OREGON CHAPTER OF THE
ASSOCIATION OF ENVIRONMENTAL &
ENGINEERING GEOLOGISTS

April 2022
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The Official

AEG OREGON CHAPTER NEWSLETTER

http://www.aegoregon.org

Meeting Details:
Date: Tuesday,
April 19, 2022
5:30 pm Hybrid
-in-person and online

ZOOM LINK

In-Person $25
Cash or check.
Cards please use link below.

Lucky Lab
1945 NW Quimby Street, Portland, OR 97209

Please only vaccinated for in person attendance.
Masks are encouraged

Agenda:
5:30- 6:30 pm SOCIAL
6:30-7:00 pm dinner
7:00 pm Virtual Presentation

UPCOMING MEETINGS:

May 17th: Student Night
In-person
Old Market Pub

Responding to Landslide Emergencies: Communicating with Stakeholders and the Feedback Loop of Preparation, Response, Analysis and Lessons Learned

Rick Wooten, P.G.
North Carolina Geological Survey (Ret.)
Richard H. Jahns Distinguished Lecturer

An important component of the North Carolina Geological Survey's (NCGS) geohazards program is to respond to requests for technical assistance on landslide events from emergency managers and the public. Since 1990 the NCGS has responded to over 160 landslide events involving ~350 landslides in the Blue Ridge Mountains of western North Carolina, including those that resulted in the loss of life, injuries, destroyed or severely damaged homes, and threatened regional infrastructure. Most of these landslides coincided with periods of heavy rainfall from tropical cyclones, low pressure systems (e.g., atmospheric rivers), and warm weather convective storms, especially when these storm events occurred during periods of extended above normal rainfall.
A primary response objective is to provide stakeholders with timely, unbiased scientific information to help protect public safety and property, and thereby reduce losses from landslides. A key response function is to help increase situational awareness for emergency responders during rescue and recovery operations. Post-landslide response efforts include assisting emergency managers with damage assessments, contingency planning if unstable slopes remain a threat, and providing documentation to support funding for recovery and mitigation efforts. Emergency landslide situations involve communicating with first responders, the public and media to convey information about the nature of landslides and recovery efforts, and in some cases giving expert witness testimony.
Our investigations revealed that damaged homes and other critical facilities in many instances unknowingly had been built in areas vulnerable to landslides. Slope modifications by human activity were contributing factors in many cases, including fill failures that mobilized into destructive debris flows. Correlations between rainfall and debris flow occurrences indicate that debris flows originating on slopes modified by human activity can be triggered by rain events with lower rates and durations than those needed to trigger debris flows on unmodified slopes. These findings show that smart development can help reduce landslide losses and improve communities' resilience after landslide events.
Field computers, lidar digital elevation models and orthophotography used in conjunction with a landslide geodatabase have improved pre-response preparation, data collection and analysis, and delivery of geospatial data to stakeholders. The advent of uncrewed aerial systems ((UAS) technology has enhanced landslide response and mapping capabilities. Rick's talk will highlight case examples, lessons learned, and challenges in responding to landslide events as a state agency.

[It] is the little causes, long continued, which are considered as bringing about the greatest changes of the earth.

James Hutton

Bio: Rick Wooten, P.G.

Rick has over 40 years of experience in applied geology in the Cascade Mountains of Washington State, and applied geologic research in the Piedmont, and Blue Ridge Mountains of North Carolina. He earned his B.S. and M.S. degrees in geology at the University of Georgia in 1973 and 1980. Rick recently retired from the North Carolina Geological Survey where he was the Senior Geologist for Geohazards and Engineering Geology from 1990 to 2021. His previous work includes mapping geologic resources and conditions for land-use planning, landslide investigations and applied geotechnical geology for the USDA-Forest Service on the Gifford Pinchot National Forest in Washington State from 1980 to 1990. His work with the North Carolina Geological Survey includes the scientific regulatory review and field investigations for a low-level radioactive waste disposal project, and bedrock geologic mapping in the Piedmont and Blue Ridge Mountains. Since 2003 his main focus has been on landslide hazard mapping and research, and responding to landslide events North Carolina Blue Ridge. He has a special interest in the relationships of ductile and brittle bedrock structures with geomorphology and landslides processes, and communicating landslide hazards information with stakeholders.

https://www.aegweb.org/current-jahns-lecturer
https://community.geosociety.org/eegdivision/awards/jahns/2021-2022

Message from the Chapter Chair

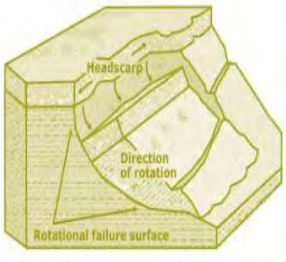
Dear AEG Oregon,

Calling all students! This will be our first in-person student night since 2019 and we are excited to meet some of you out there! Student Night is a real highlight of the year: we get to learn about the research students are pursuing, discuss their work with them, and, in return, students get to network with dozens of working professionals in our region. Students: please consider presenting a scientific poster of your graduate or undergraduate research! (It is an inclusive night; research from a class project to novel PhD research is appropriate). Professional members: please consider attending and supporting our students. It's a fun event for all involved!

We welcome this years Jahns lecturer, Rick Wooten, to discuss responding to landslides. This April Chapter Meeting will be in-person at Lucky Lab on Quimby on Tuesday, April 19th. We will also be live-streaming via Zoom; we will try to monitor the chat for A/V issues and questions for Rick. If you have issues accessing the Zoom link, try the Newsletter link (herein); email aegoregon@gmail.com with in the moment Zoom questions.

Our usual haunt, Old Market Pub, experienced a kitchen fire last week- closing them down through April. Thus, we are back at Lucky Lab on Quimby in April. We like the ambiance and sound quality- and there's plentiful pizza and refreshments! We will be back to support our friends at OMP for May's student night.

Have a field trip dream? Want to get to know more AEG Professionals in the area? Hop on board and join our team as Field Trip Chair or Membership Chair! You could fill in ad hoc, if you prefer; we're not picky.



Cheers and happy spring to you all,
-Nancy Calhoun

AEG Oregon Chapter Chair, 2021-22

AEG OREGON is inviting you to a scheduled Zoom meeting.

Topic: AEG Oregon April Meeting
Time: Apr 19, 2022 07:00 PM Pacific Time (US and Canada)

Join Zoom Meeting
https://us02web.zoom.us/j/83438274069?pwd=d3Fzc09zbGJTR2JRSEsvVFJENFphdz09

Meeting ID: 834 3827 4069
Passcode: 413338
One tap mobile
+12532158782,,83438274069#,,,,*413338# US (Tacoma)
+13462487799,,83438274069#,,,,*413338# US (Houston)

Dial by your location
+1 253 215 8782 US (Tacoma)
+1 346 248 7799 US (Houston)
+1 669 900 9128 US (San Jose)
+1 301 715 8592 US (Washington DC)
+1 312 626 6799 US (Chicago)
+1 646 558 8656 US (New York)
Meeting ID: 834 3827 4069

[redacted] Passcode 413338

Find your local number: https://us02web.zoom.us/u/kbhvKrhJRc

Can you name this location in Oregon? Submerged forest nearby.

AEG's 2022 Student Poster Night

This year's student poster night will be held on

Tuesday, May 17th at the Old Market Pub

Who can submit a poster?

Bachelor, Master, and PhD students generally focused in geology and earth sciences studies – though others with relevant topics are welcome.

What topics are acceptable?

The subject should be directly related to geology and earth sciences but within a myriad of topics including environmental, engineering, soils, field mapping, GIS, technology, chemistry, etc. The project area does not have to be in Oregon. Posters associated with a senior project, master's thesis, or PhD dissertation are all acceptable, including in-progress work.

What do you need to do?

By **May 3rd,** notify the Oregon AEG Chapter Board of your topic and provide an abstract of the poster presentation by sending an email to: nancyccalhoun@gmail.com

What does it cost and why submit a poster?

Students are always free to attend our monthly meetings! This will be a terrific opportunity to meet professionals in the geosciences and to practice presentation skills.

What can you win?

This year we will have multiple awards for the posters, including:

Best Undergraduate - $250

Best Graduate - $250

Best Quality of Presentation - $150

Best Overall - $350

Most Relevant to Engineering Geology Practice - $200

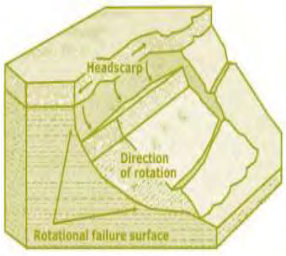
Most Relevant to Environmental Geology Practice - $200

Plus, each abstract submitter* will receive a $25 gift card to REI

** — one gift card per poster or person if multiple posters are submitted*
*** — The first 30 poster submissions will be accepted due to venue space limitations*
**** — One award per poster*

"The earth is large and old enough to teach us modesty."

Hans Cloos



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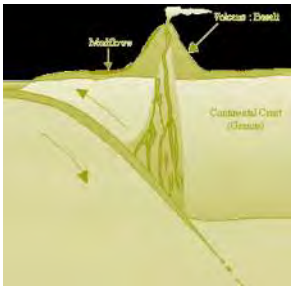
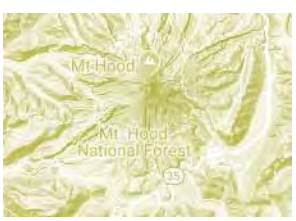
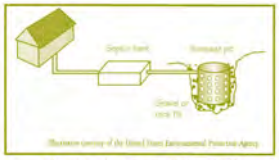
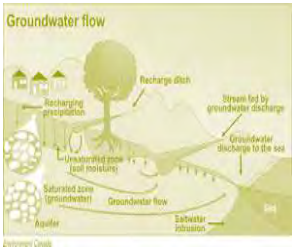






Schematic of a Seepage Pit (Dry Well)



"A soil adapted to the growth of plants, is necessarily prepared and carefully preserved; and, in the necessary waste of land which is inhabited, the foundation is laid for future continents, in order to support the system of the living world.."

James Hutton

Chapter Officers & Committee Chairs

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DOGAMI

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The Oregon Chapter is also on the web at
http://www.aegoregon.org
National AEG webpage:
http://aegweb.org

Subscribe to the newsletter by sending any e-mail to aegoregon-subscribe@groups.electricembers.net

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Rud Moe

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Thanks For Supporting AEG

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The AEG Oregon Chapter Newsletter

The Association of Engineering Geologists (AEG) contributes to its members' professional success and the public welfare by providing leadership, advocacy, and applied research in environmental and engineering geology. AEG's values are based on the belief that its members have a responsibility to assume stewardship over their fields of expertise. AEG is the acknowledged international leader in environmental and engineering geology, and is greatly respected for its stewardship of the profession.

AEG OREGON CHAPTER NEWSLETTER is published monthly from September through May. Subscriptions are for members of AEG affiliated with the Oregon Chapter or other Chapters, and other interested people who have requested and paid a local subscription fee of $10.00. E-mail subscriptions are free. News items are invited and should be sent to: Aine Mines, AEG Oregon Chapter Chair-Elect, Cornforth Consultants, Inc., 10250 SW Greenburg Road, Suite 111, Portland, OR 97223, e-mail: amines@ccilt.com, phone (503) 452-1100. Electronic media is preferred. Deadline for submittal is the 25th of the month. Advertising: business card size $100/yr; ¼ page $200/yr; ½ page $350/yr; 1 page $450/yr.