



### ABOUT THIS REPORT

The technical language, terms, descriptions, definitions, precautionary statements and scientific data contained and displayed in this report were strictly prescribed and mandated by federal authorities and federal laws. The South Carolina Department of Health and Environmental Control (SCDHEC) validated the sampling results listed.

For more information about contaminants and potential health effects, you may call the EPA's Safe Drinking Water Hotline at 1-800-426-4791.

For more information about this report of the City of Florence water quality, please contact Michael Hemingway or Forrest Whittington at (843) 665-3236.



# 2011 CITY OF FLORENCE WATER QUALITY REPORT



## Surpassing Water Quality Standards

### WHERE YOUR WATER COMES FROM

The City of Florence relies on groundwater as its primary supply source. Groundwater is obtained from deepwells drilled into the Middendorf and Black Creek aquifers. The City provides drinking water for approximately 76,000 people, including nearly 27,200 residences and more than 3,000 businesses. Approximately 80 percent of Florence's water is provided by the groundwater well system. The City of Florence also operates the Pee Dee River Regional Surface Water Plant. This plant, which utilizes the Pee Dee River as its source provides approximately 20 percent of Florence's water supply.

### FLORENCE CITY COUNCIL

Florence City Council governs the policies, funding and management of the City Utility Department. City Council meets the second Monday each month in Room 604 of the City-County Complex. The complex is located at 180 North Irby St. in Florence, S.C. Customers and the public are encouraged to attend these meetings.

### IF YOU HAVE SPECIAL HEALTH CONCERNS

Some people may be more vulnerable to substances in drinking water than the general population. Immuno-compromised persons, such as persons undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly individuals and infants can be particularly at risk due to infections. These people should seek advice about drinking water from their healthcare providers. The Environmental Protection Agency (EPA) and the Centers for Disease Control (CDC) provide guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological substances. Further information is available from the Safe Drinking Water Hotline at 1-800-426-4791.

### WHAT'S IN YOUR DRINKING WATER

All sources of drinking water are subject to potential contamination by substances that are naturally occurring or man-made. These substances can be microbes, inorganic or organic chemicals and radioactive substances. All drinking water, including bottled water, may contain at least minor traces of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants, as well as their potential health effects, can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at (800) 426-4791.

A source water assessment report has been prepared for the City of Florence water system. The report may be reviewed at the City Engineer's office by contacting Forrest Whittington at (843) 665-3236.



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## FLUORIDE

Fluoride is a naturally occurring element that helps prevent tooth decay. Therefore, a small amount of fluoride is added during the water treatment process, as recommended by the American Medical Association and the American Dental Association.

## YOUR DRINKING WATER

Continuing to provide high-quality drinking water is a top priority for the City of Florence. The City is committed to providing superior drinking water service, and can assure its customers that their drinking water is safe, healthy and of the highest quality. This report is designed not only to inform customers about water quality and the City of Florence's commitment, but also to increase customer understanding of drinking water and how it is treated.

## 2011 Water Quality Report

The City of Florence is once again proud to report that the drinking water supplied to citizens and customers throughout the 2011 calendar year was of the highest quality and surpassed all health and safety standards.

"The City of Florence is very diligent in providing safe, quality drinking water at a reasonable cost for citizens of the City and surrounding areas," said Drew Griffin, Florence City Manager. "The 2011 Water Quality Report data demonstrates that the City's water supply is indeed safe and of the highest quality. State and federal standards for drinking water verify the quality of Florence's water as shown in the tables included in this report."

To ensure the City's drinking water constantly meets or exceeds the standards set forth in the federal Safe Drinking Water Act, the City of Florence routinely collects sampling data for nearly 100 elements and substances that may be present in public drinking water supplies from both organic and man-made sources. The sampling data collected by the City of Florence is scientifically analyzed and confirmed by the South Carolina Department of Health and Environmental Control (SCDHEC).

The most recent sampling data collected and analyzed for the City of Florence Water System for the period Jan. 1, 2011, through Dec. 31, 2011, shows that the City's drinking water contains only a few of the elements and substances covered by the Safe Drinking Water Act. The sampling data is presented in a table included in this report.



## 2011 Water Quality Sampling Results

The following table shows actual sampling results for substances detected in the City of Florence's water system for the period Jan. 1 to Dec. 31, 2011, compared with state and federal health and safety standards for those substances.

Contaminant	Violation	Level Detected	Measurement Unit	MCLG	MCL	Likely Source of Contamination
Fluoride	No	0.62	PPM	4	4	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Lead (2009 data)	No	Not Detected	PPB	0	AL=15	Corrosion of household plumbing systems; erosion of natural deposits
Copper (2009 data)	No	90th Percentile 0.084 ND - 0.16 (Range)	PPM	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Sodium	No	20	PPM			Corrosion of household plumbing systems; erosion of natural deposits
Nitrate/Nitrite	No	ND - 0.80 (Range)	PPM	10	10	Runoff from fertilizer; leaching from septic tanks, sewage; erosion of natural deposits
HAA5 (Haloacetic Acids)*	No	RAA : 4.0 ND - 20.0 (Range)	PPB	0	60	By-product of drinking water chlorination
TTHM (Total Trihalomethanes)*	No	RAA : 15.0 ND - 94.3 (Range)	PPB	0	80	By-product of drinking water chlorination

\* Compliance is based on RAA, not on individual samples.

## Pee Dee River Surface Water Plant Data

Contaminant	Violation	Highest Single Sample	Measurement Unit	Lowest Monthly Percentage Meeting Standard
Turbidity	No	0.23	NTU	100%

## Additional Surface Water Plant Data

Contaminant	Violation	Level Detected	Measurement Unit	MRDLG	MRDL	Likely Source of Contamination
Chlorine	No	RAA : 0.64 0.59-0.68 (Range)	PPM	4	4	TT
Total Organic Carbon (TOC in treated water)	No	1.40 - 3.40 (Range)	PPM			Decay of naturally occurring organic matter.
TOC Removal	No	RAA Ratio: 1.42	Dimensionless	RAA Ratio Standard >1.0		TT

## The following definitions are designed to help you understand the data and information presented in the accompanying tables.

<b>MCLG</b> Maximum Contaminant Level Goal. The level of contaminant in drinking water below which there is no known or expected health risk. MCLGs provide a margin of safety.	<b>PPM</b> Parts Per Million. The equivalent of one penny in \$10,000 or one minute in two years.
<b>MCL</b> Maximum Contaminant Level. 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.	<b>MRDL</b> Maximum Residual Disinfectant Level. Highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of disinfectant is necessary for control of microbial contaminants.
<b>ND</b> Non-Detected. No measurable level of a substance or contaminant detected.	<b>MRDLG</b> Maximum Residual Disinfectant Level Goal. Level of drinking water disinfectant below which there is no known risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
<b>PPB</b> Parts Per Billion. The equivalent of one penny in \$10,000,000 or one minute in 2,000 years.	<b>NTU</b> Nephelometric Turbidity Unit. Units of measure to indicate water clarity.
<b>90th Percentile</b> Of all samples analyzed, 90 percent were at or below the detection level.	<b>TT</b> Treatment Technique. Required process intended to reduce the level of a contaminant in drinking water.
<b>AL</b> Action Level. The concentration of a contaminant that, if exceeded, triggers treatment or other requirements, which a water system must follow.	<b>RAA</b> Running annual average.