

WATER QUALITY

2008

report

ABOUT THIS REPORT

Each year, the Cape Fear Public Utility Authority will prepare a Drinking Water Quality Report for its customers as mandated by Federal law. This report provides important details about the quality of the drinking water we provide to our community.

NO VIOLATIONS

We are pleased to report that during 2008, or during any compliance period ending in 2008 there were NO violations of drinking water standards.

EN ESPANOL

Este informe contiene informacion muy importante. Traduzcalo o hable con un amigo quien to entienda bien.

From the Desk of the CEO:

During this inaugural year of the Cape Fear Public Utility Authority, we have faced many challenges and have had many successes. One of these successes is the ability to continue providing our customers with uninterrupted quality water service. We have made a commitment to this community to operate on three guiding principles: **STEWARDSHIP** to the environment, **SUSTAINABILITY** of our infrastructure and employees, and a high level of **SERVICE** at the lowest possible cost for our customers. These principles are considered when making decisions that pertain to the treatment, maintenance and growth of our utility system. We are a part of this community and our actions have and will continue to reflect our commitment to these principles and to the sustainability and viability of this region.

We all have an impact on the well-being and health of our region and it is the responsibility of every organization and citizen to do their part to help protect the precious resources that are so bountiful in our region. With this being said, several of the Departments of CFPUA have outreach programs to educate and inform our customers on how they can help to efficiently use our water resources, as well as how you as the user of the system can help protect the environment. These programs include topics such as water conservation and fats, oils and grease (FOG). As part of our service to the community, we present these programs to schools, homeowners associations, and civic groups throughout the community. We enjoy the beautiful resources of this region together as a community and we must protect it in the same manner – together.

The CFPUA is working collectively to improve your water quality through the upgrade of the existing Sweeney Water Treatment Plant and the construction of a new state of the art Nano-filtration plant. This new facility will incorporate the best available technology to ensure we continue to meet our commitment to provide the best quality of water possible to our customers. This plant will be in operation in the fall of 2009. Additionally, crews are consistently working to maintain exceptional drinking water quality throughout the system.

Due to the hard work and dedication of a wonderful staff, I am pleased to provide you with the information that follows in this inaugural Consumer Confidence Report as a snapshot of last year's drinking water quality. It includes details about where your water comes from, results of analysis, and how it compares to standards set by the regulatory agencies. Additional information is provided in this report regarding the outreach programs referenced above, along with how to request one of these programs be presented to your organization.

Best Regards,

Matthew W. Jordan, P.E.
Chief Executive Officer
Cape Fear Public Utility Authority



“the information that follows in this inaugural Consumer Confidence Report as a snapshot of last year’s drinking water quality.”

REPORT WATER WASTE!

Preventing water waste is an important part of our community's water conservation efforts, and we appreciate your helping us to identify and correct potential water waste. Did you know that water waste or misuse is a violation of CFPUA's Utility Regulations? Many times residents or businesses are unaware that they are wasting water, and will quickly make necessary repairs or changes in their watering habits once they are notified of the occurrence of water waste.

Here are a few examples of water waste:

- Running a sprinkler system too long, which allows excess water to flow off private property
- Non-compliance with watering restrictions, such as lawn watering on the wrong day and/or at the wrong time
- Not fixing a broken sprinkler head or identified water leak
- Operating sprinklers during or immediately after substantial rain events



Pick up the phone...make that call

You may anonymously report an occurrence of water waste or misuse by calling the **Water Conservation Hotline** at (910) 332-6566. If you prefer e-mail, submit to: conserveh2o@cfpua.org. Add "water waste" to the subject line.

We will need the location, day, time and type of water waste you witnessed in order to open an investigation. We can then assist the responsible resident or business to identify the source of their water waste, and advise them of methods for preventing it in the future. Violations of CFPUA's Water Use Management Plan could result in a \$500 civil citation and repeat offenses could result in termination of water service.

The water conservation hotline is also used to relay current water use advisories and area drought conditions. A recorded message is updated regularly to keep customers informed of the current conditions and any restrictions that may be in place.

The CFPUA Conservation Office has various publications and water-saving devices that can aid you in your conservation efforts. Visit our web-site to see what's available then send an e-mail or call the conservation hotline to make your request.

Remember, YOU are water saving device #1. Water - use it wisely.



Water Conservation Hotline

332-6566

conserveh2o@cfpua.org

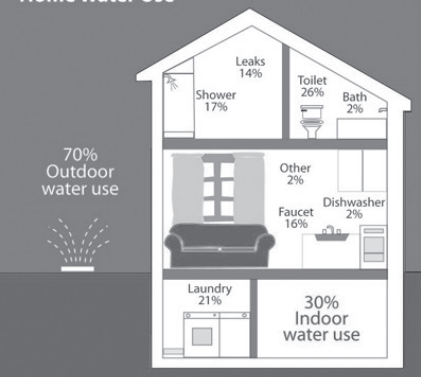
Keep these tips in mind before you irrigate...

Having a lush, green lawn is nice but it is not essential. It's also not essential to apply clean, treated drinking water wastefully on lawns. Some experts estimate that more than 50% of commercial and residential irrigation water use goes to waste due to evaporation, wind, improper system design, or overwatering. Make sure you're watering your lawn efficiently.

- Many people water their lawns too often and for too long, over-saturating plants. It's usually unnecessary to water grass every day. Instead, test your lawn by stepping on a patch of grass; if it springs back, it doesn't need water. Generally, one inch of water per week is sufficient to maintain a healthy lawn; don't forget to take rainfall into account.
- Regular maintenance of an irrigation system can help ensure that water is distributed evenly on the lawn and does not overspray onto paved areas. Look for a certified (licensed) irrigation partner to maintain and audit your system to keep it working efficiently.
- Install a rain sensor. Weather-based irrigation controllers can reduce water use by 20% compared to conventional equipment, potentially saving nearly 24 billion gallons per year across the United States - approximately equal to more than 7,000 hoses running non-stop for a year.
- Soil moisture sensors determine the amount of water in the ground available to plants. These sensors, when professionally installed and properly maintained, can potentially save a household more than 11,000 gallons of water used for irrigation annually.

EPA WaterSense™

Home Water Use



FOG Affects Everyone

Too often, fats, oils, and grease (FOG) is washed into the plumbing system, usually through the kitchen sink. Grease sticks to the insides of sewer pipes (both on your property and in the streets). Over time, the grease can build up and block the entire pipe.

Home garbage disposals do not keep grease out of the plumbing system. These units only shred solid material into smaller pieces and do not prevent grease from going down the drains. Commercial additives, including detergents, that claim to dissolve grease may pass grease down the line and cause problems in other areas.

Sewer overflows and backups can cause health hazards, damage home interiors, and threaten the environment. An increasingly common cause of overflows in and around the Port City is sewer pipes blocked by grease. Grease gets into the sewer from household drains as well as from poorly maintained grease traps in restaurants and other businesses.

Fats, oils, and greases aren't just bad for your arteries and your waistline; they're bad for sewers, too. The easiest way to solve the

grease problem and help prevent sewer overflows is to keep this material out of the sewer system in the first place.

Here are some simple steps you can take at home to help keep FOG out of our sewers:

- 1) Never pour grease down sink drains or toilets.
- 2) Scrape grease and food scraps from trays, pots, pans, plates, utensils, and grills/ cooking surfaces into a can, Fat Trapper™ or the trash for disposal.
- 3) Do not put grease or food scraps down garbage disposals. Put baskets/strainers in sink drains to catch food scraps and other solids, and empty the drain baskets/ strainers into the trash for disposal.

Help control FOG with proper disposal. CFPUA has a limited number of Fat Trappers™ available for our customers. Call (910) 332-6558 today to request your Fat Trapper and help keep our sewers fat free.

Additional information can be found at Water Environment Federation <http://www.wef.org>.



“Fats, Oils, and Greases aren’t just bad for your arteries and your waistline; they’re bad for sewers too.”

Water Treatment Projects - Progress Report...

CFPUA customers are provided water that is received and treated at the Sweeney Water Treatment Plant or water that is drawn from a ground water system of 54 networked well sites in various locations throughout the region.

The Sweeney Water Treatment Plant is currently capable of treating up to 27.5 [MGD] million gallons of water a day. The Sweeney Plant upgrade/expansion project is underway and will allow the plant to filter up to 35 MGD when completed in 2012. The Sweeney Water Treatment Plant draws water from the Cape Fear River; however, the raw water is pumped to the plant from King's Bluff Pumping Station located approximately 24 miles upstream in Bladen County. This is necessary to eliminate the intake of salty water during tidal changes.

CFPUA is moving forward in interconnecting City and County wells by 2011 and will utilize the new nano-filtration process that will be online in fall 2009. The new state-of-the-art nano plant will be capable of treating 6.0 million gallons of water per day pulled from both the Castle Hayne and Upper Pee Dee Aquifers. This process is a pressure driven process that uses micro porous membranes (hollow fibers) to remove particulate matter and to assist in reducing levels of dissolved organic matter in the source water. Once the new nano plant is

put into operation, customers receiving water in the northern area will no longer require the additional home treatment of softeners or other filtration equipment.

Check our website frequently for updates. If you have any questions about the Sweeney Water Plant, the groundwater system, or the new nano-filtration plant, please don't hesitate to call and speak to one of the Water Treatment Division's knowledgeable staff members.



CFPUA's new state-of-the-art nano-filtration plant, located in northern New Hanover County, will be online and ready to serve customers by fall 2009

What the EPA wants you to know...

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some natural substances. The presence of these substances does not necessarily indicate that water poses a health risk.

Some people may be more vulnerable to substances in drinking water than the general population. Immuno-compromised 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 can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbiological substances are available from the Safe Drinking Water Hotline.

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 and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals

or from human activity. Substances that may be present in source water include **microbial substances**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife; **inorganic substances**, such as salts and metals, which can be naturally-occurring or 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 substances**, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems; and **radioactive substances**, which can be naturally-occurring or be the result of oil production and mining activities.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain substances in water provided by public water systems. FDA regulations establish limits for substances in bottled water that must provide the same protection for public health.

Cryptosporidium

Our system monitored for *Cryptosporidium* and found no detected levels of 12 monthly samples in the source water and found no detects in a 12 month period of the finished water leaving the water treatment facility.

Cryptosporidium, or *Crypto*, is a microbial parasite which is found in surface water throughout the U.S. Although *Crypto* can be removed by filtration, the most commonly used filtration methods cannot guarantee 100 percent removal. Our facility utilizes a multi-barrier approach for removal; **Ozone** is used as a pre-oxidant and disinfectant in both pre and intermediate treatment of our water prior to filtration. Monitoring of our source water indicates the presence of these organisms; however, current test methods do not enable us to determine if the organisms are dead or if they are capable of causing disease. Symptoms of infections include nausea, diarrhea, and abdominal cramps. Most healthy individuals are able to overcome the disease within a few weeks; however, immuno-compromised people have more difficulty and are at greater risk of developing severe, life-threatening illness. Immuno-compromised individuals are encouraged to consult their doctor regarding appropriate precautions to take to prevent infection. *Cryptosporidium* must be ingested for it to cause disease, and it may be spread through means other than drinking water.

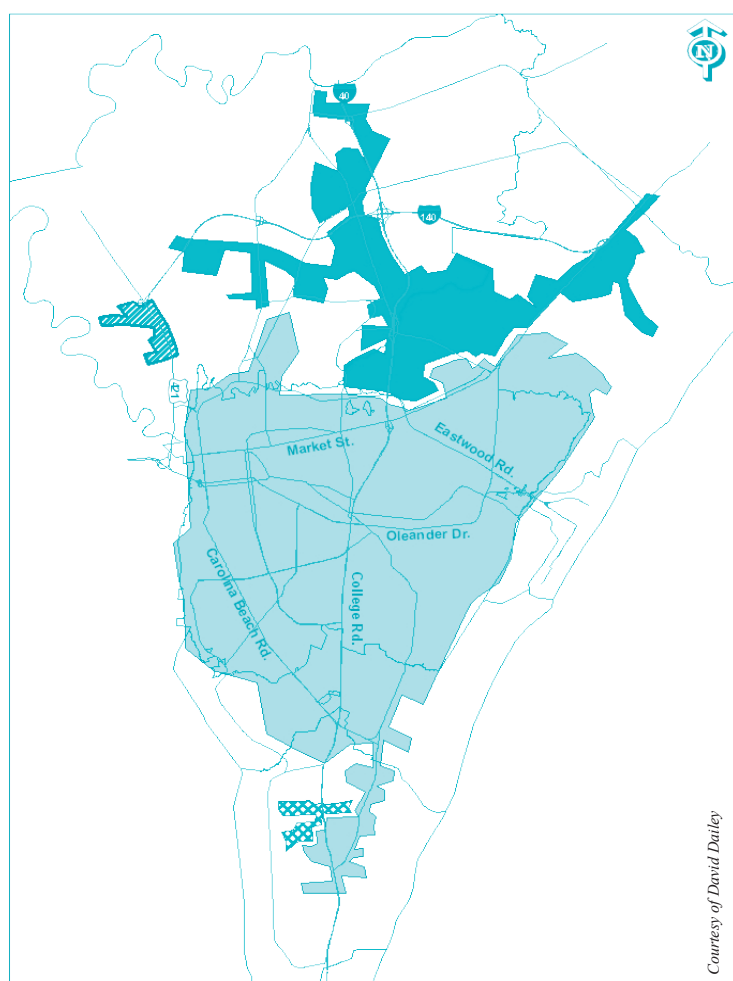
Water quality data tables of detected substances

We routinely monitor for over 150 substances in your drinking water according to Federal and State laws. The following tables list all the drinking water substances that CFPUA detected in the last round of sampling for the particular substance group. The presence of these substances does **not** necessarily indicate that water poses a health risk. **Unless otherwise noted, the data presented in these tables is from testing done January 1 through December 31, 2008.** The EPA and the State of North Carolina requires us to monitor for certain substances less than once per year because concentrations of these substances are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, is more than one year old. Unregulated substances are those for which the EPA has not established drinking water standards. The purpose of unregulated substance monitoring is to assist the EPA in determining the occurrence of unregulated substances in drinking water and whether future regulation is warranted.

CFPUA's Water Systems and Service Areas

When you turn on your tap, consider the source. The Cape Fear Public Utility Authority processes and distributes clean treated drinking water within New Hanover County through four systems. The **Sweeney Water Treatment Plant (PWS #04-65-010)** distributes water within the City of Wilmington city limits, the Ogden area, and parts of Monkey Junction. Water that is provided by the Sweeney Water Treatment Plant is surface water that is drawn from the Cape Fear River. The other three CFPWA water systems treat and supply groundwater to customers through a series of pumps and wells. The **232 System (PWS #04-65-232)** serves the northern part of New Hanover County including Porters Neck. Our **421 System (PWS #04-65-191)** serves approximately 80 customers on the Brunswick County side of the river along Hwy. 421 with groundwater obtained from two wells that pump water from surficial aquifers. The **Monterey Heights water system (PWS #04-65-137)** provides water service to a small southern area between Monkey Junction and Snow's Cut Bridge. The Monterey Heights system obtains groundwater pumped from the Castle Hayne Aquifer. A staff of certified treatment operators and a team of skilled maintenance technicians keep all the facilities fully operational 24/7.

Use the map below to determine your service area and refer to the corresponding table for the results of your water quality.



Find your service area...

- Look at the map to the left and locate your address.
 - Use the legend below to determine what water system you're connected to.
- | | |
|---|-----------------------|
|  | PWS #04-65-010 |
|  | PWS #04-65-232 |
|  | PWS #04-65-191 |
|  | PWS #04-65-137 |
- Refer to the data tables on the following pages to review the test results for your water system.

If you're unsure what water system services your area, if you have questions about the data tables or test results, or just have a general inquiry, contact CFPWA's Water Treatment Division **332-6739** for assistance.

Only Tap Water
Delivers

 American Water Works Association

DEFINITIONS

AL/Action Level = The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow. The action levels are reported at the 90th percentile for homes at greatest risk. **Average** = Approximate or summary concentration, determined by dividing the total of all results by the number of analysis. **MCL** (Maximum Contaminant Level)** = The highest level of a contaminant that is allowed in drinking water based on potential health effects. **MCLG (Maximum Contaminant Level Goal)** = The level of a contaminant in drinking water below which there is no known or expected risk to health. **MRDLG (Maximum Residual Disinfection 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. **MRDL (Maximum Residual Disinfection Level)** = the highest level of a disinfectant allowed in drinking water. There is convincing evidence that the addition of a disinfectant is necessary for control of microbial contaminants. **MRDLG (Maximum Residual Disinfection 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. **N/A** = Not applicable. **ND (Non-Detects)** = Laboratory analysis indicates that the contaminant is not present at the level of detection set for the particular methodology used. **NTU (Nephelometric Turbidity Unit)** = A measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person. **pCi/L (Picocuries per liter)** = measures radioactivity in water. **PPM (parts per million) or Milligrams per liter (mg/L)** = One part per million corresponds to one minute in two years or a single penny in \$10,000. **PPB (parts per billion) or Micrograms per liter (ug/L)** = One part per billion corresponds to one minute in 2,000 years or a single penny in \$10,000,000. **Range** = These are the lowest to the highest levels detected. **TT (Treatment Technique)** = A required process intended to reduce the level of contaminant in drinking water. **Turbidity MCL** = Less than 0.3 NTU's in 95% of all samples collected. ****MCL's** are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

2008 ANNUAL WATER QUALITY REPORT

SWEENEY WATER PLANT (SURFACE WATER SUPPLY) – PWS ID #04-65-010

Service to City of Wilmington, Ogden, Monkey Junction

MICROBIOLOGICAL SUBSTANCES					
Substance (units)	MCL Violation	Your Water	MCLG	MCL exceeded if:	Likely Source
Total Coliform Bacteria (presence or absence)	NO	0.2%	0	5% of monthly samples are positive	Naturally present in the environment
Fecal Coliform or E. coli (presence or absence)	NO	0	0	0 (Note: The MCL is exceeded if a routine sample and repeat sample are total coliform positive, and one is also fecal coliform or E. coli positive)	Human and animal fecal waste

TURBIDITY * - Systems with population ≥ 10,000					
Substance (units)	MCL Violation	Your Water	MCLG	MCL exceeded if:	Likely Source
Turbidity (NTU)	NO	0.11	N/A	TT = 1 NTU Max	Soil runoff
		100%	N/A	TT = percentage of samples ≤ 0.3 NTU	

* Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. The turbidity rule requires that 95% or more of the monthly samples must be less than or equal to 0.3 NTU

INORGANIC SUBSTANCES								
Substance (units)	Sample Date	MCL Violation	Your Water	Range		MCLG	MCL	Likely Source
				Low	High			
Fluoride (ppm) Sweeney WTP Surface water source	11/19/08	NO	0.77	N/A	N/A	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizers and aluminum factories
Fluoride (ppm) Hillside Well Groundwater source	2/28/06	NO	0.10	N/A	N/A	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizers and aluminum factories

UNREGULATED INORGANIC SUBSTANCES					
Substance (units)	Sample Date	Your Water	Range		Secondary MCL
			Low	High	
Sulfate (ppm)	11/19/08	32.0	N/A	N/A	250

UNREGULATED VOC SUBSTANCES					
Substance (units)	Sample Date	Your Water	Range		Likely Source
			Low	High	
Bromoform (ppb)	7/9/08	2.1	N/A	N/A	
Chloroform (ppb)	7/9/08	13.0			
Bromodichloromethane (ppb)	7/9/08	17.0			
Dibromochloromethane (ppb)	7/9/08	13.0			
Chloroform (mg/L) Hillside	12/12/08	0.0027			

LEAD AND COPPER						
Substance (units)	Sample Date	Your Water	# of Sites Found Above the AL	MCLG	MCL	Likely Source
Copper (ppm) 90 th percentile	June/Sept 2008	0.188	0 of 55 samples	1.3	AL = 1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb) 90 th percentile	June/Sept 2008	<3.0	1 of 55 samples	0	AL = 15	Corrosion of household plumbing systems; erosion of natural deposits

"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. The Cape Fear Public Utility Authority is 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 <http://www.epa.gov/safewater/lead>."

RADIOACTIVE SUBSTANCES						
Substance (units)	Sample Date	MCL Violation	Your Water	MCLG	MCL	Likely Source
Combined Radium (pCi/L)						
SWTP - Surface water source	Quarterly 2005	NO	1.06	0	5	Erosion of natural deposits
Hillside Well - Groundwater source	Quarterly 2005	NO	0.53	0	5	
Lords Creek - Groundwater source	Quarterly 2005	NO	0.56	0	5	

DISINFECTION BYPRODUCT PRECURSORS								
Our water system used [Step 1] as the method to comply with the disinfectants/disinfectant byproducts treatment technique requirements								
Substance (units)	Sample Date	MCL/TT Violation	Your Water	Range		MCL G	MCL	Likely Source
				Low	High			
Total Organic Carbon (ppm) (TOC)-RAW	Weekly; Every Tuesday	NO	7.9	4.9	14.1	N/A	TT	Naturally present in the environment
Total Organic Carbon (ppm) (TOC)-TREATED	Weekly; Every Tuesday	NO	2.8	2.2	3.6	N/A	TT	Naturally present in the environment

Note: Depending on the TOC in our source water, the system MUST have a certain % removal of TOC or must achieve alternative compliance criteria. If we do not achieve that % removal, there is an alternative % removal. If we fail to meet the alternative % removal, we are in violation of a Treatment Technique (TT). Minimum % removal achieved was 59%.

TOC Removal Requirements			
Source Water TOC (mg/L)	Source Water Alkalinity mg/L as CaCO ₃ (in percentages)		
	0-60	> 60 - 120	> 120
> 2.0 – 4.0	35.0	25.0	15.0
> 4.0 – 8.0	45.0	35.0	25.0
> 8.0	50.0	40.0	30.0

DISINFECTANTS AND DISINFECTION BYPRODUCTS							
Substance (units)	MCL/MRDL Violation	Your Water (AVG)	Range		MCLG	MCL	Likely Source
			Low	High			
TTHM (ppb) Total Trihalomethanes**	NO	46.3	2.2	87.2	N/A	80	By-product of drinking water disinfection
HAA5 (ppb) Total Haloacetic Acid	NO	17.4	<2.0	50.0	N/A	60	By-product of drinking water disinfection
Chlorine (ppm)	NO	1.0	<0.1	1.8	MRDLG = 4	MRDL = 4	Disinfectant

**Compliance based on Running Annual Average of all distribution samples

WATER CHARACTERISTICS SUBSTANCES				
Secondary Substances, required by the NC Public Water Supply Section, are substances that affect the taste, odor, and/or color of drinking water. These aesthetic substances normally do not have any health effects and normally do not affect the safety of your water.				
Substance (units)	Sample Date	Your Water	Range Low/High	Secondary MCL
pH (s.u.) Sweeney WTP Surface water source	11/19/08	7.12	N/A	6.5 to 8.5
pH (s.u.) Hillside Well Groundwater source	2/28/06	8.01	N/A	6.5 to 8.5
pH (s.u.) Lords Creek Groundwater source	9/8/08	7.61	N/A	6.5 to 8.5
Sodium (ppm) Sweeney WTP Surface water source	11/19/08	28.00	N/A	N/A
Sodium (ppm) Hillside Well Groundwater source	2/28/06	7.80	N/A	N/A
Sodium (ppm) Lords Creek Groundwater source	9/8/08	19.00	N/A	N/A

421 WATER SYSTEM - PWS ID #04-65-191 (GROUNDWATER)

MICROBIOLOGICAL SUBSTANCES					
Substance (units)	MCL Violation	Your Water	MCLG	MCL exceeded if:	Likely Source
Total Coliform Bacteria (presence or absence)	NO	17 tested / 0 positive	0	More than 1 sample a month is positive	Naturally present in the environment
Fecal Coliform or E. coli (presence or absence)	N/A	0	0	0 (Note: The MCL is exceeded if a routine sample and repeat sample are total coliform positive, and one is also fecal coliform or E. coli positive)	Human and animal fecal waste

UNREGULATED INORGANIC SUBSTANCES					UNREGULATED VOC SUBSTANCES				
Substance (units)	Sample Date	Your Water	Range		Substance (units)	Sample Date	Your Water	Range	
			Low	High				Low	High
Sulfate (ppm)	Feb. 2005	16	N/A	N/A	Chloroform (ppb)	Feb. 2006	1	N/A	N/A
					Bromodichloromethane (ppb)	Feb. 2006	1	N/A	N/A

DISINFECTANTS AND DISINFECTION BYPRODUCTS								
Substance (units)	Sample Date	MCL/MRDL Violation YES/NO	Your Water (AVG)	Range		MCLG	MCL	Likely Source
				Low	High			
TTHM (ppb) Total Trihalomethanes	July 2008	NO	12	N/A	N/A	N/A	80	By-product of drinking water chlorination
HAA5 (ppb) Total Haloacetic Acid	July 2008	NO	ND	N/A	N/A	N/A	60	By-product of drinking water disinfection
Chlorine (ppm)	Jan-Dec. 2008	NO	0.9	0.5	1.5	MRDLG = 4	MRDL = 4	Water additive used to control microbes

WATER CHARACTERISTICS SUBSTANCES				
Secondary Substances, required by the NC Public Water Supply Section, are substances that affect the taste, odor, and/or color of drinking water. These aesthetic substances normally do not have any health effects and normally do not affect the safety of your water.				
Substance (units)	Sample Date	Your Water	Range Low/High	Secondary MCL
Manganese (ppm)	Feb. 2005	0.029	N/A	0.05
pH	Feb. 2005	7.6	N/A	6.5 to 8.5
Sodium (ppm)	Feb. 2005	29	N/A	N/A

232 WATER SYSTEM (GROUNDWATER SUPPLY) - PWS ID #04-65-232

Service to Northern New Hanover County, Porters Neck

MICROBIOLOGICAL SUBSTANCES					
Substance (units)	MCL Violation	Your Water	MCLG	MCL exceeded if:	Likely Source
Total Coliform Bacteria (presence or absence)	NO	392 tested / 3 positive (1 Aug./1 Sept./1 Oct.)	0	More than 1 sample a month is positive	Naturally present in the environment
Fecal Coliform or E. coli (presence or absence)	N/A	0	0	0 (Note: The MCL is exceeded if a routine sample and repeat sample are total coliform positive, and one is also fecal coliform or E. coli positive)	Human and animal fecal waste

INORGANIC SUBSTANCES								
Substance (units)	Sample Date	MCL Violation YES/NO	Your Water	Range		MCLG	MCL	Likely Source
				Low	High			
Cyanide (ppb)	Jan. 2004 - Sept. 2008	NO	130	ND	130	200	200	Discharge from steel/metal factories; discharge from plastic and fertilizer factories
Fluoride (ppm)	Jan. 2004 - Sept. 2008	NO	0.20	ND	0.20	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizers and aluminum factories
Chromium (ppb)	Jan. 2004 - Sept. 2008	NO	53	ND	53	100	100	Discharge from steel and pulp mills; erosion of natural deposits

UNREGULATED VOC SUBSTANCES					
Substance (units)	Sample Date	Your Water	Range		
			Low	High	
Bromodichloromethane (ppb)	March. 2006 - Sept. 2008	32	ND	32	
Chlorodibromomethane (ppb)	March 2006 - Sept. 2008	15	ND	15	
Chloroform (ppb)	March 2006 - Sept. 2008	41	ND	41	

UNREGULATED INORGANIC SUBSTANCES					
Substance (units)	Sample Date	Your Water	Range		
			Low	High	
Sulfate (ppm)	Jan. 2004 - Sept. 2008	30	ND	30	

LEAD AND COPPER						
Substance (units)	Sample Date	Your Water	# of Sites Found Above the AL	MCLG	MCL	Likely Source
Copper (ppm) 90 th percentile	August 2006	1.02	1 of 30 samples	1.3	AL = 1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb) 90 th percentile	August 2006	6	1 of 30 samples	0	AL = 15	Corrosion of household plumbing systems; erosion of natural deposits

"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. The Cape Fear Public Utility Authority is 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 <http://www.epa.gov/safewater/lead>."

RADIOLOGICAL SUBSTANCES *Note: The MCL for beta particles is 4 mrem/year. EPA considers 50pCi/L to be the level of concern for beta particles.						
Substance (units)	Sample Date	MCL Violation YES/NO	Your Water	MCLG	MCL	Likely Source
Gross Beta (pCi/L)	June 2006 - Dec. 2008	NO	8	0	*50	Decay of natural and man-made deposits
Combined Uranium (pCi/L)	June 2006 - Dec. 2008	NO	1	0	20.1	Erosion of natural deposits

DISINFECTANTS AND DISINFECTION BYPRODUCTS								
Substance (units)	Sample Date	MCL/MRDL Violation	Your Water (AVG)	Range		MCLG	MCL	Likely Source
				Low	High			
TTHM (ppb) Total Trihalomethanes	Jan. - Dec. 2008	NO	61	ND	106	N/A	80	By-product of drinking water chlorination
HAA5 (ppb) Total Haloacetic Acid	Jan.- Dec. 2008	NO	26	ND	126	N/A	60	By-product of drinking water disinfection
Chlorine (ppm)	Jan.- Dec. 2008	NO	0.7	0.6	0.8	MRDLG = 4	MRDL = 4	Water additive used to control microbes

WATER CHARACTERISTICS SUBSTANCES				
Secondary Substances, required by the NC Public Water Supply Section, are substances that affect the taste, odor, and/or color of drinking water. These aesthetic substances normally do not have any health effects and normally do not affect the safety of your water.				
Substance (units)	Sample Date	Your Water	Range Low/High	Secondary MCL
Iron (ppm)	Jan. 2004 - Sept. 2008	0.5	ND / 0.5	0.3
Manganese (ppm)	Jan. 2004 - Sept. 2008	0.1	ND / 0.1	0.05
pH	Jan. 2004 - Sept. 2008	8.6	6.8 / 8.6	6.5 to 8.5
Sodium (ppm)	Jan. 2004 - Sept. 2008	69	12 / 69	N/A

NITRATE / NITRITE SUBSTANCES

Substance (units)	Sample Date	MCL/MRDL Violation	Your Water (AVG)	Range		MCLG	MCL	Likely Source
				Low	High			
Nitrate - as Nitrogen (ppm)	Jan.-Nov. 2008	NO	1.32	ND	1.32	10	10	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits

MONTEREY HEIGHTS WATER SYSTEM - PWS ID #04-65-137 (GROUNDWATER)**MICROBIOLOGICAL SUBSTANCES**

Substance (units)	MCL Violation	Your Water	MCLG	MCL exceeded if:		Likely Source
Total Coliform Bacteria (presence or absence)	NO	79 tested / 0 positive	0	More than 1 sample a month is positive		Naturally present in the environment
Fecal Coliform or E. coli (presence or absence)	N/A	0	0	0 (Note: The MCL is exceeded if a routine sample and repeat sample are total coliform positive, and one is also fecal coliform or E. coli positive)		Human and animal fecal waste

INORGANIC SUBSTANCES

Substance (units)	Sample Date	MCL Violation YES/NO	Your Water	Range		MCLG	MCL	Likely Source
				Low	High			
Fluoride (ppm)	March 2004 & Feb. 2008	NO	0.14	0.10	0.14	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizers and aluminum factories

VOLATILE ORGANIC SUBSTANCES

Substance (units)	Sample Date	MCL Violation	Your Water	Range		MCLG	MCL	Likely Source
				Low	High			
Xylenes (Total) (ppm)	June 2006	NO	ND	N/A	N/A	10	10	Discharge from petroleum factories; discharge from chemical factories

UNREGULATED VOC SUBSTANCES

Substance (units)	Sample Date	Your Water	Range	
			Low	High
Bromodichloromethane (ppb)	June 2006 & Jan.-Feb. 2008	5	ND	5
Chloroform (ppb)	June 2006 & Jan.-Feb. 2008	33	ND	33

LEAD AND COPPER

Substance (units)	Sample Date	Your Water	# of Sites Found Above the AL	MCLG	MCL	Likely Source
Copper (ppm) 90 th percentile	August 2007	0.305	0	1.3	AL = 1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb) 90 th percentile	August 2007	5	0	0	AL = 15	Corrosion of household plumbing systems; erosion of natural deposits

"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. The Cape Fear Public Utility Authority is 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 <http://www.epa.gov/safewater/lead>."

DISINFECTANTS AND DISINFECTION BYPRODUCTS

Substance (units)	Sample Date	MCL/MRDL Violation	Your Water (AVG)	Range		MCLG	MCL	Likely Source
				Low	High			
TTHM (ppb) Total Trihalomethanes	Aug. 2008	NO	53	46	57	N/A	80	By-product of drinking water chlorination
HAA5 (ppb) Total Haloacetic Acid	Aug. 2008	NO	16	11	20	N/A	60	By-product of drinking water disinfection
Chlorine (ppm)	Jan. - Dec. 2008	NO	0.9	0.4	1.4	MRDLG = 4	MRDL = 4	Water additive used to control microbes

WATER CHARACTERISTICS SUBSTANCES

Secondary Substances, required by the NC Public Water Supply Section, are substances that affect the taste, odor, and/or color of drinking water. These aesthetic substances normally do not have any health effects and normally do not affect the safety of your water.

Substance (units)	Sample Date	Your Water	Range Low/High	Secondary MCL
Iron (ppm)	Mar. 2004 & Feb. 2008	0.157	ND / 0.157	0.3
Manganese (ppm)	Mar. 2004 & Feb. 2008	0.020	0.012 / 0.030	0.05
pH	Mar. 2004 & Feb. 2008	7.9	7.7 / 7.9	6.5 to 8.5
Sodium (ppm)	Mar. 2004 & Feb. 2008	17	5 / 17	N/A

Source Water Assessment

The North Carolina Department of Environment and Natural Resources (DENR), Public Water Supply (PWS) Section, Source Water Assessment Program (SWAP) conducted assessments for all drinking water sources across North Carolina. The purpose of the assessments was to determine the susceptibility of each drinking water source (well or surface water intake) to Potential Contamination Sources (PCSs). The results of the assessment are available in SWAP Assessment Reports that include maps, background information and a relative susceptibility rating of Higher, Moderate or Lower.

The relative susceptibility rating of each source for CFPWA was determined by combining the contaminant rating (number and location of PCSs within the assessment area) and the inherent vulnerability rating (i.e. characteristics or existing conditions of the well or watershed and its delineated assessment area). The assessment findings are summarized in the adjacent table. The complete SWAP Assessment report for the Cape Fear Public Utility Authority may be viewed at: <http://www.deh.enr.state.nc.us/pws/swap>.

Please note that because SWAP results and reports are periodically updated by the PWS Section, the results available on this web site may differ from the results that were available at the time this water quality report was prepared. To obtain a printed copy of this report, please mail a written request to: Source Water Assessment Program - Report Request, 1634 Mail Service Center, Raleigh NC 27699-1634, or email request to swap@ncmail.net. Please indicate your system name, PWSID, and provide your name, mailing address and phone number. If you have any questions about the SWAP report please contact the Source Water Assessment staff by phone at 919-715-2633.

Keeping in Touch

If you have any questions or concerns about this report or the quality of your drinking water, please contact CFPWA's Water Treatment Division at (910) 332-6739. We want our valued customers to be informed about their water utility. If you want to learn more, consider attending an Authority Board Meeting. Information can be found by visiting our web-site.

Pass it on...

Businesses and landlords are requested to pass this information on to their tenants and customers. Please post this in a visible location. Additional copies of this report can be obtained by calling (910) 332-6739 or (910) 332-6550 during regular business hours. This report is also posted on our web-site: www.cfpwa.org. Thank you for helping us provide this information to all those who use and depend on our water.



Learn more about your utility systems. The CFPWA Board meets on the 2nd Wednesday of each month at 9:00 a.m. in Room 601 of the New Hanover County Government Center.

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Source Name	System	Susceptibility Rating*	SWAP Report Date
Cape Fear River	04-65-010	Moderate	March 2007
Lower C.F. W&S Authority	04-65-010	Moderate	March 2007
Lords Creek	04-65-010	Lower	March 2007
Hillside	04-65-010	Moderate	March 2007
Monterey Heights Well #1	04-65-137	Moderate	March 2007
Monterey Heights Well #2	04-65-137	Moderate	March 2007
Monterey Heights Well #3	04-65-137	Moderate	March 2007
NHC 421 Well #3	04-65-191	Higher	March 2007
NHC 421 Well #4	04-65-191	Higher	March 2007
Well #1 Quail Woods Rd.	04-65-232	Moderate	March 2007
Well #2 Old Quail Woods	04-65-232	Moderate	March 2007
Well #3 Bay Blossom	04-65-232	Moderate	March 2007
Well #4 White Rd.	04-65-232	Moderate	March 2007
Well #5 Shenandoah Rd.	04-65-232	Moderate	March 2007
Well #6 North Chase	04-65-232	Moderate	March 2007
Well #7 North Chase	04-65-232	Moderate	March 2007
Well #8 Ogden Park	04-65-232	Moderate	March 2007
Well #9 Bountiful Lane	04-65-232	Moderate	March 2007
Well #10 Harvest Rd.	04-65-232	Moderate	March 2007
Well #11 Stoney Rd.	04-65-232	Moderate	March 2007
Well #12 Berry St.	04-65-232	Moderate	March 2007
Well #13 Prince George	04-65-232	Moderate	March 2007
Well #15 Elkmont	04-65-232	Moderate	March 2007
Well #16 Old Oak Rd.	04-65-232	Higher	March 2007
Well #17 Raintree/Brick St.	04-65-232	Higher	March 2007
Well #18 Beawood/Brick St.	04-65-232	Moderate	March 2007
Well #19 Marsh Oaks/Marsh	04-65-232	Moderate	March 2007
Well #20 Old Marsh Oaks #2	04-65-232	Moderate	March 2007
+Well #24 - Old Kings Grant Well #1	04-65-232	Moderate	March 2007
+Well #25 - Old Kings Grant Well #2	04-65-232	Moderate	March 2007
+Well #26 - Old Kings Grant Well #3	04-65-232	Higher	March 2007
+Well #27 - Old Kings Grant Well #4	04-65-232	Lower	March 2007

Susceptibility of Sources to Potential Sources (PCSs)

** It is important to understand that a susceptibility rating of "higher" does not imply poor water quality, only the systems' potential to become contaminated by PCS's in the assessment area.*

+ SWAP information for Wells #24-#27 can be found in the old Kings Grant report PWS ID #04-65-129



PLEDGE 2 SAVE 5

It's our promise to provide you with safe, clean drink-

ing water 365 days a year. But, we deliver more than water. We deliver public health, fire protection, support for the economy, and the overall quality of life we enjoy. Our job is to ensure that your water keeps flowing not only today, but well into the future. It's all part of our commitment to serve you and everyone in our community.

Think of all the ways you use water every day. Did you know that of all the drinking water treated by CFPUA, (we're talking millions of gallons a day) only about 1% is actually consumed? The rest is used for cleaning, flushing toilets, firefighting, leaks, heating & cooling

systems, lawn irrigation, and more. And, every time the toilet is flushed or water goes down the drain, that water enters the sewer system and you are charged both water and sewer fees. If you have a leak that goes unrepaired, you're paying for water you never even used.

It also takes a considerable amount of energy to deliver and treat the water you use everyday - American water treatment facilities consume about **56 billion** kilowatt hours per year. That's enough electricity to power more than **5 million** homes for an entire year! If you let your faucet run for five minutes you're using as much energy as if you left a 60-watt light bulb on for 14 hours.

We all use water everyday - there's no way around it. But, if each resident used just 5 gallons less each day (equivalent to about 2

toilet flushes), almost **1,000,000 gallons** of water could be saved each day. So, how about it? Are you willing to take the challenge and start saving?

You and your family can **Pledge 2 Save 5** by completing and returning the pledge form to CFPUA's Water Conservation Office. Each pledge received will be added to our online list of pledges. In addition, you will be entered into our monthly drawing for a chance to win a home water conservation kit valued at over \$50. Sign up today! You'll see just how easy saving water can be.

If you have any questions or would like more information, call the Water Conservation Hotline at (910) 332-6566 (choose option #4) or send an e-mail to: conserveh2o@cfpua.org. Additional information and pledge forms can also be found on CFPUA's web-site.

"If you let your faucet run for five minutes you're using as much energy as if you left a 60-watt light bulb on for 14 hours."

- ◆ *I/we understand that water is our most precious natural resource and I/we will do my/our part to make sure there is enough water for everyone.*
- ◆ *I/we pledge to always use water wisely by taking shorter showers, checking for leaks, turning the water off whenever possible, and never wasting water.*
- ◆ *I/we pledge to do all that I/we can around my/our house, school, or business to preserve and conserve water and to share what I/we know with family and friends because I/we am/are water saving device number one.*



I/we pledge to save at least 5-gallons of water per day (per person)

Please Print:

Name(s): _____

Date: _____ Phone #: _____

Address: _____

☐ YES! I'd like to receive water conservation tips and notification of restrictions, upcoming workshops/events & water saving promotions (via e-mail)

e-mail: _____

Return completed forms:



MAIL Pledge 2 Save 5 Attn: J. Major, Cape Fear Public Utility Authority, 235 Government Center Dr. Wilmington, NC 28403



FAX 910-341-4657



e-mail conserveh2o@cfpua.org



Questions? Information?

CFPUA

235 Government Center Dr.
Wilmington, NC 28403
(910) 332-6550
www.cfpuia.org

CFPUA Water Conservation Hotline

(910) 332-6566
conserveh2o@cfpuia.org

EPA

Safe Drinking Water Hotline
1-800-426-4791



Cape Fear Public Utility Authority • 235 Government Center Drive • Wilmington, NC 28403

Helpful CFPUA phone numbers...

Water Treatment.....	332-6739
Water Conservation Hotline/Report Water Waste.....	332-6566
Customer Service - Billing Information, New Connections, System Shutoff.....	332-6550
Report broken water lines, mains, sewer overflow (24-hour).....	332-6565
Human Resources.....	332-6570
Board Information.....	332-6543
Public Relations.....	332-6704



When you use water wisely, you help the environment.

You save water for fish and animals. You help preserve drinking water supplies. And you ease the burden on wastewater treatment plants - the less water you send down the drain, the less work these plants have to do to make water clean again.

When you use water wisely, you save energy.

You save the energy that your water supplier uses to treat and move water to you, and the energy your family uses to heat your water.

When you use water wisely, you save money.

Your family pays for the water you use. If you use less water, you'll have more money left to spend on other things.



Wayne Drop, CFPUA's Water-Use it Wisely mascot

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