

NISQUALLY CHAPTER OF THE
ASSOCIATION OF ENVIRONMENTAL &
ENGINEERING GEOLOGISTS

The Official

AEG Nisqually Chapter Newsletter

Meeting Details

Wednesday April 17th

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:



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?

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.

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Please RSVP by 4 pm Monday, April 15th if you plan on attending in person. RSVP at:

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

Zoom Meeting Info:

Join Zoom Meeting

<https://us02web.zoom.us/j/88411734516?pwd=Nm9iVjVWa3dWdkdOcUNhTndLMUdhdz09>

Meeting ID: 884 1173 4516

Passcode: 716726

One tap mobile

+12532050468,,88411734516#,,, *716726# US

+12532158782,,88411734516#,,, *716726# US (Tacoma)

Upcoming Meetings:



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

Principal Geologist, DiabloGeo Environmental Consulting

President, Association of Environmental & Engineering Geologists 2023-2024

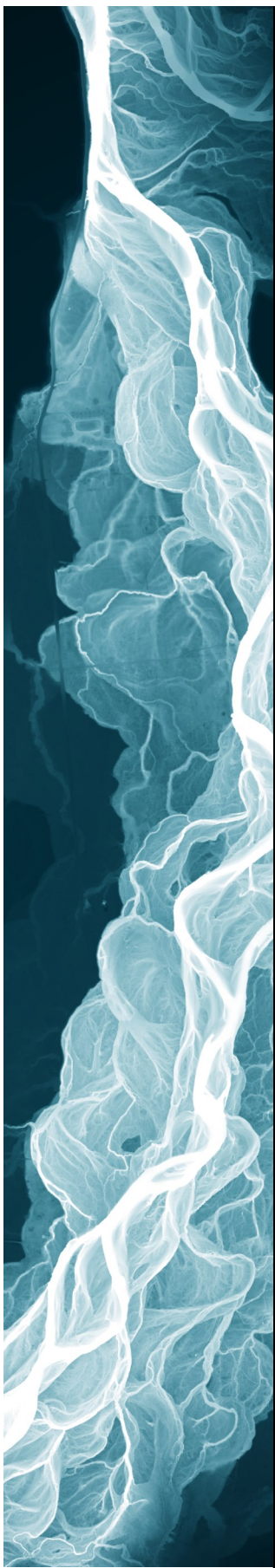
Sarah Kalika has over 22 years of experience as a geologist in the environmental consulting industry and a Bachelor of Science in Geological Sciences from the University of California, Santa Barbara. She has performed primarily environmental geoscience investigations during her career including Phase 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 stormwater 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 job sites.

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 to consulting companies, school districts, commercial property managers, and members of the Association of Environmental & Engineering Geologists.



Message from the Chair

Please note: There has been a change to our meeting day and location.

Join us on *April 17th* for the [AEG 2023-2024 Presidential Visit](#), with **Sarah Kalika, PG, CAC, CDPH Lead I/A/S**, at Mercato Ristorante in the Wine Room.

The address for Mercato Ristorante is [111 Market Street NE, Olympia, WA 98501](#).

These meetings can be applied to one hour of Continuing Education Credits. Please email AEGNisqually@gmail.com and we would be happy to provide you with a certificate for this month's talk.

Save the Date - Upcoming Meetings

Please add this upcoming date to your calendar!

Tuesday, May 7th – Bill Halbert, LHG, LEG – Insight Geologic, Inc.

Talk Title: "Humanitarian Hydrogeology" or "How to See Africa on Someone Else's Nickel"

Let's keep the rock rolling - Get Involved in our Chapter!!!

We are currently looking for volunteers to help with the Chapter next season. Serving on the board strengthens your ties to our community while giving you a chance to be a steward for the profession. If you are interested in finding out how you can help please contact Samantha Denham at AEGNisqually@gmail.com.



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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.

Mailing List sign up link: <http://eepurl.com/c5gvKn>

