

**TOWNSHIP OF ROXBURY  
1715 ROUTE 46  
LEDGEWOOD, NEW JERSEY 07852**

**PRESORT  
STANDARD  
U.S. POSTAGE  
PAID  
Dover, NJ  
PERMIT NO. 530**

**ANNUAL DRINKING WATER  
QUALITY REPORT**

**TOWNSHIP OF ROXBURY  
WATER UTILITY**

# Annual Drinking Water Quality Report

## The Township of Roxbury Water Utility

### Report for the Year 2010, Results from the Year 2009

Following is this year's Annual Drinking Water Quality Report. This report is designed to inform you about the quality water and services we deliver to you every day. The Township of Roxbury Water Utility routinely monitors for contaminants in your drinking water according to Federal and State laws. This table shows the results of our monitoring for the period of January 1<sup>st</sup> to December 31<sup>st</sup>, 2009. The state allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants does not change frequently. Some of our data, though representative, are more than one year old.

**Our water sources:** We have two sources: our wells and water purchased from the Morris County MUA. Our water utility consists of four individual water systems as shown in the tables below. Our nine wells draw water from geologic formations known as the Precambrian Granite and Stratified Drift Aquifers. Well depths in those formations are approximately 115 feet and 235 feet deep respectively. The Morris County MUA draws water from the Stratified Glacial Drift and the Leithville Limestone Formations.

The New Jersey Department of Environmental Protection (NJDEP) has completed and issued the Source Water Assessment Report and Summary for these public water systems, which are available at [www.state.nj.us/dep/swap/](http://www.state.nj.us/dep/swap/) or by contacting NJDEP's Bureau of Safe Drinking Water at (609) 292-5550. You may also contact your public water system to obtain information regarding your water system's Source Water Assessment.

**Potential sources of contamination:** 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 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.

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 Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

**Vulnerable populations:** 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 Safe Drinking Water Hotline (1-800-426-4791).

## Skyview Estates PWS ID # 1436004

Contaminant	Violation Y/N	Level Detected	Units of Measurement	MCLG	MCL	Likely Source
<b>Inorganic Contaminants</b>						
Copper Test results Yr. 2009	No	0.08 No samples exceeded the action level	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits
Barium Test results Yr. 2009	No	Well #3 = 0.02 Wells #5 & 6 = 0.01	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chromium Test results Yr. 2009	No	Well #3 = 2 Wells #5 & 6 = 5	ppb	100	100	Discharge from steel and pulp mills; erosion of natural deposits
Lead Test results Yr. 2009	No	5 1 sample out of 20 exceeded the action level	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Nitrate (as Nitrogen) Test results Yr. 2009	No	Well #3 = 1.6 Wells #5 & 6 = 1.7	ppm	1	1	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
<b>Radioactive Contaminants</b>						
Gross Alpha Test results Yr. 2007	No	Range = ND – 0.9 Highest detect = 0.9	pCi/l	0	15	Erosion of natural deposits
Combined Radium 228 & 226 Test results Yr. 2007	No	Range = ND – 1.6 Highest detect = 1.6	pCi/l	0	15	Erosion of natural deposits
<b>Secondary Contaminants</b>		<b>Level Detected</b>	<b>Units of Measurement</b>		<b>RUL</b>	
Sodium Test results Yr. 2009		Range = 40 – 60	ppm		50	

## Lookout Mountain Estates PWS ID #1436007

Contaminant	Violation Y/N	Level Detected	Units of Measurement	MCLG	MCL	Likely Source
<b>Inorganic Contaminants</b>						
Barium Test results Yr. 2009	No	0.05	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Copper Test results Yr. 2009	No	0.04 No samples exceeded the action level.	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits
Chromium Test results Yr. 2009	No	5	ppb	100	100	Discharge from steel and pulp mills; erosion of natural deposits
Lead Test results Yr.2009	No	< 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. 2009	No	3.7	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
<b>Radioactive Contaminants</b>						
Gross Alpha Test results Yr. 2007	No	Range = ND – 0.2 Highest detect = 0.2	pCi/l	0	15	Erosion of natural deposits
Combined Radium 228 & 226 Test results Yr. 2007	No	Range = ND – 2.1 Highest detect = 2.1	pCi/l	0	15	Erosion of natural deposits
<b>Secondary Contaminants</b>		<b>Level Detected</b>	<b>Units of Measurement</b>		<b>RUL</b>	
Sodium Test results Yr. 2009		Range: 64 – 145	ppm		50	

**Landing /Shore Hills & Kenvil/Ledgewood Test Results PWS ID# 1436003**

Contaminant	Violation Y/N	Level Detected	Units of Measurement	MCLG	MCL	Likely Source
<b>Inorganic Contaminants</b>						
Barium Test results Yr. 2009	No	Well #2 = 0.06 Well #4 = 0.02 Well #12 = 0.03	ppb	5	5	Discharge from drilling wastes; discharge from metal refineries; erosion of natural deposits
Chromium Test results Yr. 2009	No	Well #2 = 12 Well #4 = 8 Well #12 = 7	ppb	100	100	Discharge from steel and pulp mills; erosion of natural deposits
Copper Test results Yr. 2009	No	0.15 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	No	< 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. 2009	No	Well #2 = 1.2 Well #4 = < 0.2 Well #12 = 0.7	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
<b>Radioactive Contaminants</b>						
Gross Alpha Test results Yr. 2006	No	Range = ND – 1.2 Highest Average = 0.9	pCi/l	0	15	Erosion of natural deposits
Radium-228 Test results Yr. 2006	No	Range = ND – 0.8 Highest Average = 0.3	pCi/l	0	5	Erosion of natural deposits
<b>Microbiological Contaminants</b>						
Total Coliform Bacteria	No	1 positive monthly sample in April 2009		0	1	Naturally present in the environment
<b>Secondary Contaminants</b>		<b>Level Detected</b>	<b>Units of Measurement</b>		<b>RUL</b>	
Sodium Test results Yr. 2009		Range = 26 – 152	ppm		50	

The Shore Hills System had a positive Total Coliform Bacteria sample in April 2009. We immediately resampled and all test results were negative. We believe that this positive sample result was caused by either an incorrect sampling technique or laboratory error. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.

The Shore Hills, Lookout Mountain Estates and the Skyview Estates Systems all exceeded the Secondary 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 Recommended Upper Limit (RUL) may be of concern to individuals on a sodium restricted diet.

**Evergreen Acres PWS ID# 143006**

Contaminant	Violation Y/N	Level Detected	Units of Measurement	MCLG	MCL	Likely Source
<b>Inorganic Contaminants</b>						
Barium Test results Yr. 2009	No	0.004	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chromium Test results Yr. 2009	No	2	ppb	100	100	Discharge from steel and pulp mills; erosion of natural deposits
Copper Test Results Yr. 2009	No	0.008 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	No	< 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. 2009	No	<0.2	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
<b>Radioactive Contaminants</b>						
Gross Alpha Test results Yr. 2007	No	Range = ND – 0.5 Highest Detect = 0.5	pCi/l	0	15	Erosion of natural deposits
Combined Radium 228 & 226 Test results Yr. 2007	No	Range = ND – 1.6 Highest detect = 1.6	pCi/l	0	5	Erosion of natural deposits

Disinfection By-Products – All Roxbury Township Systems						
TTHM Total Trihalomethanes Test Results Yr. 2009	No	Range = ND – 10	ppb	N/A	80	By-product of drinking water disinfection
HAA5 Haloacetic Acids Test results Yr. 2009	No	ND	ppb	N/A	60	By-product of drinking water disinfection

Regulated Disinfectants	Level Detected	MRDL	MRDLG
Chlorine (All Systems)	Range = 0.2 – 0.3 Average = 0.3	4.0 ppm	4.0 ppm

Morris County MUA PWS ID# 1432001						
Contaminant	Violation Y/N	Level Detected	Units of Measurement	MCLG	MCL	Likely Source
<b>Inorganic Contaminants</b>						
Nitrate (as Nitrogen) Test results Yr. 2008	No	Range = 0.6 – 3 Highest detect = 3	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Barium Test results Yr. 2008	No	Range = ND – 0.1 Highest detect = 0.1	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Cadmium Test results Yr. 2008	No	Range = ND – 2 Highest detect = 2	ppb	5	5	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints
<b>Radioactive Contaminants</b>						
Alpha Emitters Test results Yr 2008	No	Range = 0.2 – 4.3 Average = 1.6	pCi/L	0	15	Erosion of natural deposits
Combined Radium – 228 & 226 Test results Yr. 2008	No	Range = 0.3 – 2.3 Average = 0.9	pCi/l	0	5	Erosion of natural deposits
<b>Volatile Organic Contaminants / Disinfection Byproducts</b>						
Total Trihalomethanes TTHM Test results Yr. 2009	No	Range = ND – 38 Average = 3	ppb	N/A	80	By-product of drinking water disinfection
HAA5 Haloacetic Acids Test results Yr. 2009	No	Range = ND – 55 Average = 4	ppb	N/A	60	By-product of drinking water disinfection
Methyl tertiary butyl ether (MTBE) Test results Yr. 2009	No	Range = ND – 1.7 Highest detect = 1.7	ppb	70	70	Leaking underground gasoline and fuel oil tanks. Gasoline and fuel oil spills.
<b>Microbiological Contaminants:</b>						
Total Coliform Bacteria	No	1 positive monthly sample in September 2009		0	1	Naturally present in the environment
<b>Regulated Disinfectants</b>						
Chlorine (Sodium Hypochlorite)		Average = 0.52		4.0 ppm		4.0 ppm

As you can see from the table, the Morris County MUA had a positive Total Coliform Bacteria sample in September 2009. They believe that this was due to a sampling technique or laboratory error because all the required confirmation samples were negative. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other; potentially-harmful, bacteria may be present.

**Evergreen System – PWSID# 1436006** is a public community water system consisting of 1 well(s), 0 wells under the influence of surface water, 0 surface water intakes(s), 0 purchased ground water source(s), and 0 purchased surface water source(s). This system's source water comes from the following aquifer(s) and/or surface water body(s) (if applicable): glacial sand and gravel. This system purchases water from the following water system(s) (if applicable): NA

**Lookout Mountain System – PWSID# 1436007** is a public community water system consisting of 2 well(s), 0 wells under the influence of surface water, 0 surface water intakes(s), 0 purchased ground water source(s), and 0 purchased surface water source(s). This system's source water comes from the following aquifer(s) and/or surface water body(s) (if applicable): glacial sand and gravel, igneous and metamorphic rocks. This system purchases water from the following water system(s) (if applicable): NA

**Skyview System – PWSID# 1436004** is a public community water system consisting of 4 well(s), 0 wells under the influence of surface water, 0 surface water intakes(s), 1 purchased ground water source(s), and 0 purchased surface water source(s). This system's source water comes from the following aquifer(s) and/or surface water body(s) (if applicable): igneous and metamorphic rocks. This system purchases water from the following water system(s) (if applicable): MORRIS COUNTY MUA



**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 made-made. Examples include radium and uranium.

**Radon:** Colorless, odorless, cancer-causing gas that occurs naturally in the environment. For more information go to <http://nj.gov/dep/rpp/radon/index.htm> or call 1-800-648-0394.

**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.

#### **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:

Non-Detects (ND) - laboratory analysis indicates that the constituent is not present.

Parts per million (ppm) - one part per million corresponds to one minute in two years or a single penny in \$10,000.

Parts per billion (ppb) - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

Picocuries per liter (pCi/L) - picocuries per liter is a measure of the radioactivity in water.

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

Treatment Technique (TT) - A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

Maximum Contaminant Level - The "Maximum Allowed" (MCL) is the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal -The "Goal"(MCLG) is the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

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

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.

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.

**Waivers:** 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. Our system received monitoring waivers for asbestos and synthetic organic chemicals.

#### **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. The Township of Roxbury Utility and the Morris County MUA 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 <http://www.epa.gov/safewater/lead>.

**Monitoring Requirements Not Met for Skyview System (PWSID# 1436004) and Shore Hills System (PWSID# 1436003)**

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. In the years 2004 and 2005 we began to monitor for Total Trihalomethanes (TTHMS) and Haloacetic Acids (HAA5s) at the Skyview and the Shore Hills Water Systems. We were required to collect 3 samples from each of the systems, however we collected only 1 sample in each system. This was a new requirement implemented in 2004 and we inadvertently took fewer samples than required. We did collect the correct number of samples in all subsequent years. We are pleased to report that all sample results starting in 2004 have been in compliance with the regulations.

Trihalomethanes & Haloacetic Acids are byproducts of drinking water disinfection / chlorination. Some people who drink water containing trihalomethanes and haloacetic acids in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

**For additional information:** If you have any questions about this report or any matter concerning your water utility, please call Michael A. Kobylarz, Township Engineer/Director of Utilities at (973) 448-2018 or Melanie Michetti, Sr. Assistant to the Township Engineer at (973) 448-2074. Major water utility issues and decisions are discussed at Township Council meetings located at 1715 Route 46, Ledgewood. Meetings are normally held on the 2<sup>nd</sup> and 4<sup>th</sup> Tuesday nights of each month at 7:30 p.m. You may call 973-448-2001 to confirm if any water issues are on the meeting schedule.

**We at the Township of Roxbury Utility work hard to ensure quality drinking water for each customer we serve. 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. Thank you for the opportunity to provide you this important resource.**