



Serving Professionals in Engineering, Environmental,
and Ground Water Geology

OREGON SECTION

NEWSLETTER

The Official Newsletter of the Oregon Section Association of Engineering Geologists

March, 1998

VOLUME 98, NUMBER 03

MARCH MEETING:

Speaker: **John Peck**, Consulting Geologist, Las Vegas, Nevada
President, National AEG

Title: **"Perspectives in Radioactive Waste Disposal"**

Date: Thursday, March 19, 1998

Times: 6:00 PM Social hour
7:00 PM Dinner
8:00 PM Talk

Where: The Old Spaghetti Factory
715 SW Bancroft
Portland, OR 97201
(503) 222-5375

The Old Spaghetti Factory is located in the Johns Landing area along the Willamette River. The restaurant is located on the east side of I-5 just south of the Ross Island Bridge, and is accessed via Macadam Avenue. The meeting room is in the large banquet room on the ground floor adjacent to the lobby entrance.

Menu: \$10 The dinner includes: Lasagna, salad, bread, ice cream, and one non-alcoholic beverage. The lasagna is made with a meat sauce. If you require a vegetarian meal, please call Diane Murbach at (503) 538-8352 to arrange

Reservation: Call the receptionist at David Newton and Assoc.,(503) 228-7718.

Background on speaker:

John Peck has been practicing geology for 36 years. He got his BS degree in geology from the University of Massachusetts in 1960 and his MS degree in geology from Dartmouth College in 1962. He worked for the U.S. Geological Survey from 1962-1974. He was a senior geologist with Stone and Webster Corporation from 1974-1976 and a consulting geologist with them from 1976 to 1989. He then went to work for Science Applications International Corp. from 1989 to 1997 as a geotechnical manager and senior scientist. He has been a consulting geologist since last year. He is a life member of AEG and is currently its president. He is the past chair of the both the New England and Southwestern sections of AEG. He is the former manager of the high-level radioactive waste disposal committee of AEG. He is a fellow of GSA, an active member of AAPG, and a member of the advisory committee of the Nevada Bureau of Mines and Geology.

Abstract:

Radioactive waste disposal in the United States is in disarray. Low level disposal sites established in the sixties have mostly been closed because of real or perceived leaks from shallow burial trenches. High-level radioactive waste from defense facilities remains on various reservations around the country built for the Manhattan Project in the forties. Spent fuel from commercial nuclear power production is stored at the reactor sites in temporary facilities. The Dept. of Energy asserts that no repository for high level wastes will be available until 2010 at the earliest.

The technical issues for shallow and deep geologic disposal of radioactive waste are principally those associated with groundwater movement and surface water infiltration. Each site is geologically unique and has to be characterized as a disposal site based on the geologic and hydrologic properties present in the past, the present and predictably for the future under changed conditions associated with waste emplacement.

The technical issues are not the ones causing the delay and indecision in finding suitable places for geologic disposal of radioactive waste. The disposal process has been politicized to such a degree that we are essentially paralyzed into a no action scenario. The scientific community is part of the problem. Unfocussed research and junk science for political purposes have clouded the process to the extent that decision-makers are unable to feel comfortable with burial technology.

Message from the Chair:

We had a super meeting last month with the ASCE group! There were over 175 in attendance to hear Dr. Mike Duncan of Virginia Tech give one of the finest talks on back-calculating slope stability that I have heard. It is always fun to interact with the geotechs! Dr. Duncan's talk will be ASCE's Casagrande lecture this year!

I invite all of you to come to this month's very special meeting. Come early and meet John Peck, the national president of AEG. He is a wonderful person, and I know that he would love to meet you. He has been working on Yucca Mountain nuclear waste repository for many years and will be talking about nuclear waste disposal in the United States. He will also update us on the workings of the national.

Also at the meeting will be a special presentation to Mrs. Herb Schlicker. We dedicated the book to her late husband and also Jasper Holland. Jasper has received his copy, but Mrs. Schlicker has not and will receive it at this meeting.

We had a board meeting this week and have many activities planned for the rest of the year. Election of the new treasurer will happen in April and at our May meeting I will retire as chair of the section and all of the officers will move up the ladder. We will have a small ceremony and pass out plaques to past presidents at the May meeting. We have four fun field trips planned too (see below). I encourage all of you to attend the national meeting in Seattle this coming fall, and if you can get the time off, go the week before to Vancouver, B.C. to the international IAEG. The mid-year board meeting of AEG is coming up in Las Vegas in April, and I will report back on that in our last newsletter before the summer. Many thanks for Charlie Hammond for another fine column on the Oregon section in the last issue of AEG news. Be sure to see the latest issue on pages 14-19 for there are many photos of the national meeting and many of you are in them! The price of the AEG book has gone up, but you can still order it from the publisher. The new order blanks are in the newsletter. Have a great spring!

Scott Burns, Chair, Oregon Section

Courses being offered for spring quarter at Portland State University that might be interesting to AEG members: Call Scott Burns, PSU, for details at 725-3389. Registration is easy. Classes start March 30th and go to the first week of June.

G571: Case histories in engineering geology, (4) TuTh 5:15-6:30 PM, CH S17, Scott Burns Come hear 18 speakers, experts in engineering geology from the Portland area, speak about their case histories. Many are published in the new AEG case histories book. Other readings will be assigned from the new book.

G520: Applied Geophysics (4) MWF 12:45-13:35, Ansel Johnson, CH S69

G583: Anatomy of Landslides (4) MW 17:15-18:30, Ken Cruikshank, S69

Geol 510: Groundwater Regulations (2) M 18:40-20:20, Dennis Nelson, CH S17

Geog 592: Geographic Information Systems (GIS) (4) TuTh 16:40-18:20, Ric Vrana, CH250

CE 510: Geosynthetics and Geotechnical Design, (4), MW 18:00-19:50, Trevor Smith, SB2 108

Upcoming Field AEG trips: (more information in the next newsletter):

a) May field trip: Landslides in the Portland: visit 23 sites in Portland where landslides resulted from the February 1996 storms. We will discuss processes, causes, and remediation measures. We will also talk about changes in codes and ordinances. Leader: Scott Burns

b) June field trip: "Geology of the Wine Country of Yamhill County". We will spend a leisurely Saturday discussing how the geology has affected the soils of the county and how certain soils are selected for the best grape production and the finest wines. We hope to visit five to six wineries to get a good cross-section (geologists are into cross-sections) of the different geologically affected wines. Leaders: Diane Murbach, Monte Murbach, Scott Burns

c) July field trip: " Engineering geology of the Barney Reservoir Dam Raise". We are bringing this popular field trip back from last year. Many people missed it and would like to see the site. The project is almost completed. The paper written by Charlie in the case histories volume on the project won one of the outstanding paper awards. Leader: Charlie Hammond

d) August 21 field trip: "Debris flow flume in action". The 50th anniversary of the H.J. Andrews Experimental Forest will be this day in August. We will visit the forest to see the debris flow flume of Dick Iverson (USGS, Vancouver) in action. We will also visit the forest and see the site of so much of the forest geomorphology work in Oregon.

Treasurer's Report: Diane reports that we have \$3175 in our account at this time which is very healthy. We thought that we would be making a lot of money from the national meeting, but after talking to Charlie Hammond yesterday, it looks like we will make very little. Our figures were not as high as we thought.

Proposal: Change officer terms from two years to one year. The board has unanimously backed a change in our by-laws, which would change the officer terms from two years to one year. Every two years we elect a new treasurer. That person is then committed to 10 years of service as the treasurer becomes the secretary who becomes the vice chair, then the chair and finally the past chair which we feel is a lot of work. We feel that we have many capable leaders in the group to allow new officer elections each year. The national likes having two year terms so the chairs who come to the national board meetings are there for four meetings not two which allows for greater continuity and less relearning each meeting. We would follow the Denver section model and have the vice chair go as a non-voting member to the mid-year board meeting the year before he/she takes over as chair of the section. Therefore, we would have a chair at three meetings, not four, during their term of office.

a) pros for the change: more people can become officers, less time of service when you make the commitment to serve; we have new blood coming into the organization all of the time.

b) cons for the change: It will cost us about \$500 more each year from our treasury as we pay for the mid-year board meeting travel expenses from our budget.

We will discuss this a little at this month's meeting and then vote on it next month.

Short news items:

Pacific Northwest Mining and Metals Conference: April 11-13, 1999 in Portland at the Doubletree at the Lloyd Center. The organizers of this conference would like to have us participate in this conference. Our two groups combined with the GSA group of Portland State to put on a fine meeting in the spring two years ago at the same place. We are looking for someone to volunteer to help in the organization of this conference from the AEG side. See Scott Burns for more details.

Election of new officers: Are you interested in running for an office in the Oregon section of AEG? One person has expressed interest so far. We would love to have at least one more volunteer also step forward. See Scott Burns if you are interested. We will have the election in April with the results of the election at the May meeting when officers change positions. We will also have a small ceremony for outgoing officers and past chairs during the 1990's

Norm Tilford Field Studies Scholarship: Oregon Section contributes \$200 to the Norm Tilford Field Studies Scholarship. This special scholarship was set up in the honor of Norm Tilford, a past president of AEG, past editor of the journal, past professor of engineering geology at Texas A & M, and more recently our director of AEG. He was killed in a plane crash in November of this past year. Our section believes in supporting students and believes that this scholarship fund is a great memory of Norm.

Southern Oregon Meeting? Do we have an organizer in Medford, Roseburg or Eugene? Last year we had a super meeting in Roseburg and there was talk of having three meetings each year in the southern part of our state. We just need for someone to step forward and organize the meeting. We will publicize it. Call Scott Burns, Oregon chair, for details.

Update on the AEG Oregon Case Histories book: All of you who have ordered the book should have received it. We have gotten many great comments about the book. Congratulations to the authors. All of the photos have been returned to me. I will be returning them to the authors in two weeks (as soon as final exams are over). I also have about half of the reprints of the articles to give to the authors. They will be mailed out in two weeks or you can come by my office and pick them up. The price of the book has gone up to \$79.95 and the new order forms are in this newsletter. Scott Burns, editor

AEG Homepage: check it out: [http:// www.aegweb.org](http://www.aegweb.org)

Seismic Zonation for the Coast of Oregon: The Building Codes Division of the state is considering a change in the seismic building code from zone 3 to zone 4 for the coast. This is because of the high potential for subduction earthquakes. I would like us to make a recommendation. We will discuss this at the meeting in our announcements.

LOCAL NEWS:

Congratulations to Squier Associates and AGRA:

Squier Associates has won the top award from CECO (Consulting Engineers Council of Oregon), Project of the Year Award for the state of Oregon. Their project was the stabilization of one of Oregon's worst landslides along the coast, the Arizona Inn landslide which is located on highway 101 between Gold Beach and Port Orford in Curry County. The landslide has a history of five major movements since Highway 101 was constructed across it in the 1930's. The latest movement was in March of 1993 and resulted in a 280-mile detour for travelers and a \$5 million economic loss to the coastal communities. Squier Associates designed a \$4.6 million geotechnical investigation and mitigation that included many horizontal drains and a drainage shaft system that was connected to many of the horizontal drains.

AGRA Earth and Environmental also received an Honor Award for their work on bioremediation of herbicide-contaminated soils at the ODOT Baldock Maintenance Station site on SW 35th drive in Portland. They collected contaminated soils in bins, studied soil characteristics over time and chemically treated the soils that will save money and make the soils acceptable as landfill material.

Board of Geologist Examiners the new address and phone numbers for the Board is:

Board of Geologist Examiners
726 Hawthorne Ave. NE
Salem, OR 97301
Phone: 503 362-2666
Fax: 503 362-5454

"AEG" CALENDAR:

- | | |
|---------------------|--|
| March 25-27 | 33rd Symposium on Engineering Geology and Geotechnical Engineering, University of Reno, Nevada |
| April 7-9 | GSA Cordilleran Section meeting, Long Beach |
| April 8-9 | Landfill gas assessment and management symposium, Sacramento, CA (AEG section there) |
| April 19-22 | First International Conference on Site Characterization, Atlanta (ASCE, Geo-Institute, ISSMGE) |
| April 16 | April Oregon Section Meeting |
| May 21 | May Oregon Section Meeting: Jim O'Connor, "Quaternary Geology of the Willamette Valley" |
| Sept. 19-20 | Friends of the Pleistocene, Willamette Valley (Scott Burns and Jim O'Connor, leaders) |
| Sept. 21-25 | IAEG meeting in Vancouver, B.C. |
| Sept. 26-30 | AEG National Meeting in Seattle, WA (abstracts due next month) |
| October 4-10 | SEPM Research Conferences: "Sedimentary Record of Natural Disasters", Portland |

Field Trips -- 8th Congress of the IAEG and the 41st Annual Meeting of AEG:

Trips offered by IAEG:

Pre-Congress:

- Alaska cruise, Inside Passage (8 days)
- Canadian Rocky Mountains; southern B.C. to Calgary, Alberta (5 days)
- Landslides and engineering geology in southern British Columbia – Fraser Valley and Coast Mountains (5 days)

Mid-Congress (1-day trips):

- Fraser Valley – large rockslides and slope deformation
- Forest practices – logging and road construction east of Vancouver
- Howe Sound – landslides
- Local dams – hydro and water-supply dams north and east of Vancouver
- Engineering geology of Vancouver and the Fraser delta – seismic/liquefaction issues
- Vancouver landfills – engineering, groundwater contamination

Trips offered jointly by IAEG/AEG (post-IAEG Congress, pre-AEG Meeting; trips originate in Vancouver and end in Seattle):

- Engineering/environmental geology of the Gulf and San Juan Islands (4 days, by boat)
- Cascade volcanoes – processes and hazards (5 days)
- Mine and smelter reclamation in the Inland Northwest (5 days)
- Grand tour of the North Cascades, Columbia Plateau, Yakima Valley and Mt. Rainier

Trips offered by AEG:

- Logging, landslides and recent faulting on the Olympic peninsula (pre-meeting, 3 days)
- 100 years of the Snoqualmie Falls underground powerplant (during meeting, ½ day, multiple trips)
- Spirit Lake Memorial Highway and Mt. St. Helens (post-meeting, 1 day)
- Engineering Geology of Seattle (post-meeting, 1 day)

Note: Costs and other details associated with the above field trips will be available Spring 1998.

Committee Chairs:

- General Chair:** William R. Clevenger, KCK Cella, P.O. Box 951, Redmond, WA 98073-0951
Office: (425) 861-8672; FAX: (425) 869-9378; e-mail: Clevenger1@aol.com
- Short Courses:
& Symposia:** Kenneth G. Neal, Kenneth Neal & Associates, 2014 Baker Terrace, Olympia, WA 98501
Office: (360) 352-5125; FAX: (call first) (360) 352-5125; e-mail: kengneal@aol.com
- Exhibitors:** Robert G. Kenly, Slope Indicator Co., P.O. Box 3015, Bothell, WA 98041-3015
Office: (425) 806-2253; FAX: (425) 806-2250; e-mail: bob@slope.com
- Field Trips:** Matthew J. Brunengo, Washington Department of Natural Resources, Forest Practices,
P.O. Box 47007, Olympia, WA 98504-7012
Office: (360) 902-1423; FAX: (360) 902-1785; e-mail: matt.brunengo@wadnr.gov
- Special Events:** Glen Wyatt, Weyerhaeuser Technical Center, WTC-2G2, Tacoma, WA 98477
Office: (253) 924-6103; FAX: (253) 924-6182; e-mail: wyattg@wdni.com



Association of Engineering Geologists
Serving Professionals in Engineering, Environmental and Ground Water Geology

Bill Clevenger CHAIR (425)861-8672	Matt Brunengo FIELD TRIPS (360)902-1423	Bill Evans FINANCES (253)926-2493	Dick Galster PUBLICITY (206)542-2596	Bob Kenly EXHIBITORS (425)806-2253	Ken Neal SYMPOSIA (360)352-5125	Teresa Taylor PROGRAM (206)685-7198	Glen Wyatt EVENTS (253)924-6103	Julie Keaton ABSTRACTS (520)204-1553
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AEG '98

SEATTLE, WASHINGTON

"Engineering Geology - Knowledge for Better Decisions"

41st Annual Meeting, September 29 - October 3, 1998

Call for Technical Papers and Exhibitors

The 41st Annual Meeting of the **Association of Engineering Geologists (AEG)** in Seattle, WA offers a unique opportunity for engineering geologists worldwide. The meeting is scheduled immediately following a Congress of the **International Association of Engineering Geology (IAEG)** in Vancouver, British Columbia. A variety of field trips will be offered by both organizations. Those wishing to attend field trips sponsored by *either* organization need only register for one meeting, and pay appropriate field trip fees.

Suggested Topics for Abstracts:

- Geologic hazards
- Legal & communication issues related to engineering geology
- Case histories
- Professional & ethical considerations in engineering geology
- Project management
- Risk assessments, site evaluations

Abstract Submissions:

Abstracts should be limited to approximately 250 words. The abstract does not have to be prepared in camera-ready format. Each abstract submitted and approved will be published in the meeting program. Acceptance or rejection of an abstract will be based on quality, timeliness and technical relevance. Authors of accepted abstracts will be so notified by the organizing committee, and informed of the session for which presentation is scheduled. Presentations will be limited to 20 minutes.

Abstract submittals due on or before May 1, 1998. Send completed abstract by e-mail (preferred) or mail with disk to:

AEG '98 c/o Julie Keaton
130 Yucca Drive, Sedona, AZ 86336-3222
(520) 204-1553; FAX (520) 204-5597
E-mail: aegjuliek@aol.com

Short Courses Include:

- Loss Prevention and Liability Insurance – What it Covers and What it Doesn't
- Preparing and Delivering Effective Technical Presentations

Symposia Include:

- Flooding in the Pacific Northwest During the 1990's
- Engineering Geology and the Media

Exhibits:

Exhibitor spaces will be provided for up to 21 booths, directly outside session rooms. Each booth will include a table, chairs, and pipe and draped 6 x 8 space. A brief description of the exhibit and any special requirements should be sent to the exhibitor committee chair noted below.

Guest Activities:

Guests accompanying conference attendees will be able to take advantage of a number of different activities planned to highlight some of the interesting scenic, cultural, and entertaining features of Seattle and nearby destinations in the Puget Sound region.

PUBLICATION ANNOUNCEMENT AND SPECIAL DISCOUNT

ENVIRONMENTAL, GROUNDWATER AND ENGINEERING GEOLOGY: APPLICATIONS FROM OREGON

PUBLISHED JANUARY 1998. Hardcover.

Dr. Scott Burns, under the auspices of the Association of Engineering Geologists, selected 82 authors from 27 consulting firms, nine government agencies, and two universities to prepare papers for this special comprehensive compendium. In this volume, you will find 69 articles organized into 8 chapters covering major concerns in applied geology. In this collection of case histories and review articles, each author describes a problem and demonstrate how they solved it.

Summary of Contents by Chapter:

- 1. Geologic and Physiographic Provinces. Describes the physiographic provinces of the state along with the geologic history.
2. Practice. This chapter offers a lawyer's perspective on geologic practice in Oregon, including registration practices and important regulations a geotechnical practitioner should know. Additional discussion of professionalism in engineering geology.
3. Facilities. A fascinating collection of articles -- the largest chapter -- including how geology and geologic processes are factors in the siting of dams, buildings, and hospitals. Discusses the important evaluation of dams for weathering, upgrading to meet new earthquake standards, and evaluating dam structures relative to landslides.
4. Transportation. The application of geology along major transportation routes: highways, railroads, coastal and inland waterways.
5. Geohazards. Three review articles on earthquakes, volcanic, and landslide hazards. Additional articles describe landslide problems, including a comparison of clear-cut and non-clear cut areas in a national forest. Landslides are a hazard worldwide, and these articles offer unique insight into this deadly problem.
6. Planning. Unique coverage of land use planning and environmental protection focusing on mining and ecosystems along the coast, rivers, wetlands and forests.
7. Water Resources. The evaluation and management of water supplies is a crisis worldwide. Portland's famous well field has a large pollutant plume sitting above it! Geothermal energy development could threaten water supplies -- here's an evaluation from Bend, Oregon. Two articles address issues related to salmon -- salmon runs are decline and major recovery programs are being implemented -- there is potential impact to salmon when a new navigation lock is constructed and when a dam pool is lowered to aid in downstream migration of salmon.
8. Contaminants. Articles discuss environmental geology case histories. Superfund sites. Fertilizer contamination. How to investigate and mitigate organic solvents in the soil and groundwater. Problems that occur in every state and in every country! Here are Oregon's solutions.

This is not a book of theory. Not just a reference book. You will have a hardcover volume of actual hands-on solutions. Answers to problems. Solutions that will inspire readers to new heights of professional excellence.

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"AEG - OFFICERS"

1996 - 1998

(* - means area code 541)

(N.M. - means National Meeting)

Position	Name	Telephone		
		Daytime	Home	FAX
Chair	Scott Burns	725-3389	692-9618	725-3025
Chair-Elect	Dave Michael	359-7448	357-0238	357-4548
Newsletter	"			
Secretary	Charlie Hammond	452-1100	274-1437	452-1528
Treasurer	Diane Murbach	228-7718	538-8352	228-7781
Past Chair	Sue D'Agnese	*957-3595	*673-1797	*957-3604
Membership	Ed Stearns		661-0462	

MEMBERSHIP

For application forms for Membership in the National AEG, call Ed Stearns who is our membership chair at 661-0462 (h). He will also have copies at the monthly meetings. Membership is on a calendar year basis. Starting this year, if you are a national member, they will collect our local dues of \$10 which just covers our newsletter costs. If you would like to subscribe to the local newsletter (comes out 9 times a year) without being a national member, fill out the form below and mail to Diane Murbach. Note: the following form is only for people and organizations who wish to subscribe to the Oregon AEG Newsletter without being members of the national AEG.

APPLICATION FOR LOCAL MEMBERSHIP IN OREGON SECTION, AEG:

NAME _____

AFFILIATION: _____

MAILING ADDRESS: _____

TELEPHONE: _____

Mail form and \$10 to Diane Murbach, David Newton & Associates, 1201 SW 12th. Ave. Suite 400, Portland, OR 97205.

ANNOUNCEMENT OF OUR NEXT EXCITING MEETING

March 19, 1998

AEG



Dave Michael, Editor
Oregon Chapter, AEG
c/o ODF NWOA
801 Gales Creek Rd.
Forest Grove, OR 97116



MAR 14 1998

Charles M. Hammond
Cornforth Associates
10250 SW Greenburg Rd. #111
Portland, OR 97223-5460

