



## Massachusetts Department of Environmental Protection Bureau of Water Resources – Drinking Water Program

### Instructions for UIC Open-Loop Ground Source Heat Pump Well Technical Compliance Form (Attach to your eDEP BRP WS 06 UIC Registration application form)

#### INTRODUCTION:

The *UIC Open-Loop Ground Source Heat Pump Well Technical Compliance Form* should be submitted with all Underground Injection Control (UIC) registration applications for UIC Class V open-loop ground source heat pump (GSHP) wells unless you are only registering those wells for the purpose of closing all of them.

The technical compliance form should be used by the applicant and Massachusetts Department of Environmental Protection (MassDEP) to determine whether a UIC Registration for open-loop GSHP discharge may be approved. Depending upon responses to questions provided on this form, MassDEP may contact you for additional information.

Technical Compliance forms are not required if you are registering UIC wells for the purpose of closing all of them.

For more information, the MassDEP's *Guidelines for Ground Source Heat Pump Wells* is available in the "Guidance" section of the following MassDEP UIC program's web page: <https://www.mass.gov/lists/underground-injection-control-uic-guidance>. All questions regarding the UIC program should be addressed to [ask.uic@mass.gov](mailto:ask.uic@mass.gov) or to Joe Cerutti by phone at 617 292-5859 or by mail at the address shown at the end of this document. You may also contact the MassDEP Drinking Water Program at [program.director-dwp@mass.gov](mailto:program.director-dwp@mass.gov) or by phone at 617-292-5770. You may also contact the MassDEP Drinking Water Program at [program.director-dwp@mass.gov](mailto:program.director-dwp@mass.gov) Subject: UIC, or by phone at 617-292-5770.

#### **DIRECTIONS FOR FILLING OUT THE UIC OPEN-LOOP GROUND SOURCE HEAT PUMP WELL TECHNICAL COMPLIANCE FORM:**

##### **Enter UIC Registration Number (if applicable):**

Provide the UIC Registration Number that was issued to you by MassDEP upon approval of your BRP WS06 Registration application form. If this is your first application for this/these well(s) then a UIC Registration Number has not been issued and you should leave this entry blank.

#### **Section A. Facility Information**

**Facility/Residential Property Name:** Enter the common name of this facility if it is different than the legal name and the facilities (or residences') street address and the town that the facility is located in. You may enter "private residences" under the "Facility/Residential Property Name" category if applicable.

#### **Section B. Preparer Information**

Enter the name, mailing address, email address, and phone number of the person who has completed the UIC Class V Well Completion of Construction Notification Form.

#### **Section C. Open-Loop GSHP Well Technical Compliance Questions**

Most of the following technical compliance questions relate to the MassDEP *Guidelines for Ground Source Heat Pump Wells*. These guidelines may be obtained from the Underground Injection Control Guidance section on the following MassDEP web page: <https://www.mass.gov/lists/underground-injection-control-uic-guidance>.



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- 1.) Is there any existing soil or groundwater contamination that may be affected by the UIC Class V injection (i.e. soil contamination that may be mobilized either directly from the discharge or indirectly from the water table mounding that will result from the discharge and/or groundwater contaminant plumes that may migrate or expand as a result of the Class V UIC injection)?**

If yes, MassDEP will require additional information regarding the potential for soil and/or groundwater contamination migration that may occur and a feasibility argument for why the UIC discharge can't be designed to eliminate the potential for causing an impact on contaminant transport.

- 2.) Is the well that will be receiving the discharge from the GSHP system also being used as a public water supply well?**

A public water supply well is a well that is regulated by the MassDEP Drinking Water Program (DWP). If yes, you are strongly advised to contact the MassDEP UIC program prior to submitting your UIC Registration application so that MassDEP may work with you to determine whether or not your proposed GSHP system is approvable.

- 3.) Is the well that will be receiving the discharge from the GSHP system also being used as a private water supply well?**

If yes, please be aware that the use of the well as a source of private drinking water requires prior approval from the local board of health or health department. Also, a local plumbing permit is required for the installation of the plumbing associated with the GSHP system.

- a. If yes, does the proposed GSHP system meet the criteria stated in Sections 6.0 and 9.3 of the MassDEP Guidelines for Ground Source Heat Pump Wells?

If no to question 3.a., you are not eligible for MassDEP UIC Registration approval unless you request and obtain MassDEP approval of your proposed variance from the guidelines. There are no exceptions to the Section 9.3 backflow prevention device requirements.

- 4.) Is the existing or proposed UIC GSHP well in a Zone I Wellhead Protection Area of a public water supply?**

If yes, you are strongly advised to contact the MassDEP UIC program prior to submitting your UIC Registration application so that MassDEP may work with you to determine whether or not your proposed GSHP system is approvable.

In order to determine whether or not you are may be within a Zone I you may use the MassDEP Online Map Viewer <http://maps.massgis.state.ma.us/images/dep/omv/wspviewer.htm> Make sure that you zoom in far enough to get the detail necessary to accurately locate your facility or residence. Zone I areas are not mapped but public water supply well locations are. There is a "legend" button on the main page that will open a pop-up legend window so that you can see the symbols for a public water supply well (the two symbols are labeled "community groundwater well" and "non-community groundwater well").

The maximum Zone I radius for a public water supply well is 400 feet from the well. If you are within 400 feet of a public water supply well then you should contact the MassDEP UIC program for information regarding the Zone I radius for that well.



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#### 5.) Does the existing or proposed GSHP system include a system bleed discharge?

- a. If yes, does or will the system bleed discharge line include a backflow prevention device to prevent back siphoning?

See Section 9.3 of the guidelines.

#### 6.) Does any of the GSHP return flow or system bleed discharge to a surface water body or to a stormwater system that discharges to a surface water body?

The EPA National Pollutant Discharge Elimination System (NPDES) regulations apply to the surface water discharge from a GSHP system. Any discharge of GSHP wastewater (including system bleed discharge) to a jurisdictional surface water body requires a NPDES Noncontact Cooling Water General Permit (NCCWGP). The requirement to obtain an NCCWGP also applies to GSHP wastewater discharges to a stormwater system that discharges to a jurisdictional surface water body regardless of whether or not a NPDES Permit has been issued for the stormwater discharge. Please be aware that some of the maximum contaminant concentrations allowed under a NPDES permit are more stringent than are allowed under a UIC Registered discharge.

#### 7.) Will any chemicals be added to the water that is discharged to the UIC well?

If yes, you are advised to contact the MassDEP UIC program prior to submitting your UIC Registration application so that MassDEP may work with you to determine whether or not your proposed GSHP discharge is eligible for a UIC Registration approval or whether it requires a MassDEP issued Groundwater Discharge Permit.

#### 8.) Does the existing or proposed GSHP well(s) meet the applicable setback distances from Section 9.7 of the *Guidelines for Guidelines for Ground Source Heat Pump Wells*?

If no, you are not eligible for MassDEP UIC Registration approval unless you request and obtain MassDEP approval of your proposed variance from the guidelines.

#### Section D. Certification Statement

State statutes provide for penalties for submitting false information on this application form. This section must be signed by either the owner or operator of the property/facility. Any person who signs for the operator or owner must have authority to legally bind the business to perform the activities described in the applicable certification statement. The following are the only eligible persons who may sign for the operator or owner.

Any person who signs for the operator or owner must have authority to legally bind the business to perform the activities described in the applicable certification statement. That person must be one of the following:

- In a sole proprietorship, the company's sole proprietor.
- In a partnership, a general partner with authority to bind the partnership.
- In a corporation or a non-profit corporation, a corporate official with authority to bind the corporation, e.g., president, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy-making or decision making functions of the corporation.
- In a municipality or other public agency, a principal executive officer or ranking elected official who is empowered to enter into contracts on behalf of the municipality or public agency.



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Well Technical Compliance Form (Attach to your eDEP  
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**Upload a copy of the signed original document through eDEP upon submittal of your eDEP UIC registration application or mail the original to:**

MassDEP  
1 Winter Street – 5th Floor  
Boston, MA 02108  
Attn: UIC Program