

WATER QUALITY **2013** 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 (1996 amendment to the Safe Drinking Water Act (SDWA)). This report provides important details about the quality of the drinking water we provide to our community.

STAGE 2 DISINFECTANTS/ DISINFECTION BY- PRODUCTS RULE

The Authority requested and was granted a waiver of the Stage 2 Disinfectants/Disinfection By-Products (DBP) Rule in March of 2012. This waiver allows the Authority to complete construction of the Sweeney Water Treatment Plant and to construct interconnections, new pipelines and other modifications associated with improvements necessary to enable the Authority to comply with the new rules that became effective April 1, 2012. The waiver expires on March 30, 2014.

VIOLATIONS

During 2013, PWS#04-65-010 received a Tier 3 monitoring violation. Corrective action has been taken and a modified sampling schedule is now being followed. See page 2 of this report for more details.

EN ESPANOL

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

A Message from our Executive Director:



In 2013, thanks to our hard-working and dedicated staff, CFPUA marked its fifth year of delivering reliable water and wastewater services that provide the backbone for our community's way of life. Every day we treat and distribute life's most precious resource - millions of gallons of clean, reliable drinking water - to nearly 200,000 people in the City of Wilmington and New Hanover County.

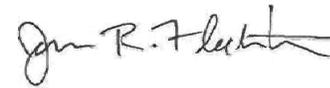
I am proud to present to you our annual Drinking Water Quality Report for the 2013 calendar year and encourage to read it to learn more about the water being sent to your home, business, school, hospital or favorite restaurant. It details where your water comes from, how it's treated, and the degree that it is tested before it comes out of your tap.

Our laboratory conducts tens of thousands of tests every year to ensure the safety of your drinking water. This report provides an extensive list of what we test for in your water and information on how we meet or exceed the many drinking water regulations established by the state of North Carolina and the U.S. Environmental Protection Agency.

The people of the Cape Fear Public Utility Authority will continue to work 24 hours a day with three guiding principles at the heart of everything we do: **STEWARDSHIP** to the environment and community, **SUSTAINABILITY** of our infrastructure and operations, and the delivery of a high level of **SERVICE** at the lowest practicable cost to our customers. We play an important role in the daily lives of the people we serve and we hope the results found in this report demonstrate to you, our customer, how seriously we take this responsibility.

As always, CFPUA staff will gladly speak with you and your neighbors about the results found in this water quality report. We would also enjoy any available opportunity to talk to you about our other duties and to address any issues of interest to your homeowners association, civic organization or community group. To set up such a conversation, please contact Mike McGill, Chief Communications Officer, at (910) 332-6704 or communications@cfpua.org.

Regards,



James R. Flechtner
Executive Director
Cape Fear Public Utility Authority

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 treated drinking water within New Hanover County through four different water systems. The largest system **CFPUA/City (PWS #04-65-010)** distributes water within the City of Wilmington city limits, parts of the Ogden area, parts of Monkey Junction and the King's Grant. Water is provided to the system by the Sweeney Water Treatment Plant, whose source water is surface water that is drawn from the Cape Fear River. The next largest system **CFPUA/NHC (PWS #04-65-232)** distributes water to portions of the northern part of New Hanover County including Murrayville, Wrightsboro, parts of Castle Hayne, Porters Neck and parts of the Ogden Area. Water is provided to this system by the CFPUA Nano-filtration Membrane Facility whose source water is groundwater wells drawing from the Castle Hayne and Pee Dee Aquifers. Two smaller systems **CFPUA/421 System (PWS #04-65-191)**, distributing water in the Flemington area, and **CFPUA/Monterey Heights water system (PWS #04-65-137)**, distributing water in Monterey Heights, Woodlake, Laurel Ridge/S. Myrtle Grove, Lord's Creek and Veteran's Park area provide treated groundwater from wells which draw water from the Castle Hayne and surficial aquifers. A staff of highly trained, state certified water treatment operators and a team of skilled maintenance technicians keep all these facilities fully operational 24 hours per day, 7 days per week to insure a safe, high quality, reliable drinking water source. Look through this report to learn more so you can make informed decisions about your drinking water and know the preventative measures taken to protect this valuable resource and ensure safe, clean drinking water.

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 micro-biological 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.

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 tables on the following pages list all the drinking water substances that CFPWA 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, 2013.** 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. A glossary of terms used in these tables can be found on page 6 of this report.

NOTICE TO THE PUBLIC

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Violation Awareness Date: **January 2014**

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During the compliance period specified in the table below, we did not complete all monitoring or testing for the contaminant listed and therefore cannot be sure of the quality of your drinking water during that time.

CONTAMINANT GROUP**	FACILITY ID NO./ SAMPLE POINT ID	COMPLIANCE PERIOD BEGIN DATE	NUMBER OF SAMPLES/ SAMPLING FREQUENCY	WHEN SAMPLES WERE TAKEN (Returned to Compliance)
SOC/DALAPON	PO1/007	10/1/2013 – 12/31/2013	1 SAMPLE/QUARTER	2/6/2014

(SOC) – Synthetic Organic Chemicals/Pesticides – Dalapon

What should I do? There is nothing you need to do at this time.

What is being done? Sample collected in July 2013 was improperly reported, triggering a modified sampling schedule. Sampling began in February 2014 and continued in May 2014 according to the modified schedule. No samples collected in 2014 have had detected levels of dalapon.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

For questions or to request additional information about this violation, please contact Tiffanie Hawley, ORC PWS #04-65-010 at 910-332-6739 or send an e-mail to tiffanie.hawley@cfpua.org.

2013 ANNUAL WATER QUALITY REPORT

CFPUA/CITY – PWS ID #04-65-010 (Surface Water/Sweeney Water Treatment Plant)

Service to City of Wilmington, Ogden, Monkey Junction, Kings Grant

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)	TT Violation	Your Water	MCLG	Treatment Technique (TT) Violation if:	Likely Source
Turbidity (NTU) Highest single turbidity measurement	NO	0.117	N/A	Turbidity > 1 NTU	Soil runoff
Turbidity (NTU) Lowest monthly percentage (%) of samples meeting turbidity limits	NO	100%	N/A	Less than 95% of monthly turbidity measurements are ≤ 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	Nov 13, 2013	NO	0.72	N/A	N/A	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizers and aluminum factories

SYNTHETIC ORGANIC CHEMICAL (SOC) SUBSTANCES								
Substance (units)	Sample Date	MCL Violation	Your Water	Range		MCLG	MCL	Likely Source
				Low	High			
Dalapon (ppb)	July 10, 2013	NO	1.4	N/A	N/A	200	200	Runoff from herbicide used on rights-of-way

UNREGULATED INORGANIC SUBSTANCES					
Substance (units)	Sample Date	Your Water	Range		Secondary MCL
			Low	High	
Sulfate (ppm)	Nov 13, 2013	34.2	N/A	N/A	250

LEAD AND COPPER † (See page 6 for more information)						
Substance (units)	Sample Date	Your Water	# of Sites Found Above the AL	MCLG	MCL	Likely Source
Copper (ppm) 90 th percentile	June/Sept 2011	0.193 ppm	0	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 2011	<3.0 ppb	0	0	AL = 15	Corrosion of household plumbing systems; erosion of natural deposits

DISINFECTION BYPRODUCT PRECURSORS							
Our water system used [Step 1] as the method to comply with the disinfectants/disinfectant byproducts treatment technique requirements							
Substance (units)	MCL/TT Violation	Your Water (RAA Removal Ratio)	Range Monthly Removal Ratio		MCLG	MCL	Likely Source
			Low	High			
Total Organic Carbon (TOC) Removal Ratio - TREATED	NO	1.46	126%	167%	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			
THM† (ppb) Total Trihalomethanes**	NO	72.2	23.0	120.0	N/A	80	By-product of drinking water chlorination
HAA5 (ppb) Total Haloacetic Acid	NO	29.0	8.9	60.0	N/A	60	By-product of drinking water disinfection
Bromate (ppb)	NO	1.04	0	2.8	0	10	By-product of drinking water disinfection
Chlorine (ppm)	NO	1.1	0.21	2.46	MRDLG = 4	MRDL = 4	Water additive used to control microbes

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

† Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer

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
Sweeney WTP surface water source				
• Iron (ppm)	Nov 13, 2013	<0.06	N/A	0.3 mg/L
• Manganese (ppm)	Nov 13, 2013	0.0077	N/A	0.05 mg/L
• Nickel (ppm)	Nov 13, 2013	<0.1	N/A	N/A
• pH (s.u.)	Nov 13, 2013	7.2	N/A	6.5 to 8.5
• Sodium (ppm)	Nov 13, 2013	27.4	N/A	N/A
• Sulfate (ppm)	Nov 13, 2013	34.2	N/A	250 mg/L

In 2013 our system monitored for the following water quality parameters and found no detected levels: Asbestos (7/15/2013), Inorganic Compounds (11/13/2013), Nitrates (4/10/2013), Volatile Organic Compounds (7/10/2013), and Cryptosporidium* (4/25/2013).

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.

CFPUA/NHC - PWS ID #04-65-232 (Groundwater/Nano-filtration)

Service to Northern New Hanover County, Ogden, Porters Neck, Murrayville, Wrightsboro, Castle Hayne

MICROBIOLOGICAL SUBSTANCES					
Substance (units)	MCL Violation	Your Water	MCLG	MCL exceeded if:	Likely Source
Total Coliform Bacteria (presence or absence)	NO	480 tested / 0 positive	0	5% of monthly samples are 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	Your Water	Range		MCLG	MCL	Likely Source
				Low	High			
Fluoride (ppm)	Jan-Dec 2013 (Daily)	NO	1.06	0.43	1.06	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizers and aluminum factories

LEAD AND COPPER † (See page 6 for more information)						
Substance (units)	Sample Date	Your Water	# of Sites Found Above the AL	MCLG	MCL	Likely Source
Copper (ppm) 90 th percentile	June-Sept 2013	0.31	0	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 2013	ND	0	0	AL = 15	Corrosion of household plumbing systems; erosion of natural deposits

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	Your Water	MCLG	MCL	Likely Source
Gross Beta (pCi/L)	Sept 2010	NO	ND	0	*50	Decay of natural and man-made deposits
Combined Uranium (pCi/L)	Sept 2010	NO	ND	0	20.1	Erosion of natural deposits
Uranium (pCi/L)	Sept 2010	NO	ND	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 2013	NO	27	23	30	N/A	80	By-product of drinking water chlorination
HAA5 (ppb) Total Haloacetic Acid	Jan-Dec 2013	NO	19	16	21	N/A	60	By-product of drinking water disinfection
Chlorine (ppm)	Jan-Dec 2013	NO	1.13	0.21	1.78	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-Dec 2013 (Daily)	0.49	0.01 / 0.49	0.3
Manganese (ppm)	Jan-Dec 2013 (Daily)	0.088	0.001 / 0.088	0.05
pH (s.u.)	Jan-Dec 2013 (Daily)	7.67	7.04 / 7.67	6.5 to 8.5
Sodium (ppm)	Dec 2012	11.0	N/A	N/A

CFPUA/421 WATER SYSTEM - PWS ID #04-65-191 (Groundwater)

Service to Flemington

MICROBIOLOGICAL SUBSTANCES					
Substance (units)	MCL Violation	Your Water	MCLG	MCL exceeded if:	Likely Source
Total Coliform Bacteria (presence or absence)	NO	24 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

LEAD AND COPPER † (See page 6 for more information)

Substance (units)	Sample Date	Your Water	# of Sites Found Above the AL	MCLG	MCL	Likely Source
Copper (ppm) 90 th percentile	June 2012	0.059	0	1.3	AL = 1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb) 90 th percentile	June 2012	ND	0	0	AL = 15	Corrosion of household plumbing systems; erosion of natural deposits

NITRATE/NITRITE SUBSTANCES								
Substance (units)	Sample Date	MCL/MRDL Violation	Your Water (AVG)	Range		MCLG	MCL	Likely Source
				Low	High			
Nitrate-as Nitrogen (ppm)	Feb 2013	NO	1.50	N/A	N/A	10	10	Runoff from fertilizer use; leaching from septic tanks; sewage; 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	July 2012	NO	18	N/A	N/A	N/A	80	By-product of drinking water chlorination
HAA5 (ppb) Total Haloacetic Acid	July 2012	NO	3	N/A	N/A	N/A	60	By-product of drinking water disinfection
Chlorine (ppm)	Jan-Dec 2013	NO	1.20	0.27	1.58	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	Secondary MCL
Manganese (ppm)	Feb 2013	0.071	N/A	0.05
pH (s.u.)	Feb 2013	7.0	N/A	6.5 to 8.5
Sodium (ppm)	Feb 2013	22.5	N/A	N/A

CFPUA/MONTEREY HEIGHTS WATER SYSTEM - PWS ID #04-65-137 (Groundwater)

Service to Monterey Heights, Woodlake, Laurel Ridge/S. Myrtle Grove, Lord's Creek, Veteran's Park

MICROBIOLOGICAL SUBSTANCES					
Substance (units)	MCL Violation	Your Water	MCLG	MCL exceeded if:	Likely Source
Total Coliform Bacteria (presence or absence)	NO	108 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)	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

INORGANIC SUBSTANCES								
Substance (units)	Sample Date	MCL Violation	Your Water	Range		MCLG	MCL	Likely Source
				Low	High			
Fluoride (ppm)	March 2013	NO	0.18	0.17	0.18	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizers and aluminum factories

LEAD AND COPPER †						
Substance (units)	Sample Date	Your Water	# of Sites Found Above the AL	MCLG	MCL	Likely Source
Copper (ppm) 90 th percentile	July-Dec 2013	0.481	0	1.3	AL = 1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb) 90 th percentile	July-Dec 2013	3	0	0	AL = 15	Corrosion of household plumbing systems; 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	Aug 2013	NO	44	39	47	N/A	80	By-product of drinking water chlorination
HAA5 (ppb) Total Haloacetic Acid	Aug 2013	NO	18	15	23	N/A	60	By-product of drinking water disinfection
Chlorine (ppm)	Jan-Dec 2013	NO	0.87	0.22	1.82	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)	Feb 2011 & Mar 2013	0.190	0.080 / 0.190	0.3
Manganese (ppm)	Feb 2011 & Mar 2013	0.019	0.010 / 0.019	0.05
pH (s.u.)	Feb 2011 & Mar 2013	8.1	7.9 / 8.1	6.5 to 8.5
Sodium (ppm)	Feb 2011 & Mar 2013	18	5 / 18	N/A

† LEAD & COPPER

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>.

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. MRDLG's 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.

Source Water Assessment Program

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 complete SWAP Assessment report for the Cape Fear Public Utility Authority may be viewed at: <http://www.ncwater.org/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@ncdenr.gov. 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 919-707-9098.

Source Name	Source Status	System Name	Susceptibility Rating*	SWAP Report Date
NHC 421 Well #4	Active	04-65-191	Higher	March 2010
NHC 421 Well #3	Active	04-65-191	Higher	March 2010
Monterey Heights Well #3	Active	04-65-137	Moderate	March 2010
Monterey Heights Well #2	Active	04-65-137	Moderate	March 2010
Monterey Heights Well #1	Active	04-65-137	Higher	March 2010
NHC Well # 30 O	Active	04-65-232	Moderate	March 2010
NHC Well #29 N	Active	04-65-232	Higher	March 2010
Well #8 Ogden Park	Active	04-65-232	Moderate	March 2010
NHC Well #28 M	Active	04-65-232	Higher	March 2010
NHC Well #23	Active	04-65-232	Moderate	March 2010
NHC Well #22	Active	04-65-232	Moderate	March 2010
Well #15 Elkmont	Active	04-65-232	Moderate	March 2010
Lower Cape Fear WSA	Active	04-65-010	Moderate	February 2010
Lords Creek	Active	04-65-010	Lower	February 2010
Cape Fear River Kings Bluff	Active	04-65-010	Moderate	February 2010
Well #4 White Rd.	Emergency	04-65-232	Moderate	March 2010
Well #20 Old Marsh Oaks #2	Emergency	04-65-232	Higher	March 2010
Well #16 Old Oak Rd.	Emergency	04-65-232	Higher	March 2010
Sea Spray Rd.	Emergency	04-65-010	Higher	February 2010
Sea Pines	Emergency	04-65-010	Moderate	February 2010
Masonboro Forest	Emergency	04-65-010	Lower	February 2010

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.



Questions? Information?

CFPUA

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

EPA

Safe Drinking Water Hotline
1-800-426-4791

If you have any questions or concerns about this report or the quality of your drinking water, please contact CFPUA'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. The CFPUA Board meets on the 2nd Wednesday of each month at 9:00 a.m. in Room 601 of the New Hanover County Government Center.

Pass it on...

Businesses and landlords are encouraged to share this information with their tenants and customers. Paper copies can be obtained by calling (910) 332-6739 or (910) 332-6550 during regular business hours. This report is available online at: www.cfpua.org/2013WQReport.

Thank you for helping us provide this information to all those who use and depend on our water.



AWWA
MEMBER

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Cape Fear
Public Utility Authority

Stewardship. Sustainability. Service.

Helpful CFPUA phone numbers...

Report Water/Sewer Emergencies (24-hour).....	332-6565
Customer Service - Billing Information, New Connections, System Shutoff.....	332-6550
Water Treatment (Sweeney Water Treatment Plant).....	332-6739
(Nano-filtration Water Treatment Plant).....	332-6739
Human Resources.....	332-6570
Board Information.....	332-6543
Communications.....	332-6704
Community Compliance.....	332-6558

Invite CFPUA to meet with you...

Learn more about CFPUA, the role it plays in your life, how it does its job and how those operations are funded. Maybe you have a specific concern regarding the rates you pay or the infrastructure that serves you? CFPUA conducts public meetings with groups, homeowners associations, civic organizations, school classes or other groups interested in learning more about the Authority. We're available morning, noon and night to meet with you and your neighbors and will tailor a presentation to touch upon areas that interest you most. Each session also includes time for a Q&A with our staff so you can bring forth your questions and concerns.

For more information about inviting CFPUA speak to you and your friends, neighbors, or colleagues, contact Mike McGill, Chief Communications Officer, at (910) 332-6704 or by email at communications@cfpua.org.

Water Plant Tours & School Presentations

Have you ever wondered where your water comes from or how it gets to the tap? Well, we'd love to show you! Schedule a tour of the Sweeney Water Treatment or Nano-filtration (Groundwater) Plant for your school group, boy/girl scout troop or other organization. We'll take you on a behind-the-scenes guided tour through the actual treatment process where you'll discover how your drinking water is collected, cleaned, and distributed.

For more information about touring our water treatment facilities or to arrange a presentation for your classroom or scout troop, contact Jacqueline Valade, Water Resources Administrative & Outreach Specialist, at (910) 332-6579 or by email at jacqueline.valade@cfpua.org.



CFPUA is on Twitter and Facebook! Keep up with the latest Authority news including meeting notices, road closure information, and scheduled & emergency work that affects our service area. Follow us on Twitter [@CFPUA](https://twitter.com/CFPUA) or friend us on Facebook (search Cape Fear Public Utility Authority).

Notifications are also available through "Notify Me"! Receive instant alerts and messages straight from CFPUA to your e-mail or mobile phone as soon as something new is posted to our web-site. Simply click on the "Notify Me" link found on our homepage, www.cfpua.org, choose your preferences and register.