OREGON CHAPTER OF THE
ASSOCIATION OF ENVIRONMENTAL &
ENGINEERING GEOLOGISTS

September 2020

Volume 5, Number 1

The Official

AEG Oregon Chapter Newsletter

http://www.aegoregon.org

MEETING DETAILS

Date: **Tuesday, September 22, 2020**

Location: **Virtual**
Link:
https://attendee.gotowebinar.com/register/7048049164111072267

Evening Agenda:

6:00 pm Virtual Presentation

Deadline:

September 18th, 2020

UPCOMING MEETINGS:

October: Andy Baird and Hans van de Vrugt

November: TBD

December: TBD

January: TBD

February: TBD

March: TBD

April: TBD

May: TBD

June: TBD

A Post-Earthquake Investigation in the Eastern United States: David F. Fenster

At 1:51 pm on August 23, 2011, an Mw 5.8 earthquake occurred near the town of Mineral in Louisa County, Virginia. The earthquake caused both structural and non-structural damage in Mineral. The resulting ground motion was sufficient to cause the safe shutdown of a nuclear power plant at the North Anna site. The Mineral earthquake occurred within the Chopawamsic Terrane of the Virginia Piedmont, east of the Chopawamsic fault and west of the Spotsylvania fault. The Chopawamsic Terrane is comprised of the Chopawamsic Formation and the Ta River Metamorphic Suite – both interpreted as having formed in an island arc environment during the Ordovician. The earthquake occurred within the Central Virginia Seismic Zone, a cluster of seismicity that is not associated with known faults. Various geologic and seismologic investigations indicate that seismicity in the epicentral region is not associated with any of the known faults mapped at the surface. Aftershock hypocenters define a northeast striking, southeast dipping cluster of seismicity. When projected to the surface, this cluster of seismicity extends for a lateral distance of about 10 km. This investigation used interpretations of LiDAR imagery and published geologic maps to focus on locations of potential surface deformation. No surface faulting occurred, and all data and results were reported to the U.S. Nuclear Regulatory Commission as part of Dominion Power's application for an additional nuclear power plant at the North Anna site.

Bio: David F. Fenster (Past AEG President)

Dave retired as a general consulting engineering geologist in January 2018 after a 44-year career working primarily for large consulting firms. After starting at the City College of the City University of New York (CUNY) as an engineering major, he was graduated with a BA in History in 1967. He received an MA in history from the University of Illinois in 1968. Dave started taking geology courses at Queens College of CUNY while teaching in the South Bronx. He was awarded a teaching assistantship (Lecturer Part-time) and received a Masters in Geology in 1975. He is a Licensed Professional Geologist (PG) in California; Certified Professional Geologist in Virginia and was previously certified in Indiana and Missouri.

As an engineering geologist, Dave applied geologic principals to investigate sites for: geologic and seismic hazards assessments; critical facility site selection; radioactive and hazardous waste management; nuclear facility licensing, LNG facility permitting and certification; and NEPA compliance. His project experience

"The earth is large and old enough to teach us modesty."

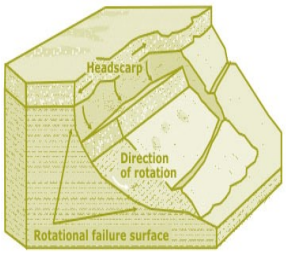
Hans Cloos

Bio Continued...

includes site investigations; report preparation; project management; and business development. Many projects have included Federal, state, and local regulatory compliance; permit acquisition and nuclear facility licensing. Prior to retiring, he had been a Principal Geologist and the Engineering Geology Supervisor and was recognized as an Elite Technical Specialist for Bechtel Power Corporation in Fredrick, MD and Reston, VA. (2006-2018). Most of his work for Bechtel included site investigations and report preparation for the current generation of commercial nuclear power plants. Dave began his career as a geologist with Dames & Moore in 1974 investigating sites for nuclear power plants, working on foundation and groundwater investigations and other aspects of applied geology. His experience with geologic field mapping led to interpretations of surface and subsurface data to develop the regional and site geology sections of Safety Analysis Reports filed with the US Nuclear Regulatory Commission in support of nuclear power plant licensing. As this work declined, Dave conducted environmental geologic investigations to characterize site groundwater and soil conditions and to determine whether clients were in compliance with environmental regulations. After leaving Dames Moore, Dave worked on the geologic isolation of high-level radioactive wastes while with Argonne National Laboratory (1982-1985), Roy F. Weston Inc. (1985-1991) and with Woodward Clyde/URS (1991-2006). At URS he supported FEMA while working on the Pre-Disaster Hazard Mitigation Program and other geology-related programs.

Dave joined the North-Central Section of AEG in 1982. He served as North-Central Section Program Chairman (1982-1984) and Secretary (1984-1985). He was appointed as Chairman of the Committee on Rock Mechanics and AEG's representative to the U.S. National Committee on Rock Mechanics (1984-1989). He was Chairman of the Committee on Radioactive Waste Management (1989-1991) and Chairman of the Committee on High-Level Radioactive Waste Management (1991-1994). Dave served as Chairman of the Baltimore-Washington-Harrisburg Section (current DC-Maryland-Virginia Chapter) (2002-2004). He was an initial member of the Section Chapter Support Committee. He served on the Board of Directors of the AEG Foundation from 2006-2016 as Secretary for two years and as President for 2015. Dave was appointed as interim Vice President of AEG in 2017 and was elected as Vice President/President-elect for 2017-2018. He served as AEG President for 2018-2019 and is the current Immediate Past President.

Dave has served as a peer reviewer for AEG's Environmental & Engineering Geology Journal. His term as Overseas Reviewer of the Quarterly Journal of



"The earth is large and old enough to teach us modesty."

Hans Cloos

Message from the Chair

Welcome to the AEG Oregon Chapter 2020-2021 year. With the changing of the leaves, we change our board members. I would like to thank the outgoing Past Chair, Chris Humphrey, for his leadership and guidance. I appreciate Ben George for his insight and understanding and I look forward to his guidance as Past Chair this year. Let us welcome Nancy Calhoun as Chair Elect, Aine Mines as Treasurer, and Bryon Free as our new Secretary. Changes are the theme this year and we can anticipate more of the changes we have endured so far this year.

I would like to share with you in this moment of upheaval and change as we charge together at the hurdles in front of us. As geologists we are familiar with adaptation resulting from an ever dynamic and changing environment. We examine, we adjust, or we just manipulate a shifting landscape to suit our purpose. I ask you to take this opportunity with myself and the Oregon Chapter Board to examine and adjust to our changed world.

With the challenges we face, together we can adapt and overcome.

This year I would like to focus on three challenges ahead of us:

Connecting with each other,
Connecting students with professionals, and
Creating diversity in our profession

I think we can take down the hurdles if we put our heads together. With your help, we can create new facets to the jewel of AEG, the Oregon Chapter, and manipulate our landscape. The Oregon Chapter Board invites you to participate in these developments and help guide the direction and outcomes of the changes we must make to how we pursue the mission of AEG in our community.

Please contact myself or any Board member if you have ideas, time, and the motivation to break away from your sourdough starter, home brew, or home remodeling projects. We are in need of Chapter members to help support a new path. I am looking forward to discussing with you how we can move forward and find new ways to share, connect, and grow.

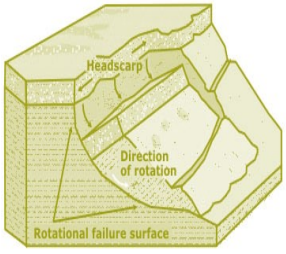
In the meantime, register for the 2020 Virtual Annual meeting September 16 to 18 and please be kind while we feel around in the dark for the light.

Talk soon and be well,

Mike Marshall

AEG Oregon Chapter Chair

Interested in presenting for the Oregon Chapter?



The Oregon Chapter is looking for great topics and presenters to provide content to share with the chapter. As we continue to navigate the virtual world, we will be holding the next foreseeable meetings through webinars. We currently have opportunities to present in November and December. Please consider presenting your exciting project to the Oregon Chapter. We look forward to hearing from all of you and especially appreciative of those willing to present to the Chapter. If you are interested in presenting please feel free to contact any board member. Our contact information is at the end of the newsletter.

"The earth is large and old enough to teach us modesty."

Hans Cloos

In Memoriam

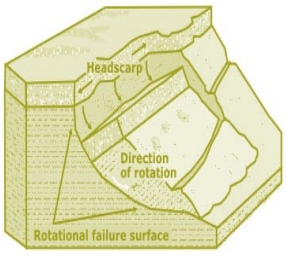
Gunnar Schlieder, a widely respected engineering geologist in Eugene, Oregon, died on July 21, 2020 from an apparent heart attack with much in life left undone. Gunnar was born to Siegfried and Eva Johanna (Werner) Schlieder on February 17, 1957 in Göttingen, Germany. His parents brought him to the US when he was 8 years old. The family returned to Germany, but Gunnar was captivated by America. After he graduated from Technical University of Munich with a BS degree in Geology in 1978, he came back to the US to pursue graduate work. He completed a Masters Degree in Geology at The George Washington University in 1984, and a Doctor of Philosophy in Geology from Lehigh University in 1989. Both his Masters and Ph.D.s were in Glacial Geology a discipline that would later come to define his finest accomplishment in interpretive geology.

Following completion of his PhD in 1989, he landed in Eugene, Oregon. After a brief time as a partner in GEM Consulting, Gunnar established GeoScience, Inc. a geology consulting firm he led as CEO and President. Gunnar was an Oregon Registered Geologist (RG), a Certified Engineering Geologist (CEG), a member of the Association of Engineering Geologists, and the Lehigh branch of Sigma Xi.

Gunnar was a strong task master. Few could stand up to his expectations and desire to have quality oversight and control of the company's work. Gunnar's belief, which is a standard in geology, was that every piece of evidence must be consistent with the final geologic interpretation, or the interpretation is wrong, and must be reformulated. This precept would guide an enviable career in engineering geology. Gunnar was the ultimate consummate professional.

Throughout his career, Gunnar provided geotechnical consulting services to residential clients, developers, industry, and governmental entities – he completed more than 40 projects for the City of Eugene. He was a voice of reason and consistency in land development, forestry, and the location and design of public roads. Being located in Eugene, Oregon, much of Gunnar's professional work was in support of the Forest Industry's never ending quest to balance society's needs for forest products, jobs for woods workers, a viable business model for forest land owners and long term environmental quality. At the same time, he was very active in local land use decisions where the property concerned had some level of geologic risk for the proposed use. Gunnar spent more time than he would have liked in the role of expert witness in legal disputes, working for both plaintiff and defense attorneys as the merits of the case dictated.

He was a generous mentor to younger geologists throughout his career. He employed the Socratic method of teaching as a means of developing critical thinking skills in those that were fortunate enough to be mentored by him. He was universally regarded as the single most capable practitioner of determining landslide public safety risk levels from forestry operations in the state of Oregon. Many of the current professional landslide public safety practitioners in the Pacific Northwest learned the analytical techniques of that practice from Gunnar.



Gunnar was a member of the Geotechnical Extreme Events Reconnaissance (GEER) Association, an international group of volunteers who respond to geotechnical extreme events, such as earthquakes, landslides, dam failures, etc., to conduct detailed reconnaissance and document valuable perishable information that can be used to advance research and improve engineering practice.

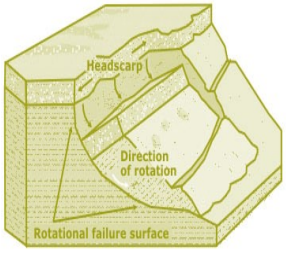
"The earth is large and old enough to teach us modesty."

Hans Cloos

Gunnar's most important project and contribution to Society was the investigation of the Oso Landslide in Washington State. Gunnar was a member of the six person team commissioned by the attorney general of Washington to determine the cause of the landslide which killed 43 people. Gunnar was the primary on-the-ground geologist and was responsible for the geologic interpretation that fundamentally changed our understanding of the glacial geology of the region.

Gunnar is survived by his mother of Heiligenstadt in Oberfranken, Bavaria, Germany, his wife, Robin Jayne, and two children, Wilhelm and Sophia, just days short of their 18th birthdays. In addition, he leaves countless professional colleagues who will never again enjoy his humor, his insistence on high quality of profession practice, his love of sailing, his love of good food, his love of good beer, his restoration of old houses, and the stimulating discussions that he always brought to the table.

Gunnar will be sorely missed by family, friends, and colleagues. In his memory, we all should work to bring out the better person that is within each of us in everything that we do – he would want that.



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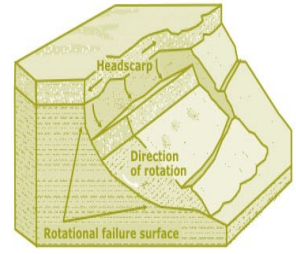

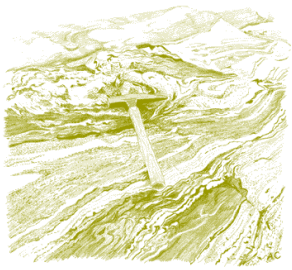

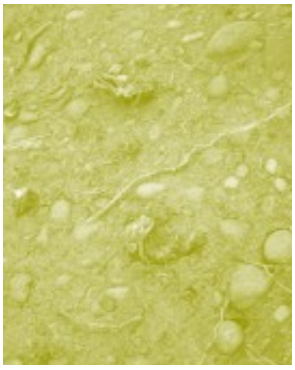

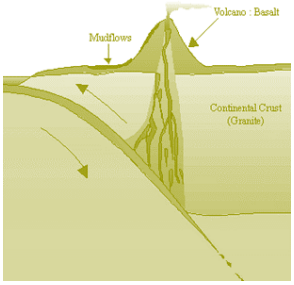

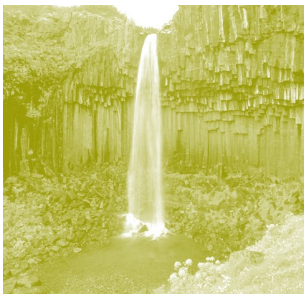

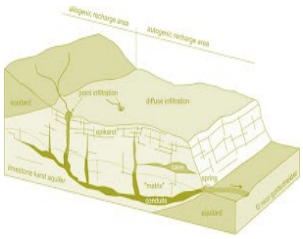

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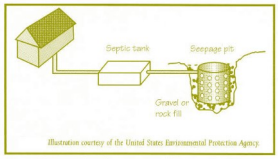
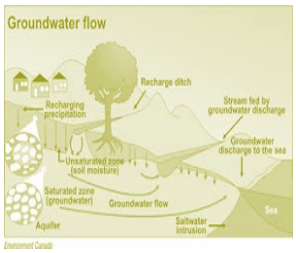


Schematic of a Seepage Pit (Dry Well)



"A soil adapted to the growth of plants, is necessarily prepared and carefully preserved; and, in the necessary waste of land which is inhabited, the foundation is laid for future continents, in order to support the system of the living world.."

James Hutton

Chapter Officers & Committee Chairs

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GRI
mmarshall@gri.com

Program Chair:
Jasmin Jamal
Aspect Consulting
jjamal@aspectconsulting.com

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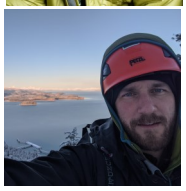

Past-Chair:
Benjamin George
Cornforth Consultants, Inc.
bgeorge@ccilt.com

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The AEG Oregon Chapter Newsletter

The Association of Engineering Geologists (AEG) contributes to its members' professional success and the public welfare by providing leadership, advocacy, and applied research in environmental and engineering geology. AEG's values are based on the belief that its members have a responsibility to assume stewardship over their fields of expertise. AEG is the acknowledged international leader in environmental and engineering geology, and is greatly respected for its stewardship of the profession.

AEG OREGON CHAPTER NEWSLETTER is published monthly from September through May. Subscriptions are for members of AEG affiliated with the Oregon Chapter or other Chapters, 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: Ben George, AEG Oregon Chapter Chair-Elect, Cornforth Consultants, Inc., 10250 SW Greenburg Road, Suite 111, Portland, OR 97223, e-mail: bgeorge@ccilt.com, phone (503) 452-1100. Electronic media is preferred. Deadline for submittal is the 25th of the month. Advertising: business card size $100/yr; ¼ page $200/yr; ½ page $350/yr; 1 page $450/yr.