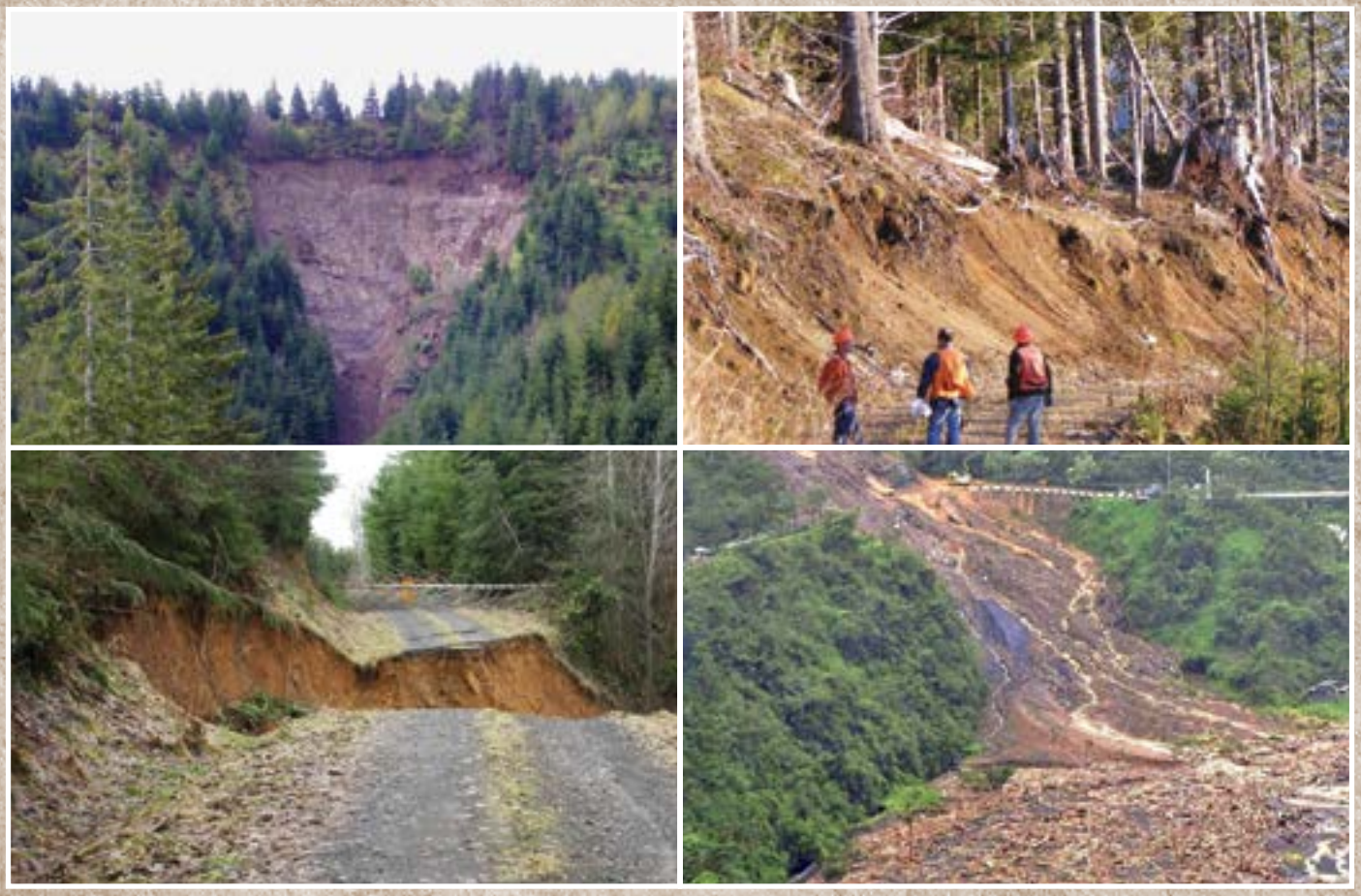
WFCA

Slope Stability And Landslide Management In The Pacific Northwest



April 11-12, 2019 • Springfield, Oregon

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CONFERENCE AGENDA

April 11, 2019

9:00 am

Types of Slope Movement and Instabilities

- What is a landslide?
- What drives landslides to occur?
- How to identify landslide features in the field.
- Rock-fall and rockslides.
- Translational and rotational failures.
- Debris flows and rapidly moving landslides.
- How to recognize landslide types.

10:30 am Break

10:45 am

Slope Movement and Mechanisms, (continued)

Slope stability concepts

- Assessing driving and resisting forces.
- Reviewing geologic conditions.
- Examining soils and topography.
- Evaluating surface and groundwater conditions.
- Methods of slope stability analysis.
- Natural slopes versus engineered slopes.

Noon Lunch

1:00 pm

Identification of Landslide Features using Remote Sensing Data

1. Basic Features of Landslides
2. Identifying Landslide Features using Aerial Photography
3. Identifying Landslide Features using Contour Maps Digital Elevation Models
4. Identifying Landslide Features using LiDAR
5. Available State Resources and Landslide Inventories
6. Class Mapping Exercise

2:30 pm

Slope Stabilization Methods

1. Drainage
2. Use of Vegetation (Bioengineering)
3. Surface Protection
4. Unloading
5. Buttressing and Shear Keys
6. Installing Earth Retention Structures
7. MSE Walls
8. Reinforced Steep Slopes
9. Soil Nails
10. Scaling, Containment, and Rockfall Mitigation

3:30 pm

Slope Stabilization Case Studies

1. Examples of Slope Stabilization Using Retaining Walls
2. Examples of Slope Stabilization Using Geosynthetics
3. Examples of Slope Stabilization Using Earthworks
4. Examples of Slope Stabilization Using Drainage

4:30 pm Adjourn

April 12, 2019

8:30 am

Landslide Hazard and Risk Assessment

1. Definitions and Elements of Landslide Hazard and Risk
2. Risk-reduction Strategies (objectives for landslide mitigation)
3. Considerations for Harvest Layout.
4. Applications

10:00 am Break

10:15 am

Introduction to Soil Mechanics

1. Soil and Rock Mechanics
2. Basic soil and rock properties
3. How are soil properties measured?
4. The influence of water

Noon Lunch

1:00 pm

Application of Slope Stability Analysis

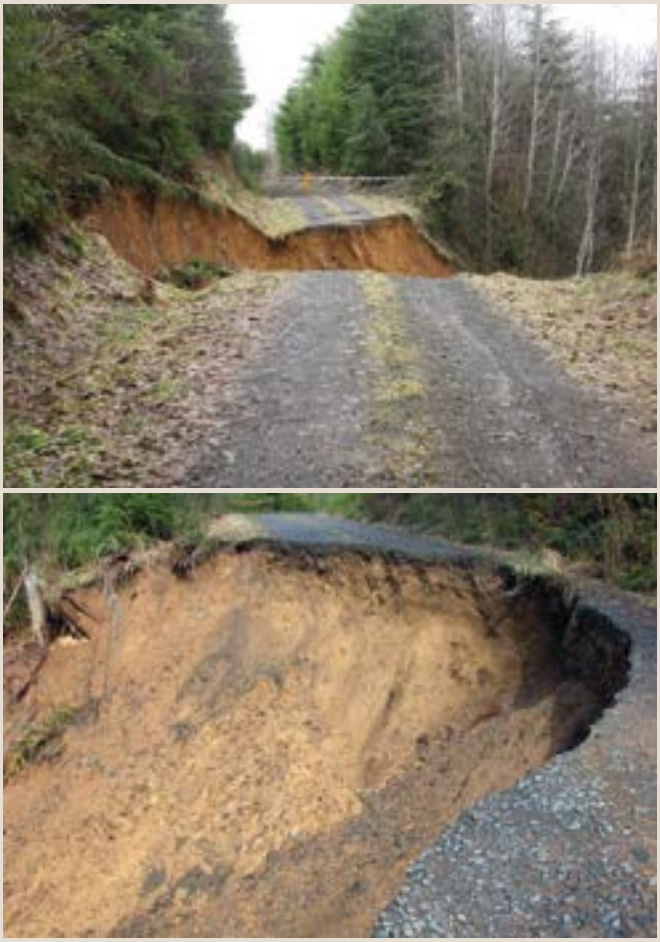
1. Coulomb Wedge
2. Infinite Slope
3. Bishop's Method
4. Consideration of Water, Seismic, and Reinforcement
5. Back-Analysis

2:30 pm

Activity - Applying Slope Stability Analyses with Computers

1. Coulomb Wedge
2. Infinite Slope
3. Bishop's Method

4:30 pm Adjourn



ABOUT THE INSTRUCTORS

Curran Mohney is presently the Engineering Geology Program Leader for the Oregon Department of Transportation. The Engineering Geology Program at ODOT encompasses site characterization, subsurface exploration, slopes and embankments, geologic hazards, groundwater, geotechnical instrumentation, and planning and research activities. In this role, he also oversees the Unstable Slopes (Landslide/Rockfall) program for ODOT.

Curran is a Registered Geologist and Certified Engineering Geologist in Oregon with over 25 years of experience in Oregon and the Western States. He has been the Engineering Geology Program Leader since 2004. Prior to this, he has been a Staff and Project-level geologist for Consulting firms and the Mining Industry as well as for ODOT. He is a graduate of the Geology program at Portland State University.

Ben Leshchinsky is an Associate Professor, Geotechnical Engineering with a dual appointment in the School of Civil and Construction Engineering and College of Forestry at Oregon State University in Corvallis, OR. He has a B.S., M.S. and Ph.D in Civil Engineering with a professional engineering license in Oregon. Ben's areas of interest include: landslides, slope stability, earth retaining structures, railroad engineering, geosynthetics, behavior of granular materials, degradation of granular materials, and reinforced soil.

Rene' Renteria is the Regional Geotechnical & Dam Safety Engineer for the USDA Forest Service, Pacific Northwest and Alaska regions. Rene' is a graduate of the civil and forest engineering programs at OSU and has 35 years of experience with transportation structures and slope stability in the mountain ranges of the Pacific Northwest and Intermountain West, including 10 years with the Oregon DOT. His current responsibilities include geotechnical, pavements, and dams engineering on the national forests in Oregon, Washington, and Alaska. Rene' is a registered Professional Engineer in Oregon

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REGISTRATION FORM

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ORGANIZATION AND AFFILIATION _____

ADDRESS _____

CITY, STATE, ZIP _____

PLEASE LIST ANY SPECIAL DIETARY NEEDS: _____

EMAIL _____ **TEL** _____

Registration

		AMOUNT
BEFORE April 5, 2019	**$375**	_____
AFTER April 5, 2019	**$450**	_____

Questions?

Call 503-226-4562
or Melinda@westernforestry.org

Western Forestry and Conservation Association
4033 SW Canyon Rd. • Portland, OR 97221
503-226-4562, FAX: 503-226-2515

Register at: www.westernforestry.org

Payment Method

1. **Please make check payable to:**
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   503-226-4562 • FAX: 226-2515
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   Expiration Date _____ **Security Code** _____
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Workshop Location

This workshop will be held at the Holiday Inn Springfield-Eugene located at 919 Kruse Way. Springfield, OR. The hotel is located at Exit 195 off I-5 in Springfield. The hotel can be reached at (541) 284-0707.

Workshop Lodging

Reduced rate rooms are available at $106/single plus tax by calling 541-284-0707 and mentioning Western Forestry and Conservation Association. After 3/27/19, the reduced rate is subject to availability.

Registration

The registration fee is $375 if received by April 5, 2019 or $450 after April 5, 2019. The registration fee includes a book of speaker materials, lunch and refreshments. Checks should be made payable to Western Forestry and Conservation Association. Purchase orders, VISA/MasterCard, and American Express are accepted. Tax id # 930-331-712. Registration is available at www.westernforestry.org

Cancellations

Cancellations received by April 5, 2019 are subject to a 15% service charge. Cancellations received after that time will be charged the entire registration fee, but substitutions are always welcome.

Society of American Foresters CFE credits:

By attending this workshop participants will be eligible for 14 CFE hours in Category 1 through the Society of American Foresters.

Registration questions?

Call Melinda at (503) 226-4562 or richard@westernforestry.org

Western Forestry and Conservation Association

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Register online at www.westernforestry.org