ARTICLE 13. WATER WELL DRILLERS

Rule 1. Definitions

312 IAC 13-1-1 General application of definitions
Authority: IC 25-39-4-9
Affected: IC 25-39-2

Sec. 1. The definitions in this rule are in addition to those contained in IC 25-39-2 and 312 IAC 1 and apply throughout this article. *(Natural Resources Commission; 312 IAC 13-1-1; filed Nov 22, 1999, 3:34 p.m.: 23 IR 763; readopted filed Aug 4, 2005, 6:00 p.m.: 28 IR 3661)*

312 IAC 13-1-2 "Abandon" defined
Authority: IC 25-39-2-5; IC 25-39-4-9
Affected: IC 25-39

Sec. 2. "Abandon" means to terminate operations of a well for water supply, monitoring, dewatering, or geothermal purposes and to restore the site of the well in a manner that will protect ground water resources from contamination. *(Natural Resources Commission; 312 IAC 13-1-2; filed Nov 22, 1999, 3:34 p.m.: 23 IR 763; readopted filed Aug 4, 2005, 6:00 p.m.: 28 IR 3661)*

312 IAC 13-1-3 "Aquifer characteristics" defined
Authority: IC 25-39-4-9
Affected: IC 25-39

Sec. 3. "Aquifer characteristics" refers to the type, thickness, transmissivity coefficient of storage, and materials of a water bearing unit. *(Natural Resources Commission; 312 IAC 13-1-3; filed Nov 22, 1999, 3:34 p.m.: 23 IR 763; readopted filed Aug 4, 2005, 6:00 p.m.: 28 IR 3661)*

312 IAC 13-1-4 "Bentonite" defined
Authority: IC 25-39-2-5; IC 25-39-4-9
Affected: IC 25-39

Sec. 4. "Bentonite" means clay material composed predominantly of sodium montmorillonite that meets American Petroleum Institute specifications Standard 13-A (1985). *(Natural Resources Commission; 312 IAC 13-1-4; filed Nov 22, 1999, 3:34 p.m.: 23 IR 763; readopted filed Aug 4, 2005, 6:00 p.m.: 28 IR 3661)*

312 IAC 13-1-5 "Bentonite slurry" defined
Authority: IC 25-39-4-9
Affected: IC 25-39

Sec. 5. "Bentonite slurry" means a mixture, made according to manufacturer specifications, of water and commercial grouting or plugging bentonite that contains high concentrations of solids. The term does not include sodium bentonite products that contain low solid concentration or are designed for drilling fluid purposes. *(Natural Resources Commission; 312 IAC 13-1-5; filed Nov 22, 1999, 3:34 p.m.: 23 IR 763; readopted filed Aug 4, 2005, 6:00 p.m.: 28 IR 3661)*

312 IAC 13-1-6 "Bridge" defined
Authority: IC 25-39-4-9
Affected: IC 25-39

Sec. 6. "Bridge" means a barrier created by any unwanted object or material that prevents the introduction of grouting materials in the borehole or well. *(Natural Resources Commission; 312 IAC 13-1-6; filed Nov 22, 1999, 3:34 p.m.: 23 IR 763; readopted filed Aug 4, 2005, 6:00 p.m.: 28 IR 3661)*

312 IAC 13-1-7 "Coarse grade crushed bentonite" defined
Authority: IC 25-39-4-9
Affected: IC 25-39

Sec. 7. "Coarse grade crushed bentonite" means natural bentonite crushed to an average size range of three-eighths (⅜) to three-fourths (¾) inches. *(Natural Resources Commission; 312 IAC 13-1-7; filed Nov 22, 1999, 3:34 p.m.: 23 IR 763; readopted filed Aug 4, 2005, 6:00 p.m.: 28 IR 3661)*

312 IAC 13-1-8 "Competency examination" defined
Authority: IC 25-39-4-9
Affected: IC 25-39

Sec. 8. "Competency examination" means an examination given by the department that is designed to establish the capability and skill of an individual to operate as a water well driller. *(Natural Resources Commission; 312 IAC 13-1-8; filed Nov 22, 1999, 3:34 p.m.: 23 IR 763; readopted filed Aug 4, 2005, 6:00 p.m.: 28 IR 3661)*

312 IAC 13-1-9 "Confined aquifer" defined
Authority: IC 25-39-4-9
Affected: IC 25-39

Sec. 9. "Confined aquifer" means an aquifer that contains sufficient hydrostatic head to cause ground water to rise above the upper boundary of the aquifer. *(Natural Resources Commission; 312 IAC 13-1-9; filed Nov 22, 1999, 3:34 p.m.: 23 IR 764; readopted filed Aug 4, 2005, 6:00 p.m.: 28 IR 3661)*

312 IAC 13-1-10 "Contamination" defined
Authority: IC 25-39-4-9
Affected: IC 25-39

Sec. 10. "Contamination" means the degradation of natural water quality as a result of human activities. *(Natural Resources Commission; 312 IAC 13-1-10; filed Nov 22, 1999, 3:34 p.m.: 23 IR 764; readopted filed Aug 4, 2005, 6:00 p.m.: 28 IR 3661)*

312 IAC 13-1-11 "Dewatering well" defined
Authority: IC 25-39-2-5; IC 25-39-4-9
Affected: IC 25-39

Sec. 11. "Dewatering well" means a temporary water well that:
(1) is used as part of a construction project to remove water from a surface or subsurface area; and
(2) ceases to be used upon completion of the construction project or shortly after completion of the project.
(Natural Resources Commission; 312 IAC 13-1-11; filed Nov 22, 1999, 3:34 p.m.: 23 IR 764; readopted filed Aug 4, 2005, 6:00 p.m.: 28 IR 3661)

312 IAC 13-1-12 "Disinfection" defined
Authority: IC 25-39-4-9
Affected: IC 25-39

Sec. 12. "Disinfection" means the process of destroying pathogenic micro-organisms, such as coliform bacteria. *(Natural Resources Commission; 312 IAC 13-1-12; filed Nov 22, 1999, 3:34 p.m.: 23 IR 764; readopted filed Aug 4, 2005, 6:00 p.m.: 28 IR 3661)*

312 IAC 13-1-13 "Division" defined
Authority: IC 25-39-4-9
Affected: IC 25-39

Sec. 13. "Division" means the division of water of the department. *(Natural Resources Commission; 312 IAC 13-1-13; filed Nov 22, 1999, 3:34 p.m.: 23 IR 764; readopted filed Aug 4, 2005, 6:00 p.m.: 28 IR 3661)*

312 IAC 13-1-14 "Drawdown" defined
Authority: IC 25-39-4-9
Affected: IC 25-39

Sec. 14. "Drawdown" means the amount of lowering of the water level in a well resulting from the discharge of water by pumping from the well. *(Natural Resources Commission; 312 IAC 13-1-14; filed Nov 22, 1999, 3:34 p.m.: 23 IR 764; readopted filed Aug 4, 2005, 6:00 p.m.: 28 IR 3661)*

312 IAC 13-1-15 "Grout pipe" defined
Authority: IC 25-39-4-9
Affected: IC 25-39

Sec. 15. "Grout pipe" means a length of hose or pipe positioned in the annular space of a well, between the well casing and the borehole, used for the introduction of grouting materials. *(Natural Resources Commission; 312 IAC 13-1-15; filed Nov 22, 1999, 3:34 p.m.: 23 IR 764; readopted filed Aug 4, 2005, 6:00 p.m.: 28 IR 3661)*

312 IAC 13-1-16 "High capacity water well" defined
Authority: IC 25-39-4-9
Affected: IC 25-39

Sec. 16. "High capacity water well" means a well that has the capability of withdrawing one hundred thousand (100,000) gallons of ground water or more in one (1) day. *(Natural Resources Commission; 312 IAC 13-1-16; filed Nov 22, 1999, 3:34 p.m.: 23 IR 764; readopted filed Aug 4, 2005, 6:00 p.m.: 28 IR 3661)*

312 IAC 13-1-17 "Medium grade crushed bentonite" defined
Authority: IC 25-39-2-5; IC 25-39-4-9
Affected: IC 25-39

Sec. 17. "Medium grade crushed bentonite" means natural bentonite crushed to an average size range of one-fourth (¼) to three-eighths (⅜) inch. *(Natural Resources Commission; 312 IAC 13-1-17; filed Nov 22, 1999, 3:34 p.m.: 23 IR 764; readopted filed Aug 4, 2005, 6:00 p.m.: 28 IR 3661)*

312 IAC 13-1-18 "Monitoring well" defined
Authority: IC 25-39-4-9
Affected: IC 25-39

Sec. 18. "Monitoring well" means a well installed to obtain hydrogeological information or to monitor the quality or quantity of ground water. *(Natural Resources Commission; 312 IAC 13-1-18; filed Nov 22, 1999, 3:34 p.m.: 23 IR 764; readopted filed Aug 4, 2005, 6:00 p.m.: 28 IR 3661)*

312 IAC 13-1-19 "Operating well drilling equipment" defined
Authority: IC 25-39-4-9
Affected: IC 25-39

Sec. 19. "Operating well drilling equipment" means to use equipment to drill a well. *(Natural Resources Commission; 312 IAC 13-1-19; filed Nov 22, 1999, 3:34 p.m.: 23 IR 764; readopted filed Aug 4, 2005, 6:00 p.m.: 28 IR 3661)*

312 IAC 13-1-20 "Public water supply well" defined
Authority: IC 25-39-4-9
Affected: IC 25-39

Sec. 20. "Public water supply well" means a well that provides a source of water to a community water system that:
(1) serves a residential population; and
(2) is defined as having fifteen (15) or more service connections or serving at least twenty-five (25) year-round residents.
(Natural Resources Commission; 312 IAC 13-1-20; filed Nov 22, 1999, 3:34 p.m.: 23 IR 764; readopted filed Aug 4, 2005, 6:00 p.m.: 28 IR 3661)

312 IAC 13-1-21 "Reference" defined
Authority: IC 25-39-4-9
Affected: IC 25-39

Sec. 21. "Reference" means a person who attests to the character and professional qualifications of an applicant for a license. *(Natural Resources Commission; 312 IAC 13-1-21; filed Nov 22, 1999, 3:34 p.m.: 23 IR 765; readopted filed Aug 4, 2005, 6:00 p.m.: 28 IR 3661)*

312 IAC 13-1-22 "Regulatory flood" defined
Authority: IC 25-39-4-9
Affected: IC 25-39

Sec. 22. "Regulatory flood" has the meaning set forth in 310 IAC 6-1-3(32). *(Natural Resources Commission; 312 IAC 13-1-22; filed Nov 22, 1999, 3:34 p.m.: 23 IR 765; readopted filed Aug 4, 2005, 6:00 p.m.: 28 IR 3661)*

312 IAC 13-1-23 "Thermoplastic pipe" defined
Authority: IC 25-39-4-9
Affected: IC 25-39

Sec. 23. "Thermoplastic pipe" means plastic well pipe made of acrylonitrile butadiene styrene, polyvinyl chloride, or rubber-modified polystyrene with standards listed in American Society of Testing Materials. *(Natural Resources Commission; 312 IAC 13-1-23; filed Nov 22, 1999, 3:34 p.m.: 23 IR 765; readopted filed Aug 4, 2005, 6:00 p.m.: 28 IR 3661)*

312 IAC 13-1-24 "Unconsolidated formation" defined
Authority: IC 25-39-4-9
Affected: IC 25-39

Sec. 24. "Unconsolidated formation" means geologic material or deposits overlying bedrock, such as sand, gravel, and clay. *(Natural Resources Commission; 312 IAC 13-1-24; filed Nov 22, 1999, 3:34 p.m.: 23 IR 765; readopted filed Aug 4, 2005, 6:00 p.m.: 28 IR 3661)*

312 IAC 13-1-25 "Well pit" defined
Authority: IC 25-39-4-9
Affected: IC 25-39

Sec. 25. "Well pit" means a subsurface excavation that contains a well. *(Natural Resources Commission; 312 IAC 13-1-25; filed Nov 22, 1999, 3:34 p.m.: 23 IR 765; readopted filed Aug 4, 2005, 6:00 p.m.: 28 IR 3661)*

Rule 2. Drilling License and Well Records

312 IAC 13-2-1 Application form

Authority: IC 25-39-3-2; IC 25-39-4-9
Affected: IC 25-39-3-3

Sec. 1. (a) An initial application for a license as a water well driller must be completed on a departmental form and must include the following:

(1) The name, current address, telephone number, and birth date of the applicant.

(2) The type of drilling equipment the applicant uses, and the number of years the applicant has operated that type of equipment.

(3) The applicable employment experience of the applicant.

(4) The signature of the applicant attesting to or affirming the accuracy of the information on the application.

(5) The license fee established under section 2 of this rule.

(6) Statements by references under IC 25-39-3-3(a)(2).

(b) Subsequent applications must provide what is required in subsection (a)(1), (a)(4), and (a)(5). *(Natural Resources Commission; 312 IAC 13-2-1; filed Nov 22, 1999, 3:34 p.m.: 23 IR 765; readopted filed Aug 4, 2005, 6:00 p.m.: 28 IR 3661)*

312 IAC 13-2-2 License fee; duplicate license

Authority: IC 25-1-8-2; IC 25-39-3-2; IC 25-39-4-9
Affected: IC 25-39

Sec. 2. (a) The fee to accompany any application for a license as a water well driller is one hundred dollars ($100) for a calendar year.

(b) A person who is issued a license as a water well driller may apply to the department for a duplicate license (which is effective during the same calendar year) if the original license is lost, stolen, destroyed, or otherwise becomes unavailable to the driller. *(Natural Resources Commission; 312 IAC 13-2-2; filed Nov 22, 1999, 3:34 p.m.: 23 IR 765; readopted filed Aug 4, 2005, 6:00 p.m.: 28 IR 3661)*

312 IAC 13-2-3 License renewals and restorations

Authority: IC 25-39-4-9
Affected: IC 25-39

Sec. 3. (a) A license may be renewed for the following year, without examination, under section 1(b) of this rule.

(b) A license that has been expired in excess of one (1) year may be reinstated only upon successful completion by the applicant of a competency examination and the completion of an application and submission of the license fee.

(c) A water well driller must deliver a completed renewal application form to the division at least five (5) working days before the renewal is to become effective. *(Natural Resources Commission; 312 IAC 13-2-3; filed Nov 22, 1999, 3:34 p.m.: 23 IR 765; readopted filed Aug 4, 2005, 6:00 p.m.: 28 IR 3661)*

312 IAC 13-2-4 Competency examination

Authority: IC 25-39-4-9
Affected: IC 25-39

Sec. 4. (a) A competency examination will be given by the division at least two (2) times annually. The examination will be given on a day specified by the division during the second full week of June and during the second full week of November.

(b) The fee to take the competency examination is twenty-five dollars ($25).

(c) The competency examination is in writing, but, upon request by an applicant, an oral examination will be given.

(d) An applicant must submit a valid identification card, with a photograph of the applicant, before taking the examination. *(Natural Resources Commission; 312 IAC 13-2-4; filed Nov 22, 1999, 3:34 p.m.: 23 IR 765; readopted filed Aug 4, 2005, 6:00 p.m.: 28 IR 3661)*

312 IAC 13-2-5 Statement by a reference
Authority: IC 25-39-4-9
Affected: IC 25-39

Sec. 5. A statement by a reference shall include the following information:
(1) The state of residence of the reference.
(2) The full name, address, telephone number, and occupation of the reference.
(3) The length of time the reference has known the applicant.
(4) How the reference is familiar with the applicant's work.
(5) A general statement regarding their evaluation of the applicant's professional competency.
(6) The signature of the reference attesting to or affirming the accuracy of the information on the reference form.
(Natural Resources Commission; 312 IAC 13-2-5; filed Nov 22, 1999, 3:34 p.m.: 23 IR 766; readopted filed Aug 4, 2005, 6:00 p.m.: 28 IR 3661)

312 IAC 13-2-6 Well records
Authority: IC 25-39-4-1; IC 25-39-4-9
Affected: IC 25-39

Sec. 6. A water well driller must submit, on a departmental form or division-approved form, accurate records for each well drilled to include the following information:
(1) The method of well construction.
(2) The proposed use of the well, for example, residential, industrial, monitoring, or dewatering.
(3) Pumping information, including each of the following:
(A) The type of pump and the depth of the pump setting (if applicable).
(B) Whether the well was bailer, air, or pump tested.
(C) The test rate and length of time of test pumping.
(4) Specifications for the well casing and the well screen.
(5) The inside diameter of the well.
(6) The total depth of the well.
(7) The static water level in the well.
(8) The name, address, and telephone number of the owner (and the builder, if different from the owner).
(9) The name and address of the drilling company.
(10) The name and license number of the equipment operator.
(11) The type and thickness of formations or materials encountered, including color, hardness, and a geological description.
(12) A statement of the accuracy of the information contained on the form that is signed by the water well driller or his authorized representative upon an affirmation or attestation.
(13) The type, depth, and thickness of grouting materials and method of installation.
(14) Specific roadway directions to the well, including a reference to the nearest major highway or street intersection.
(Natural Resources Commission; 312 IAC 13-2-6; filed Nov 22, 1999, 3:34 p.m.: 23 IR 766; readopted filed Aug 4, 2005, 6:00 p.m.: 28 IR 3661)

Rule 3. Well Drilling Procedures and Well Locations

312 IAC 13-3-1 Operations at drilling site
Authority: IC 25-39-4-2; IC 25-39-4-9
Affected: IC 25-39

Sec. 1. A water well driller shall operate all equipment according to generally accepted standards in the industry. The driller is responsible for initiating, maintaining, and supervising operations and shall take appropriate precautions to prevent damage, injury, or other loss to persons and property at the drilling site. *(Natural Resources Commission; 312 IAC 13-3-1; filed Nov 22, 1999, 3:34 p.m.: 23 IR 766; readopted filed Aug 4, 2005, 6:00 p.m.: 28 IR 3661)*

312 IAC 13-3-2 Well locations
Authority: IC 25-39-4-2; IC 25-39-4-9
Affected: IC 25-39

Sec. 2. (a) A well shall be located as follows:
(1) To use every natural protection to promote the maintenance of the well and its surroundings, and to protect the quantity and quality of ground water encountered during the construction of the well.
(2) As far as practicable from any:
(A) high capacity well; and
(B) known contamination source.
(3) To protect the well against surface water ponding, drainage, or flooding. Earthen materials shall be placed around the pitless unit or finished well casing in a manner to drain surface water away from the well. The finished well casing or pitless unit shall extend at least one (1) foot above the ground level and, if located in a designated flood hazard area, must:
(A) be at least two (2) feet above the elevation of the regulatory flood; or
(B) be equipped with a watertight pitless unit cap or well seal and vented to an elevation at least two (2) feet above the elevation of the regulatory flood.
(b) This section does not apply to a monitoring well or a dewatering well. *(Natural Resources Commission; 312 IAC 13-3-2; filed Nov 22, 1999, 3:34 p.m.: 23 IR 766; readopted filed Aug 4, 2005, 6:00 p.m.: 28 IR 3661)*

312 IAC 13-3-3 Standards for wells drilled adjacent to buildings
Authority: IC 25-39-4-2; IC 25-39-4-9
Affected: IC 25-39

Sec. 3. (a) This section establishes standards for the placement of a well that is near a building.
(b) The center line of a well located outside and adjacent to a building shall, if extended vertically, clear any projection from the building by not less than five (5) feet.
(c) A well shall be reasonably accessible to equipment for proper cleaning, repair, testing, inspection, and other maintenance. *(Natural Resources Commission; 312 IAC 13-3-3; filed Nov 22, 1999, 3:34 p.m.: 23 IR 767; readopted filed Aug 4, 2005, 6:00 p.m.: 28 IR 3661)*

Rule 4. Well Equipment and Installation Specifications

312 IAC 13-4-1 Casing
Authority: IC 25-39-4-2; IC 25-39-4-9
Affected: IC 25-39

Sec. 1. (a) This section establishes minimum casing requirements.
(b) A new well shall be equipped with casing having an inside diameter of at least two (2) inches. The inside diameter of the well casing shall allow for easy installation and future removal of the permanent pumping equipment.
(c) A well must be cased to a depth of at least twenty-five (25) feet below the ground surface unless otherwise approved by the division.
(d) Casing shall be constructed of a steel or thermoplastic material or a casing specified in subsection (f). Ferrous casing shall be new, first class material that meets the American Society of Testing Materials (ASTM) standards ASTM A-120 (1984) or ASTM A-53 (1987) or American Petroleum Institute (API) standards API-5A or API-5L (1987). Thermoplastic pipe shall comply with ASTM F-480 (1981).
(e) Casing used under this section must be new. Casing that is salvaged within thirty (30) days of the installation of a well is considered new if the casing is still in new condition.
(f) Steel, thermoplastic or NSF certified fiberglass pipe, or concrete tile shall be used in bucket wells. This casing shall be new material.
(g) No finished well casing shall be cut below the ground surface except to install a pitless well adapter or as specified in 312 IAC 13-6-2(b)(1) or 312 IAC 13-6-2(c)(2). A pitless adapter must meet the requirements of section 3 of this rule.

(h) Upon installation, a well casing shall be fitted with a temporary cap that remains in place until pumping equipment or a pitless adapter is installed. The cap shall be a type that prevents vermin or other potential contaminants from entering the well.

(i) This section does not apply to a monitoring well or a dewatering well. *(Natural Resources Commission; 312 IAC 13-4-1; filed Nov 22, 1999, 3:34 p.m.: 23 IR 767; filed Oct 9, 2001, 4:32 p.m.: 25 IR 708; readopted filed Aug 4, 2005, 6:00 p.m.: 28 IR 3661)*

312 IAC 13-4-2 Well screens

Authority: IC 25-39-4-2; IC 25-39-4-9
Affected: IC 25-39

Sec. 2. (a) A well drilled in an unconsolidated formation shall be equipped with a well screen having adequate openings to provide for maximum water transmittance with respect to the size of the water bearing formation or gravel pack.

(b) Approved screen materials are stainless steel, brass, bronze, fiberglass, and polyvinyl chloride or acrylonitrile butadiene styrene plastic.

(c) This section does not apply to a monitoring well or a dewatering well. *(Natural Resources Commission; 312 IAC 13-4-2; filed Nov 22, 1999, 3:34 p.m.: 23 IR 767; readopted filed Aug 4, 2005, 6:00 p.m.: 28 IR 3661)*

312 IAC 13-4-3 Pitless units and pitless adapters

Authority: IC 25-39-4-2; IC 25-39-4-9
Affected: IC 25-39

Sec. 3. (a) A pitless unit shall do the following:

(1) Extend the upper end of the well casing at least one (1) foot above the ground level.

(2) Be affixed to the well casing in a manner that is watertight by:

(A) threading;

(B) welding (including gluing); or

(C) a mechanical connection.

(b) The cap, cover, or seal of the pitless unit shall:

(1) be self-draining and overlap the top of the casing extension with a downward flange;

(2) fit securely on the well casing; and

(3) be tamper resistant.

(c) A pitless unit shall be installed under 312 IAC 13-3-2(a)(3).

(d) A pitless adapter shall be constructed and installed to prevent the entrance of contaminants in the well through openings in the well casing to which the adapter is attached. *(Natural Resources Commission; 312 IAC 13-4-3; filed Nov 22, 1999, 3:34 p.m.: 23 IR 767; readopted filed Aug 4, 2005, 6:00 p.m.: 28 IR 3661)*

312 IAC 13-4-4 Well pits

Authority: IC 25-39-4-2; IC 25-39-4-9
Affected: IC 25-39

Sec. 4. (a) The design of a well pit that contains a well must be approved by the division before construction.

(b) This section does not apply to a monitoring well. *(Natural Resources Commission; 312 IAC 13-4-4; filed Nov 22, 1999, 3:34 p.m.: 23 IR 767; readopted filed Aug 4, 2005, 6:00 p.m.: 28 IR 3661)*

312 IAC 13-4-5 Construction water

Authority: IC 25-39-4-2; IC 25-39-4-9
Affected: IC 25-39

Sec. 5. Water used in the drilling process shall be obtained from a source that will not result in contamination of the well or water bearing zones penetrated by the well. *(Natural Resources Commission; 312 IAC 13-4-5; filed Nov 22, 1999, 3:34 p.m.: 23 IR 768; readopted filed Aug 4, 2005, 6:00 p.m.: 28 IR 3661)*

Rule 5. Grouting of Wells

312 IAC 13-5-1 Materials and installation

Authority: IC 25-39-4-2; IC 25-39-4-9
Affected: IC 25-39

Sec. 1. (a) This section governs grouting materials and the installation of grouting materials for new wells.

(b) Grouting materials shall consist of:

(1) neat cement with no more than five percent (5%) by weight of bentonite additive;

(2) bentonite slurry (which can include polymers designed to retard swelling);

(3) pelletized, granular, medium grade, or coarse grade crushed bentonite; or

(4) other materials approved by the commission.

(c) This section applies if neat cement or a bentonite slurry is used for grouting. The cement or slurry shall be pumped into place from the bottom of the annular space upward in a continuous operation with a grout pipe or the well casing using the positive displacement method.

(d) Grouting material, other than neat cement or bentonite slurry, shall be introduced in a manner to prevent bridging of the annulus between the outside of the well casing and the borehole.

(e) A borehole annulus shall be grouted upon the earlier of the following:

(1) Within twenty-four (24) hours after the installation of the well casing.

(2) Before drilling equipment is removed from the site.

(f) This section does not apply to a public water supply well. The installation of a public water supply well is governed by 327 IAC 8-3.4. *(Natural Resources Commission; 312 IAC 13-5-1; filed Nov 22, 1999, 3:34 p.m.: 23 IR 768; readopted filed Aug 4, 2005, 6:00 p.m.: 28 IR 3661)*

Rule 6. Minimum Well Construction Standards

312 IAC 13-6-1 Rotary or augered wells

Authority: IC 25-39-4-2; IC 25-39-4-9
Affected: IC 25-39

Sec. 1. (a) This section governs the construction of wells by rotary or auger drilling methods.

(b) A well shall be drilled and equipped with a casing having a minimum of two (2) inches inside diameter installed in an open hole having a diameter of at least two (2) inches greater than the outside diameter of the casing.

(c) A well shall be cased to a minimum depth of twenty-five (25) feet below the ground surface unless otherwise approved by the division.

(d) A well shall have a minimum of twenty-five (25) feet of the borehole annulus pressure grouted with neat cement or a bentonite slurry unless otherwise approved by the division.

(e) A well penetrating bedrock shall have the borehole annulus pressure grouted with neat cement or a bentonite slurry from the bottom of the well casing, or the top of the formation packer to the ground surface (or to four (4) feet below the ground surface if a pitless adapter is installed).

(f) A well constructed in an unconsolidated aquifer shall have the borehole annulus pressure grouted with neat cement or a bentonite slurry from the top of the natural or introduced gravel pack to the ground surface (or to four (4) feet below the ground surface if a pitless adapter is installed). The gravel pack shall not extend more than ten (10) feet above the top of the well screen unless otherwise approved by the division.

(g) This section does not apply to any of the following:

(1) A monitoring well.

(2) A dewatering well.

(3) A public water supply well.

The installation of a public water supply well is governed by 327 IAC 8-3.4. *(Natural Resources Commission; 312 IAC 13-6-1; filed Nov 22, 1999, 3:34 p.m.: 23 IR 768; readopted filed Aug 4, 2005, 6:00 p.m.: 28 IR 3661)*

312 IAC 13-6-2 Bucket wells

Authority: IC 25-39-4-2; IC 25-39-4-9
Affected: IC 25-39

Sec. 2. (a) This section governs the construction of wells by bucket rig drilling methods.
(b) A bucket well installed as buried slab construction shall conform with the following:
(1) The well casing shall terminate not less than ten (10) feet below the ground surface. The casing shall meet the requirements contained in 312 IAC 13-4-1 and must be firmly embedded in or connected to a pipe, a minimum of two (2) inches inside diameter, cast in a reinforced buried concrete slab, or attached to a NSF certified fiberglass cap with a watertight mechanical or glued connection. Fiberglass well casing may be slotted below the ground surface to allow for the transmittance of water into the well.
(2) The annular opening between the well casing and the well bore shall be filled with washed graded gravel from the bottom of the well to the concrete slab or the fiberglass. The annular space between the pipe and borehole shall be sealed with concrete or granular, pelletized, or coarse grade crushed bentonite at least six (6) inches thick. The remainder of the borehole shall be filled with clean earth and thoroughly tamped to minimize settling.
(c) A bucket well installed not using buried slab construction shall conform with the following:
(1) A well shall have a borehole with an inside diameter at least two (2) inches larger than the outside diameter of the lining or well casing.
(2) The well shall have a continuous watertight lining of steel or fiberglass casing or concrete extending at least five (5) feet below the ground surface. The casing shall meet the requirements contained in 312 IAC 13-4-1. Fiberglass well casing may be slotted below the ground surface to allow for the transmittance of water into the well.
(3) The annulus between the inside diameter of the borehole and the outside diameter of the well casing shall be filled with washed graded gravel from the bottom of the well to a depth at least five (5) feet below the ground surface. The remaining annulus shall be sealed with neat cement, bentonite slurry, or granular, pelletized, medium grade, or coarse grade crushed bentonite from ground level to at least five (5) feet below ground level.
(4) A reinforced cover slab at least four (4) inches thick with a diameter larger than the casing or a NSF certified fiberglass cap shall be provided. Vents or pump piping that exits through the slab shall have the pipe sleeves cast in place. Vents or pump piping that exits through the fiberglass cap or casing shall be attached with a watertight mechanical or glued connection. The top of the slab or fiberglass cap shall be sloped to drain to all sides. A watertight joint shall be made where the slab rests on the well lining using a watertight sealing compound. If a manhole is installed, the manhole shall have a metal curb cast in the concrete slab and extending four (4) inches above the slab. The manhole shall have a watertight cover with the sides to overhang the curb at least two (2) inches. A vent shall be installed in a concrete slab and shall consist of a metal pipe extending above the slab with the open end turned down and at least six (6) inches above the slab. The open end shall be covered with sixteen (16) mesh or finer screen made of durable material. A vent shall be installed in a fiberglass cap or casing and shall consist of a metal or plastic pipe extending at least six (6) inches above the cap or away from the casing with the open end turned down.
(5) A hole drilled in the concrete casing for a below ground discharge line shall be sealed on the inside and outside of the well casing with concrete or a mastic compound. Fiberglass casing equipped with a below ground discharge line shall have the discharge line attached with a watertight mechanical or glued connection.
(6) In a bucket well where casing is used with an inside diameter of less than twelve (12) inches that extends the entire depth of the borehole, the graded gravel filling the annular space between the inside of the borehole and outside of the casing shall terminate not less than ten (10) feet below ground surface. The borehole annulus shall be filled with granular, pelletized, or coarse grade crushed bentonite a minimum of six (6) inches thick and the remainder of the borehole shall be filled with clean earth and thoroughly tamped to minimize settling.
(d) This section does not apply to any of the following:
(1) A monitoring well.
(2) A dewatering well.
(3) A public water supply well.
The installation of a public water supply well is governed by 327 IAC 8-3.4. *(Natural Resources Commission; 312 IAC 13-6-2; filed Nov 22, 1999, 3:34 p.m.: 23 IR 768; filed Oct 9, 2001, 4:32 p.m.: 25 IR 709; readopted filed Aug 4, 2005, 6:00 p.m.: 28 IR 3661)*

312 IAC 13-6-3 Cable tool or jetted wells
Authority: IC 25-39-4-2; IC 25-39-4-9
Affected: IC 25-39

Sec. 3. (a) This section governs the construction of wells by cable tool or jetting methods.

(b) A well installed by cable tool or jetting shall be equipped with casing having a minimum of two (2) inches inside diameter and be cased a minimum of twenty-five (25) feet below ground surface.

(c) If well casing is driven or jetted, a borehole with an inside diameter at least two (2) inches greater than the outside diameter of the casing to be driven shall be dug at least three (3) feet, but not more than five (5) feet, below ground surface. The casing shall be centered in the larger diameter borehole. A bentonite slurry, granular bentonite, or medium grade crushed bentonite shall fill the annulus during the installation of the well casing. Notwithstanding 312 IAC 13-5-1(c), bentonite slurry may be introduced into the borehole annulus by gravity methods during the installation of the well casing.

(d) Unless otherwise approved by the division, a well must be grouted under section 1 of this rule if either of the following conditions exist:

(1) A larger diameter temporary casing is used to install a smaller diameter permanent well casing.

(2) A later diameter borehole is drilled to install a smaller diameter well casing.

(e) This section does not apply to a monitoring well, a dewatering well, or a public water supply well. The installation of a public water supply well is governed by 327 IAC 8-3.4. *(Natural Resources Commission; 312 IAC 13-6-3; filed Nov 22, 1999, 3:34 p.m.: 23 IR 769; readopted filed Aug 4, 2005, 6:00 p.m.: 28 IR 3661)*

Rule 7. Well Yield

312 IAC 13-7-1 Well yield
Authority: IC 25-39-4-9
Affected: IC 25-39

Sec. 1. (a) Every well (which is to be equipped with a pump) shall be tested for yield. The well shall be test pumped at a capacity at least equal to the pumping rate desired from the well during normal usage.

(b) A well shall be developed and tested at capacity for a minimum of one (1) hour. The yield and drawdown shall be recorded.

(c) Pumping equipment shall be installed at a depth to allow for drawdown caused by:

(1) the pumping equipment itself; and

(2) seasonal water level fluctuations.

(d) This section does not apply to a monitoring well or a dewatering well. *(Natural Resources Commission; 312 IAC 13-7-1; filed Nov 22, 1999, 3:34 p.m.: 23 IR 769; readopted filed Aug 4, 2005, 6:00 p.m.: 28 IR 3661)*

Rule 8. Other Wells and Structures

312 IAC 13-8-1 Geothermal heat pump wells
Authority: IC 14-10-2-4; IC 25-39-4-2; IC 25-39-4-9
Affected: IC 25-39

Sec. 1. (a) This section establishes standards for drilling ground water heat pump systems that are in addition to the general requirements for drilling a well under 312 IAC 12.

(b) If a return well is used with an open loop system, its design shall provide a water transmitting capacity that is at least one and one-half (1½) times the required water supply of the heat pump unit.

(c) With respect to a vertical closed loop system, boreholes shall be pressure grouted from the bottom of the borehole to the ground surface with a high solids bentonite grout that may contain sand to enhance thermal conductivity. *(Natural Resources Commission; 312 IAC 13-8-1; filed Nov 22, 1999, 3:34 p.m.: 23 IR 770; readopted filed Aug 4, 2005, 6:00 p.m.: 28 IR 3661; filed Jul 14, 2006, 1:23 p.m.: 20060809-IR-312050341FRA)*

312 IAC 13-8-2 Radial collector wells
Authority: IC 25-39-4-2; IC 25-39-4-9
Affected: IC 25-39

Sec. 2. Plans and specifications for a radial collector well must be approved by the division before drilling begins. Factors to be considered by the division include the following:
(1) The depth of the well.
(2) Well casing materials.
(3) Well sealing procedures.
(4) Types of aquifer materials.
(5) The location of the proposed well.
(Natural Resources Commission; 312 IAC 13-8-2; filed Nov 22, 1999, 3:34 p.m.: 23 IR 770; readopted filed Aug 4, 2005, 6:00 p.m.: 28 IR 3661)

312 IAC 13-8-3 Monitoring wells
Authority: IC 14-10-2-4; IC 25-39-4-2; IC 25-39-4-9
Affected: IC 25-39

Sec. 3. (a) This section establishes standards for monitoring wells that are in addition to the general requirements for drilling a well under this article.
(b) A monitoring well shall be equipped with casing. The composition, wall thickness, and nominal diameter of the casing shall be sufficient to allow the well to be used for its intended purpose.
(c) Monitoring well casing shall be new first class material that meets the American Society of Testing Materials (ASTM) standards ASTM A-120 (1984) or ASTM A-53 (1987) or the American Petroleum Institute (API) standards API-5A or API-5L (1987). Thermoplastic pipe shall comply with ASTM F-480 (1981). Well casing shall be as follows:
(1) Clean and free of rust, grease, oil, or contaminants and composed of materials that will have minimal impact on the quality of a water sample.
(2) Centered in the borehole and free of obstructions so monitoring devices can be lowered into the well.
(d) A monitoring well screen shall be composed of materials that will not corrode or react with chemicals found in the ground water at the site. The well screen slots shall not be hand cut and shall be sized to retain at least ninety percent (90%) of the grain size of the introduced filter pack or natural formation materials if an introduced filter pack is not used. The introduced filter pack shall:
(1) be properly sized and graded; and
(2) not extend more than two (2) feet above the top of the screen or the uppermost water bearing unit to be monitored in the well annulus unless otherwise approved by the division.
(e) A filter pack seal of bentonite slurry or granular, pelletized, medium grade, or coarse grade crushed bentonite may be placed in the annulus directly above the filter pack or sand grout barrier. The filter pack seal shall:
(1) be installed to prevent bridging; and
(2) not extend more than two (2) feet above the filter pack or sand grout barrier.
(f) Except as provided in subsection (h), the finished well casing:
(1) shall extend at least two (2) feet above the ground level; and
(2) if located in a flood plain, must be:
(A) at least two (2) feet above the elevation of the regulatory flood; or
(B) equipped with a watertight cap.
The monitoring well shall be located to protect against surface water ponding, and earthen materials, neat cement, or concrete shall be placed around the well casing to drain surface water from the well.
(g) A monitoring well, located where the casing is susceptible to damage, shall be equipped with a protective outer pipe consisting of a metal casing having a diameter large enough to allow easy access to the well. The protective cover pipe shall be firmly anchored in the ground. Additional protective devices, for example, brightly colored posts around the well, are required where construction equipment or vehicular traffic could damage the well.
(h) A monitoring well must be equipped with a locking cap or cover to prevent unauthorized access. The locking cap may be placed:

(1) directly on the well casing; or

(2) if required under subsection (g), on the protective cover pipe.

(i) A monitoring well installed so that the top of the well casing is finished at an elevation below the ground surface shall be equipped with a watertight cap. The top of the well casing shall terminate at a depth no greater than one (1) foot below the ground surface and shall be located in a flush mounted protective cover pipe. The flush mounted protective cover pipe shall include each of the following:

(1) A watertight one (1) piece or continuous welded metal casing:

(A) at least one (1) foot long; and

(B) having a nominal diameter at least four (4) inches greater than the nominal diameter of the monitoring well.

The casing shall be flanged for greater stability if installed in a location likely to be subject to vehicular traffic.

(2) A concrete ground surface seal, if an impervious surface, for example, concrete or asphalt, is not present. The ground surface seal shall be installed and extend not more than three (3) feet below the ground surface.

(3) A sealed lid that is not more than one-half (½) inch higher than the elevation of the ground surface. The sealed lid shall be as follows:

(A) Of a quality to withstand vehicular traffic if installed in a location likely to be subject to vehicular traffic.

(B) Clearly marked with the words "MONITORING WELL" or "MONITOR" and also display the words "DO NOT FILL".

(j) A monitoring well installed by the rotary or auger drilling method shall have a borehole with a diameter at least two (2) inches greater than the nominal diameter of the casing. Except as provided in subsection (e), the well shall be grouted as follows:

(1) Granular bentonite may be used to grout a monitoring well if the:

(A) diameter of the borehole is four (4) inches or larger than the nominal diameter of the well casing; and

(B) well is not more than twenty-five (25) feet deep.

(2) Except as provided in subdivision (3), the annulus of the monitoring well shall be pressure grouted with neat cement or a bentonite slurry or be grouted with pelletized, medium grade, or coarse grade crushed bentonite from the top of the filter pack or filter pack seal under subsection (e) (for a well installed in unconsolidated materials) or the bottom of the well casing (for a well penetrating bedrock) to the ground surface or to within one (1) foot of the ground surface if a flush mounted protective cover pipe is installed if the:

(A) diameter of the borehole is four (4) inches or larger than the nominal diameter of the well casing; and

(B) well is not more than one hundred (100) feet deep.

(3) The annulus of the monitoring well shall be pressure grouted with neat cement or a bentonite slurry from the top of the filter pack or filter pack seal under subsection (e) (for a well installed in unconsolidated materials) or the bottom of the well casing (for a well penetrating bedrock) to the ground surface or to within one (1) foot of the ground surface if a flush mounted protected cover pipe is installed where either the:

(A) diameter of the borehole is less than four (4) inches larger in diameter than the nominal diameter of the well casing; or

(B) well is more than one hundred (100) feet deep.

(k) A monitoring well installed by the cable tool method shall be grouted as follows:

(1) The well casing shall be centered in a borehole:

(A) with a diameter of at least two (2) inches greater than the nominal diameter of the casing to be driven;

(B) dug at least three (3) feet, but not more than five (5) feet, below the ground surface; and

(C) filled with granular bentonite or a bentonite slurry during the installation of the casing.

Notwithstanding 312 IAC 13-5-1(c), bentonite slurry may be introduced into the borehole annulus by gravity methods during the installation of the well casing.

(2) Grouting shall be performed as provided under subsection (i) if a larger diameter:

(A) temporary casing is used to install a smaller diameter permanent well casing; or

(B) borehole is drilled to install a smaller diameter well casing.

(l) A monitoring well installed by the direct push method must be constructed as follows:

(1) The well shall be equipped with a prepacked well screen.

(2) A sand grout barrier shall:

(A) be placed directly above the prepacked well screen in the annulus between the well casing (riser pipe) and the borehole wall as the probe rods are retracted;

(B) be installed to prevent bridging; and
(C) extend not more than two (2) feet above the top of the prepacked well screen.
(3) A filter pack seal may be installed under subsection (e) directly above the sand grout barrier.
(4) The remaining annulus between the well casing (riser pipe) and probe rods shall be pressure grouted with neat cement or a bentonite slurry from the top of the sand grout barrier or filter pack seal to:
(A) if a flush-mounted protective pipe is installed, within one (1) foot of the ground surface; or
(B) the ground surface.
(5) The probe rods shall be pulled during installation of the grout material.
(m) A monitoring well shall be developed following installation and before water samples are collected. This development shall be accomplished to produce water that is as free as practicable from the following:
(1) Sediment.
(2) Drill cuttings.
(3) Drilling fluids.
If a well is installed to monitor ground water quality, the well shall be adequately developed to present a representative sample of the water quality.
(n) Contaminated drill cuttings, fluids, and surge and wash waters produced in the drilling and development of a monitoring well shall be collected and contained to:
(1) prevent contamination of the area; and
(2) protect persons who might otherwise come in contact with these materials.
(o) Monitoring well construction and development equipment that comes in contact with contaminated water or contaminated geologic materials shall be cleaned with high-pressure hot water or steam, using inorganic soap or other suitable solvents, and rinsed thoroughly. Contaminated fluids or wash waters shall be collected and contained so that the result is not:
(1) contamination of the area; or
(2) a hazard to individuals who may come in contact with these materials.
(Natural Resources Commission; 312 IAC 13-8-3; filed Nov 22, 1999, 3:34 p.m.: 23 IR 770; errata filed Dec 30, 1999, 4:02 p.m.: 23 IR 1109; readopted filed Aug 4, 2005, 6:00 p.m.: 28 IR 3661; filed Jul 14, 2006, 1:23 p.m.: 20060809-IR-312050341FRA)

312 IAC 13-8-4 Dewatering wells
Authority: IC 25-39-4-9
Affected: IC 25-39

Sec. 4. (a) This section establishes standards for dewatering wells which are in addition to the general requirements for drilling a well under this article.
(b) A dewatering well shall be equipped with casing having a nominal diameter of at least one and one-fourth (1¼) inches. The casing shall be clean and free of grease, oil, or other contaminants that would impact water quality.
(c) Upon installation, a dewatering well must be fitted with a temporary cap which remains in place until pumping equipment is installed. The cap shall be of a type that prevents vermin or other potential contaminants from entering the well.
(d) Earthen materials shall be placed around the well casing to drain surface water away from the dewatering well. *(Natural Resources Commission; 312 IAC 13-8-4; filed Nov 22, 1999, 3:34 p.m.: 23 IR 772; readopted filed Aug 4, 2005, 6:00 p.m.: 28 IR 3661)*

Rule 9. Well Disinfection

312 IAC 13-9-1 Disinfection procedures for drilled wells
Authority: IC 25-39-4-2; IC 25-39-4-9
Affected: IC 25-39

Sec. 1. (a) Except as provided in subsection (d), the following procedures shall be used for the disinfection of drilled wells:
(1) The amount of water in the well shall be determined by multiplying the gallons per foot by the number of feet of water in the well according to the following table:

Diameter of Well in Inches	Gallons Per Foot
2	.16
3	.37
4	.65
5	1.00
6	1.50
8	2.60
10	4.10
12	6.00

(2) At least one hundred (100) parts per million of chlorine concentration in water are required for disinfection. For each one hundred (100) gallons of water in the well, the amount of chlorine liquid or compound shown in the following table shall be used:

Laundry Bleach (5.25% chlorine)	Hypochlorite Granules (70% chlorine)
3 cups	2 ounces

(3) The solution prepared under subdivision (2) shall be poured into the well to ensure the casing walls are wetted before the cover, cap, or seal is installed.

(4) Instead of the applications described in subdivisions (1) through (2), another application of chlorine may be substituted by a water well driller which results in a chlorine concentration of at least one hundred (100) parts per million.

(b) As used in this section, one (1) cup is equivalent to an eight (8) ounce measuring cup.

(c) As used in this section, one (1) ounce is equivalent to one (1) heaping tablespoon of granules.

(d) This section does not apply to a monitoring well or a dewatering well. *(Natural Resources Commission; 312 IAC 13-9-1; filed Nov 22, 1999, 3:34 p.m.: 23 IR 772; readopted filed Aug 4, 2005, 6:00 p.m.: 28 IR 3661)*

312 IAC 13-9-2 Disinfection procedures for bucket wells

Authority: IC 25-39-4-2; IC 25-39-4-9
Affected: IC 25-39

Sec. 2. The following procedures shall be used for the disinfection of bucket wells:

(1) The amount of disinfectant required is determined primarily by the amount of water in the well. The following table establishes the amount of chlorine to use for each foot of water in the well:

Diameter of well in feet	3	4	5	6	7	8	10
Amount of 5.25% laundry bleach to use per foot of water (in cups)	1.5	3	4.5	6	9	12	18
Amount of .70% hypochlorite (in cups)	1	2	3	4	6	8	12

(2) To determine the amount of bleach, multiply the amount of disinfectant indicated as determined by the diameter of the well times the number of feet of water in the well.

(3) The amount of bleach determined under subdivision (2) shall be added to approximately ten (10) gallons of water and splashed around the lining or wall of the well. The entire amount of disinfectant must be circulated so that the solution contacts all parts of the well.

(4) The top of the well must be sealed.

(5) Instead of the applications described in this section, another application of chlorine may be substituted which results in a chlorine concentration of one hundred (100) parts per million.

(Natural Resources Commission; 312 IAC 13-9-2; filed Nov 22, 1999, 3:34 p.m.: 23 IR 772; readopted filed Aug 4, 2005, 6:00 p.m.: 28 IR 3661)

Rule 10. Landowner Responsibility for Abandonment and Plugging of Wells

312 IAC 13-10-1 Temporary abandonment of wells

Authority: IC 25-39-4-2; IC 25-39-4-6; IC 25-39-4-9
Affected: IC 25-39

Sec. 1. A well which has not been used for more than three (3) months without being permanently abandoned must be sealed at or above the ground surface by a welded, threaded, or mechanically attached watertight cap. The well shall be maintained so that the well does not become a source or channel of ground water contamination. *(Natural Resources Commission; 312 IAC 13-10-1; filed Nov 22, 1999, 3:34 p.m.: 23 IR 772; readopted filed Aug 4, 2005, 6:00 p.m.: 28 IR 3661)*

312 IAC 13-10-2 Permanent abandonment of wells

Authority: IC 14-10-2-4; IC 25-39-4-2; IC 25-39-4-6; IC 25-39-4-9
Affected: IC 25-39

Sec. 2. (a) A well abandoned before January 1, 1988, must be sealed at or above the ground surface by a welded, threaded, or mechanically attached watertight cap. The well shall be maintained so the well does not become a source or channel of ground water contamination. A well that poses a hazard to human health must also be plugged under subsection (c). A cased or uncased bucket well or a hand dug well (other than buried slab construction) that was abandoned before January 1, 1988, shall be closed in conformance with one (1) of the following procedures:

(1) Covered with a reinforced concrete slab:

(A) at least four (4) inches thick; and

(B) having a diameter larger than the nominal diameter of the borehole or the well casing.

(2) Equipped with a properly reinforced cover:

(A) constructed of pressure treated lumber;

(B) having dimensions larger than the nominal diameter of the borehole or well casing; and

(C) protected against the water with roofing or other water repelling materials that are properly maintained to ensure the integrity of the cover.

Closure shall not be performed under this subdivision, however, if the cover is in direct contact with ground water or surface water.

(3) Closed as otherwise approved by the division.

(b) A well drilled before January 1, 1988, and abandoned before January 1, 1994, shall be as follows:

(1) Sealed at or above the ground surface by a welded, threaded, or mechanically attached watertight cap.

(2) Maintained so the well does not become a source or channel of ground water contamination.

A well that poses a hazard to human health must also be plugged under subsection (c).

(c) A well abandoned after December 31, 1987, shall be plugged with an impervious grouting material to prevent the following:

(1) Migration of materials or fluids in the well.

(2) Loss of pressure in a confined aquifer.

(d) A well drilled after December 31, 1987, and not equipped with casing must be plugged within seventy-two (72) hours after completion.

(e) This subsection applies as follows to a cased or uncased well abandoned after December 31, 1987:

(1) The plugging material must consist of one (1) or a combination of the following:

(A) Neat cement with not more than five percent (5%) by weight of bentonite additive.

(B) Bentonite slurry, which can include polymers designed to retard swelling.

(C) Pelletized, medium grade, or coarse grade crushed bentonite.

(D) Other materials approved by the commission.

(2) The following methods apply:

(A) Cement and bentonite slurries shall be pumped into place in a continuous operation with a grout pipe introducing the plugging material at the bottom of the well and moving the pipe progressively upward as the well is filled.

(B) Plugging materials other than neat cement or bentonite slurry shall be installed in a manner to prevent bridging of the well or borehole. The well or borehole shall be measured periodically throughout the plugging process to ensure that bridging does not occur.

(3) The following procedures apply:

(A) An abandoned well shall be disconnected from the water system. Any substance that may interfere with plugging shall be removed, if practicable.

(B) A well, other than:

(i) a monitoring well;

(ii) a dewatering well; or

(iii) an uncased borehole;

shall be chlorinated before abandonment as provided in 312 IAC 13-9-1.

(4) A cased well shall be plugged as follows:

(A) With neat cement, bentonite slurry, or medium grade or coarse grade crushed or pelletized bentonite from the bottom of the well to within two (2) feet below the ground surface unless otherwise provided by the department.

(B) The well casing shall be severed at least two (2) feet below the ground surface, and a cement plug larger in diameter than the borehole shall be:

(i) constructed over the borehole; and

(ii) covered with natural clay material to the ground surface.

(5) An uncased well (other than a borehole drilled by a bucket rig or a dewatering well governed by subdivision (8) or (9)) shall be filled with:

(A) natural clay materials;

(B) neat cement;

(C) bentonite slurry; or

(D) medium grade or coarse grade crushed or pelletized bentonite;

from the bottom of the borehole to a depth of not less than twenty-five (25) feet below ground surface. The borehole shall be filled with neat cement or medium grade or coarse grade crushed or pelletized bentonite from a depth not less than twenty-five (25) feet below ground surface to within two (2) feet below ground surface. The remaining borehole shall be filled with natural clay material to ground surface.

(6) A cased or uncased monitoring well shall be plugged from the bottom of the well or borehole to the ground surface with a:

(A) bentonite slurry; or

(B) pelletized or coarse grade crushed bentonite.

(7) A bucket well shall be plugged as follows:

(A) A bucket well installed as buried slab construction shall be filled with gravel from the bottom of the well to within ten (10) feet below the ground surface. Neat cement, bentonite slurry, or pelletized, medium grade, or coarse grade crushed bentonite shall be installed in the casing or well pipe from not less than ten (10) feet below the ground surface to within two (2) feet below the ground surface. The well pipe shall be:

(i) severed at least two (2) feet below the ground surface; and

(ii) covered with a cement plug larger in diameter than the well pipe.

The remaining hole shall be filled with natural clay material to the ground surface.

(B) Bucket well construction:

(i) using casing with an inside diameter of less than twelve (12) inches extending the entire length of the borehole; and

(ii) equipped with a well screen;

shall be abandoned under subdivision (4)(A).

(C) An uncased borehole drilled by a bucket rig shall be filled with natural clay material:

(i) from the bottom of the hole to the ground surface; and

(ii) thoroughly tamped to minimize settling.

(D) For other than buried slab construction, a bucket well shall be filled with gravel from the bottom of the well to at least five (5) feet below ground surface. The top section of the concrete or tile well casing shall be removed to cause the top of the well to terminate below ground surface. The well shall be filled with at least one (1) foot of:

(i) neat cement;

(ii) bentonite slurry; or

(iii) pelletized, medium grade, or coarse grade crushed bentonite;

from at least five (5) feet below ground surface to the top of the well casing. The well casing shall be covered with a

cement plug larger in diameter than the borehole. The remaining hole shall be filled with natural clay material to ground surface.

(8) If a dewatering well casing is removed following use, the remaining borehole shall initially be filled with granular, pelletized, medium grade, or coarse grade crushed bentonite a minimum of one (1) foot thick. The remainder of the borehole shall be:

(A) filled with natural earth materials obtained during the drilling process to the ground surface; and

(B) thoroughly tamped to minimize settling.

(9) If a dewatering well casing is removed following use and the well site will be excavated as part of the construction project, the remaining borehole shall be:

(A) filled with natural earth materials obtained during the drilling process to the ground surface; and

(B) thoroughly tamped to minimize settling.

(f) The division shall be notified in writing of a well abandonment within thirty (30) days after plugging is completed. *(Natural Resources Commission; 312 IAC 13-10-2; filed Nov 22, 1999, 3:34 p.m.: 23 IR 773; readopted filed Aug 4, 2005, 6:00 p.m.: 28 IR 3661; filed Jul 14, 2006, 1:23 p.m.: 20060809-IR-312050341FRA)*

Rule 11. Inspections

312 IAC 13-11-1 Inspections; compliance

Authority: IC 25-39-4-2; IC 25-39-4-9
Affected: IC 25-39

Sec. 1. A conservation officer or another representative of the department may observe the installation of a water well or pump and may inspect equipment used to drill a well. Work that does not comply with this article or IC 25-39 must be promptly corrected by the water well driller. Work that is covered contrary to the request of a department representative must, upon request, be uncovered for inspection and replaced by the water well driller. *(Natural Resources Commission; 312 IAC 13-11-1; filed Nov 22, 1999, 3:34 p.m.: 23 IR 774; readopted filed Aug 4, 2005, 6:00 p.m.: 28 IR 3661)*

312 IAC 13-11-2 Inspections by the department of records of a water well driller

Authority: IC 25-39-4-2; IC 25-39-4-6; IC 25-39-4-9
Affected: IC 25-39

Sec. 2. A conservation officer or another representative of the department may, at any reasonable time, inspect any record maintained by a water well driller that is needed to comply with IC 25-39 or this article. *(Natural Resources Commission; 312 IAC 13-11-2; filed Nov 22, 1999, 3:34 p.m.: 23 IR 774; readopted filed Aug 4, 2005, 6:00 p.m.: 28 IR 3661)*

Rule 12. Enforcement

312 IAC 13-12-1 Administrative enforcement

Authority: IC 14-10-2-4; IC 25-39-4-2; IC 25-39-4-9
Affected: IC 4-21.5; IC 25-39

Sec. 1. (a) This rule governs enforcement of IC 25-39 and this article by the department under IC 4-21.5 and 312 IAC 3-1.

(b) This rule does not limit the authority to enforce IC 25-39 and this article through any other lawful method.

(c) This rule does not establish a basis for an action against a water well driller by a person other than the department. *(Natural Resources Commission; 312 IAC 13-12-1; filed Nov 22, 1999, 3:34 p.m.: 23 IR 774; readopted filed Aug 4, 2005, 6:00 p.m.: 28 IR 3661)*

312 IAC 13-12-2 Suspension or revocation of a license as a water well driller

Authority: IC 14-10-2-4; IC 25-39-4-2; IC 25-39-4-9
Affected: IC 4-21.5-3-6; IC 4-21.5-4; IC 25-39-4

Sec. 2. (a) The division may seek to suspend or revoke the license of a water well driller who has done any of the following:
(1) Acted as a well driller without a license in violation of IC 25-39.
(2) Secured a license through error or fraud.
(3) Failed to comply with the requirements set forth in any of the following:
(A) IC 25-39-4-1, IC 25-39-4-2, IC 25-39-4-4, IC 25-39-4-5, or IC 25-39-4-6.
(B) 312 IAC 13-2 through 312 IAC 13-10.
(b) An action under this section is governed by IC 4-21.5-3-6 and shall be initiated by the division with the issuance of a written notice directed to the person who is the subject of the action. The notice shall include the following:
(1) A brief description of the order for suspension or revocation. An order for a license suspension shall not exceed a period of effectiveness that exceeds ninety (90) days.
(2) A declaration that the recipient of the order may seek:
(A) a stay of effectiveness of the suspension or revocation;
(B) review of the suspension or revocation; or
(C) both a stay of effectiveness and review of the suspension or revocation;
by making a written request within eighteen (18) days of issuance addressed to:
Director, Division of Hearings
Natural Resources Commission
Indiana Government Center-South
402 West Washington Street, Room W272
Indianapolis, Indiana 46204.
(c) An order issued by the division under subsection (b) is effective fifteen (15) days after issuance unless the recipient of the order obtains a stay of effectiveness. This subsection does not preclude the department from issuing, under IC 4-21.5-4, an emergency or other temporary order with respect to the license. *(Natural Resources Commission; 312 IAC 13-12-2; filed Nov 22, 1999, 3:34 p.m.: 23 IR 774; readopted filed Aug 4, 2005, 6:00 p.m.: 28 IR 3661)*

312 IAC 13-12-3 Denial of a new, renewal, or restoration license as a water well driller
Authority: IC 14-10-2-4; IC 25-39-4-2; IC 25-39-4-9
Affected: IC 4-21.5-3-5; IC 4-21.5-4; IC 25-39-4

Sec. 3. (a) The division may refuse to grant, renew, or restore a license to a person who has done any of the following:
(1) Acted as a well driller without a license in violation of IC 25-39.
(2) Secured a license through error or fraud.
(3) Failed to comply with the requirements set forth in any of the following:
(A) IC 25-39-4-1, IC 25-39-4-2, IC 25-39-4-4, IC 25-39-4-5, or IC 25-39-4-6.
(B) 312 IAC 13-2 through 312 IAC 13-10.
(b) An action under this section is governed by IC 4-21.5-3-5 and shall be initiated by the division with the issuance of a written notice directed to the applicant and to any person who has requested notice under IC 4-21.5-3-5(b)(4). The notice shall include the following:
(1) A brief description of the denial order and the basis for the denial.
(2) A declaration that the recipient of the order may seek administrative review by making a written request within eighteen (18) days of issuance addressed to:
Director, Division of Hearings
Natural Resources Commission
Indiana Government Center-South
402 West Washington Street, Room W272
Indianapolis, Indiana 46204.
(c) If the division orders the denial of a license renewal, and a timely and sufficient application was made for renewal of the license, the existing license does not expire until the commission has disposed of a proceeding. This subsection does not preclude the department from issuing, under IC 4-21.5-4, an emergency or other temporary order with respect to the license. *(Natural Resources Commission; 312 IAC 13-12-3; filed Nov 22, 1999, 3:34 p.m.: 23 IR 775; readopted filed Aug 4, 2005, 6:00 p.m.: 28 IR 3661)*

312 IAC 13-12-4 Administrative review of a sanction against a water well drilling license

Authority: IC 14-10-2-4; IC 25-39-4-2; IC 25-39-4-9
Affected: IC 25-39

Sec. 4. (a) The commission may consider the factors set forth in this section in conducting administrative review of an order issued by the department under section 2 or 3 of this rule.

(b) Mitigating factors are as follows:

(1) The person against whom action is taken has not previously been adjudicated by the commission or a court to have violated IC 25-39 or this article.

(2) The violation appears to have been unintentional.

(3) The violation was an isolated occurrence.

(4) Contamination is unlikely to have occurred as a result of the violation.

(5) Where a violation has occurred, the person has acted diligently to correct the violation.

(c) Aggravating factors are as follows:

(1) The person against whom action is taken has previously been adjudicated by the commission or a court to have violated IC 25-39 or this article.

(2) The violation appears to have been intentional.

(3) A pattern of violations has occurred.

(4) Significant contamination is likely to have occurred as a result of the violation.

(5) A hazard to human health is likely to have occurred as a result of the violation.

(Natural Resources Commission; 312 IAC 13-12-4; filed Nov 22, 1999, 3:34 p.m.: 23 IR 775; readopted filed Aug 4, 2005, 6:00 p.m.: 28 IR 3661)

312 IAC 13-12-5 Notice of violation

Authority: IC 14-10-2-4; IC 25-39-4-2; IC 25-39-4-9
Affected: IC 4-21.5-3-8; IC 14-10-2-6; IC 25-39-5

Sec. 5. (a) The department may issue a complaint for a notice of violation under IC 14-10-2-6 against a person who violates IC 25-39-5. The complaint shall be filed with the division of hearings of the commission and is subject to IC 4-21.5-3-8. The division of hearings shall cause the complaint to be served upon the parties named in the complaint.

(b) The department has the burden of proving any violation alleged in the complaint by a preponderance of the evidence.

(c) A separate notice of violation may be issued or a separate charge imposed for each day a violation occurs.

(d) The person who is the subject of the complaint may establish as an affirmative defense the filing by a prosecuting attorney of a misdemeanor information or infraction complaint based on the same event as that upon which the notice of violation was based. The person has the burden of proving the affirmative defense.

(e) If following a completed proceeding under IC 4-21.5 the commission finds the violation occurred, the commission shall order the person to abate the violation within a reasonable period of time. The abatement period shall not be less than fifteen (15) days. The order shall also specify that, if the violation is not abated within the specified time, the person shall pay a charge that does not exceed the maximum amount that may be assessed by a court for committing the violation as an infraction or misdemeanor.

(Natural Resources Commission; 312 IAC 13-12-5; filed Nov 22, 1999, 3:34 p.m.: 23 IR 775; readopted filed Aug 4, 2005, 6:00 p.m.: 28 IR 3661)

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