An intensive three-day short course

Advanced Aquifer Testing Techniques Featuring AQTESOLV™

New Concepts, Field Methods & Data Analysis Procedures

Feb 27, 28 and March 1, 2007

University of San Diego
Manchester Executive Center

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

Glenn Duffield
HydroSOLVE, Inc., Author of AQTESOLV

Featuring Guest Lecturer

Shlomo P. Neuman, PhD
University of Arizona

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 three-day training course on aquifer testing design, field methods and data analysis techniques featuring AQTESOLV. This course will provide you with the knowledge to master aquifer testing from beginning to end. Gain an advantage by learning up-to-date methods and procedures for designing, conducting and analyzing aquifer tests.

Dr. Neuman will provide his unique perspective on state-of-the-art methods for the analysis of pumping tests in unconfined and multiaquifer systems. He will discuss his landmark contribution to the estimation of aquitard properties using the Neuman-Witherspoon ratio method and his recent groundbreaking work on the role of 3D saturated-unsaturated flow in the analysis of unconfined aquifers.

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
- 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 In-Situ, Inc. Level TROLL
- Master tips and tricks for using AQTESOLV to analyze constant-rate, step-drawdown and recovery tests

Glenn Duffield is a hydrogeologist and the president of HydroSOLVE, Inc., with over 23 years of consulting experience in groundwater flow and transport modeling, software development and aquifer test analysis. He is the author of AQTESOLV, which for over 18 years has been the world's leading software for the analysis of aquifer tests.

Dr. Jim Butler is the 2007 NGWA Darcy Lecturer and author of "The Design, Performance, and Analysis of Slug Tests" (Lewis Pub., 1998). For the last 21 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.

Dr. Shlomo P. Neuman is Regents' Professor of Hydrology and Water Resources at the University of Arizona. Among his many accomplishments and countless reference publications, Dr. Neuman has made seminal contributions to the area of pumping test design and analysis including the theory of flow in multiaquifer systems, estimation of aquitard properties and flow in unconfined aquifers.

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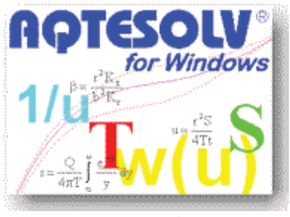
BRING YOUR COMPUTER

Analyze data from a variety of hydrogeologic conditions and well configurations using AQTESOLV. Participants may bring their own project data for analysis for QA/QC by the instructors. Register to receive a discount voucher toward the purchase of AQTESOLV.



www.aqtesolv.com

UNIVERSITY OF SAN DIEGO
Office of Professional & Continuing Education

24 Contact Hours (2.4 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

Advanced Aquifer Testing Techniques Featuring AQTESOLV: New Concepts, Field Methods and Data Analysis Procedures
February 27, 28 & March 1, 2007

Last Name: _____ First Name: _____

Position: _____

Company: _____

Address: _____

City, State, Zip: _____

Phone: _____

Email: _____

*For early registration, payment must be received before 02/09/07. Cancellations may be made up to 02/01/06, however 25% of the fee will be charged. No refunds. Minimum registration of 25 people must be registered at early registration deadline to conduct this course. Questions? Call Customer Service at 763.607.0092 or email **info@midwestgeo.com.**

Course Fee:

Register Now $980

After Feb 9 ..... $1,195

☐ *Check Enclosed*

☐ *VISA* ☐ *MasterCard* ☐ *AMEX*

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Mail completed form with payment to:
Midwest GeoSciences Group
6771 County Road 8 SW
Waverly, Minnesota, USA 55390

Or Register On-Line: www.midwestgeo.com