water's source is primarily groundwater from wells. We own and operate fifty-one active deep wells which are located throughout the service area in the Borough of Glen Rock, the Borough of Midland Park, the Township of Wyckoff, and the Village of Ridgewood. We also purchase water from Suez / United Water NJ and, during peak summertime demands, water from the Hawthorne Water Department.

The NJDEP has completed and issued Source Water Assessment Reports and Summaries for Ridgewood Water, the Hawthorne Water Department and United Water NJ, which are available at www.state.nj.us/dep/swap or by contacting NJDEP's Bureau of Safe Drinking Water at (609) 292-5550. You may also contact Ridgewood Water to obtain information regarding these Source Water Assessments. Ridgewood Water's source water susceptibility ratings and a list of potential contaminant sources is included.

## BACKGROUND INFORMATION

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 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 storm water runoff, industrial or domestic wastewater discharges, oil and gas projection, mining, or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water 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 storm water 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 tap water is safe to drink, EPA and NJDEP prescribe 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 similar protection for public health. EPA regulations are more stringent than FDA regulations.

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's Safe Drinking Water Hotline at 800-426-4791.

Ridgewood Water, the Hawthorne Water Department and United Water NJ routinely monitor for contaminants in your drinking water according to Federal and State laws. The following tables show the results of that monitoring for the period from January 1 to December 31, 2015. The state allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.

# In 2015, Ridgewood Water exceeded the 15 ppb Action Level for Lead of which you were previously notified. We are still working with the New Jersey Department of Environmental Protection to correct this Issue.

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. Ridgewood 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 and 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 <a href="https://www.epa.gov/safewater/lead">www.epa.gov/safewater/lead</a>.

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 an infant you should ask advice from your health care provider.

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 microbiological contaminants are available from the EPA Safe Drinking Water Hotline at 800-426-4791.

For Total Halocetic Acids (HAA5s) and Total Trihalomethanes (TTHMs), which are disinfection byproducts, compliance is based on a Locational Running Annual Average (LRAA), calculated at each monitoring location. The LRAA calculation is based on four completed quarters of monitoring results.

		Suez / United PWS I	Water Te D #NJ022000	est Resul	ts				
Contaminant	Viola- tion Y/N	Level Detected	Units of Measure- ment	MC LG	MCL	Likely Source of Contamination			
Inorganic Contaminants:									
Barium Test results yr. 2015	N	0.03	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits			
Chromium Test results Yr. 2015	N	1.8	ppb	100	100	Discharge from steel and pulp mills; erosion of natural deposits			
Copper Test results Yr. 2015 Result at 90 <sup>th</sup> Percentile	N	0.27 No samples exceeded the action level	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits			
Fluoride Test results Yr. 2015	N	0.08	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories			
Lead Test results Yr. 2015 Result at 90 <sup>th</sup> Percentile	N	4 1 sample out of 23 exceeded the action level	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits			
Nitrate (as Nitrogen) Test results Yr. 2015	N	Range = $2.1 - 2.3$ Highest detect = $2.3$	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits			
Disinfection Byproducts:									
TTHM Total trihalomethanes Test results Yr. 2015	N	Range = 13 - 65 Highest LRAA = 28	ppb	N/A	80	By-product of drinking water disinfection			
HAA5 [Total Haloacetic Acids] Test results Yr. 2015	Ν	Range = ND - 28 Highest LRAA = 12	ppb	N/A	60	By-product of drinking water disinfection			
Volatile Organic Contaminants:	<b>1</b>	•	•						
Methyl <i>tertiary</i> butyl ether (MTBE) Test results Yr. 2015	N	Range = $0.5 - 1.0$ Highest detect = $1.0$ Highest Average = $0.7$	ppb	70	70	Leaking underground gasoline and fuel oil tanks. Gasoline and fuel oil spills.			
Regulated Disinfectants		Level Detected		MRDL		MRDLG			
Chlorine Test results Yr. 2015		Average = 1.0 ppm		4.0 ppm		4.0 ppm			
Secondary Contaminant		Level Detected	Units of Meas	urement		RUL			
Sodium Test results Yr. 2015		Range = 44 - 59	ppm			50			

Suez/United Water NJ drew groundwater from 2 wells. The source water comes from the Brunswick Aquifer System.

# **Unregulated Contaminants for Which EPA Requires Monitoring**

Suez / United Water collected data in 2014 as part of an ongoing study to determine the general occurrence of unregulated contaminants. Currently, there are no drinking water standards for these compounds. Unregulated contaminant monitoring helps the USEPA and the NJDEP to determine where certain contaminants occur and whether they should consider regulating those contaminants in the future.

Contaminant	Level Detected	Units of Measurement	Likely source
1,4-Dioxane	Range = ND – 0.07	ррb	Cyclic aliphatic ether; used as a solvent or solvent stabilizer in manufacturing and processing of paper, cotton, textile products, automotive coolant, cosmetics and shampoos
Chlorate	Range = 110 - 300	ррb	Agricultural defoliant of desiccant; disinfection byproduct; used in the production of chloride dioxide
Hexavalent Chromium (VI)	Range = 0.03 – 0.33	ррb	Naturally-occurring element; used in the making of steel and other alloys; chromium -3 or -6 are used for chrome plating, dyes and pigments, leather tanning, and other wood preservation
Chromium	Range = $ND - 0.5$	ррb	Naturally-occurring element; used in the making of steel and other alloys; chromium -3 or -6 are used for chrome plating, dyes and pigments, leather tanning, and other wood preservation
Strontium	Range = 110 - 170	ррb	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	Range = $ND - 0.4$	ррb	Naturally-occurring element metal; used as vanadium pentoxide which is a chemical intermediate and a catalyst

Ridgewood Water Test Results PWS ID #NJ0251001													
Contaminant	Viola- tion Y/N	Level Detected	Units of Measure- ment	MC LG	MCL	Likely Sourc Contaminati	e of on						
Radioactive Contaminants:	_												
Alpha emitters Test results Yr. 2011	N	Range = $ND - 3.7$ Highest detect = 3.7	pCi/1	0	15	Erosion of na	tural deposits						
Combined Radium 228 & 226 Test results Yr. 2011	N	Range = $ND - 3.7$ Highest detect = 3.7	pCi/1	0	5	Erosion of na	tural deposits						
Inorganic Contaminants:													
Arsenic Test results Yr. 2015	N	Range = $ND - 3.0$ Highest detect = 3.0 Highest Average = 2.3	ррb	N/A	5	Erosion of na runoff from o from glass an production wa	tural deposits; rchards; runoff d electronics astes						
Barium Test results Yr. 2015	N	Range = $0.2 - 0.4$ Highest detect = $0.4$ Highest Average = $0.4$	ppm	2	2	Discharge of discharge from erosion of nat	drilling wastes; n metal refineries; ural deposits						
Cadmium Test results Yr. 2015	N	Range = $ND - 1.1$ Highest detect = $1.1$ Highest Average = $0.28$	ppb	5	5	Corrosion of a erosion of nat discharge from runoff from w paints	f galvanized pipes; atural deposits; om metal refineries; waste batteries and						
Chromium Test results Yr. 2015	N	Range = $ND - 9.4$ Highest detect = $9.4$ Highest Average = $5.1$	ppb	100	100	Discharge from steel and pulp mills; erosion of natural deposits							
Copper Test results June 2012 Result at 90 <sup>th</sup> Percentile	N	0.37 1 sample out of 60 exceeded the action level	ppm	1.3	AL=1.3	Corrosion of plumbing sys natural depos	f household /stems; erosion of /sits						
Lead Test results June 2012 Result at 90 <sup>th</sup> Percentile	Y	21.6 11 samples out of 60 exceeded the action level	ррb	0	AL=15	Corrosion of plumbing sys natural depo	of household systems, erosion of eposits						
Nickel Test results Yr. 2015	N	Range = ND – 14 Highest detect = 14 Highest Average = 4.1	ppb	N/A	N/A	Erosion of na corrosion of b	tural deposits; pronze.						
Nitrate (as Nitrogen) Test results Yr. 2015	N	Range = 2.2 - 6.7 Highest detect = 6.7 Highest Average = 6.1	ppm	10	10	Runoff from the leaching from the sewage; erosing deposits	fertilizer use; a septic tanks, on of natural						
Selenium Test results Yr. 2015	N	Range = $ND - 9.7$ Highest detect = 9.7 Highest Average = 1.6	ррb	50	50	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines							
Volatile Organic Contaminan	ts:	1											
Cis-1,2-dichloroethylene Test results Yr. 2015	N	Range = ND $- 0.7$ Highest detect = 0.7 Highest Average = 0.05	ppb	70	70	Discharge from industrial chemical Factories							
Tetrachloroethylene Test results Yr. 2015	Ν	Range = ND – 1.6 Highest detect = 1.6 Highest average = 0.1	ppb	0	1	Leaching from PVC pipes; discharge from factories and dry cleaners							
Disinfection Byproducts:													
TTHM [Total trihalomethanes] Test results Yr. 2015	N	Range = 1 - 39 Highest LRAA = 22	ррb	N/A 80 By-produ disinfection			f drinking water						
HAA5's [Total Halocetic Acids] Test results Yr. 2015	N	Range = ND - 11 Highest LRAA = 4	ррb	N/A	60	By-product of drinking water disinfection							
Regulated Disinfectants		Level Detected		MRDL		MRDLG							
Chlorine Test results Yr. 2015		Average =0.9 ppm		4.0 ppm		4.0 ppm							
Secondary Contaminant		Level Detected		Units	of Measurement		RUL						
Sodium – Test results Yr. 2015		Range = ND - 101		ppm			50						

For Total Halocetic Acids (HAA5s) and Total Trihalomethanes (TTHMs), which are disinfection byproducts, compliance is based on a Locational Running Annual Average (LRAA), calculated at each monitoring location. The LRAA calculation is based on four completed quarters of monitoring results.

In 2015, Ridgewood Water, the Hawthorne Water Department and Suez / United Water all had sample results which exceeded the 50 ppm Recommended Upper Limit (RUL) for Sodium. For healthy individuals the sodium intake from water is not important, because a much greater intake of sodium is from salt in the diet. However, sodium levels above the Recommended Upper Limit (RUL) may be of concern to individuals on a sodium restricted diet.

#### Water Sources:

In the year 2015, the Hawthorne Water Department drew groundwater from 21 wells throughout the Borough of Hawthorne. Following is a list of the Hawthorne sources:

- Wagaraw Road Wellfield (6 wells), and wells at Cedar and Maitland Avenue.
- Goffle Road Wellfield (5 wells), and wells at First Avenue, Rea Avenue and Bamford Avenue.
- South Wagaraw Road Wellfield (3 wells)
- Goffle Hill Road Well
- Utter Avenue Well

#### **Cryptosporidium:**

Cryptosporidium is a microbial pathogen found in surface water throughout the United States. Although filtration removes Cryptosporidium, the most commonly-used filtration methods cannot guarantee 100% removal. Suez / United Water NJ monitoring indicates no presence of these organisms in their source water or finished water. 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, immuno-compromised people, infants and small children, and the elderly are at a greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.

	H	lawthorne Water	· Depar	tment	Test	Results						
Contaminant	Viola- tion Y/N	Level Detected	Units Measu men	of M nre- L(	C G	MCL		Likely Sourc Contamination	e of Dn			
Radioactive Contaminants:												
Gross Alpha Test results Yr. 2011	N	Range = $ND - 4.7$ Highest detect = 4.7	pCi/1		0		15	Erosion of natural deposits				
Uranium Test results Yr. 2011	Ν	Range = $ND - 1.2$ Highest detect = 1.2	ppb		0		30	Erosion of natur	ral deposits			
Inorganic Contaminants:												
Barium Test results Yr. 2014	Ν	Range = $0.3 - 0.8$ Highest detect = $0.8$	ppm		2		2	illing wastes; metal refineries; al deposits				
Chromium Test results Yr. 2014	Ν	Range = $ND - 0.9$ Highest detect = 0.9	ppb		100		100	steel and pulp mills; al deposits				
Copper Test results Yr. 2015 Result at 90 <sup>th</sup> Percentile	N	0.11 No samples exceeded the action level.	ppm		1.3	A=1.3		Corrosion of household plumbing systems; erosion of natural deposits				
Lead Test results Yr. 2015 Result at 90 <sup>th</sup> Percentile	N	3.5 No samples exceeded the action level	Ppb		0	A =15		Corrosion of household plumbing systems, erosion of natural deposits				
Mercury (inorganic) Test results Yr. 2014	N	Range = $0.03 - 0.04$ Highest detect = $0.04$	ppb		2		2	Erosion of nature from refineries from landfills; r	ral deposits; discharge and factories; runoff unoff from cropland			
Nitrate (as Nitrogen) Test results Yr. 2015	Ν	Range = $2.9 - 3.5$ Highest detect = $3.5$	ppm		10			Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits				
Thallium Test results Yr. 2014	N	Range = $ND - 0.6$ Highest detect = $0.6$	ppb		0.5		2 Leaching from ore-processing sites; discharge from electronics, glass, and drug factories					
Disinfection Byproducts:								-				
TTHM [Total trihalomethanes] Test results Yr. 2015	N	Range = 3 - 30 Highest LRAA = 23	ppb		N/A		80	By-product of d disinfection	drinking water			
HAA5's [Total Halocetic Acids] Test results Yr. 2015	Ν	Range = $ND - 8$ Highest LRAA = 4	ppb			60 By-product of drinking water disinfection						
Regulated Disinfectants		Level Detected		MRDL			MRDLG					
Chlorine Test results Yr. 2015	Aver	age = 0.5 ppm		4.0 ppm				4.0 ppm				
Secondary Contaminant		Level Detected			Units o	of Measureme	ent		RUL			
Sodium - Test results Yr. 2014		Range = 19 - 71			ppm				50			

# ABBREVIATIONS AND DEFINITIONS

In the following table you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

- ND Non-Detectable the concentration of the constituent (if present at all) is below the minimum detectable level of the laboratory.
- ppm parts per million (equivalent to milligrams per liter mg/L) a representation of the concentration of the constituent. One ppm corresponds to one minute in two years or a single penny in \$10,000.
- ppb parts per billion (equivalent to micrograms per liter, ug/L) a representation of the concentration of the constituent. One ppb corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.
- pCi/L picocuries per liter picocuries per liter is a measure of the radioactivity in water.
- NTU Nephelometric Turbidity Unit a measure of the clarity of the water (as opposed to its cloudiness). 5 NTU is just noticeable to the average person.
- AL Action Level the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- TT Treatment Technique a required process intended to reduce the level of a contaminant in drinking water.
- 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.

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.

- RUL Recommended Upper Limit-Recommended maximum concentration of secondary contaminants. These reflect aesthetic qualities such as odor, taste or appearance. RUL's are recommendations, not mandates.
- 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. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination.
- SAFE DRINKING WATER ACT The Federal law, administered by the NJDEP which defines and requires drinking water quality.

#### **Unregulated Contaminants for Which EPA Requires Monitoring**

Ridgewood Water Department collected data in 2014 and 2015 as part of an ongoing study to determine the general occurrence of unregulated contaminants. Currently, there are no drinking water standards for these compounds. Unregulated contaminant monitoring helps the USEPA and the NJDEP to determine where certain contaminants occur and whether they should consider regulating those contaminants in the future.

Contaminant	Level Detected	Units of Measurement	Likely source
1,1-Dichloroethane	Range = $ND - 30$	ppb	Halogenated alkane; used as a solvent
1,4-Dioxane	Range = $ND - 0.2$	ppb	Cyclic aliphatic ether; used as a solvent or solvent stabilizer in manufacturing and processing of paper, cotton, textile products, automotive coolant, cosmetics and shampoos
Chlorate	Range = 35 - 210	ррЬ	Agricultural defoliant of desiccant; disinfection byproduct; used in the production of chloride dioxide
Hexavalent Chromium	Range = $ND - 26$	ppb	Naturally-occurring element; used in the making of steel and other alloys; chromium -3 or -6 are used for chrome plating, dyes and pigments, leather tanning, and other wood preservation
Chromium	Range = ND $- 0.96$	ppb	Naturally-occurring element; used in the making of steel and other alloys; chromium -3 or -6 are used for chrome plating, dyes and pigments, leather tanning, and other wood preservation
Strontium	Range = 120 - 640	ppb	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	Range = $0.3 - 1.6$	ррb	Naturally-occurring element metal; used as vanadium pentoxide which is a chemical intermediate and a catalyst
Dioxane	Range = ND $- 0.1$	ррb	Cyclic aliphatic ether; used as a solvent or solvent stabilizer in manufacture and processing of paper, cotton, textile products, automotive coolant, cosmetics and shampoos.
Chlorodifluoromethane	Range = $ND - 120$	ррb	Occurs as a gas and used as a refrigerant, as a low-temperature solvent, and used in fluorocarbon resins, especially tetrafluoroethylene polymers.
Perfluorooctanoic acid - PFOA	Range = $ND - 0.06$	ррь	Man-made chemical used in the manufacture of fluoropolymers. With non-stick and stain-resistant properties, fluoropolymers have a wide application in common household products such as cookware, carpet and all-weather clothing.
Perfluoro octanesulfonic acid - PFOS	Range = ND $- 0.04$	ррь	Surfactant or emulsifier; used in fire –fighting foam, circuit board etching acids, alkaline cleaners, floor polish, and as a pesticide active ingredient for insect bait traps; U.S. manufacture of PFOS phased out in 2002.

## Ridgewood Water Department- PWSID # NJ0251001

Ridgewood Water Department is a public community water system consisting of 51 active wells and 2 purchased water sources

This system's source water comes from the following aquifer: Brunswick Aquifer System

This system purchases water from the following water systems: Hawthorne Water Department, Suez / United Water

## Susceptibility Ratings for Ridgewood Water Department 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.

The seven contaminant categories are defined at the bottom of this page. 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 <u>potential</u> 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.

	Pa	athoge	ens	N	utrien	its	Pesticides			Volatile Organic Compounds			Inorganics			Radionuclides			Radon			Disinfection Byproduct Precursors		
Sources	Н	М	L	Н	М	L	Н	М	L	Н	М	L	Н	М	L	Н	М	L	Н	М	L	Н	М	L
Wells - 51	1	46	4	26	25			20	31	48		3	30	21		25	26		51					51

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 Byproduct Precursors**: A common source is naturally occurring organic matter in surface water. Disinfection byproducts are formed when the disinfectants (usually chlorine) used to kill pathogens react with dissolved organic material (for example leaves) present in surface water.

#### Ground Water Under the Influence of Surface Water:

Ridgewood Water is currently performing a study to evaluate whether certain ground water sources are considered to be under the Direct Influence of Surface Water (GWUDI) under a rigorous Source Water Monitoring Plan which has been approved by the EPA. The study involves the collection of water samples from up to 38 wells and three surface water locations on a weekly and biweekly basis. The samples will be analyzed in the laboratory for evidence of microbiologic activity and for other parameters that may indicate surface water influence. All samples will be collected and analyzed by an NJDEP-certified laboratory and will be reported on a quarterly basis to the NJDEP and EPA. In conjunction with the sampling, Ridgewood Water is performing a hydrogeologic sensitivity analysis to evaluate the susceptibility of it wells to surface water influence. The study will take one year to complete and will be concluded in 2017. More information on the study is available at

http://water.ridgewoodnj.net/index.php?option=com\_content&view=article&id=119&Itemid=108.