The Northwest Environmental Training Center presents:

**Introduction to Applied Hydrogeologic Site Characterization & Monitoring Well Construction for Environmental Professionals**

Course ID: GHYD-402  
October 1-3, 2008, 8:30 A.M. to 5 P.M.  
Alaska Department of Fish and Game  
Sport Fish Division  
1300 College Rd.  
Fairbanks, Alaska 99701

**Instructors:** Rick G. Graff  
**Guest Speaker:** Michael R. Lilly, President of Geo-Watersheds Scientific

**Description:** This three day training course is intended to introduce environmental professionals to Applied Hydrogeologic principles and prepare the attendee to manage and develop Site Characterization activities. These principles will be presented by the trainer in a clear manner to students who have little to no previous knowledge of hydrogeology. Conceptual real-world discussions and visual aids will help in dispelling common misconceptions of groundwater. Hands on exercises will allow the student to apply this conceptual understanding to practical use. In-class exercises will include calculating hydraulic gradient, flow direction, flow volume, and flow velocity; water table contouring, designing monitoring wells, constructing geologic profiles from well logs, and investigating contaminated sites based on case study data. The course is structured in a manner that the student will be able to understand hydrogeologic reports, prepare work plans and implement field studies. The attendee will further understand regional groundwater hydrology and how it relates to their local environment. The class is intended for environmental professionals who are not hydrogeologists, but would benefit from a practical understanding of environmental hydrogeology.

**About the Instructor:** Rick has over 23 years of experience as a Water Resources Geologist providing pragmatic solutions to water resource and environmental issues for private and public sector clients. This experience has included hydrogeologic site characterizations at many locations throughout North America. He also has extensive experience with water supply studies for agricultural, municipal and domestic water users. Rick is well versed with federal, state and local regulations including CWA, SDWA, RCRA, CERCLA, water rights, and growth management requirements.

**About the Guest Speaker:** Mr. Lilly has been working for more than twenty years on Alaskan climate, hydrologic, and geotechnical programs. Educational background includes a B.S. in Geology from Texas A&M and a M.S. in Hydrogeology from the University of Alaska Fairbanks. Experience includes over 15 years managing large-scale projects in the Fairbanks and North Slope areas. After working for the USGS for 7 years managing ground-water and surface-water research projects in the Fairbanks area, Michael started GW Scientific. An ongoing area of interest is helping diverse groups understand the balances in sustainable resource conservation and development and leading interdisciplinary teams of scientists and engineers. Michael has helped bring industry, agency, and public organizations together to help achieve these goals through applied research, education and outreach. Remote monitoring and data acquisition is a specialty service, including internet applications for over 15 years. Key research partners include the University of Alaska Fairbanks and the Cold Climate Housing Research Center. Current research interests include the design and operations of arctic transportation networks, arctic hydrology, and increased sustainability in Arctic and Sub-Arctic communities.

**Course Topics:**

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<tr>
<th>Introduction</th>
<th>Groundwater Hydrology (continued)</th>
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<tbody>
<tr>
<td>Course outline</td>
<td>Saturated, unsaturated zones</td>
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<td>Overview of groundwater resources</td>
<td>Specific yield, retention</td>
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Intended Audience: Course attendees would include scientist, technicians and well owners. Further, the general public could gain pertinent knowledge local water resource issues and protection of the resource.

After completing this course, participants will be able to:

- Design monitoring wells for contaminant delineation
- Review Hydrogeologic reports
- Understand elementary pumping tests
- Prepare work plans for groundwater field studies
- Take a further advanced groundwater classes

Prerequisites: A basic understanding of hydrologic and chemical processes is required.

Course Materials: Attendees will receive a binder containing workshop proceedings and reference material.

Continuing Education Units: 1.3

What to Bring: Pen or pencil, coffee mug, and a water bottle (to reduce waste). Please wear comfortable clothes appropriate for the prevailing weather. Drinks and snacks will be provided each day. Lunch on your own. Please provide extra time to pass through security at the Alaska Fish and Game Building. Please do not bring any items considered to contraband.

Registration: $595 (*$495 reduced tuition is available for Native American tribes; government employees; nonprofits; students; and NAEP, NEBC, NWAEP members). You may register via the link below or by calling the Northwest Environmental Training Center at 206-762-1976.

Cancellation Policy: Registration fees are fully refundable up to 30 days prior to the event and 50 percent refundable (or 100% credit) thereafter up to 3 business days prior to the event. No refunds are issued for cancellations occurring less than 3 business days before the start day. Course registration fees and cancellation policy are subject to change without notice.

Disability Accommodations: To request disability accommodations, please contact us at info@nwetc.org or (206) 762-1976 at least 30 days prior to the event.

Northwest Environmental Training Center
A nonprofit 501(c)(3) program of the Northwest Environmental Education Council
650 S. Orcas Street, Suite 220, Seattle, Washington 98108
Phone: (206)762-1976, Fax: (206)762-1979
www.nwetc.org
### Accommodations in Fairbanks, AK

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<tr>
<th>Hotel Name</th>
<th>Address</th>
<th>Phone Number</th>
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<tbody>
<tr>
<td>Regency Fairbanks Hotel</td>
<td>95 - 10th Avenue, Fairbanks, AK 99701</td>
<td>(907) 459-2700</td>
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<tr>
<td>Pike's Waterfront Lodge LLC</td>
<td>1850 Hoselton Rd, Fairbanks, AK</td>
<td>(907) 456-4500</td>
</tr>
<tr>
<td>Bridgewater Hotel</td>
<td>723 1st Ave, Fairbanks, AK</td>
<td>(907) 456-3642</td>
</tr>
<tr>
<td>Fairbanks Springhill Suites by Mariott</td>
<td>575 1st Ave, Fairbanks, AK</td>
<td>(877) 729-0197</td>
</tr>
<tr>
<td>Aspen Hotel</td>
<td>4580 Old Airport Way, Fairbanks, AK</td>
<td>(907) 457-2288</td>
</tr>
<tr>
<td>Captain Bartlett Inn</td>
<td>1411 Airport Way, Fairbanks, AK</td>
<td>(907) 452-1888</td>
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Directions/Maps to
Alaska Department of Fish and Game
Sport Fish Division
1300 College Rd.
Fairbanks, Alaska 99701

From Rt 2
AK-2 N toward Fairbanks
Turn left at College Rd
1300 College Rd Fairbanks, AK 99701

From AK 3
AK-3 northeast
Take the Chena Pump Rd/Geist Rd exit
Turn left at Chena Pump Rd/Geist Rd
Continue to follow Geist Rd
Turn left at University Ave
Turn right at College Rd
1300 College Rd Fairbanks, AK 99701
REGISTRATION FORM

Name: ________________________________  Today’s Date: __________________

Agency/Organization: ____________________________

Street Address: ______________________________________

Street Address (cont’d): ________________________________

City: ___________________  State: ___________  Zip: ___________

Phone: ____________________________  Fax: __________________________

Email: ___________________________  Title: __________________

**Applied Hydrogeological Site Characterization & Monitoring Well Construction**

For Environmental Professionals  $_________

Course ID: GHYD-401 (3 days)

October 1-3, 2008, 8:30 A.M. to 5:00 P.M.

Alaska Department of Fish and Game – Sport Fish Division

1300 College Rd., Fairbanks, AK 99701

Registration: $595 (**$495**)

*Reduced rates for Native American Tribes; nonprofits; government; students; and NEBC and NAEP members.

Payment Method: Check ☐  PO ☐  Credit Card (☐Visa  ☐Mastercard)  Total: $______________

Credit Card or PO #: ___________________________  Exp: __________________

Notes: Please make checks payable to Northwest Environmental Training Center.

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