OREGON SECTION OF THE ASSOCIATION OF ENVIRONMENTAL & ENGINEERING GEOLOGISTS

March 2014

Volume 14, Number 7

The Official

OREGON SECTION AEG NEWSLETTER

http://www.aegoregon.org

March Meeting Details

Tuesday, March 18th

Location: Hopworks

2944 SE Powell Blvd

Portland, Oregon

PLEASE NOTE MEETING LOCATION

6:00 pm Social

6:45 pm Dinner

7:30 pm Presentation

Dinner: Pizza & Salad

$20 Dinner ($5 Students)

Reservations: mwegner@cornforthconsultants.com with "AEG Reservation" in the subject line or 971-222-2047 by 4 pm Thur. Mar. 13

There is a $2 surcharge for those who do not reserve by the deadline

Upcoming Meetings:

Apr 15th Jeff Coe
May 20th Student Poster Night

AEG/AWG Joint Meeting Presents:

What Professional Geologists and Engineers Should Know About Litigation

Guest Speaker: Laura Maffei

Litigation can be daunting for professional geologists and engineers. Becoming a fact witness, expert witness, or the subject of a professional negligence claim puts most technical professionals outside of their comfort zones. On March 18, Laura Maffei will walk through the litigation process, with an emphasis on the role that professionals play.

This presentation will cover topics such as: (1) professional reports, records and the discovery process; (2) preparing for a deposition or other testimony; and (3) types of actions that may constitute professional negligence. It will also analyze recent cases involving professionals and their actions. Finally, Ms. Maffei will discuss the Oregon Board of Geologist Examiners' rules for professional conduct by geologists and engineering geologists in the context of disciplinary actions.

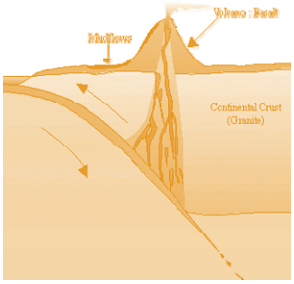
Bio: Laura Maffei, RG, Attorney

Laura Maffei is an attorney and Registered Geologist with the state of Oregon. She focuses her practice on environmental law, especially environmental cleanup and Clean Water Act matters. Laura has a B.S. in Geology from UCLA, a M.S. in Geology from University of Washington, and a J.D., *cum laude*, from Northwestern School of Law of Lewis & Clark College.

Message from the Chair

Wow! What a turnout for the February meeting for the presentation on sediment peels and the current state of liquefaction potential analysis. We had a record of nearly 100 attendees to view the impressive peels and to interact with the panel of experts. Special thanks to Brian Atwater, Yumei Wang, Mike Beaty, Dan Gillins, and Wes Spang for offering their time and experience to those attending. Yumei and Dan have prepared an abridged "Top 10" liquefaction needs statement for AEG and is contained in this newsletter for our review. Also, huge thanks to Mike Marshall who was able to coordinate the large number of people attending the meeting; he did a great job!

The Washington State Department of Licensing's Geologist Licensing Board is pursuing an agreement with California's Board of Professional Engineers, Land Surveyors, and Geologists for engineering geologist registration reciprocity. Recently, the Washington and California Boards have invited Oregon to join in the discussion. Ken Neal, AEG Licensure Committee Co-chair, has compared the Knowledge Requirements of Washington, Oregon and California and there are a number of key differences that could impact future reciprocity agreements. One of AEG's primary purposes is to strengthen the practice of Geology and input from our members can be used to inform OSBGE to ensure that the thoughts and opinions of our members on how this may impact geology registration in Oregon. Our Section's Treasurer and acting Legislator Chair Adam Reese (AReese@apexcos.com) has been staying abreast of the information and is the one to contact to share your thoughts and compile Oregon AEG Section members' comments on the matter.



Not to be a broken record, but let's get the word out for AEG Oregon's student travel grant for attending the 2014 AEG National Meeting in Scottsdale, Arizona. The announcement is detailed on our website at www.aegoregon.org.

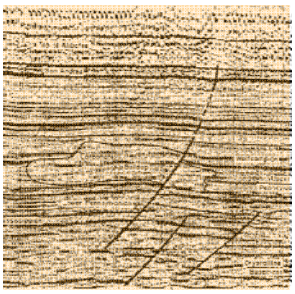
Take note that our next meeting is at a new location, Hopworks Urban Brewery on SE Powell where Laura Maffei will be speaking on litigation involving registered geologists. Hope to see you there!

Darren Beckstrand, CEG
Cornforth Consultants

PSU Geologist Scott Burns Named 2014 Outstanding Oregon Scientist

Details may be found at the following link:

http://www.pdx.edu/news/psu-geologist-scott-burns-named-2014-outstanding-oregon-scientist

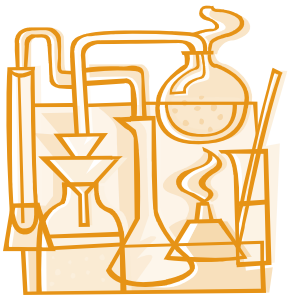


Tensioned Slope & Rock Stabilization Systems Workshop Wednesday, March 26, 2014 • Portland, Oregon

You are invited to attend a FREE day-long workshop hosted by Geobrugg North America, LLC and KANE GeoTech, Inc. at the Oregon Dept of Transportation, Region 1, Flanders Conference Room, 123 NW Flanders Street, Portland, Oregon 97209-4012.
Additional details and reservations can be made by contacting Deborah Johnson (deborah.johnson@geobrugg.com, Phone: 505-771-4080).

ASCE Seattle Section Geotechnical Group and Seattle Geo-Institute Chapter, 31st Annual Spring Seminar, "Geotechnical Instrumentation"
March 29th, 2014 at Kane Hall, University of Washington

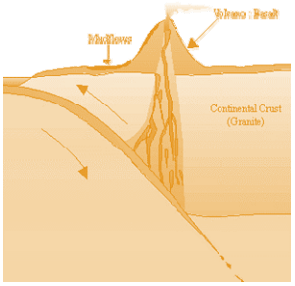
Details may be found at the following link:



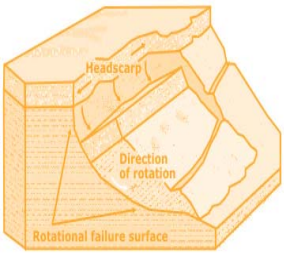
http://www.seattlegeotech.org/Website/Shortcourse/2014%20Spring%20Seminar%20-%20General%20Flyer.pdf)

Spring Quarter Courses at PSU: Start March 31

- G410/510: Lidar and Landscape Evolution, Booth, 4 credits, MW (15:15-16:20), lab M (16:40-18:30)
- G448/548: Chemical Hydrogeology, Perkins, TTh, 16:40-17:50; lab Th (18:00-19:30) 4 credits
- G429/529: GIS for the Natural Sciences, Percy, MW (11:30-12:35); lab W (12:45-14:35) 4 credits
- CE437/537: Earthquake Engineering, Dusicka, TR (14:00-15:50) 4 credits
- CE440/540: Geosynthetics, Smith, 4 credits, TTh, 12:00-13:50
- CE 579, Toxics in the Environment, Fish, MW, 12:00-13:50, 4 credits



Any questions: call Scott Burns, 503-725-3389 or email at burnss@pdx.edu



Oregon's Top 10 Liquefaction Research Priorities

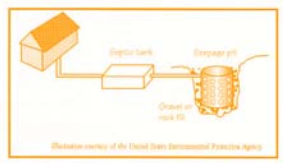
Prepared by: Daniel Gillins (OSU, assistant professor) and Yumei Wang (DOGAMI, PE)

In August 2013, Oregon Department of Geology and Mineral Industries (DOGAMI) and Oregon State University (OSU) hosted a meeting to identify and discuss liquefaction and lateral spreading research needs in Oregon. The participants believe a major earthquake on the Cascadia Subduction Zone will cause widespread liquefaction-induced ground deformations that will be severely damaging to the built environment in Oregon. The meeting attendees strongly advocate and prioritize these following ten efforts to improve understanding of the liquefaction hazard in Oregon. More detailed information is available from the authors.

1. **Developing a database of probabilistic seismic hazard analysis deaggregations from the USGS National Seismic Mapping Project (NSHMP).** Such a database will enable a performance-based approach to evaluating liquefaction triggering and its consequences (e.g., lateral spreading, settlement) for the entire range of probabilistic seismic ground motions in Oregon.
2. **Updating and/or creating new liquefaction hazard maps in Oregon, especially in the highly urbanized Portland Metro Area.** Hazard maps could be improved by incorporating recently developed geology maps, seismic hazard data from the most-current NSHMP, digital elevation models from aerial lidar studies, advances in liquefaction hazard assessment techniques, and available geotechnical data. Such maps should depict liquefaction potential as well as predictions of lateral spreading and settlement displacements.
3. **Identifying more geologic evidence of liquefaction and lateral spreading in Oregon during prehistoric, major earthquakes.** Finding such evidence will improve understanding of the liquefaction hazard in Oregon and promote preparations for the next great earthquake.
4. **Recommending and/or developing ground improvement methods for increasing the resistance of a site to liquefaction-induced ground failure.** Mitigation strategies need to be further investigated, developed and implemented for critical sites (e.g., fuel terminal) and typical foundation systems in Oregon.
5. **Performing additional shear wave velocity tests to further characterize the site amplification and liquefaction potential of sediments in Oregon.**
6. **Developing a geospatial database of geotechnical investigations where the public can easily access, upload data, and download data.** This database could be used to develop correlations and distributions of soil properties for common geologic units in Oregon.
7. **Evaluating the performance of published liquefaction hazard models against case studies of great earthquakes that are similar to potential earthquakes from the Cascadia Subduction Zone** (e.g., 2011 Tohoku Earthquake).
8. **Characterizing the liquefaction potential of geologic units commonly encountered in Oregon, especially in the Willamette Valley and along the Coast using improved in-situ and laboratory testing methods.**
9. **Developing fragility curves for common foundations and structures in Oregon which could be used in seismic vulnerability analyses.**
10. **Informing emergency planners, building officials and other stakeholders of the liquefaction hazard in Oregon.**

"Keen observation is at least as necessary as penetrating analysis"

Karl Terzaghi

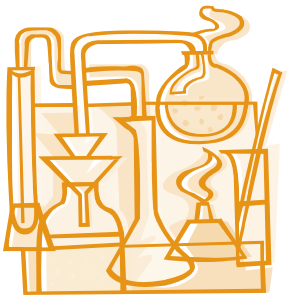

Schematic of a Seepage Pit (Dry Well)

Letter to the Editor – Scott Burns

Dear AEG Oregon Section:

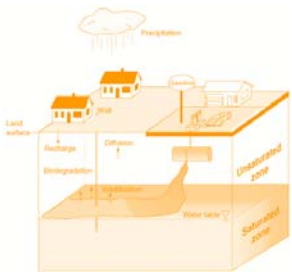
On February 27, 2014, the geology department at PSU voted to hire a replacement for me because I have now retired. I wanted to let the section know the results.

I wanted to let the section know that I have really enjoyed my 24 years of teaching at PSU and helping the students learn about applied geology. I tried to teach courses that could get them jobs and at the same time develop professionalism so I tried to get them involved in AEG. I tried to teach good solid engineering geology based on good field work. I got the students to really know the geology of the Pacific Northwest. Many of you gave talks in my case history courses because I wanted the students to get real practical knowledge. I took the students on many field trips to see engineering geology in action. Our program in engineering geology (not the environmental side which is also strong, but only the engineering geology side) was ranked in the top 5 programs in the US in a poll this past year mentioned at the GSA in Denver. That will now change.



The department took a vote on Wednesday for a replacement for me. I supported for an engineering geologist who also does environmental geology, who has six years of good teaching already, is active in AEG and would connect to the applied geology community. The rest of the department voted for a civil engineer to replace me. This person is a fluid mechanics specialist who has three degrees in civil engineering with no background in either geology or geotechnical engineering. This person is a lab modeler who investigates porosity and movement of fluids through media and clogging of the pores; this candidate is not a field person. This person joins two other modelers in the department who are also new. The connection to AEG will probably end.

Scott Burns, Retired PSU Professor of Geology



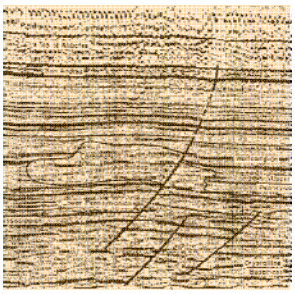
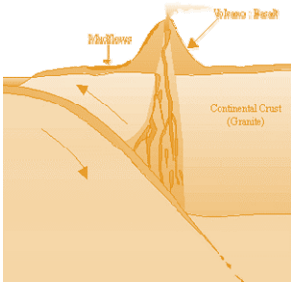


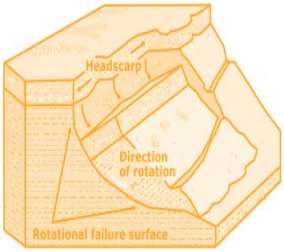
Photo of the Month (courtesy of Stephen Hay, ODOT)

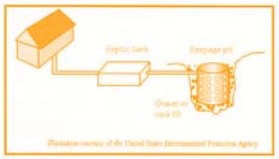
Scaling performed by Hi-Tech Rockfall Construction, Inc. during emergency work at the rockfall on I-84 at MP 61. The rockfall occurred on 2/12/2014 and Hi-Tech was onsite scaling on 2/14/2014. Scaling was completed by 2/16/2014 and the highway was fully opened to traffic on 2/17/2014 after 3,300 cubic yards of rockfall material had been removed by Tapani Construction.

"Keen observation is at least as necessary as penetrating analysis"

Karl Terzaghi







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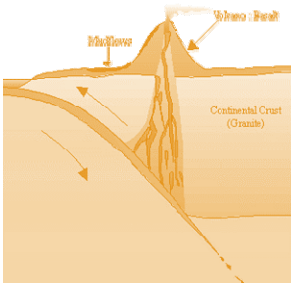

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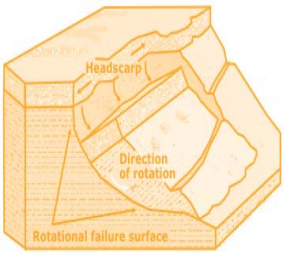

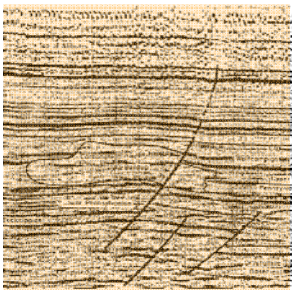

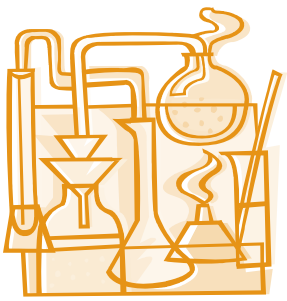

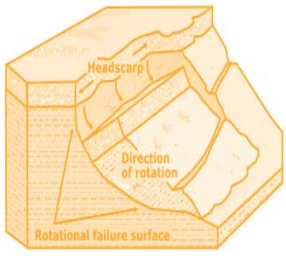

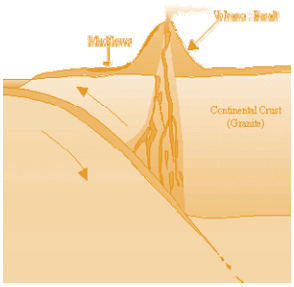

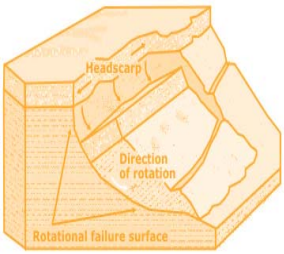

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The Oregon Section Newsletter

OREGON SECTION AEG NEWSLETTER is published monthly from September through May. Subscriptions are for members of AEG affiliated with the Oregon Section or other Sections, 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: Scott Braunsten, OR Section AEG Newsletter Editor, PBS Engineering and Environmental, 4412 SW Corbett Avenue, Portland, OR 97239, e-mail: scott.braunsten@pbsenv.com, phone (503) 417-7737. Electronic media is preferred. Deadline for submittal is the 25th of the month. Advertising: business card $100/yr; ¼ page $200/yr; ½ page $350/yr; 1 page $450/yr. Please notify Scott if you have a change to your email or mailing address.

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