

15A NCAC 18C .0402 WATER SUPPLY WELLS

(a) Well Construction. The construction of water supply wells shall conform to well construction regulations and standards of the Department, codified in 15A NCAC 02C.

(b) Upper Terminal of Well. A well casing shall terminate neither below ground nor in a pit. The pump pedestal for above ground pumps of every water supply well shall project not less than six inches above the concrete floor of the well house or the concrete slab surrounding the well. A well casing shall project at least one inch above the pump pedestal. For submersible pumps, the casing shall project at least six inches above the concrete floor or slab surrounding the well head.

(c) Sanitary Seal. The upper terminal of a well casing shall be sealed watertight, with the exception of a vent pipe or vent tube having a downward-directed, screened opening.

(d) Concrete Slab or Well House Floor. A water supply well shall have a continuous bond concrete slab or well house concrete floor extending at least three feet horizontally around the outside of the well casing. Minimum thickness for the concrete slab or floor shall be four inches.

(e) Sample Tap and Waste Discharge Pipe. Faucets or spigots shall be provided for sampling both raw water prior to treatment and treated water prior to delivery to the first customer. Sample spigots shall not be threaded for hose connection. Threaded hose bibs shall be equipped with anti-siphon devices. A water sample tap and piping arrangement for discharge of water to waste shall be provided.

(f) Physical Security and Well Protection. A water supply well shall be secured against unauthorized access and protected from the weather. One of the following structures shall be provided:

- (1) Well house. A well house shall be constructed as follows:
 - (A) Structures shall comply with applicable provisions of state and local building codes.
 - (B) Drainage shall be provided by floor drain, wall drain, or slope to door.
 - (C) Access into the structure shall be a doorway with minimum dimensions of 36 inches wide and 80 inches high.
 - (D) The structure shall have adequate space for the use and maintenance of the piping and appurtenances. If treatment is provided at the well, the provisions of Rule .0404(a) of this Section shall apply.
 - (E) The structure shall be secured with lock and key.
- (2) Prefabricated structures. A prefabricated structure shall be constructed as follows:
 - (A) A well-head cover shall be hinged and constructed so that it can be lifted by one person.
 - (B) A locking mechanism shall be provided.
 - (C) The structure shall not be permanently fastened to the slab.
- (3) Fencing and temperature protection. Fencing and temperature protection shall be constructed as follows:
 - (A) The fence height shall be a minimum of six feet.
 - (B) The fence shall be constructed of chain link with locked access.
 - (C) The fence shall enclose the well, hydropneumatic tank, and associated equipment.
 - (D) Access shall be provided for maintenance and operation.
 - (E) The well, piping, treatment equipment, and electrical controls shall be protected against freezing. Wrapping with insulation shall be acceptable for appurtenances such as the air vent, meter, valves, and sample taps, provided they are visible and accessible. Insulation shall be jacketed.

(g) Yield:

- (1) Wells shall be tested for yield and drawdown. A report or log of at least a 24-hour drawdown test to determine yield shall be submitted to the Department for each well.
- (2) Wells shall be located so that the drawdown of any well shall not interfere with the required yield of another well.
- (3) The combined yield of all wells of a public water system shall provide in 12-hours pumping time the daily flow requirements as determined in Rule .0409 of this Section.
- (4) The capacity of the permanent pump to be installed in each well shall not exceed the yield of the well as determined by the drawdown test.
- (5) A residential community water system using well water as its source of supply and designed to serve 50 or more connections shall provide at least two wells. A travel trailer park or campground designed to serve 100 or more connections shall provide at least two wells. In lieu of a second well, another approved water supply source may be accepted.
- (6) A totalizing meter shall be installed in the piping system from each well.

(h) Initial Chemical Analyses. A representative sample of water from every new water supply well shall be collected and submitted for chemical analyses to the State Laboratory of Public Health or to a certified laboratory. The results of the analysis shall demonstrate that the water is treatable to meet the water quality standards in Section .1500 of this Subchapter, and this treatment shall be provided before the well is placed into service.

(i) Continuous Disinfection. Continuous application of chlorine, hypochlorite solution, or another approved and equally efficient disinfectant shall be provided for all well water supplies introduced on or after January 1, 1972. Equipment for determining residual chlorine concentration in the water shall be included in the plans and specifications.

*History Note: Authority G.S. 130A-315; 130A-317; P.L. 93-523;
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