

The Official

AEG OREGON CHAPTER NEWSLETTER

<http://www.aegoregon.org>

MEETING DETAILS

Date: Tuesday, Sept 18, 2018

Location: Old Market Pub
6959 SW Multnomah Blvd
Portland, OR 97223

Evening Agenda:

6:00 pm Social Hour

6:45 pm Dinner

7:30 pm Presentation

Reservations:

aeg-or-2018-09.brownpapertickets.com

\$25 Private Industry

\$20 Public Agencies

Free for Students

Deadline:

5pm Sunday, Sept 16, 2018 at

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

UPCOMING MEETINGS:

Oct 16th Alan Hull

Nov 20th TBD

(This could be you)

Dec 18th TBD

(Tell us a great story)

Jan 15th Doug Boyer

(Joint ASCE Meeting)

Feb 19th Weston Thelen

Mar 26th Debra Green

Apr 16th Bill Burns

Josh Roering

Will Struble

May 21st Student Poster Night

Transportation Resilience: Vulnerable Threads in an Unstable Fabric Guest Speaker: Curran Mohny, CEG (ODOT)

The predicted Magnitude 9.0 or greater earthquake along the Cascadia Subduction Zone (CSZ) has been the single event that dominates the risk to Oregon's transportation network: An event of this enormity will result in significant loss of life and the widespread destruction of dwellings, businesses, and public buildings leaving large areas of coastal and western Oregon isolated for a long period of time – possibly years.



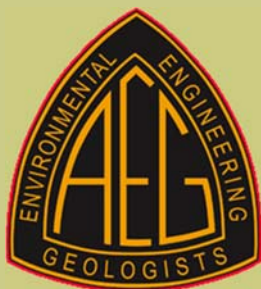
Unfortunately, the effects of Climate Change also pose a similar threat to the system. Extreme weather events associated with climate change won't be as destructive or widespread as a CSZ earthquake in any single event, but will be a recurring issue with a similar cumulative effect. The key to rescue, relief, and recovery after such extreme events is a functioning transportation system.

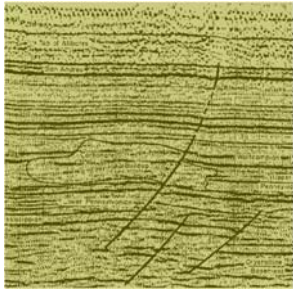
In 2011, the Oregon Legislature directed the Oregon Seismic Safety Policy Advisory Commission to lead the coordination of an Oregon Resilience Plan, presented to the Legislature in 2013. ODOT was a major participant in this effort and later supplemented this work with its own Seismic Options Report, which provides more focus on the



effects of a major seismic event on Oregon's surface transportation system. In this latter effort, ODOT identifies critical Lifeline Routes which will serve as the "backbone" of the transportation system to allow delivery of critical resources after the event. Route selection to prioritize resources takes three main principles into account: Survivability, Life Support, and Economic Recovery.

ODOT has also recognized the need to assess the vulnerability of the highway system to the effects of a changing climate. To this end, the agency has embarked on several efforts to assess the potential impacts of climate change that include: sea level rise, storm surge, storm frequency and intensity, and increased wave height. This work has included a pilot study on coastal highway vulnerability and ongoing research projects that are evaluating climate effects on coastal bluff erosion, landslide acceleration, and the economic impacts of weather-related events on the highway system. These efforts will inform future agency policy with respect to climate change adaptation.





Bio: Curran Mohney, CEG

Curran is the Engineering Geology Program Leader for the Oregon Department of Transportation. The Engineering Geology Program at ODOT encompasses site characterization, subsurface exploration, slopes and embankments, geologic hazards, groundwater, and geotechnical instrumentation. In this role, he also oversees the Unstable Slopes (Landslide/Rockfall) program for ODOT.

Curran is a Registered Geologist and Certified Engineering Geologist in Oregon with 27 years of experience in Oregon and the Western States. He has been the Engineering Geology Program Leader since 2004. Prior to this, he has been a Staff and Project-level geologist in private consulting as well as for ODOT. From 1992 to 1995, Curran was the Programs Chair for the Oregon Section of AEG.

In Memoriam

It is with a sad hearts we announce the loss of a wonderful person and geologist, Katie Castelli, R.G., C.E.G (ODOT). She passed away on June 23, 2018 and will truly be missed. As a tribute and remembrance, the we contributed \$500 to her son's college fund. Additional contributions can be made at OregonCollegeSavings.com, eGift #ORq8bJTcuy.

Obituary: Kathryn (Katie) Castelli R.G., C.E.G. passed away on June 23, 2018 from a serious illness. Katie was full of positive energy in everything she did, and an active supporter of AEG for many years. She graduated in 1998 from the University of California, Santa Cruz where she was awarded Outstanding Senior of the Year for the Earth Sciences Department. Katie graduated College Honors and Honors in the Major. She started her geology career in California, before moving to Oregon in 2001 to start working at the Oregon Department of Transportation (ODOT) in 2002. She obtained professional registration in Oregon in 2006, and earned her C.E.G. in 2007. At ODOT, she advanced steadily as an entry level geologist, to eventually becoming the Senior Engineering Geologist for ODOT's northwest region.



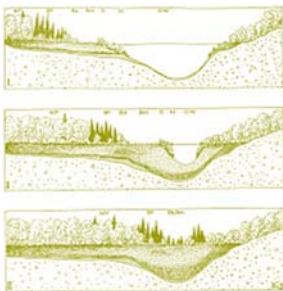
Katie always enjoyed challenging assignments and working with people. One of her largest projects was coordinating a team of engineering geologists from ODOT and consultants, along with drilling companies, to deliver the engineering geology investigation for the Newberg – Dundee Bypass. Every winter she stepped up to deliver numerous landslide repairs during winter emergencies. She could often be found rappelling down steep rock slopes while designing repairs for rock fall projects. She had a particular passion for coastal hazards, and eventually helped manage a research project for FHWA called "Green Infrastructure Techniques for Resilience of the Oregon Coast Highway". For over 15 years she worked on many projects for ODOT, and covered all parts of northwest Oregon.

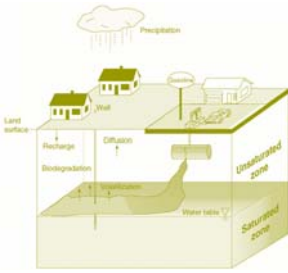
She was a long time member of AEG, publishing her first abstract in the AEG News on Bluff Stabilization in Santa Cruz, California in 2000. Katie attended and presented at AEG meetings in San Jose and Las Vegas before working at ODOT. She regularly attended dinner meetings and presented at conferences. At the 2011 AEG meeting in Alaska she presented a landslide case study for the OR18 MP 11.2 Landslide. She attended the 2016 AEG meeting in Hawaii where she made a presentation on a rather unique landslide mitigation for Sheep Creek Bridge on US20.

Katie is survived by her husband and 4 year old son.

"Keen observation is at least as necessary as penetrating analysis"

Karl Terzaghi





Message from the Chair

It's the beginning of another year for the Oregon AEG Chapter. I'm very excited to share this time with you as a community. I would like to thank Stephen Hay (ODOT) for his tireless work on the Chapter Board. Stephen completed his 5th and final year, most recently as our Past-Chair. He served during a time of significant transition, as our local group changed from a "Section" to a "Chapter". His leadership has allowed us to thrive in the new Chapter structure, and I will miss having him on the Board. I would also like to thank outgoing Chair, Mark Swank (Aspect), who's service as has been outstanding. Mark will be a hard act to follow, but I hope he will continue to mentor and guide me in his new role as Past-Chair.

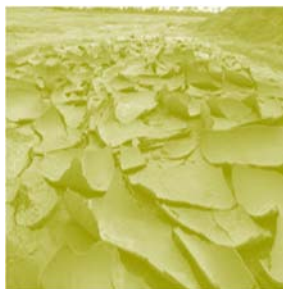
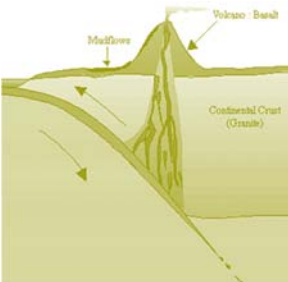
Along with our Chair-Elect, Ben George (Cornforth), and Treasurer, Mike Marshall (GRI), I would like to welcome incoming Secretary, Nancy Calhoun (DOGAMI) to the Board. She received a Bachelor of Arts in Geology from Colorado College and a Master of Science in Earth Sciences from Simon Fraser University, Vancouver, BC. Nancy conducts landslide hazard mapping and risk assessments, and contributes to a variety of projects within the natural hazards and earth sciences group of DOGAMI.

However, the Board and Chapter could not function without its volunteers. I would like to sincerely thank all of our volunteers, including: Matt Randall (PBS), Website Editor; Erin Dunbar (GeoSyntec), Field Trip Chair; Ruth Wilmoth (Columbia Geotechnical), Membership Chair; and Jennifer DiGiulio (US DOE), Legislature Chair. Also, thank you to outgoing PSU Student Chapter President, Andrew Trotter. And special BIG thanks to Scott Braunsten (PBS), our outgoing Newsletter Editor, who has served for many years in that role. Our Newsletter has been exceptional during Scott's time as the Editor and has served as a template for other Chapters. We all owe Scott a round of applause.

Talking about volunteers... This past June, our AEG Pacific Regional Director & past Portland 2020 AEG Annual Meeting General Chair, Linda Mark (Environmental Science Associates), sent out a request for volunteers to help plan and serve during the 2020 AEG Annual Meeting, which will be held in Portland...Yes! you heard me right. The AEG Annual "National" meeting will be here in Portland, Oregon in September 2020. A number of you were instrumental in developing our winning proposal to host this meeting, and now we need further help of our Oregon Chapter members. This meeting will not be successful on its own and needs all of us to actively participate. There are a number of positions that need filling, from large to small, so please contact Linda as soon as possible to volunteer, if only for a few hours or a few days. We need our membership to make this meeting great, and to show the entire National AEG community how Oregon ROCKS!

If our September Chapter meeting is lightly attended, I hope it's because so many of you are attending this year's (I)AEG National/International meeting in San Francisco (September 15-23, 2018). Please congratulate Bryan Allen for winning the 2018 Oregon Chapter AEG Student Award to attend this year's (I)AEG Annual meeting. Bryan was awarded \$1,500 to assist his travel and meeting costs. During the meeting, he will present his paper titled "Use of Multi-Temporal Ground Penetrating Radar to Locate the Slip Surface of a Western Cascade Landslide Complex".

Christopher Humphrey, R.G., C.E.G.
Oregon AEG Chapter Chair



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

Hans Cloos

TECCO® SYSTEM³ – Your slopes made stable

- TECCO® SYSTEM³ can be optimized depending on the subsoil with several mesh types
- meshes made of 2 mm, 3 mm and 4 mm diameter high-tensile steel wire
- optimization of anchor spacing thanks to two new spike plate sizes
- RUVOLUM® dimensioning software based on large-scale field and model tests
- small CO₂ footprint and option to cover with natural vegetation



Scan and watch our movie on
[www.geobrugg.com/youtube/](http://www.geobrugg.com/youtube/TECCO-fullscale)
TECCO-fullscale



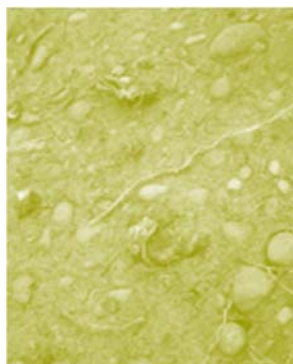
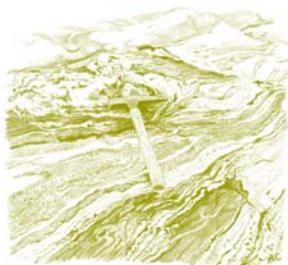
Geobrugg North America, LLC
Tim Shevlin, PG • Northwestern USA
Phone (503) 423-7258 • Fax (505) 771-4081
tim.shevlin@geobrugg.com
www.geobrugg.com



GEOPHYSICAL SURVEYING
for environmental
and geotechnical
applications



503.501.7846
nikos@pacificgeophysics.com
www.pacificgeophysics.com

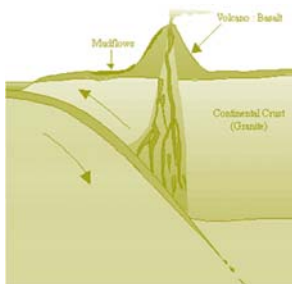


**Your Environmental,
Geotechnical
& Clean Water
Professionals**

360-771-7586

info@holtservicesinc.com

www.holtservicesinc.com



WHERE COMPLEX CHALLENGES MEET **QUALITY SOLUTIONS**

PBS is a trusted source of practical, sustainable solutions to environmental and engineering challenges—enabling projects to proceed and communities to grow and thrive.

Pictured: Vancouver Waterfront Redevelopment



11 LOCATIONS | **PBSUSA.COM**

Engineering (Geotechnical, Enviro. & Civil)
Environmental Services • Health & Safety
Natural Resources • Permitting • Surveying



*Providing Quality
Geophysical Services
since 1984*

EARTH DYNAMICS LLC

2284 NW. Thurman St.
Portland, OR 97210
(503) 227-7659
info@earthdyn.com

www.earthdyn.com

Engineering Geophysics:

- Seismic Refraction/Reflection
- Shearwave Velocity Studies
- Electrical Resistivity Profiling
- Ground Penetrating Radar
- Magnetics/Electromagnetics
- Gravity
- Marine Geophysics

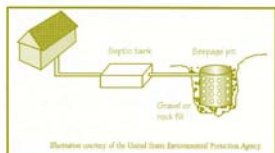
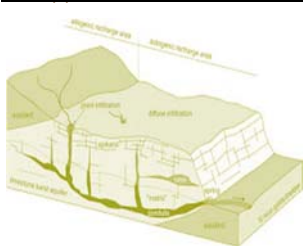
Vibration & Noise Analysis:

- Remote Vibration Monitoring
- Real-time Frequency Analysis
- Construction Monitoring
- Demolition Monitoring
- Blast Design and Monitoring
- Pre-construction Surveys
- Sensitive Equipment Certification

Rock Mechanics:

- Uniaxial Compressive Strength
- Direct and Triaxial Shear Strength
- Direct and Indirect Tensile Strength
- Dynamic & Static Elastic Moduli
- Thermal Properties
- Density & Porosity
- Moisture Content





Schematic of a Seepage Pit (Dry Well)



HI-TECH ROCKFALL CONSTRUCTION INC.

HI-TECH Rockfall is a General Contractor that specializes in Rockfall Mitigation and has been the industry leader for over 18 years. Our Highly Trained & Skilled Employees provide us the Highest Safety Record in the Industry.



Products and Services include:

Highwall Stabilization

Rock Scaling

Rock Dowels

Rockfall Barriers

Instrumentation Installation

Wire Mesh Drapery

Rock Bolts

Shotcrete

Avalanche Nets

Rope Access Work

HI-TECH Rockfall Construction, Inc.
P.O. Box 674, Forest Grove, OR 97116

Office: (503) 357-6508
www.hitechrockfall.com



We Service Multiple Industries which include:

Government & Military

Mines & Quarries

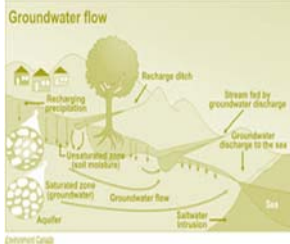
Commercial & Residential

Highways

Railroads

Utilities





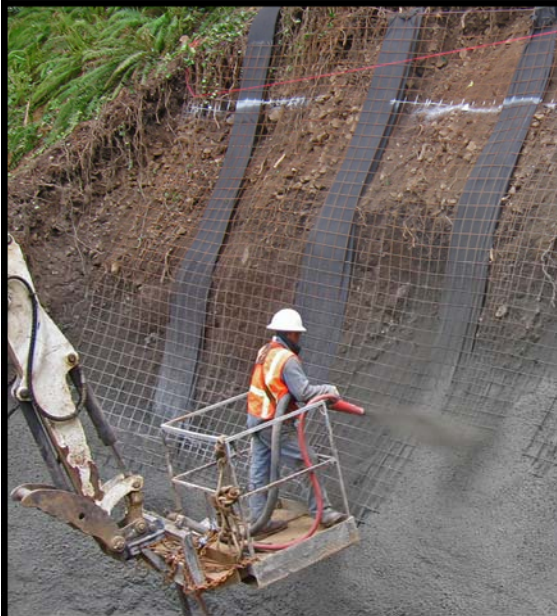
**SOIL and FOUNDATION
STABILIZATION SOLUTIONS**
in OREGON and WASHINGTON
503.649.8111 info@plisystems.com

- Drilled and Grouted Tie-Back Anchors
- Geotechnical Drilling Explorations
- Shoring (temporary & permanent)
- Drainage, Including Horizontal
- Helical Anchors & Piles
- Drilled Shafts (caissons)
- Limited Access Drilling
- Landslide Stabilization

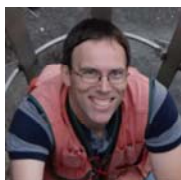
- Elevator Jack Shafts
- Displacement Piles
- Wall Construction
- Sheet Pile Walls
- Injection Boring
- Underpinning
- Rock Anchors
- Rock Coring
- Dewatering
- Pile Driving
- Micropiles
- Shotcrete
- Soil Nails
- Grouting
- Pin Piles
- SPT

"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



Chair:
Chris Humphrey
FERC
geohumphrey@yahoo.com

Have you ever
wanted to be a
part of some-
thing bigger
than you?

Program Chair:
Opportunity One
Dream.job1@gmail.com



Legislature Chair:
Jennifer DiGiulio
National Energy Technology Laboratory,
U.S. Department of Energy
jennifer.digiulio@netl.doe.gov



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



Field-Trip Chair:
Erin Dunbar
Geosyntec Consultants, Inc.
dunbar.erin@gmail.com

Here are two
opportunities
of a life time...

Newsletter Editor:
Opportunity Two
Dream.job2@gmail.com



Treasurer:
Michael Marshall
GRI
mmmarshall@gri.com



Membership Chair:
Ruth Wilmoth
Columbia Geotechnical, Inc.
ruthwilmoth@comcast.net



Webpage Editor:
Matt Randall
PBS Engineering and Environmental
matt.randall@pbsusa.com



Secretary:
Nancy Calhoun
DOGAMI
nancy.calhoun@oregon.gov

The Oregon Chapter is also on
the web at

<http://www.aegoregon.org>

National AEG webpage:

<http://aegweb.org>

Picture
Pending

PSU Student Chapter President:
Lucky New Person
Portland State University
Lucky.new.person@psu.edu



Past-Chair:
Mark Swank
Aspect Consulting
markswank@comcast.net

Subscribe to the newsletter by sending any e-mail to
aegoregon-subscribe@groups.electricembers.net

Thanks For Supporting AEG

Members, Volunteers, Aspect Consulting, Columbia Geotechnical, Cornforth Consultants Inc., DOGAMI, Earth Dynamics LLC., Federal Energy Regulatory Commission (FERC), Geobruigg, GRI, Hi-Tech Rockfall, Holt Drilling, NACSE, ODOT, Oregon State University, Pacific Geophysics, PBS Engineering & Environmental, PLI Systems, Portland State University, Western Oregon University

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.

