



2009 WATER QUALITY REPORT

Town of Hillsborough Public Water System ID# 03-68-015

We are pleased to present to you the Hillsborough 2009 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 the Town of Hillsborough Water Treatment Plant at (919) 732-3621.

When you Turn on Your Tap, Consider the Source

The water that is used by this system is at Lake Ben Johnston on the Eno River and it is located at 1000 Ben Johnston Road. It is considered a surface water and the Town's primary water source. The Town has two secondary water sources, 1) Lake Orange is at 1221 Lake Orange Road in Hillsborough on the East Fork of the Eno River; and 2) the West Fork of the Eno Reservoir at 4210 Efland Cedar Grove Road in Cedar Grove on the West Fork of the Eno River.

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 Hillsborough 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 table below:

Source Name	Susceptibility Rating	SWAP Report Date
Eno River	Moderate	March 2010

The complete SWAP Assessment report for the Town of Hillsborough may be viewed on the Web at: <http://swap.deh.enr.state.nc.us/swap/>. Note that because SWAP results and reports are periodically updated by the PWS Section, the results available on this web site may differ from the results that were available at the time this water quality report was prepared. If you are unable to access your SWAP report on the web, you may mail a written request for a printed copy to: Source Water Assessment Program – Report Request, 1634 Mail Service Center, Raleigh, NC 27699-1634, or email requests to swap@ncmail.net. Please indicate your system name (Hillsborough), PWSID (03-68-015), 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.

Citizen Input Welcome

Citizens are welcome to attend regular Town Board and Water Sewer Advisory Committee meetings. The board and committee meet in the Town Barn at 7 pm on the Town Hall campus, located at 101 E. Orange St. The Town Board meets on the second and fourth Monday of every month and the Water Sewer Advisory Committee meets on the first Thursday of the month.

New Rule to ensure no presence of Cryptosporidium

The EPA implemented a new rule last year (LT2) as further means to assure the public that the local utility is treating the water appropriately and additional treatment is not needed. Some disease causing microorganisms and contaminants can be resistant to certain treatment processes and it is important for the utility to know if the current process being used is effective enough to provide safe drinking water. Hillsborough pulled raw water samples from the Eno River and tested for Cryptosporidium during every month of 2009. The results were as follows: 3 oocysts in January, 1 oocyst in February and 1 oocyst in December. These results confirmed that Hillsborough's treatment process is more than adequate to meet the safe drinking water standards put in place by the EPA and North Carolina. Additional information can be found at <http://www.epa.gov/safewater/disinfection/lt2>.

Cryptosporidium: What exactly is it?

Cryptosporidium is a microbial parasite which is found in surface water throughout the U.S. Although Cryptosporidium can be removed by filtration, the most commonly used filtration methods cannot guarantee 100 percent removal. Our monitoring of our source water and/or finished water indicates the presence of these organisms. Current test methods do not enable us to determine if the organisms are dead or if they are capable of causing disease. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals are able to overcome the disease within a few weeks. However, immuno-compromised people have more difficulty and are at greater risk of developing severe, life-threatening illness. Immuno-compromised individuals are encouraged to consult their doctor regarding appropriate precautions to take to prevent infection. Cryptosporidium must be ingested for it to cause disease, and it may be spread through means other than drinking water.

What EPA (Environmental Protection Agency) 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 Hillsborough 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.

Water Quality Data Table of Detected Contaminants

We routinely monitor for over 150 contaminants in your drinking water according to Federal and State laws. The table below lists all the drinking water contaminants that we detected in the last round of sampling for the particular contaminant group. The presence of contaminants does not necessarily indicate that water poses a health risk. **Unless otherwise noted, the data presented in this table is from testing done January 1 through December 31, 2009.** The EPA or the State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, is more than one year old.

Inorganic Contaminants

Contaminant (units)	Sample Date	MCL Violation Y/N	Town Water Results	Range		MCLG	MCL	Likely Source of Contamination
				Low	High			
Fluoride (ppm)	1/15/09	N	1.22	1.22	1.22	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories

Disinfectants and Disinfection By-products Contaminants

Contaminant (units)	MCL/MRDL Violation Y/N	Town Water (AVG)	Range		MCLG	MCL	Likely Source of Contamination
			Low	High			
TTHMs (ppb) [Total Trihalomethanes]	N	54	28	95	N/A	80	By-product of drinking water chlorination
HAA5 (ppb) [Total Haloacetic Acids]	N	38	25	54	N/A	60	By-product of drinking water disinfection

Total Organic Carbon (TOC)

Our water system used Step 1 as the method to comply with the disinfectants byproducts treatment technique requirements.

Contaminant (units)	MCL/TT Violation Y/N	Town Water (AVG)	Range		MCLG	MCL	Likely Source of Contamination
			Low	High			
Total Organic Carbon (ppm) (TOC)-RAW	N	6.18	4.43	7.68	N/A	TT	Naturally present in environment
Total Organic Carbon (ppm) (TOC)-TREATED	N	2.88	2.16	3.98	N/A	TT	Naturally present in environment

Note: Depending on the TOC in our source water, the system MUST have a certain % removal or TOC or must achieve alternative compliance criteria. If we do not achieve that % removal, there is an alternative % removal. If we fail to meet the alternative % removal, we are in violation of Treatment Technique.

Radioactive Contaminants

Contaminant (units)	Sample Date	MCL Violation Y/N	Town Water	MCLG	MCL	Likely Source of Contamination
Beta/photon emitters (pCi/L)	2/12/03	N	5.7	0	50*	Decay of natural and man-made deposits *Note: The MCL for beta particles is 4 mrem/year. EPA considers 50 pCi/L to be the level of concern for beta particles.

Water Characteristics Contaminants

Contaminant (units)	Sample Date	Town Water	Range Low/High	Secondary MCL
Iron (ppm)	1/15/09	0.069	N/A	0.3
Sodium (ppm)	1/15/09	15.5	N/A	N/A

Unregulated Inorganic Contaminants

Contaminant (units)	Sample Date	Town Water	Range Low/High	Secondary MCL
Sulfate (ppm)	1/15/09	20.8	N/A	250



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Important Drinking Water Definitions:

Not-Applicable (N/A) – Information not applicable/not required for that particular water system or for that particular rule.

Non-Detects (ND) - Laboratory analysis indicates that the contaminant is not present at the level of detection set for the particular methodology used.

Parts per million (ppm) or Milligrams per liter (mg/L) - One part per million corresponds to one minute in two years or a single penny in \$10,000.

Parts per billion (ppb) or Micrograms per liter (ug/L) - One part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

Picocuries per liter (pCi/L) - Picocuries per liter is a measure of the radioactivity in water.

Nephelometric Turbidity Unit (NTU) - Nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

Action Level (AL) - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Treatment Technique (TT) - A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

Maximum Residual Disinfection Level Goal (MRDLG) – The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Maximum Contaminant Level (MCL) - 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 (MCLG) - The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Extra Note: MCLs are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.