

## SECTION .1000 - DISINFECTION OF WATER SUPPLY SYSTEMS

Rules .1001 - .1004 of Title 15A Subchapter 18C of the North Carolina Administrative Code (T15A.18C .1001 - .1004); has been transferred and recodified from Rules .2201 - .2204 Title 10 Subchapter 10D of the North Carolina Administrative Code (T10.10D .2201 - .2204), effective April 4, 1990.

### **.1001 DISINFECTION OF NEW SYSTEMS**

- (a) All interior surfaces of new potable water supply systems, including wells, filters, storage tanks and distribution lines shall be thoroughly disinfected by means of hypochlorite or chlorine solutions, after which bacteriological test samples shall be collected.
- (b) After disinfection the water supply shall not be placed into service until bacteriological test results of representative water samples analyzed in an approved laboratory are found to be satisfactory.

*History Note:* Authority G.S. 130A-315; 130A-317; P.L. 93-523;  
Eff. January 1, 1977;  
Readopted Eff. December 5, 1977.

### **.1002 DISINFECTION OF WELLS**

- (a) After water supply wells have been cleaned of foreign substances, including sediment, grease and oil, the wells shall be disinfected by the addition of chlorine solution in concentrations sufficient to produce a minimum chlorine residual of 100 milligrams per liter (or ppm) in the entire water column within the well casing.
- (b) The chlorine solution shall remain in the well for a period of 24 hours. The well shall then be pumped until the water is free of chlorine.
- (c) A representative sample or samples of the water shall be collected and analyzed by a certified laboratory. If bacteriological tests indicate that the water is free of bacteriological contamination, the well may be placed in service.

*History Note:* Authority G.S. 130A-315; 130A-317; P.L. 93-523;  
Eff. January 1, 1977;  
Readopted Eff. December 5, 1977;  
Amended Eff. July 1, 1994.

### **.1003 DISINFECTION OF STORAGE TANKS AND DISTRIBUTION SYSTEMS**

- (a) Water distribution systems, including storage tanks and water mains, after flushing to remove sediment and other foreign matter, and after testing for leaks, shall be disinfected by the addition and thorough dispersion of a chlorine solution in concentrations sufficient to produce a chlorine residual of at least 50 milligrams per liter (or ppm) in the water throughout the distribution system, including all water mains and storage tanks.
- (b) The chlorine solution shall remain in contact with interior surfaces of the water system for a period of 24 hours. Then the water system shall be flushed with fresh water from an approved water source until the chlorine solution is dispelled.
- (c) Representative samples of the water shall then be collected. If bacteriological tests of the samples indicate that the water quality is satisfactory, the water mains and storage tanks may be placed in service.
- (d) In unusual situations where large volume tanks are involved and where there is not sufficient water available to fill the tank or there is not available a suitable drainage area for the chlorinated water, an alternate disinfection procedure for tanks may be proposed. Such proposal must be submitted in writing completely describing the proposed disinfection procedure and substantiating the need for an alternate procedure in the particular circumstance. Such alternate procedure must be approved before being implemented. The conclusion of the department shall be final.

*History Note:* Authority G.S. 130A-315; 130A-317; P.L. 93-523;  
Eff. January 1, 1977;  
Readopted Eff. December 5, 1977;  
Amended Eff. January 1, 1978.

### **.1004 DISINFECTION OF FILTERS**

- (a) After filters have been thoroughly backwashed to remove dust, silt and other foreign matter the entire filter (including filter media, supporting material and underdrain system) shall be disinfected by application of a chlorine solution having a minimum concentration of 50 milligrams per liter (or ppm).

- (b) The solution shall be dispersed throughout the filter bed and remain in contact for a minimum of 24 hours.
- (c) For treatment equipment that cannot tolerate chlorine, alternate disinfection procedures as recommended by the equipment manufacturer may be used if equivalent to the disinfection procedure using chlorine.

*History Note: Authority G.S. 130A-315; 130A-317; P.L. 93-523;  
Eff. January 1, 1977;  
Readopted Eff. December 5, 1977;  
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