BRUNSWICK REGIONAL WATER & SEWER
WATER QUALITY REPORT-2012PWSID 70-10-053

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DID YOU KNOW?

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (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).

Sources of Drinking Water

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. 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 storm water 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 storm water 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 storm water runoff, and septic systems; and radioactive contaminants, which can be naturally-occurring or be the result of oil and gas 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 contaminants in bottled water which must provide the same protection for public health.

Distribution System

The Public Utilities Maintenance Department would like to let you know that we are here to serve you with any of your water needs 24 hours a day. If you plan to dig and are not sure who to call, we can help. We have all the numbers you will need to contact other utilities for locates. If you have water quality issues or feel that your meter is not working, please contact our office at (910) 371-9949 we will be happy to assist in solving any water issues. If you have questions about your backflow device or need it inspected, we can help- please call our office.

Over the past year, we conducted more than 200 tests for drinking water contaminants and are **pleased to report that for the 2012 year Brunswick Regional Water & Sewer did not receive any violations**. This newsletter is a representation of the quality of the water that we provided last year. Listed are the details about where your water comes from, what it contains, and how it compares to Environmental Protection Agency (EPA) and state standards. H2GO is dedicated to providing you with information because informed customers are our best partners. Should you have questions regarding your water, please call (910) 371-9949 and ask for Russ Lane.

The NC Source Water Assessment Program (SWAP)

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 Contaminant Sources (PCS's). 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 Brunswick County Water System was determined by combining the contaminant rating (number and location of PCS's 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:

Susceptibility of Sources to Potential Contaminant Source (PCS's)

Source Name	Susceptibility Rating
Cape Fear River	Moderate

The complete SWAP Assessment report for Brunswick County Water System (Treatment Plant for water purchased by Brunswick Regional Water & Sewer) may be viewed on the Web at: http://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 email request to swap@ncmail.net. Please indicate your system name, PWSID, and provide your name, mailing address and phone number. If you have any questions about the SWAP report please contact the Source Water Assessment staff by phone at 919-715-2633. 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.

Contact Us…

Emergencies during business hours
(910)371-9949
BILLING OFFICE (910)371-9949
Emergencies- After hours after 5 p.m.
& before 9 a.m. (910)371-9949

Terms & abbreviations used below:

- **N/A** not applicable● **nd**: not detectable at testing limit ● **ppb** :parts per billion or micrograms per liter● **ppm** :parts per million or milligrams per liter● **pCi/** l: Pico-curies per liter (a measure of radiation)
- **Maximum Contaminant Level** - the "Maximum Allowed" **(MCL**) is the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
- **Maximum Contaminant Level Goal** – (**MCGL**): the level of a contaminant in drinking water below which there is no known or expected risk to health. MCGLs allow for a margin of safety.
- **Action Level (AL)**: the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.

Water Quality Results For 2012

Listed below are the results of water quality sampling performed from January 1, 2012, to December 31, 2012.

Questions and Comments: Contact Glenn Walker, Water Treatment Plant Superintendent, 910-371-3490 or gwalker@brunsco.net

Northwest Water Treatment Plant Analysis

REGULATED ORGANIC CHEMICALS	EPA's MCL	EPA's MCLG	Brunswick County Amount Detected	Range Low	Range High	Violation Y/N	Source of Contaminant
Turbidity	Treatment Technique Limit of 1.0ntu	N/A	Average 0.054ntu	Percent of samples ≤ 0.3ntu		N	Soil Runoff
			Maximum 0.374ntu	99.99%			
Raw Water TOC	Treatment Technique 45% Removal Efficiency	N/A	Average 6.1 ppm	4.9	7.7	N	Naturally Present in the Environment
Finish Water TOC		N/A	Average 3.0 ppm	2.6	3.4		
Total Organic Carbon (TOC)	Treatment Technique	N/A	Removal Efficiency Average 50.1 %	34% - 66%		N	
REGULATED INORGANIC CHEMICALS			**Brunswick County Amount Detected**	**Range Low**	**Range High**	**Violation Y/N**	
Chlorite	1.0ppm	0.8ppm	Average 0.72ppm	0.40	0.99	N	By-product of Disinfection
Chlorine Dioxide	0.8ppm	0.8ppm	Average < 0.1ppm	0.0	0.34	N	Water Additive Used to Control Microbes
Fluoride	4ppm	4ppm	0.72ppm	0.14	1.23	N	Water Additive which Promotes Strong Teeth
Sulfate	250ppm	N/A	15.1	N/A		N	Part of the Treatment Process, Erosion of Natural Deposits
Orthophosphate	17ppm	N/A	Average 1.42ppm	1.1	2.2	N	Water Additive Used to Control Corrosion
Total Chlorine	4ppm	4ppm	Average Minimum 2.66ppm	1.4	3.3	N	
Monochloramine Disinfectant Residual	4ppm	4ppm	3.03ppm	2.64	3.31	N	Water Additive Used to Control Microbes
UNREGULATED SUBSTANCES			**Brunswick County Amount Detected**	**Range Low**	**Range High**	**Violation Y/N**	
Hardness	Non Regulated	N/A	30.4	20	41	N	Part of the Treatment Process, Erosion of Natural Deposits
Iron	Non Regulated	N/A	0.006	0	0.07	N	Part of the Treatment Process, Erosion of Natural Deposits
Manganese	Non Regulated	N/A	0.004	0	0.02	N	Part of the Treatment Process, Erosion of Natural Deposits
Free Ammonia	Non Regulated	N/A	0.11	0.02	0.24		Water Additive Used to Control Microbes
Sodium	Non Regulated	N/A	**30.1ppm**	N/A		N/A	Part of the Treatment Process, Erosion of Natural Deposits
CRYPTOSPORIDIUM	**EPA's MCL**		**Brunswick County Amount Detected**	**Range Low**	**Range High**	**Violation Y/N**	Naturally Present in the Environment
Cape Fear River 2008	N/A		0.210 oocyst	0.0	0.210	N	Sampling Study Ended 12/2008

HWY 211 Groundwater Treatment Plant Analysis

Questions and Comments: Contact Jeremy Sexton, Water Treatment Plant Superintendent, 910-454-0512 or jsexton@brunsco.net

	EPA's MCL	EPA's MCLG	Brunswick County Amount Detected	Range Low	Range High	Violation Y/N	Source of Contaminant
UNREGULATED SUBSTANCES							
Turbidity	Non Regulated	N/A	**Average 0.399 ntu**	0.02	3.1	N	Part of the Treatment Process, Erosion of Natural Deposits
pH	Non Regulated	N/A	------	6.7	8.4	N	Part of the Treatment Process
CO2	Non Regulated	N/A	6.2	3	12	N	Part of the Treatment Process
Alkalinity	Non Regulated	N/A	45.6	25	200	N	Part of the Treatment Process, Erosion of Natural Deposits
Hardness	Non Regulated	N/A	76.4	51	240	N	Part of the Treatment Process, Erosion of Natural Deposits
Iron	Non Regulated	N/A	0.008	0	0.2	N	Part of the Treatment Process, Erosion of Natural Deposits
Chloride	Non Regulated	N/A	22.3	18	31	N	Part of the Treatment Process, Erosion of Natural Deposits
Free Ammonia	Non Regulated	N/A	0.09	0	0.49	N	Water Additive Used to Control Microbes
REGULATED INORGANIC CHEMICALS			**Brunswick County Amount Detected**	**Range Low**	**Range High**	**Violation Y/N**	**Source of Contaminant**
Flouride	4ppm	4ppm	0.79	0	1.3	N	Water Addititve Used to Promote Strong Teeth
Orthophosphate	17ppm	N/A	1.63	0.4	3	N	Water Additive Used to Control Corrosion
Total Chlorine	4ppm	4ppm	3.2	2	4	N	Water Additive Used to Control Microbes
Monochloraime	4ppm	4ppm	3.11	2.2	3.7	N	Water Additive Used to Control Microbes

There were no public notices for 2012.

Brunswick Regional Water & Sewer, H2GO

2012 Distribution System Analysis

Questions and Comments: Contact Russ Lane, Distribution System ORC 910-371-9949 or rlane@h2goonline.com

	Action Level (AL)	MCLG	BRWS Amount Detected	# of Samples above the AL	Exceedence of the Action Level?	
Copper 90th percentile 6/1/11 - 9/30/11	1.3ppm	1.3ppm	**0.072ppm**	0	N	Corrosion of Household Plumbing
Lead 90th percentile 6/1/11 - 9/30/11	0.015ppm	0ppm	**0.003ppm**	0	N	Corrosion of Household Plumbing
ORGANIC CHEMICALS	**EPA's MCL**		**BRWS Amount Detected**	**Range Low**	**Range High**	**Violation Y/N**
Monochloramine Disinfectant Residual	4ppm	4ppm	**Average Minimum 1.31ppm**	0.11	3.70	N	Water Additive Used to Control Microbes
Total Trihalomethanes	80ppb	N/A	**Average 0.04 ppb**	0.0	.04	N	By-product of Disinfection
Total Haloacetic Acids	60ppb	N/A	**Average 0.011ppb**	0.00	0.011	N	By-product of Disinfection

H2GO Water Quality Report 2012 Continued:

- 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. H2GO 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.

- Remove and flush faucet aerators regularly. This helps to keep debris such as pipe solder and sediment from clogging aerator screens, as well as provide the best quality water possible.

6 WAYS TO LOWER YOUR WATER BILL!

1. Wash only full loads of laundry.

2. Take a shower instead of a bath. A 5 to 10 minute shower will save up to 45 gallons of water over taking a bath!

3. Turn off the faucet when brushing your teeth. Turning it off can save 8 gallons a day per person!

4. When replacing toilets, faucets, and shower heads, choose high-efficiency models. High efficiency toilets can save as much as 5 gallons of water per flush!

5. When purchasing appliances look for the Water Sense seal of approval. This is the Environmental Protection Agency's (EPA) drinking water conservation program to help ensure our water supply is available for future generations. For more information on this and other programs offered by the EPA please visit their website: http://www.epa.gov/owm/water-efficiency/

6. Purchase a rain sensor for your irrigation system so you don't water your landscaping during rain events. These little devices easily attach to most programmable sprinkler systems and can be purchased at most local home improvement stores.

EDUCATION

- My sewer is stopped up! I don't understand why it's not working right!
- My toilet won't flush; what's wrong?

In the Public Service Department we hear this on a daily basis, however most sewer problems can be prevented BY THE CUSTOMER the majority of stop ups are caused by a buildup of grease in the lines. You can help prevent SSO (Sanitary Sewer Overflow) by reducing the amount of grease and fats that's put into the wastewater system. Your friends in the Public Service Department are trying their best to prevent problems in your wastewater collection system please help them out a little bit by NOT pouring grease, fat, or oils down the drain. The work we have to do to handle grease and oils in the collection system makes operating cost go up, and when operating cost go up, so does the cost of living.

PLEASE HELP KEEP COST DOWN BY FOLLOWING THESE SIMPLE GUIDELINES

- **DON'T** pour grease, fats or oils from cooking down the drain.
- **DON'T** put anything down the drain that doesn't belong there, paper towels, personal hygiene products, food scraps (unless you have a disposer), disposable diapers, or any other foreign objects.

In addition to blockages, INFLOW AND INFILTRATION sometimes causes SSO's during heavy rains. Missing and broken cleanout caps, broken or improperly set manhole lids, contribute to this problem. Be observant when you drive and travel around H2GO and let us know if you see anything that doesn't look right. A single broken cleanout can allow up to 4600 gallons of water to enter the wastewater system each hour all this adds to higher treatment cost.