



The Official

Newsletter

of the Oregon Section Association of Engineering Geologists

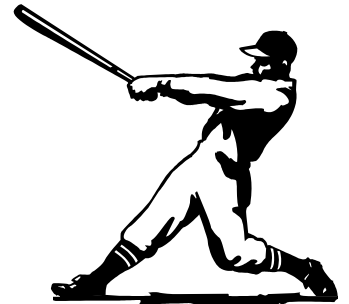
Serving Professionals in Engineering, Environmental, and Groundwater Geology

SPECIAL JUNE 2004 SECTION MEETING

SEE YOU AT THE BALLPARK!

Date: Tuesday, June 22, 2004 (Beavers host the Sacramento River Cats)
 Time: 1st pitch is at 7:05 pm
 Where: PGE Park, seating in a group between 3rd base and home plate.
 Price: \$9 per seat group rate (under 2-yrs are free in your arms and lap, but there may be empty seats)
 Menu: Ballpark fare (hot dogs, peanuts, popcorn, crackerjacks and more) is reasonably priced.

Come join your AEG friends and bring your family too! Reserve your seat(s) by mailing a check and requested number of seats to Warren Krager by June 18th. We have reserved a block of 30 tickets, first come, first serve, but can add more if we have interest. In order to keep all of us in the same general area, please confirm by mailing your check today! Tickets will be distributed by Warren at the entrance to the park on the day of the game. Please call Warren for alternate arrangements.



If you are unable to confirm with a check by June 18 and still want to go to the game, please call Warren Krager at 503-978-4727 (office), 503-810-5066 (cell), or 503-684-4902 (home).

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REGISTRATION FORM FOR THE OREGON SECTION SPECIAL JUNE BALL GAME

Name: _____ Number of tickets: ____ × \$9 = _____: your admission fee
 Address: _____ Phone Number: _____
 _____ Email: _____

Return this form with your admission fee (payable to Oregon section AEG) to:

Warren Krager
 PSI, Inc.
 6032 N. Cutter Circle, Suite 480
 Portland, OR 97217

THANKS FOR SUPPORTING OREGON AEG!

Columbia Geotechnical, Inc.
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ELECTION OF OFFICERS BALLOT

AEG OREGON SECTION 2003-2004

Please indicate your vote by circling the name of choice for the following offices. Your ballot should be sent to: Rowland French, Oregon Section AEG Chair-Elect, Northwest Geophysical Associates, Inc, P.O. Box 1063, Corvallis, OR 97339 or FAX to Rowland at (541)757-7331. Please return by July 1, 2004. The new slate of officers will be announced at the September meeting.

CHAIRPERSON

- Rowland French:

Rowland has devoted over 21 years to applying geophysical techniques to projects in engineering geology, geotechnical engineering, and groundwater resources. He has been active in the Oregon Section of AEG since he moved to Oregon in 1988 and has attended several AEG national meetings as an exhibitor. For the past year he served as Secretary of the Oregon Section. Rowland received his B.S. in Physics from Dartmouth College and his PhD in Geology from the University of Michigan. Since 1988, Rowland has worked at Northwest Geophysical Associates, Inc. in Corvallis, where he is currently Vice President and manager of geophysical services.

- _____ (write in)

CHAIR-ELECT

- Brent Black:

Brent has been active with the Oregon Section of AEG since 1993, and before that was a member and president of the Kent State University AEG student chapter in 1990-1992. Brent received his B.S. in Geology from West Virginia University and his M.S. in Engineering Geology from Kent State University. He is currently an Associate Engineering Geologist with Cornforth Consultants and is a Certified/Licensed Engineering Geologist in Oregon and Washington. He would like to continue his involvement with AEG by participating as a local officer.

- _____ (write in)

SECRETARY

- Michael Zimmerman:

Michael has been active with the Oregon Section of AEG since moving to Portland in 1997. He received his B.S. in Geological Engineering from University of Missouri-Rolla and M.S. in Geological Engineering from Michigan Technological University. He is currently a Project Engineer/Geologist with GRI in Portland and is registered as a Certified Engineering Geologist and a Professional Engineer in Oregon. Michael would like to increase his involvement with AEG by serving as an officer of the AEG Oregon Section.

- _____ (write in)

TREASURER

- Matt Brunengo:

Matt has been active with Oregon AEG since returning to Portland in 1998. He received B.S. and M.S. degrees in Geology from Stanford University, and pursued graduate study at the University of Washington. He worked as a consultant in Seattle and then at the Washington Department of Natural Resources for 12 years, during which he was active in the Washington section of AEG and the Northwest Geological Society. He worked for GeoEngineers in Portland for three years, and is now concentrating on finishing an elusive Ph.D. in Geology/Environmental Sciences at Portland State. He is a Certified/Licensed Engineering Geologist in Oregon and Washington.

- _____ (write in)

WHEN IT RAINS, IT SLIDES

The conflict of interest between economic growth and the forces of nature has led to a serious problem for landslide hazard potential. Landslides are extremely costly to mitigate, and they can be dangerous, especially when they occur in a populated area. To make matters worse, a lack of funding has delayed the proper research and investigation that landslides deserve. An example of the extent of this problem can be found in the State of Oregon. Every winter in Portland, rain falls continuously, which eventually causes many slopes to fail. Some years are better than others, but overall the landslide occurrences are increasing. This is due primarily to the current methods and practices adopted by two of Oregon's largest industries, namely logging and real estate development.

Every summer, more developments pop up in the hills and along the rugged Oregon coast. Logging for timber in the Pacific Northwest forests is continuous all year long. Despite Oregon's reputation as a state comprised of nature lovers and tree huggers, logging is big business and probably always will be. Especially these days, as Oregon has had among the highest unemployment rates in the nation for two years running. Trees love this climate, and much like other crops, they need to be harvested efficiently. We are not against having mansions with beautiful views and logging trees for timber products. However, many of our current methods can integrate more sustainable development practices and suggestions follow. To give the industry some credit, logging practices and construction methods have drastically improved over the years, but there is still much room for improvement.

For example, current logging

practices can exacerbate hazards in natural debris flow chutes. In late 1996, southern Oregon was hit by a severe storm. Deadly debris flows were generated from the high intensity rainfall in a source area within 1987 clear-cut slopes. These fast-moving landslides, which were rich with eroded top soils and logged materials, flowed down Hubbard Creek into harms way, killing three persons near their homes. If logging practices can minimize the concentration of surface water run-off in hazardous debris flow prone areas, then the public can be safer.

Unfortunately, land development often occurs without a comprehensive grading plan and sound management of storm water. Aside from a number of obvious clues of unwise construction (for example, the new homes built on shifting eroding beach terraces and sand spits), we have some first hand disasters. In early 1996, Portland storms triggered hundreds of landslides in the Portland hills damaging dozens of homes. The city's geotechnical engineer has explained how (1) the storm water system is under-capacity, and (2) upslope homes often concentrate then divert their drainage to homes down gradient, which leads to many of the problems. It's difficult for geotechnical engineers (and engineering geologists to accept that the State of Oregon has never adopted a grading code. In 1999, the Oregon chapter of the American Society of Civil Engineers Geotechnical Group Board proposed to the State building codes division that they adopt a state grading code available in the 1997 Uniform Building Code Chapter 33. This sensible ASCE request was rejected.

For another example of the possible effects of landslides are

discussed in a recent report of the geologic hazards along parts of the Columbia River transportation corridor published by the Oregon Department of Geology and Mineral Industries. A low probability, worst-case scenario that could occur in this multi-modal transportation corridor involving barge, rail, and truck traffic was identified. This scenario is a natural recurrence of a Cascade Landslide Complex, where steep slopes forming the headscarp are still looming. Major hydroelectric facilities and the U.S. Corp of Engineers dams are founded on the toe of the westernmost and youngest slide (Bonneville landslide) within the larger Cascade Landslide Complex. Geoscientists have estimated this younger Bonneville landslide, which blocked and diverted the Columbia River south by over one-mile, at approximately 450-yr old.

Smaller landslide events occur all the time in the Columbia River Gorge. An event of the magnitude discussed above, however, would result in complete disruption of transportation systems through the gorge, complete damage to the hydroelectric facilities, as well as inundation of vital low lying areas in Portland. The hydroelectric facilities that could be affected include two powerhouses, spillway, navigation lock, fish facilities, and electrical switchyards, which would require over 10 years and \$2 billion to replace today. The Columbia River barge system reaches ports farther east than any other system west of the Mississippi. Also, the gorge is vital for truck and rail traffic because this is the only route through the Cascade Mountains that is low in elevation and snow free most of the year.

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The discussions above illustrate what you already know. Landslide hazards are costly, many current practices are not sustainable, and, more importantly, the earth science community can take a stance now to reduce landslide risks in the nation and locally. Currently, there is not nearly enough funding available to give landslide geohazard research the proper attention it deserves. An expert committee of the National Research Council (NRC) has just released a report that recognizes the need for a national strategy to reduce landslide hazards. The recommended actions in this report entitled, "Partnerships for Reducing Landslide Risk," are sorely needed

in light of the hazards that numerous communities in the United States face each year. The report can be accessed at <http://books.nap.edu/catalog/10946.html>.

The bottom line of the report is that the USGS should immediately increase their landslide hazards reduction program funding by tenfold from about \$2 million to \$20 million each year. At least one half of the funds would be made available to states, local government and nongovernmental organizations. They recommend that the USGS and other organizations focus on landslide loss reduction from many angles (research, hazards and risk, maps, land-use planning, warning systems, awareness, assessment

standards), and involve stakeholders including state surveys, local government, academia and the private sector so that landslides losses can be reduced. Many states, such as Oregon, are perfect choices as locations to concentrate some research because of the effects that severe landslides have on life safety, as well as the damage to the local economy.

Submitted by Yumei Wang and Chris Heathman, Oregon Department of Geology and Mineral Industries (DOGAMI), 800 NE Oregon St., #28, Portland, OR 97232

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scriptions are free.

News items are invited and should be sent to: Charlie Hammond, OR Section AEG Newsletter Editor, Cornforth Consultants, 10250 SW Greenburg Road, Portland, OR 97223, email: or.aeg.news@cornforthconsultants.com,

phone (503) 452-1100. Electronic media is preferred. Deadline for submittal is Friday three weeks before each meeting.

Please notify Charlie if you have a change to your email or mailing address.

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