OREGON CHAPTER OF THE
ASSOCIATION OF ENVIRONMENTAL &
ENGINEERING GEOLOGISTS

April 2024
Volume 12, Number 7

The Official

AEG OREGON CHAPTER NEWSLETTER

http://www.aegoregon.org

Meeting Details:
Date: Tuesday, April 16th, 2024 7:00 pm Hybrid

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

Old Market Pub
6959 SW Multnomah Blvd.

Agenda:
5:30- 6:30 pm social
6:30-7:00 pm dinner
7:00 pm presentation

UPCOMING MEETINGS:

May 2024--Student Poster Night

AEG Presidential Visit

Sarah Kalika, PG, CAC, CDPH Lead I/A/S

Principal Geologist, DiabloGeo Environmental Consulting

President, Association of Environmental & Engineering Geologists 2023-2024

State of the Association

We'll start with an update on AEG and review our current membership numbers, demographics, 2023 financial summary, volunteer opportunities on operational committees and technical working groups, scholarships for students, and information about the 2024 Annual Meeting in Philadelphia. Bring your questions about AEG's operations on an Association level and how your Chapter fits into the Association's Strategic Plan, as well as what YOU can do to help AEG.

Technical Talk

Using elevated concentrations of Chromium and Nickel as an indicator for the presence of chrysotile asbestos in Serpentinite rock units

Serpentine, a magnesium silicate mineral formed when peridotite is altered by extremely hot water during tectonic plate subduction and partial crustal melting from heat from the upper mantle, is composed of the platy minerals lizardite and antigorite criss-crossed by veins of chrysotile. In California, serpentinite is typically found within the Coast Range, Klamath Mountains and Sierra Nevada foothills. When analyzed for metals presence, serpentinite rocks typically contain elevated chromium (Cr) and nickel (Ni). Chrysotile asbestos is often found in veins within serpentinite.

When project sites are evaluated for the presence of potentially hazardous substances or waste soil is analyzed for landfill disposal pre-approval, metals are part of the list of required analytes, but evaluation for the presence of asbestos is often not included.

Following years of anecdotal observation, this research intended to evaluate whether the presence of elevated chromium and nickel concentrations could be a reliable indicator for the presence of chrysotile asbestos. If such a correlation could be made, at what concentrations would the presence of Cr and Ni be a predictor for chrysotile?

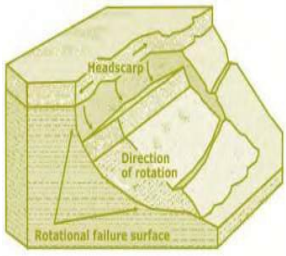
Geologists have a saying - rocks remember.

Neal Armstrong

This study used data from soil samples collected within California's Coast Ranges and reported within site investigation reports published for public use on the California Department of Toxic Substances Control Envirostor database and California's State Water Resources Control Board Geotracker database. Data was evaluated using statistical tools to establish a threshold concentration for Cr and Ni, above which, serpentinite is likely to be the source and warrants additional analysis for the presence of chrysotile asbestos. To test this theory, elevated Cr and Ni concentrations from USGS were mapped to see if this method could be used as a reliable predictor for where to find serpentinite rock and was found to be successful in identifying a specific location in Maryland.

Sarah Kalika has over 22 years of experience as a geologist in the environmental consulting industry and a Bachelor of Science in Geological Sciences from the University of California, Santa Barbara. She has performed primarily environmental geoscience investigations during her career including Phase I & II property transactions, asbestos and lead surveys for renovations and demolitions, abatement oversight, geologic mapping and sampling for the presence of naturally occurring asbestos, asbestos dust mitigation plan preparation, area air monitoring for asbestos, construction storm water pollution prevention plan preparations and inspections, and health and safety plan preparation. She has successfully managed the investigation, regulatory agency interaction, documentation, and cleanup of many complex, high profile, and confidential development projects, including schools, agricultural redevelopment, commercial and residential properties, highways, and rail corridors.

As a California Certified Asbestos Consultant and Professional Geologist, Ms. Kalika has a unique combination of expertise with applying regulations originally written for asbestos in building materials to construction projects that impact asbestos occurring naturally within rock and soil. Ms. Kalika is skilled in navigating the often-complicated assortment of regulations that apply to asbestos and asbestiform minerals and provides awareness training sessions for workers who will interact with asbestos-containing soil or rock on jobsites.



As a member of the Association of Environmental & Engineering Geologists, she has served as chair of several operational committees as well as the Naturally Occurring Asbestos Technical Working Group and co-chaired the AEG Annual Meeting in San Francisco. She is currently on the Executive Council as Association President.

Ms. Kalika is a frequent public speaker and gives presentations for consulting companies, school districts, commercial property managers, and members of the Association of Environmental & Engineering Geologists.

Message from the Chapter Chair

Hello Oregon Chapter,

In March we were fortunate to have the opportunity to host the 2023–2024 Jahns Distinguished Lecturer Cynthia Palomares, who gave two talks: "Diversity Equity and Inclusion in the Geosciences: What Can We Do?" and "How Climate Change Impacts Infrastructure." It never dawned on me that there was non-transportation related infrastructure, such as sanitary landfills, that will have potentially massive impacts from the effects of climate change. Thank you for visiting the Chapter, Cynthia!

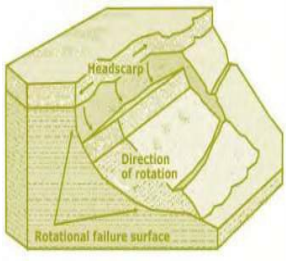
On Tuesday, April 16, we will host the current AEG President, Sarah Kalika, who will also be giving two talks: "State of the Association," and "Using elevated concentrations of Chromium and Nickel as an indicator for the presence of chrysotile asbestos in Serpentinite rock units." It is always great to hear directly from the national leadership how the association is doing. It's also been a while since the Oregon Chapter has hosted an environmental geology talk, and I hope you all are looking forward to this one as much as I am.

We are rapidly approaching the end of our scheduled meetings for the year and will end with our annual Student Night on Wednesday, May 22. Student Night is the highlight of the year. Students get to present the research they are pursuing to a network of dozens of working professionals, all with the possibility of cash prizes. Students, please consider presenting a scientific poster of your graduate or undergraduate research. You can present anything from a class project to novel PhD research. If you are a professional member, please consider attending and supporting the students. It's a fun event for all involved. We are looking for additional judges, so please reach out to us directly if you're interested in judging.

After the busy field season ends toward the end of summer, we will send out information for our annual summer social where we wrap up the year telling tales of field adventures over pizza and cold beverages. Stay tuned.... In the meantime, I hope your spring field days are filled with good weather, and we look forward to catching up with you in April!

Ryan Cole

AEG Oregon Chapter Chair, 2023–2024



AEG Oregon
Student Night 2024

This year the student night will be held on

Wed. May 22, 2024, Old Market Pub, Portland

Eligibility:
Bachelor, Master, and PhD students generally focused on geology and earth science studies – though others with relevant topics are welcome.

Poster Topics:
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. can all be considered. 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.

Submission:
By **May 10th, 2024**, notify the Oregon AEG Chapter board of your topic and provide an abstract of the poster presentation by sending an email to: Ryan.Cole@usda.gov

Prizes:

Best Undergraduate - $250

Best Graduate - $250

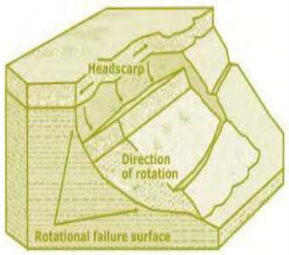
Best Overall Presentation - $350

Best Quality Presentation - $150

Most Relevant to Engineering Geology Practice - $200

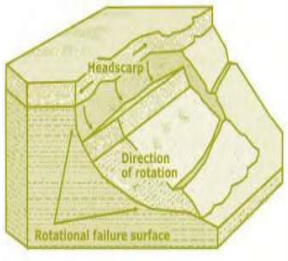
Most Relevant to Environmental Geology Practice - $200

Each accepted submittal will receive a $25 gift card to REI
**one gift card per person if multiple submittals are provided*
*** one award per poster or person if multiple submittal*
****Space is limited to the first 30 poster submissions*



Geologists are never at a loss for paperweights.

Bill Bryson



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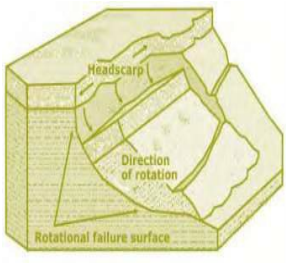

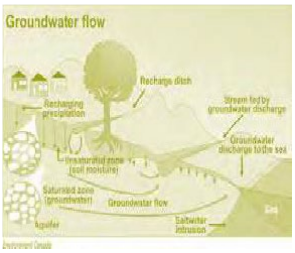

We learn geology the morning after the earthquake.

Ralph Waldo Emerson

Chapter Officers & Committee Chairs

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US Forest Service
ryan.cole@usda.gov

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Pacific Geophysics
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nvilleneuve@gri.com

This could be you!

Field-Trip Chair:
Volunteer Needed
Please Help

This could be you!

Membership Chair:
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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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PSU Student Chapter President:
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Thanks For Supporting AEG

Members, Volunteers, Aspect Consulting, Cornforth Consultants Inc., DOGAMI, Earth Dynamics LLC., Federal Highways (FHWA), Geobrugg, GRI, Hi-Tech Rockfall, Holt Drilling, NACSE, ODOT, Oregon State University, Pacific Geophysics, PBS Engineering & Environmental, PLI Systems, Portland State University, Western Oregon University

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.