NISQUALLY CHAPTER OF THE
ASSOCIATION OF ENVIRONMENTAL &
ENGINEERING GEOLOGISTS

The Official

AEG Nisqually Chapter Newsletter

Meeting Details

Wednesday, November 18th

Location: Mercato Ristorante

111 Market St NE

Olympia, WA

Google Maps Link

5:30 PM Social hour and buffet

6:30 PM Presentation
7:30 PM Brief Q&A

$30 Member or Non-Member

$15 Educators or Job Seekers

$5 Student
$5 Online

Please RSVP Online by Clicking This Link Here

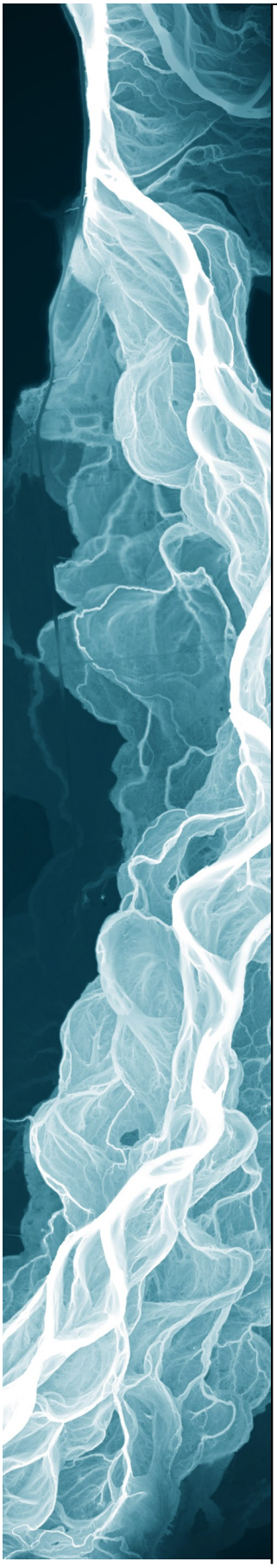
Upcoming Meetings:

December 16th, 2026
January 21st, 2027

Denali National Park: Pretty Rocks Bridge



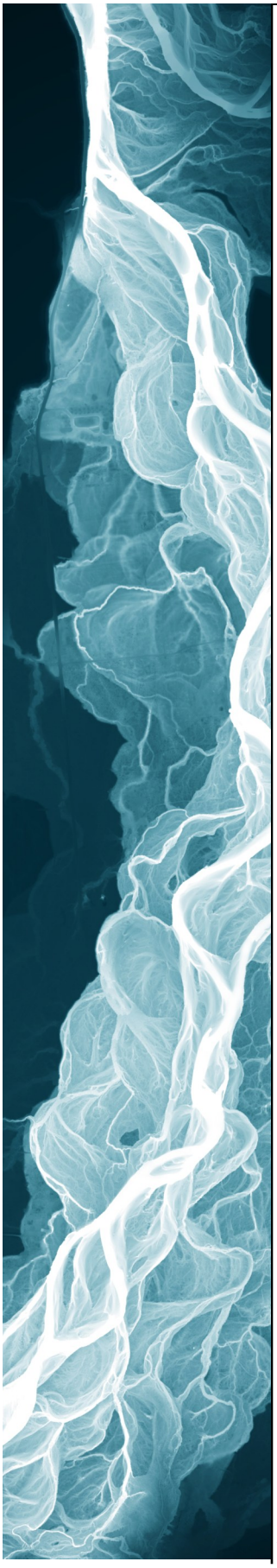
For decades, the Pretty Rocks Landslide at Mile 45.4 of the Denali Park Road historically required only minor maintenance, but thawing permafrost and increased precipitation caused movement to accelerate dramatically. Shifting from inches per year before 2014 to up to 0.65 inches per hour by 2021, this rapid deterioration made traditional road repairs impossible. The acceleration forced the closure of the park's only through-road, severing vehicle access to key visitor destinations and the community of Kantishna at MP 90. To restore access, the National Park Service funded the multidisciplinary effort that culminated in a collaborative project between the NPS, Federal Highway Administration, and private engineering partners. Construction began in 2023 to build a 475-foot-long steel truss bridge spanning the active landslide, supported by slope stabilization, complex earthwork, and thermosyphons to mitigate further permafrost degradation. The team successfully navigated site challenges, with the bridge launching across the chasm in 2025 and was finished in 2026 and opened to admin traffic with the official ribbon-cutting in September. Once final road improvements are complete, public access to the western half of Denali National Park will resume in Spring 2027.



Biography: Mark Swank, CEG



Mark is the Acting Geotechnical Functional Manager for the Federal Highway Administration's Western Federal Lands Highway Division in Vancouver, Washington. He has more than 25 years of experience in engineering geology and geotechnical consulting, with work spanning transportation corridors, dams, bridges, pipelines, and hillside developments. Prior to joining the Western Federal Lands in 2023, Mark held leadership positions at Aspect Consulting, PBS Environmental, and Kleinfelder. His work has included evaluating landslides, designing monitoring programs, and assessing geologic and seismic hazards throughout the Pacific Northwest and across the United States. Mark received his bachelor's degree in soil science with a focus on environmental management from California Polytechnic State University, San Luis Obispo, and his master's degree in engineering geology from San José State University. He has been a member of AEG since 2005 and active in the Oregon Chapter since 2009, serving through the 5 year Board rotation from Secretary to Past Chair. At the national level, he served as the Pacific Region's Regional Director for 2 years until beginning his Executive Council rotation in 2023 and served as the Vice President/President-Elect for 2025-2026, coordinating biannual town hall meetings and serving as the liaison between AEG's operational. His involvement has emphasized volunteer participation, chapter growth, and opportunities for members to help shape the association. Mark now serves as AEG President for the 2026-2027 term.



Message from the Chair

The Sleeping Giant: Living in the Seismic Context of the Pacific Northwest

My wife and I had just landed in Japan for the first time and were settling into our high-rise hotel room just east of Tokyo on January 1, 2024. As we set down our bags, the buildings outside our window began to oscillate. Before long, we could feel ourselves swaying as well. A powerful magnitude 7.5–7.6 earthquake had struck the Noto Peninsula in Ishikawa Prefecture, Japan. The earthquake triggered severe ground shaking, tsunamis, landslides, and liquefaction, causing widespread damage to buildings and infrastructure. More than 240 people lost their lives, and tens of thousands of buildings were damaged. It was a sobering reminder that even countries with advanced earthquake engineering are vulnerable to large earthquakes. These lessons hit particularly close to home here in Washington, where the region faces significant seismic hazards.

Fast forward to September 29, 2026, when a magnitude 4.2 earthquake struck near Gig Harbor, approximately 6 kilometers northwest of Wauna. Did you feel it? Although relatively modest in magnitude, this earthquake is another reminder that western Washington is an active seismic region. Our area faces a variety of hazards, from shallow crustal earthquakes to deeper earthquakes within the subducting Juan de Fuca Plate, as well as the potential for a massive magnitude 9 earthquake along the Cascadia Subduction Zone. The question isn't whether earthquakes will happen in the Pacific Northwest, but whether we will be prepared when the next significant event occurs.

So, how prepared are you? Start with the basics: maintain a two-week emergency supply of food, water, medications, and first-aid supplies. Secure heavy furniture and water heaters and consider retrofitting older buildings to improve their seismic performance. Develop a family communication plan and know your evacuation routes, particularly if you live or work in coastal communities threatened by tsunamis. Remember that earthquakes can also trigger landslides, liquefaction, fires, and infrastructure failures. Being prepared to function independently until emergency services become available can make a tremendous difference.

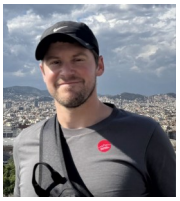
Just as important, know what to do during an earthquake. If indoors, drop, cover, and hold. If outdoors, move away from buildings, trees, and power lines. If driving, pull over away from bridges and overpasses. After shaking stops, check for injuries, fires, gas leaks, and structural damage, and expect aftershocks. If you are on the coast and experience strong or prolonged shaking, move to higher ground immediately rather than waiting for a tsunami warning.

I'm sure we would all be fascinated to experience the "Big One" in our lifetime from a scientific perspective, but I personally would vote to miss it! Regardless, earthquakes remain one of the most significant natural hazards looming over (or under) the Pacific Northwest. Let's strap down that water heater, talk with our families and colleagues about emergency plans, and take the necessary steps to protect our communities. As geoscience professionals, we understand the risks facing our region better than most. Let's make sure our preparedness reflects that knowledge and we are ready to respond. Stay safe, stay prepared, and I look forward to seeing everyone at our meeting!

Sam Angel, LG

AEG Nisqually Chapter Chair

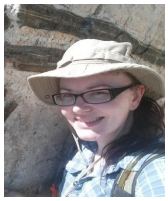
Section Officers & Committee Chairs



Chair:

Sam Angel, LG

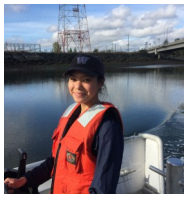
Washington State Department of Transportation



Vice Chair:

Crystal Lambert, LG

Washington State Department of Transportation



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Landau Associates



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National AEG webpage:
http://aegweb.org

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 May. 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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