

Agenda

Presented by Sage Evans, PG

Slope Mechanics and Movement

Types of slope movement and instability

- Rock fall and rockslides
- Slump
- Mudslides
- Avalanche protection
- Debris flow

Evaluating types of slopes

- Natural slopes
- Engineered slopes

Analyzing the Stability of Slopes

Slope stability concepts

- Reviewing geologic conditions
- Examining soils and topography
- Evaluating surface and groundwater conditions

Methods of slope stability analysis

Slope Stabilization Methods

Surficial slope protection

- Use of vegetation

Global slope protection

- Unloading
- Buttrressing
- Draining
- Reinforcing
- Geosynthetics

Installing earth retention structures

- MSE walls
- Soil nailing
- Shotcrete

Rock slope stabilization

- Rock bolting
- Simple drapery
- Pinned drapery
- Dynamic rockfall barriers
- Hybrid/attenuator systems

Preserving Streambeds, Shorelines and Drainage Channels

Preserving streambeds

- Debris flow barriers
- Weirs
- Drop structures

Maintaining shoreline

- Sea bluff retreat

Dune restoration

Slope Stabilization and Landslide Prevention
Salt Lake City, UT - Tuesday, February 26, 2019

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Learning Objectives

You'll be able to:

Identify types of slope movement and instability.

Understand how geologic conditions, soils and topography, and surface and groundwater conditions impact slope stability.

Evaluate stabilization methods including unloading, draining, reinforcing, and the use of vegetation, geosynthetics, and rock bolting.

Examine earth retention structures.

Learn how to use debris flow barriers, weirs and drop structures to preserve streambeds, shorelines and drainage channels.



Slope Stabilization and Landslide Prevention

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Learn about slope mechanics and review types of slope movement and instability

Analyze the stability of slopes

Examine surficial, global, and rock slope stabilization methods

Evaluate the use of draining, reinforcing, rock bolting and earth retention structures

Receive practical guidance on preserving streambeds, shorelines and drainage channels

Continuing Education Credits

Professional Engineers

7.0 Professional Ed. Hours/PDHs

Architects

7.0 HSW Continuing Ed. Hours

7.0 AIA HSW Learning Units

Landscape Architects

7.0 HSW Contact Hours

7.0 LA/CES HSW PDHs

Floodplain Managers

7.0 ASFPM CECs



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Faculty

Sage Evans, PG *Geohazard Technical Sales, Maccaferri Inc*

With 15 years of project management and hydrogeologic consulting experience in the environmental engineering sector of the Intermountain West, Mr. Evans worked at mine sites, on large remediation projects, Superfund investigations and cleanups, and many other federal and state jobs. He began a new career as a technical sales representative for the Rockfall Division of Maccaferri in 2016. Mr. Evans now works on a diverse portfolio of geohazard mitigation projects across some of the most rugged and beautiful parts of the Rocky Mountains, Sierra Nevada, Cascades, and islands of the Pacific. A graduate from Utah State University’s College of Science, Mr. Evans has a Geology degree with an emphasis in Hydrogeology and is a licensed professional geologist in Utah, Idaho, and Wyoming. When not working, Mr. Evans enjoys backpacking, mountaineering, and canyoneering in Utah’s backcountry with his family.

Seminar Information

Marriott University Park	Registration	Lunch (On your own)
480 Wakara Way	8:00 - 8:30 am	12:00 - 1:00 pm
Salt Lake City, UT 84108	Morning Session	Afternoon Session
(801) 581-1000	8:30 am - 12:00 pm	1:00 - 5:00 pm

Tuition

\$279 for individual registration
\$259 for three or more simultaneous registrations.
Included with your registration:
Complimentary continental breakfast and printed seminar manual.

Receive a reduced tuition rate of \$101 by registering to be our on-site coordinator for the day. For availability and job description, please visit www.halfmoonseminars.org.

How to Register

- Visit us online at www.halfmoonseminars.org
- Mail-in or fax the attached form to 715-835-6066
- Call customer service at 715-835-5900

Cancellations: Cancel at least 48 hours before the start of the seminar, and receive a full tuition refund, minus a \$39 service charge for each registrant. Cancellations within 48 hours will receive a credit toward another seminar or the self-study package. You may also send another person to take your place.

Additional Learning

Webinar Series

- Technical Writing**
- **Technical Writing Basics**
Mon., Jan. 14, 2019, 11:00 AM - 1:00 PM CST
 - **Planning Documents**
Mon., Jan. 14, 2019, 1:30 - 3:30 PM CST
 - **Writing Documents**
Tues., Jan. 15, 2019, 11:00 AM - 1:00 PM CST
 - **Revising and Editing Documents**
Tues., Jan. 15, 2019, 1:30 - 3:30 PM CST

- Fiber-Reinforced Composites**
- **Portland Cement and Masonry**
Thurs., Jan. 17, 2019, 11:00 AM - 1:00 PM CST
 - **Fiber-Reinforced Composites**
Thurs., Jan. 17, 2019, 1:30 - 3:30 PM CST
 - **Fiber-Reinforced Polymer (FRP) Composites Reinforcement**
Fri., Jan. 18, 2019, 11:00 AM - 1:00 PM CST
 - **Overview of Sandwich Materials and Structures**
Fri., Jan. 18, 2019, 1:30 - 3:30 PM CST

- Pumping and Piping Systems**
- **Introduction to Pumps: Operation, Principles and Calculations**
Thurs., Jan. 24, 2019, 12:00 - 2:00 PM CST
 - **Design Standards and Codes**
Thurs., Jan. 24, 2019, 2:30 - 3:30 PM CST
 - **Piping System Components, Materials and Calculations**
Fri., Jan. 25, 2019, 12:00 - 2:00 PM CST
 - **Handling Pump and Piping System Problems**
Fri., Jan. 25, 2019, 2:30 - 3:30 PM CST

- Off-Grid Master Class**
- **Off-Grid Master Class, Part I**
Wed., Feb. 6, 2019, 11:00 AM -2:15 PM CST
 - **Off-Grid Master Class, Part II**
Thurs., Feb. 7, 2019, 11:00 AM -2:15 PM CST

For more information visit:
www.halfmoonseminars.org/webinars/

Continuing Education Credit Information

This seminar is open to the public and offers 7.0 professional education hours/PDHs to professional engineers and 7.0 HSW continuing education hours to architects in all states. It also offers Utah landscape architects 7.0 HSW contact hours. Educators and courses are not subject to preapproval in Utah.

This seminar is approved by the American Institute of Architects for 7.0 HSW Learning Units (Sponsor No. J885) and the Landscape Architecture Continuing Education System for 7.0 HSW PDHs. Only full attendance can be reported to the AIA/CES and LA/CES.

HalfMoon Education is an approved continuing education sponsor for engineers in Florida, Indiana, Maryland, New Jersey (Approval No. 24GP00000700), New York (NYSED Sponsor No. 35), North Carolina, and North Dakota. HalfMoon Education is deemed an approved continuing education sponsor for New York architects.

The Association of State Floodplain Managers has approved this activity for 7.0 CECs.

Attendance will be monitored and reported, as required. Attendance certificates will be available after the seminar for most individuals who complete the entire event. Attendance certificates not available at the seminar will be mailed to participants within fifteen business days.

Can’t Attend? Order the Manual and Audio from the Live Seminar as a Self-Study Package!

An audio recording of this seminar is available for \$289. Allow four weeks from the seminar date for delivery. Please refer to specific state licensing rules or certification requirements to determine if this learning method is eligible for continuing education credit.

Registration

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How to Register	
Online: www.halfmoonseminars.org	
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Tuition
() **I will be attending the live seminar.** Single Registrant - **\$279.00**. Three or more registrants from the same company registering at the same time - **\$259.00** each.
() **I am not attending.** Please send me the self-study package for **\$289.00**.

☐ Downloadable MP3 Audio/PDF Manual
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