



The Official

Newsletter

of the Oregon Section Association of Engineering Geologists

Serving Professionals in Engineering, Environmental, and Groundwater Geology

OCTOBER 2002 SECTION MEETING

JON J. MAJOR, USGS CASCADES VOLCANO OBSERVATORY

Post eruption suspended-sediment transport at Mount St. Helens-- a decadal-scale perspective

Decadal-scale monitoring of streamflow and suspended-sediment discharges from basins disturbed by the catastrophic 1980 eruption of Mount St. Helens reveals when, and under what conditions, sediment redistribution occurred following major landscape disturbance. The redistributed sediment includes new material deposited by the eruption as well as centuries-old sediment remobilized from storage. Annual suspended-sediment yields, as much as 20 Mg per m³/km² of runoff shortly after the eruption, declined nonlinearly in all basins for more than a decade. Yet, after 20 years, suspended-sediment yields from some basins remain 10-100 times greater than typical background values. Suspended sediment is transported dominantly by stormflows; more than 50% of the suspended B sediment load is transported in 1 to 4 weeks each year.

Very large floods ($p < 0.01$) have transported as much as 50% of the annual suspended-sediment load in a single day from some basins. Although large stormflows can transport significant quantities of sediment, the majority of the annual suspended-sediment load is transported by moderate, common stormflows. On average, about half of the annual suspended-sediment load is transported by stormflows having return intervals of less than 1.5 years. Discharges smaller than the mean annual flow transport

<10% of the annual suspended-sediment load. Two decades of monitoring posteruption suspended-sediment discharges as well as changes in hillslope and channel geometries at Mount St. Helens demonstrates that the magnitudes and durations of geomorphic responses to channel disturbances greatly exceed the responses to hillslope disturbances. They also demonstrate the long-term instability of eruption-generated detritus under common hydrologic conditions.

PLEASE NOTE OUR NEW MEETING DAY
THIRD TUESDAY OF EACH MONTH
SEPTEMBER THROUGH MAY

This Month's Meeting is on Tuesday Oct. 15

McMenamins
2927 SW Cedar Hills Blvd
Beaverton, Oregon

Burger Buffet
 Garden burgers available upon request
 \$12 per person (they raised their price!)
 \$6 for students

6:00 pm Social
 7:00 pm Dinner
 8:00 pm Presentation

Call URS at 503-222-7200 by 4 pm Fri.
 Oct. 11 with your meal preference to
 make your reservation.

MESSAGE FROM THE CHAIR

There were roughly a dozen Oregon Section AEG members at this year's annual meeting in Reno, which had an appropriate theme for the location: *Gambling with Geologic Hazards and Dealing with Sustainability*. The meeting drew approximately 640 attendees, including students and exhibitors. This number is higher than average for the annual AEG meeting and higher than the estimated counts for this year's meeting, bringing in roughly \$25,000 over anticipated net proceeds. During the three-day meeting, there were roughly 400 talks divided into 30 technical sessions, as well as a dozen poster sessions, 39 exhibitors, and pre- and post-meeting field trips. The quality of the presentations was high and the organization of the meeting commendable. The Board of Directors then met for two days following the technical meeting to introduce new Board members to the workings of AEG and vote on various action items. The Board of Directors is composed of the five-member Executive Committee and the Chairs of each AEG section, thus numbering roughly 30 members; most sections had a representative. Our section, the Oregon section, includes all of Oregon and a portion of Idaho.

It was great to meet the enthusi-

astic chairs of the various sections and share how the different sections meet, serve their members and community, and raise funds. The biggest news of this year is the move of AEG from a base of operations at Texas A&M University to the new headquarters in Denver, Colorado. With the move, came several operational changes that will allow the Association to save tens of thousands of dollars each year. The review of the budget consumed much of the Board's focus at this meeting. A well-substantiated balanced budget was explained and approved. In addition, methods to accommodate a serious cash flow imbalance expected this year were discussed. Of those, there is a new Education and Publication Fund that is established within the Engineering Geology Foundation that provides a tax-deductible method for individuals to contribute to AEG, the Corporate Sponsors program continues to be an avenue for companies to donate to AEG while getting recognition in the AEG NEWS and tax deductions, a steady retention of members or increase in new members will bring in additional funds for the year, and last, a low-interest loan will probably be necessary to make it through the first year at our new headquarters. In three years or less, the Associa-

tion hopes to be solvent again and in five years, have at least three months operating expenses in the bank. Please come see me if you have any questions or would like more details on the budget crisis or how you can contribute to our comeback.

The Board also took time to develop a plan to revise the AEG Mission Statement and formulate Vision, Value, and Purpose statements that will be useful to our members. Future meetings will also define the AEG structure and By-Laws and formulate Operating Policies that provide proper checks and balances to protect all of our investments in AEG. The meeting was concluded with a short Leadership workshop lead by President Scott Burns.

Mark your calendars now for next year's meeting, September 15-21, 2003, in Vail, Colorado.

See you at the October meeting; bring your questions, ideas, appetite, and thirst.

Ruth Wilmoth

AEG Oregon Section Chair

OREGON SECTION AEG NEWS-LETTER 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. Email subscriptions 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.



Scott Burns, with assistance from Tom Kuper, explaining soil and wine in the Willamette Valley during the Eng. Geo. of Salem Area field trip June 2, 2001 (Photo by C. Hammond)

SHORT NEWS ITEMS

Membership Information: If your membership information has changed, please take the time to update through the AEG Website or by contacting our Chief Staff Executive Becky Roland at (303) 757-2926 x307

Oregon Association of Environmental Professionals (OAEP): Monthly Forum Thursday, October 10, 2002 at the Radisson Hotel; 1441 NE 2nd Ave. (Lloyd Center Area) Portland, OR 97232; Telephone number: 503-233-2401; Free parking.

AGENDA: 6:00 to 6:30 p.m. Networking/Hors d'oeuvres

6:30 to 7:30 p.m. Speaker Forum

For more information, contact: John Foxwell, Speaker Committee, at 503-603-6663 or Ron Doughten, Outreach Committee, at 503-229-5983 ext.241

FORUM: Greenway Review and Implications for Willamette River Source Control

Environmental overlay zones are applied throughout the City of Portland to conserve and protect important resources and the functions they provide. The City established the Greenway overlay to ensure that future development within the floodplain of the Willamette River is conducted only for river dependant uses. As the cleanup of the Portland Harbor moves ahead, the Oregon Department of Environmental Quality (DEQ) is emphasizing the need to evaluate and implement source control measures within the Portland Harbor. Implementation of source control measures often includes excavation, cut-off wall construction, or other activities that require grading or construction permits. Often, source control projects are time-critical and the time needed to incorporate a systematic permit review can have significant impacts on project schedule. In order to ensure

that source control projects continue to move forward, the City and the DEQ are taking steps to streamline the review process and facilitate implementation of these very important projects.

Please join us for an informative discussion led by City and DEQ representatives discussing a general overview of the Greenway designation and the land use review process, Greenway review as it applies to remediation projects, and steps the DEQ and City are taking to streamline the review and facilitate completion of these very important projects.

Tom Carter is a senior planner with the City of Portland Bureau of Planning. Tom's primary responsibilities include conducting land use reviews and working to streamline the city's site development rules. Prior to joining the City in 1997, Tom worked for nearly ten years in hazardous and radioactive waste consulting. Tom holds an MS in Urban/Regional Planning from Portland State University, an MS in Geology from Colorado State University, and a BS in Geology from Westminster University.

Eric Blischke is the DEQ's technical coordinator for Portland Harbor. In this role Eric coordinates all upland investigations within the Portland Harbor, and works closely with EPA on the sediment RI/FS. Eric has worked for the past ten years in DEQ's environmental cleanup program, and for eight years in consulting. Eric earned a MS in environmental science and engineering from Oregon Graduate Institute in 1992 and a BS in chemistry from the University of Michigan in 1983.

Green Briefcases: We still have a few green canvas briefcases left over from the Seattle annual meeting.

You can have one for \$5.00. Contact our Chair and we will bring one to the next meeting!

Oregon Section Book: The 1998 publication "Environmental, Groundwater And Engineering Geology Applications from Oregon" Edited by Scott Burns, with articles by many Oregon Section members, is available from Nature of the Northwest (DOGAMI Book Store at 800 NE Oregon St.), Powell's Book Store, Portland State Book Store (corner 5th and Mill), and Amazon.com.

"Seeking Old AEG Annual Directories": If anybody has any pre-1997 AEG annual directories, please email George Freitag, History Chair at gfreitag@gri.com. George is compiling our sections history. His mailing address is: GRI Inc., 9725 SW Beaverton-Hillsdale Hwy, Beaverton, OR 97005

Receive Your Newsletter by E-Mail: PLEASE TAKE THE TIME TO SWITCH TO THE E-MAIL NEWSLETTER. This saves the Section money and simplifies the editor's job. Please send your e-mail address to or.aeg.news@cornforth-consultants.com

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Thanks for your Support at the May 2002 Dinner Meeting!

Geo-Tech Explorations, Inc.

CALENDAR

November 14: Ken Lite, Oregon Water Resources, Opal Springs/ Deschutes Basin Water Rights Issues

December 19: Jon Hofmeister, DOGAMI, Landslide Modeling/ Debris Flow Mapping

January 16, 2003: Jon Allan, DOGAMI-Newport Office, Coastal Geomorphology Research.

February: to be announced

March 20: Willie Scott, USGS

CVO, Three Sisters Bulge Data

April 17: Student Night

May: to be announced

MEMBERSHIP & LOCAL SUBSCRIPTIONS

Application forms for Membership in AEG can be obtained from Tim Blackwood, Membership Chair. He will also have copies at the monthly meetings. Membership is on a calendar year basis. If you are an AEG member, headquarters will also collect our Oregon Section dues of \$10, which supports our newsletter costs, and, in part, the dinner costs for student members.

If you would like to subscribe to the local newsletter (comes out 9 times a year) without being an AEG member, fill out the form below and

mail or e-mail to Charlie Hammond, Oregon AEG Newsletter Editor. Note: this is only for people and organizations that wish to subscribe to our Newsletter without being members of AEG. Email subscriptions are free.

Copy this page and mail the subscription form with a \$10.00 check, payable to "Oregon Section AEG," to Charlie Hammond, Oregon Section AEG Newsletter Editor, Cornforth Consultants, Inc., 10250 SW Greenburg Road, Suite 111, Portland, OR 97223

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Legislature Chair: position available