2016 WATER QUALITY REPORT
Mount Hermon System
PWS ID No: 5143396

The Pittsylvania County Service Authority continues to provide you, our customer, with quality drinking water that meets all federal and state standards and regulations. This Annual Drinking Water Quality Report for the 2016 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, 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 Chris Adcock, Director, at (434) 836-7135, Monday through Friday during regular office hours (9:00 A.M. - 5:00 P.M.). The PCSA Board of Commissioners meets the third (3rd) Monday of each month at 7:30 P.M., at our office which is located at 405 R & L Smith Drive, Danville, VA. Please visit our website (pcsa.co) for additional information. Note: Paper copies will not be mailed but are available upon request, or can be viewed on our website (pcsa.co) under: "Water Quality Reports".

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 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 the result of oil / gas production or 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 C*ryptosporidium* 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 the Dan River which is classified as a surface water source, provided by the City of Danville. Treatment of the raw water is provided at the City of Danville Water Treatment Plant and consists of chemical addition, coagulation, flocculation, settling, filtration, fluoridation, corrosion control and chlorination. All of these processes work together to remove any physical, chemical, or biological contaminants to make the water safe for drinking. A source water assessment of our system was conducted in 2002 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, and documentation of any known contamination within the last 5 years. The report is available by contacting your water system representative, Mr. Christopher Adcock at (434) 836-7135.

KEEPING YOUR WATER SYSTEM SAFE

In order to keep your water supply safe, the PCSA is taking steps to protect the system and its valuable assets. With vandalism and terrorism in the world becoming a concern we are asking that you also be vigilant. Please report any suspicious activity that you might see or encounter to the PCSA office at 434-836-7135 or call the Sheriff's Department. This can be as simple as spotting someone other than the fire department getting water from a fire hydrant, non-PCSA staff tampering with a meter, suspicious activity at a water tank or our booster (pumping) stations.

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!

FIX A LEAK!

PCSA customers are responsible for all water usage on their side of the meter.

- The average household's leaks can account for more than 10,000 gallons of water wasted every year, or the amount of water needed to wash 270 loads of laundry.
- Common types of leaks found in the home include worn toilet flappers, dripping faucets, and other leaking valves. All are easily correctable.
- One way to find out if you have a toilet leak is to place a drop of food coloring in the toilet tank. If the color shows up in the bowl within 15 minutes without flushing, you have a leak. Make sure to flush immediately after this experiment to avoid staining the tank.
- If your toilet is leaking, the cause is often an old, faulty toilet flapper. Replacement of the whole rubber flapper is a relatively easy, inexpensive do-it-yourself project that pays for itself in no time.
- A leaky faucet that drips at the rate of one drip per second can waste more than 3,000 gallons per year (180 average showers)!
- A leak in your main supply line or irrigation system as small as 1/32 of an inch in diameter (about the thickness of a dime) can waste about 6,300 gallons of water per month.

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, 2016. 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) - 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.

Locational Running Annual Average (LRAA) – The average of sample analytical results for samples taken at a particular monitoring location in the distribution system during the previous four calendar quarters.

WATER QUALITY RESULTS
We routinely monitor for various contaminants in the water supply to meet all regulatory requirements. The attached 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. 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 *Pittsylvania County 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 the 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 (1-800-426-4791) or at http://www.epa.gov/safewater/lead.

Annual Drinking Water Quality Report for 2016

Water Quality Test Results

MOUNT HERMON SYSTEM - PCSA - PWSID NO. 5143396						
Lead and Copper						
Contaminant (Unit of Measurement)	**MCLG**	**MCL**	**Level Found / Range**	**Violation**	**Date of Sample** (frequency of test)	**Typical Source of Contamination**
Copper (ppm)	1.3	AL = 1.3	**0.08** (90th Percentile) Range: ND – 0.086 Of twenty samples collected, none were above the AL	No	July 2014 (every 3 years)	Corrosion of household plumbing systems
Lead (ppm)	0	AL = 15	Of twenty samples collected (from combined distribution systems) lead was non-detectable	No	July 2014 (every 3 years)	Corrosion of household plumbing systems
Disinfection Byproducts, Precursors, and Residuals						
Contaminant (Unit of Measurement)	**MCLG**	**MCL**	**Level Found / Range**	**Violation**	**Date of Sample**	**Typical Source of Contaminant**
TTHM (Total Trihalomethanes) (ppb)	N/A	80	Highest LRAA: **50** Range: 20 - 64	No	Quarterly 2016	By-product of drinking water disinfection
HAA5 -Total Haloacetic Acids (ppb)	N/A	60	Highest LRAA: **26** Range: 13 - 39	No	Quarterly 2016	By-product of drinking water disinfection
Chlorine (ppm)	MRDLG = 4	MRDL = 4	Average: **0.73** Range: 0.3 – 1.0	No	Monthly 2016	Water additive used to control microbes

Microbiological Contaminants
Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. The PCSA is pleased to report that there were **no detections** of total coliforms or e-coli bacteria in the monthly samples collected during calendar year 2016.

The source water for the Mount Hermon water system is obtained from the City of Danville, therefore we are providing testing data below from the City of Danville system.

REGULATED COMPOUNDS – From City of Danville Water Supply (source of Mt. Hermon system water)						
Contaminant & Unit of Measurement [1]	**MCLG**	**MCL**	**Level Detected And / or Range**	**Violation**	**Date of Sample**	**Typical Sources of Contaminant**
Gross Alpha [2] (pCi/L)	0	15	< 0.6	NO	May 2014 Every 6 Yrs.	Erosion of natural deposits
Combined Radium [2] (pCi/L)	0	5	< 0.6	NO	May 2014 Every 6 Yrs.	Erosion of natural deposits
Barium (ppm)	2	2	0.019	NO	August 2016 Annually	Discharge of drilling waste; discharge from metal refineries; erosion of natural deposits
Turbidity NTU In Finished Water	N/A	TT = 1 NTU max	Max = 0.289 Range: 0.018 – 0.289	NO	Tested continuously at plant	Soil runoff
		TT = at least 95% of the monthly samples <0.3 NTU	100%		N/A	
Fluoride (ppm)	4	4	Average = 0.65 ppm Range: 0.58 - 0.72	NO	Tested continuously at plant	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories; desired level 0.7
Nitrate (ppm)	10	10	0.19	NO	August 2016 Annually	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Total Organic Carbon - TOC (ppm)	N/A	TT – Based on the percentage of TOC removed during the treatment process; ratio must be greater than or equal to 1.00	TOC removal Ratio Lowest Running Average = 1.33 Range: 1.00 - 2.25	NO	Tested monthly at raw and treated water.	Naturally present in the environment.

Notes:

[1] Detected Compounds - Listed are compounds detected in Danville's drinking water. The State allows monitoring for some compounds less than once per year because the concentrations of these compounds do not change frequently.

[2] This data is the latest available. The SDWA requires that the highest value/lowest removal ratio detected during the calendar year be provided in this report. Not listed are the hundreds of other compounds for which we tested that were not detected.

VIOLATION INFORMATION

We did not receive any monitoring or operational violations during the 2016 calendar year.