

SECTION.3800 - PRIVATE DRINKING WATER WELL SAMPLING

15A NCAC 18A .3801 DEFINITIONS

The following definitions shall apply throughout this Section:

- (1) "Certified laboratory" means the North Carolina State Laboratory of Public Health certified by the US Environmental Protection Agency or a laboratory certified by the Certification Section of the North Carolina Public Health Laboratory pursuant to 10A NCAC 42D to perform tests to determine the presence of coliform bacteria or the chemical constituents to be tested.
- (2) "Coliform bacteria" or "total coliform" means aerobic or facultative anaerobic, gram-negative, non-spore forming, rod shaped bacteria included in the genera Klebsiella, Enterobacter, Escherichia and Citrobacter. Coliform bacteria originate in soil, vegetation or the intestinal tract of warm-blooded animals. The presence of coliform bacteria in a water sample indicate the presence of a pathway for bacteria and possibly pathogens to gain entry into a water supply system.
- (3) "Department of Environment and Natural Resources" or "Department" means the North Carolina Department of Environment and Natural Resources. The term also means the authorized representative of the Department.
- (4) "Fecal coliform bacteria" or "fecal coliform" means a sub-group of coliform bacteria that are present in the intestinal tract and feces of warm-blooded animals. The presence of fecal coliform bacteria in a water sample indicate fecal contamination and the presumed presence of pathogens in the water supply
- (5) "Local Health Department" means the county or district health department or its successor.
- (6) "Private drinking water well" means a private drinking water well as defined in G.S. 87-85(10a).

*History Note: Authority G.S. 87-97;
Eff. July 1, 2008.*

15A NCAC 18A .3802 SAMPLE COLLECTION

(a) Within 30 days after it issues a certificate of completion for a newly constructed private drinking water well, the local health department shall obtain water samples and submit them to a certified laboratory for analyses or ensure that the water obtained from the well has been sampled and tested by a certified laboratory, in accordance with the rules of this Section.

(b) Samples collected from private drinking water wells pursuant to the rules of this Section shall be collected by an employee of a local health department, or a certified laboratory. The sample collector shall use aseptic sampling techniques for collection of coliform bacteria and sampling techniques and containers for chemical constituents following methods described in 40 Code of Federal Regulations 141.23 Inorganic Chemical Sampling and Analytical Requirements and 40 Code of Federal Regulations 143.4 Monitoring, which are incorporated by reference including any subsequent amendments, additions or editions. A copy may be obtained from the National Archives and Records Administration through their website at <http://www.gpoaccess.gov/cfr/index.html>.

(c) Water samples shall be collected from the sample tap at the well or the closest accessible collection point to the water source with a tap capable of being disinfected, provided the sampling point shall precede any water treatment devices.

(d) It is the responsibility of the well owner to provide access and a source of power for the purpose of collecting the required water sample.

(e) For all new private drinking water wells, samples for total coliform and fecal coliform bacteria shall be collected after the disinfectant agent has been flushed from the well and water supply system. The water shall be determined to be free of disinfectant before collection of samples for bacteria. Required water samples shall not be collected from wells that are not constructed and located in accordance with the rules of 15A NCAC 02C .0100 and .0300.

(f) Samples shall be transported to the laboratory following the procedures for sample preservation and within holding times required in 40 Code of Federal Regulations 141.21(f) Analytical Methodology, 141.23 Inorganic Chemical Sampling and Analytical Requirements, and 143.4 Monitoring, which are hereby incorporated by reference including any subsequent amendments, additions or editions. Copies may be obtained from the National Archives and Records Administration through their website at <http://www.gpoaccess.gov/cfr/index.html>.

(g) Additional or retest samples may be collected if:

- (1) during the permitting, construction and sampling process, information indicates the potential for other contaminants to be present in the groundwater source; or

- (2) if necessary to confirm initial testing results.

History Note: Authority G.S. 87-97;
Eff. July 1, 2008.

15A NCAC 18A .3803 SAMPLE ANALYSIS

- (a) Water samples shall be analyzed in the North Carolina State Laboratory of Public Health or a certified laboratory.
- (b) A water sample shall be tested for total coliform bacteria and if present, further analyzed for the presence of fecal coliform bacteria or E. coli.
- (c) A water sample shall be analyzed for Arsenic, Barium, Cadmium, Chromium, Copper, Fluoride, Lead, Iron, Magnesium, Manganese, Mercury, Nitrate, Nitrite, Selenium, Silver, Sodium, Zinc and pH.
- (d) Testing protocols shall follow EPA methods as published in the applicable sections of the most recent 40 CFR 141 and 143, Federal Register updates and the North Carolina Drinking Water Laboratory Certification rules of Section 10A NCAC 42D. Copies may be obtained from the National Archives and Records Administration through their website at <http://www.gpoaccess.gov/cfr/index.html>.

History Note: Authority G.S. 87-97;
Eff. July 1, 2008.

15A NCAC 18A .3804 REPORTING

- (a) Laboratories shall report results of chemical and bacteriological water sample analyses for each new private drinking water well to:
 - (1) the local health department;
 - (2) the DENR Private Water Supply Protection Branch; and
 - (3) the DHHS Division of Public Health, Epidemiology Section, Occupational and Environmental Epidemiology Branch.
- (b) Certified laboratories reporting results of sampling required by the rules of this Section shall use the reporting format developed by the North Carolina State Laboratory of Public Health for reporting private well-water sample results and shall include well identification information and a guide for interpreting sample results.
- (c) For the purposes of any notices required pursuant to the rules of this Section, notice shall be mailed to "Division of Environmental Health, On-Site Water Protection Section, North Carolina Department of Environment and Natural Resources," 1642 Mail Service Center, Raleigh, NC 27699-1642.

History Note: Authority G.S. 87-97;
Eff. July 1, 2008.

15A NCAC 18A .3805 DATA REVIEW

- (a) For all private well sampling data where chemical or biological contaminants are detected exceeding the Maximum Contaminant Levels (MCLs) for public drinking water, as defined in 15A NCAC 18C, the North Carolina Occupational and Environmental Epidemiology Branch (OEEB) shall provide the following to the local health department from which the sample was collected:
 - (1) information about the contaminant(s) exceeding public drinking water MCLs;
 - (2) recommendations for water use limitations or treatment options to reduce exposure to a level comparable to meeting public drinking water MCLs; and
 - (3) recommendations about the need for and the frequency of repeat sampling.
- (b) The local health department shall provide information to the well owner or respective lease holder concerning chemical and biological contaminants exceeding public drinking water MCLs and the need for exposure limitation, remediation, or future sampling.

History Note: Authority G.S. 87-97;
Eff. July 1, 2008.