

May 2020  
Volume 3, Number 7

NISQUALLY CHAPTER OF THE  
ASSOCIATION OF ENVIRONMENTAL &  
ENGINEERING GEOLOGISTS

The Official

# AEG Nisqually Chapter Newsletter

## May Meeting Details

Tuesday, May 5th

### Location: Go To Meeting

You must RSVP to

[aegniskually@gmail.com](mailto:aegniskually@gmail.com)

By 3pm May 5th

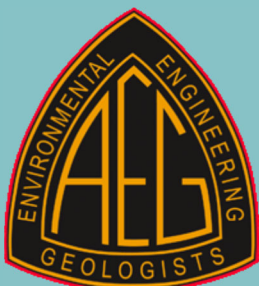
Put RSVP in the subject line

6:00 Presentation

Dinner: At your home

**FREE for Member or Non-Member**

## Upcoming Meetings:



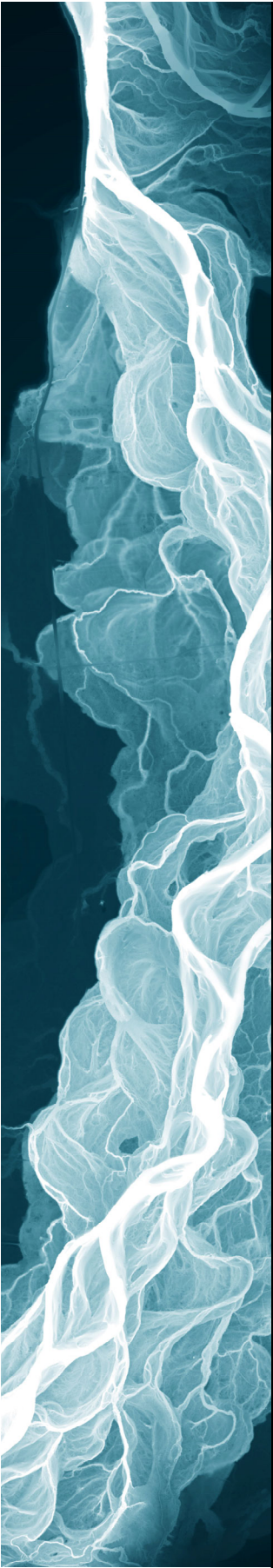
## What If the Rock Only Threatens to Fall?" Emergency Response to a Decoupled Cliff Face in Washington State

Many engineering geologists are familiar with the following scenario: hundreds of cubic yards of rock debris have blocked a roadway, with resultant disruption to traffic and commerce. Assessment is necessary to evaluate whether additional unstable rock material remains on the slope and whether the debris on the roadway can be safely cleared in order to reopen (or partially reopen) the road. What if, however, instead of hundreds of cubic yards, the event included several thousand cubic yards of material, all within a single rock slab, which suddenly decoupled from the rock face, and essentially teetered above the roadway? Such an event occurred on Washington State Route 503 during the spring of 2017. A single slab of volcanic rock (measuring approximately 65 to 70 feet tall, 100 to 105 feet wide and 15 to 20 feet thick) suddenly detached from a vertical cliff face upslope of the highway, dropped approximately 15 feet, and came to rest in a precarious sub-vertical position on a highway-sloping bench. The subsequent WSDOT emergency response included highway closure/detour, geologic and UAV (drone) reconnaissance, terrestrial LiDAR scans and change analyses, exploratory drilling, and emergency rock scaling and trim blasting. A follow-on design and bid contract included additional scaling and trim blasting, and the installation of rock reinforcement and horizontal drains in unstable areas behind and adjacent to the failure site. The combination of geologic, topographic and hydrogeologic factors that led to this failure include: competent volcanic rock overlying weaker volcanoclastic rock; a highly persistent sub-vertical rock discontinuity set; steep to moderately-sloping upland terrain above the highway-adjacent cliffs; perched groundwater; and a mineral assemblage within the volcanoclastic that is vulnerable to localized differential weathering. This presentation will highlight how these site conditions are informative to geohazard specialists working in volcanic terrain.



## Bio: Eric Smith

Eric graduated from California Lutheran University with a bachelor's degree in geology. He has worked as an engineering geologist for private consulting firms in Southern and Central California and Washington State, specializing in geologic hazard mitigation. He joined the Washington State Department of Transportation in their headquarters Geotechnical Office in 2006. His work for the WSDOT has included landslide and rockfall mitigation projects, various studies for new highway corridors, lane additions, asset repairs, slope stabilization, and conducting and coordinating emergency response efforts, such as the one discussed in the subject presentation.





## Message from the Chair

### The times they are a-changin'

I hope this newsletter finds you well. After we canceled all of our meetings in a panic, Sarah Kalika offered to give a talk about Naturally Occurring Asbestos from her COVID isolation in California. I wasn't sure what to expect from a virtual meeting, and was happy and comforted hearing 26 familiar voices from southern Oregon to BC. It was really nice, and informational.

These virtual meetings also provide the opportunity for those who live far from the in person meetings to participate. We will want to have this remote option for our future in person meetings. It turned out that the Nisqually Chapter was the first AEG chapter to start having virtual chapter meetings!

I expect that our in person meetings may be changing for a time. None of us knows what the future holds, and I would like us to continue the connections we have with AEG and our unique community of applied geologists. I hope that we will be able to start up in person meetings again this fall.

Typically, we have a lull in meetings during the summer; however, we may choose to continue talks/meetings through the summer just to keep us connected and learning from each other. Let me know if you have ideas for speakers, want to give a talk or have ideas of things we can be doing to keep us all connected.

### May Meeting

Eric Smith (WSDOT) has volunteered to give his talk at our May 5<sup>th</sup> online meeting. Originally, he was going to give his talk at the April meeting. Thanks Eric for keeping us moving forward together!

### Looking for volunteers:

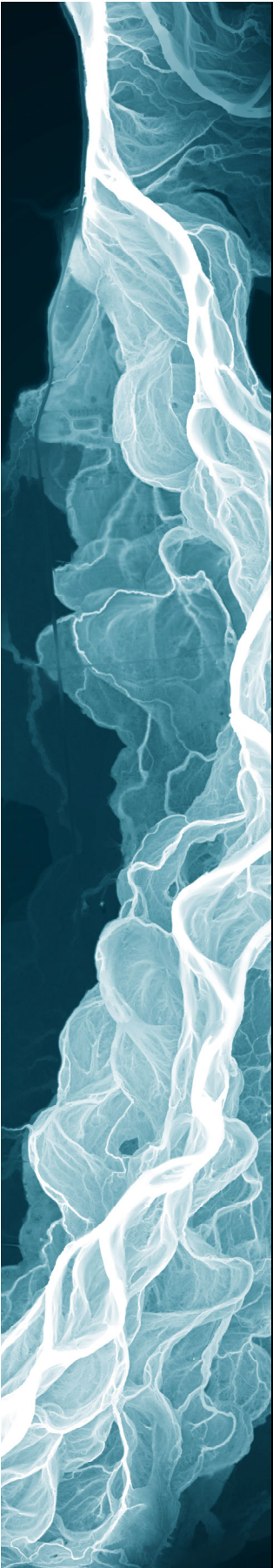
We're looking for a field trip chair. Now's the time to be dreaming up a field trip for this fall or next spring. You can scope the position however you would like. Please contact Gabe ([gabe.cascadian@gmail.com](mailto:gabe.cascadian@gmail.com)) or me to talk about this position if you are at all interested in organizing field trips.

Whenever we start up in person meetings again, we'd like to have a Virtual Meetings Chair. This person would set up the laptop at meetings to stream the talks to others who cannot make the meeting in person. I am envisioning that you would set up the Go-to-meeting, the laptop with camera and microphone, and act as the liaison for questions from the virtual meeting room to the speaker. If you are comfortable with virtual meetings and want to help to connect our members with in person meetings, whenever that starts up again, volunteer to be our virtual meetings chair.

Rock on,

Trevor

[trevor.contreas@dnr.wa.gov](mailto:trevor.contreas@dnr.wa.gov)



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## Section Officers & Committee Chairs



Chair:

Trevor Contreras

Washington Geological Survey

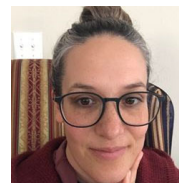
Trevor.Contreras@dnr.wa.gov



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WSDOT



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Newsletter and Technology Chair:

Kate Mickelson

Washington Geological Survey

Kate.Mickelson@dnr.wa.gov

Field-Trip Chair:

Vacant

**National AEG webpage:**

**<http://aegweb.org>**

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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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