

Aquifer Testing For Improved Hydrogeologic Site Characterization

Featuring **AQTESOLV™** and the **In-Situ LevelTROLL®**

Dates:

5 & 6 October 2010

Location:

In-Situ, Inc. Headquarters
Fort Collins, Colorado

Instructors:

Jim Butler, PhD, PG
Kansas Geological Survey and
2007 NGWA Darcy Lecturer

Glenn Duffield

HydroSOLVE, Inc., Author of AQTESOLV

Jim Butler is author of "The Design, Performance, and Analysis of Slug Tests" (Lewis Pub., 1998) and the 2007 National Ground Water Association Distinguished Darcy Lecturer with more than 60 lectures on four continents. For the last 20 years, he has worked as a research scientist at the Kansas Geological Survey. He holds a B.S. in Geology from the College of William and Mary, and a M.S. and Ph.D. in Applied Hydrogeology from Stanford University. Jim also serves as a consulting hydrogeologist to federal agencies and private industry, and is currently an associate editor of both Ground Water and the Hydrogeology Journal.

Glenn Duffield is a hydrogeologist and the president of HydroSOLVE, Inc., with over 25 years of consulting experience in groundwater flow and transport modeling, software development and aquifer test analysis. He is currently an associate editor of Ground Water and the author of AQTESOLV, which for over 17 years has been the world's leading software for the analysis of aquifer tests

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Conducting aquifer tests in complex hydrogeologic settings such as heterogeneous or fractured media is a key element to site characterization, water resources assessment and remediation system design. However poorly planned aquifer testing programs often lead to suspect data or unanswered questions after the field work is complete. Even when you are confident of the geologic conditions, you may have difficulty designing effective aquifer tests, running field equipment or selecting the best available model to analyze the test data. Where can you turn to improve your approach and skills for aquifer testing?

Midwest GeoSciences Group can help! We have designed a powerful two-day training course on aquifer testing design, field methods and data analysis techniques featuring AQTESOLV and the In-Situ Level TROLL. This course will provide you with the knowledge to master aquifer testing from beginning to end - using world class field equipment and aquifer test software.

This course will teach you state-of-the-art methods and procedures for designing, conducting, and analyzing aquifer tests. You will gain the following benefits from the course:

Master State-of-the-Art Field and Analysis Procedures

- Learn to design the most effective aquifer test programs for a wide range of geologic conditions (including low permeability confining units and fractured bedrock)
- Gain an advantage during your next aquifer test by mastering new field and data analysis procedures
- Find out how to differentiate laterally extensive sands from isolated sand bodies
- Discover new techniques for anticipating and resolving problems that may arise in aquifer tests
- Obtain step-by-step instruction for field screening using AQTESOLV computerized analysis

Learn Up-To-Date Slug Testing Procedures

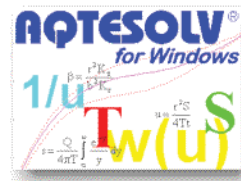
- Learn to select and apply appropriate slug test models for different hydrogeologic settings and well configurations
- Maximize results from tests conducted in wells screened across the water table
- Find out how to recognize and account for the effects of noninstantaneous (noisy) test initiation and wellbore skin
- Discover the latest strategies for designing, conducting and analyzing tests in high-K media including oscillatory responses
- Gain knowledge of new approaches for decreasing test duration in low-K media
- Master all aspects of data collection with the In-Situ Level TROLL
- Obtain hands-on experience with AQTESOLV analyzing data from a wide range of geologic settings

Discover Recent Advances in Pumping Test Methods

- Learn to design, conduct and analyze pumping tests in confined, leaky, unconfined and fractured aquifers
- Master strategies for dealing with variable pumping rates, wellbore storage, partial penetration, well losses, wellbore skin and other common issues
- Discover powerful diagnostic methods including derivative analysis that help you select appropriate pumping test models
- Gain an advantage by applying Agarwal's method for analysis of recovery data
- Find out the best procedures for monitoring a pumping test with the Level TROLL
- Master tips and tricks for using AQTESOLV to analyze constant-rate, step-drawdown and recovery tests

BRING YOUR COMPUTER

Analyze data from a variety of hydrogeologic conditions and well configurations using AQTESOLV. Participants are welcomed to bring their own project data for analysis for QA/QC by the instructors .



www.aqtesolv.com



16 Contact Hours
1.6 CEUs

Advanced registration is necessary for participation in this limited-enrollment short course. Pre-registration is required to reserve space and receive course materials. A confirmation letter and map will be sent within 10 days following your course registration.

REGISTRATION

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Last Name: _____ First Name: _____
 Position: _____
 Company: _____
 Address: _____
 City, State, Zip: _____
 Phone: _____
 Email: _____

*For early registration, payment must be received before 09/24/2010. Cancellations may be made up to Sept 24, however 25% of the fee will be charged. No refunds. Questions? Call Customer Service at 763.607.0092 or email info@midwestgeo.com.

Course Fee: Register Now..... \$750
After Sept 24..... \$999

Check Enclosed

VISA MasterCard AMEX

VISA / MC / AMEX NUMBER _____ EXP _____

CARDHOLDER NAME _____

Purchase Order _____

Mail completed form with payment to:
In-Situ, Inc. (Attn: Jeff Leatherman)
221 East Lincoln Avenue
Ft. Collins, Colorado 80524

Or Register On-Line: www.midwestgeo.com

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6771 County Road 8 SW
Waverly, Minnesota 55390



In-Situ, Inc. Headquarters

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Ft. Collins, Colorado

These are the guys who literally wrote the book -- excellent course, very helpful, and cutting edge.

- Paul Blubaugh, Michael Pisani & Associates, Inc.

The course was very helpful and I will apply the information using the different models available in AQTESOLV. The sessions for slug testing shed light on input parameters and will us to use our data to obtain more reliable results!

- Tonya McGowan, GES, Inc.

The instructors enthusiasm made for a great atmosphere and it transferred over to the overall enthusiasm of the attendees.

This is a great course...and is a must for geologists and engineers alike! I look forward to attending future courses! Kudos!

- Peter Wilson, Wright-Pierce

The diagnostic / derivative plots for pumping test analysis was most valuable to me.

- Larry Cook, Larry Cook & Associates of Australia

Quotes from participants of our most recent aquifer testing course:

I have attended the Advanced Aquifer Testing Analysis course _twice_. The usefulness and quality of information coupled with the instructor's excellent teaching skills and tools is the best continuing education seminar/workshop/short course I have experienced in my 25+ years as a professional hydrogeologist."

- Brent Huntsman, Terran Corporation

Great course - I learned a lot! (I will) put it into practice as soon as I get back to the office.

- Dan Matlock, Pacific Groundwater Group

This (is) the best course that I've ever attended and I look forward to future course offerings. Excellent!

- Mark Larson, Larson & Associates

All-in-all, one of the best courses I've ever taken.

- Cynthia Gefvert, South Florida Water Management District

Great Course! Would highly recommend it to any hydrogeologist.

- Dan Weber, Errol L. Montgomery & Associates

Venue and Accommodations

We chose the In-Situ, Inc. headquarters for this course location so you can see and experience the place where the most widely used aquifer testing field equipment is developed and manufactured.

In-Situ, Inc. headquarters is located in Ft. Collins, CO which is approximately 55 miles north of Denver and 35 miles from Rocky Mountain National Park.

A block of rooms is reserved at the Fort Collins Hilton until September 15, 2006. Mention "In-Situ / MidwestGeo" to receive the guaranteed rate of \$98/night.

Hilton Fort Collins

425 W. Prospect
Fort Collins, CO 80526
Phone: 1-970-482-2626
Fax: 1-970-493-6265
www.hiltonfortcollins.com

Ground Transportation

If you are flying to Denver, you can arrange ground transportation to Ft. Collins via various express shuttle services. The one-way rate for Shamrock Airport Express service is approx. \$32.

Shamrock Airport Express

4414 E. Harmony Rd, Ft. Collins 80525
970-686-5555
www.rideshamrock.com

Daily ground transportation to the course from the Fort Collins Hilton will be provided by the hotel. Call ahead to reserve space.

Course affiliates are not responsible for ticketing or expenses.

What to Bring

Bring your laptop computer, a calculator and any field forms that you normally use for aquifer testing. You are also encouraged to bring your own slug and pumping test data. Instructors will QA/QC your analysis results if time permits.

You may rent a computer for this course, however it must be reserved during the Early Registration period. Computer rental is an additional \$300 for the duration of the course.

Course attendees bringing personal laptops will download and install the AQTESOLV demo from www.aqtesolv.com before arriving at the course.

Registration

Advance registration is necessary in this limited-enrollment workshop to reserve space and receive course materials. A confirmation letter will be sent within 10 days of registering for the course.

Registration is accepted on a first come, first served basis. A minimum of 25 people must be registered by September 24th to conduct this course. This course routinely reaches maximum capacity.

Special arrangements for diet, equipment, or handicap facilities should be indicated when registering for the course.

You can register:

- On-Line at www.midwestgeo.com
- Phone: 970.498.1590
- Fax: 970.498.1598 (Attn: Jeff L.)
- Mail your registration form to:

In-Situ, Inc.
Attn: Jeff Leatherman
221 East Lincoln Avenue
Ft. Collins, Colorado 80524

What You Will Receive

You will receive 16.0 contact hours of instruction, a Course Notebook, a Field Guide for Slug Testing by Midwest GeoSciences Group, and a CEU completion certificate from the Colorado School of Mines.

Continental breakfast, morning coffee break, lunch, and an afternoon break will be served with the course. Recording devices are not permitted during classroom sessions.

At the end of the first day, attendees will tour the In-Situ, Inc. facility and see where their equipment is developed and manufactured.

With your registration, you will receive a discount voucher good toward the purchase of a special aquifer testing bundle featuring the In-Situ Level TROLL and AQTESOLV.

Cancellation Policy

Cancellations may be made up to Sept 24th, however, 25 percent of the course fee will be charged. Cancellations made after Sept 24th will be charged \$500. No refunds. One substitute is allowed for each registrant who is unable to attend.

Continuing Education Units

Continuing Education Units (CEUs) and a Course Completion Certificate will be administered by the Colorado School of Mines.

Most state professional licensure programs accept CEUs for this course.

For those states where pre-approval is necessary, go to www.midwestgeo.com and check out the list of licensure programs where this course is pre-approved.

Discounts

Register before September 24th and take advantage of the early registration rate.

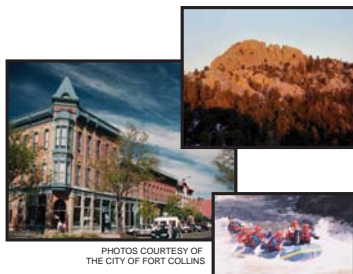
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Colorado Rocky Mountains

Horsetooth Mountain Park is a scenic 2,500 acre park, located west of Horsetooth Reservoir, with 27 miles of trails for hiking, mountain biking and horseback riding. Elevations climb to 7,255 feet at the top of Horsetooth Rock, one of the more outstanding features in the park and a very familiar landmark in Fort Collins.

Just 35 miles away, the peaks of Rocky Mountain National Park soar to more than 13,000 feet and form the Continental Divide. The town of Estes Park sits at the eastern edge of the park. Rocky Mountain National Park covers 410 square miles with 18 peaks above 13,000 feet. The park is open year-round and provides a myriad of opportunities for the outdoor enthusiast.

Colorado Highway 14 along the Cache La Poudre River is one of Colorado's premier scenic highways. Enjoy spectacular scenery as you drive west into the Poudre Canyon. This area is especially popular with rafters and kayakers.



PHOTOS COURTESY OF THE CITY OF FORT COLLINS