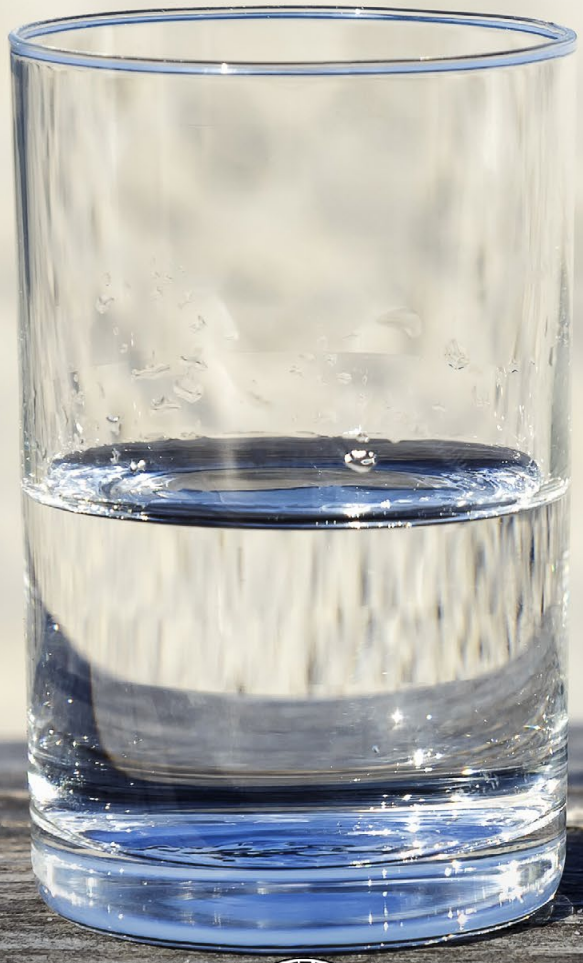
ANNUAL WATER QUALITY REPORT

Reporting Year 2023



Presented By

Dorchester County Water Authority

PWS ID#: SC 1820001 Knightsville; SC 1850009 Calomet Valley; SC 1820003 Tranquil

Our Commitment

We are pleased to present to you this year's annual water quality report. This report is a snapshot of last year's water quality covering all testing performed between January 1 and December 31, 2023. Included are details about your sources of water, what it contains, and how it compares to standards set by regulatory agencies. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water and providing you with this information because informed customers are our best allies.

Source Water Assessment

A source water assessment has been completed for our system and for the Santee Cooper Regional Water System, our water supplier. The purpose of the assessment is to determine the susceptibility of each drinking water source to potential contaminant sources. The report includes background information and a relative susceptibility rating of higher, moderate, or lower. It is important to understand that a higher susceptibility rating does not imply poor water quality, only the system's potential to become contaminated within the assessment area. You can access this report at scdhec.gov/sites/default/files/docs/HomeAndEnvironment/Docs/Watershed/wwqa/Santee_WWQA_2013.pdf. Dorchester County Water Authority has a source water assessment on file with SC Department of Health and Environmental Control. Our water is a blend of well water and surface water. If you would like a copy of the assessment please call our office.

Important Health Information for Our Vulnerable Consumers

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. Environmental Protection Agency (EPA)/Centers for Disease Control and Prevention (CDC) 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 http://water.epa.gov/drink/hotline.

Community Participation

If you would like to learn more about your water provider, please attend any of our scheduled board meetings. They are held at 5:30 p.m. on the second Monday of each month in our office. Our meeting schedule is posted at dcwaonline.com, along with newsletters and prior water quality reports. If you have any questions. feel free to call our office at (843) 875-0140. Our office staff will gladly take a message and make sure you are contacted by personnel equipped to answer any questions you may have.

What's Your Water Footprint?

You may have some understanding about your carbon footprint, but how much do you know about your water footprint? The water footprint of an individual, community, or business is defined as the total volume of freshwater that is used to produce the goods and services that are consumed by the individual or community or produced by the business. For example, 11 gallons of water is needed to irrigate and wash the fruit in one half-gallon container of orange juice. Thirty-seven gallons of water is used to grow, produce, package, and ship the beans in that morning cup of coffee. Two hundred and sixty-four gallons of water is required to produce one quart of milk, and 4,200 gallons of water is required to produce two pounds of beef.

According to the U.S. EPA, the average American uses over 180 gallons of water daily. In fact, in the developed world, one flush of a toilet uses as much water as the average person in the developing world allocates for an entire day's cooking, washing, cleaning, and drinking. The annual American per capita water footprint is about 8,000 cubic feet, twice the global per capita average. With water use increasing sixfold in the past century, our demands for freshwater are rapidly outstripping what the planet can replenish. To check out your own water footprint, go to www.watercalculator.org.

Questions?

For more information about this report, or for any questions relating to your drinking water, please call Richie Murdaugh at (843) 875-0140. You may also contact us at dcwaonline.com.

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 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 may also come from gas stations, urban stormwater 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.

New Safe Drinking Water Standard Announced

On Wednesday, April 10, 2024, the EPA announced a new addition to the national drinking water standards with regard to PFOA and PFOS. These are two specific members of a group of thousands of chemicals called per- and polyfluoroalkyl substances, PFAS for short. PFAS are widely used, completely man-made compounds that break down very slowly over time. They are sometimes referred to as "forever chemicals".

The EPA's new drinking water standards for PFOA and PFOS are 4 ppt for each.

Public water systems will have three years to complete their initial monitoring requirements. They must inform the public of the level of PFAS measured in their drinking water and must implement solutions to reduce PFAS in their drinking water to levels below these standards within five years.

Where Are PFAS Found?

The EPA estimates that 80% of a typical person's PFAS exposure comes from consumer products such as cookware (non-stick coatings), cosmetics, food wrappings, stain and water-resistant clothing, and carpet and furniture treatments. They are also widely used in deodorants, contact lenses, dental floss, toilet paper, and feminine products. People can also be exposed to PFAS by eating foods containing them, especially fish from PFAS contaminated surface water sources. They are also prevalent in the air, surface and ground water sources, and rainwater.

A person's exposure to PFAS can vary due to several factors. They've been used in millions of ways since the 1940's because of their resistance to heat, water, and stains. Teflon, the most famous PFAS, was first used on pans as early as 1961, resulting in more than 60 years of consumer use.

The EPA estimates that 20% or less, of a person's total exposure to PFAS comes from drinking water. We want you to know that water utilities do not produce or use any PFAS products in our treatment processes. In short, water providers, such as Dorchester County Water Authority, are being tasked to remove these potentially hazardous substances in which they are the recipient of from other sources at their own expense.

Regardless of the challenges posed by PFAS, Dorchester County Water Authority is committed to providing safe, reliable drinking water in a way that protects public health.

I Live in Knightsville - Where Does My Water Come From?

Knightsville has a blended water system. In an effort to provide our customers with the highest-quality water at an economical price, Dorchester County Water Authority purchases some of our water from Summerville Commissioners of Public Works. Surface water purchased from Summerville comes from the Santee Cooper Lake Moultrie Regional Water System. Its source water is Lake Moultrie. Water from local wells is blended with this supply before it's distributed to your home.

I Live in Calomet Valley or Tranquil - Where Does My Water Come From?

Calomet Valley and Tranquil water systems are master-metered, and your water is surface water purchased from the Summerville Commissioners of Public Works. Summerville water comes from the Santee Cooper Lake Moultrie Regional Water System; its water source is Lake Moultrie, a 60,000-acre freshwater lake that is part of the Catawba-Santee basin.

Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule, and the water we deliver must meet specific health standards. Here, we only show those substances that were detected in our water (a complete list of all our analytical results is available upon request). Remember that detecting a substance does not mean the water is unsafe to drink; our goal is to keep all detects below their respective maximum allowed levels.

The state recommends monitoring for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

REGULATED SUBSTANCES

				Tranquil–1820003		Knightsville–1820001		Calomet Valley–1850009			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Beta/Photon Emitters (pCi/L)	2022	50[1]	0	NA	NA	7.51	ND–7.51	NA	NA	No	Decay of natural and human-made deposits
Chlorine (ppm)	2023	[4]	[4]	2.0	2.0–2.0	2	2–2	2.8	1.7–2.8	No	Water additive used to control microbes
Combined Radium (pCi/L)	2022	5	0	NA	NA	0.0719	ND–0.0719	NA	NA	No	Erosion of natural deposits
Fluoride (ppm)	2022	4	4	NA	NA	2.4	ND–2.4	NA	NA	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAAs]–Stage 1 (ppb)	2023	60	NA	16	12.60–18.20	13	3.5–17.9	16	0–16.10	No	By-product of drinking water disinfection
TTHMs [total trihalomethanes]–Stage 1 (ppb)	2023	80	NA	29	22.20–34.40	27	17.80–36.10	33	33–33	No	By-product of drinking water disinfection

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

				Tranquil–1820003		Knightsville–1820001		Calomet Valley–1850009			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH %ILE)	SITES ABOVE AL/ TOTAL SITES	AMOUNT DETECTED (90TH %ILE)	SITES ABOVE AL/ TOTAL SITES	AMOUNT DETECTED (90TH %ILE)	SITES ABOVE AL/ TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2022	1.3	1.3	0.0072	0/10	0.0061[2]	0/28[2]	0.0055[3]	0/5[3]	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2022	15	0	0.37	0/10	0.28[2]	0/28[2]	0.90[3]	0/5[3]	No	Lead service lines; Corrosion of household plumbing systems, including fittings and fixtures; Erosion of natural deposits

[1] The MCL for beta particles is 4 millirems per year. U.S. EPA considers 50 pCi/L to be the level of concern for beta particles.
[2] Sampled in 2023.
[3] Sampled in 2021.

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 we 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 two 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 at (800) 426-4791 or www.epa.gov/safewater/lead.

Definitions

90th %ile: The levels reported for lead and copper represent the 90th percentile of the total number of sites tested. The 90th percentile is equal to or greater than 90% of our lead and copper detections.

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

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.

pCi/L (picocuries per liter): A measure of radioactivity.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

To the Last Drop

The National Oceanic and Atmospheric Administration (NOAA) defines drought as a deficiency in precipitation over an extended period of time, usually a season or more, resulting in a water shortage causing adverse impacts on vegetation, animals, and people. Drought strikes in virtually all climate zones, from very wet to very dry.

There are primarily three types of drought: Meteorological Drought refers to the lack of precipitation, or the degree of dryness and the duration of the dry period; Agricultural Drought refers to the agricultural impact of drought, focusing on precipitation shortages, soil water deficits, and reduced groundwater or reservoir levels needed for irrigation; and Hydrological Drought pertains to drought that usually occurs following periods of extended precipitation shortfalls that can impact water supply (i.e., stream flow, reservoir and lake levels, groundwater).

Drought is a temporary aberration from normal climatic conditions, and it can vary significantly from one region to another. Although normally occurring, human factors such as water demand can exacerbate the duration and impact that drought has on a region. By following simple water conservation measures, you can help significantly reduce the lasting effects of extended drought.

Benefits of Chlorination

Disinfection, a chemical process used to control disease-causing microorganisms by killing or inactivating them, is unquestionably the most important step in drinking water treatment. By far, the most common method of disinfection in North America is chlorination.

Before communities began routinely treating drinking water with chlorine (starting with Chicago and Jersey City in 1908), cholera, typhoid fever, dysentery, and hepatitis A killed thousands of U.S. residents annually. Drinking water chlorination and filtration have helped to virtually eliminate these diseases in the U.S. Significant strides in public health are directly linked to the adoption of drinking water chlorination. In fact, the filtration of drinking water and the use of chlorine are probably the most significant public health advancements in human history.

How chlorination works:

Potent Germicide Reduction of many disease-causing microorganisms in drinking water to almost immeasurable levels.

Taste and Odor Reduction of many disagreeable tastes and odors from foul-smelling algae secretions, sulfides, and decaying vegetation.

Biological Growth Elimination of slime bacteria, molds, and algae that commonly grow in water supply reservoirs, on the walls of water mains, and in storage tanks.

Chemical Removal of hydrogen sulfide (which has a rotten egg odor), ammonia, and other nitrogenous compounds that have unpleasant tastes and hinder disinfection. It also helps to remove iron and manganese from raw water.

Santee Cooper Regional Water System Results

SUBSTANCE (UNIT OF MEASURE)	MCL	AVERAGE LEVEL DETECTED
Alkalinity (ppm)	NS	19
Total Hardness (ppm)	NS	25
Conductivity (µmhos/cm)	NS	148
Temperature (C)	NS	20.8
pH (SU)	6.5 - 8.5	7.82
Total Dissolved Solids (ppm)	500	87.5