

2011 Annual Drinking Water Quality Report

Ridgewood Water Department

Results from the Year 2010

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 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 attached.

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 production, 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.

The New Jersey Department of Environmental Protection (NJDEP) has completed and issued the Source Water Assessment Reports and Summaries for all of these public water systems, 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 your public water system to obtain information regarding Ridgewood Water's Source Water Assessment. Ridgewood Water's source water susceptibility ratings and a list of potential contaminant sources is attached.

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 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, that defines and requires drinking water quality.

SUMMARY OF 2010 WATER QUALITY

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, 2010. 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.

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 can not 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 second 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 www.epa.gov/safewater/lead.

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.

We work hard to provide top quality water to every tap. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children's future. Please call our office if you have questions.

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.

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 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.

Sources	Pathogens			Nutrients			Pesticides			Volatile Organic Compounds			Inorganics			Radio-nuclides			Radon			Disinfection Byproduct Precursors		
	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 - 58	1	53	4	33	25			27	31	55		3	37	21		32	26		58			4	54	
GUDI - 0																								
Surface water intakes - 0																								

- **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.

Ridgewood Water Test Results

Contaminant	Violation Y/N	Level Detected	Units of Measurement	MC LG	MCL	Likely Source of Contamination
Radioactive Contaminants						
Alpha emitters Test results Yr. 2007	N	Range = ND – 1.5 Highest detect = 1.5	pCi/l	0	15	Erosion of natural deposits
Combined Radium 228 & 226 Test results Yr. 2007	N	Range = ND – 1.5 Highest detect = 1.5	pCi/l	0	5	Erosion of natural deposits
Uranium Test results Yr. 2007	N	Range = ND - 2 Highest detect = 2	ppb	0	30	Erosion of natural deposits
Inorganic Contaminants:						
Arsenic Test results Yr. 2010	N	Range = ND – 8 Highest detect = 8 Highest average = 5	ppb	n/a	5	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium Test results Yr. 2010	N	Range = ND – 1.7 Highest detect = 1.7	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chromium Test results Yr. 2010	N	Range = ND – 17 Highest detect = 17	ppb	100	100	Discharge from steel and pulp mills; erosion of natural deposits
Copper Test results Yr. 2009	N	0.6 No samples exceeded the action level	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits
Cyanide Test results Yr. 2010	N	Range = ND – 2 Highest detect = 2	ppb	200	200	Discharge from steel/metal factories; discharge from plastic and fertilizer factories
Fluoride Test results Yr. 2010	N	Range = ND – 0.07 Highest detect = 0.07	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Lead Test results Yr. 2009	N	8 1 sample out of 60 exceeded the action level	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Nickel Test results Yr. 2010	N	Range = ND - 9 Highest detect = 9	ppm	N/A	N/A	Erosion of natural deposits; corrosion of bronze.
Nitrate (as Nitrogen) Test results Yr. 2010	N	Range = 1.9 – 5.3 Highest detect = 5.3	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium Test results Yr. 2010	N	Range = ND – 16 Highest detect = 16	ppb	50	50	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Volatile Organic Contaminants / Disinfection Byproducts						
Xylenes (Total) Test results yr. 2010	N	Range = ND – 0.9 Highest Average = 0.04 Highest detect = 0.9	ppb	1000	1000	Discharge from petroleum factories; discharge from chemical factories
TTHM Total Trihalomethanes Test results Yr. 2010	N	Range = ND – 34 Annual Average = 10	ppb	N/A	80	By-product of drinking water disinfection
HAA5 Haloacetic Acids Test results Yr. 2010	N	Range = ND - 15 Average = 3	ppb	N/A	60	By-product of drinking water disinfection
Tetrachloroethylene Test results yr. 2010	N	Range = ND – 2.6 Highest Average = 0.1 Highest detect = 2.6	ppb	0	1	Leaching from PVC pipes; discharge from factories and dry cleaners
Cis-1,2-dichloroethylene Test results Yr. 2010	N	Range = ND – 0.8 Highest Average = 0.003 Highest detect = 0.8	ppb	70	70	Discharge from industrial chemical Factories
Regulated Disinfectants		Level Detected	MRDL		MRDLG	
Chlorine		Average = 2	4.0 ppm		4.0 ppm	

Secondary Contaminant	Level Detected	Units of Measurement	RUL
Sodium	Range = 18 - 86	ppm	50

Ridgewood Water exceeded the Recommended Upper Limit (RUL) for sodium. For healthy individuals the sodium intake from water is not important, because a much greater of sodium takes place 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.

Hawthorne Water Department Test Results						
PWS ID #NJ1604001						
Contaminant	Violati on Y/N	Level Detected	Units of Measureme nt	MCL G	MCL	Likely Source of Contamination
Radioactive Contaminants						
Gross Alpha Test results Yr. 2008	N	Range = ND – 3.1 Highest detect = 3.1	pCi/l	0	15	Erosion of natural deposits
Uranium Test results Yr. 2008	N	Range = ND – 1 Highest detect = 1	ppb	0	30	Erosion of natural deposits
Inorganic Contaminants:						
Barium Test results yr. 2008	N	Range = 1.2 – 1.7 Highest detect = 1.7	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Copper Test results Yr. 2009	N	< 0.3 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. 2008	N	5 2 samples out of 30 exceeded the action level	Ppb	0	A =15	Corrosion of household plumbing systems, erosion of natural deposits
Nitrate (as Nitrogen) Test results Yr. 2010	N	Range = 2.9 – 3.7 Highest detect = 3.7 Highest Average = 3.5	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Arsenic Test results Yr. 2008	N	Range = 2.4 – 3.6 Highest detect = 3.6	Ppb	n/a	5	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Volatile Organic Contaminants / Disinfection Byproducts						
HAA5 Haloacetic Acids Test results Yr. 2010	N	Range = ND - 3 Annual Average = 1	Ppb	N/A	60	By-product of drinking water disinfection
TTHM [Total trihalomethanes] Test results Yr. 2010	N	Range = ND – 20 Annual Average = 8	Ppb	N/A	80	By-product of drinking water disinfection
Regulated Disinfectants		Level Detected	MRDL		MRDLG	
Chlorine		Average = 0.3	4.0 ppm		4.0 ppm	

Water Sources:

In the year 2010, the Hawthorne Water Department drew groundwater from 21 wells throughout the Borough. Following is a list of our 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

United Water Test Results
PWS ID#NJ0220001

Contaminant	Violation Y/N	Level Detected	Units of Measurement	MC LG	MCL	Likely Source of Contamination
Microbiological Contaminants						
Turbidity	N	99.5% -100% < 0.3 NTU		n/a	TT	Soil runoff
Inorganic Contaminants:						
Arsenic Test results Yr. 2010	N	Range = 0.6 – 0.8 Highest detect = 0.8	ppb	n/a	5	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium Test results yr. 2010	N	Range = 0.02 – 0.024 Highest detect = 0.024	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chromium Test results Yr. 2010	N	Range = 7.0 – 7.5 Highest detect = 7.5	ppb	100	100	Discharge from steel and pulp mills; erosion of natural deposits
Copper Test results Yr. 2009	N	0.48 No samples exceeded the action level	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits
Lead Test results Yr. 2009	N	2 No samples exceeded the action level	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Nitrate (as Nitrogen) Test results Yr. 2010	N	Range = 0.02 – 5.5 Highest detect = 5.5 Average = 2.3	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nickel Test results Yr. 2010	N	Range = 1.3 – 1.4 Highest detect = 1.4	ppm	N/A	N/A	Erosion of natural deposits; corrosion of bronze
Volatile Organic Contaminants / Disinfection Byproducts						
TTHM Total trihalomethanes Test results Yr. 2010	N	Range = 10 - 51 Highest Average = 25	ppb	N/A	80	By-product of drinking water disinfection
Methyl tertiary butyl ether (MTBE) Test results Yr. 2010	N	Range = ND – 2.1 Highest detect = 2.1	ppb	70	70	Leaking underground gasoline and fuel oil tanks. Gasoline and fuel oil spills.
HAA5 [Total Haloacetic Acids] Test results Yr. 2010	N	Range = ND - 25 Highest Average = 10	ppb	N/A	60	By-product of drinking water disinfection
Radioactive Contaminants						
Gross Alpha Test results Yrs. 2006 & 2007	N	Range = ND – 3.5 Highest detect = 3.5 Average = 3.2	pCi/l	0	15	Erosion of natural deposits
Combined Radium 226 & 228 Test results Yrs. 2006 & 2007	N	Range = ND – 3.9 Highest detect 3.9 Average = 1.7	pCi/l	0	5	Erosion of natural deposits
Regulated Disinfectants		Level Detected		MRDL		MRDLG
Chlorine		Average = 1.1		4.0 ppm		4.0 ppm
Secondary Contaminant		Level Detected		Units of Measurement		RUL
Sodium Test results Yr. 2010		Range = 40 - 100		ppm		50

United Water NJ exceeded the Recommended Upper Limit (RUL) for sodium. For healthy individuals the sodium intake from water is not important, because a much greater of sodium takes place 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 2010, United Water NJ drew groundwater from 6 wells and 2 surface water intakes. The source water comes from the Brunswick Aquifer System and the Wanaque Reservoir.