



The Official

OREGON SECTION AEG NEWSLETTER

October Meeting Details

Date: Tuesday, November 14

Location: Lucky Lab Beer Hall

1945 NW Quimby

Portland, OR

6:00 pm Social

7:00 pm Dinner

8:00 pm Presentation

Dinner: Chicken or Veg. Bento

\$16 Dinner (\$8 Students)

Reservations:
mwegner@cornforthconsultants.com
with "AEG Reservation" in
the subject line or 971-222-
2047 by 4pm Thursday No-
vember 9th.

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

Upcoming Meetings:

- December 19, Brent Black: Rockfall Hazard Mitigation
- January 16, AEG/ASCE Joint Meeting: Kristie Hartfeil: Dam Safety



NOTE: Meeting is at the NEW Lucky Lab in NW Portland

November Meetings Guest Speakers are Paul Trone & Craig Ware from GeoDesign, Inc. Presentation: Methane: New Rules, New Challenges

Methane gas is traditionally associated with MSW landfills, oil and gas fields, and natural bogs or swamps. Specific solid waste regulations exist to prevent MSW landfill-generated methane gas from exceeding 25 percent of its lower explosive limit of 5 percent by volume in MSW facility structures or at MSW boundaries (OAR 340-094-0040). In recent years, a need for more comprehensive methane regulations was created when methane gas was discovered at explosive concentrations (5 to 15 percent by volume) in non-solid-waste-permitted fill sites, e.g., "clean" fills, under development in several areas. In response, the DOJ fashioned the "methane rule", which gave DEQ statutory au-

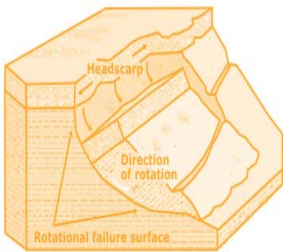
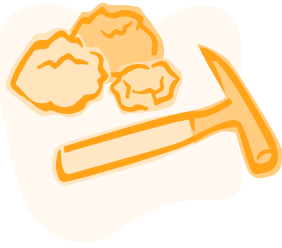
thority and associated rules in OAR 340-122-0040(3) to regulate methane gas in filled gravel quarries that are increasingly being targeted for commercial and residential developments. The "methane rule" requires that "removal or remedial actions shall be implemented to prevent the concentrations of methane exceeding, or likely to exceed, 1.25 percent by volume in confined spaces or structures." The former Cobb's Quarry site and the former Durham Quarry site are two such filled quarries where methane gas being generated in dirt fill is controlled through remedial actions approved and implemented under the hazardous substance rules,

and the oversight of the DEQ's Voluntary Cleanup Program (VCP). Engineering controls including sub-slab passive ventilation systems, low-permeability gas membranes beneath buildings, automated fixed methane sensors inside buildings, and active gas extraction systems are being used (along with manual monitoring at these and other dirt fill sites) to address the explosive risks associated with methane gas and to facilitate site development. Existing developments over fills may come under regulatory scrutiny, and with the current focus on organics as a solid waste (non-inert), future "clean" fill sites may require remedial actions, and even fall under solid waste permit requirements.

Bios: Craig Ware and Paul Trone (see page 4)

Craig W. Ware, RG, is a principal geologist in GeoDesign's Portland office. He has practiced in Oregon since 1990, representing various private and public sector clients in the investigation and remediation of contaminated sites. He has managed assessment and cleanup projects for agricultural, landfill, commercial and industrial sites under various regulatory agency programs involving multimedia sampling, human health and ecological risk assessment, and remedy selection and implementation. In addition, Craig served as project manager for the investigation and remediation of the former Cobb's Quarry site in Beaverton, which is now fully developed for commercial and residential use. He holds a bachelor's degree in geology from California State University at Sacramento and is a registered geologist in Oregon.





Message From The Chair

Sustainable Development. The crowd at the last meeting was really into this topic. It has been a while since there has been so much discussion and questions after a presentation. Thank you to Tom Archer of PBS Engineering and Environmental for presenting about the LEED Green Building Rating System and getting us talking. As geologists, most of us know that resources such as petroleum, minerals, and water are finite. So how can development be infinitely sustainable? Tom pointed out that the technology for construction we currently have is not truly sustainable. The hope for today is that the impact of development and building can be reduced. The eventual goal of true sustainability will be built on decisions made today and every improvement that can be made now will help in the future. For example, increases in the energy efficiency of a building can dramatically reduce the

lifetime cost of the structure. Cost reductions benefit the owner and reductions in the use of energy benefit society. Discussions also included the recycling of concrete from demolished buildings for use as fill, and re-development of closed gravel pits for building sites.

My perception of most development projects has been that decisions affecting the environmental impact of a site are made by architects and others further up the consultant food chain. I learned that this is not necessarily true. Geologists do have a role to play in sustainable development. We may have involvement in site selection, management of stormwater on a site, development of quarry operations, or any number of other roles. As Tom Archer pointed out, the LEED process is a collaborative process that is designed to bring together many design professionals with a broad range of

expertise.

The topic of our November meeting will be directly related to contributions of the geosciences to sustainable development. Paul Trone and Craig Ware will discuss methane and the impacts on the environment. A case study will examine re-development of a quarry for commercial use and the methane generated in the material placed to fill the quarry.

The AEG National Convention will be in progress when this newsletter is distributed. I hope those of you attending, presenting your work, and representing the Oregon AEG are having a great time. For the rest of us, the 50th Anniversary Meeting of AEG is in Los Angeles next year. There is also the First Annual AEG Landside Conference in June to look forward to. Please save me a spot in Vail!

Michael Zimmerman, AEG
Oregon Section Chair

Meeting of the State Board of Geologist Examiners

The Oregon State Board of Geologist Examiners will convene for a quarterly meeting on Friday, December 1, 2006, at 1:00 PM. The meeting will be preceded by a 9:00 AM work session. The work session and the Board meeting will be held on the campus of Western Oregon University, 345 North Monmouth Avenue, Monmouth, Oregon 97361 in Conference Room #205 of the Hammersly Library. The Board will have a working lunch.

During the meeting, the Board may consider Administrative

Rule review, legislative activities, law enforcement matters, financial reports, administration of examinations, and examination appeals.

Executive Session may be convened to discuss records exempt from public inspection per ORS 192.660(2)(f). Such a meeting could be convened during the Work Session or during the Board Meeting.

Meetings of the Board are open to the public. Parties interested in the regulation of registered professionals or the practices of

geology and engineering geology are invited to attend.

The meeting location is accessible to people with disabilities. A request for an interpreter for the hearing impaired or for other accommodations for persons with disabilities should be made at least 72 hours before the meeting with the contact name below. For additional information, please direct your questions regarding the meeting to the Board office as follows:

Susanna Knight, Administrator
osbge.info@state.or.us



PARKS and PLATES:
Interpreting the
Landscapes and
Geology of National
Parks in the Pacific
Northwest

Bob Lillie
Department of Geosciences
Oregon State University
lillie@geo.oregonstate.edu



Bob Lillie shared his presentation on geology in the national parks.



Natalie Richards at the Oregon Science Teachers Association annual meeting.



Bill Burns at Springwater Elementary



Earth Science Week 2006

American Geological Institute National Update: Record numbers of people gained a new awareness of the geosciences through the ninth annual Earth Science Week, October 8-14, 2006. The event celebrated the theme “Be a Citizen Scientist” by engaging the public in real “citizen science” research and promoting science literacy. Earth Science Week events ranged from individual teachers and classrooms completing in-class Earth science activities to open houses held at large USGS field stations.

More Earth Science Week Toolkits were distributed this year than ever before. For example, for the first time, the vast majority of State Geological Surveys - 31 - requested bulk shipments for distribution to teachers and others within their respective states. This year the Toolkit included a new edition of its popular Earth Science Activity Calendar filled with activities and important geoscientific dates. The kits also include fact sheets on citizen science programs from the USGS, a DVD entitled “Views of the National Parks” from the National Parks Service, and a lithograph about ozone and a cloud chart from NASA.

Oregon Update:

Thanks to everyone for participating in the Earth Science Week 2006 activities. AEG, DOGAMI, and USGS Cascades Volcano Observatory distributed 100 toolkits to teachers and volunteers for participation in the Earth Science Week (ESW), October 8-14. Talks and demonstrations of geologic processes were given at class-

rooms throughout Oregon and in Vancouver, Washington.

AEG would like to give credit to everyone who participated in this year’s event. Some of those are listed below, but please accept thanks and apologies if we didn’t get you listed.

Yumei Wang, Kathleen Erikson, and Natalie Richards from DOGAMI staffed an exhibit to promote Earth Science Week at the Oregon Science Teachers Association annual meeting. They gave away many of the 2006 toolkits and remaining 2005 ESW toolkits.

Marjan Rotting began working with Eric Wergeland, Project Leader/Advocate for the Open Meadow CRUE program. The project evolved into a mentoring program, with plans for the class to go out to a job site and seeing what it takes to be a geologist.

Matt Brunengo visited Bonnie Magura’s geologic hazards class at Jackson Middle School.

George Freitag visited two schools in Beaverton: Debbie Martin’s five classes of 1st graders at Scholls Heights Elementary in Beaverton; and Steve Lafleur’s two classes of 6th graders at Conestoga Middle School.

Warren Krager talked about geology careers and earthquakes at Mrs. Livingstone’s 5th grade class at CF Tigard.

Ron Metzger, from the Geology Department at Southwestern Oregon Community College, visited three North Bend 5th grade classes and gave a PowerPoint presentation on Crater Lake.

Brooke Running plans to visit Mrs. McCracken’s 1st grade class at Wilson Elementary

School in Corvallis in mid-May 2007, when the class will be learning about earth science and rocks and minerals.

Sunny Simpkins and Zeitel Gray, PSU student members of AEG, gave presentations about Mt. Saint Helens to Roger Groom’s classes Mt. Tabor Middle School.

Scott Braunsten gave a talk about the geology of Canby and demonstrated a volcanic eruption with a model volcano for 130 students in the 6th, 7th, and 8th grades at Baker Prairie Middle School in Canby. He has been asked to come back and give more talks later in the school year.

Frank Reckendorf plans to give presentation later for his local school district of Salem-Keizer.

James Roddey and Bill Burns from DOGAMI visited the Springwater Environmental Sciences School in Oregon City. Bill taught the 1st through 4th graders about the rock cycle.

Bob Lillie from Oregon State University presented a PowerPoint presentation on geology in the national parks. He and Ellen Bishop also gave a geology bike tour during Earth Science Week.

Governor Kulongoski issued a proclamation designating October 8-14, 2006 to be Earth Science Week in Oregon.

*“Keen observation is at
least as necessary as
penetrating analysis”*

Karl Terzaghi

Bio: Paul Trone

Paul M. Trone, RG, LG, is GeoDesign’s environmental group manager. His 17 years of experience includes numerous remedial investigation/feasibility study, and remedial action projects at contaminated sites for both public and private clients. He recently managed the implementation of remedial actions (under the oversight of DEQ’s VCP) at a high-end commercial development of a former quarry fill site, which includes risk of methane gas accumulation in on- and off-site structures at concentrations exceeding 25 percent of the LEL. He was responsible for all aspects of the remedial design program concurrent with site development, including passive sub-slab ventilation systems and low-permeability gas membranes under buildings, active gas extraction systems within interior and perimeter areas, fixed methane gas sensors inside buildings, and various monitoring and system maintenance programs. Paul earned bachelor’s and master’s degrees in geology from Portland State University. He is a registered geologist in Oregon, a licensed geologist in Washington and an envi-



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: Bill Burns, OR Section AEG Newsletter Editor, Oregon Department of Geology, 800 NE Oregon Street, Portland, OR 97232, e-mail: <bill.burns@dogami.state.or.us>, phone (971) 673-1555. Electronic

media is preferred. Deadline for submittal is Friday three weeks before each meeting. Advertising: business card \$10/mo, \$100/yr; ¼ page \$30/mo, \$200/yr; ½ page \$35/mo, \$350/yr. Please notify Bill if you have a change to your email or mailing address.

The Oregon Section is also on the web at <http://www.aegoregon.org>
National AEG webpage: <http://aegweb.org>


Thanks For Supporting AEG !

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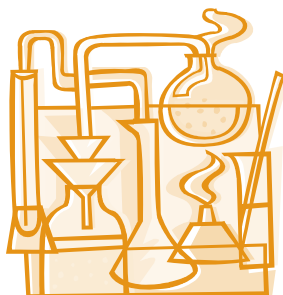
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Section Officers & Committee Chairs



Chair:
Michael Zimmerman
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mzimmerman@gri.com



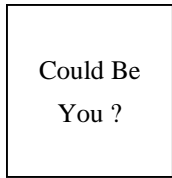
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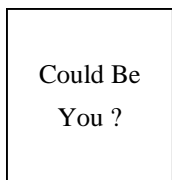
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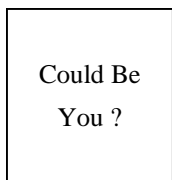
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Photo of the Month

The November photo is from George Freitag who is with GRI Geotechnical and Environmental Consultants. George noticed the unique outcrop as a roadside geologist. The photo is of a newly constructed cutslope along Highway 26 near the Cornell Road exit in Beaverton, OR. The horizontal lines are rhythmites within Missoula flood deposits and are cross-cut by diagonal dikes.

For more information on projects from GRI visit their website at <http://www.gri.com>

To submit a photo, please email the picture in a JPEG or TIF format to bill.burns@dogami.state.or.us. Also include a short paragraph describing the photo and