

## Guidance for Geothermal Projects Proposed for the Barnes Aquifer Area

- The Barnes Aquifer Protection Advisory Committee recommends against open loop systems in the Zone II Aquifer area.
- Check with local municipal boards to see what may be required for installation of closed loop geothermal systems, including set back distances from drinking water supply wells.
- Only Massachusetts registered well drillers are permitted to construct, alter, or decommission geothermal wells in Massachusetts.
- As an anti-freeze agent, propylene glycol provides the least health and environmental risk. Note that the use of methanol as an anti-freeze chemical is not allowed in Massachusetts. (If a system is using methanol and needs to be changed out, this fluid must be collected and disposed of properly. Not dumped on the ground.)
- Make sure that water chemistry is not going to cause problems with antifreeze solutions. Water with high levels of manganese and iron can cause problems with clogging.

### Important resources:

MassDEP Underground Injection Control Program:

<http://www.mass.gov/eea/agencies/massdep/water/drinking/underground-injection-control.html>

MassDEP Guidelines for Ground Source Heat Pump Wells (2013):

<http://www.mass.gov/eea/docs/dep/water/laws/a-thru-h/gshpguid.pdf>

North Central District Health Department (Enfield, East Windsor, Windsor Locks, Suffield, Vernon, Windham, and Stafford, Connecticut)

<http://www.ncdhd.org/geothermal-wells>

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