

Closed Loop Rulemaking

Oregon Administrative Rule Chapter 690, Division 240

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- **What is a Closed Loop Ground Source Heat Pump?**
 - It is a geothermal heat exchanger that circulates a nontoxic fluid through a loop that is installed below the ground

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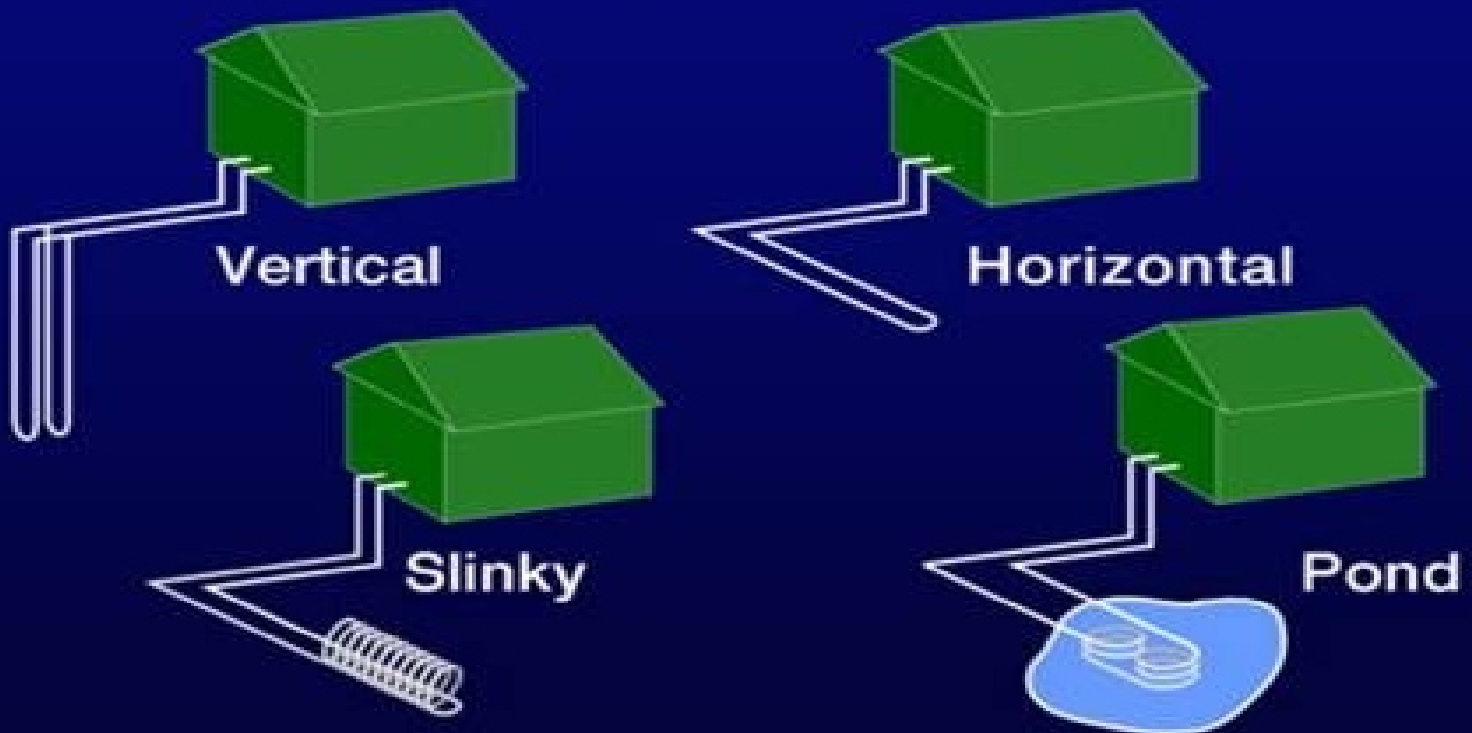
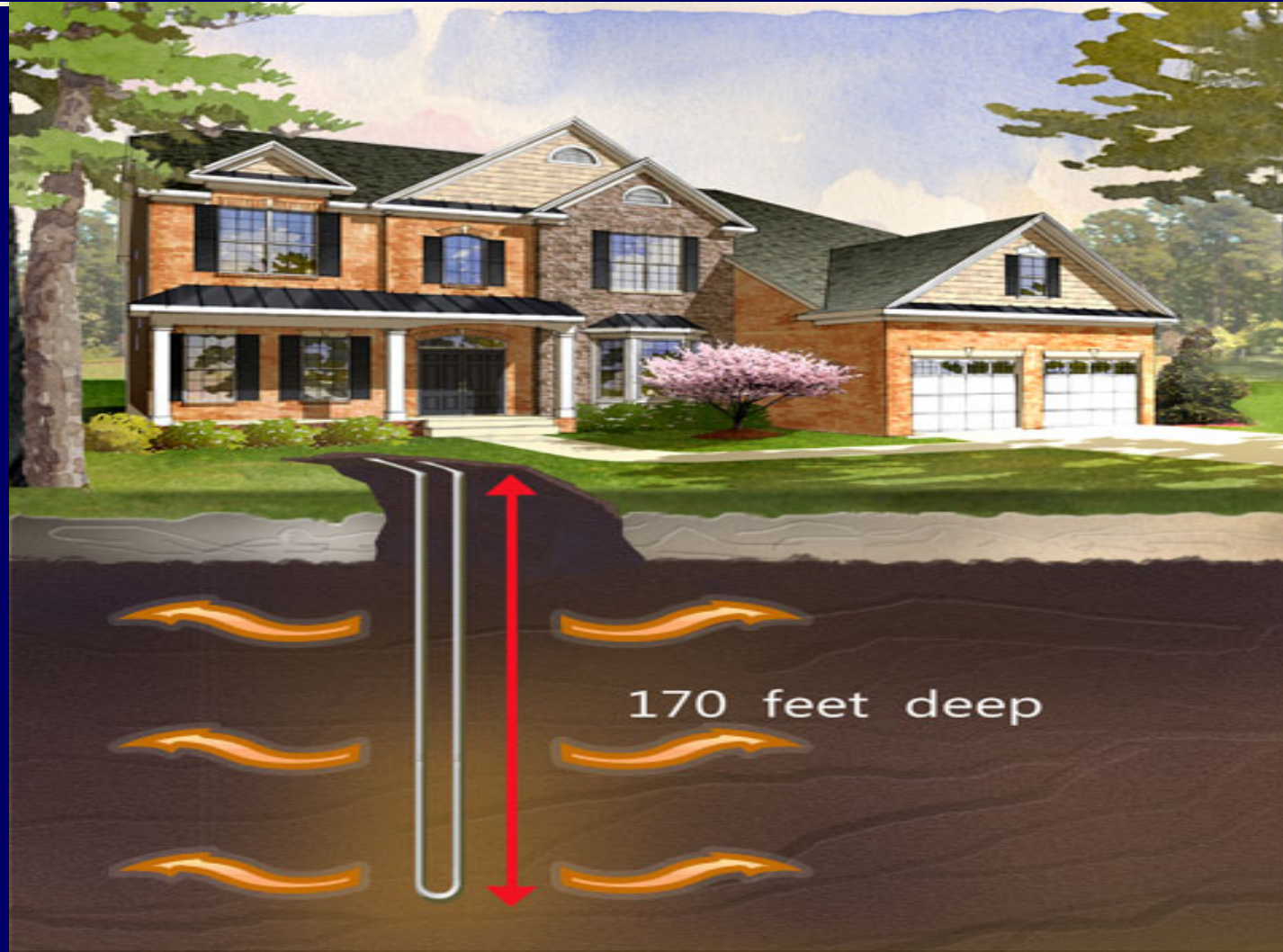


Figure 1 - Types of Closed-Loop Geothermal Systems

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- **April 2009 concerns regarding consistency of sealing materials being used were brought to the Commission**
- **September 22, 2011, staff began development of permanent rules**

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- **The final proposed rules provide guidance and standards for installers to meet when constructing closed loop ground source heat borings**
 - **Bentonite or cement slurry is pumped through a grout pipe from the bottom upward**

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- **The Commission's Groundwater Advisory Committee met November 1, 2011**
 - **The section of the proposed final rules relating to setbacks was modified to reflect the Committee's comment**

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- **Public Hearing November 22, 2011**
- **Open Comment Period November 1 - November 30**

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- **Comments received in the open comment period are reflected in the final proposed rules**
 - The term “tremie” was replaced with “grout”
 - To allow ease of locating the boring, language was added to including the use of marking or magnetic tape

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Alternatives

- 1. Adopt the final proposed rules, Chapter 690, Division 240, in Attachment 1**
- 2. Adopt modified final proposed rules**
- 3. Not adopt the final proposed rules and request the Department further evaluate the issues**

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- **The Director recommends Alternative 1 - adopt the final proposed rules, Chapter 690, Division 240, in Attachment 1**