

## 2011 ANNUAL WATER QUALITY REPORT TOWN OF BOILING SPRINGS

**Dear Customer:** This is an annual report for the quality of water delivered by the Town of Boiling Springs. It meets the Federal Safe Drinking Water Act (SDWA) requirement for "Consumer Confidence Reports" and contains information on the source of our water, its constituents, added the health risk associated with any contaminants. Such water is vital to our community, and if you have any questions, call the numbers listed below. Call us for information about the next opportunity for public participation in decisions about our drinking water. **Overview - Water Source** - The Town of Boiling Springs is proud of the high quality water it provides. The annual water report shows the source of our water lists the results of our tests and contains important information about our water and your health. The Town of Boiling Springs will notify you immediately if there is any reason for concern about our water. We are happy to show you how we have surpassed water-quality standards.

**Where does my water come from?** - Shelby's water comes from the surface water source of the First Broad River that flows along the west side of town. An emergency backup water supply at the Broad River is also available. The City of Shelby is permitted to withdraw up to 18 million gallons per day (MGD) from the First Broad River and the facilities at the Broad River can provide approximately 9 MGD for emergency backup water supply. The Town of Boiling Springs tap water is purchased from the City of Shelby, which falls under the regulation of the Environmental Protection Agency. **How it is treated** - Shelby has one water treatment plant located at 801 W. Grover St. Water is transferred from the river into a series of three on-site reservoirs at the water treatment plant which holds a three-day supply of raw water. The water treatment plant, built in 1953 and upgraded in 1994, has a product ion capacity of 12 MGD. Once at the plant, raw water is mixed with caustic soda to adjust the pH and alum to coagulate particles. After mixing, the water flows into settling basins where heavy particles are removed through settling. The water then flows through filters, which removes the remaining particles. The water is then fluoridated to promote dental health and chlorine is added to prevent bacterial growth. The staff at the water plant is continually conducting tests at the plant and throughout the City's distribution system to assure that high water quality. The City's water treatment plant welcomes visitors, please call 704-484-6885 for an appointment.

**How to Read the Water Quality Table** - The water quality table shows the results of our water-quality analysis. Both regulated and unregulated contaminants are listed here. The table contains the name of each substance, the highest level allowed by regulation (MCL), the ideal goals for public health, the amount detected, the usual sources of such contamination, footnotes explaining our findings, and a key to units of measurement. For your information, definitions of MCL and MCLG are listed below.

**Maximum Contaminant Level or MCL:** The highest level of a contaminant that is allowed in drinking water. **Maximum Contaminant Level Goal or MCLG:** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLs are set as close to the MCLGs as feasible by the EPA and the City of Shelby by using the best available treatment technology. MCLGs allow for a margin of safety.

**Key to Table** AL= Action Level • NR = Not Regulated • SS = Secondary Standards (non-enforced guide-lines) • MCL = Maximum Contaminant Level • NTU = Nephelometric Turbidity Units • MCLG = Maximum Contaminant Level Goal • ppq = parts per quadrillion, or pictograms • TT = Treatment Technique • MFL = Million Fibers Per Liter • ppm = parts per million • mg/L = Milligrams per liter • ppt = parts per trillion, or nanograms per liter • ppb = parts per billion, or micrograms per liter • N/A = Not Applicable

### Town of Boiling Springs

#### Disinfection By-Product Contaminants

Contaminants (units)	MCL Violation	Your Water (AVG)	Range		MCLG	MCL	Likely Source of Contamination
			Low	High			
TTHM (mg/L) (Total Trihalomethanes)	N	0.055	0.018	0.11	N/A	0.08	By-product of drinking water chlorination.
HAA5 (mg/L) (Total Haloacetic Acids)	N	0.017	0.008	0.035	N/A	0.06	By-product of drinking water chlorination.
Chlorine (ppm)	N	1.05	0.50	1.6	MRDLG=4	MRDL=4	Water additive used to control microbes.

#### Lead and Copper Contaminants

Contaminants (units)	Sample Date	Your Water	# of sites above the AL	MCLG	MCL	Likely Source of Contamination
Copper (ppm) (90th percentile)	September 2010	<0.05	0	1.3	AL = 1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
Lead (ppm) (90th percentile)	September 2010	<0.003	1	0	AL = 0.015	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.

#### Unregulated VOC Contaminants

Contaminants (units)	Sample Date	Your Water (AVG)	Likely Source of Contamination
Chloroform (mg/L)	Quarterly	0.04	Component of total Trihalomethanes.
Bromoform (mg/L)	Quarterly	<0.0005	Component of total Trihalomethanes.
Bromodichloromethane (mg/L)	Quarterly	0.006	Component of total Trihalomethanes.
Dibromochloromethane (mg/L)	Quarterly	0.002	Component of total Trihalomethanes.

#### NO MICROBIOLOGICAL MCL VIOLATIONS

### CITY OF SHELBY

#### Microbiological Contaminants

Contaminant, Units	Our Water (RAA)	MCLG	MCL	Likely Source of Contamination
Total Coliform Bacteria	0	0	5% of monthly samples of positive	Naturally present in the environment.
Fecal Coliform or E. Coli (presence or absence)	0	0	0	Human and animal fecal waste.

*Note 1*

Note 1: The MCL is exceeded if a routine sample and repeat sample are total coliform positive, and one is also fecal coliform or E. Coli positive.

#### Turbidity

Contaminant - Units	Sample Date	MCL	MCLG	Our Water	Range	Likely Source of Contamination	Violation
Turbidity, NTU	1/22/2011	1.0	0	0.381	N/A	Soil run-off	No
In January, recorded lowest %	98.9%	<i>Note 2</i>					
<b>Inorganic Compounds</b>							
Fluoride, mg/L	2/01/2011	4	4	1.31	0.29-1.31	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.	No
<b>Unregulated Inorganic Contaminants</b>							
Sulfate, ppm	1/06/2011	N/A		18.0		Naturally occurring minerals; treatment process.	No

Note 2 - 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.

**Lead and Copper Contaminants**

Contaminant, Units	Sample Date	Our Water	# of Sites above AL	MCL/MCLG	Likely Source of Contamination
Copper, mg/L 90 <sup>th</sup> percentile	08/25/2010	0.140	0	AL = 1.3 / 1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
Lead, mg/L 90 percentile	08/25/2010	<0.003	2	AL = 0.015 / 0	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.

**Disinfection Byproduct Precursors Contaminants**

Contaminant, Units	Our Water (RAA)	Range	MCL/TT Violation	MCL / MCLG	Likely Source of Contamination
Total Organic Carbon, ppm Raw Water	2.53	0.0 – 2.16	No	N/A (TT)	Naturally Present in the Environment
Total Organic Carbon, ppm Treated Water	0.57	0.0 – 1.29	No	N/A (TT)	Naturally Present in the Environment

Depending on the TOC in our source water, the system MUST have a certain % removal of TOC or must achieve alternative compliance criteria. Our water system uses Alternative Compliance Criteria 2, which means our treated water TOC must be <2.0 mg/L. If we fail to meet this limit we are in violation of a treatment technique.

**Disinfectants and Disinfection By-Products**

Contaminants, Units	MCL / MRDL Violations (Y/N)	Our Water (RAA)	Range	MCLG	MCL	Likely Source of Contamination
TTHM, mg/L (Total Trihalomethanes)	N	0.045	0.010-0.090	N/A	0.080/NA	By-product of drinking water disinfection.
HAA5, mg/L (Total Halo acetic Acids)	N	0.016	0.003-0.020	N/A	0.60/NA	By-product of drinking water disinfection.
Chlorine (ppm)	N	1.14	0.20-1.89	MRDLG=4	MRDL=4	Water additive used to control microbes.

**Synthetic Organic Chemical (SOC) Contaminants Including Pesticides and Herbicides**

Contaminant, Units	Sample Date	MCL/MRDL Violations (Y/N)	Our Water (RAA)	Range	MCLG	MCL	Likely Source of Contamination
Atrazine	04/14/2011	N	0.00022	0.00-0.00022	0.003	0.003	Run off from herbicide used on row crops.

**Unregulated Volatile Organic Contaminants**

Contaminants, Units	Sample Date	Our Water	Range
Dichloroacetic Acid (mg/L)	04/05/2011	0.026	0.005-0.026
Trloroacetic Acid (mg/L)	10/04/2011	0.009	0.009-0.004
Bromodichloromethane (mg/L)	10/04/2011	0.018	0.002-0.018
Chloroform (mg/L)	10/04/2011	0.074	0.006-0.074
Dibromochloromethane (mg/L)	11/04/2011	0.0055	0.00077-0.0055

**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 N.C. The purpose of the assessments was to determine the susceptibility of each drinking water source (well or surface water intake) to Potential Containment 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 City of Shelby was determined by combining the contaminant rating (number and location of PCSs within the assessment area) and the inherent vulnerable rating (i.e., characteristics or existing conditions of the well or watershed and its delineated assessment area). The assessment findings are summarized as: **2011 Susceptibility of Sources to Potential Contaminant Sources (PCSs) SOURCE NAME: First Broad River SUSCEPTIBILITY RATING: Moderate Broad River: Moderate** The complete SWAP Assessment Report for the City of Shelby 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 - Program Request, 1634 Mail Service Center, Raleigh, NC 27699-1634 or email a request to: [swap@ncmail.net](mailto: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 1-919-715-2633. 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 PCSs in the assessment area. **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 the 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. Immune-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 1-800-426-4791. **Required Additional Health Information** To insure that tap water is safe to drink, EPA prescribes limits on the manner of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants in bottled water. The presence of contaminants does not necessarily indicate that the 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). The sources of drinking water (both tap water and bottled water) include rivers, streams, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and 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: (A) Microbial contaminants such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife. (B) Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban runoff, industrial or domestic. (C) Pesticides and herbicides, which may come from a variety of sources such as agriculture, storm water runoff, and residential uses. (D) Organic chemical contaminants, including synthetic and volatile organics, which are by-products of industrial processes and petroleum production, can also come from gas stations, urban runoff and septic systems. (E) Radioactive contaminants, which can be naturally occurring or be the result of certain gas production and mining activities. Some people may be more vulnerable to contaminants in drinking water than the general population. Immune-compromised persons such as person 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 a 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 are available from the Safe Drinking Water Hotline (800-426-4791). National Primary Drinking Water Regulation Compliance Town of Boiling Springs Public Water System ID Number 0123025

Responsible Person	System Name	System Address (Street)	Phone Number	System PWSID #	System Address(City/State/Zip)
Mike Gibert	Town of Boiling Springs	145 S. Main St.	704-434-2357	0123025	PO Box 1014, Boiling Springs, NC 28017