



2007 Annual Drinking Water Quality Report

Town of Wrightsville Beach
Public Works Department
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Customers,

The Town of Wrightsville Beach Public Works Department is pleased to present to you the 2007 Annual Drinking Water Quality Report. This report is a snapshot of last year's water quality. Included are details about where your water comes from, 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 our efforts to protect our water resources. We are committed to ensuring the quality of your water and service 365 days a year.

The Town is proud to report that your water system has had no violations and that your drinking water meets or exceeds all Federal and State standards.

If you have any questions about this report or concerning your water, please contact the Wrightsville Beach Public Works Department at 910-256-7935.

When You Turn on the Tap, Consider the Source

The Town of Wrightsville Beach's water source is groundwater from the PeeDee Aquifer. There are nine wells, two water treatment centers, two ground storage reservoirs, and two elevated tanks located throughout the Town. The wells pump water from the aquifer to the surface. The water is then treated and pumped throughout the distribution system and into the two elevated storage tanks. The elevated tanks maintain proper system pressure and store treated water until it is needed. These processes assure that the Town has the highest possible quality and quantity of water available to you everyday.

What the 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 EPA's Safe Drinking Water Hotline at 1-800-426-4791. 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 healthcare 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 \(800-426-4791\)](tel:800-426-4791). The sources of drinking water (both tap water and bottled water include) 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; pesti-

cides 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.

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 Wrightsville Beach 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 following tables:

Susceptibility of Sources to Potential Contaminant Sources (PCSs)

Source Name	Susceptibility Rating	Source Name	Susceptibility Rating
Well 1	Moderate	Well 6	Higher
Well 2	Moderate	Well 7	Moderate
Well 3	Lower	Well 8	Moderate
Well 4	Lower	Well 11	Moderate
Well 5	Moderate		

It is important to understand that a susceptibility rating of “higher” does not imply poor water quality. Susceptibility is an indication of a water supply’s potential to become contaminated by the identified PCSs within the assessment area.



The complete SWAP Assessment report for the Town of Wrightsville Beach 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 – Report Request, 1634 Mail Service Center, Raleigh NC 27699-1634, or email request to 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

Water Quality Data Table of Detected Substances...

We routinely monitor for over 150 substances in your drinking water according to Federal and State laws. The tables shown list all of 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 date presented in this table is from testing done January 1 through December 31, 2007.**

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.

Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminants monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.



Extra Note: Maximum Contaminant Levels (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 everyday at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

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 Wrightsville Beach 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 on the Safe Drinking Water Hotline (800-426-4791) or at <http://www.epa.gov/safewater/lead>.

Microbiological Substances							
Substance (units)	MCL Violation Y/N	Your Water	MCLG	MCL	Likely Source		
Total Coli form Bacteria (presence or absence)	N	0	0	One monthly positive	Naturally present in the environment		
Inorganic Substances							
Substance (units)	Sample Date	MCL Violation Y/N	Your Water	Range Low – High	MCLG	MCL	Likely Source
Fluoride (ppm)	10/06/06	N	0.233	.02–0.4	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Sulfate (ppm)	10/06/06	N	17	9-30	250	250	Occurs naturally in drinking water
Cyanide (ppm)	10/06/06	N	0	0-.04	.20	.20	Discharge from steel/metal factories; discharge from plastic and fertilizer factories.
Unregulated VOC Substances							
Substance (units)	Sample Date		Your Water	Range Low- High			
All VOC Contaminants	06/05/07 & 07/12/07		Not Detected	N/A			
Lead and Copper Substances							
Substance (units)	Sample Date	Your Water	# of sites found above the AL	MCLG	MCL	Likely Source	
Copper (ppm) (90 th percentile)	9/11/07	1.5	4	1.3	AL = 1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives	
Lead (ppb) (90 th percentile)	9/11/07	.009	2	0	AL = .015	Corrosion of household plumbing systems; erosion of natural deposits	
Radiological Substances							
Substance (units)	Sample Date	Your Water	Range Low - High	MCLG	MCL	Likely Source of Contamination	
Alpha emitters (pCi/l)	2005 Quarterly Composite	N/D	Not Detected	0	15	Erosion of natural deposits	
Beta/photon emitters (pCi/l)	2005 Quarterly Composite	8.0	5.5-11.1	0	50	Decay of natural and man-made deposits	
Disinfection By-Product Contaminants							
Substance (units)	MCL/MRD L Violation Y/N	Your Water (AVG)	Range Low - High	MCLG	MCL	Likely Source of Contamination	
THM (ppb) [Total Trihalomethanes]	N	58	27-89	N/A	80	By-product of drinking water chlorination	
HAA5 (ppb) [Total Halo acetic Acids]	N	8.1	5-13	N/A	60	By-product of drinking water disinfection	
Chlorine (ppm)	N	.84	.25-2.0	MRDLG = 4	MRDL = 4	Water additive used to control microbes	

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				
Contaminant (units)	Sample Date	Your Water (AVG)	Range (Low – High)	Secondary MCL
Iron (ppm)	10/06/06	.04	0-.15	.3
Sodium (ppm)	10/06/06	126	N/A	N/A
pH	10/06/06	7.51	7.29-7.74	6.5 to 8.5
Water Characteristics Contaminants - Hardness				
Contaminant (units)	Unit	Max Allowed	Detected Level	Source
Total Hardness (CaCO ₃) Calcium Carbonate	ppm	N/A	187-222	Calcium Carbonate occurs as erosion of natural deposits
Calcium Hardness (CaCO ₃) Calcium Carbonate	grains per gallon	N/A	10.94-12.98	Calcium Carbonate occurs as erosion of natural deposits

Important Drinking Water Definitions

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 (mg/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.

Not-Applicable (N/A) – Information not applicable/not required for this particular water system or for a 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

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

Maximum Contaminant Level (MCL) - The "Maximum Allowed" is 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 "Goal" is 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.

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 Residual Disinfection Level (MRDL) – The "Highest Level" of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

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