

2007 Annual Drinking Water Quality Report

City of Henderson – Kerr Lake Regional Water System

PWS ID# 02-91-010

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. Immunocompromised 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.

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 Henderson – Kerr Lake Regional 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	SWAP Report Date
Kerr Lake	Moderate	May 17, 2007

The complete SWAP Assessment report for Henderson – Kerr Lake Regional 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.

When You Turn on Your Tap, Consider the Source

The water that is used by this system is surface water from John H Kerr Lake and is located at 280 Regional Water Lane.

What If I Have Any Questions?

If you have any questions about this report or concerning your water, please contact Christy Lipscomb at (252) 438-2141. We want our valued customers to be informed about their water utility.

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, 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.

Important Drinking Water Definitions:

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

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.

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.

Turbidity - Measurement of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. The turbidity rule requires that 95% or more of the monthly samples must be less than or equal to 0.3 NTU.

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.

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.

Contaminant (Units)	Sample Date	Violation Y / N	Your Water	Range	MCLG	MCL	#of sites above limit	Likely source of con- tamination
Turbidity (NTU)	Continuously	N	.20	.04-.20	N/A	TT=1 NTU TT= 100% of samples <.3		Soil Runoff
Fluoride (ppm)	Daily	N	1.00	.70-1.49	4	4	0	Erosion of natural deposits, water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Sulfate (ppm)	1/2/07	N	20	N/A		250 Secondary MCL	0	
Chloroform(ppb)	1/2/07	N	12.9	N/A			0	
Bromodichloromethane (ppb)	1/2/07	N	5.55	N/A			0	
Dibromomethane (ppb)	1/2/07	N	0.68	N/A			0	
Copper (ppm) {90th Percentile}	August 2005		.389		1.3	AL 1.3	0	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppm) {90th Percentile}	August 2005		6		0	AL 15	1	Corrosion of household plumbing systems, erosion of natural deposits
Nitrate (as Nitrogen)(ppm)	4/2/2007	N	.12	N/A	10	10	0	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Total Organic Carbon (ppm) (TOC) Raw	2007	N	2.99	2.59-3.41	N/A	TT	0	Naturally in the environment
Total Organic Carbon (removal ratio)(TOC) Treated	2007	N	1.21	.95-1.68	N/A	TT	0	Naturally in the environment
TTHM (ppb) [Total Trihalomethanes]	Quarterly	N	43	17-68	N/A		0	By-Product of drinking water chlorination
HAA5 (ppb) [Total Haloacetic Acids]	Quarterly	N	29	19-45	N/A		0	By-Product of drinking water disinfection
Chlorine (ppm)	Continuously	N	.95	.21-1.69	MRDLG=4	MRDL=4	0	Water additive used to control microbes

NOTE:Our water system used Step 1 and Alternative Compliance Criteria 4 as the method to comply with the disinfectants/disinfectant byproducts treatment technique requirements. Depending on the TOC in our source water, the system MUST have a certain % removal of 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 a Treatment Technique.