

### 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 7:30am to 6:00pm 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:

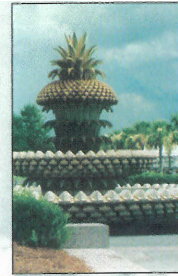
Main Office Downtown: 103 St. Philip Street  
West Ashley Office: 4 Carriage Lane  
North Area Office: 6296 Rivers Avenue



Commissioners  
of Public Works  
of the City of Charleston

# 1998 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!



### 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 1998, we conducted 5200 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 1998, CPW treated water from the **Bushy Park Reservoir** and **Edisto River** at the Hanahan Water Treatment Plant. All of the water for the Charleston CPW and Island Estates system came from these sources. 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 affects 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.

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



**Fluoride** - Fluoride is added to drinking water to help prevent tooth decay. We add (1 mg/l) to meet American Dental Association recommended levels.

**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. **In 1998, CPW did not find any viable (living) cysts or oocysts in the river water or in the treated drinking water.** 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 produces water that is well below the EPA standard.

# Drinking Water Quality Report • Typical Water Quality for 1998

(The information in the following tables covers the period of January 1998 to December 1998. 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                 |
|-------------------------|--------------------|----------------------------------|--|--|--------------|------|---|
| Total Coliform Bacteria | % positive samples | 1%                               | 0% to 1%   | Presence of coliform bacteria in < 5% of monthly samples | 1998         | 0%   | naturally present in the environment      |
| Turbidity               | NTU                | 0.67                             | 99.6% lowest monthly % of samples meeting limits | TT   | 1998         | NA   | soil runoff                               |
| Copper                  | ppm                | 0.03                             | no samples exceeded the action level             | AL=1.3   | 1998         | 1.3  | corrosion of household plumbing materials |
| Lead                    | ppb                | 4                                | no samples exceeded the action level             | AL=15  | 1998         | 0    | corrosion of household plumbing materials |
| Nitrate / Nitrogen      | ppm                | 0.7                              | NA   | 10   | 1998         | 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                | 0.99                             | NA   | 4  | 1998         | 4    | additive to reduce tooth decay            |
| Total Trihalomethanes   | ppb                | 61 average                       | 27 to 81   | 100  | 1998         | 0    | byproduct of water disinfection process   |
| Total Haloacetic acids  | ppb                | 47 average                       | 13 to 90   | none   | 1998         | 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   |
| Total Chlorine Residual | ppm                | 2.9 average                      | 1.7 to 4.2                                       | none   | 1998         | none | byproduct of water disinfection process   |

### 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 Three

| Parameter                         | CPW Water Average | Highest Level Allowed by EPA Regulation MCL |
|-----------------------------------|-------------------|---|
| Alkalinity, ppm                   | 28                | No standard                                 |
| Chloride, ppm                     | 18                | 250   |
| Color, PCU                        | 4                 | 15  |
| Conductivity, umhos/cm            | 180               | No standard                                 |
| Hardness, ppm                     | 58                | No standard                                 |
| Iron, ppm                         | 0.04              | 0.3   |
| Manganese, ppm                    | 0.02              | 0.05  |
| Ortho-phosphate, ppm              | 1.3               | No standard                                 |
| Silica, ppm                       | 6.7               | No standard                                 |
| Sodium, ppm                       | 9                 | No standard                                 |
| Temperature, C                    | 22                | No standard                                 |
| Total Dissolved Solids (TDS), ppm | 111               | 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

### Island Estates System – Table Two

| Parameter               | Units              | CPW Water Highest Level Detected | Range or Other Comments              | MCL  | Date Sampled | MCLG | Possible Sources in Water                 |
|-------------------------|--------------------|----------------------------------|--------------------------------------|--|--------------|------|---|
| Total Coliform Bacteria | % positive samples | 1%                               | 0%                                   | Presence of coliform bacteria in < 5% of monthly samples | 1998         | 0%   | naturally present in the environment      |
| Alpha emitters          | pCi/l              | 0.0 ± 1.6                        | NA                                   | 15   | 1996         | 0    | erosion of natural deposits               |
| Beta / photon emitters  | pCi/l              | 0.0 ± 1.2                        | NA                                   | 50   | 1996         | 0    | erosion of natural deposits               |
| Copper                  | ppm                | 0.03                             | no samples exceeded the action level | AL=1.3   | 1998         | 1.3  | corrosion of household plumbing materials |
| Lead                    | ppb                | 8                                | no samples exceeded the action level | AL=15  | 1998         | 0    | corrosion of household plumbing materials |

Island Estates is a small water distribution system that CPW operates. This applies specifically to the Island Estates system.