

Presented By



**Palmetto State
Utility Services, Inc.**

A Subsidiary of American States Utility Services, Inc

ANNUAL
WATER
QUALITY
REPORT

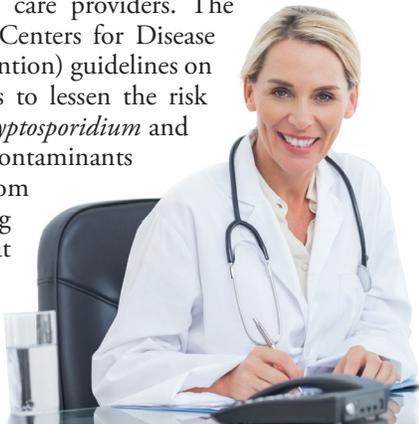
WATER TESTING PERFORMED IN 2016

We've Come a Long Way

Once again we are proud to present our annual water quality report covering the period between January 1 and December 31, 2016. In a matter of only a few decades, drinking water has become exponentially safer and more reliable than at any other point in human history. Our exceptional staff continues to work hard every day—at any hour—to deliver the highest quality drinking water without interruption. Although the challenges ahead are many, we feel that by relentlessly investing in customer outreach and education, new treatment technologies, system upgrades, and training, the payoff will be reliable, high-quality tap water delivered to you and your family.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791 or at <http://water.epa.gov/drink/hotline>.



Source Water Assessment

Columbia gets its water from the Broad River Diversion Canal (Canal) and Lake Murray (Lake). The Broad River collects water from a large portion of northern South Carolina through the Broad River Basin, while Lake Murray receives water from the Saluda River Basin. The South Carolina Department of Health and Environmental Control (SCDHEC) periodically assess the quality of source water for drinking water systems throughout the state. SCDHEC's Source Water Assessment Report is available and can be reviewed at 1136 Washington Street, or by calling 803-545-3400.

Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

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, in some cases, radioactive material, and substances resulting from the presence of animals or from human activity. Substances 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, or wildlife;

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may result from urban storm-water 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 storm-water runoff, and residential uses;

Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production and may also come from gas stations, urban storm-water runoff, and septic systems;

Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

FOG (fats, oils, and grease)

You may not be aware of it, but every time you pour fat, oil, or grease (FOG) down your sink (e.g., bacon grease), you are contributing to a costly problem in the sewer collection system. FOG coats the inner walls of the plumbing in your house as well as the walls of underground piping throughout the community. Over time, these greasy materials build up and form blockages in pipes, which can lead to wastewater backing up into parks, yards, streets, and storm drains. These backups allow FOG to contaminate local waters, including drinking water. Exposure to untreated wastewater is a public health hazard. FOG discharged into septic systems and drain fields can also cause malfunctions, resulting in more frequent tank pump-outs and other expenses.

Communities spend billions of dollars every year to unplug or replace grease-blocked pipes, repair pump stations, and clean up costly and illegal wastewater spills. Here are some tips that you and your family can follow to help maintain a well-run system now and in the future:

NEVER:

- Pour fats, oil, or grease down the house or storm drains.
- Dispose of food scraps by flushing them.
- Use the toilet as a waste basket.

ALWAYS:

- Scrape and collect fat, oil, and grease into a waste container such as an empty coffee can, and dispose of it with your garbage.
- Place food scraps in waste containers or garbage bags for disposal with solid wastes.
- Place a wastebasket in each bathroom for solid wastes like disposable diapers, creams and lotions, and personal hygiene products, including nonbiodegradable wipes.

Where Does My Water Come From?

Fort Jackson purchases drinking water from the City of Columbia. The City treats surface water from the Broad River and Lake Murray. The Installation of Fort Jackson is divided into two separate areas, Cantonment and Training. The Cantonment area receives its water from the Canal Water Treatment Plant. The range areas are serviced by nine wells and a connection to the City of Columbia's Lake Murray Water Treatment Plant.



Unregulated Contaminant Monitoring

We participated in the 3rd stage of the EPA's Unregulated Contaminant Monitoring Rule (UCMR3) program by performing additional tests on our drinking water. UCMR3 benefits the environment and public health by providing the EPA with data on the occurrence of contaminants suspected to be in drinking water, in order to determine if EPA needs to introduce new regulatory standards to improve drinking water quality. Contact us for more information on this program.

QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please call Tommy Quasney, Palmetto States Utility Services, Inc. Utility Manager, at 803-790-7288.



Lead in Home Plumbing

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. We are 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 www.epa.gov/lead.



What type of container is best for storing water?

Consumer Reports has consistently advised that glass or BPA-free plastics such as polyethylene are the safest choices. To be on the safe side, do not use any container with markings on the recycle symbol showing “7 PC” (code for BPA). You could also consider using stainless steel or aluminum with BPA-free liners.

How much emergency water should I keep?

Typically, 1 gallon per person per day is recommended. For a family of four, that would be 12 gallons for 3 days. Humans can survive without food for 1 month, but can survive only 1 week without water.

How long can I store drinking water?

The disinfectant in drinking water will eventually dissipate, even in a closed container. If that container housed bacteria before it was filled with tap water, the bacteria may continue to grow once the disinfectant has dissipated. Some experts believe that water could be stored up to six months before needing to be replaced. Refrigeration will help slow the bacterial growth.

How long does it take a water supplier to produce one glass of drinking water?

It could take up to 45 minutes to produce a single glass of drinking water.

Results of Detected Contaminants

PSUS and the City of Columbia constantly monitor for various contaminants in the water supply to meet all regulatory requirements. The tables list 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 following tables list the drinking water contaminants that were detected during the 2016 calendar year. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in these tables is from testing done January 1 – December 31, 2016. The state requires PSUS to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, are more than one year old.

We are pleased to report to you that there were no detections of total coliforms or fecal coliforms in the monthly samples collected during the calendar year 2016.

REGULATED SUBSTANCES									
				Palmetto States Utility Services, Inc.		City of Columbia			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chloramines (ppm)	2016	[4]	[4]	NA	NA	2.5	2.0–2.5	No	Water additive used to control microbes
Chlorine Dioxide (ppb)	2016	[800]	[800]	NA	NA	143	0–143	No	Water additive used to control microbes
Chlorine (ppm)	2016	[4]	[4]	2.00	2.00–2.00	NA	NA	No	Water additive used to control microbes
Chlorite (ppm)	2016	1	0.8	NA	NA	0.528	0.280–0.656	No	By-product of drinking water disinfection
Fluoride (ppm)	2016	4	4	NA	NA	0.55	0.54–0.55	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAA] (ppb)	2016	60	NA	31.00	5.81–37.26	45	14–69	No	By-product of drinking water disinfection
Nitrate (ppm)	2016	10	10	NA	NA	0.345	0.22–0.47	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
TTHMs [Total Trihalomethanes] (ppb)	2016	80	NA	25	11–35.7	44	8–61	No	By-product of drinking water disinfection
Total Coliform Bacteria (% positive samples)	2016	5% positive monthly samples	0	0	NA	2.63	NA	No	Naturally present in the environment
Total Organic Carbon (% removal)	2016	TT	NA	NA	NA	44.14	34.20–59.90	No	Naturally present in the environment
Turbidity ¹ (NTU)	2016	TT	NA	NA	NA	0.26	NA	No	Soil runoff
Turbidity (lowest monthly percent of samples meeting limit)	2016	TT = 95% of samples meet the limit	NA	NA	NA	100	NA	No	Soil runoff
Tap Water Samples Collected for Lead and Copper Analyses from Sample Sites throughout the Community									
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL	VIOLATION	TYPICAL SOURCE		
Copper (ppm)	2016	1.3	1.3	0.16	0	No	Corrosion of household plumbing systems; Erosion of natural deposits		
Lead (ppb)	2016	15	0	5.0	1	No	Corrosion of household plumbing systems; Erosion of natural deposits		

UNREGULATED SUBSTANCES - PALMETTO STATES UTILITY SERVICES, INC.

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Bromodichloromethane (ppm)	2016	0.007	0.003–0.011	Disinfectant by-product
Bromoform (ppm)	2016	0.19	0–0.19	Disinfectant by-product
Chloroform (ppm)	2016	0.020	0.06–0.023	Disinfectant by-product
Dibromochloromethane (ppm)	2016	0.002	0.000–0.004	Disinfectant by-product
Dichloroacetic Acid (ppm)	2016	0.015	0.003–0.023	Disinfectant by-product
Monobromoacetic Acid (ppm)	2016	0.002	0.001–0.003	Disinfectant by-product
Monochloroacetic Acid (ppm)	2016	0.006	0.0–0.023	Disinfectant by-product
Trichloroacetic Acid (ppm)	2016	0.009	0.002–0.016	Disinfectant by-product

UNREGULATED CONTAMINANT MONITORING RULE - PART 3 (UCMR3)

		Palmetto States Utility Services, Inc.		City of Columbia		
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
1,4-Dioxane (ppb)	2014	0.28	NA	0.38	0.29–0.47	NA
Chlorate (ppb)	2014	290	280–300	235	170–300	Disinfectant by-product
Chromium [Total] (ppb)	2014	0.27	0.24–0.3	0.15 ²	0–0.30 ²	Naturally occurring element
Chromium-6 (ppb)	2014	0.089	NA	0.0975	0.085–0.11	Naturally occurring element
Molybdenum (ppb)	2014	2.2	1.7–2.7	1.55	1.1–1.8	Naturally occurring element
Strontium (ppb)	2014	46	46–47	50	42–58	Naturally occurring element
Vanadium (ppb)	2014	0.695	0.58–0.81	0.61	0.47–0.75	Naturally occurring element

¹Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of the filtration system.

²Sampled in 2016.

Definitions

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

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. Amount Detected values for TTHMs and HAAs are reported as LRAAs.

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.

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.

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.

MRDLG (Maximum Residual Disinfectant 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.

NA: Not applicable.

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

PDWS (Primary Drinking Water Standard): MCLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter). This is equivalent to 1 drop in 14,000 gallons (average swimming pool)

ppm (parts per million): One part substance per million parts water (or milligrams per liter). This is equivalent to 3 drops in 42 gallons (large bathtub)

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