

WATER QUALITY *report* 2017

ABOUT THIS REPORT

Each year, Cape Fear Public Utility Authority prepares 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.

MONITORING VIOLATIONS

The 010 and the 232 water systems both received monitoring violations in May and June of 2018 for Total Coliform and Disinfectant residual samples that had to be invalidated due to a sample location error. For more information see the "NOTICE TO THE PUBLIC" forms included as part of this document.

EN ESPANOL

Este informe contiene información muy importante. Tradúzcalo o hable con un

QUESTIONS? INFORMATION?

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.

A Message from our Executive Director:

In 2017, the issue of water quality became the focus of our community when emerging contaminants were discovered in the drinking water and in the Cape Fear River, the largest source of drinking water for our region. Over the past year, Cape Fear Public Utility Authority has continued to monitor and track levels of these compounds while testing new treatment technologies that have the potential to remove them from the drinking water.

As may be seen in this report, levels of these contaminants have dropped significantly - an accomplishment that could not have been done without the hard work of many organizations in this community. The issue of emerging contaminants is a challenge that utilities across the nation are working to address, and we will continue to collaborate with our partners at the local, state and federal levels to ensure we are providing clean and reliable drinking water to our customers.

I am proud to present our annual Drinking Water Quality Report for the 2017 calendar year. I encourage you to read it to learn more about the water being delivered 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 Environmental Protection Agency (EPA).

The people of CFPUA will continue to work 24 hours a day with three guiding principles at the heart of everything that 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 practical 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.

Regards,



James R. Flechtner, P.E.
Executive Director
Cape Fear Public Utility Authority



Kings Bluff raw water intake

Water quality data tables of detected contaminants

We routinely monitor for more than 150 contaminants in your drinking water according to Federal and State laws. The tables on the following pages list all the drinking water contaminants that CFPUA has **detected** in the last round of sampling for each particular contaminant group. The presence of contaminants 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, 2017.**

The EPA and the State of North Carolina allow us to monitor for certain contaminants less than once per year because concentrations of these contaminants 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 contaminants are those for which the EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist the EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulations are warranted. To obtain more information on contaminants that CFPUA conducts special or voluntary monitoring for not contained in this document, or to obtain specific sample results, please visit our Drinking Water Quality webpage at <https://www.cfpuu.org/692/Drinking-Water-Quality>.

CFPUA's Water Systems and Service Areas

When you turn on your tap, consider the source. Cape Fear Public Utility Authority processes and distributes treated drinking water within New Hanover County through three different water systems. The largest system, **CFPUA-Wilmington (PWS #04-65-010)**, distributes water within the City of Wilmington city limits, parts of the Ogden area, Monkey Junction/Independence (including areas in and near Pine Valley, Echo Farms, Barclay, Crosswinds and Lake Brewster), King's Grant, Tarin Woods, River Lights, parts of Hwy. 421/Flemington, and Wrightsboro. Water is provided to this system via the **Sweeney Water Treatment Plant** using surface water (source water) 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, Northchase, Porters Neck, parts of Castle Hayne, and parts of the Ogden Area. The **Michael E. Richardson Nanofiltration Water Treatment Plant** provides treated groundwater, drawn from the Castle Hayne and PeeDee Aquifers through wells, to this system.

A smaller system, **CFPUA/Monterey Heights water system (PWS #04-65-137)**, distributes water in the southern portion of New Hanover County in areas including Monterey Heights, Woodlake, Laurel Ridge, Sentry Oaks, S. Myrtle Grove, Lord's Creek, and the Veteran's Park area. This system provides treated groundwater from wells which draw water from the Castle Hayne and surficial aquifers.

A staff of highly trained, state certified and licensed water treatment operators and a team of skilled maintenance and field technicians keep all of these facilities fully operational every day in order 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.

Visit this page of our website: <http://www.cfpua.org/641/Your-Water-Service-Area> for an interactive map of our service area to determine what system serves your home and/or business.

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 contaminants. The presence of these contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

Some people may be more vulnerable to contaminants 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

contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

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>.

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 contaminants resulting from the presence of animals or from

human activity. Contaminants that may be present in source water include **microbial contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife; **inorganic contaminants**, 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 contaminants**, 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 contaminants**, 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 contaminants in water provided by public water systems. FDA regulations establish limits for substances in bottled water to provide protection for public health.

EPA
Safe Drinking
Water Hotline
1-800-426-4791

2017 ANNUAL WATER QUALITY REPORT

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

Service to City of Wilmington, Ogden, Monkey Junction/Independence, Kings Grant, Flemington/421, River Lights, Wrightsboro

MICROBIOLOGICAL CONTAMINANTS IN DISTRIBUTION SYSTEM					
Contaminant (units)	MCL Violation	Your Water	MCLG	MCL	Likely Source of Contamination
Total Coliform Bacteria (presence or absence)	N/A	N/A	N/A	TT*	Naturally present in the environment
<i>E. coli</i> (presence or absence)	-	0	0	Routine and repeat samples are total coliform-positive and either is <i>E. coli</i> -positive or system fails to take repeat samples following <i>E. coli</i> -positive routine sample or system fails to analyze total coliform-positive repeat sample for <i>E. coli</i> Note: If either an original routine sample and/or its repeat sample(s) are <i>E. coli</i> -positive, a Tier 1 violation exists.	Human and animal fecal waste

* If a system collecting 40 or more samples per month finds greater than 5% of monthly samples are positive in one month, an assessment is required.

TURBIDITY* - Systems with population ≥ 10,000					
Contaminant (units)	TT Violation	Your Water	MCLG	Treatment Technique (TT) Violation if:	Likely Source of Contamination
Turbidity (NTU) Highest single turbidity measurement	NO	0.068	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 CONTAMINANTS								
Contaminant (unit)	Sample Date	MCL Violation	Your Water	Range		MCLG	MCL	Likely Source of Contamination
				Low	High			
Fluoride (ppm)	Aug & Sep 2015 Nov 2016 Oct & Nov 2017	NO	0.70	0.12	0.70	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizers and aluminum factories

LEAD AND COPPER Every three years with reduced monitoring. 2017 was a compliance period. † See page 2 for more information						
Contaminant (units)	Sample Date	Your Water	# of Sites Found Above the AL	MCLG	MCL	Likely Source of Contamination
Copper (ppm) 90 th percentile	Jun & Sep 2017	0.210 ppm	0	1.3	AL = 1.3	Corrosion of household plumbing systems; erosion of natural deposits;
Lead (ppb) 90 th percentile	Jun & Sep 2017	<3.0 ppb	1	0	AL = 15	Corrosion of household plumbing systems; erosion of natural deposits

DISINFECTION BYPRODUCT PRECURSORS - Total Organic Carbon (TOC)								
Contaminant (units)	TT Violation	Your Water (RAA Removal Ratio)	Range Monthly Removal Ratio		MCLG	MCL	Likely Source of Contamination	Compliance Method (Step 1 or ACC#)
			Low	High				
Total Organic Carbon (TOC) (Removal Ratio) TOC - TREATED	NO	1.54	63%	78%	N/A	TT	Naturally present in the environment	Step 1

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 63%.

TOC Removal Requirements (Step 1)			
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



DISINFECTION BY- PRODUCT COMPLIANCE - based upon Locational Running Annual Average (LRAA)

Disinfection By-product	Location Code	Year Sampled	MCL Violation	Your Water (Highest LRAA)	Range		MCLG	MCL	Likely Source of Contamination
					Low	High			
TTHMs (ppb)	System	2017	NO	48.3	18.9	64.6	N/A	80	Byproduct of drinking water disinfection
	B01	2017	NO	37.8	18.9	54.0	N/A	80	Byproduct of drinking water disinfection
	B02	2017	NO	32.4	21.2	42.7	N/A	80	Byproduct of drinking water disinfection
	B03	2017	NO	39.8	27.5	54.3	N/A	80	Byproduct of drinking water disinfection
	B04	2017	NO	32.8	21.4	42.9	N/A	80	Byproduct of drinking water disinfection
	B05	2017	NO	32.1	20.2	41.5	N/A	80	Byproduct of drinking water disinfection
	B06	2017	NO	39.1	31.0	54.3	N/A	80	Byproduct of drinking water disinfection
	B07	2017	NO	48.3	33.3	64.6	N/A	80	Byproduct of drinking water disinfection
	B08	2017	NO	40.3	22.6	53.0	N/A	80	Byproduct of drinking water disinfection
HAA5 (ppb)	System	2017	NO	20.1	9.3	22.0	N/A	60	Byproduct of drinking water disinfection
	B01	2017	NO	16.8	9.4	22.0	N/A	60	Byproduct of drinking water disinfection
	B02	2017	NO	17.1	11.0	21.0	N/A	60	Byproduct of drinking water disinfection
	B03	2017	NO	16.4	11.1	20.5	N/A	60	By-product of drinking water disinfection
	B04	2017	NO	17.8	11.2	19.1	N/A	60	By-product of drinking water disinfection
	B05	2017	NO	14.7	9.3	13.9	N/A	60	By-product of drinking water disinfection
	B06	2017	NO	19.6	12.4	20.4	N/A	60	By-product of drinking water disinfection
	B07	2017	NO	20.1	13.6	14.9	N/A	60	By-product of drinking water disinfection
	B08	2017	NO	19.4	11.0	19.1	N/A	60	By-product of drinking water disinfection

OTHER DISINFECTION BY- PRODUCTS - based upon Locational Running Annual Average (LRAA)

Disinfection By-product (Unit)	Year Sampled	MCL/ MRDL Violation	Your Water	Range		MCLG	MCL	Likely Source of Contamination
				Low	High			
Bromate (ppb)	2017	NO	1.96	1.0	4.8	0	10	By-product of drinking water disinfection

DISINFECTANT RESIDUALS SUMMARY

Disinfectant (unit)	Year Sampled	MRDL Violation	Your Water (highest RAA)	Range		MCLG	MCL	Likely Source of Contamination
				Low	High			
Chlorine (ppm)	2017	NO	1.22	1.09	1.22	MRDLG = 4	MRDL = 4	Water additive used to control microbes

WATER CHARACTERISTICS CONTAMINANTS

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) - Manganese (ppm) - Nickel (ppm) - pH (s.u.) - Sodium (ppm) - Sulfate (ppm)	Aug & Sep 2015, Nov 2016, Oct & Nov 2017 Aug & Sep 2015, Nov 2016, Oct & Nov 2017 Aug & Sep 2015, Nov 2016, Oct & Nov 2017 Aug & Sep 2015, Nov 2016, Oct & Nov 2017 Aug & Sep 2015, Nov 2016, Oct & Nov 2017 Aug & Sep 2015, Nov 2016, Oct & Nov 2017	1.6 0.023 <0.100 7.4 34 35.0	ND / 1.6 ND / 0.023 N/A 7.1 / 7.4 13 / 34 ND / 35	0.3 mg/L 0.05 mg/L N/A 6.5 to 8.5 N/A 250 mg/L



OTHER UNREGULATED CONTAMINANTS * - CFPWA-Wilmington – PWS ID #04-65-010 (Surface Water/Sweeney Water Treatment Plant)					
Contaminant (units)	Sample Date	Your Water	Range		Health Goals / Health Advisories
			Low	High	
1,4 Dioxane (mg/L)	Jun 2017	0.00018	-	-	EPA established a 1-day health advisory of 4.0 milligrams per liter (mg/L) and a 10-day health advisory of 0.4 mg/L in drinking water for a 10- kilogram child and a lifetime health advisory of 0.2 mg/L in drinking water
Chlorate (µg/L)	Jan & Jul 2017	42.5	ND	84.9	None
Perchlorate (µg/L)	May, Sep, Nov 2017	0.08	0.07	0.09	EPA established an Interim Lifetime Drinking Water Health Advisory of 15 micrograms per liter (µg/L)
Total Organic Halogens (TOX) (µg/L)	Mar 2017	100	-	-	None
Perfluoro-2-propoxypropanoic acid (GenX) (ng/L)	Jan - Dec 2017	65.6	25	286	NC-DHHS revised its recommended health goal from 71,000 ppt to 140 ppt for GenX
Perfluorobutanesulfonic acid (PFBS) (ng/L)	Mar & Jul 2017	4.9	-	-	None
Perfluorodecanoic acid (PFDA) (ng/L)	Jul 2017	4.4	-	-	None
Perfluoroheptanoic acid (PFHpA) (ng/L)	Jul 2017	13	-	-	None
Perfluorohexanesulfonic acid (PFHxS) (ng/L)	Mar & Jul 2017	8.7	-	-	None
Perfluorohexanoic acid (PFHxA) (ng/L)	Jul 2017	17	-	-	None
Perfluorononanoic acid (PFNA) (ng/L)	Mar & Jul 2017	4.7	-	-	None
Perfluorooctane sulfonate (PFOS) (ng/L)	Mar & Jul 2017	23	-	-	70 ng/L EPA Health Advisory for Total Combined Concentration of PFOA and PFOS
Perfluorooctanoic acid (PFOA) (ng/L)	Mar & Jul 2017	14	-	-	

* Testing for GenX and subsequent unregulated contaminants yielded no detects in the CFPWA/NHC (PWS ID #04-65-232) or CFPWA/Monterey Heights (PWS ID #04-65-137) water systems.

Visit NC Division of Environmental Quality's website: <https://deq.nc.gov/news/hot-topics/genx-investigation> for more information about GenX and other unregulated contaminants.

CFPWA also provides more information on GenX and other emerging compounds on our website at <https://www.cfpwa.org/761/Emerging-Compounds>.

Definitions

AL/Action Level = The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow. **Average** = Approximate or summary concentration, determined by dividing the total of all results by the number of analyses. **Level 1 Assessment** = A study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system. **LRAA (Locational Running Annual Average)** = The average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters under the Stage 2 Disinfectants and Disinfection Byproducts Rule. **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. **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 (µg/L)** = One part per billion corresponds to one minute in 2,000 years or a single penny in \$10,000,000. **PPT (parts per trillion)** or **nanograms per liter (ng/L)** = One part per trillion corresponds to one minute in 2,000,000 years or one penny in \$10,000,000,000. **Range** = 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.**

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

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

MICROBIOLOGICAL CONTAMINANTS IN DISTRIBUTION SYSTEM					
Contaminant (units)	MCL Violation	Your Water*	MCLG	MCL	Likely Source of Contamination
Total Coliform Bacteria (presence or absence)	N/A	N/A	N/A	TT**	Naturally present in the environment
<i>E. coli</i> (presence or absence)	-	0	0	Routine and repeat samples are total coliform-positive and either is <i>E. coli</i> -positive or system fails to take repeat samples following <i>E. coli</i> -positive routine sample or system fails to analyze total coliform-positive repeat sample for <i>E. coli</i> Note: If either an original routine sample and/or its repeat sample(s) are <i>E. coli</i> -positive, a Tier 1 violation exists.	Human and animal fecal waste

If a system collecting fewer than 40 samples per month has two or more positive samples in one month, an assessment is required.

* Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct an assessment(s) to identify problems and to correct any problems that were found during these assessments.

** During the past year we were required to conduct (1) Level 1 assessment and completed (1) Level 1 assessment. In addition, we were required to take (1) corrective action which was completed. Operations and Lab staff found no known causes for the total coliform positive results from samples collected 9/26/17 and 9/27/17. Several special samples were collected on 9/28/17 and all samples were absent for total coliform and *E. coli*.

INORGANIC CONTAMINANTS								
Contaminant (units)	Sample Date	MCL Violation	Your Water	Range		MCLG	MCL	Likely Source of Contamination
				Low	High			
Fluoride (ppm)	Sep & Dec 2015, Oct 2016, Mar 2017	NO	0.72	0.11	0.72	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizers and aluminum factories

LEAD AND COPPER † See page 2 for more information						
Contaminant (units)	Sample Date	Your Water	# of Sites Found Above the AL	MCLG	MCL	Likely Source of Contamination
Copper (ppm) 90 th percentile	Jun-Sep 2016	0.25	0	1.3	AL = 1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb) 90 th percentile	Jun-Sep 2016	ND	0	0	AL = 15	Corrosion of household plumbing systems; erosion of natural deposits

RADIOLOGICAL CONTAMINANTS								
Contaminant (units)	Sample Date	MCL Violation	Your Water	Range		MCLG	MCL	Likely Source of Contamination
				Low	High			
Combined Radium (pCi/L)	Nov 2014, Jan & Nov 2017	NO	1.1	ND	1.1	0	5	Erosion of natural deposits
Radium 228 (pCi/L)	Nov 2014, Jan & Nov 2017	NO	1.1	ND	1.1	0	2	Erosion of natural deposits
Alpha emitters (pCi/L)	Nov 2014, Jan & Nov 2017	NO	2.5	ND	2.5	0	15	Erosion of natural deposits

DISINFECTION BY-PRODUCT COMPLIANCE - based upon Locational Running Annual Average (LRAA)									
Disinfection By-product (unit)	Location Code	Year Sampled	MCL Violation	Your Water (Highest LRAA)	Range		MCLG	MCL	Likely Source of Contamination
					Low	High			
TTHMs (ppb)	System	2017	NO	24.8	22.0	24.8	N/A	80	Byproduct of drinking water disinfection
	B01	2017	NO	22.0	-	-	N/A	80	Byproduct of drinking water disinfection
	B02	2017	NO	24.8	-	-	N/A	80	Byproduct of drinking water disinfection
HAAs (ppb)	System	2017	NO	16.5	12.7	16.5	N/A	60	Byproduct of drinking water disinfection
	B01	2017	NO	12.7	-	-	N/A	60	Byproduct of drinking water disinfection
	B02	2017	NO	16.5	-	-	N/A	60	Byproduct of drinking water disinfection

DISINFECTANT RESIDUALS SUMMARY								
Disinfectant (unit)	Sample Date	MCL/MRDL Violation	Your Water (AVG)	Range		MCLG	MCL	Likely Source of Contamination
				Low	High			
Chlorine (ppm)	Jan-Dec 2017	NO	1.52	1.37	1.52	MRDLG = 4	MRDL = 4	Water additive used to control microbes

WATER CHARACTERISTICS CONTAMINANTS				
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.				
Contaminant (units)	Sample Date	Your Water	Range Low/High	Secondary MCL
Iron (ppm)	Sep & Dec 2015, Oct 2016, Mar 2017	0.655	0.106 / 0.655	0.3
Manganese (ppm)	Sep & Dec 2015, Oct 2016, Mar 2017	0.032	ND / 0.032	0.05
pH (s.u.)	Sep & Dec 2015, Oct 2016, Mar 2017	7.5	7.2 / 7.5	6.5 to 8.5
Sodium (ppm)	Sep & Dec 2015, Oct 2016, Mar 2017	20.0	11 / 20	N/A

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

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

MICROBIOLOGICAL CONTAMINANTS IN DISTRIBUTION SYSTEM					
Contaminant (units)	MCL Violation	Your Water	MCLG	MCL	Likely Source of Contamination
Total Coliform Bacteria (presence or absence)	N/A	N/A	N/A	TT*	Naturally present in the environment
<i>E. coli</i> (presence or absence)	-	0	0	Routine and repeat samples are total coliform-positive and either is <i>E. coli</i> -positive or system fails to take repeat samples following <i>E. coli</i> -positive routine sample or system fails to analyze total coliform-positive repeat sample for <i>E. coli</i> Note: If either an original routine sample and/or its repeat sample(s) are <i>E. coli</i> -positive, a Tier 1 violation exists.	Human and animal fecal waste

* If a system collecting fewer than 40 samples per month has two or more positive samples in one month, an assessment is required.

INORGANIC CONTAMINANTS								
Contaminant (units)	Sample Date	MCL Violation	Your Water	Range		MCLG	MCL	Likely Source of Contamination
				Low	High			
Fluoride (ppm)	Mar 2016 Feb, Sep, & Dec 2017	NO	0.14	0.18	0.2	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizers and aluminum factories

LEAD AND COPPER † See page 2 for more information						
Contaminant (units)	Sample Date	Your Water	# of Sites Found Above the AL	MCLG	MCL	Likely Source of Contamination
Copper (ppm) 90 th percentile	Jun-Sep 2016	0.563	0	1.3	AL = 1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb) 90 th percentile	Jun-Sep 2016	8	0	0	AL = 15	Corrosion of household plumbing systems; erosion of natural deposits

DISINFECTION BY-PRODUCT COMPLIANCE - based upon Locational Running Annual Average (LRAA)									
Disinfection By-product (unit)	Location Code	Year Sampled	MCL Violation	Your Water (Highest LRAA)	Range		MCLG	MCL	Likely Source of Contamination
					Low	High			
TTHMs (ppb)	System	2017	NO	25.5	24.4	25.5	N/A	80	Byproduct of drinking water disinfection
	B01	2017	NO	25.5	N/A	N/A	N/A	80	Byproduct of drinking water disinfection
	B02	2017	NO	24.4	N/A	N/A	N/A	80	Byproduct of drinking water disinfection
HAAs (ppb)	System	2017	NO	13.0	12.8	13.0	N/A	60	Byproduct of drinking water disinfection
	B01	2017	NO	13.0	N/A	N/A	N/A	60	Byproduct of drinking water disinfection
	B02	2017	NO	12.8	N/A	N/A	N/A	60	Byproduct of drinking water disinfection

DISINFECTANT RESIDUALS SUMMARY								
Contaminant (unit)	Sample Date	MRDL Violation	Your Water (AVG)	Range		MCLG	MCL	Likely Source of Contamination
				Low	High			
Chlorine (ppm)	Jan-Dec 2017	NO	0.97	0.89	0.97	MRDLG = 4	MRDL = 4	Water additive used to control microbes

WATER CHARACTERISTICS CONTAMINANTS				
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.				
Contaminant (units)	Sample Date	Your Water	Range Low/High	Secondary MCL
Iron (ppm)	Mar 2016, Feb, Sep, & Dec 2017	0.154	ND / 0.319	0.3
Manganese (ppm)	Mar 2016, Feb, Sep, & Dec 2017	0.013	ND / 0.027	0.05
pH (s.u.)	Mar 2016, Feb, Sep, & Dec 2017	7.9	7.5/ 8.2	6.5 to 8.5
Sodium (ppm)	Mar 2016, Feb, Sep, & Dec 2017	10.3	6.7 / 21.0	N/A

RADIOLOGICAL CONTAMINANTS								
Contaminant (units)	Sample Date	MCL Violation	Your Water (AVG)	Range		MCLG	MCL	Likely Source of Contamination
				Low	High			
Alpha Emitters (pCi/L)	Jan & Oct 2014, Dec 2017	NO	2.6	ND	2.6	0	15	Erosion of natural deposits
Combined Radium (pCi/L)	Jan & Oct 2014, Dec 2017	NO	1.6	ND	1.6	0	5	Erosion of natural deposits
Radium 228 (pCi/L)	Jan & Oct 2014, Dec 2017	NO	0.95	ND	0.95	0	2	Erosion of natural deposits

Source Water Assessment Program

The NC 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/?page=600>. Enter CFPWA or the system ID number in the 'search criteria box'. There are three different reports for CFPWA; one for each of its water systems: CFPWA/Wilmington #0465010, CFPWA/Monterey Heights #0465137, and CFPWA/NHC #0465232.

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.

Susceptibility of Sources to Potential Contaminant 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.

Source Name	Source Status	System Name	Susceptibility Rating*	SWAP Report Date
Beacon Woods	Emergency	04-65-010	Lower	Sept 2017
Foxcroft	Emergency	04-65-010	Moderate	Sept 2017
Monterey Heights Well #1	Active	04-65-137	Higher	Apr 2017
Monterey Heights Well #2	Active	04-65-137	Moderate	Apr 2017
Monterey Heights Well #3	Active	04-65-137	Moderate	Apr 2017
Monterey Heights/Lord's Creek Well #4	Active	04-65-137	Lower	Apr 2017
Well A - Castle Hayne	Active	04-65-232	Moderate	June 2017
Well A - Pee Dee	Active	04-65-232	Higher	June 2017
Well B - Castle Hayne	Active	04-65-232	Higher	June 2017
Well B - Pee Dee	Active	04-65-232	Higher	June 2017
Well C - Castle Hayne	Active	04-65-232	Moderate	June 2017
Well C - Pee Dee	Active	04-65-232	Moderate	June 2017
Well F - Castle Hayne	Active	04-65-232	Lower	June 2017
Well F - Pee Dee	Active	04-65-232	Lower	June 2017
Well G - Castle Hayne	Active	04-65-232	Moderate	June 2017
Well G - Pee Dee	Active	04-65-232	Moderate	June 2017
Well H - Castle Hayne	Active	04-65-232	Moderate	June 2017
Well H - Pee Dee	Active	04-65-232	Moderate	June 2017
Well I - Castle Hayne	Active	04-65-232	Lower	June 2017
Well I - Pee Dee	Active	04-65-232	Lower	June 2017
Well J - Castle Hayne	Active	04-65-232	Lower	June 2017
Well J - Pee Dee	Active	04-65-232	Lower	June 2017
Well K - Castle Hayne	Active	04-65-232	Moderate	June 2017
Well K - Pee Dee	Active	04-65-232	Moderate	June 2017
Well L - Castle Hayne	Active	04-65-232	Moderate	June 2017
Well L - Pee Dee	Active	04-65-232	Moderate	June 2017
Well #28 M	Active	04-65-232	Higher	June 2017
Well #29 N	Active	04-65-232	Higher	June 2017
Well # 30 O	Active	04-65-232	Moderate	June 2017

Source Water Assessment Program cont'd.

Source Name	Source Status	System Name	Susceptibility Rating*	SWAP Report Date
Well P - Pee Dee	Active	04-65-232	Moderate	June 2017
Well Q - Pee Dee	Active	04-65-232	Higher	June 2017
Well #4 White Rd.	Emergency	04-65-232	Moderate	June 2017
Well #15 Elkmont	Emergency	04-65-232	Moderate	June 2017
Well #20 Old Marsh Oaks #2	Emergency	04-65-232	Higher	June 2017
Cape Fear River Kings Bluff	Active	04-65-010	Moderate	Sept 2017
Lower Cape Fear WSA-KI	Active	04-65-010	Moderate	Sept 2017
Masonboro Forest	Emergency	04-65-010	Lower	Sept 2017
Sea Pines	Emergency	04-65-010	Lower	Sept 2017
Sea Spray Rd.	Emergency	04-65-010	Moderate	Sept 2017

For more information on the Source Water Assessment Program (SWAP), visit <https://deq.nc.gov/about/divisions/water-resources/drinking-water/drinking-water-protection-program/source-water-assessment-program>

Wellhead Protection

Wellhead protection is simply protection of all or part of the area surrounding a well from which the well's groundwater is drawn. Protecting your water from becoming contaminated is a wise investment in public health and your community's future. The 1986 amendments to the Safe Drinking Water Act established the wellhead protection program and requires each state to develop comprehensive programs to protect public water supply wells from contaminants that could be harmful to human health. Groundwater contamination can originate on the surface of the ground, in the ground above the water table, or in the ground below the water table. Where a contaminant originates is a factor that can affect its actual impact on groundwater quality. Because ground water is hidden from view, contamination can go undetected for years until the supply is tapped for use.

Where a contaminant originates is a factor that can affect its actual impact on groundwater quality.

A wellhead protection program is a pollution prevention and management program used to protect underground sources of drinking water. These programs were intended by Congress to be a key part of a national groundwater protection strategy to prevent contamination of groundwaters that are used as public drinking water supplies. In North Carolina, development of a local Wellhead Protection Plan is not mandatory but, rather, is viewed as a valuable supplement to existing state groundwater protection programs. North Carolina's wellhead protection program is intended for city and county governments and water supply operators who wish to provide added protection to their local groundwater supplies. The Wellhead Protection Plan, once implemented, reduces (but does not eliminate) the susceptibility of wells to contaminants.

CFPUA has a state approved wellhead protection program. Our groundwater system, as well as our [main] surface water system, is continuously monitored and tested to ensure our customers receive the best quality of water possible. To learn more about wellhead protection and North Carolina's drinking water standards visit www.ncwater.org.



Well #38



Well #15



Well #4

CFPUA

235 Government Center Dr.
Wilmington, NC 28403
(910) 332-6550
web-site: www.cfpua.org
e-mail: communications@cfpua.org

Check us out on Social Media

Sign up now to receive **FREE** immediate emergency alerts and advisories, notifications, job openings, and real-time updates via e-mail or text messaging. Visit our website here: <http://www.cfpua.org/list.aspx> and subscribe to the categories that interest you. You can also follow us on Twitter @CFPUA and like us on Facebook.

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/2017WQReport.

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



This report is printed using
recycled paper and soy ink.



Report Water/Sewer Emergencies (24-hour).....	332-6565
Customer Service - Billing Information, New Connections, System Shutoff.....	332-6550
Water Quality Issues.....	332-6738
Water Treatment.....	332-6739
Community Compliance.....	332-6558
Engineering.....	332-6560
Human Resources.....	332-6570
Board Information.....	332-6543
Communications.....	332-6704

Help Protect Your Source Water

Protection of drinking water is everyone's responsibility. CFPUA has implemented many source water protection measures such as adopting a wellhead protection program, limiting access to our raw water intake and other sensitive facilities, installing physical barriers along with the constant monitoring of well and tank sites via closed circuit cameras (CCTV). You can also help protect your community's drinking water source(s) in several ways such as disposing of chemicals like fertilizers and pesticides properly, taking used motor oil to a recycling center, or volunteering in your community to participate in group efforts to protect your drinking water sources. Together we can make sure we've got safe, clean water for many years to come.

Backflow 101

All residential homes with lawn irrigation systems are required to have a backflow preventer because water can be siphoned from the yard into the public water supply if pressure is lost on the water main serving your home. In addition to irrigation systems, commercial businesses and industries such as schools, hospitals, and restaurants are also required to have backflow preventers to protect the public water supply from cross contamination.

Like any mechanical device, a backflow preventer is subject to failure. Current regulations require backflow preventers to be tested annually by a certified tester to ensure that they are functioning properly. A list of certified backflow preventer testers can be found on our website homepage (www.cfpua.org) under the **MY HOME** tab.

Contact our Environmental Compliance section at 332-6558 or use the online form found here: <https://www.cfpua.org/FormCenter/Enviro-14/Community-Compliance-72> for questions or to request more information.

Water Plant Tours Available

Have you ever wondered where your water comes from or how it gets to the tap? Visit your local water plant and find out! Schedule a tour of the Sweeney Water Treatment Plant (surface water) or Michael E. Richardson Nano-filtration Plant (groundwater) for your school group, college class, boy/girl scout troop or other community 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.

Tours must be requested and scheduled in advance. Simply complete the electronic tour request form on our website under the **HOW DO I...?** tab or find it here: <https://www.cfpua.org/FormCenter/Facility-Tours-11/Facility-Tour-Form-63>

For more information about touring our water treatment facilities contact Jacqueline Valade at 332-6579.



NOTICE TO THE PUBLIC

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

CFPUA-WILMINGTON HAS NOT MET MONITORING REQUIREMENTS

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 contaminants 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 OR WILL BE TAKEN (Water System to Complete)
Total Coliform and Disinfectant Residual	D01	March 1, 2018	120 PER MONTH	120 Samples were taken initially but one sample taken during this compliance period was invalidated due to a sample location error.

** See back of this notice for further information on contaminants.

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

What is being done? In May of 2018 it was discovered that a site used to monitor for compliance Total Coliform and Disinfectant Residual was not located within the CFPUA-Wilmington water system, but on an adjacent water system. CFPUA requested that the compliance sample taken at this site be invalidated. As a result, we sampled only 119 of the 120 required monthly samples for this system and are required by law to issue this notice. In addition to these required monthly samples, CFPUA takes many non-compliance / operational samples at water tanks, hydrants, flushing points and customer taps, to confirm the absence of Total Coliform and monitor disinfectant residuals throughout the system. CFPUA staff is conducting a review of all sample locations to prevent this type of issue from occurring again in the future.

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 more information, please contact:

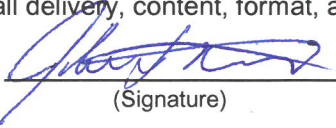
Responsible Person John Malone Water Resources Manager	System Name CFPUA-Wilmington	System Address (Street) 235 Government Center Drive
Phone Number (910) 332-6739	System Number NC0465010	System Address (City/State/Zip) Wilmington, NC 28403

Violation Awareness Date: May 23, 2018

Date Notice Distributed: June 22, 2018 **Method of Distribution:** Included in Water Quality Report (CCR)

Public Notification Certification:

The public water system named above hereby affirms that public notification has been provided to its consumers in accordance with all delivery, content, format, and deadline requirements specified in 15A NCAC 18C .1523.

Owner/Operator: 
(Signature)

John Malone
(Print Name)

June 22, 2018
(Date)

Contaminant Group List

(AS) Asbestos - includes testing for Chrysotile, Amphibole and Total Asbestos.

(BA) Total Coliform Bacteria - includes testing for Total Coliform bacteria and Fecal/*E.coli* bacteria. Testing for Fecal/*E.coli* bacteria is required if total coliform is present in the sample.

(BB) Bromate/Bromide - includes testing for Bromate and/or Bromide

(CD) Chlorine Dioxide/Chlorite - includes testing for Chlorine Dioxide and/or Chlorite.

(DI) Disinfectant Residual must be tested with the collection of each compliance bacteriological sample, at the same time and site.

Fecal Indicators - includes *E.coli*, enterococci or coliphage.

(HAAS)- Haloacetic Acids - include Monochloroacetic Acid, Dichloroacetic Acid, Trichloroacetic Acid, Monobromoacetic Acid, Dibromoacetic Acid.

(IOC) Inorganic chemicals - include Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cyanide, Fluoride, Iron, Manganese, Mercury, Nickel, pH, Selenium, Sodium, Sulfate, and Thallium.

(LC) Lead and Copper are tested by collecting the required number of samples and testing each of the samples for both lead and copper.

(NT) Nitrate/ (NI) Nitrite - includes testing for nitrate and/or nitrite.

(RA) Radionuclides - includes Gross Alpha, Radon, Uranium, Combined Radium, Radium 226, Radium 228, Potassium 40 (Total), Gross Beta, Tritium, Strontium 89, Strontium 90, Iodine 131, and Cesium 134.

(SOC) - Synthetic Organic Chemicals/Pesticides - include 2,4-D, 2,4,5-TP (Silvex), Alachlor, Atrazine, Benzo(a)pyrene, Carbofuran, Chlordane, Dalapon, Di(2-ethylhexyl)adipate, Di(2-ethylhexyl)phthalate, Dibromochloropropane (DBCP), Dinoseb, Endrin, Ethylene dibromide (EDB), Heptachlor, Heptachlor Epoxide, Hexachlorobenzene, Hexachlorocyclopentadiene, Lindane, Methoxychlor, Oxamyl(vydate), PCBs, Pentachlorophenol, Picloram, Simazine, Toxaphene.

(TOC) - Total Organic Carbon - includes testing for Alkalinity, Dissolved Organic Carbon (DOC), Total Organic Carbon (TOC) and Ultraviolet Absorption 254 (UV254). Source water samples must be tested for both TOC and Alkalinity. Treated water samples must be tested for TOC. Source water samples and treated water samples must be collected on the same day.

(TTHM) - Total Trihalomethanes - include Chloroform, Bromoform, Bromodichloromethane, and Dibromochloromethane

(VOC) - Volatile Organic Chemicals - include 1,2,4-Trichlorobenzene, Cis-1,2-Dichloroethylene, Xylenes (Total), Dichloromethane, o-Dichlorobenzene, p-Dichlorobenzene, Vinyl Chloride, 1,1,-Dichloroethylene, Trans-1,2,-Dichloroethylene, 1,2-Dichloroethane, 1,1,1-Trichloroethane, Carbon Tetrachloride, 1,2-Dichloropropane, Trichloroethylene, 1,1,2-Trichloroethane, Tetrachloroethylene, Chlorobenzene, Benzene, Toluene, Ethylbenzene, and Styrene.

(WQP) Water Quality Parameters (for Lead and Copper Rule) - includes Calcium, Orthophosphate (as PO₄), Silica, Conductivity, pH, Alkalinity and Water Temperature.

Instructions for Completing the Notice/Certification Form & for Performing Public Notice for Tier 3 Monitoring Violations

- Complete ALL the missing information on the "Notice to the Public."** Note: Under the section of the notice entitled "What is being done?" describe corrective actions you took, or are taking. You may choose the appropriate language below, or develop your own:
 - We have since taken the required samples, as described in the last column of the table above. The sample results showed we are meeting drinking water standards.
 - We have since taken the required samples, as described in the last column of the table above. The sample for [contaminant] exceeded the limit. [Describe corrective action; use information from public notice prepared for violating the limit.]
 - We plan to take the required samples soon, as described in the last column of the table above.

- Provide public notification to your customers as soon as reasonably possible after you learn of the violation as follows:**

Community systems must use one of the following: - Hand or direct delivery - Mail, as a separate notice or included with the bill For community systems, this notice is appropriate for insertion in an annual notice or the Consumer Confidence Report (CCR), as long as public notification timing and delivery requirements are met [CFR 141.204(d)].	Non-community systems must use one of the following: - Posting in conspicuous locations - Hand delivery - Mail For non-community systems, if you post the notice, it must remain posted as long as the violation or situation persists; in no case should the notice be posted less than 7 days, even if the violation is resolved. [CFR 141.204(b)].
(Note: Both community and non-community systems must use <i>another</i> method reasonably calculated to reach others IF they would not be reached by one of the <u>required</u> methods listed above [CFR 141.204(c)]. Such methods could include newspapers, e-mail, or delivery to community organizations.	

- Both sides of this public notice/certification MUST be delivered to the persons served by the water system** in order for your customers to have access to the required **Contaminant Group List**.
 - If you mail, post, or hand deliver, print your notice on letterhead, if available.
 - Notify new billing customers or units prior to or at the time their service begins.
 - Provide multi-lingual notifications if 30% of the residents served are non-English speaking.
 - Should you decide not to use this enclosed notice and develop your own version instead, the mandatory language in ***bold italics*** may not be altered and you **MUST** include the ten required elements listed in CFR 141.205. A separate Public Notification Certification Form that is available on our web site or the certification located at the bottom of the sample notice provided **MUST** also be submitted.
- After Issuing the Notice** [40 CFR 141.31(d)] - Within **10 days** after completing the initial public notification, the Public Water Supply Section **MUST** receive a copy of the original notice (and any repeat notices) you distributed to your customers with your signature and date on the Public Notification Certification (located at the bottom of the notice) indicating that you have fully complied with all the public notice requirements. Email your notice/certification to PWSS.PN@ncdenr.gov or mail your notice/certification to the Public Water Supply Section, Compliance Services Branch, ATTN: Public Notification Rule Manager, 1634 Mail Service Center, Raleigh, NC 27699-1634. Retain a copy of these documents for your files.

NOTICE TO THE PUBLIC

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

CFPUA/NHC HAS NOT MET MONITORING REQUIREMENTS

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 contaminants 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 OR WILL BE TAKEN (Water System to Complete)
Total Coliform and Disinfectant Residual	D01	June 1, 2017 July 1, 2017 January 1, 2018	30 PER MONTH	30 Samples were taken initially but one sample taken during each of the listed compliance periods was invalidated due to a sample location error.

** See back of this notice for further information on contaminants.

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

What is being done? In June of 2018 a review of sample site locations was initiated by CFPUA staff and it was discovered that a site used to monitor for compliance Total Coliform and Disinfectant Residual was not located within the CFPUA/NHC water system, but on the adjacent CFPUA/Wilmington water system. CFPUA requested that the compliance samples taken at this site be invalidated. As a result, we sampled only 29 of the 30 required monthly samples for this system and are required by law to issue this notice. In addition to these required monthly samples, CFPUA takes many non-compliance / operational samples at water tanks, hydrants, flushing points and customer taps, to confirm the absence of Total Coliform and monitor disinfectant residuals throughout the system. CFPUA staff is conducting a review of all sample locations to prevent this type of issue from occurring again in the future.

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 more information, please contact:

Responsible Person John Malone Water Resources Manager	System Name CFPUA/NHC	System Address (Street) 235 Government Center Drive
Phone Number (910) 332-6739	System Number NC0465232	System Address (City/State/Zip) Wilmington, NC 28403

Violation Awareness Date: June 07, 2018

Date Notice Distributed: June 22, 2018 **Method of Distribution:** Included in Water Quality Report (CCR)

Public Notification Certification:

The public water system named above hereby affirms that public notification has been provided to its consumers in accordance with all delivery, content, format, and deadline requirements specified in 15A NCAC 18C .1523.

Owner/Operator: _____

(Signature)

John Malone

(Print Name)

June 22, 2018

(Date)

Contaminant Group List

(AS) Asbestos - includes testing for Chrysotile, Amphibole and Total Asbestos.

(BA) Total Coliform Bacteria - includes testing for Total Coliform bacteria and Fecal/*E.coli* bacteria. Testing for Fecal/*E.coli* bacteria is required if total coliform is present in the sample.

(BB) Bromate/Bromide - includes testing for Bromate and/or Bromide

(CD) Chlorine Dioxide/Chlorite - includes testing for Chlorine Dioxide and/or Chlorite.

(DI) Disinfectant Residual must be tested with the collection of each compliance bacteriological sample, at the same time and site.

Fecal Indicators - includes *E.coli*, enterococci or coliphage.

(HAAS)- Haloacetic Acids - include Monochloroacetic Acid, Dichloroacetic Acid, Trichloroacetic Acid, Monobromoacetic Acid, Dibromoacetic Acid.

(IOC) Inorganic chemicals - include Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cyanide, Fluoride, Iron, Manganese, Mercury, Nickel, pH, Selenium, Sodium, Sulfate, and Thallium.

(LC) Lead and Copper are tested by collecting the required number of samples and testing each of the samples for both lead and copper.

(NT) Nitrate/ (NI) Nitrite - includes testing for nitrate and/or nitrite.

(RA) Radionuclides - includes Gross Alpha, Radon, Uranium, Combined Radium, Radium 226, Radium 228, Potassium 40 (Total), Gross Beta, Tritium, Strontium 89, Strontium 90, Iodine 131, and Cesium 134.

(SOC) - Synthetic Organic Chemicals/Pesticides - include 2,4-D, 2,4,5-TP (Silvex), Alachlor, Atrazine, Benzo(a)pyrene, Carbofuran, Chlordane, Dalapon, Di(2-ethylhexyl)adipate, Di(2-ethylhexyl)phthalate, Dibromochloropropane (DBCP), Dinoseb, Endrin, Ethylene dibromide (EDB), Heptachlor, Heptachlor Epoxide, Hexachlorobenzene, Hexachlorocyclopentadiene, Lindane, Methoxychlor, Oxamyl(vydate), PCBs, Pentachlorophenol, Picloram, Simazine, Toxaphene.

(TOC) - Total Organic Carbon - includes testing for Alkalinity, Dissolved Organic Carbon (DOC), Total Organic Carbon (TOC) and Ultraviolet Absorption 254 (UV254). Source water samples must be tested for both TOC and Alkalinity. Treated water samples must be tested for TOC. Source water samples and treated water samples must be collected on the same day.

(TTHM) - Total Trihalomethanes - include Chloroform, Bromoform, Bromodichloromethane, and Dibromochloromethane

(VOC) - Volatile Organic Chemicals - include 1,2,4-Trichlorobenzene, Cis-1,2-Dichloroethylene, Xylenes (Total), Dichloromethane, o-Dichlorobenzene, p-Dichlorobenzene, Vinyl Chloride, 1,1,-Dichloroethylene, Trans-1,2,-Dichloroethylene, 1,2-Dichloroethane, 1,1,1-Trichloroethane, Carbon Tetrachloride, 1,2-Dichloropropane, Trichloroethylene, 1,1,2-Trichloroethane, Tetrachloroethylene, Chlorobenzene, Benzene, Toluene, Ethylbenzene, and Styrene.

(WQP) Water Quality Parameters (for Lead and Copper Rule) - includes Calcium, Orthophosphate (as PO₄), Silica, Conductivity, pH, Alkalinity and Water Temperature.

Instructions for Completing the Notice/Certification Form & for Performing Public Notice for Tier 3 Monitoring Violations

- Complete ALL the missing information on the "Notice to the Public."** Note: Under the section of the notice entitled "What is being done?" describe corrective actions you took, or are taking. You may choose the appropriate language below, or develop your own:
 - We have since taken the required samples, as described in the last column of the table above. The sample results showed we are meeting drinking water standards.
 - We have since taken the required samples, as described in the last column of the table above. The sample for [contaminant] exceeded the limit. [Describe corrective action; use information from public notice prepared for violating the limit.]
 - We plan to take the required samples soon, as described in the last column of the table above.

- Provide public notification to your customers as soon as reasonably possible after you learn of the violation as follows:**

Community systems must use one of the following: - Hand or direct delivery - Mail, as a separate notice or included with the bill For community systems, this notice is appropriate for insertion in an annual notice or the Consumer Confidence Report (CCR), as long as public notification timing and delivery requirements are met [CFR 141.204(d)].	Non-community systems must use one of the following: - Posting in conspicuous locations - Hand delivery - Mail For non-community systems, if you post the notice, it must remain posted as long as the violation or situation persists; in no case should the notice be posted less than 7 days, even if the violation is resolved. [CFR 141.204(b)].
(Note: Both community and non-community systems must use <i>another</i> method reasonably calculated to reach others IF they would not be reached by one of the <u>required</u> methods listed above [CFR 141.204(c)]. Such methods could include newspapers, e-mail, or delivery to community organizations.	

- Both sides of this public notice/certification MUST be delivered to the persons served by the water system** in order for your customers to have access to the required **Contaminant Group List**.
 - If you mail, post, or hand deliver, print your notice on letterhead, if available.
 - Notify new billing customers or units prior to or at the time their service begins.
 - Provide multi-lingual notifications if 30% of the residents served are non-English speaking.
 - Should you decide not to use this enclosed notice and develop your own version instead, the mandatory language in ***bold italics*** may not be altered and you **MUST** include the ten required elements listed in CFR 141.205. A separate Public Notification Certification Form that is available on our web site or the certification located at the bottom of the sample notice provided **MUST** also be submitted.
- After Issuing the Notice** [40 CFR 141.31(d)] - Within **10 days** after completing the initial public notification, the Public Water Supply Section **MUST** receive a copy of the original notice (and any repeat notices) you distributed to your customers with your signature and date on the Public Notification Certification (located at the bottom of the notice) indicating that you have fully complied with all the public notice requirements. Email your notice/certification to PWSS.PN@ncdenr.gov or mail your notice/certification to the Public Water Supply Section, Compliance Services Branch, ATTN: Public Notification Rule Manager, 1634 Mail Service Center, Raleigh, NC 27699-1634. Retain a copy of these documents for your files.