

Annual Drinking Water Quality Report for 2011

Eagle Lane Subdivision

PWS ID No. 5089285

INTRODUCTION

This Annual Drinking Water Quality Report for the 2011 calendar year is designed to inform you about your drinking water quality. Our goal is to provide you with a safe and dependable supply of drinking water, and we want you to understand the efforts we make to protect your water supply. The quality of your drinking water must meet state and federal requirements administered by the Virginia Department of Health (VDH).

If you have questions about this report, or if you want additional information about any aspect of your drinking water or want to know how to participate in decisions that may affect the quality of your drinking water, please contact:

Henry County Public Service Authority 2285 Fairystone Park Highway Bassett, VA 24055	Mr. Darrell Campbell (276) 634-2555
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GENERAL INFORMATION

As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and can pick up substances resulting from the presence of animals or from human activity. Contaminants in source water may be naturally occurring substances, or may come from septic systems, discharges from domestic or industrial wastewater treatment facilities, agricultural and farming activities, urban stormwater runoff, residential uses, and many other types of activities. Water from surface sources is treated to make it drinkable while groundwater may or may not have any treatment.

Contaminants that may be present in source water include:

- **Microbial contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- **Inorganic contaminants**, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- **Pesticides and herbicides**, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- **Organic chemical contaminants**, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
- **Radioactive contaminants**, which can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that 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.

All drinking water, including bottled drinking 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 can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (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 (800-426-4791).

SOURCE(S) AND TREATMENT OF YOUR DRINKING WATER

The source of your drinking water is groundwater drawn from two drilled wells. The water is treated with soda ash for pH adjustment and sodium hypochlorite for continuous disinfection.

A source water assessment of our system was conducted in 2002 by the Virginia Department of Health. The wells were determined to be of high susceptibility to contamination using the criteria developed by the state in its approved Source Water Assessment Program.

The assessment report consists of maps showing the source water assessment area, an inventory of known land use activities of concern, and documentation of any known contamination within the last 5 years. The report is available by contacting your water system owner, Mr. Darrell Campbell, (276) 634-2555.

WATER CONSERVATION TIPS

Did you know that the average U.S. household uses approximately 350 gallons of water per day? Luckily, there are many low-cost or no-cost ways to conserve water. Water your lawn at the least sunny times of the day. Fix toilet and faucet leaks. Take short showers - a 5 minute shower uses 4 to 5 gallons of water compared to up to 50 gallons for a bath. Turn the faucet off while brushing your teeth and shaving; 3-5 gallons go down the drain per minute. Teach your kids about water conservation to ensure a future generation that uses water wisely. Make it a family effort to reduce next month's water bill!

DEFINITIONS

Contaminants in your drinking water are routinely monitored according to federal and state regulations. The table on the next page shows the results of this monitoring for the period of January 1st through December 31st, 2011. In the table and elsewhere in this report you will find many terms and abbreviations you might not be familiar with. The following definitions are provided to help you better understand these terms:

Non-detects (ND) - lab analysis indicates that the contaminant is not detectable, based on the limits of the analytical equipment used.

Parts per million (ppm) or Milligrams per liter (mg/l) - one part per million corresponds to one minute in two years or one penny in \$10,000.

Parts per billion (ppb) or Micrograms per liter (µg/l) - one part per billion corresponds to one minute in 2,000 years, or one penny in \$10,000,000.

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

Nephelometric Turbidity Unit (NTU) - nephelometric turbidity unit is a measure of the cloudiness of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

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 required process intended to reduce the level of a contaminant in drinking water.

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

Maximum 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 Residual Disinfectant Level Goal (MRDLG) - the level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

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.

Variances and exemptions - state or EPA permission not to meet an MCL or a treatment technique under certain conditions

WATER QUALITY RESULTS

We routinely monitor for various contaminants in the water supply to meet all regulatory requirements. The table lists only those contaminants that had some level of detection. Many other contaminants have been analyzed but were not present or were below the detection limits of the lab equipment.

Microbiological Contaminants						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found	Violation	Date of Sample	Typical Source of Contamination
Total Coliform Bacteria	0	1 positive monthly sample	None Detected	No	Monthly	Naturally present in the environment
Inorganic Contaminants						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found	Violation	Date of Sample	Typical Source of Contamination
Nitrate (ppm)	10	10	Not Detected	No	May 2011	Fertilizer use runoff; septic tank / sewage leaching; erosion of natural deposits
Barium (ppm)	2	2	0.059	No	September 2011	Erosion of natural deposits, discharge from metal refineries, discharge from drilling wastes
Radiological Contaminants						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found	Violation	Date of Sample	Typical Source of Contamination
Alpha emitters (pCi/L)	0	15	Below Detection Limits	No	June 2009	Erosion of natural deposits
Combined radium (pCi/L)	0	5	Below Detection Limits	No	June 2009	Erosion of natural deposits
Uranium (µg/L)	0	30	Below Detection Limits	No	June 2009	Erosion of natural deposits
Beta Emitters (pCi/L)	0	50	2.5	No	June 2009	Decay of natural and man-made deposits
Disinfectants/ Disinfection Byproducts						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found	Exceedance	Date of Sample	Typical Source of Contamination
Total Trihalomethanes - TTHM (ppb)	N/A	80	1	No	August 2010	Byproduct of drinking water chlorination / disinfection
Total Haloacetic Acids - HAA5 (ppb)	N/A	60	2	No	August 2010	Byproduct of drinking water chlorination / disinfection
Chlorine Residual (ppm)	MRDLG 4	MRDL 4	Highest Quarterly Avg.: 1.27 Range: 0.50 to 2.00	No	Monthly 2011	Water additive for disinfection to control microorganisms
Lead and Copper						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found	Exceedance	Date of Sample	Typical Source of Contamination
Copper (ppm)	1.3	1.3	0.1 (90th Percentile) Range: ND to 0.14 All five samples were below the respective Action Level	No	September 2010	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	0	15	3 (90th Percentile) Range: ND to 5 All five samples were below the respective Action Level	No	September 2010	Corrosion of household plumbing systems; Erosion of natural deposits

The results in the table are from testing done between 2009 and 2011. 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 results, though representative, are more than one year old.

Other drinking water constituents you may be interested in are as follows:

A water sample collected in *September 2011* reported additional parameters that may be of interest. Sodium was detected in treated water at a concentration of 83.4 mg/L. The EPA has established a recommended level of 20 mg/L, which is the optimal level established for individuals on a sodium restricted diet. The elevated sodium concentration is most likely a result of the soda ash pH adjustment treatment.

Turbidity in the compliance samples collected in *September 2011* was detected at a level of 1.3 NTU (nephelometric turbidity units). Turbidity is related to the clarity of water and should generally be less than 1 TU at the point of entry to the distribution system for those groundwater supplies not under the influence of surface water runoff. The elevated turbidity measured in the above sample may be attributed to the presence of iron and/or manganese in the source water.

In addition, routine compliance sampling in *September 2011* detected zinc at a concentration of 0.04 mg/L. The presence of zinc may result in a metallic taste in the drinking water, and products made with water such as coffee and tea.

The U.S. Environmental Protection Agency sets MCLs at very stringent levels. In developing the standards EPA assumes that the average adult drinks 2 liters of water each day throughout a 70-year life span. EPA generally sets MCLs at levels that will result in no adverse health effects for some contaminants or a one-in-ten-thousand to one-in-one-million chance of having the described health effect for other contaminants.

ADDITIONAL INFORMATION FOR 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 Henry County Public Service Authority 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 15 to 30 seconds or until it becomes cold or reaches a steady temperature 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, 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>.

VIOLATION INFORMATION

Eagle Lane Subdivision did not incur any violations during the 2011 calendar year.

Annual Drinking Water Quality Report for 2011

Eastwood Subdivision

PWS ID No. 5089300

INTRODUCTION

This Annual Drinking Water Quality Report for the 2011 calendar year is designed to inform you about your drinking water quality. Our goal is to provide you with a safe and dependable supply of drinking water, and we want you to understand the efforts we make to protect your water supply. The quality of your drinking water must meet state and federal requirements administered by the Virginia Department of Health (VDH).

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Contaminants that may be present in source water include:

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- **Inorganic contaminants**, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- **Pesticides and herbicides**, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- **Organic chemical contaminants**, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
- **Radioactive contaminants**, which can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that 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.

All drinking water, including bottled drinking 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 can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (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 (800-426-4791).

SOURCE(S) AND TREATMENT OF YOUR DRINKING WATER

The source of your drinking water is groundwater drawn from two drilled wells located within the subdivision. The water is treated with soda ash (pH adjustment) and an ortho-phosphate blend (sequesterant) for corrosion control purposes and a sodium hypochlorite solution for continuous disinfection.

A source water assessment of our system was conducted in 2002 by the Virginia Department of Health. The wells were determined to be of high susceptibility to contamination using the criteria developed by the state in its approved Source Water Assessment Program.

The assessment report consists of maps showing the source water assessment area, an inventory of known land use activities of concern, and documentation of any known contamination within the last 5 years. The report is available by contacting your water system owner, Mr. Darrell Campbell, (276) 634-2555.

WATER CONSERVATION TIPS

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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 Residual Disinfectant Level Goal (MRDLG) - the level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

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Variances and exemptions - state or EPA permission not to meet an MCL or a treatment technique under certain conditions.

WATER QUALITY RESULTS

We routinely monitor for various contaminants in the water supply to meet all regulatory requirements. The table lists only those contaminants that had some level of detection. Many other contaminants have been analyzed but were not present or were below the detection limits of the lab equipment.

Microbiological Contaminants						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found	Violation	Date of Sample	Typical Source of Contamination
Total Coliform Bacteria	0	1 positive monthly sample	None Detected	No	Monthly	Naturally present in the environment
Inorganic Contaminants						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found	Violation	Date of Sample	Typical Source of Contamination
Nitrate (ppm)	10	10	3.3	No	December 2011	Fertilizer use runoff; septic tank, sewage leaching; erosion of natural deposits
Barium (ppm)	2	2	0.1	No	December 2010	Erosion of natural deposits, discharge from metal refineries, discharge from drilling wastes
Radiological Contaminants						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found	Violation	Date of Sample	Typical Source of Contamination
Alpha emitters (including uranium) (pCi/L)	0	15	0.7	No	September 2008	Erosion of natural deposits
Combined radium (pCi/L)	0	5	0.5	No	September 2008	Erosion of natural deposits
Beta Emitters (pCi/L)	0	50	2.3	No	September 2008	Decay of natural and man-made deposits
Disinfectants / Disinfection Byproducts						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found	Exceedance	Date of Sample	Typical Source of Contamination
Total Trihalomethanes - TTHM (ppb)	N/A	80	2	No	September 2010	Byproduct of drinking water chlorination / disinfection
Total Haloacetic Acids - HAA5 (ppb)	N/A	60	2	No	September 2010	Byproduct of drinking water chlorination / disinfection
Chlorine Residual (ppm)	MRDLG 4	MRDL 4	Highest Quarterly Avg.: 1.27 Range: 0.50 to 1.50	No	Monthly 2011	Water additive for disinfection to control microorganisms
Lead and Copper						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found	Exceedance	Date of Sample	Typical Source of Contamination
Copper (ppm)	1.3	1.3	0.3 (90th Percentile) Range: ND to 0.5 All five samples were below the respective Action Level	No	September 2010	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	0	15	< 3 (90th Percentile) Range: Not Detected All five samples were below the respective detection level	No	September 2010	Corrosion of household plumbing systems; Erosion of natural deposits

The results in the table are from testing done between 2008 and 2011. 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 results, though representative, are more than one year old.

The U.S. Environmental Protection Agency sets MCLs at very stringent levels. In developing the standards EPA assumes that the average adult drinks 2 liters of water each day throughout a 70-year life span. EPA generally sets MCLs at levels that will result in no adverse health effects for some contaminants or a one-in-ten-thousand to one-in-one-million chance of having the described health effect for other contaminants.

Other drinking water constituents you may be interested in are as follows:

A water sample collected in *December 2010* reported additional parameters that may be of interest. Sodium was detected in treated water at a concentration of 67.8 mg/L. The EPA has established a recommended level of 20 mg/L, which is the optimal level established for individuals on a sodium restricted diet. The elevated sodium concentration is most likely a result of the soda ash pH adjustment treatment.

In addition, routine compliance sampling in *December 2010* detected zinc at a concentration of 0.12 mg/L. The presence of zinc may result in a metallic taste in the drinking water, and products made with water such as coffee and tea.

ADDITIONAL INFORMATION FOR 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 Henry County Public Service Authority 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 15 to 30 seconds or until it becomes cold or reaches a steady temperature 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, 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>.

VIOLATION INFORMATION

Eastwood Subdivision did not incur any violations during the 2011 calendar year.

Annual Drinking Water Quality Report for 2011

Edgewood Village

PWS ID No. 5089315

INTRODUCTION

This Annual Drinking Water Quality Report for the 2011 calendar year is designed to inform you about your drinking water quality. Our goal is to provide you with a safe and dependable supply of drinking water, and we want you to understand the efforts we make to protect your water supply. The quality of your drinking water must meet state and federal requirements administered by the Virginia Department of Health (VDH).

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SOURCE(S) AND TREATMENT OF YOUR DRINKING WATER

The source of your drinking water is surface water purchased from the City of Martinsville and distributed to the customers. The City's source of water under normal (non-drought) conditions is the Beaver Creek Reservoir and under emergency and drought conditions are the Leatherwood Creek and / or the Little Beaver Creek. Water is collected and treated by the City of Martinsville Water Treatment Plant. Treatment of the raw surface water includes chemical addition, coagulation, flocculation, settling, filtration, fluoridation, corrosion control, and chlorine disinfection. All of these processes work together to remove the biological, chemical, and physical contaminants to make the water safe for human consumption.

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WATER QUALITY RESULTS

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Inorganic Contaminants						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found	Violation	Date of Sample	Typical Source of Contamination
Turbidity (NTU)	NA	TT=1 NTU max	0.30 Max	No	*Continuous and every 2 hours	Soil runoff (Turbidity itself is not harmful, but high levels may indicate other treatment problems).
		TT=95% of monthly samples must be <0.3 NTU	Lowest Monthly Percentage of samples < 0.3 NTU = 100%			
Nitrate (ppm)	10	10	Not Detected	No	*May 2011	Fertilizer use runoff; leaching from septic tanks, sewage; erosion of natural deposits
Fluoride (ppm)	4	4	Avg: 0.97 ppm -when added Range: 0.74 – 1.45	No	*Daily	Erosion of natural deposits; water additive which promotes stronger teeth; discharge from fertilizer and aluminum factories
Total Organic Carbon - TOC (ppm)	NA	TT-TOC (Removal ratio greater than or equal to 1.0)	Minimum Annual Average Removal Ratio: 1.3 Range: 1.0 – 1.6	No	*Monthly	Naturally present in the environment
Radiological Contaminants						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found	Violation	Date of Sample	Typical Source of Contamination
Alpha emitters (pCi/L)	0	15	Not Detected	No	* May 2010	Erosion of natural deposits
Combined radium (pCi/L)	0	5	Not Detected	No	* May 2010	Erosion of natural deposits
Beta Emitters (pCi/L)	0	50	Not Detected	No	* May 2010	Decay of natural and man-made deposits
Disinfectant / Disinfection Byproduct Contaminants						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found	Exceedance	Date of Sample	Typical Source of Contamination
HAA5s (Total Haloacetic Acids) (ppb)	N/A	60	Highest Compliance Avg.: 32 Range: 22 – 35	No	Quarterly 2011	By-product of drinking water disinfection
TTHM (Total Trihalomethanes) (ppb)	N/A	80	Highest Compliance Avg.: 83 Range: 59 – 100	Yes	Quarterly 2011	By-product of drinking water disinfection
Chlorine (ppm)	MRDLG =4	MRDL = 4	Highest Quarterly Avg- 0.87 Range 0.20 – 1.0	No	Tested Monthly	Water additive used to control microbes
Lead and Copper Contaminants						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found	Exceedance	Date of Sample	Typical Source of Contamination
Copper (ppm)	1.3	1.3	< 0.01 (90 th Percentile) Range: ND to 0.005 All five samples were below the respective Action Level	No	September 2011	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	0	15	< 1 (90 th Percentile) Range: all below 1 ppb All five samples were below the respective detection level	No	September 2011	Corrosion of household plumbing systems; Erosion of natural deposits

*Sampled at the City of Martinsville Water Treatment Plant

Other drinking water constituents you may be interested in are as follows:

In addition, routine compliance sampling in *May 2011* detected aluminum at a concentration of 0.23 mg/L. This sample result is above the Secondary Maximum Contaminant Level (SMCL) recommended by the EPA of 0.05 – 0.20 mg/L. The presence of aluminum at this concentration may result in a discoloration of the water or a metallic taste in the drinking water, and products made with water such as coffee and tea. Also in the compliance samples collected during May 2011, the sodium content was determined to be 13.8 ppm, which is below the maximum recommended level of 20 ppm by EPA. The recommended level was established for those individuals on a sodium-restricted diet. If you have any concerns about the sodium level in your drinking water, you may wish to consult with your physician.

The results in the table are from testing done between 2010 and 2011. 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 results, though representative, are more than one year old.

The U.S. Environmental Protection Agency sets MCLs at very stringent levels. In developing the standards EPA assumes that the average adult drinks 2 liters of water each day throughout a 70-year life span. EPA generally sets MCLs at levels that will result in no adverse health effects for some contaminants or a one-in-ten-thousand to one-in-one-million chance of having the described health effect for other contaminants.

ADDITIONAL INFORMATION FOR 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 Henry County Public Service Authority 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, 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>.

VIOLATION INFORMATION

The Edgewood Village water system incurred a violation for exceeding the Primary Maximum Contaminant Level for Total Trihalomethanes (TTHM) during the second quarter (April – June) of 2011. Compliance with the PMCL is based on a running annual average (4 quarters average) of the quarterly samples collected, and the average TTHM levels during the quarter exceeded the PMCL of 80 ppb during these periods (as can see from table above was 83 ppb). TTHM compounds are formed when trace amounts of naturally occurring organic compounds in the raw water source combine with chlorine that is used to disinfect the treated water. Because of the nature of formation of these compounds in the presence of chlorine, increased detention time in the system allows additional formation beyond what is formed in the respective City water supply and thus can account for higher levels detected. All locations do not have the same levels of TTHMs. Higher levels are expected in the areas with highest residence time (generally the furthest points in the system) and during the warmer months of the year. Some people who drink water containing TTHMs in excess of the PMCL over many years could experience problems with their liver, kidneys or central nervous system and may have increased risk of getting cancer. This water system will continue to be monitored for TTHMs. We intend to maintain compliance with the drinking water contaminants.

Annual Drinking Water Quality Report for 2011

Leatherwood Estates

PWS ID No. 5089475

INTRODUCTION

This Annual Drinking Water Quality Report for the 2011 calendar year is designed to inform you about your drinking water quality. Our goal is to provide you with a safe and dependable supply of drinking water, and we want you to understand the efforts we make to protect your water supply. The quality of your drinking water must meet state and federal requirements administered by the Virginia Department of Health (VDH).

If you have questions about this report, or if you want additional information about any aspect of your drinking water or want to know how to participate in decisions that may affect the quality of your drinking water, please contact:

Henry County Public Service Authority 2285 Fairystone Park Highway Bassett, VA 24055	Mr. Darrell Campbell (276) 634-2555
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GENERAL INFORMATION

As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and can pick up substances resulting from the presence of animals or from human activity. Contaminants in source water may be naturally occurring substances, or may come from septic systems, discharges from domestic or industrial wastewater treatment facilities, agricultural and farming activities, urban stormwater runoff, residential uses, and many other types of activities. Water from surface sources is treated to make it drinkable while groundwater may or may not have any treatment.

Contaminants that may be present in source water include:

- **Microbial contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- **Inorganic contaminants**, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- **Pesticides and herbicides**, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- **Organic chemical contaminants**, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
- **Radioactive contaminants**, which can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that 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.

All drinking water, including bottled drinking 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 can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (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 (800-426-4791).

SOURCE(S) AND TREATMENT OF YOUR DRINKING WATER

The source of your drinking water is groundwater drawn from one drilled well located within the subdivision. The water is treated with soda ash (pH adjustment) for corrosion control purposes and sodium hypochlorite for continuous disinfection.

A source water assessment of our system was conducted in 2001 by the Virginia Department of Health. The wells were determined to be of high susceptibility to contamination using the criteria developed by the state in its approved Source Water Assessment Program.

The assessment report consists of maps showing the source water assessment area, an inventory of known land use activities of concern, and documentation of any known contamination within the last 5 years. The report is available by contacting your water system owner, Mr. Darrell Campbell, (276) 634-2555.

WATER CONSERVATION TIPS

Did you know that the average U.S. household uses approximately 350 gallons of water per day? Luckily, there are many low-cost or no-cost ways to conserve water. Water your lawn at the least sunny times of the day. Fix toilet and faucet leaks. Take short showers - a 5 minute shower uses 4 to 5 gallons of water compared to up to 50 gallons for a bath. Turn the faucet off while brushing your teeth and shaving; 3-5 gallons go down the drain per minute. Teach your kids about water conservation to ensure a future generation that uses water wisely. Make it a family effort to reduce next month's water bill!

DEFINITIONS

Contaminants in your drinking water are routinely monitored according to federal and state regulations. The table on the next page shows the results of this monitoring for the period of January 1st through December 31st, 2011. In the table and elsewhere in this report you will find many terms and abbreviations you might not be familiar with. The following definitions are provided to help you better understand these terms:

Non-detects (ND) - lab analysis indicates that the contaminant is not detectable, based on the limits of the analytical equipment used.

Parts per million (ppm) or Milligrams per liter (mg/l) - one part per million corresponds to one minute in two years or one penny in \$10,000.

Parts per billion (ppb) or Micrograms per liter (µg/l)- one part per billion corresponds to one minute in 2,000 years, or one penny in \$10,000,000.

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

Nephelometric Turbidity Unit (NTU) - nephelometric turbidity unit is a measure of the cloudiness of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

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 required process intended to reduce the level of a contaminant in drinking water.

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

Maximum 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 Residual Disinfectant Level Goal (MRDLG) – the level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

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.

Variances and exemptions - state or EPA permission not to meet an MCL or a treatment technique under certain conditions.

WATER QUALITY RESULTS

We routinely monitor for various contaminants in the water supply to meet all regulatory requirements. The table lists only those contaminants that had some level of detection. Many other contaminants have been analyzed but were not present or were below the detection limits of the lab equipment.

Inorganic Contaminants						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found	Violation	Date of Sample	Typical Source of Contamination
Nitrate (ppm)	10	10	4.0	No	December 2011	Fertilizer use runoff; septic tank / sewage leaching; erosion of natural deposits
Barium (ppm)	2	2	0.06	No	December 2011	Erosion of natural deposits, discharge from metal refineries, discharge from drilling wastes
Radiological Contaminants						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found	Violation	Date of Sample	Typical Source of Contamination
Alpha emitters (including uranium) (pCi/L)	0	15	0.7	No	June 2009	Erosion of natural deposits
Combined radium (pCi/L)	0	5	Not Detected	No	June 2009	Erosion of natural deposits
Beta Emitters (pCi/L)	0	50	3.6	No	June 2009	Decay of natural and man-made deposits
Disinfectants / Disinfection Byproducts						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found	Exceedance	Date of Sample	Typical Source of Contamination
Chlorine Residual (ppm)	MRDLG 4	MRDL 4	Highest Quarterly Avg.: 1.07 Range: 0.5 to 1.3	No	Monthly 2011	Water additive for disinfection to control microorganisms
Total Haloacetic Acids – HAA5 (ppb)	N/A	60	4	No	September 2010	Byproduct of drinking water chlorination / disinfection
Total Trihalomethanes - TTHM (ppb)	N/A	80	2	No	September 2010	Byproduct of drinking water chlorination / disinfection
Lead and Copper						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found	Exceedance	Date of Sample	Typical Source of Contamination
Lead (ppb)	0	15	< 3 (90 th Percentile) Range: Below Detection All five samples were below the respective Action Level	No	September 2010	Corrosion of household plumbing systems; Erosion of natural deposits
Copper (ppm)	1.3	1.3	< 0.05 (90 th Percentile) Range: Below Detection All five samples were below the respective Action Level	No	September 2010	Corrosion of household plumbing systems; Erosion of natural deposits
Microbiological Contaminants						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found	Exceedance	Date of Sample	Typical Source of Contamination
Total Coliform Bacteria	0	No more than 1 present sample/mo.	None Detected	No	Monthly	Naturally present in the environment

The results in the table are from testing done between 2009 and 2011. 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 results, though representative, are more than one year old.

The U.S. Environmental Protection Agency sets MCLs at very stringent levels. In developing the standards EPA assumes that the average adult drinks 2 liters of water each day throughout a 70-year life span. EPA generally sets MCLs at levels that will result in no adverse health effects for some contaminants or a one-in-ten-thousand to one-in-one-million chance of having the described health effect for other contaminants.

Other drinking water constituents you may be interested in are as follows:

A water sample collected in *November 2011* reported additional parameters that may be of interest. Sodium was detected in Well No. 1 at a concentration of 54.4 mg/L. The EPA has established a recommended level of 20 mg/L, which is the optimal level established for individuals on a sodium restricted diet. The elevated sodium concentration is most likely a result of the soda ash pH adjustment treatment.

In addition, routine compliance sampling in *November 2011* detected zinc at a concentration of 0.02 mg/L. The presence of zinc may result in a metallic taste in the drinking water, and products made with water such as coffee and tea.

ADDITIONAL INFORMATION FOR 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 Henry County Public Service Authority 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 15 to 30 seconds or until it becomes cold or reaches a steady temperature 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, 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>.

VIOLATION INFORMATION

Leatherwood Estates did not incur any violations during the 2011 calendar year.

Annual Drinking Water Quality Report for 2011

Pine Forest Subdivision

PWS ID No. 5089634

INTRODUCTION

This Annual Drinking Water Quality Report for the 2011 calendar year is designed to inform you about your drinking water quality. Our goal is to provide you with a safe and dependable supply of drinking water, and we want you to understand the efforts we make to protect your water supply. The quality of your drinking water must meet state and federal requirements administered by the Virginia Department of Health (VDH).

If you have questions about this report, or if you want additional information about any aspect of your drinking water or want to know how to participate in decisions that may affect the quality of your drinking water, please contact:

Henry County Public Service Authority 2285 Fairystone Park Highway Bassett, VA 24055	Mr. Darrell Campbell (276) 634-2555
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GENERAL INFORMATION

As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and can pick up substances resulting from the presence of animals or from human activity. Contaminants in source water may be naturally occurring substances, or may come from septic systems, discharges from domestic or industrial wastewater treatment facilities, agricultural and farming activities, urban stormwater runoff, residential uses, and many other types of activities. Water from surface sources is treated to make it drinkable while groundwater may or may not have any treatment.

Contaminants that may be present in source water include:

- **Microbial contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- **Inorganic contaminants**, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- **Pesticides and herbicides**, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
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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.

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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 (800-426-4791).

SOURCE(S) AND TREATMENT OF YOUR DRINKING WATER

The source of your drinking water is groundwater drawn from two drilled wells located within the subdivision. The water is treated with soda ash for pH adjustment for corrosion control purposes and sodium hypochlorite for continuous disinfection.

A source water assessment of our system was conducted in 2003 by the Virginia Department of Health. The wells were determined to be of high susceptibility to contamination using the criteria developed by the state in its approved Source Water Assessment Program.

The assessment report consists of maps showing the source water assessment area, an inventory of known land use activities of concern, and documentation of any known contamination within the last 5 years. The report is available by contacting your water system owner, Mr. Darrell Campbell, (276) 634-2555.

WATER CONSERVATION TIPS

Did you know that the average U.S. household uses approximately 350 gallons of water per day? Luckily, there are many low-cost or no-cost ways to conserve water. Water your lawn at the least sunny times of the day. Fix toilet and faucet leaks. Take short showers - a 5 minute shower uses 4 to 5 gallons of water compared to up to 50 gallons for a bath. Turn the faucet off while brushing your teeth and shaving; 3-5 gallons go down the drain per minute. Teach your kids about water conservation to ensure a future generation that uses water wisely. Make it a family effort to reduce next month's water bill!

DEFINITIONS

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Parts per billion (ppb) or Micrograms per liter (µg/l)- one part per billion corresponds to one minute in 2,000 years, or one penny in \$10,000,000.

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

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

Maximum 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 Residual Disinfectant Level Goal (MRDLG) - the level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

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.

Variances and exemptions - state or EPA permission not to meet an MCL or a treatment technique under certain conditions.

WATER QUALITY RESULTS

We routinely monitor for various contaminants in the water supply to meet all regulatory requirements. The table lists only those contaminants that had some level of detection. Many other contaminants have been analyzed but were not present or were below the detection limits of the lab equipment.

Microbiological Contaminants						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found	Violation	Date of Sample	Typical Source of Contamination
Total Coliform Bacteria	0	No more than 1 present sample/mo	None Detected	No	Monthly	Naturally present in the environment
Inorganic Contaminants						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found	Violation	Date of Sample	Typical Source of Contamination
Nitrate (ppm)	10	10	Highest Level: 7.0 Range: 3.1 to 7.0	No	December 2011	Fertilizer use runoff; septic tanks / sewage leaching; erosion of natural deposits
Barium (ppm)	2	2	Highest Level: 0.04 Range: 0.03 to 0.04	No	November 2011	Erosion of natural deposits, discharge from metal refineries, discharge from drilling wastes
Radiological Contaminants						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found	Violation	Date of Sample	Typical Source of Contamination
Alpha emitters (pCi/L)	0	15	Highest Level: 0.1 Range: 0.0 to 0.1	No	April 2002	Erosion of natural deposits
Combined radium (pCi/L)	0	5	Highest Level: 1.1 Range: 0.0 to 1.1	No	April 2002	Erosion of natural deposits
Beta Emitters (pCi/L)	0	50	Highest Level: 2.3 Range: 2.0 to 2.3	No	April 2002	Decay of natural and man-made deposits
Disinfectants/ Disinfection Byproducts						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found	Exceedance	Date of Sample	Typical Source of Contamination
TTHM - Total Trihalomethanes (ppb)	N/A	80	Highest Level: 1 <i>Both samples were 1 ppb</i>	No	August 2010	Byproduct of drinking water chlorination / disinfection
Chlorine Residual (ppm)	MRDLG 4	MRDL 4	Highest Quarterly Avg.: 1.07 Range: 0.60 to 1.60	No	Monthly 2011	Water additive for disinfection to control microorganisms
Lead and Copper						
Copper (ppm)	1.3	1.3	0.1 (90th Percentile) Range: < 0.05 to 0.1 All five samples were below the respective Action Level	No	September 2010	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	0	15	< 3 (90th Percentile) All five samples were below the respective detection level	No	September 2010	Corrosion of household plumbing systems; Erosion of natural deposits
Volatile Organic Contaminants						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found	Exceedance	Date of Sample	Typical Source of Contamination
Ethylbenzene (ppb)	700	700	0.6	No	September 2011	Discharge from petroleum refineries
Xylenes (ppm)	10	10	0.007	No	September 2011	Discharge from petroleum factories; discharge from chemical factories

The results in the table are from testing done between 2002 and 2011. 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 results, though representative, are more than one year old.

The U.S. Environmental Protection Agency sets MCLs at very stringent levels. In developing the standards EPA assumes that the average adult drinks 2 liters of water each day throughout a 70-year life span. EPA generally sets MCLs at levels that will result in no adverse health effects for some contaminants or a one-in-ten-thousand to one-in-one-million chance of having the described health effect for other contaminants.

Other drinking water constituents you may be interested in are as follows:

Water samples collected in *November 2011* reported additional parameters that may be of interest. Sodium was detected in at concentrations of 46 mg/L and 36.1 mg/L at Well Nos. 1 and 9, respectively. The EPA has established a recommended level of 20 mg/L, which is the optimal level established for individuals on a sodium restricted diet. The elevated sodium concentration is most likely a result of the soda ash pH adjustment treatment.

In addition, routine compliance sampling in *November 2011* detected zinc at concentrations of 0.02 mg/L and 0.11 mg/L from Well Nos. 1 & 9, respectively. The presence of zinc may result in a metallic taste in the drinking water, and products made with water such as coffee and tea.

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

ADDITIONAL INFORMATION FOR 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 Henry County Public Service Authority 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 15 to 30 seconds or until it becomes cold or reaches a steady temperature 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, 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>.

VIOLATION INFORMATION

Pine Forest Subdivision did not incur any violations during the 2011 calendar year.

Annual Drinking Water Quality Report for 2011

Pleasant Grove Subdivision

PWS ID No. 5089638

INTRODUCTION

This Annual Drinking Water Quality Report for the 2011 calendar year is designed to inform you about your drinking water quality. Our goal is to provide you with a safe and dependable supply of drinking water, and we want you to understand the efforts we make to protect your water supply. The quality of your drinking water must meet state and federal requirements administered by the Virginia Department of Health (VDH).

If you have questions about this report, or if you want additional information about any aspect of your drinking water or want to know how to participate in decisions that may affect the quality of your drinking water, please contact:

Henry County Public Service Authority 2285 Fairystone Park Highway Bassett, VA 24055	Mr. Darrell Campbell (276) 634-2555
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GENERAL INFORMATION

As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and can pick up substances resulting from the presence of animals or from human activity. Contaminants in source water may be naturally occurring substances, or may come from septic systems, discharges from domestic or industrial wastewater treatment facilities, agricultural and farming activities, urban stormwater runoff, residential uses, and many other types of activities. Water from surface sources is treated to make it drinkable while groundwater may or may not have any treatment.

Contaminants that may be present in source water include:

- **Microbial contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- **Inorganic contaminants**, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- **Pesticides and herbicides**, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- **Organic chemical contaminants**, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
- **Radioactive contaminants**, which can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that 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.

All drinking water, including bottled drinking 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 can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (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 (800-426-4791).

SOURCE(S) AND TREATMENT OF YOUR DRINKING WATER

The source of your drinking water is groundwater drawn from two drilled wells located within the subdivision. The water is treated with soda ash (pH adjustment) and an ortho-phosphate blend (sequesterant) for corrosion control purposes and a sodium hypochlorite solution for continuous disinfection.

A source water assessment of our system was conducted in 2002 by the Virginia Department of Health. The wells were determined to be of high susceptibility to contamination using the criteria developed by the state in its approved Source Water Assessment Program.

The assessment report consists of maps showing the source water assessment area, an inventory of known land use activities of concern, and documentation of any known contamination within the last 5 years. The report is available by contacting your water system owner, Mr. Darrell Campbell, (276) 634-2555.

WATER CONSERVATION TIPS

Did you know that the average U.S. household uses approximately 350 gallons of water per day? Luckily, there are many low-cost or no-cost ways to conserve water. Water your lawn at the least sunny times of the day. Fix toilet and faucet leaks. Take short showers - a 5 minute shower uses 4 to 5 gallons of water compared to up to 50 gallons for a bath. Turn the faucet off while brushing your teeth and shaving; 3-5 gallons go down the drain per minute. Teach your kids about water conservation to ensure a future generation that uses water wisely. Make it a family effort to reduce next month's water bill!

DEFINITIONS

Contaminants in your drinking water are routinely monitored according to federal and state regulations. The table on the next page shows the results of this monitoring for the period of January 1st through December 31st, 2011. In the table and elsewhere in this report you will find many terms and abbreviations you might not be familiar with. The following definitions are provided to help you better understand these terms:

Non-detects (ND) - lab analysis indicates that the contaminant is not detectable, based on the limits of the analytical equipment used.

Parts per million (ppm) or Milligrams per liter (mg/l) - one part per million corresponds to one minute in two years or one penny in \$10,000.

Parts per billion (ppb) or Micrograms per liter (µg/l)- one part per billion corresponds to one minute in 2,000 years, or one penny in \$10,000,000.

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

Nephelometric Turbidity Unit (NTU) - nephelometric turbidity unit is a measure of the cloudiness of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

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 required process intended to reduce the level of a contaminant in drinking water.

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

Maximum 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 Residual Disinfectant Level Goal (MRDLG) - the level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

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.

Variances and exemptions - state or EPA permission not to meet an MCL or a treatment technique under certain conditions.

WATER QUALITY RESULTS

We routinely monitor for various contaminants in the water supply to meet all regulatory requirements. The table lists only those contaminants that had some level of detection. Many other contaminants have been analyzed but were not present or were below the detection limits of the lab equipment.

Microbiological Contaminants						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found	Violation	Date of Sample	Typical Source of Contamination
Total Coliform Bacteria	0	1 positive monthly sample	None Detected	No	Monthly 2011	Naturally present in the environment
Inorganic Contaminants						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found	Violation	Date of Sample	Typical Source of Contamination
Nitrate (ppm)	10	10	Highest Level: 4.7 Range: 3.0 to 4.7	No	May, Sept., December 2011	Fertilizer use runoff; septic tanks / sewage leaching; erosion of natural deposits
Barium (ppm)	2	2	Highest Level: 0.05 Range: 0.02 to 0.05	No	March 2011	Erosion of natural deposits, discharge from metal refineries, discharge from drilling wastes
Radiological Contaminants						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found	Violation	Date of Sample	Typical Source of Contamination
Alpha emitters (pCi/L)	0	15	Highest Level: 0.5 Range: 0.0 to 0.5	No	April 2002	Erosion of natural deposits
Combined radium (pCi/L)	0	5	Highest Level: 0.5 Range: 0.2 to 0.5	No	April 2002	Erosion of natural deposits
Beta Emitters (pCi/L)	0	50	Highest Level: 3.9 Range: 3.6 to 3.9	No	April 2002	Decay of natural and man-made deposits
Disinfectants/ Disinfection Byproducts						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found	Exceedance	Date of Sample	Typical Source of Contamination
Chlorine Residual (ppm)	MRDLG 4	MRDL 4	Highest Quarterly Avg.: 1.10 Range: 0.60 to 1.30	No	Monthly 2011	Water additive for disinfection to control microorganisms
TTHM - Total Trihalomethanes (ppb)	N/A	80	Highest Level: 5 Range: 3 to 5	No	August 2010	Byproduct of drinking water chlorination / disinfection
HAAs - Total Haloacetic Acids (ppb)	N/A	60	Not Detected	No	August 2010	Byproduct of drinking water chlorination / disinfection
Lead and Copper						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found	Exceedance	Date of Sample	Typical Source of Contamination
Copper (ppm)	1.3	1.3	0.33 (90th Percentile) Range: 0.05 to 0.37 All 5 samples were below the respective Action Level	No	September 2010	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	0	15	<3 (90 th Percentile) All 5 samples were below the respective detection level	No	September 2010	Corrosion of household plumbing systems; Erosion of natural deposits

The results in the table are from testing done between 2002 and 2011. 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 results, though representative, are more than one year old.

The U.S. Environmental Protection Agency sets MCLs at very stringent levels. In developing the standards EPA assumes that the average adult drinks 2 liters of water each day throughout a 70-year life span. EPA generally sets MCLs at levels that will result in no adverse health effects for some contaminants or a one-in-ten-thousand to one-in-one-million chance of having the described health effect for other contaminants.

Other drinking water constituents you may be interested in are as follows:

Zinc was detected in the *March 2011* water sample from Well No. 2 at a concentration of 0.06 mg/L. The presence of zinc may result in a discoloration of the water or a metallic taste in the drinking water, and products made with water such as coffee and tea.

Turbidity in the compliance samples collected in *March 2011* was detected at concentrations of 0.68 NTU (nephelometric turbidity units) and 1.4 NTU from Well Nos. 1 and 9, respectively. Turbidity is related to the clarity of water and should generally be less than 1 TU at the point of entry to the distribution system for those groundwater supplies not under the influence of surface water runoff.

ADDITIONAL INFORMATION REGARDING *Escherichia coli* PRESENCE

As a result of *E. coli* detection in a routine annual source water sample collected from Well No. 1 during November 2009, weekly monitoring was completed between January – May 2010. The increased monitoring was requested to allow the Virginia Department of Health to assess whether the source is under the direct influence of surface water. Results of the monitoring included further detections of both total coliform bacteria and *E. coli*. Three of 20 samples collected from the source during this time period were *E. coli* present (two during January 2010 and one during May 2010). The Virginia Department of Health has indicated the source has the potential to be surface water influenced but based on criteria used to evaluate sources for this purpose, additional on-site and microscopic particulate testing has been requested and we are following an approved water-quality monitoring plan. Upon completion of required special source water monitoring, a final assessment will be determined. Although the Well No. 1 source has been continuously chlorinated for disinfection purposes for many years and as a result there have been no detects of *E. coli* in any distribution system samples collected on a monthly basis, **the Authority has taken the Well No. 1 source out of service until this matter has been resolved with the Virginia Department of Health.** We are currently trying to obtain funding to evaluate this matter and may include development of another groundwater source meeting all drinking water standards. The Henry County Public Service Authority will keep you apprised of the status of this matter, particularly if the Well No. 1 source will need to be put back in service, though we do not anticipate this unless a problem arises with Well No. 2. Well No. 2 is also continuously chlorinated but has no history of detections of *E. coli*.

E. coli (and fecal coliform) are bacteria whose presence indicates that the water maybe contaminated with human or animal wastes. Microbes in these wastes can cause short-term affects, such as diarrhea, cramps, nausea, headaches or other symptoms. They may pose a special health risk for infants, young children, some of the elderly and people with severely compromised immune systems.

The source of the contamination of this well has not been determined and is not obvious but the influence from on-site sewage disposal systems associated with residences in the subdivision could be a suspected source, given the location of this well. **We want to emphasize that the Well No. 1 source is currently not being utilized by the water supply.**

ADDITIONAL INFORMATION FOR 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 Henry County Public Service Authority 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 15 to 30 seconds or until it becomes cold or reaches a steady temperature 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, 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>.

VIOLATION INFORMATION

Pleasant Grove Subdivision did not incur any violations during the 2011 calendar year.

Annual Drinking Water Quality Report for 2011

Rockhill Subdivision

PWS ID No. 5089712

INTRODUCTION

This Annual Drinking Water Quality Report for the 2011 calendar year is designed to inform you about your drinking water quality. Our goal is to provide you with a safe and dependable supply of drinking water, and we want you to understand the efforts we make to protect your water supply. The quality of your drinking water must meet state and federal requirements administered by the Virginia Department of Health (VDH).

If you have questions about this report, or if you want additional information about any aspect of your drinking water or want to know how to participate in decisions that may affect the quality of your drinking water, please contact:

Henry County Public Service Authority 2285 Fairystone Park Highway Bassett, VA 24055	Mr. Darrell Campbell (276) 634-2555
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GENERAL INFORMATION

As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and can pick up substances resulting from the presence of animals or from human activity. Contaminants in source water may be naturally occurring substances, or may come from septic systems, discharges from domestic or industrial wastewater treatment facilities, agricultural and farming activities, urban stormwater runoff, residential uses, and many other types of activities. Water from surface sources is treated to make it drinkable while groundwater may or may not have any treatment.

Contaminants that may be present in source water include:

- **Microbial contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- **Inorganic contaminants**, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- **Pesticides and herbicides**, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- **Organic chemical contaminants**, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
- **Radioactive contaminants**, which can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that 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.

All drinking water, including bottled drinking 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 can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (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 (800-426-4791).

SOURCE(S) AND TREATMENT OF YOUR DRINKING WATER

The source of your drinking water is groundwater drawn from one drilled well located within the subdivision. The water is treated with soda ash (pH adjustment) and an ortho-phosphate blend (sequesterant) for corrosion control purposes and a sodium hypochlorite solution for continuous disinfection.

A source water assessment of our system was conducted in 2002 by the Virginia Department of Health. The wells were determined to be of high susceptibility to contamination using the criteria developed by the state in its approved Source Water Assessment Program.

The assessment report consists of maps showing the source water assessment area, an inventory of known land use activities of concern, and documentation of any known contamination within the last 5 years. The report is available by contacting your water system owner, Mr. Darrell Campbell, (276) 634-2555.

WATER CONSERVATION TIPS

Did you know that the average U.S. household uses approximately 350 gallons of water per day? Luckily, there are many low-cost or no-cost ways to conserve water. Water your lawn at the least sunny times of the day. Fix toilet and faucet leaks. Take short showers - a 5 minute shower uses 4 to 5 gallons of water compared to up to 50 gallons for a bath. Turn the faucet off while brushing your teeth and shaving; 3-5 gallons go down the drain per minute. Teach your kids about water conservation to ensure a future generation that uses water wisely. Make it a family effort to reduce next month's water bill!

DEFINITIONS

Contaminants in your drinking water are routinely monitored according to federal and state regulations. The table on the next page shows the results of this monitoring for the period of January 1st through December 31st, 2011. In the table and elsewhere in this report you will find many terms and abbreviations you might not be familiar with. The following definitions are provided to help you better understand these terms:

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

Nephelometric Turbidity Unit (NTU) - nephelometric turbidity unit is a measure of the cloudiness of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

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 required process intended to reduce the level of a contaminant in drinking water.

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

Maximum 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 Residual Disinfectant Level Goal (MRDLG) – the level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

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.

Variations and exemptions - state or EPA permission not to meet an MCL or a treatment technique under certain conditions.

WATER QUALITY RESULTS

We routinely monitor for various contaminants in the water supply to meet all regulatory requirements. The table lists only those contaminants that had some level of detection. Many other contaminants have been analyzed but were not present or were below the detection limits of the lab equipment.

Microbiological Contaminants						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found	Exceedance	Date of Sample	Typical Source of Contamination
Total Coliform Bacteria	0	No more than 1 present sample/mo.	None Detected	No	Monthly 2011	Naturally present in the environment
Radiological Contaminants						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found	Violation	Date of Sample	Typical Source of Contamination
Alpha emitters (pCi/L)	0	15	0.2	No	June 2003	Erosion of natural deposits
Combined radium (pCi/L)	0	5	0.1	No	June 2003	Erosion of natural deposits
Beta Emitters (pCi/L)	0	50	2.6	No	June 2003	Decay of natural and man-made deposits
Disinfectants/ Disinfection Byproducts						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found	Exceedance	Date of Sample	Typical Source of Contamination
Chlorine Residual (ppm)	MRDLG 4	MRDL 4	Highest Quarterly Avg.: 1.27 Range: 0.80 to 1.30	No	Monthly 2011	Water additive for disinfection to control microorganisms
Total Trihalomethanes - TTHM (ppb)	N/A	80	1	No	August 2010	Byproduct of drinking water chlorination / disinfection
Total Haloacetic Acids – HAA5 (ppb)	N/A	60	Not Detected	No	August 2010	Byproduct of drinking water chlorination / disinfection
Lead and Copper						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found	Exceedance	Date of Sample	Typical Source of Contamination
Copper (ppm)	1.3	1.3	0.33 (90th Percentile) Range: ND to 0.34 All five samples were below the respective Action Level	No	September 2010	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	0	15	< 3 (90 th Percentile) All five samples were below the respective detection level	No	September 2010	Corrosion of household plumbing systems; Erosion of natural deposits
Inorganic Contaminants						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found	Violation	Date of Sample	Typical Source of Contamination
Nitrate (ppm)	10	10	1.9	No	December 2011	Fertilizer use runoff; septic tank / sewage leaching; erosion of natural deposits
Barium (ppm)	2	2	0.05	No	November 2011	Erosion of natural deposits, discharge from metal refineries, discharge from drilling wastes

The results in the table are from testing done between 2003 and 2011. 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 results, though representative, are more than one year old.

The U.S. Environmental Protection Agency sets MCLs at very stringent levels. In developing the standards EPA assumes that the average adult drinks 2 liters of water each day throughout a 70-year life span. EPA generally sets MCLs at levels that will result in no adverse health effects for some contaminants or a one-in-ten-thousand to one-in-one-million chance of having the described health effect for other contaminants.

Other drinking water constituents you may be interested in are as follows:

A water sample collected in *November 2011* reported additional parameters that may be of interest. Sodium was detected in Well No. 1 at a concentration of 60.7 mg/L. The EPA has established a recommended level of 20 mg/L, which is the optimal level established for individuals on a sodium restricted diet. The elevated sodium concentration is most likely a result of the soda ash pH adjustment treatment.

In addition, routine compliance sampling in *November 2011* detected zinc at a concentration of 0.31 mg/L which is below the secondary maximum contaminant level of 5 mg/L. The presence of zinc may result in a metallic taste in the drinking water, and products made with water such as coffee and tea.

ADDITIONAL INFORMATION FOR 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 Henry County Public Service Authority 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 15 to 30 seconds or until it becomes cold or reaches a steady temperature 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, 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>.

VIOLATION INFORMATION

Rockhill Subdivision did not incur any violations during the 2011 calendar year.

Annual Drinking Water Quality Report for 2011

Woodland Avenue Extension

PWS ID No. 5089955

INTRODUCTION

This Annual Drinking Water Quality Report for the 2011 calendar year is designed to inform you about your drinking water quality. Our goal is to provide you with a safe and dependable supply of drinking water, and we want you to understand the efforts we make to protect your water supply. The quality of your drinking water must meet state and federal requirements administered by the Virginia Department of Health (VDH).

If you have questions about this report, or if you want additional information about any aspect of your drinking water or want to know how to participate in decisions that may affect the quality of your drinking water, please contact:

Henry County Public Service Authority 2285 Fairystone Park Highway Bassett, VA 24055	Mr. Darrell Campbell (276) 634-2555
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GENERAL INFORMATION

As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and can pick up substances resulting from the presence of animals or from human activity. Contaminants in source water may be naturally occurring substances, or may come from septic systems, discharges from domestic or industrial wastewater treatment facilities, agricultural and farming activities, urban stormwater runoff, residential uses, and many other types of activities. Water from surface sources is treated to make it drinkable while groundwater may or may not have any treatment.

Contaminants that may be present in source water include:

- **Microbial contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- **Inorganic contaminants**, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- **Pesticides and herbicides**, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- **Organic chemical contaminants**, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
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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.

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VULNERABLE POPULATIONS

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SOURCE(S) AND TREATMENT OF YOUR DRINKING WATER

The source of your drinking water is surface water purchased from the City of Martinsville and distributed to the customers. The City's source of water under normal (non-drought) conditions is the Beaver Creek Reservoir and under emergency and drought conditions are the Leatherwood Creek and / or the Little Beaver Creek. Water is collected and treated by the City of Martinsville Water Treatment Plant. Treatment of the raw surface water includes chemical addition, coagulation, flocculation, settling, filtration, fluoridation, corrosion control, and chlorine disinfection. All of these processes work together to remove the biological, chemical, and physical contaminants to make the water safe for human consumption.

A source water assessment of our system was conducted in 2002 by the Virginia Department of Health. The wells were determined to be of high susceptibility to contamination using the criteria developed by the state in its approved Source Water Assessment Program.

The assessment report consists of maps showing the source water assessment area, an inventory of known land use activities of concern, and documentation of any known contamination within the last 5 years. The report is available by contacting your water system owner, Mr. Darrell Campbell, (276) 634-2555.

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Variances & exemptions - state \ EPA permission not to meet an MCL or a treatment technique under certain conditions

WATER QUALITY RESULTS

We routinely monitor for various contaminants in the water supply to meet all regulatory requirements. The table lists only those contaminants that had some level of detection. Many other contaminants have been analyzed but were not present or were below the detection limits of the lab equipment.

Inorganic Contaminants						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found	Violation	Date of Sample	Typical Source of Contamination
Turbidity (NTU)	NA	TT=1 NTU max	0.30 Max	No	*Continuous and every 2 hours	Soil runoff (Turbidity itself is not harmful, but high levels may indicate other treatment problems).
		TT=95% of monthly samples must be <0.3 NTU	Lowest Monthly Percentage of samples < 0.3 NTU = 100%			
Nitrate (ppm)	10	10	Not Detected	No	*May 2011	Fertilizer use runoff; leaching from septic tanks, sewage; erosion of natural deposits
Fluoride (ppm)	4	4	Avg: 0.97 ppm -when added Range: 0.74 – 1.45	No	*Daily	Erosion of natural deposits; water additive which promotes stronger teeth; discharge from fertilizer and aluminum factories
Total Organic Carbon - TOC (ppm)	NA	TT-TOC (Removal ratio greater than or equal to 1.0)	Minimum Annual Average Removal Ratio: 1.3 Range: 1.0 – 1.6	No	*Monthly	Naturally present in the environment
Radiological Contaminants						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found	Violation	Date of Sample	Typical Source of Contamination
Alpha emitters (pCi/L)	0	15	Not Detected	No	* May 2010	Erosion of natural deposits
Combined radium (pCi/L)	0	5	Not Detected	No	* May 2010	Erosion of natural deposits
Beta Emitters (pCi/L)	0	50	Not Detected	No	* May 2010	Decay of natural and man-made deposits
Disinfectant / Disinfection Byproduct Contaminants						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found	Exceedance	Date of Sample	Typical Source of Contamination
HAA5s (Total Haloacetic Acids) (ppb)	N/A	60	Highest Compliance Avg.: 28 Range: 22 – 38	No	Quarterly 2011	By-product of drinking water disinfection
TTHM (Total Trihalomethanes) (ppb)	N/A	80	Highest Compliance Avg.: 70 Range: 55 – 81	No	Quarterly 2011	By-product of drinking water disinfection
Chlorine (ppm)	MRDLG =4	MRDL = 4	Highest Quarterly Avg- 0.63 Range 0.20 – 0.80	No	Tested Monthly	Water additive used to control microbes
Lead and Copper Contaminants						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found	Exceedance	Date of Sample	Typical Source of Contamination
Copper (ppm)	1.3	1.3	0.07 (90 th Percentile) Range: Not Detected to 0.11 All five samples were below the respective Action Level	No	September 2011	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	0	15	< 1 (90 th Percentile) Range: all below 1 ppb All five samples were below the respective detection level	No	September 2011	Corrosion of household plumbing systems; Erosion of natural deposits

*Sampled at the City of Martinsville Water Treatment Plant

The results in the table are from testing done between 2010 and 2011. 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 results, though representative, are more than one year old.

The U.S. Environmental Protection Agency sets MCLs at very stringent levels. In developing the standards EPA assumes that the average adult drinks 2 liters of water each day throughout a 70-year life span. EPA generally sets MCLs at levels that will result in no adverse health effects for some contaminants or a one-in-ten-thousand to one-in-one-million chance of having the described health effect for other contaminants.

Other drinking water constituents you may be interested in are as follows:

In addition, routine compliance sampling in *May 2011* detected aluminum at a concentration of *0.23 mg/L*. This sample result is just above the Secondary Maximum Contaminant Level (SMCL) recommended by the EPA of 0.05 – 0.20 mg/L. The presence of aluminum at this concentration may result in a discoloration of the water or a metallic taste in the drinking water, and products made with water such as coffee and tea. Also in the compliance samples collected during May 2011, the sodium content was determined to be 13.8 ppm, which is below the maximum recommended level of 20 ppm by EPA. The recommended level was established for those individuals on a sodium-restricted diet. If you have any concerns about the sodium level in your drinking water, you may wish to consult with your physician.

Additional Information That You May Be Interested in:

The levels of total trihalomethanes (TTHM) in some quarterly samples collected during 2011 were greater than the PMCL of 80 ppb, but were not a violation of the drinking water standard. Compliance with the PMCL is based on a running annual average (4 quarters) of the quarterly samples collected and you will note the water supply did not exceed the drinking water limits on this basis. TTHM/HAA5 compounds are formed when trace amounts of naturally occurring organic compounds in the raw water source combine with chlorine that is used to disinfect the treated water. This water supply is served directly from the City of Martinsville water supply. Because of the nature of formation of these compounds in the presence of chlorine, increased detention time in the system allows additional formation beyond what is formed in the City's water supply and thus can account for higher levels detected. All locations do not have the same levels of TTHM/HAA5. Higher levels are expected in the areas with highest residence time (generally the furthest points in the system) and during the warmer months of the year. Some people who drink water containing TTHM/HAA5 in excess of the PMCL over many years could experience problems with their liver, kidneys or central nervous system and may have increased risk of getting cancer. This water system will continue to be monitored for TTHM/HAA5. We intend to maintain compliance with the drinking water contaminants.

ADDITIONAL INFORMATION FOR 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 Henry County Public Service Authority 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, 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>.

VIOLATION INFORMATION

Woodland Avenue Extension did not incur any violations during the 2011 calendar year.