Annual Drinking Water Quality Report Drink with Confidence

Valley Rural Utility Company Water Division

Valley Rural Utility Company, *your* utility company, is pleased to present the annual Consumer Confidence Report on Water Quality for the calendar year of 2018. This report is designed to inform you, our consumers, of the quality water that we supply to your homes. Valley Rural Utility Company (VRUC) is committed to providing quality drinking water. VRUC purchases water from two sources to ensure an adequate supply. Greendale Utilities and Tri-Township Water Corporation are those suppliers. Tri-Township Water, in Bright, has well fields that draw from the Whitewater Valley aquifer. Greendale Utilities has well fields that draw from the Ohio River Valley aquifer.

We are pleased to report that both sources provide us with safe drinking water meeting both state and federal requirements. Greendale Utilities and Tri-Township Water routinely test their water supplies for contaminants at the sources and within their systems. To ensure that the supply is not contaminated, VRUC also tests the water at several locations within Hidden Valley.

If you have any questions regarding this report or your utility company, please contact our General Manager, Floyd Ogden, at the VRUC office at (812) 539-3330 or (513) 564-1500. If you would like to remain informed and learn more about your utility company, please call. If you would like to be on the agenda for a meeting, a form needs to be filled out by noon on the Thursday before the meeting

"The sources of drinking water (both tap water and bottled water) include rivers, lake, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include:

- **Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.**
- **Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm 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, storm water runoff, and residential uses**
- **Organic chemicals, including synthetic and volatile organic chemicals, which are by-products of industry and processes and petroleum production, and can, also come from gas station, urban storm water runoff, and septic systems.**
- **Radioactive materials, which can be naturally occurring or be the result of oil and gas production and mining activities.**

In the table you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:
Part per million (ppm) or Milligrams per liter (mg/l) – one part per million corresponds to one minute in two years or a single penny in $10,000.
Part per billion (ppb) or Micrograms per liter- one part per billion corresponds to one minute in 2,000 years, or a single penny in $10,000,000.
Picocuries per liter (pCi/L)- picocures per liter is a measure of the radioactivity in water.
Maximum Contaminant Level- The "Maximum Allowed" (MCL) is the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
Maximum Contaminant Level Goal- The "Goal" (MCLG) is the level of a contaminant in drinking water below which there is no know or expected risk to health. MCLGS allows for a margin of safety.
Action Level (AL): The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements, which a water system must follow.

In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulation establish limits for contaminants in bottled water, which must provide the same protection for public health. Drinking water, including bottled water may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at (800) 426-4791.

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.

You, our customers, are the reason that VRUC takes such care with our water. We thank you for allowing us to provide your family with clean, quality water. Valley Rural Utility Company serves approximately 5,500 people. In 2018, we purchased 140,712,800 gallons of safe drinking water. This relates to an average of 385,5215 gallons per day or 77 gallons per person per day.

Always remember that we are here to serve you and provide quality water to your family. We ask that all of our customers help us protect our water sources, which are the heart of our community, our way of life, and our children's future. If you have any questions, please call our office.

Sincerely,
Floyd Ogden
The Board and Staff of Valley Rural Utility Company

TEST RESULTS

CONTAMINATES	POE 1 RESULTS	POE 2 RESULTS	UNIT MEASUREMENT	MCLG	MCL	VIOLATES	LIKEY SOURCE OF CONTAMINATION
RADIOACTIVE CONTAMINATES	**LAST DATE SAMPLED 4/16/2008**						
Radium 228	0.7	0.4	pCi/l	0	5	No	Decay of natural and man made deposits
INORGANIC CONTAMINATES	**LAST DATE SAMPLED 4/18/17**						
Barium	0.099	0.087	ppm	2	2	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Flouride (natural)	0.138	0.110	ppm	4	4	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Chlorine (daily 2018)	1.0	1.0	ppm	MRDLG=4 0		No	Water additive used to control microbes
Sodium	25.5	10.7	ppm	N/A	N/A	No	Leaching from ore-processing sites; discharge from electronics, glass, & drug factories
Nitrate (as Nitrogen) sample date 3/20/18	1.41	2.44	ppm	10	10	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
DISTRIBUTION SAMPLING							
Copper Sample date 7/18/17	0.126	0.126	ppm	1.3	AL=1.3	No	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead Sample date 7/18/17	0.0017	0.0017	ppm	0	AL=0.015	No	Corrosion of household plumbing systems; erosion of natural deposits
TTHM's (Total Trihalomethanes) Sample date 8/14/18	0.0112	0.0112	ppm	N/A	0.08	No	By-product of drinking water disinfections
(HAA5) (Haloacetic Acids) Sample date 8/14/18	0.0049	0.0049	ppm	N/A	0.06	No	By-product of drinking water disinfections

The Tri-Township Water Corporation operates two filtration plants. A 600 gpm (gallon per minute) plant at the Jamison Well Field and a 1200 gpm plant at the Cedar Grove Well Field. Both of these Plants are iron & Maganese removal plants & Chlorine is added for oxidation of Iron & Maganese & for disinfection. Tri-Township water employees test our Raw & Finished Water daily for Iron, Manganese, PH & Chlorine. Of our Finished Water, our Iron averages 0 00 Mg/L, our Maganese is 0.0 Mg/L & our PH averages 7 2-7 3. Chlorine dissipates the farther you get from the water plants where it is injected. We are required to maintain a 0.2 Mg/L throughout the distribution system. Our Free Chlorine levels will range from 1.0 Mg/L at the treatment plants to 0 4 Mg/L at the farthest point in our distribution system. The hardness of our water is 23 grains per gallon. **We also collect 10 Bacteriological samples monthly from various homes throughout the distribution system. These samples are sent to a State approved Laboratory, and we are pleased to report, all of our 2018 samples were satisfactory.**

WATER QUALITY TABLE

CONTAMINANT	MCL	MCLG	GREENDALE WATER	DATE	VIOLATION	SOURCES
Nitrate	10ppm	10 ppm	0.882 ppm	7/25/18	None	Run off from fertilizer use
Radioactive Contaminants						
Gross Alpha	15	0	2.3 pCi/L	6/28/17	None	Erosion of natural and man made deposits
Radium 228	5	0	0.45 pCi/L	6/28/17	None	Erosion of natural deposits
Uranium	30	0	0.56 ugll	5/09/17	None	Erosion of natural deposits
Synthetic Organic Compounds	Separate regulated	0	All BDL	5/03/16 9/23/16	None	Discharge from rubber & chemical factories
Sodium (MCL)	NR	NR	149 ppm	7/25/18	None	Natural erosion of road salt application
Chlorine Residual	4 MDRL	0	Result Min Max 1.0ppm 0.9ppm 1.1 ppm	2018	None	Water additive (disinfectant) used to control microbiological organisms
Inorganic Compounds						
Flouride	2ppm	2ppm	0.55ppm	7/25/18	None	Erosion of natural deposits, Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Barium (ICP)	2ppm	2ppm	BDL	7/25/18	None	Discharge of drilling waste; discharge from metal refineries; Erosion of natural deposits
Copper	AL 1.3 ppm	1.3ppm	0.172 ppm (90th percentile)	6/06/17	No samples exceeded the action level	Corrosion of household plumbing; erosion of natural deposits; leaching from wood preservatives
Lead	AL 15ppb	0	2.0ppb (90th percentile)	6/06/17	No samples exceeded the action level	Corrosion of household plumbing; erosion of natural deposits
Cyanide	0.2ppm	0.2ppm	BDL	10/6/15	None	Discharge from steel/metal factories; discharge from plastic & fertilizer factories
Beryllium	4.0 ppb	4.0 ppb	1.0 ppb	2018	None	Discharge from metal refineries & coal burning factories; Discharge from electrical, aerospace & defense industries
Volatile Organic Compounds						
HAA5	60 ppb	0	3.6 ppb	8/14/18	None	Byproduct of drinking water chlorination
TTHM	80 ppb	0	17.3 ppb	8/14/18	None	Byproduct of drinking water chlorination

TEST RESULTS

CONTAMINATES		DETECT LEVEL	VIOLATION	UNIT MEASUREMENT	MCLG	MCL	LIKEY SOURCE OF CONTAMINATION
RADIOACTIVE CONTAMINATES							
ALPHA EMITTERS							
Greendale	2017	2.3	NO	pCi/l	N/A	15	Erosion of natural deposits
Tri-Township	2008	0.7					Man made
RADIUM 228							
Tri-Township	2008	0.45	NO	ug/L		0.30	Erosion of natural deposits
Greendale	2017	0.45					
URANIUM	2017	0.56	NO	ug/L			
INORGANIC CONTAMINATES							
Beryllium	Greendale 2018	1	NO	ppb	4	4	Discharge from steel and pulp mills, erosion of natural deposits
Chromium			NO	ppm	0.1	0.1	
Tri-Township	2011	0.001					
NITRATE							
Greendale	2018	0.882	NO	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks,
Tri-Township	2018	2.44					erosion of natural sewage deposits
NICKEL							
Tri-Township	2014	0.006					Erosion of natural deposits leaching from
Greendale	2009	<0.1	NO	ppb	NR	0.0011	
BARIUM							
Tri-Township	2017	0.099	NO	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; natural deposits
FLUORIDE							
Greendale	2018	0.55	NO	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; dischage from Fertilizer and aluminum factor
Tri-Township	2017	0.138					
SODIUM-(AA-FLAME)							
Greendale	2018	149	NO	ppm	N/A	N/A	Erosion of natural deposits
Tri-Township	2017	25.5					
URANIUM							
Combined			NO				Erosion of natural deposits
Greendale	2017	0.45		pci/l	N/A	5	
CHLORINE							
Greendale	daily 2017	1.1		ppm			Water additive (disinfectant use to control
Tri-Township	daily 2017	1.0			4	5	microbiogical organisims
COPPER	2018	0.158		ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of
VRUC			NO				natural deposits, leaching from wood preservatives
LEAD	2018	3		ppb	0	AL=15	wood preservatives
TRIHALOMETHANES (TTHM)							
VRUC	2018	18.3	NO	ppb			
Greendale	2018	14.6	NO	ppb	N/A	80	
Tri-Township	2017	0.0073	NO	ppm	N/A	80	By product of chlornation
HALOACETIC ACIDS (HAA5)							
VRUC	2018	12.1	NO	ppb	N/A	60	
Greendale	2018	5.2	NO	ppb	N/A	60	
Tri-Township	2018	0.0039	NO	ppm	N/A	60	By product of drinking water chlorination

CONTAMINATE	COLLECT DATE	HIGHEST LEVEL DETECTED	RANGE OF LEVELS DETECTED	MCLG	MCL	UNITS	VIOLATION	LIKEY SOURCE OF CONTAMINATION
GROSS ALPHA EXCLUDING RADON AND URANIUM								
Greendale	6/28/17	2.3	2.3-2.3	0	15	pCi/L	No	Erosion of natural deposits
Tri-Township	5/10/17	0.7	0-0.7	0	15	pCi/L	No	Erosion of natural deposits
URANIUM								
Greendale	5/09/17	0.5594	0.5594-0.5594	0	30	ug/l	No	Erosion of natural deposits
Tri-Township	5/10/17	0.8964	0.7876-0.8964	0	30	ug/l	No	Erosion of natural deposits
BETA/PHOTON EMITTERS								
Tri-Township	5/10/17	2.3	1.5-2.3	0	4	mrem/yr	No	Decay of natural and man made deposits

Special Note on Arsenic: The new arsenic MCL is effective on January 23, 2006. Until then the MCL is 50 ug/l and there is no MCLG. Arsenic is a naturally-occurring mineral known to cause cancer in humans at high concentrations.

Special Note on 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. Our system is responsible for providing high quality drinking water, but can not control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 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.

All sources of drinking water are subject to potential contamination by constituents that are naturally occurring or is man made Those constituents can be microbes, organic or inorganic chemicals