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lease notify us if you have any dietary or mo- ility restrictions. Remit application and heck of \$575 made payable to the Ohio Val- ey Soil Workshops, 3869 Kilbourne Avenue, Eincinnati, Ohio, 45209. Register 3 or more rom one organization and save \$50 on each egistration. Registrations must be made at the ame time to receive discount. No refunds iven within 2 weeks of course offering. Any uestions can be directed to: 513-321-3391

оню valley soil workshops 3869 Kilbourne Ave. Suite I Cincinnati, Ohio 45209

LABEL

Slope Stability, Stabilization Methods, & Field Reconnaissance of Landsliding in the Tri-State Area of Ohio, Kentucky, & Indiana.

> A Short Course offered by Ohio Valley Soil Workshops

Mark Bowers, PhD, PE Barry Maynard, PhD Tim Agnello, PG, CPG

A hands on workshop for engineers & other professionals. Meets 15 hours of PE Continuing Education in Ohio & Kentucky.

Part I. Basic Concepts & Lab Procedures. Part II. Field Examination of Classic Landslides in Ohio & Kentucky.

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Limited Seating.

September 13 & 14, 2007; 8:00am-4:30pm

Workshop Location: The Vernon Manor Hotel in Clifton at 400 Oak Street, on the corner of Oak & Burnet. Directions by phone at 281-3300.

Workshop includes refreshments, lunch, transportation to soil lab and field sites, and the field guide to Tri-State landslides.

WWW.OHIOVALLEYLANDSLIDES.COM

Slope Stability, Stabilization Methods, & Field Reconnaissance of Landsliding in the Tri-State.

#### PURPOSE:

To provide a foundation for understanding slope stability concepts and basic lab procedures.

To provide a foundation for understanding and recognizing landslide types and the spatial & temporal extent of landsliding in the tri-state.

To provide continuing education for the professional engineer, surveyor, or engineer in training.

#### WORKSHOP BENEFITS:

-Visit to a Soils Lab with overview on testing.
-Overview of slope stability concepts.
-Relevant Tri-State slope stabilization methods.
-Overview of Tri-State landslide history.
-Overview of the surficial & bedrock geology.
-Site visits to classic Tri-State landslides.

## WHO SHOULD ATTEND:

This course is open to engineering professionals, junior engineers, technicians, surveyors, building & zoning officials or anyone interested in the geotechnical and geologic aspects of slope stability in the tri-state region of Ohio, Kentucky, and Indiana.

## **SPECIAL FEATURES:**

Lunch at a scenic overlook near the confluence of the Ohio River, Mill Creek, and the Licking River. Site visits with emphasis on pattern, history, and type of landsliding plaguing the Tri-State region.

# **INSTRUCTORS:**

## MARK T. BOWERS, PhD, PE

Mark is an Associate Professor of Civil Engineering and Assistant Dean for Undergraduate Studies in the College of Engineering at the University of Cincinnati where he has been teaching since 1985. He is the head of the Geotechnical Engineering Program in which he teaches courses in soil mechanics, foundation engineering, consolidation, settlement, shear strength, slope stability, and ground control and improvement. He is a Registered Professional Engineer in the State of Ohio. In addition to his academic career, Mark worked as a consulting engineer in Utah and as a project engineer for a mining corporation in Arizona.

#### BARRY MAYNARD, PhD

Barry is Professor of Geology in UC's College of Arts and Sciences, where he has taught since 1972. He is the author or co-author of 6 books on geology, including "Mud and Mudstone", Springer 2005. He has extensive research experience in environmental engineering, including groundwater contamination and acid mine drainage, and has consulted for mining companies in South Africa, Australia, and Mexico. He has taught geologic aspects of slope stability to students in geology and engineering since 1990.

# TIM AGNELLO, PG, CPG\_

Tim has an M.S. in engineering geology from the University of Cincinnati. His engineering geology study for the City of Cincinnati covering a 170 acre hillside area relates past land use practices to landsliding. The study is utilized by the City of Cincinnati Geotechnical Division and the City Planning Department. Tim was the field leader for the Northern Kentucky Landslide Workshop which was sponsored by the Kentucky Geological Survey and the Northern Kentucky Area Planning Commission. Tim is a Kentucky Registered Professional Geologist and recognized nationally as a Certified Professional Geologist.

# **SUMMARY OUTLINE**

# <u>DAY ONE</u> <u>STABILITY & STABILIZATION METHODS</u>:

General Slope Stability Concepts Engineering Geology Principles

> Groundwater Conditions Geologic Site Exploration

**Slide Presentation of Slope Failure** 

Slope Stability Concepts Slope Stabilization Methods Design, Construction & Maintenance of Slopes

> Session at U.C. Soil Laboratory Lab Testing and Interpretation

#### DAY TWO OVERVIEW AND FIELD RECONNAISSANCE OF LANDSLIDING IN THE TRI-STATE:

- Presentation on surficial materials, geology, and historical pattern & types of landslides in the Tri-State region.
- Classic Site Visits:

1<sup>st</sup> Stop: Price Hill, colluvial slope.

- 2<sup>nd</sup> Stop: Price Hill overlook, lunch, and local geologic setting.
- 3<sup>rd</sup> Stop: Classic block glide movement in lacusterine clay.
- 4<sup>th</sup> Stop: N. Kentucky Licking River embankment failure.