

2005 Annual Drinking Water Quality Report

Currituck County Water

PWS ID# 04-27-010

We are pleased to present to you this year's 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.

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 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).

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.

When You Turn on Your Tap, Consider the Source

The water that is used by this system is 28 groundwater wells located off Maple Road and drawing from the Yorktown Aquifer.

Currituck County obtains processed water from South Camden Water Plant to supplement our water supply. This water is blended at the Currituck Water plant with our water for distribution.

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 Currituck Water 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:

Susceptibility of Sources to Potential Contaminant Sources (PCSs)

Source Name	Susceptibility Rating
Currituck Wells 3,6,8,9,14,26	Lower
Currituck Wells 1,2,4,5,7,10,11,12,13,15,16,17,18,19,20,21,22,23,24,25,27,28	Moderate
South Camden Shallow Wells 1,2	Moderate
South Camden Deep Wells 1,2	Lower

The complete SWAP Assessment report for Currituck Water may be viewed on the Web at: <http://www.deh.enr.state.nc.us/pws/swap> Please 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 CCR was prepared. 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 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

Violations that Your Water System Received for the Report Year

During 2005, or during any compliance period that ended in 2005, we did not receive a violation.

What If I Have Any Questions Or Would Like to Become More Involved?

If you have any questions about this report or concerning your water, please contact Leland Gibbs at Currituck County Water 252-453-2155. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled monthly meetings. Please call for an appointment.

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, 2005.** 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 contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.

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 - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

Maximum Contaminant Level - The “Maximum Allowed” (MCL) 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 - The “Goal”(MCLG) 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.

Extra Note: MCL’s 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.

Microbiological Contaminants

Contaminant (units)	MCL Violation Y/N	Your Water	MCLG	MCL	Likely Source of Contamination
Total Coliform Bacteria (presence or absence)	N	0	0	one positive monthly sample	Naturally present in the environment
Fecal Coliform or <i>E. coli</i> (presence or absence)	N	0	0	0 (Note: The MCL is exceeded if a routine sample and repeat sample are total coliform positive, and one is also fecal coliform or <i>E. coli</i> positive)	Human and animal fecal waste

Nitrate/Nitrite Contaminants

Contaminant (units)	MCL Violation Y/N	Your Water	Range		MCLG	MCL	Likely Source of Contamination
			Low	High			
Nitrate (as Nitrogen) (ppm)	N	ND	N/A		10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nitrite (as Nitrogen) (ppm)	N	ND	N/A		1	1	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

Unregulated Inorganic Contaminants

Contaminant (units)	Sample Date	Your Water	Range		Secondary MCL
			Low	High	
Sulfate (ppm)	6/14/04	9	N/A		250

Unregulated VOC Contaminants

Contaminant (units)	Sample Date	Your Water	Range	
			Low	High
Chloroform (ppb)	12/1/04	41.7 mcg/L	N/A	
Bromodichloromethane (ppb)	12/1/04	13.1mcg/L	N/A	
Bromoform (ppb)	12/1/04	28.3 mcg/L	N/A	
Chlorodibromomethane (ppb)	12/01/04	42.7 mcg/L	N/A	

Lead and Copper Contaminants

Contaminant (units)	Sample Date	Your Water	# of sites found above the AL	MCLG	MCL	Likely Source of Contamination
Copper (ppm) (90 th percentile)	8/19/05	0.482	0	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb) (90 th percentile)	8/19/05	4	1	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits

Inorganic Contaminants

Contaminant (units)	Sample Date	MCL Violation Y/N	Your Water	Range		MCLG	MCL	Likely Source of Contamination
				Low	High			
Antimony (ppb)	6/14/04	N	ND	N/A		6	6	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
Arsenic (ppb)	6/14/04	N	ND	N/A		0	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium (ppm)	6/14/04	N	ND	N/A		2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Beryllium (ppb)	6/14/04	N	ND	N/A		4	4	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries
Cadmium (ppb)	6/14/04	N	ND	N/A		5	5	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints
Chromium (ppb)	6/14/04	N	ND	N/A		100	100	Discharge from steel and pulp mills; erosion of natural deposits
Cyanide (ppb)	6/14/04	N	ND	N/A		200	200	Discharge from steel/metal factories; discharge from plastic and fertilizer factories
Fluoride (ppm)	6/14/04	N	ND	N/A		4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Mercury (inorganic) (ppb)	6/14/04	N	ND	N/A		2	2	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills; runoff from cropland
Selenium (ppb)	6/14/04	N	12	N/A		50	50	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Thallium (ppb)	6/14/04	N	ND	N/A		0.5	2	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories

Synthetic Organic Chemical (SOC) Contaminants Including Pesticides and Herbicides

Tested 3/3/05, all contaminants were below the detection limits.

Unregulated SOC Contaminants Including Pesticides and Herbicides

Tested 3/3/05, all contaminants were below the detection limits.

Volatile Organic Chemical (VOC) Contaminants

Tested 12/1/04, no violations.

Disinfection and Disinfection Byproducts Contaminants (Tested 7/5/05)

Contaminant (units)	MCL/MRDL Violation Y/N	Your Water (AVG)	Range		MCLG	MCL	Likely Source of Contamination
			Low	High			
TTHM (ppb) [Total Trihalomethanes]	N	39.9	N/A		N/A	80	By-product of drinking water chlorination
HAA5 (ppb) [Total Haloacetic Acids]	N	20.1	N/A		N/A	60	By-product of drinking water disinfection

South Camden Water CCR Results 2005

Unregulated Inorganics Contaminants – All tested contaminants were below MCL values.

Unregulated VOC Contaminants

Contaminant (units)	Sample Date	Result
Bromoform (ppb)	8/18/05	4.0
Chlorodibromomethane	8/18/05	5.0

Disinfection Byproduct Contaminants

Contaminant (units)	Result	MCL
TTHM (ppb)	50	80
HAA5 (ppb)	ND	60
Chlorine (ppm)	0.92	4

Currituck County Water Facts...

- Again this year, Currituck County's water met all federal and state requirements for water quality. Water is tested daily by plant operators.
- The average family of four pays less than 1/2 cent per gallon for clean, fresh water delivered to their home.
- The Water Department staff handles 6,852 active accounts; this reflects a customer base increase of 328 accounts for 2005.
- The department processed a total of 68,490 water bills during 2005. This includes accounts for mainland and Currituck Outer Banks customers.
- This past year, a total of 53,304 meters were read; this reflects an increase of 2,169 meters since 2004.
- The Water Distribution staff maintains and repairs the water lines that delivered over 346 million gallons of water to customers last year.
- The County's water source is 28 groundwater wells located off Maple Road, drawing from the Yorktown Aquifer. Currituck also purchases some water from Camden County.
- The Water Plant operates an average of 16 hours per day, seven days per week.
- The Water Department now offers online account access and accepts VISA and MasterCard for bill payments.

For more information, please visit the Currituck County Water Department website at <http://www.co.currituck.nc.us/government/departments/water/water.aspx>.

