

"2011" Annual Drinking Water Quality Report

"Town of Spring Lake"

PWS ID# "03-26-030"

ORC - Roy Lowder

Questions may be directed to the Water Resources Department at Town Hall, **910-436-0241**

We are pleased to present to you this year's Annual Drinking Water Quality Report. This report is a snapshot of last year's water quality. Included are details about from where your water comes, what it contains, and how it compares to standards set by regulatory agencies. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water and to providing you with this information, because informed customers are our best allies. **If you have any questions about this report or concerning your water, please contact Byron Blumenfeld at (910) 436-0241.... We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled Board meetings. They are held every 2nd and 4th Monday of the month at Town Hall.**

What EPA Wants You to 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)**.

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 Town of Spring Lake 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 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.

When You Turn on Your Tap, Consider the Source

The water that is used by this system is purchased from both PWC and Harnett County. Reports from both of our sources are included.

Source Water Assessment Program (SWAP) Results

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 (PCSs). The results of the assessment are available in SWAP Assessment Reports that include maps, background information and a relative susceptibility rating of Higher, Moderate or Lower.

The relative susceptibility rating of each source for The Town of Spring Lake was determined by combining the contaminant rating (number and location of PCSs within the assessment area) and the inherent vulnerability rating (i.e., characteristics or existing conditions of the well or watershed and its delineated assessment area). The assessment findings are summarized in the tables below:

Thank you,
Byron Blumenfeld
Town of Spring Lake
Water Resources Director
910-436-0241

PWC

TABLE I -- FILTERED WATER QUALITY DATA (Regulated)

Parameters	Unit	MCL	MCLG	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(d)	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.

(d) The Town of Spring Lake had a higher range – the average for the year was 79.85 with a range of 20.00 (12/11) to 115.00 (5/11) – most recent tests in Spring Lake were 12/11

TABLE II (Non Regulated)

Detected Levels

Parameters	Unit	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) *

Detected Levels

Parameters	Unit	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.

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 <u>E. coli</u>	A routine sample and repeat sample are total coliform positive, and one is also fecal coliform or <u>E. coli</u> positive	0	N	0.00%	Human and animal fecal waste

NOTE: The Town of Spring Lake had one E-Coli positive during the year in April 11. The system was flushed and rechecked. All clear within 36 hours. The positive was at one of 30 sites monitored.

Table VI - Disinfection By-Product Precursors Contaminants

Contaminant (units)	MCL/TT	Violation	Your Water	Range	MCLG	MCL	Likely Source of Contamination
	Sample Date						
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) (90 th 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) (90 th percentile)	6/16/11	<2.00	3	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The 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>.

Harnett County

Source Water Assessment Program (SWAP) Results

Susceptibility of Sources to Potential Contaminant Sources (PCSs)

Source Name	Susceptibility Rating	SWAP Report Date
Cape Fear River	Higher	March 2010

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

Water Characteristics Contaminants	Sample Date	Your Water	Range Low/High	Secondary MCL
Contaminant (units)				
Iron (ppm)	2-7-11	N/D	N/A	0.3
Manganese (ppm)	2-7-11	0.012	N/A	0.05
Nickel (ppm)	2-7-11	N/D	N/A	N/A
Sodium (ppm)	2-7-11	41.2	N/A	N/A
pH	2-7-11	7.4	N/A	6.5 to 8.5

Total Organic Carbon (TOC)	TT Violation Y/N	Your Water (RAA Removal Ratio)	Range Monthly Removal Ratio Low - High	MCLG	MCL	Likely Source of Contamination	Compliance Method (Step 1 or ACC# __)
Contaminant (units)							
Total Organic Carbon (removal ratio) (TOC)-TREATED	N	1.17	1.03 - 1.26	N/A	TT	Naturally present in the environment	STEP 1

STEP 1 TOC Removal Requirements

Source Water TOC (mg/L)	Source Water Alkalinity mg/L as CaCO3 (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

Microbiological Contaminants

Contaminant (units)	MCL Violation Y/N	Your Water	MCLG	MCL	Likely Source of Contamination
Total Coliform Bacteria (presence or absence)	N	5%	0	5% of monthly samples are positive	Naturally present in the environment
Fecal Coliform or E. coli (presence or absence)	N	0	0	0 (Note: The MCL is exceeded if a routine sample and repeat sample are total coliform positive, and one is also fecal coliform or <i>E. coli</i> positive)	Human and animal fecal waste

NOTE: The Town of Spring Lake had one E-Coli positive during the year in April 11. The system was flushed and rechecked. All clear within 36 hours. The positive was at one of 30 sites monitored.

Turbidity* - Systems with population >10,000

Contaminant (units)	MCL Violation Y/N	Your Water	MCLG	MCL	Likely Source of Contamination
Turbidity (NTU)	N	0.11	N/A	TT = 1 NTU	Soil runoff
		100%	TT = percentage of samples < 0.3 NTU		

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

Inorganic Contaminants Contaminant (units)	Sample Date	MCL Violation Y/N	Your Water	Range Low High	MCLG	MCL	Likely Source of Contamination
Fluoride (ppm)	2-7-11	N	0.12		4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories

Unregulated Inorganic Contaminants Contaminant (units)	Sample Date	Your Water	Range Low High	Secondary MCL
Sulfate (ppm)	2-7-11	51.1		250

Asbestos Contaminant Contaminant (units)	Sample Date	MCL Violation Y/N	Your Water	Range Low High	MCLG	MCL	Likely Source of Contamination
Total Asbestos (MFL)	1-13-11	N	N/D		7	7	Decay of asbestos cement water mains; erosion of natural deposits

Lead and Copper Contaminants Contaminant (units)	Sample Date	Your Water	# of sites found above the AL	MCLG	MCL	Likely Source of Contamination
Copper (ppm) (90th percentile)	7/2010 – 8/2010	0.132	0	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb) (90th percentile)	7/2010 – 8/2010	N/D	0	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits

**Disinfectants & Disinfection
Byproducts Contaminants**

Contaminant (units)	MCL/MRDL Violation Y/N	Your Water (AVG)	Range Low - High	MCLG	MCL	Likely Source of Contamination
TTHM (ppb) [Total Trihalomethanes]	N	41.2	25 - 58	N/A	80	By-product of drinking water chlorination
HAA5 (ppb) [Total Haloacetic Acids]	N	18.8	15.1 – 24.4	N/A	60	By-product of drinking water disinfection
Bromate (ppb)		0	10			By-product of drinking water disinfection
Chlorite (ppm)	N	0.251	0.188 - 0.411	0.8	1	By-product of drinking water chlorination
Chlorine dioxide (ppb)	N	37.0	0 - 650	MRDLG = 800	MRDL = 800	Water additive used to control microbes
Chloramines (ppm)	N	2.88	0.90 - 4.03	MRDLG = 4	MRDL = 4	Water additive used to control microbes
Chlorine (ppm) FREE	N	1.59	0.07 - 3.39	MRDLG = 4	MRDL = 4	Water additive used to control microbes