ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
WATER DIVISION - WATER WELL STANDARDS PROGRAM
ADMINISTRATIVE CODE

CHAPTER 335-9-1
LICENSING AND CERTIFICATION OF WATER AND WATER WELL CONSTRUCTION STANDARDS

TABLE OF CONTENTS

335-9-1-.01 Purpose
335-9-1-.02 Definitions
335-9-1-.03 Rules
335-9-1-.04 Location Standards
335-9-1-.05 Materials
335-9-1-.06 Construction Standards

335-9-1-.01 Purpose.

In order to protect the public health and general welfare of the people of the State of Alabama, the Alabama Department of Environmental Management hereby promulgates the following rules and regulations in order to ensure that a pure, sanitary and healthful water supply is provided to the people of the State of Alabama.
Author:
Statutory Authority: Code of Ala. 1975, §§22-22A-5 (1984), 22-22A-8 (1984), 22-24-3(d) (1984).
History: Filed April 30, 1990.

335-9-1-.02 Definitions.

(a) "Board" means the Director of the Alabama Department of Environmental Management.

(b) "Director" means the Director of the Alabama Department of Environmental Management.

(c) "Drill" means to drill or redrill, bore, auger, dig or otherwise construct a water well.

(d) "Driller" means any person who manages or supervises the drilling of a water well.

(e) "Log" means a record of the type of material or rock penetrated in the drilling of a water well.

(f) "Person" means any individual, organization, group, association, partnership, corporation, or any combination of them operating a business to drill water wells.

(g) "Sample" means cutting or other fragments or rock or soil materials removed from the well.

(h) "Well" means a hole drilled for the production of water.

(i) "Shall" means a mandatory requirement.

(j) "Capping a completed well" means the installing of a secure watertight cover sufficient to prevent contamination.

(k) "Capping a well during construction" means the installing of a secure temporary cover sufficient to prevent contamination.

(l) "Aggregate" means sand and/or gravel not to exceed 1/2 inch in diameter.

Author:

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335-9-1-.03 Rules.

(a) APPLICATION FOR A LICENSE TO DRILL A WATER WELL.

(1) Every person who proposes to drill a water well in the State of Alabama shall file, on or before September 30 of each year, an application for a water well driller's license, along with a payment of the annual fee of $200.00.

(b) FILING OF PERTINENT DATA RELATING TO A WATER WELL.

(1) Every person desiring to drill a water well shall file with the Board, on a form furnished by the Board, a Notification of Intent to drill a well. This form shall be filed prior to the commencement of work.

(2) Every person who drills a well shall file a Certification of Completion on the form furnished by the Board within 30 days after completion of work. The Board shall notify the local Health authorities within 7 days of the receipt thereof.

(3) When requested by the Geological Survey of Alabama, the driller shall collect samples in compliance with Code of Ala. 1975, § 22-24-8 (5) (84).

(c) EXAMINATIONS.

(1) Any driller applying for a license shall furnish the Board acceptable proof that he has at least two years of water well construction experience and shall make a minimum score of 70 percent on a Board authorized examination prior to being licensed.

(2) Reciprocity to drillers from out of state will be considered on an individual basis.

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335-9-1-.04 Location Standards.

Every well shall be located so that it is easily accessible, free from flooding from any known source of pollution. The location of the well shall comply with local regulations. The following table is recommended:

Projections or roofs of adjacent building	2 feet
Secondary electrical services	10 feet
Primary electrical services	75 feet
Cess pool or sewage lagoon	150 feet
Septic tank or field lines	100 feet
Barnyard	150 feet

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335-9-1-.05 Materials.

All materials used in the construction of a water well shall have the structural strength to accomplish the purpose for which they are installed.

(a) Casing and liners shall be new steel of a minimum wall thickness of Schedule 30 or thermoplastic water well casing produced in accordance with ASTM Standard F 480-76, and approved for potable water by the National Sanitation Foundation (NSF). Nonporous concrete pipe shall be acceptable when grouted to a depth of 20 feet below land surface, and the grout shall be introduced at the bottom until it overflows at

the top or by gravity flow. The grout shall consist of 50% cement and 50% aggregate. The upper 20 feet of the hole diameter shall be at least 4-inch larger than the O.D. of the concrete casing. All steel casing is to be welded, or threaded and coupled; thermoplastic casing shall be joined in accordance with ASTM Standard F 480-76.

(b) Screen, where required, shall provide adequate open area to transmit the desired amount of water from the formation and shall be sized to retain the sand or other extraneous material that would make the completed well undesirable. It shall be constructed of a material that will not be subjected to serious attack by the chemical action of the water in the formation in which it is placed. Thermoplastic screens shall be approved by NSF for potable water uses.

(c) When required, grout shall consist of a ratio of one sack of Portland cement to a maximum of six gallons of clean water.

(d) Capping of the well shall be such that no contamination can enter the well.

(e) Disinfection of every well shall be accomplished by adding a strong chlorine solution such as HTH, Prechlorine, or Chlorox, so as to subject the entire well to a 50 ppm solution for at least 12 hours. It is strongly recommended that all drilling fluids be chlorinated with at least 50 ppm chlorine.

Gallons Water	5 1/4% Chlorox	10% Sodium Hypochlorite	30% Chlorine Lime	70% HTH
50	6.5 oz	3.5 oz	1 oz	0.5 oz
100	13 oz	7 oz	2 oz	1 oz
500	63.5 oz	33 oz	11 oz	5 oz
1,000	127 oz	67 oz	22 oz	10 oz

Remember -- There are 16 oz/lb and 32 fl oz/qt.

(f) No materials may be used in the construction of a well that will result in the delivery of water that is toxic or has an objectionable odor or taste.

(g) Any person desiring to use materials that are not approved herein shall submit the specifications for the materials to the Board for approval before they are used in any well.

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335-9-1-.06 Construction Standards.

(a) Casing.

(1) In every well, the casing shall extend from 1 foot above ground level to a suitable impervious layer where it shall be properly sealed to prevent the entrance of seep water and other extraneous material. In no case shall the length of casing be less than 20 feet. Where an impervious layer is not encountered above the water-bearing zone, the seal shall be affected by sealing 50 feet of the annulus, the upper 20 feet of which must be grouted. All well with casing greater than 8 inches in I.D. (inside diameter) shall be grouted to a depth of 20 feet or more. Wells that are to be constructed with less than 20 feet of casing must be approved by the County Environmentalist.

(2) The minimum casing size in mud rotary wells shall be 4 1/2 inches O.D. If a person desires to drill a well with casing of a size smaller than herein specified, permission shall be obtained from the County Environmentalist prior to commencement of work, and when approved by the County Environmentalist, the driller may construct, install, or service a single-string completion well with cemented casing and chlorination. This type well shall not be pulled or re-screened except in Choctaw County, Act 81-185, and Sumter County, Act 81-186; it shall be sealed or plugged according to Rule .06 (g).

(3) Air rotary drilling equipment used in the developing of ground water shall be equipped with a pump for the injection of a minimum of 3 gallons per minute of water. This injection equipment shall be used during the course of drilling for water.

(4) Casing may be driven, lowered, or installed in any manner which will affect a continuous watertight installation. In those wells where there is an annulus, it shall be filled with puddled clay and/or cement grout in the manner prescribed in Rule 06 (a) (1).

(b) Screens.

An adequate screen shall be provided where necessary and installed in such a manner that removal and replacement can be accomplished without affecting the watertight seal around the casing.

(c) Development.

The well shall be developed to its maximum practical yield of the best quality of water at the site.

(d) Testing.

The contractor shall make an adequate test for yield and report the results on the Well Completion Certificate.

(e) Capping.

Every well shall be left with a secure cap which will not permit the well to become contaminated during construction.

(f) Special Cases.

Any person desiring to construct a well in a manner not covered above, shall submit this information to the Board for approval before the work is started on the well.

(g) Abandonment.

Any well to be abandoned shall be permanently sealed in the following manner: The well will be filled with a puddled clay material containing 50 ppm of chlorine to within 20 feet of the top of the well. The top 20 feet shall be filled with cement grout or concrete.

(h) Holes.

Any holes remaining after construction or testing attempts shall be properly backfilled.

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Statutory Authority: Code of Ala. 1975, §§22-22A-5 (1984), 22-22A-8 (1984), 22-24-3(d) (1984).
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