

Special Information for Immunocompromised People

Some people may be more vulnerable to drinking water contaminants than the general population. Immunocompromised persons - such as those with cancer undergoing chemotherapy, with organ transplants, and with HIV/AIDS or other immune system disorders, as well as some elderly and infants - can be particularly at risk of 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 microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791) or on the web at <http://water.epa.gov/drink>.

During the years 2006 and 2007 (using EPA approved methods), PWC collected monthly samples for *Cryptosporidium* in untreated source waters at our two facilities. The highest level recorded in the untreated water (from the Cape Fear River), at our P.O. Hoffer facility, was 1.0 oocysts** per 100 liters. This was considerably lower than the trigger level of 1,000 oocysts per 100 liters, which triggers a requirement for additional sampling and analysis - indicating that our source water is relatively free from *Cryptosporidium*.

*EPA - Environmental Protection Agency, CDC - Centers for Disease Control
**The oocyst is the outer protective shell of the *Cryptosporidium* parasite, which allows it to survive outside the body for long periods of time. When a person or animal ingests oocysts, the parasite comes out of its shell and can cause infection.

Contaminants

That May Reasonably Be Expected In Drinking Water (Including Bottled Water)

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 land or through the ground, it dissolves naturally-occurring minerals (in some cases, radioactive material), and it can pick up substances resulting from human activity or the presence of animals.

Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, which may come from septic systems, wastewater treatment facilities, agricultural livestock operations, and wildlife

- Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharge, oil and gas production, mining, or farming

- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential use

- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, or which come from gas stations, urban storm water runoff, and septic systems



- Radioactive contaminants, which can be naturally-occurring or the result of oil and gas production and mining activities

In order to ensure that tap water is safe to drink, the Environmental Protection Agency (EPA) stipulates regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800-426-4791) or on the web at <http://water.epa.gov/drink>.

Source Water Assessment Program (SWAP) Results

The North Carolina Department of Environment and Natural Resources (NCDENR), 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 Contaminant Sources (PCS). The results of the assessment are available in SWAP Assessment Reports that include maps, background information and a relative susceptibility rating of Higher, Moderate or Lower.

The relative susceptibility rating of each source for PWC was determined by combining the contaminant rating (number and location of PCS within the assessment area) and the inherent vulnerability rating (i.e., characteristics or existing conditions of the well or watershed and its delineated assessment area). The assessment findings are summarized in the table below. It is important to understand that a susceptibility rating of "higher" **does not** imply poor water quality, only the systems' potential to becoming contaminated by PCS in the assessment area.

Susceptibility of Sources to Potential Contaminant Sources

Source Name	Susceptibility Rating
Cape Fear River	Higher
Glenville Lake	Higher

The complete SWAP Assessment report for PWC may be viewed on the web at: www.deh.enr.state.nc.us/pws/swap. 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 e-mail request to swap@ncmail.net. Please indicate your system name, PWSID, and provide your name, mailing address and phone number. If you have any questions about the SWAP report, please contact the Source Water Assessment staff by phone at (919)715-2633.

How is Your Water Treated?

While the treatment process varies slightly at our two water treatment facilities, the basic steps are similar.

The Disinfection Method

PWC uses the disinfection method chloramination, which uses both ammonia and chlorine. Ammonia is added to the water at a carefully controlled level, and the chlorine and ammonia react chemically to produce chloramines.

Chloraminated drinking water is perfectly safe for drinking, cooking, bathing and other daily water uses. There are, however, two groups of people who need to take special care with chloraminated water: customers who use drinking water for kidney dialysis machines and fish owners.

For more information on chloramination, including special precautions these special groups should take, contact PWC.

As an extra measure of safety, the North Carolina Department of Environment and Natural Resources requires all water systems using chloramination to suspend the addition of ammonia for a one-month period each year. We do this each March to ensure control of any biological growth that may have occurred in the water distribution system.

The Treatment Process

PWC operations and maintenance staff at our facilities are committed to providing safe, high quality drinking water for our customers. When raw water enters the facility, ferric sulfate is added, causing small particles to adhere to one another. This makes the particles heavy enough to settle out of the water in a sedimentation basin. The water is then filtered through sand and anthracite to remove remaining fine particles. Ammonia and chlorine are added to kill harmful bacteria, protozoans, and viruses. Lime or caustic soda, and a corrosion inhibitor are added to minimize the potential for dissolving the lead used in older household plumbing. Fluoride is added as an aid in preventing tooth decay. Both facilities also add powdered activated carbon to reduce substances that produce unpleasant tastes and odors.

Treated water proceeds through a series of pumps and storage facilities before being delivered to your home.

Partnership for Safe Water - Director's Award



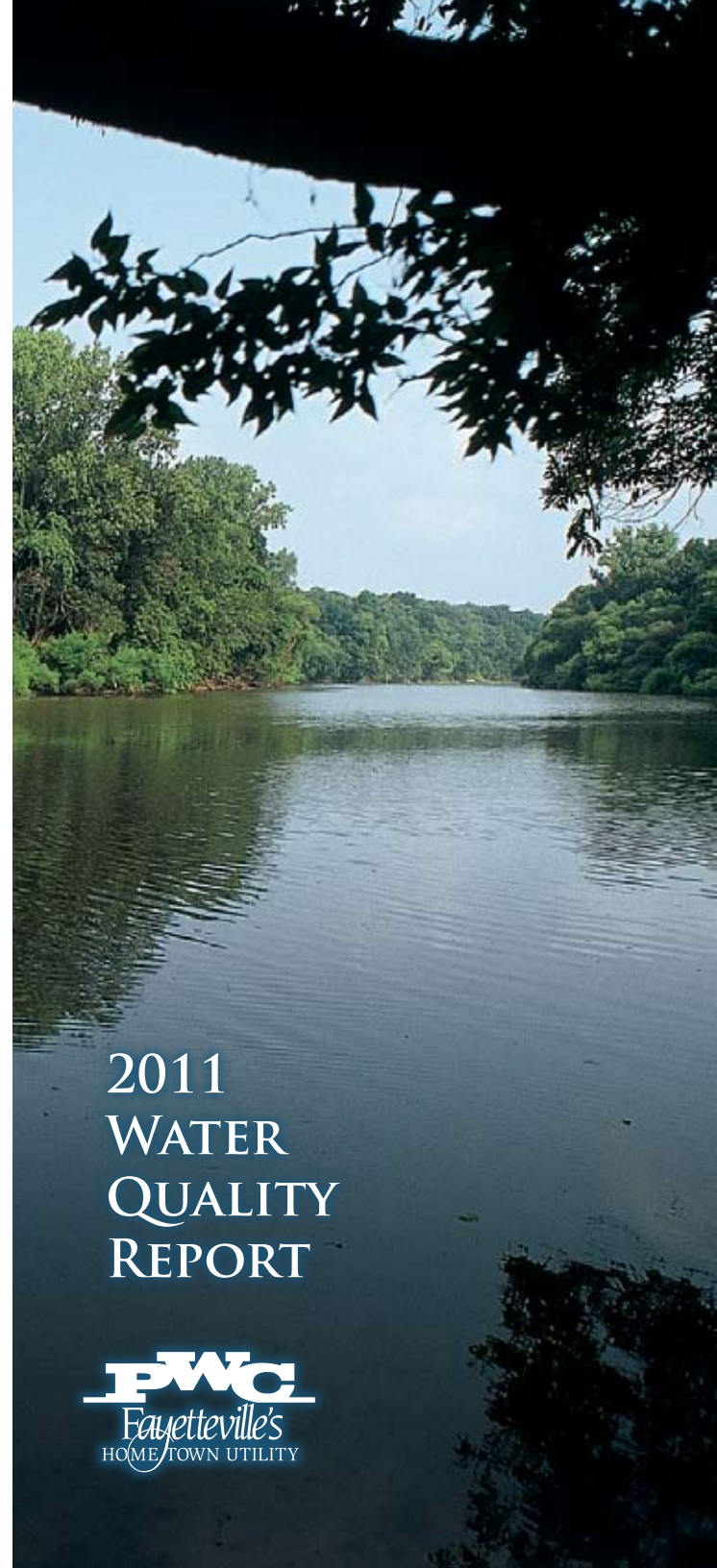
PWC is proud to be a charter member of the Partnership for Safe Water.

For the 12th straight year, PWC received the prestigious Environmental Protection Agency Director's Award for extra efforts in providing clean, safe drinking water.

In 2011, PWC became a Charter Member of the Partnership for Safe Water Distribution System Optimization Program. This new Partnership program will focus on the operation and maintenance of our distribution system. As a Charter Member, we will test program materials and provide input to improve this program for others that follow. Additionally, Charter Members successfully completing the self-assessment phase of the program will be among the first in the country to be recognized for this achievement.



Customer Service
910-483-1382
24 Hour Emergency
1-877-OURPWC1
www.faypwc.com



2011
WATER
QUALITY
REPORT



Where Does Your Water Come From?

All of the water we process at PWC is surface water. The water processed at our P.O. Hoffer Water Treatment Facility comes from the Cape Fear River. Water processed at our Glenville Lake Facility comes from the Cape Fear River, Big Cross Creek, and the Little Cross Creek Watershed, which contains four bodies of water used for water storage – Bonnie Doone Lake, Kornbow Lake, Mintz Pond and Glenville Lake. Both facilities provide water to the same distribution system, so the water you drink is a blend of the water processed by PWC from all sources.

Notice of Violation

Our system did not meet the treatment technique requirement for disinfectant contact time at our Glenville Lake Water Treatment Facility on Jan. 13, 2011. The North Carolina Rules Governing Public Water Systems, requires that we comply with this treatment technique at all times; therefore, we routinely monitor the disinfectant residual levels and contact times within our water treatment facilities. Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites, which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. People with severely compromised immune systems, infants, and some elderly may be at increased risk anytime this disinfection requirement is not met.

On January 13, 2011, a 48-inch water main ruptured at our P.O. Hoffer Facility. In order to maintain system pressure for fire protection, we operated the Glenville Lake Facility at a flow rate higher than its design capacity. In order to protect our customers during this exceedance, a boil water advisory was issued on Jan. 13, 2011. Tests taken during this period did not indicate the presence of bacteria in the water. Once determined safe by PWC and The North Carolina Department of Environment and Natural Resources staff, the boil water advisory was lifted on Jan. 16, 2011.

2011 Water Quality Results

TABLE I — FILTERED WATER QUALITY DATA (Regulated)

Parameters	Unit	MCL	MCLG	MCL Violation Y/N	Your Water Level	Range of Detected Levels	Date Most Recent Testing Completed(b)	Source
Gross Alpha	pCi/L	15	0	N	0.7		5/07	Erosion of natural deposits
Gross Beta	pCi/L	50	0	N	0.9		5/07	Decay of natural and man-made deposits
Radium 226	pCi/L	3	0	N	0.1		5/07	Erosion of natural deposits
Radium 228	pCi/L	2	0	N	0.6		5/07	Erosion of natural deposits
Uranium	ug/L	30.0	0	N	0.8		5/07	Erosion of natural deposits
Barium	mg/L	2	2	N	<0.4		2/11	Erosion of natural deposits; discharge of drilling wastes; discharge from metal from refineries
Copper	mg/L	AL-1.3	1.3	N	0.053	<0.02-1.75 (c)	6/11	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Fluoride	mg/L	4	4	N	0.72	0.1-1.40	12/11	Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum deposits
Lead	ug/L	AL-15	0	N	<2.0	<2.0-11.0 (c)	6/11	Corrosion of household plumbing systems; erosion of natural deposits
Nitrate	mg/L	10	10	N	<1.0		2/11	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
TTHM(a)	ug/L	80	0	N	46.03	31.62-62.25	11/11	By-product of drinking water disinfection
THAA	ug/L	60	0	N	13.00	10.38-15.88	11/11	By-product of drinking water disinfection
Total Asbestos	MFL	7	7	N	<0.2	NA	6/11	Decay of asbestos cement water mains; erosion of natural deposits

- (a) Compliance is based on a running annual average of 32 quarterly distribution system samples.
 (b) Data presented in this table are from the most recent testing performed in accordance with Federal and State regulations.
 (c) Lead and Copper action levels are exceeded if the concentrations in more than 10% of tap water samples collected during any monitoring period are greater than the MCL Action Levels shown in the table above.

TABLE II — FILTERED WATER QUALITY DATA (Non-Regulated)

Parameters	Unit	Detected Levels Your Water	SDWR	MCLG	Source
Alkalinity	mg/L	30.21	NS	NS	Erosion of natural deposits, water treatment processes
Hardness	mg/L	42.83	NS	NS	Presence of mineral deposits most commonly calcium and magnesium
Iron	mg/L	<0.06	0.3	NS	Erosion of natural deposits
Manganese	mg/L	<0.01	0.05	NS	Erosion of natural deposits
pH	pH units	7.8	6.5 – 8.5	NS	Measurement of acid or base neutralizing capacities of water
Sodium	mg/L	43.48	NS	NS	Erosion of natural deposits, chemical use in water treatment
Sulfate	mg/L	58.2	250	NS	Erosion of natural deposits, decay or organic matter

TABLE III - VOC CONTAMINANTS (Non-Regulated)*

Parameters	Unit	Detected Levels Your Water	Range of Detected Level	Sample Date
Chloroform	ug/L	10.37	6.38 – 13.80	11/11
Bromodichloromethane	ug/L	13.54	10.50 – 16.38	11/11
Bromoform	ug/L	5.89	3.13 – 12.29	11/11
Chlorodibromomethane	ug/L	15.50	11.00 – 25.63	11/11

*These compounds are associated with chlorine disinfection.

TABLE IV - TURBIDITY(a)

Parameters	Unit	MCL	Your Water	Average	Range	MCLG Violation	Source
Turbidity	NTU	95% of samples <0.30	100.00% <0.3 NTU	0.05	0.03-0.15	N	Soil runoff

(a) Turbidity is a measure of the cloudiness of the water. PWC monitors it because it is a good indicator of the effectiveness of PWC's filtration system.

In 2011 Fayetteville PWC tested 118 parameters for a total of more than 150,000 tests. Those presented in these tables were the only parameters that were detected with none exceeding EPA limits.



About Your Water Quality Report

This Annual Water Quality Report was developed to keep you informed about our water quality. It is also available on-line at www.faypwc.com under Reports.

TABLE V - MICROBIOLOGICAL CONTAMINANTS
PWC Surface Water Distribution

Parameters	MCL	MCLG	MCL Violation	Your Water	Source
Total Coliform Bacteria	5% of monthly samples are positive	0	N	2.36%	Naturally present in the environment
Fecal Coliform or <i>E. coli</i>	A routine sample and repeat sample are total coliform positive, and one is also fecal coliform or <i>E. coli</i> positive	0	N	0.00%	Human and animal fecal waste

Table VI – DISINFECTION BY- PRODUCT PRECURSORS CONTAMINANTS

Contaminant (units)	Sample Date	MCL/TT Violation	Your Water	Range Low – High	MCLG	MCL	Likely Source of Contamination
Total Organic Carbon (ppm) (TOC)-RAW	Monthly	N	N/A	2.60 – 7.80	N/A	TT	Naturally present in the environment
Total Organic Carbon (ppm) (TOC)-TREATED	Monthly	N	3.04	1.00 – 4.10	N/A	TT	Naturally present in the environment

Table VII – LEAD AND COPPER CONTAMINANTS*

Contaminant (units)	Sample Date	Your Water	# of sites found above the AL	MCLG	MCL	Likely Source of Contamination
Copper (mg/L) (90th percentile)	6/16/11	0.053	0	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ug/L) (90th percentile)	6/16/11	<2.00	3	0	AL=15	Corrosion of household plumbing systems; erosion from natural deposits

Fact: PWC treats over 10 billion gallons of water a year.



* 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 Public Works Commission 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 (1-800-426-4791), or at <http://www.epa.gov/safewater/lead>.

Key to Abbreviations	
MCL	Maximum Contaminant Level – The highest level of a contaminant that is allowed in drinking water
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 Disinfectant Level – The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
MRDLG	Maximum Residual Disinfectant 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.
AL	Action Level – The concentration of a contaminant which triggers a treatment or other requirement which a water system must follow.
TT	Treatment Technique – A required process intended to reduce the level of a contaminant in drinking water.
pCi/L	picoCuries per liter (a measure of radioactivity).
mrem/yr	millirems per year (a measure of radiation absorbed by the body).
mg/L	milligrams per liter
SDWR	Secondary Drinking Water Regulations (State Options) State regulatory agencies make the determination about whether a limit applies to controlling parameters that primarily affect the aesthetic qualities of drinking water.
NTU	Nephelometric Turbidity Units, a measure of the suspended material in water.
NS	No Standard
ug/L	Micrograms per liter
TTHM	Total Trihalomethanes
THAA	Total Haloacetic Acid
NA	Not Applicable – Information not applicable/not required for that particular water system or for that particular rule.
MFL	Million Fibers per Liter – a measure of the presence of asbestos fibers that are longer than 10 micrometers.
VOC	Volatile Organic Compounds