

GEOTHERMAL VERTICAL LOOP INSTALLER COURSE



Education Program brought to you by:
American Ground Water Trust
50 Pleasant Street, Suite 2
Concord, New Hampshire 03301



November 1 & 2, 2011
8:00 am – 5:15 pm (daily)
Holiday Inn
Cleveland, OH

- ☞ **NATURAL GAS HAS ENVIRONMENTAL PRESSURES**
- ☞ **NUCLEAR ENERGY IS LESS CERTAIN**
- ☞ **OIL PRICES ARE RISING**
- ☞ **GEOTHERMAL IS GROWING**

!! DON'T GET LEFT BEHIND !!

GEOTHERMAL VERTICAL LOOP INSTALLER COURSE

Training Program for Drillers

EXPAND YOUR DRILLING BUSINESS IN THE RAPIDLY GROWING GEOTHERMAL MARKET

November 1 & 2, 2011 ~ 8:00 am – 5:15 pm (daily)
Holiday Inn Cleveland Airport, 4181 West 150th Street, Cleveland, OH 44135
Hotel Tel: (216) 658-9053

Present US geothermal market penetration is less than 1%

One million homes have geothermal (ground source heat pump) installations

Potentially there are ninety nine million properties still waiting for geothermal installation

Vertical Loop Installation (correctly done) provides immediate and long term business opportunities

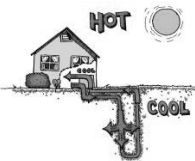
***** Course details and certifications available inside *****

GEOTHERMAL VERTICAL LOOP INSTALLER COURSE

Program Focus – What will the course cover?

Ground-loop installations for geothermal energy exchange are the backbone of ground source heating and cooling HVAC systems. This training program will provide drillers with the opportunity to learn how to install drilled vertical loop systems using industry-accepted methods in terms of design, effort, materials, and installation techniques. Architects and system designers are increasingly looking for contractors who have completed training specific to the geothermal industry.

Convened by:
American Ground Water Trust
501(c)(3) non-profit Education organization
Leader in Ground Water Education



CLIMATEMASTER
Geothermal Heating & Cooling Systems

Training by:
ClimateMaster
*The largest manufacturer of
heat pumps in the US*

COURSE, CERTIFICATIONS AND INSTRUCTOR INFORMATION

COURSE TOPICS: (Full details at www.agwt.org)

Drilling Methods for Geothermal Vertical Loop Installations

Geothermal - Enhanced Grouting Requirements and Procedures

Learn how a Site Survey can Increase Your Profits

How to Conduct a Site Survey and What Documentation is required

How a Geothermal Heat Pump (GHP) Works

- GHP System Components and How they Function
- Learn about Basic Refrigeration - The Foundation of GHP Operation
- How to Calculate the Optimum Operating Water Flow Rate for Efficiency
- How to Calculate the Amount of Heat Available in the Ground For Extract/Rejection

Closed Loop Design Basics - How Is Ground Energy Transferred - Ground To Building and Back Again

- Flow Controller
- Parallel vs. Series Configurations
- Header Design
- Inside Piping
- Vertical Loop Piping Installation & Testing
- Closed Loop Pressure Drop Calculations

Flushing the Earth Loop - In many ways the "Most important part of the Installation Process"

- Learn The Proper Flushing Procedure and How It Can Make Your Job More Profitable; Typical Flush Carts, Valve Positioning and Flushing, Antifreeze Selection & Charging, Pump Replacement Procedure

Computer Design Basics - GeoDesigner Software Overview

Drillers Who Successfully Complete the Training May Obtain the Following Certifications / Recognition:

- ClimateMaster Certificate of Participation (Test Required)
- Membership in ClimateMaster's Preferred Vertical Loop Installer & Dealership Network
- Inclusion on ClimateMaster's Find-a-Preferred Driller Website Listing
- Socket Fusion Certification
- Access to ClimateMaster's GSHP Loop Installation Experts

INSTRUCTOR: The course is taught by Dave Pergel, a ClimateMaster Lead Trainer and Senior Field Systems Engineer. Dave has drilled and installed Ground Source Heat Pump HVAC systems for over thirty years.



REGISTRATION FORM or register online at www.agwt.org/workshops.htm

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To obtain the special sleeping room rate of \$79, please call the hotel and reference American Ground Water Trust

COURSE REGISTRATION

\$300.00 **

**Registration includes (two days) on-site lunches, all break foods, study materials and ClimateMaster's Drillers Installation Kit™. All proceeds go to support the AGWT to offset costs for its ground water education programs. The AGWT is a 501 ©(3) non-profit organization.

Please Note: Walk-in Registrations on day of the course is not available. Pre-registration required. Course limited to 25 attendees.

PAYMENT: Check [payable to: American Ground Water Trust]

AMEX Visa MasterCard PO

Card # _____ Expiration _____

Cardholder Name _____ Cardholder E-mail _____

Name of Attendee _____ Attendee E-mail _____

Company _____ Job Title: _____

Address _____ City _____ State _____ Zip _____

Phone _____ Fax _____

CANCELLATION POLICY

- Cancellations received in the AGWT office by 5 pm EST 5 days prior to event will receive a full refund less \$25.
- For cancellation 4-2 days prior to the there is a 50 % refund.
- Cancellations one day prior to the start of the event or on the day of the event are considered "No Shows" and no refund will be made - (substitutions gladly accepted).
- The AGWT will not cancel a program because of bad weather conditions. Except that, as the result of an event cancellation resulting from, (but not limited to) circumstances such as a state mandatory evacuation or a fire at the program facility, the Trust will reschedule the event and honor registrations as payment for the new event.

Mail: American Ground Water Trust, 50 Pleasant St., Suite 2, Concord, NH 03301-4073 ~ **Call:** (800) 423-7748 ~ **Fax:** (603) 228-6557