2017 Water Quality Results
We met or surpassed all water quality requirements.
Our drinking water was tested more than 20,000 times for over 150 substances and parameters.

Water Characteristics
Our water is clean, safe, enjoyable, and affordable.
Our mission is to support public health and protect the environment.
Our vision is to achieve excellence and exceed customer expectations.

2017 Average
- Chloride: 250 ppm
- Fluoride: 0.61 ppm
- Dissolved Organic Carbon (DOC): 0.27 mg/L
- Copper: 1.3 ppm
- Lead: 0.05 ppm

500 ppm Range: 0.13 – 1.0 ppm
4 ppm Range: 0 – 100 ppb
10 ppm Range: 0 to 100 ppb
1.3 ppm Range: 0 to 100 ppb
800 ppb Range: 0 to 100 ppb
2 ppm Range: 0 to 100 ppb
100 ppb Range: 0 to 100 ppb

Chlorine Dioxide
- Naturally occurring in some water sources, particularly groundwater. It is also added to
- A compound of chlorine and ammonia added in small amounts to treated water to protect against
- 0.61 ppm in finished water
- 4 ppm MRDL

Nitrate/Nitrite
- A byproduct of disinfection
- 4 ppm
- 1.1 ppm
- <0.05 ppm
- 56 ppm (3.27 gpg)
- Required % removal varies from 15 PCU

Sodium
- Required by EPA
- 0.05 ppm
- Removal ratio RAA = 1.39

Manganese
- Required by EPA
- Range: 0 – 1.9%
- 90th percentile = 1.3 ppb*

Silica
- Required by EPA
- Range: 0 to 100 ppb
- 1.3 ppm
- 1.1 ppm

Definition:
Maximum Contaminant Level Goal (MCLG)
Recommended by EPA

Chloramines
- A compound of chlorine and ammonia added in small amounts to treated water to protect against
- 0.61 ppm in finished water
- 4 ppm MRDL

Turbidity
- A measure of the cloudiness or opacity of water caused by suspended particles or dissolved substances.
- 1.3 ppm
- 1.1 ppm

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Message from the EPA
- Some people may be more vulnerable to contaminants in drinking water than the general population. Immune-compromised persons, such as persons with HIV/AIDS or other immune system disorders, persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, some elderly and infants can be particularly at risk from infections.

Possible Contaminants in Source Water
- The sources of drinking water (both tap and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells.
- As water travels over land and into streams, it dissolves natural minerals and picks up unwanted nutrients.

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Possible contaminants, such as nitrates and nitrates, which can be naturally occurring or the result of more urban water research, industrial or domestic wastewater discharges, oil and gas production, mining or farming.

Radioactive compounds can be naturally occurring or the result of oil and gas production and mining activities.

Postulates and pesticides may come from agriculture, lawn, and residential uses.

Bacteria, viruses, and protozoa are usually 5 to 10 times smaller than the average 1-liter sample.
Fluoride Position Statement
Adopted by the Board of Commissioners October 24, 2017

The Charleston Water System (CWS) supports the recommendations of the World Health Organization, American Medical Association, Canadian Medical Association, Centers for Disease Control and Prevention (CDC), American Dental Association, Canadian Dental Association, South Carolina Dental Association and other professional organizations in the medical community for the proper fluoridation of public water supplies as a public health benefit. We also support regular scrutiny of the most current peer reviewed research on fluoride and the positions of the medical and dental community.

We adjust the naturally occurring level of fluoride in our drinking water to a responsible, effective, and reliable manner that includes monitoring and controlling fluoride levels as mandated by state and/or federal laws, regulations and recommendations. We continually monitor and adjust possible sources to achieve the scientifically recommended concentration of fluoride for protection against dental caries, which is 0.7 parts per million. Our annual cost for this program is about $150,000, which equates to $0.20 per person across the approximately 400,000 people in our water service area.

This CWS participates in the foundation of the state under the guidance of the South Carolina Department of Health and Environmental Control (SCDHEC). The Health Division, SCDHEC coordinates their program in cooperation with the CWS and the U.S. Department of Health and Human Services.

If there are questions regarding these programs, please contact:

SCDHEC
Division of Oral Health
2100 Bull Street, Columbia, S.C. 29201
P: (803) 898-6577
F: (803) 898-2045

For more information, visit www.scidhec.gov

Source Water Protection
To raise awareness about preventing water pollution, SC DHEC identifies potential sources of contamination for each drinking water source in the state. www.sparkandalarm.com

How You Can Help
Stormwater runoff pollutes local waterways.

Do not throw debris, tires, or any other material into storm drains.

No dumping in storm drains. They empty directly into a waterway.

Don’t over-fertilize your lawn. It washes into storm drains, streams, rivers and oceans.

Our team is dedicated to producing the highest quality drinking water for our customers and excellent fire protection for our community.

Jane Byrne, PhD
Director, Water Treatment
Hanahan Water Treatment Plant
BS: Biology, Francis Marion University
Masters of Earth and Environmental Resource Management, University of South Carolina
Masters of Business Administration, The Citadel
An operator license: Water Treatment

Becky Thames
Lahk Director
Hanahan Water Treatment Plant
BS: Biology, Francis Marion University
Masters of Earth and Environmental Resource Management, University of South Carolina
Masters of Business Administration, The Citadel
An operator license: Water Treatment

I work with a great team of water professionals, and we’re all proud of what we do to protect the health of our community!

Jason Thompson
Source Water Manager
Hanahan Water Treatment Plant
BS: Chemistry, University of Tennessee at Chattanooga
Licensed water treatment professional
Responsible for the development and oversight of the source water management plans for both water sources: Buddy Park Reservoir and the Fish River.

“Water quality begins at the source.”

Water Treatment Process

Chlorine
Chlorine Dioxide (disinfectant)
Orthophosphates and Copper (counter)
Fluoride (oral health)
Chloramine (feed & copper central)
Park Reserved
Busiess
Nest
Finished Drinking Water

Three:
1. Sedimentation
2. Coagulation/Flocculation
3. Disinfection

We receive water from the Bushy Park Reservoir and Edisto River through deep tunnels to our plant.

Rapid Mixing
Aerobic settling, pH adjusted and water is rapidly mixed with chlorine dioxide (a-sodium that helps the impurities stick together to form bigger particles called floc.

Filtration: The water travels through filters made of activated carbon, sand, and gravel. This removes any remaining microscopic particles and microorganisms.

Disinfection
Finally, the water is disinfected to protect against bacteria. We use chlorine dioxide and a combination of chlorine and ammonia called chloramines to disinfect the water. Fluoride is added to support good dental health.

Distribution
Treated water is then pumped into pipes that deliver it to more than 450,000 people and businesses in the greater Charleston area.

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We’re a publicly owned water and wastewater utility. We provide clean drinking water to more than 450,000 people in the greater Charleston area, including downtown retail to over 125,000 homes and businesses and wholesale water service to neighboring cities and municipalities. Our public water system specification number is 101865.

We’re governed by a board of seven Commissioners, which meets monthly. These meetings are open to the public, and citizen participation is welcomed. Meetings are typically held the second Tuesday of every month at 9 a.m. at 103 St. Philip Street. For more information, visit www.charlestonwater.com.

Visit Charleston Water System on Facebook: facebook.com/charlestonwater
Visit Charleston Water System on Twitter: @ChasWaterSystem
Visit Charleston Water System on Instagram: Charlestonwater.com

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Quick Facts:

Million Gallons a Day (MGD)

58 MGD
Average volume of treated water

96 MGD
Winter Storm Grayson (Jan., 2018)

105.5 MGD
Record volume (Dec., 1999)

115.4 MGD
SC DHEC permitted volume

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Service Interruptions

Water Outage Notification
We always notify affected customers before we work on water mains. We knock on doors, use door hangers, post signs in neighborhoods, or are our call technology. Major outages are posted on our homepage, social media channels or automated phone system at (843) 727-4000, and shared with media when appropriate.

Water Main Repairs
Most take hours to days. Planned repairs and maintenance are scheduled during off-peak water demand.

Disconnected Water
If it’s not harmful, just let your cold water faucet run until clear.

Electric Water Advisories
A precautionary measure to alert people to boil tap water before use. They’re issued after accidents that could allow bacteria to enter the water distribution system, such as a large water main break, a widespread loss of system pressure, or a natural disaster.

Water Sources
Water from the Buddy Park Reservoir and Edisto River flows through deep tunnels to our plant.

Rapid Mixing
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Before arriving at your tap, water is treated at the Bushy Park Treatment Plant (BPTP) to remove sediment, bacteria, and other impurities. The plant is a member of the Partnership for Safe Water and meets or exceeds all water quality standards.

Customer Service
(843) 727-4000, customerservice@charlestonwater.com

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Get Involved
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Susan Levison
Communications Manager (843) 727-7146

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YouTube.com/CharlestonWater
Our water treatment video is awesome!

facebook.com/charlestonwater

@ChasWaterSystem

Charlestonwater.com

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Service Area

Water

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