

Permit No. \_\_\_\_\_



## APPLICATION FOR PERMIT TO CONSTRUCT OR MODIFY A LOW-FLOW (<50 GPM) HEAT PUMP INJECTION WELL (5A7 ONLY)

**IDAHO DEPARTMENT OF WATER RESOURCES**  
322 East Front St., PO Box 83720, Boise, ID 83720-0098  
Under the Provisions of Title 42, Chapter 39 of the Idaho Code

### I. GENERAL INFORMATION

#### A. Application Type:

- New Injection Well Operating Permit (A Drilling Permit is also required prior to construction)
- Permit to Modify an Existing Injection Well

#### B. Legal Owner:

Name \_\_\_\_\_  
 Organization Name \_\_\_\_\_  
 Mailing Address \_\_\_\_\_  
 City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_  
 Phone No. 1 \_\_\_\_\_ Phone No. 2 \_\_\_\_\_

\*\*If the property will change ownership soon, provide contact information for future owner:

\_\_\_\_\_

#### C. Well Location:

Facility Name \_\_\_\_\_  
 Address \_\_\_\_\_  
 City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_  
 County \_\_\_\_\_ Facility Phone No. \_\_\_\_\_

Provide one of the following two options:

1) GPS Location (Datum = WGS84):

Latitude \_\_\_\_\_ Longitude \_\_\_\_\_

(You can check the accuracy of your GPS data with the "Well Diller's Locator Tool" here:  
<http://maps.idwr.idaho.gov/locator>)

2) A USGS Topographic Map or aerial photo with the well location marked **and** Township, Range, Section information.

| Township | Range | Section | ¼, ¼, ¼ Section | ¼, ¼ Section | ¼ Section |
|----------|-------|---------|-----------------|--------------|-----------|
|          |       |         |                 |              |           |

(Get free maps using this tool: <http://maps.idwr.idaho.gov/IrrigationRightsFinder>)

#### D. Well Operation:

Frequency of Injection:  Continuous (24 hr/day, 7 day/wk)  Intermittent

Maximum Average Weekly Rate \_\_\_\_\_  cfs  gpm

**E. Well Construction Information:** (Attach well log, if available)

- As Built                       Expected Construction                       Well Modification

Total Well Depth: \_\_\_\_\_ (ft)  
Well Casing: Diameter \_\_\_\_\_ (in) Depth \_\_\_\_\_ (ft)  
Ht. above Ground Surface \_\_\_\_\_ (ft) Casing Type \_\_\_\_\_  
Perforation: From \_\_\_\_\_ (ft) To \_\_\_\_\_ (ft)  
Surface Seal: Depth \_\_\_\_\_ (ft) Seal Type \_\_\_\_\_

Construction Date (Indicate Actual, Approximate or Anticipated): \_\_\_\_\_  
Driller's Name: \_\_\_\_\_

For well modifications describe purpose and intended changes:  
\_\_\_\_\_  
\_\_\_\_\_

**F. Adjacent Features:**

Depth to Groundwater \_\_\_\_\_ (ft)  Estimate  Measured Date Measured \_\_\_\_\_  
Distance to Nearest Domestic Well \_\_\_\_\_ (ft) Direction \_\_\_\_\_

**II. WATER USAGE INFORMATION**

- A. Attach documentation from your heat pump contractor that indicates how many gallons per day your heat pump will use during peak heating and cooling days.
- B. What is the approximate square footage of the structure served by the heat pump? \_\_\_\_\_
- C. Please check all of your domestic uses served by your groundwater well:  
 Household                       Irrigation ( $\leq \frac{1}{2}$  acre)                       Livestock  
 Heat Pump                       Other \_\_\_\_\_

What is your total domestic groundwater usage? \_\_\_\_\_ Gallons Per Day  
(Guidance on page 5)

- Are you connected to a city or community drinking water system?  Yes  No
- Do you have a water right for the heat pump?  Yes  No Water Right # \_\_\_\_\_
- Have you applied for a water right for the heat pump?  Yes  No Water Right Application # \_\_\_\_\_

### III. CONDITIONS OF APPROVAL

1. This injection well is administered under IDAPA 37.03.03, Rules and Regulations for the Construction and Use of Injection Wells, and IDAPA 37.03.09, Well Construction Standards & Rules.
2. The facility owner and operator bear sole responsibility to mitigate for harm or degradation resulting from the injection activities authorized in this permit.
3. Violating the water quality standards stated in IDAPA 37.03.03.050, degrading the quality of the groundwater, or impacting a beneficial use of groundwater resources through the use of this injection well is prohibited and is cause for cancellation of this permit.
4. In the event that existing or future points of diversion for beneficial use are suspected by IDWR of being contaminated by injection activities at this well, IDWR will require that injection activities at this well cease immediately. Burden of proof that injection activities at this well are not contaminating existing or future points of diversion is the responsibility of the injection well owner.
5. Approval of this permit does not authorize diversion or beneficial use of water. This permit is not a Water Right nor does approval of this permit guarantee the approval of any Water Right being sought for this well.
6. The system must be closed to the surface to prevent contamination of the injectate. A protected air vent may be installed if needed, and a sampling port is required.
7. The injectate entering this well must be restricted to heat exchange unit return water. Prior approval from the IDWR UIC Program is required for the use of additives.
8. Discharge water from the heat exchange unit into the well is recommended to be delivered via a drop pipe that terminates below the static water level in the well. Seasonal fluctuations in groundwater levels should be considered when determining the depth of the drop pipe to insure that the outflow end is submerged at all times. A pitless adaptor should be used to create a watertight seal between the drop pipe and conductance pipe delivering water to the well to prevent contamination of the discharge water.
9. The temperature of injected water must be maintained below 85° F. If the injectate temperature exceeds 85° F, the Department of Water Resources must be notified within 48 hours of the increased injectate temperature.
10. If at any time use of this injection well is not desired, the owner/operator must contact the IDWR UIC Program to obtain approval prior to decommissioning activities commence.
11. A well log must be submitted to IDWR within thirty (30) days of the construction of new injection wells.

### IV. SIGNATURE OF LEGAL OWNER

I certify under penalty of law that there are no discharges of hazardous substances or other fluids in amounts that may endanger an underground source of drinking water from the injection well(s) identified on this application form.

I have read and understand the Conditions of Approval for the operation of this injection well. Additionally, I certify under penalty of law that this document and all attachments were prepared under my direction or

supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information is to the best of my knowledge and belief true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

All sections of this form must be complete and accurate. Incomplete forms will be returned to applicant. The information submitted is subject to verification by IDWR or its agents.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**V. PROCESSING FEE**

A \$100.00 processing fee must be submitted for each permit application. A separate permit application and processing fee must be submitted for each injection well. Make checks payable to: Idaho Department of Water Resources.

All sections of this form must be complete and accurate. Incomplete forms will be returned to applicant. The information submitted is subject to verification by IDWR or its agents. Applications and fees can be submitted your nearest IDWR office:

IDWR Northern Region  
7600 N Mineral Dr., Suite 100  
Coeur d'Alene, ID 83815  
Ph: (208) 762-2800

IDWR Southern Region  
650 Addison Ave., Suite 500  
Twin Falls, ID 83301  
Ph: (208) 736-3033

IDWR Eastern Region  
900 North Skyline  
Idaho Falls, ID 83402  
Ph: (208) 525-7161

IDWR Western Region  
2735 Airport Way  
Boise, ID 83705  
Ph: (208) 334-2190

IDWR State Office  
322 East Front St., PO Box 83720  
Boise, ID 83720-0098  
Ph: (208) 287-4800.

**VI. IDWR APPROVAL** (to be completed by IDWR personnel)

This permit will be administered in accordance with Idaho law and applicable rules of the Idaho Department of Water Resources.

Date this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_

\_\_\_\_\_

## UIC Program Guidance For Calculating Total Domestic Water Use For Permitting a Ground-Source Heat Pump



Idaho Code (42-111 & 42-227) defines domestic water use and states that a water right is not required for domestic use, provided that the volume of water does not exceed 13,000 gallons per day. When permitting an injection well for a ground-source heat pump, the UIC Program must determine if the use of a heat pump will cause a homeowner to exceed the 13,000 gallon per day limit for a domestic water right exemption. If domestic water use is anticipated to exceed 13,000 gallons per day, the applicant must obtain a water right before the injection well permit can be issued by IDWR.

The following table should be completed to document your calculation of total domestic water use for Section II of your injection well application.

| Use                               | Gallons Per Day Per Person   |   | Number of People  |   | Total Gallons Used Per Day |
|-----------------------------------|--|---|-------------------|---|----------------------------|
| Single Family Residence           | 75   | x |                   | = |                            |
| Luxury Residence                  | 150  | x |                   | = |                            |
|                                   |  |   |                   |   |                            |
| Use                               | Gallons Per Day Per Animal   |   | Number of Animals |   |                            |
| Cattle                            | 12   | x |                   | = |                            |
| Dairy Cattle                      | 35   | x |                   | = |                            |
| Horses                            | 12   | x |                   | = |                            |
| Mules                             | 12   | x |                   | = |                            |
| Hogs                              | 4  | x |                   | = |                            |
| Goats                             | 2  | x |                   | = |                            |
| Sheep                             | 2  | x |                   | = |                            |
| Other Livestock                   |  | x |                   | = |                            |
|                                   |  |   |                   |   |                            |
| Use                               | Gallons Per Day Per 100 Animals  |   | Number of Animals |   |                            |
| Chickens                          | 10   | x |                   | = |                            |
| Turkeys                           | 18   | x |                   | = |                            |
| Other Poultry                     |  | x |                   | = |                            |
|                                   |  |   |                   |   |                            |
| Use                               | Gallons Per Day Per 1 Acre at 9 gpm                                    |   | Number of Acres   |   |                            |
| Irrigation                        | 12,960   | x |                   | = |                            |
|                                   |  |   |                   |   |                            |
| Use                               | Average Weekly Injection Rate (gpm)<br>See Page 5 Guidance – Example 1 |   | Minutes Per Day   |   |                            |
| Heat Pump                         |  | x | 1440              | = |                            |
|                                   |  |   |                   |   |                            |
| Other Uses                        | Gallons Per Day  |   |                   |   |                            |
|                                   |  |   |                   |   |                            |
|                                   |  |   |                   |   |                            |
|                                   |  |   |                   |   |                            |
|                                   |  |   |                   |   |                            |
| <b>Total Gallons Per Day Used</b> |  |   |                   |   |                            |