

NISQUALLY CHAPTER OF THE
ASSOCIATION OF ENVIRONMENTAL &
ENGINEERING GEOLOGISTS

The Official

AEG Nisqually Chapter Newsletter

Meeting Details

Wednesday, April, 20th

Location: Mercato Ristorante

111 Market St NE

Olympia, WA

6:00 pm Social

7:00 pm Presentation

Dinner: Pizza and Salad

\$25 Member or Non-Member

\$15 Educators or Job Seekers

\$5 Student

Virtual attendance is free

Upcoming Meetings:

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

An important component of the North Carolina Geological Survey (NCGS) geohazards program is to respond to requests for technical assistance on landslide events from emergency managers and the public. From 1990 to 2016 the NCGS has responded to 130 requests for assistance on landslide events from government agencies, the public, and consultants. As a result, NCGS geologists investigated 202 landslides in the Blue Ridge Mountains of western North Carolina which have destroyed 27 homes and damaged 42 others, damaged 79 roads, and killed 5 people and an unborn child.

Field investigations of 183 landslides determined that 89% occurred where slope modifications by humans were contributing factors, with the majority being fill failures that mobilized into damaging debris flows and debris slides. Landslides that occurred where there were existing landslide hazard maps correlate strongly with areas where the maps show an increased potential for debris flows and debris slides. Most landslides corresponded with periods of heavy rainfall from tropical cyclones Frances and Ivan (2004) and Cindy and Ernesto (2005), or with periods of above normal rainfall in 2009-2010 and 2013. Correlations between rainfall and debris flow occurrences indicate that debris flows on slopes modified by human activity can be triggered by rainfall events with lower rates and durations than events that trigger debris flows on unmodified slopes.

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. Ricks talk will highlight case examples, lessons learned, and challenged in responding to landslide events as a state agency.



This is no April fools prank! Don't forget to register for our BONUS AEG Nisqually presentation from this years Distinguished Jahns Lecturer, Rick Wooten! Virtual attendance is welcomed, and in-person attendance is recommended.

Cheers,
Britt
aegnisqually@gmail.com

Please RSVP by 4 pm Monday, April 18th if you plan on attending in person or virtually.

RSVP at:

<https://aeg-nisqually.brownpapertickets.com>

COVID vaccination required for in-person attendance

Zoom Meeting Info:

Join Zoom Meeting

<https://us02web.zoom.us/j/89709534280?pwd=NklqN0pYTnBVYy83MEtHN2l0YzIzZz09>

Meeting ID: 897 0953 4280

Passcode: 109230

One tap mobile

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Meeting ID: 897 0953 4280

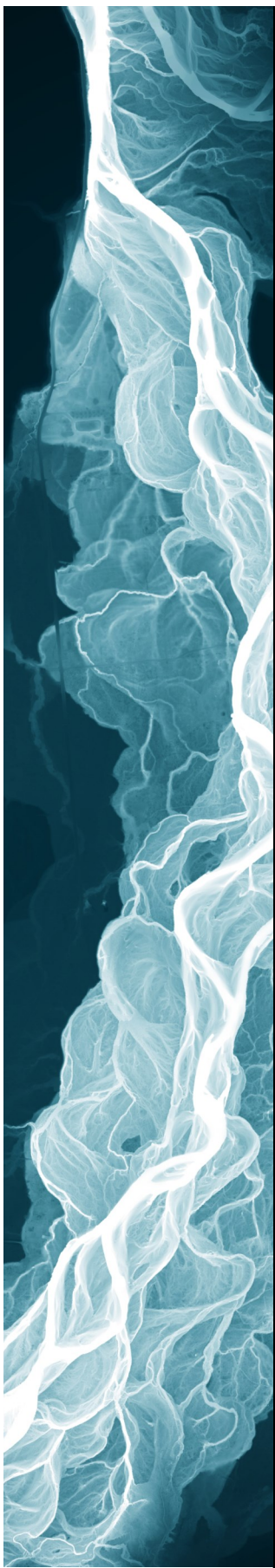
Passcode: 109230

Find your local number: <https://us02web.zoom.us/j/89709534280?pwd=NklqN0pYTnBVYy83MEtHN2l0YzIzZz09>

Bio: Richard M. Wooten, P.G.

Richard (Rick) Wooten 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 BS and MS 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.



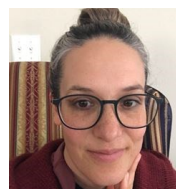
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The AEG Nisqually Chapter Newsletter

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 NISQUALLY CHAPTER NEWSLETTER is published monthly from September through April. Subscriptions are for members of AEG affiliated with the Nisqually Chapter or other Chapters, and other interested people. E-mail subscriptions are free.

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