



Oregon

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Water Resources Department

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MEMORANDUM

TO: Water Resources Commission

FROM: Phillip C. Ward, Director

SUBJECT: Agenda Item M, January 27, 2012
Water Resources Commission Meeting

**Request for Adoption of Rules that Establish Requirements for the
Construction of Closed Loop Ground Source Heat Pump Borings,
OAR Chapter 690, Division 240**

I. Issue Statement

The Department requests that the Commission adopt final proposed rules (OAR Chapter 690, Division 240) that provide guidance and standards for installers to meet when constructing closed loop ground source heat pump borings. The proposed rules provide clarity, consistency and certainty for construction of these facilities.

II. Background

A closed loop ground source heat pump boring is an opening constructed for the purpose of installing a closed loop heat exchange system for a ground source heat pump. The opening may be cased or uncased and is considered a type of geotechnical hole.

In April of 2009, concerns regarding the consistency of the sealing materials being used in these types of borings were brought to the Water Resources Commission. As a result, staff worked with the Oregon Ground Water Association (OGWA) and the Groundwater Advisory Committee (GWAC) to form a technical committee. The committee reviewed current construction practices using National guidelines and State of Washington practices to develop a set of guidelines.

Staff began development of permanent rules (OAR Chapter 690, Division 240) in September 2011.

III. Rulemaking Process

The Department appointed a Rules Advisory Committee (RAC) to assist with the development of permanent rules. The RAC met on September 22, 2011, which resulted in preparation of a public hearing draft.

The Department submitted a Notice of Proposed Rulemaking Hearing and Statement of Need and Fiscal Impact to the Secretary of State on October 15, 2011. The notice was published November 1, 2011, in the *Oregon Bulletin*. A public hearing was held in Salem on November 22, 2011, and the public comment period extended from November 1, through December 1, 2011.

One written comment was received and is included as Attachment 2. The Department's response to the public comments is included as Attachment 3. The hearing draft rules were modified as followings:

- The sentence under OAR 690-240-0043(3) was modified for consistency to read, "grout" pipe.
- The paragraph under OAR 690-240-0046(1) was reworded for clarity to read, "Grouting of an uncased boring shall be completed after the heat exchange loop is installed. The boring shall be completed in a manner to allow ease in locating the boring including but not limited to the use of marking or locating magnetic tape, if maintenance or abandonment is necessary."
- The paragraph under OAR 690-240-0046(3) was reworded for consistency to read, "grout" pipe.

The Ground Water Advisory Committee, which advises the Commission on rules for development and protection of groundwater (ORS 536.090), met on November 1, 2011, to discuss the draft rules. GWAC unanimously recommended that the Commission adopt the final proposed rules with the following modifications:

- The paragraph under OAR 690-240-0040(2) was modified by adding a sentence to clarify that municipal sewer and storm water systems are excluded from the 50 feet setback.

IV. Summary

The final proposed rules in Attachment 1 provide the guidance and standards necessary for installers to meet when constructing closed loop ground source heat pump borings, cased or uncased, that are greater than 18 feet.

VI. Alternatives

The Commission may consider the following alternatives:

1. Adopt the final proposed rules in Attachment 1.
2. Adopt modified final proposed rules.
3. Not adopt the final proposed rules and request the Department further evaluate the issues.

VII. Recommendation

The Director recommends Alternative 1.

Attachments:

1. Final Proposed Rules “ Closed Loop Ground Source Heat Pump Borings”
Chapter 690, Division 240
2. Written comments received
3. OWRD’s responses to written and oral comments received

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