

Well Management Section
 625 North Robert Street
 P.O. Box 64502
 St. Paul, Minnesota 55164-0502
 651-201-4600 or 800-383-9808
 health.wells@state.mn.us
 www.health.state.mn.us/wells



| MDH Use Only | |
|--------------------|-----------------------------------|
| Date Received | _____ |
| Amount Received | _____ |
| Deposit Number | _____ |
| Application Number | _____ |
| Date Approved | _____ |
| Receipt Codes: | |
| | \$350 GTED (20 gpm or less) (227) |
| | \$590 GTED (over 20 gpm) (411) |

Permit Application to Operate a Groundwater Thermal Exchange Device (GTED)

With reinjection to the aquifer pursuant to Minnesota Statutes, section 1031.621 and rules adopted thereunder.

- Please print or type the requested information.
- Incomplete applications cannot be processed and will be returned to the applicant.
- Submit the completed application, the nonrefundable \$350 application fee for small systems having a maximum capacity of 20 gallons per minute (g.p.m.) or less and \$590 for larger systems having a capacity over 20 g.p.m. Include the site plan, schematic of GTED, well construction record(s) (if applicable), and required signatures.
- Make check or money order payable to the Minnesota Department of Health or pay by credit card using the attached Credit Card Payment Information form.
- Mail completed application and fee to address listed above or fax to 877-434-9853.

Indicate Capacity

20 g.p.m. or less (\$350) over 20 g.p.m. (\$590)

General Project Data

| | |
|--|------------------------------|
| _____ | |
| Certified Representative Name | Certified Representative No. |
| _____ | |
| Company Name | Company License No. |
| _____ | |
| Email or Mailing Address Where Approved Permit Should be Delivered | Telephone No. |

GTED Location

| | | | | | | |
|----------------|---------------|-------------|---------------------------------------|-----------------------------|----------|-----|
| _____ | | _____ | | _____ | | |
| County | Township Name | | | Property Identification No. | | |
| _____ | | | | | | |
| Township No. | Range No. | Section No. | (Quarters – List Smallest to Largest) | Qtr | Qtr | Qtr |
| _____ | | | | | | |
| Street Address | | | City | State | ZIP Code | |

Property Owner

Property Owner Name

PERMIT APPLICATION TO OPERATE A GROUNDWATER THERMAL EXCHANGE DEVICE (GTED)

Street Address City State ZIP Code

Property Owner Email Address

GTED Construction Details

Supply the following information where appropriate. Write "unknown" where the information is not available.

Table with 5 columns: Well Information, Existing Supply Well, Existing ReInjection Well, Proposed Supply Well, Proposed ReInjection Well. Rows include: Minnesota Unique Well No., Well Depth, Hole Diameter, Casing Diameter, Casing Depth, Well Construction Date, Well Pump Installation Date, Type of Well Pump.

Existing Well(s): Please submit a copy of the well construction record(s) along with this form.

Proposed Well(s): If the well(s) are not yet constructed, write in estimated depths, sizes, and dates. This information can be obtained from the licensed well contractor.

Heat Pump Unit Description

Manufacturer Name Model No.

Maximum Flow Rate (g.p.m.) Installation Date (actual or proposed)

Installer Name

Water Withdrawal Information

Indicate Usage Purpose: Heating Cooling Both

Total Amount of Water to be Rejected into the Aquifer (gallons per year [g.p.y.]

For a proposed pumping schedule, provide:

Rate (gallons per minute [g.p.m.]) Times (example: October to May)

Duration (days per month) (months per year) (hours per day)

Note: GTEDs withdrawing more than 10,000 gallons per day (e.g., 6.9 g.p.m. continuous operation for 24 hours) or 1 million gallons per year (e.g., 1.9 g.p.m. continuous operation for 365 days) requires an appropriations permit from the Minnesota Department of Natural Resources. More information is available at Water Appropriations Permit Program (www.dnr.state.mn.us/waters/watermgmt_section/appropriations) or mpars.dnr@state.mn.us.

GTED Well(s) Location

The well(s) must be located and constructed in accordance with the provisions of the Minnesota Rules, chapter 4725, Wells and Borings.

PERMIT APPLICATION TO OPERATE A GROUNDWATER THERMAL EXCHANGE DEVICE (GTED)

Indicate well(s) location on an attached site plan. Show isolation distances from the supply and injection wells to any contamination sources specified in Minnesota Rules, part 4725.4450 and distances from gas pipes, liquid propane tanks, electrical lines, buildings, and other wells.

Attach Schematic with GTED Specifications

(A sample schematic of a GTED is attached.)

Schematic must indicate:

- Fifteen-psi pressure valve at discharge well.
- Heat pump's solenoid valve on discharge side.
- Pressure gauge in line between pressure valve and solenoid valve.
- Device(s) to provide automatic shutdown of system if discharge line pressure is below 15 psi.
- In-line thermometer in heat pump inlet and outlet lines.
- Check valve in line from supply well.
- Taps (unthreaded) for draining and sampling in supply and discharge lines.
- Shutoff valves in supply and discharge lines.
- Filter in discharge line from heat pump.
- Flow control valve and flow meter in supply line.
- Air release valves.
- Any other provisions or installed devices, such as a pressure tank or isolation valves for servicing heat pump.

Specifications must indicate:

- Piping materials.
- Flow control valve setting.
- Provision for pressure testing for system.
- Provision for disinfecting the completed system.

Note: Pipe installations must comply with Minnesota Rules, chapter 4714 (Minnesota Plumbing Code), including materials and joint methods.

Certified Representative Signature

As a condition of this permit, I agree to construct this GTED under the provisions of Minnesota Statutes, chapter 103I and Minnesota Rules, chapter 4725.

| | | |
|---------------------------------------|------------------------------------|------|
| Certified Representative Name (print) | Certified Representative Signature | Date |
|---------------------------------------|------------------------------------|------|

Property Owner Signature

As a condition of this permit, I agree to operate and maintain this GTED under the provisions of Minnesota Statutes, chapter 103I and Minnesota Rules, chapter 4725 and to allow inspection by the commissioner of health or their agent during regular work hours.

| | | |
|-----------------------------|--------------------------|------|
| Property Owner Name (print) | Property Owner Signature | Date |
|-----------------------------|--------------------------|------|