

### Wholesale Customers

The Commissioners of Public Works provides drinking water on a contract basis to several other utilities in the Charleston area. These utilities may use all CPW water or supplement their own sources with only a portion of CPW water. These utilities include Dorchester County Public Works, Dorchester County Water Authority, City of Folly Beach, Isle of Palms, Mt. Pleasant, Town of Lincolnville, Town of Sullivan's Island, Department of Defense installations and St. Johns Water Company who in-turn wholesales to Kiawah Island Utility and Seabrook Island Water and Sewer.



For more information about this report contact the CPW Customer Service Department at 727-6800 from 8:00am to 5:00pm Monday through Friday. We also have information available on our web site <http://www.charlestoncpw.com>

CPW's Commissioner's Meetings provide opportunities for public participation. The meetings are held on the fourth Tuesday of every month in the 1st floor meeting room at 103 St. Philip Street, Charleston, SC. Contact (843) 727-6856 for specific dates and times.

Este informe contiene información muy importante. Tradúscalo ó hable con alguien que lo entienda bien.

### CPW Customer Service Locations:

Main Office Downtown: 103 St. Philip Street  
West Ashley Office: 4 Carriage Lane  
North Area Office: 6296 Rivers Avenue



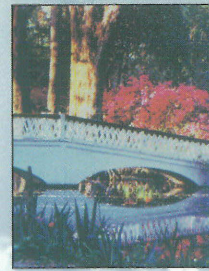
Commissioners  
of Public Works  
of the City of Charleston

# 1999 Annual Drinking Water Quality Report

Every gallon of CPW water:

- ✓ meets all drinking water standards!
- ✓ is tested continuously for safety!
- ✓ has NO fat, calories, or cholesterol!

Photo Credits: Mark Cline, Dixie Fanning, Jim Owens, Kevin Whitsett, Clif Wooten



### Our Vision for the Future

"Our vision is to become by the year 2005, a best-in-class utility through innovation, competitiveness and quality services." CPW is in compliance with all State and Federal regulations. In 1999, we conducted 31,000 tests for over 630 contaminants that may be found in water. The few that we found are listed in Table 1 and all of those were at safe levels. The water produced by Charleston CPW is safe to drink.

### Treatment Facility

The Hanahan Water Treatment Plant is the largest single water treatment plant in SC. We currently produce 50 million gallons of water a day and have the capability to treat up to 118 million gallons per day. The plant uses state-of-the-art technology to produce the best quality drinking water possible at a reasonable cost. The plant is staffed 24 hours a day, 365 days a year by highly trained, state licensed operators. The technical ability and expertise of CPW personnel has allowed us to surpass all state and national water quality standards and regulations.



### Surface Water Source

In 1999, CPW treated water from Bushy Park Reservoir and Edisto River at the Hanahan Water Treatment Plant. As the rivers pass through the countryside, it is possible for contaminants to find their way into the river. 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 EPA's Safe Drinking Water Hotline (1-800-426-4791). The Environmental Protection Agency (EPA) and the South Carolina Department of Health and Environmental Control (DHEC) prescribe regulations which ensure that water sold by public water systems contains no harmful contaminants. The Food and Drug Administration (FDA) regulations prescribe similar limits for contaminants in bottled water.



The Source Water Assessment and Protection Program (SWAP) for the state of South Carolina can be viewed at the DHEC site: [www.state.sc.us/dhec/eag/water/html/srcewtr.html](http://www.state.sc.us/dhec/eag/water/html/srcewtr.html). The plan's main objective is to prevent contamination from occurring in watershed areas that supply drinking water.

### Understanding the Significance of Compounds Found in Drinking Water



**Fluoride** - Fluoride is added to drinking water to help prevent tooth decay. We add the amount recommended by the American Dental Association.

**Microbial Testing** - *Giardia* and *Cryptosporidium* are two types of microscopic protozoa that can cause illness in humans. There are many ways to come in contact with these parasites including contaminated foods, swimming pools, recreational waters, day care centers, contact

with contaminated soil, nursing homes, and drinking water. CPW is taking steps to ensure these organisms do not pose a problem in the drinking water. The treatment plant has multiple barriers of protection such as enhanced chemical coagulation, filtration, disinfection, and careful monitoring of turbidity to ensure the optimum removal of these organisms. However, for people with compromised immune systems, the EPA and the US Center for Disease Control offer the following advisory statement: "Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-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 some infants can be particularly at risk from infections. These people should seek advice from their health care providers. EPA/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 (1-800-426-4791)."



**Turbidity** - Turbidity is a measurement of the clarity of the water and is an indicator of overall water quality. CPW measures the turbidity of the water on a continuous basis 24 hours a day and has consistently produced water that is well below the EPA standard.

# Drinking Water Quality Report • Typical Water Quality for 1999

(The information in the following tables covers the period of January 1999 to December 1999. The data presented is from the most recent monitoring done in compliance with regulations.)

## Charleston CPW System – Table One

	Parameter	Units	CPW Water Highest Level Detected	Range or Other Comments	MCL	Date Sampled	MCLG	Possible Sources in Water
<b>REGULATED</b>	Total Coliform Bacteria	% positive samples	1.4% highest level detected in any monthly sample	0% to 1.4%	Presence of coliform bacteria in < 5% of monthly samples	1999	0%	naturally present in the environment (all repeat samples were satisfactory)
	Turbidity	NTU	0.51	99.6% lowest monthly % of samples meeting limits	TT	1999	NA	soil runoff
	Copper	ppm	0.04	no samples exceeded the action level	AL=1.3	1999	1.3	corrosion of household plumbing materials
	Lead	ppb	4	no samples exceeded the action level	AL=15	1999	0	corrosion of household plumbing materials
	Nitrate / Nitrogen	ppm	0.2	NA	10	1999	10	runoff from fertilizers
	Alpha emitters	pCi / l	0.0 ± 1.2	NA	15	1996	0	erosion of natural deposits
	Beta / photon emitters	pCi / l	0.4 ± 0.4	NA	50	1996	0	erosion of natural deposits
	Fluoride	ppm	0.96	NA	4	1999	4	additive to reduce tooth decay
	Total Trihalomethanes	ppb	77	52 to 112	100	1999	0	byproduct of water disinfection process
<b>UNREGULATED</b>	Total Haloacetic acids	ppb	48 average	37 to 74	none	1999	none	byproduct of water disinfection process
	Haloacetonitriles	ppb	3.7 average	<1 to 8.7	none	1998	none	byproduct of water disinfection process
	Haloketones	ppb	2.1 average	<1 to 10.5	none	1998	none	byproduct of water disinfection process
	Chloropicrin	ppb	0.6 average	<0.5 to 0.8	none	1998	none	byproduct of water disinfection process
	Chloral hydrate	ppb	2.4 average	<1 to 5.2	none	1998	none	byproduct of water disinfection process
	Total Organic Halides	ppb	203 average	99 to 350	none	1998	none	byproduct of water disinfection process
	Cyanogen chloride	ppb	2 average	<1 to 2.4	none	1998	none	byproduct of water disinfection process
	Chlorite	ppb	503 average	27 to 1850	none	1998	none	byproduct of water disinfection process
	Chlorate	ppb	148 average	47 to 249	none	1998	none	byproduct of water disinfection process
	Giardia in River Water	per liter	<1	0 to <0.37	none	1999	none	human and animal sources
	Cryptosporidium in River Water	per liter	<1	0 to <0.37	none	1999	none	human and animal sources

## Table of Definitions

### Maximum Contaminant Level (MCL):

The highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLG's as feasible using the best available treatment technology.

### Maximum Contaminant Level Goal (MCLG):

The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG's allow for a margin of safety.

### 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.

## General Interest – Table Two

Parameter	CPW Water Average	Highest Level Allowed by EPA Regulation MCL
Alkalinity, ppm	29	No standard
Chloride, ppm	20	250
Chlorine Residual (total) ppm	3.0	4.0
Color, PCU	3	15
Conductivity, umhos/cm	190	No standard
Hardness, ppm	54	No standard
Iron, ppm	0.05	0.3
Manganese, ppm	0.02	0.05
Ortho-phosphate, ppm	1.3	No standard
Silica, ppm	6.1	No standard
Sodium, ppm	13	No standard
Temperature, C	21	No standard
Total Dissolved Solids (TDS), ppm	117	500

## Abbreviations

NTU = Nephelometric Turbidity Units    PCU = platinum cobalt units    ppm = parts per million (mg / l)    ppb = parts per billion (ug / l)    Umhos / cm = micromhos / centimeter    c = centigrade    pCi / l = picocuries per liter