

## 2006 WATER QUALITY REPORT

The City of Florence is proud to report that the drinking water supplied to citizens and customers throughout the 2006 calendar year was of the highest quality and surpassed all state and health safety standards.

"We are pleased that the City's water system not only met regulatory standards, but in many cases exceeded these requirements," said David Williams, the Florence City Manager. "For example, our surface water plant was recognized again this year under SCDHEC's Areawide Optimization Program for achieving consistently low treated water turbidity levels."

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 SCDHEC.

The most recent sampling data collected and analyzed for the City of Florence Water System for the period January 1, 2006 through December 31, 2006 shows that the City's drinking water contains only a few of the elements and substances covered by the Safe Drinking Water Act. This sampling data is presented in a table, which is included in this report.

## WHERE YOUR WATER COMES FROM

The City of Florence relies both on groundwater and surface water as its main supply source. Groundwater is obtained from deep wells drilled into the Middendorf and Black Creek aquifers. The City provides drinking water for approximately 67,000 people, including nearly 26,290 residences and more than 2,850 businesses. Approximately 55 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 45 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 at 1 p.m. in Room 604 of the City-County Complex. The complex is located at 180 North Irby Street 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 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.



## 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 Forrest Whittington at (843) 665-3236 or Michael Hemingway at (843) 665-3271.



**Surpassing Water Quality Standards:**

**2006**  
**City of Florence Water Quality Report**

## 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 of Florence Utility Department office by contacting Forrest Whittington, Department Manager, at (843) 665-3236.

In 2006, the City of Florence detected only a very small number of the nearly 100 substances and elements regulated under the Safe Drinking Water Act in its drinking water supplies.

## FLUORIDE

Fluoride is a naturally occurring element produced by geologic deposits in groundwater supplies that helps prevent tooth decay. Because naturally occurring levels of fluoride are low in the City's source waters, a small amount is added during the treatment process as recommended by the American Medical Association and the American Dental Association.



## YOUR DRINKING WATER

Providing high-quality drinking water is a priority for the City of Florence. With its dedication to providing superior drinking water service, the City of Florence 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.

## 2006 WATER QUALITY SAMPLING RESULTS

The following table shows actual sampling results for substances detected in the City of Florence's groundwater systems for the period January 1 to December 31, 2006, compared with state and federal health and safety standards for those substances.

CONTAMINANT	VIOLATION	LEVEL DETECTED	UNIT MEASUREMENT	MCLG	MCL	LIKELY SOURCE OF CONTAMINATION
FLUORIDE	NO	0.68	PPM	4	4	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
LEAD	NO	90th Percentile 3.0	PPB	0	AL = 15	Corrosion of household plumbing systems; erosion of natural deposits
COPPER	NO	90th Percentile 0.017	PPM	1.3	AL = 1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
NITRATE	NO	ND - 0.48 (range)	PPM	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposit
HAA5 (HALOACETIC ACIDS)*	NO	RAA: 6.0, Range: ND - 23.4	PPB	0	60	Byproduct of drinking water chlorination
TTHM (TOTAL TRIHALOMETHANES)*	NO	RAA: 19.0, Range: ND - 95.3	PPB	0	80	Byproduct of drinking water chlorination
TOTAL ORGANIC CARBON (TOC) IN TREATED WATER	NO	0.7 - 1.7 (range)	PPM			Decay of naturally occurring organic matter
TOC REMOVAL	NO	RAA Ratio - 1.94	Dimensionless		RAA ratio standard >1.0	
ALPHA EMITTERS (SOURCE B21018)*	NO	RAA - 10.6 -0.3 to 40.7 (range)	pCi/l	0	15	Erosion of natural deposits
COMBINED RADIUM (SOURCE B21004)	NO	1.86	pCi/l	0	5	Erosion of natural deposits
COMBINED RADIUM (SOURCE B21008)	NO	2.51	pCi/l	0	5	Erosion of natural deposits

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

## PEE DEE RIVER SURFACE WATER PLANT DATA

CONTAMINANT	VIOLATION	HIGHEST SINGLE SAMPLE	UNIT OF MEASUREMENT	LOWEST MONTHLY PERCENTAGE MEETING STANDARD
TURBIDITY	NO	0.17**	NTU	100%

\*\* High single measurement, Lowest monthly percentage meeting standard - 100 percent.

## ADDITIONAL CCR DATA FOR DISINFECTION

CONTAMINANT	VIOLATION	LEVEL DETECTED	UNIT MEASUREMENT	MRDLG	MRDL	LIKELY SOURCE OF CONTAMINATION
CHLORINE	NO	RAA: 0.56 0.47-0.71 (RANGE)	PPM	4.0	4.0	TT

## HOW TO READ THIS TABLE

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

- MCLG:** 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.
- MCL:** 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.
- ND:** Non-Detected. No measurable level of a substance or contaminant detected.
- PPB:** Parts Per Billion. The equivalent of one penny in \$10,000,000 or one minute in 2,000 years.
- 90th Percentile:** Of all samples analyzed, 90 percent were at or below the detection level.
- AL:** Action Level. The concentration of a contaminant that, if exceeded, triggers treatment or other requirements, which a water system must follow.
- PPM:** Parts Per Million. The equivalent of one penny in \$10,000 or one minute in two years.
- MRDL:** Highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of disinfectant is necessary for control of microbial contaminants.
- MRDLG:** 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.
- NTU:** Nephelometric Turbidity Unit. Units of measure to indicate water clarity.
- TT:** Treatment Technique. Required process intended to reduce the level of a contaminant in drinking water.
- RAA:** Running annual average.
- pCi/l:** Picocuries per liter. A measurement of radioactivity in water.