2018 Annual Water Quality Report - BCPSA Page Water System
PWSID# 1027068

Is my water safe?

We are pleased to present this year's Annual Water Quality Report (Consumer Confidence Report) as required by the Safe Drinking Water Act (SDWA). This report is designed to provide details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. This report is a snapshot of last year's water quality. We are committed to providing you with information because informed customers are our best allies.

Do I need to take special precautions?

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/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Water Drinking Hotline (800-426-4791).

Where does my water come from?

All of your drinking water originates from the Clinch River. The Town of Richlands processes water from the river and sells it to the Russell County PSA Swords Creek Water System which, in turn, supplies the Page Water System.

Source Water Assessment and its Availability

A source water assessment of the Clinch River was conducted in 2001 by the Virginia Department of Health. The river was 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. The report is available by contacting your water system representative at the phone number or address given elsewhere in this drinking water quality report.

Description of Water Treatment Process

The Town of Richlands processes your water using a "treatment train" (a series of processes applied in a sequence) that includes coagulation, flocculation, sedimentation, filtration, and disinfection. Coagulation removes dirt and other particles suspended in the source water by adding chemicals (coagulants) to form tiny sticky particles called "floc," which attract the dirt particles. Flocculation (the formation of larger flocs from smaller flocs) is achieved using gentle, constant mixing. The heavy particles settle naturally out of the water in a sedimentation basin. The clear water then moves to the filtration process where the water passes through sand, gravel, charcoal or other filters that remove even smaller particles. A small amount of chlorine is used to kill bacteria and other microorganisms (viruses, cysts, etc.) that may be in the water before water is stored and distributed to homes and businesses in the community.

Why are there contaminants in my drinking water?

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 water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's (EPA) Safe Drinking Water Hotline (800-426-4791). The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity:

- Microbial contaminants, such as viruses and bacteria, that 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 by-products 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 that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

How can I get involved?

If you have any questions about this report or concerning the water utility, please contact Gregory McClanahan, Executive Director, or Robert Sauer, Assistant Director/System Operator at the Buchanan County Public Service Authority (BCPSA) during our normal office hours at 276-935-5827. Queries by mail should be sent to the address at the end of this report. If you want to learn more, please attend any of our regularly scheduled board meetings. They are held on the 3rd Monday of every month at 6:00 PM (except when scheduling conflicts necessitate a change). The meetings are held at Food City (meeting Room) in Vansant, VA. Every attempt will be made to address any questions or concerns as quickly as possible.

Water Conservation Tips

Did you know that the average U.S. household uses approximately 400 gallons of water per day or 100 gallons per person per day? Luckily, there are many low-cost and no-cost ways to conserve water. Small changes can make a big difference - try one today and soon it will become second nature.

- Take short showers - a 5 minute shower uses 4 to 5 gallons of water compared to up to 50 gallons for a bath.
- Shut off water while brushing your teeth, washing your hair and shaving and save up to 500 gallons a month.
- Use a water-efficient showerhead. They're inexpensive, easy to install, and can save you up to 750 gallons a month.
- Run your clothes washer and dishwasher only when they are full. You can save up to 1,000 gallons a month.
- Water plants only when necessary.

- Fix leaky toilets and faucets. Faucet washers are inexpensive and take only a few minutes to replace. To check your toilet for a leak, place a few drops of food coloring in the tank and wait. If it seeps into the toilet bowl without flushing, you have a leak. Fixing it or replacing it with a new, more efficient model can save up to 1,000 gallons a month.
- Adjust sprinklers so only your lawn is watered. Apply water only as fast as the soil can absorb it and during the cooler parts of the day to reduce evaporation.
- 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!
- Visit www.epa.gov/watersense for more information.

Cross Connection Control Survey

The purpose of this survey is to determine whether a cross-connection may exist at your home or business. A cross connection is an unprotected or improper connection to a public water distribution system that may cause contamination or pollution to enter the system. We are responsible for enforcing cross-connection control regulations and insuring that no contaminants can, under any flow conditions, enter the distribution system. If you have any of the devices listed below please contact us so that we can discuss the issue, and if needed, survey your connection and assist you in isolating it if that is necessary.

- Boiler/ Radiant heater (water heaters not included)
- Underground lawn sprinkler system
- Pool or hot tub (whirlpool tubs not included)
- Additional source(s) of water on the property
- Decorative pond
- Watering trough

Source Water Protection Tips

Protection of drinking water is everyone's responsibility. You can help protect your community's drinking water source in several ways:

- Eliminate excess use of lawn and garden fertilizers and pesticides - they contain hazardous chemicals that can reach your drinking water source.
- Pick up after your pets.
- If you have your own septic system, properly maintain your system to reduce leaching to water sources or consider connecting to a public water system.
- Dispose of chemicals properly; take used motor oil to a recycling center.
- Volunteer in your community. Find a watershed or wellhead protection organization in your community and volunteer to help. If there are no active groups, consider starting one. Use EPA's Adopt Your Watershed to locate groups in your community, or visit the Watershed Information Network's How to Start a Watershed Team.
- Organize a storm drain stenciling project with your local government or water supplier. Stencil a message next to the street drain reminding people "Dump No Waste - Drains to River" or "Protect Your Water." Produce and distribute a flyer for households to remind residents that storm drains dump directly into your local water body.

Other Information - Cryptosporidium

In mid-2017, the Town of Richlands (from which your drinking water is supplied) began monitoring for Cryptosporidium in the source water (before treatment) as required by EPA's Long Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR). Cryptosporidium is a microscopic parasite found in surface water

throughout the United States. Ingestion of Cryptosporidium may cause cryptosporidiosis, an abdominal infection. Although filtration removes Cryptosporidium, the most commonly-used filtration methods cannot guarantee 100 percent removal. Under the LT2ESWTR, the average Cryptosporidium concentration determines if additional treatment measures are needed. Twenty-four samples are required for analysis over a two-year period and the average Cryptosporidium concentration for the 18 samples collected in 2017 and 2018 was 0 oocysts per liter. Based on the Cryptosporidium monitoring results and the current performance of the treatment plant, the Town of Richlands anticipates meeting the future treatment requirements of the LT2ESWTR.

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. Page Water System 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.

Water Quality Data Table

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of contaminants in water provided by public water systems. The table below lists all of the drinking water contaminants that we detected during the calendar year of this report. Although many more contaminants were tested, only those substances listed below were found in your water. All sources of drinking water contain some naturally occurring contaminants. At low levels, these substances are generally not harmful in our drinking water. Removing all contaminants would be extremely expensive, and in most cases, would not provide increased protection of public health. A few naturally occurring minerals may actually improve the taste of drinking water and have nutritional value at low levels. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report. The EPA or the State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. As such, some of our data, though representative, may be more than one year old. In this table you will find terms and abbreviations that might not be familiar to you. To help you better understand these terms, we have provided the definitions below the table.

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Detect In Your Water	Range		Sample Date	Violation	Typical Source
				Low	High			
Disinfectants & Disinfection By-Products								
(There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants)								
Chlorine (as Cl2) (ppm)	4	4	0.53	0.2	1.17	2018	No	Water additive used to control microbes
Haloacetic Acids (HAA5) (ppb)	NA	60	54	5	63	2018	No	By-product of drinking water chlorination
TTHMs [Total Trihalomethanes] (ppb)	NA	80	82	45	148	2018	Yes	By-product of drinking water disinfection
Inorganic Contaminants								

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Detect In Your Water	Range		Sample Date	Violation	Typical Source
				Low	High			
Barium (ppm)	2	2	.052	NA	NA	2018	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Nitrate [measured as Nitrogen] (ppm)	10	10	0.62	NA	NA	2018	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Microbiological Contaminants								
Turbidity (NTU)	NA	0.3	0.8	NA	NA	2018	No	Soil runoff
100% of the samples were below the TT value of .3. A value less than 95% constitutes a TT violation. The highest single measurement was .14. Any measurement in excess of 1 is a violation unless otherwise approved by the state.								

Contaminants	MCLG	AL	Your Water	Sample Date	# Samples Exceeding AL	Exceeds AL	Typical Source
Inorganic Contaminants							
Copper - action level at consumer taps (ppm)	1.3	1.3	0	2016	0	No	Corrosion of household plumbing systems; Erosion of natural deposits
Inorganic Contaminants							
Lead - action level at consumer taps (ppb)	0	15	5.8	2016	1	No	Corrosion of household plumbing systems; Erosion of natural deposits

Violations and Exceedances

Total Trihalomethanes (TTHM)

Some people who drink water containing trihalomethanes in excess of the MCL over many years may have an increased risk of getting cancer. The TTHM Locational Running Annual Average (LRAA) exceeded the MCL of 80 ppb in the 3rd Quarters (July - September) of 2018. The exceedence resulted from high detection values in the same quarter. The PSA is working with the Health Department Office of Drinking Water (ODW) to determine the cause of the high detection values. System treatment and distribution system practices, including storage tank operations, excess storage capacity and treatment changes or problems that may contribute to TTHM formation are being examined while flushing of the distribution system to reduce existing levels is being carried out.

Unit Descriptions

Term	Definition
ppm	ppm: parts per million, or milligrams per liter (mg/L)
ppb	ppb: parts per billion, or micrograms per liter (µg/L)
NTU	NTU: Nephelometric Turbidity Units. Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system.
NA	NA: not applicable
ND	ND: Not detected
NR	NR: Monitoring not required, but recommended.

Important Drinking Water Definitions

Term	Definition
MCLG	MCLG: Maximum Contaminant Level Goal: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
MCL	MCL: Maximum Contaminant Level: The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Important Drinking Water Definitions	
TT	TT: Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
AL	AL: Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Variances and Exemptions	Variances and Exemptions: State or EPA permission not to meet an MCL or a treatment technique under certain conditions.
MRDLG	MRDLG: Maximum residual disinfection level goal. The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
MRDL	MRDL: Maximum residual disinfectant level. The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
MNR	MNR: Monitored Not Regulated
MPL	MPL: State Assigned Maximum Permissible Level
LRAA	LRAA: Locational Running Annual Average. The average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters.

For more information please contact:

Contact Name: Robert Sauer, Assistant Director/System Operator
Address: 1023 Old Benns Branch Rd
Oakwood, VA 24631
Phone: 2769355827

CONSUMER CONFIDENCE REPORT CERTIFICATION

Waterworks Name BCPSA – Page Water System **PWSID No.** 1027068

Instructions for completing this certification form:

- All systems must sign and date Part A and return the completed form to the VDH-Office of Drinking Water Field Office by October 1st to verify that CCR distribution was completed by July 1st.
- Systems serving 10,000 or more persons must fill out Parts B and D.
- Systems serving fewer than 10,000 persons but not electing to use a mailing waiver must fill out Parts B and D.
- Systems serving fewer than 10,000 persons electing to use a mailing waiver must fill out Part C.
- Reminder – Copy of CCR must be given to VDH-ODW at the same time it is delivered to customers.

Part A – I certify that the Consumer Confidence Report for calendar year 2018 has been prepared and distributed directly to customers in conformance with state and federal drinking water regulations governing consumer confidence reports. The distribution or publication was completed on the following date: _____.

Signature _____ Date _____

Title _____ Telephone_____

Part B – Systems serving 10,000 or more persons and systems serving fewer than 10,000 persons not electing to use a mailing waiver. Check all that apply. *Include a copy of CCR with this certification.*

( ) CCR distributed directly to customers by mail.
( ) CCR distributed directly to customers by electronic delivery. Briefly describe and provide copy of email, water bill, or post card/letter that was used to notify customers: _____
_____
( ) CCR distributed by hand or other direct method. Briefly describe: _____
_____
( ) CCR posted on the Internet (required for systems serving 100,000 or more persons.)
( ) Good faith effort (Part D below) does not apply since all consumers receive water bills.
( ) CCR available to public upon request.

Part C – Systems serving fewer than 10,000 persons electing to use a mailing waiver. All 3 items listed below apply, so all 3 must be checked. *Include a copy of CCR with this certification.*

( ) CCR published in its entirety in local newspaper of general circulation in the area.
( ) Customers informed in newspaper that CCR will not be mailed. If other method used to inform customers, describe:
[ ] separate newspaper notice [ ] mail
[ ] door-to-door [ ] posting
[ ] other method _____
( ) Customers and public informed in newspaper that CCR is available upon request.

Part D – Good faith effort to reach non-bill paying consumers. Check all that apply. One or more is required.

( ) posted CCR on Internet
( ) published CCR in local newspaper
( ) advertised CCR availability in local news media
( ) mailed CCR to postal patrons
( ) delivered CCR to community organizations
( ) posted CCR in public places - libraries, schools, community centers
( ) delivered multiple copies of CCR to single bill addresses serving multiple people
( ) other methods_____