

Department of State
Division of Publications
 312 Rosa L. Parks, 8th Floor Snodgrass/TN Tower
 Nashville, TN 37243
 Phone: 615.741.2650
 Fax: 615.741.5133
 Email: register.information@tn.gov

For Department of State Use Only
 Sequence Number: 12-15-14
 Notice ID(s): 2284
 File Date: 12/11/14

Notice of Rulemaking Hearing

Hearings will be conducted in the manner prescribed by the Uniform Administrative Procedures Act, T.C.A. § 4-5-204. For questions and copies of the notice, contact the person listed below.

| | |
|---------------------------------|--|
| Agency/Board/Commission: | Environment and Conservation |
| Division: | Water Resources |
| Contact Person: | Anna Rollins |
| Address: | William R. Snodgrass Tennessee Tower 312 Rosa L. Parks Avenue, 11th Floor Nashville, Tennessee 37243 |
| Phone: | 615-532-0159 |
| Email: | anna.rollins@tn.gov |

Any Individuals with disabilities who wish to participate in these proceedings (to review these filings) and may require aid to facilitate such participation should contact the following at least 10 days prior to the hearing:

| | |
|---------------------|--|
| ADA Contact: | ADA Coordinator Beverly Evans 2nd Floor William R. Snodgrass Tennessee Tower 312 Rosa L. Parks Avenue |
| Address: | Nashville, Tennessee 37243 1-866-253-5827 (toll free) or (615) 532-0200 |
| Phone: | Hearing impaired callers may use the TN Relay Service at 1-800-848-0298. |
| Email: | Beverly.Evans@tn.gov |

Hearing Location(s) (for additional locations, copy and paste table)

| | | | |
|----------------|--|---|----------------------------------|
| Address 1: | Nashville Room, 3 rd Floor | | |
| Address 2: | William R. Snodgrass Tennessee Tower 312 Rosa L. Parks Avenue | | |
| City: | Nashville, Tennessee | | |
| Zip: | 37243 | | |
| Hearing Date : | 02/09/15 | | |
| Hearing Time: | 9:30 a.m. | <input checked="" type="checkbox"/> X CST/CDT | <input type="checkbox"/> EST/EDT |

Videoconferencing Location(s): The public may teleconference the Nashville hearings at the following locations:

| | | | |
|----------------|--|---|----------------------------------|
| Address 1: | Main Conference Room Memphis Environmental Field Office | | |
| Address 2: | 8383 Wolf Lake Drive | | |
| City: | Bartlett, Tennessee | | |
| Zip: | 38133 | | |
| Hearing Date : | 02/09/15 | | |
| Hearing Times: | 9:30 a.m. | <input checked="" type="checkbox"/> X CST/CDT | <input type="checkbox"/> EST/EDT |

| | | |
|----------------|--|--|
| Address 1: | Main Conference Room Jackson Environmental Field Office | |
| Address 2: | 1625 Hollywood Drive | |
| City: | Jackson, Tennessee | |
| Zip: | 38305 | |
| Hearing Date : | 02/09/15 | |
| Hearing Time: | 9:30 a.m. | <input checked="" type="checkbox"/> CST/CDT <input type="checkbox"/> EST/EDT |

| | | |
|----------------|--|--|
| Address 1: | Conference Room Columbia Environmental Field Office | |
| Address 2: | 1421 Hampshire Pike | |
| City: | Columbia, Tennessee | |
| Zip: | 38401 | |
| Hearing Date : | 02/09/15 | |
| Hearing Time: | 9:30 a.m. | <input checked="" type="checkbox"/> CST/CDT <input type="checkbox"/> EST/EDT |

| | | |
|----------------|---|--|
| Address 1: | Conference Room Nashville Environmental Field Office | |
| Address 2: | 711 R. S. Gass Blvd | |
| City: | Nashville, Tennessee | |
| Zip: | 37243 | |
| Hearing Date : | 02/09/15 | |
| Hearing Time: | 9:30 a.m. | <input checked="" type="checkbox"/> CST/CDT <input type="checkbox"/> EST/EDT |

| | | |
|----------------|--|--|
| Address 1: | Conference Room Cookeville Environmental Field Office | |
| Address 2: | 1221 South Willow Avenue | |
| City: | Cookeville, Tennessee | |
| Zip: | 38506 | |
| Hearing Date : | 02/09/15 | |
| Hearing Time: | 9:30 a.m. | <input checked="" type="checkbox"/> CST/CDT <input type="checkbox"/> EST/EDT |

| | | |
|----------------|---|--|
| Address 1: | Conference Room Chattanooga Environmental Field Office | |
| Address 2: | 1301 Riverfront Parkway Suite 206 | |
| City: | Chattanooga, Tennessee | |
| Zip: | 37402 | |
| Hearing Date : | 02/09/15 | |
| Hearing Times: | 10:30 a.m. | <input type="checkbox"/> CST/CDT <input checked="" type="checkbox"/> EST/EDT |

| | | |
|----------------|--|--|
| Address 1: | Main Conference Room Knoxville Environmental Field Office | |
| Address 2: | 3711 Middlebrook Pike | |
| City: | Knoxville, Tennessee | |
| Zip: | 37921 | |
| Hearing Date : | 02/09/15 | |
| Hearing Time: | 10:30 a.m. | <input type="checkbox"/> CST/CDT <input checked="" type="checkbox"/> EST/EDT |

| | | |
|----------------|---|--|
| Address 1: | Main Conference Room Johnson City Environmental Field Office | |
| Address 2: | 2305 Silverdale Road | |
| City: | Johnson City, Tennessee | |
| Zip: | 37601 | |
| Hearing Date : | 02/09/15 | |
| Hearing Time: | 10:30 a.m. | <input type="checkbox"/> CST/CDT <input checked="" type="checkbox"/> EST/EDT |

Additional Hearing Information:

The primary intent of this rulemaking is to update the existing water well licensing and well construction standards by incorporating clarification language.

- The duties of the Ground Water Management Board were collected from Rule Chapter 0400-45-09 and placed in Rule 0400-45-10-.05.
- Pump and treatment installer licenses were modified for clarification.
- The continuing education requirements were clarified.
- Setback distances from potential contaminant sources were updated to include new sources of potential contamination.
- Well location submittal data was modified due to the Tennessee Department of Transportation's changes in how the local county maps were published.
- Well abandonment standards were modified to allow more flexibility on existing wells where the construction information is unavailable.
- Clarification on the source of water that will be used as drilling fluids.
- Clarification was made on well site safety and borehole protection and construction of boreholes for geothermal wells.

The "Draft" rules may also be accessed for review using <http://tn.gov/environment/ppo/#dwr>.

The Department prepared an initial set of draft rules for public review and comment. Copies of these initial draft rules are available for review at the following address:

Tennessee Department of Environment and Conservation
Division of Water Resources
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 11th Floor
Nashville, Tennessee 37243
(615) 532-0159

Office hours are from 8:00 AM to 4:30 PM, Monday through Friday (excluding holidays).

Oral or written comments are invited at the hearing. In addition, written comments may be submitted prior to or after the public hearing to: Tennessee Department of Environment and Conservation, Water Resources Division; Attention: Ms. Anna Rollins, William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue, 11th Floor, Nashville, Tennessee 37243; telephone (615) 532-0159 or fax (615) 532-0199. However, such written comments must be received by 4:30 PM CDT, February 16, 2015, in order to assure consideration. For further information, please contact Ms. Anna Rollins at the above address or telephone number or by e-mail at anna.rollins@tn.gov.

Revision Type (check all that apply):

- Amendment
- New
- Repeal

Rule(s) (ALL chapters and rules contained in filing must be listed. If needed, copy and paste additional tables to accommodate more than one chapter. Please enter only **ONE** Rule Number/Rule Title per row.)

| Chapter Number | Chapter Title |
|----------------|---|
| 0400-45-09 | Water Well Licensing Regulations and Well Construction Standards |
| Rule Number | Rule Title |
| 0400-45-09-.05 | Examinations |
| 0400-45-09-.06 | Licenses |
| 0400-45-09-.10 | Well Construction Standards |
| 0400-45-09-.15 | Data and Records Required |
| 0400-45-09-.16 | Well Abandonment |
| 0400-45-09-.17 | Geothermal Well Construction Standards for Closed Loop Geothermal Boreholes |

(Place substance of rules and other info here. Statutory authority must be given for each rule change. For information on formatting rules go to <http://state.tn.us/sos/rules/1360/1360.htm>)

Amendments

Chapter 0400-45-09
Water Well Licensing Regulations and Well Construction Standards

Paragraph (8) of Rule 0400-45-09-.05 Examinations is amended by deleting it in its entirety and substituting instead the following:

(8) Interviews of applicants will be conducted in accordance with paragraph (2) of Rule 0400-45-10-.05.

Authority: T.C.A. §§ 69-10-101 et seq. and 4-5-201 et seq.

Subparagraph (b) of paragraph (1) of Rule 0400-45-09-.06 Licenses is amended by deleting it in its entirety and substituting instead the following:

- (b) Installer applicants shall be issued one or a combination of three licenses:
 - 1. A license to install pumps on water wells, which includes pumping equipment, pressure tanks or pressure switches on well systems, (P for pump installation on water wells).
 - 2. A license to install closed loops or droplines for heat transfer in closed loop geothermal wells, (L for closed loop or dropline installation in closed loop geothermal boreholes).
 - 3. A license to install water treatment on water wells, which includes any equipment, devices or filters, pressure tanks or pressure switches on well systems, (T for Treatment on water wells).

Authority: T.C.A. §§ 69-10-101 et seq. and 4-5-201 et seq.

Subparagraph (i) of paragraph (1) of Rule 0400-45-09-.06 Licenses is amended by deleting it in its entirety and substituting instead the following:

- (i) In order to renew any license or combination of licenses, the licensee shall submit to the Commissioner satisfactory proof of the required credit hours of training approved by the Board of Ground Water Management or Director completed during the previous license year. Five (5) credit hours will be required to renew any license for the license period beginning August 1 through July 31 of the following year. First year license holders not previously licensed for any installer or driller category will not be required to obtain continuing education credits for their first year of renewal. Second and subsequent year license holders will be required to obtain continuing education credits thereafter to renew a license or combination of licenses.

Authority: T.C.A. §§ 69-10-101 et seq. and 4-5-201 et seq.

Subparagraph (d) of paragraph (2) of Rule 0400-45-09-.10 Well Construction Standards is amended by deleting it in its entirety and substituting instead the following:

- (d) New wells shall not be located closer than ten (10) feet from a property line. New wells located from ten (10) feet to twenty-five (25) feet from a property line shall require a minimum of thirty-five (35) feet of casing installed below land surface with impervious material such as cement grout or bentonite chips, tablets or bentonite grout backfilled in the annular space to a depth of thirty-five feet.

TABLE A
MINIMUM DISTANCES TO SEPARATE WATER WELLS
FROM POTENTIAL SOURCES OF CONTAMINATION

SOURCES OF CONTAMINATION

MINIMUM DISTANCES

| | |
|--|----------|
| Animal pens or feed lots | 100 feet |
| Leaching Pits; sewage lagoons | 200 feet |
| Pit Privys | 75 feet |
| Sewer lines | 50 feet |
| Sludge and septage disposal sites | 100 feet |
| Septic tanks and drain fields | 50 feet |
| House to septic tank connections, if the line is tight | 10 feet |
| House to sewer line, if the line is tight | 10 feet |

Authority: T.C.A. §§ 69-10-101 et seq. and 4-5-201 et seq.

Subparagraph (c) of paragraph (2) of Rule 0400-45-09-.15 Data and Records Required is amended by deleting it in its entirety and substituting instead the following:

- (c) The location of the well as denoted by the latitude and longitudinal coordinates of the well in degrees, minutes and seconds. The accuracy of the coordinates must be to the nearest second of the location;

Authority: T.C.A. §§ 69-10-101 et seq. and 4-5-201 et seq.

Rule 0400-45-09-.16 Well Abandonment is amended by adding paragraph (9) to read as follows:

(9) Well Abandonment-Existing Wells with Obstructions

- (a) Existing wells required to be closed for which no well construction report is on file and/or those that are partially filled or obstructed with soil, rock, construction debris or other materials must be cleaned out inside the well down to a minimum depth of twenty-five (25) feet below land surface to allow for proper sealing of the upper terminus of the well.
 1. If the well does not open up and remains filled below twenty-five (25) feet, the well shall be backfilled and sealed from twenty-five (25) feet to land surface with a cement grout or bentonite as defined in subparagraph (2)(c) of this rule.
 2. If the well opens up below twenty-five (25) feet while cleaning, the well shall be backfilled from its lowermost open depth to twenty-five (25) feet below land surface with either cement grout, bentonite, clean crushed stone one-half (½) inch diameter or less, well cuttings, puddled clay, sand or a combined mixture of any of these materials. Cement grout or bentonite as defined in subparagraph (2)(c) of this rule shall be used to backfill the well from twenty-five (25) feet to land surface.
- (b) If the grading or elevation changes are expected at the site, native soil or crushed rock can be used to backfill the well from land surface to two (2) feet below land surface.
- (c) The driller will be required to file a well closure report with the Department within sixty (60) days of the completion of the well abandonment.

Authority: T.C.A. §§ 69-10-101 et seq. and 4-5-201 et seq.

Subparagraph (b) of paragraph (2) of Rule 0400-45-09-.17 Geothermal Well Construction Standards for Closed Loop Geothermal Boreholes is amended by deleting it in its entirety and substituting instead the following:

- (b) Water used in the drilling or construction process shall be treated with enough chlorine product to retain a free chlorine residual of at least two (2) parts per million unless the water is obtained on site from a direct connection to a public supply equipped with a proper cross connection protection device.

Authority: T.C.A. §§ 69-10-101 et seq. and 4-5-201 et seq.

Subparagraph (d) of paragraph (3) of Rule 0400-45-09-.17 Geothermal Well Construction Standards for Closed Loop Geothermal Boreholes is amended by deleting it in its entirety and substituting instead the following:

- (d) The driller shall take all steps necessary to maintain safety around the borehole until the closed loop is installed and grouted in the borehole. Each ungrouted borehole or loop shall have a protective cover, or sand bag placed over the open borehole. The closed loop u-bend or dropline pipe shall be placed into the borehole to its proper depth and grouted in place within five (5) days of drilling each borehole unless the u-bend dropline pipe has been installed to its maximum depth with a dedicated tremie pipeline. Each u-bend dropline pipe opening shall be taped or crimped or covered at land surface after installation of the loop. All Closed Loop Geothermal Boreholes shall be grouted in-place within fifteen (15) days of being drilled.

Authority: T.C.A. §§ 69-10-101 et seq. and 4-5-201 et seq.

Paragraph (3) of Rule 0400-45-09-.17 Geothermal Well Construction Standards for Closed Loop Geothermal Boreholes is amended by adding subparagraphs (g) through (j) to read as follows:

- (g) All drilled boreholes must be drilled to a minimum of four inches in diameter or larger to allow for installation of the loop and tremie pipe unless prior approval has been granted by the department. Well depths shall not exceed five hundred feet unless prior approval has been granted by the department.
- (h) Geothermal systems consisting of five boreholes or greater shall not be located within well head protection areas unless prior approval has been granted by the department in writing. The driller must contact the department to determine if a site is located within a well head protection area designated by the department. The Director may set any conditions deemed necessary to protect the well head protection area,
- (i) A licensed geothermal driller or loop installer may request a variance from the Director to convert an existing water well into a closed loop geothermal well. A geothermal report is required within sixty (60) days upon completion of conversion if approved by the department. There is no Notice of Intent or fee required for this conversion. The Director may approve or disapprove any request for conversion and set additional conditions as deemed necessary by the Director to protect the ground water resource.
- (j) A licensed geothermal well driller may request a variance from the department to convert a geothermal borehole at a geothermal system to a water well. A Notice of Intent fee and specific water well driller report for the converted well is required within sixty days upon completion of conversion if approved by the department. The department may approve or disapprove any request for conversion and set additional conditions as deemed necessary by the department to protect the ground water resource.

Authority: T.C.A. §§ 69-10-101 et seq. and 4-5-201 et seq.

Part 3 of subparagraph (b) of paragraph (4) of Rule 0400-45-09-.17 Geothermal Well Construction Standards for Closed Loop Geothermal Boreholes is amended by deleting it in its entirety and substituting instead the following:

- 3. The location of the system as denoted by latitude and longitudinal coordinates of the center of the system, a diagram of the closed loop geothermal boreholes, and identification of other wells on the property and the location of the septic tank, field lines or sewers lines on the property. The accuracy of the coordinates must be to the nearest second of the location;

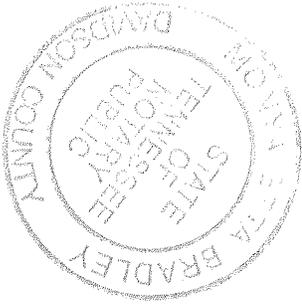
Authority: T.C.A. §§ 69-10-101 et seq. and 4-5-201 et seq.

Part 6 of subparagraph (b) of paragraph (4) of Rule 0400-45-09-.17 Geothermal Well Construction Standards for Closed Loop Geothermal Boreholes is amended by deleting it in its entirety and substituting instead the following:

- 6. Reserved;

Authority: T.C.A. §§ 69-10-101 et seq. and 4-5-201 et seq.

I certify that the information included in this filing is an accurate and complete representation of the intent and scope of rulemaking proposed by the agency.



Date: December 11, 2014

Signature: [Handwritten Signature]

Name of Officer: Tisha Calabrese-Benton

Title of Officer: Director of the Division of Water Resources

Subscribed and sworn to before me on: December 11, 2014

Notary Public Signature: Tronja Etta Bradley

My commission expires on: August 17, 2015

Department of State Use Only

Filed with the Department of State on: 12/11/14

[Handwritten Signature]

Tre Hargett
Secretary of State

2014 DEC 11 PM 3:47
SECRETARY OF STATE