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LSP Association

405 Concord Avenue #352, Belmont, MA 02478 | 617-977-4304 | info@lspa.org | www.lspa.org

COURSE DESCRIPTION

Solute Transport Modeling for the Environmental Professional

This course will appeal to LSPs and other environmental professionals who are responsible for investigating and remediating groundwater contaminant plumes. Attendees will receive instruction and participate in a series of hands-on solute transport modeling exercises that focus on issues commonly encountered by site investigators.

This course requires no previous modeling experience. Attendees are required to bring a laptop computer to participate in hands-on exercises. Click **here** for the course agenda.

The lecture portion of the course will include discussion of:

- Key concepts of contaminant fate and transport processes
- Solute transport modeling concepts, considerations, and approaches
- Transport model input data and where to obtain it
- Solute transport modeling tools and resources
- Example applications

Attendees will then be introduced to the TS-CHEM solute transport modeling software, which they will use to work through a series of hands-on exercises, including:

- Estimating the length and duration of contaminant plumes
- Evaluating the effects of site remedial actions on the groundwater plume and the applicability of Monitored Natural Attenuation (MNA)
- Evaluating the commingling of groundwater plumes and potential impacts to downgradient receptors
- Analyzing modeled plume area, volume, mass, and mass flux, and generating report-ready maps of their modeled plumes

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COURSE OUTLINE

Solute Transport Modeling for the Environmental Professional

Introduction	1:00 PM
Discussion of key contaminant fate and transport concepts	
Solute transport modeling concepts	
Data requirements and resources	
Overview of modeling software	
Example applications	
Break	2:35 PM
Overview of Hands-on portion of course	2:50 PM
Hands-On Exercise: Estimation of plume length and duration	
Hands-On Exercise: Effects of source control, remediation on MNA applicability	
Hands-On Exercise: Evaluation of commingled plumes and potential impacts to receptors	
Final Wrap-up and Discussion	
Course Adjourns	5:00 PM

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INSTRUCTOR BIOGRAPHIES

Solute Transport Modeling for the Environmental Professional

Mark Kauffman

Mr. Kauffman is Senior Environmental Scientist and President of Quantitative Hydro Solutions, Inc. He has managed and consulted on a number of projects and has special expertise in hydrogeologic site investigations, analysis and interpretation of complex geospatial data, environmental forensic techniques, and groundwater flow and contaminant transport modeling. Mr. Kauffman has applied these techniques to interpret complex site data and provided consulting support for projects including site investigation and remediation, regulatory compliance, and litigation support. Mr. Kauffman has also provided technical expertise on litigation matters involving CERCLA cost recovery and cost allocation.

Brady Ziegler, PhD

Dr. Brady Ziegler of Quantitative Hydro Solutions, Inc. is a multidisciplinary hydrogeologist with extensive experience in environmental research, project management, and education. He specializes in water-soil interactions with a focus on water and soil quality, utilizing advanced geochemical modeling, laboratory analysis, and field techniques to evaluate contaminant behavior and improve environmental monitoring. In addition to his academic background, he has over 12 years of field experience leading groundwater sampling campaigns across the country and abroad. Dr. Ziegler demonstrates a proven ability to manage complex, multi-year projects, secure research funding, and provide high-quality deliverables while mentoring and collaborating with diverse stakeholders. He is passionate about applying his expertise in environmental monitoring to solve real-world environmental challenges.