

The Official

AEG OREGON CHAPTER NEWSLETTER

<http://www.aegoregon.org>

February Meeting Details

Tuesday, February 20th

Location: Old Market Pub
6959 SW Multnomah Blvd
Portland, Oregon

6:00 pm Social

6:45 pm Dinner

7:30 pm Presentation

Dinner: Salad and Pizza

\$25 Dinner

Exact Change Appreciated
Students **FREE** with RSVP
(\$5 if no RSVP)

Reservations by 4 pm Friday
February 16th at

<http://aeg-or-2018-02.brownpapertickets.com>

There is a \$2 surcharge for
those who do not reserve by
the deadline

Upcoming Meetings:

Mar 20th TBD
Apr 18th John Wakabayashi
May 15th Nick Zenter
Student Poster Night



Large dextral motion on the Gales Creek fault, NW Oregon

Guest Speaker: Dr. Ray Wells

New geologic mapping, gravity and magnetic surveys, and laser terrain mapping (Lidar) reveal the Gales Creek Fault (GCF) to be a major right lateral fault in northwest Oregon. The northwest-trending GCF forms the boundary between the Coast Range and the Tualatin and northern Willamette basins. A steep gravity gradient up to 110 mgal marks the fault along the western margin of the Tualatin basin, which is 5 km deep based on gravity inversions. Sharp magnetic boundaries suggest 10-15 km dextral offset of Eocene magnetic basement. The fault consists of two sub parallel strands near Gales Creek. The eastern strand, previously mapped as the GCF by Schlicker and Deacon, follows the Gales Creek valley north at least to the Highway 6 bridge, but it has no obvious physiographic expression in the valley. The western strand crosses east-flowing Gales Creek tributaries that all exhibit kilometers of dextral offset where they cross the fault. An anticline cored by unusual, subaerial Siletz River Volcanics (49 Ma) intruded by Eocene diabase provides a piercing point across the western strand and indicates 12 km of post-Eocene right lateral offset north of Hagg Lake, consistent with the offset of aeromagnetic anomalies. On LiDAR imagery of the western strand, uphill-facing scarps, offset streams and shutter ridges can be traced intermittently along the mapped bedrock fault for 20 km between Hagg Lake and Highway 6. Southwest of Forest Grove, the fault splays into en echelon strands which pass between the Dundee Hills and Chehalem Mountain. Paleoseismic trenching of the fault by the Bureau of Reclamation near Scoggins Dam in 2017 indicates late Quaternary, and possibly Holocene displacement of bedrock, loess and flood plain deposits. Additional work is planned in 2018.

Bio: Dr. Ray Wells

Dr. Wells was a research geologist with the USGS for 40 years, where he used field geology, paleomagnetism, and GPS to understand the tectonic evolution and seismic hazards of active continental margins. He has studied subduction zones around the world to better understand the controls on great megathrust earthquakes and has applied that understanding to the Cascadia convergent margin. Ray is particularly interested in how the oblique component of convergence is partitioned into permanent deformation of the forearc, producing faults, earthquakes, and tectonic rotation of the upper plate. Dr. Wells is the recipient of the Distinguished Service Award of the Department of the Interior and the 2017 recipient of the Geological Society of America's Geologic Mapping Award in honor of Florence Bascom. Recently retired, Ray is a Scientist Emeritus stationed at the USGS Oregon Water Science Center and is a Research Associate with the Geology Department at Portland State University.



Message from the Chair

Thanks to everyone who attended our January joint meeting with ASCE where Keith Mills, PE, GE from the Oregon Water Resources Department presented on *The Geotechnical State of Oregon's Dams*. It was great to continue our annual tradition of combining our two practices and membership with ASCE and really appreciate Keith sharing his knowledge and experience with all of us.

Our upcoming February meeting is scheduled for February 20th back at our usual stomping ground – The Old Market Pub. Ray Wells from the U.S. Geological Survey will present his work on *Large dextral motion on the Gales Creek fault, NW Oregon*. New geologic mapping, gravity and magnetic surveys, and laser terrain mapping (lidar) reveal the Gales Creek Fault (GCF) to be a major right lateral fault in northwest Oregon.

Although the early part of our AEG season seemed relatively quiet on the National level, 2018 has come crashing and banging in with a couple of significant happenings in the first few weeks of the year. First and foremost, as we are all aware, we must be ever vigilant in protecting our professional licensure, which is relentlessly under attack in state legislatures across the country. This includes scouring through bills that may seem innocent but contain aspects that can degrade our responsibilities and qualifications as geologists. Recently, for one reason or another and always from a variety of interest groups with differing motivations, several states are now pushing bills to alter or remove geology licensure – including our very close neighbor to the north, Washington. As always, AEG is taking action but in these cases, it is reaction rather than proactively dissuading the creation of these types of bills. Hopefully, the active bills will be voted down but it is essential we, as members of AEG, are helping to promote and support our practice in Oregon and elsewhere.

Second, as some members may be aware already, AEG is changing Association Management Companies. Offinger Management Company (OMC) is ending its business to all clients. AEG has contracted with AMR Management Services. OMC and AMR are amid a flurry of actions transitioning AEG's records, practices and processes to AMR. Although this will likely cause temporary disruptions and some impacts may be noticed, for the most part none probably will be, except to those directly involved in the National organization management. If you do have any concerns or questions though, feel free to reach out.

Our 61st AEG Annual Meeting / 13th IAEG Congress is scheduled for September 15th to the 23rd, at the Hyatt Regency in San Francisco. Registration is now open - be sure to register today! For meeting information and updates visit www.aegweb.org/SanFrancisco2018 Call for Published Papers is now open. Submit your abstract today!

It's only February making it a great time to remind all current Oregon Chapter members that your memberships expired at the end of the year – unless of course you renewed it. If not, please renew today and encourage fellow students and professionals to become new members! The long-term success of our Chapter and AEG nationally only occurs with the continual growth of membership.

Mark Swank, CEG
AEG Oregon Chapter Chair



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

Hans Cloos



TECCO® SYSTEM³ – Your slopes made stable

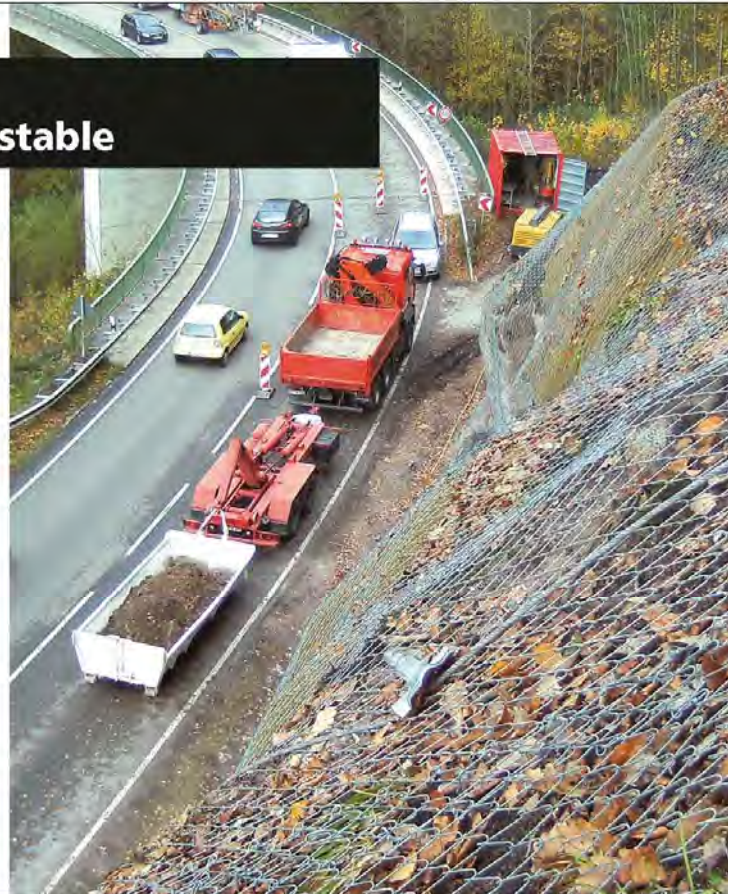
- TECCO® SYSTEM³ can be optimized depending on the subsoil with several mesh types
- meshes made of 2 mm, 3 mm and 4 mm diameter high-tensile steel wire
- optimization of anchor spacing thanks to two new spike plate sizes
- RUVOLUM® dimensioning software based on large-scale field and model tests
- small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



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



TERRA HYDR INC.

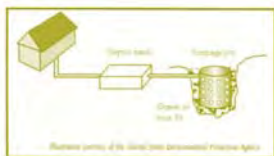
(503) 625-4000
24 Hour Service

PO Box 3616
Portland Or. 97208

*Proudly serving the
region's premiere
consultants and
quality conscious
industrial clients*

ENVIRONMENTAL CONSTRUCTION SERVICES
HEAVY CONSTRUCTION / EXCAVATION
INDUSTRIAL SERVICES & CLEANING
EMERGENCY RESPONSE / SPECIAL PROJECTS
CONFINED SPACE ENTRY & RESCUE SERVICES

www.terrahidr.com | CCB# 101128



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

Karl Terzaghi

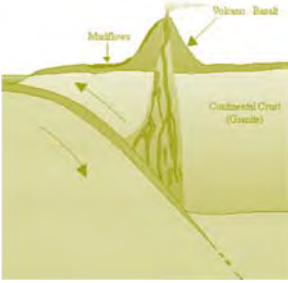


**Your Environmental,
Geotechnical
& Clean Water
Professionals**

253-604-4878

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





EARTH WATER

Geotechnical Engineering
Environmental Remediation
Water Resources
Stormwater
Data + Mapping

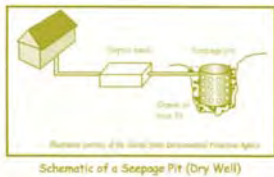
Portland
Seattle
Bainbridge Island
Bellingham
Wenatchee
Yakima



Aspect
CONSULTING

www.aspectconsulting.com
971.865.5890





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.



We Service Multiple Industries which include:

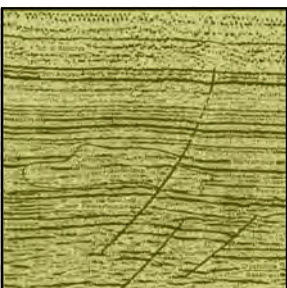
Government & Military	Highways
Mines & Quarries	Railroads
Commercial & Residential	Utilities

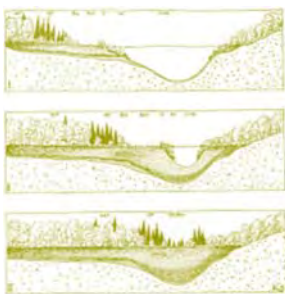
Products and Services include:

Highwall Stabilization	Wire Mesh Drapery
Rock Scaling	Rock Bolts
Rock Dowels	Shotcrete
Rockfall Barriers	Avalanche Nets
Instrumentation Installation	Rope Access Work

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

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

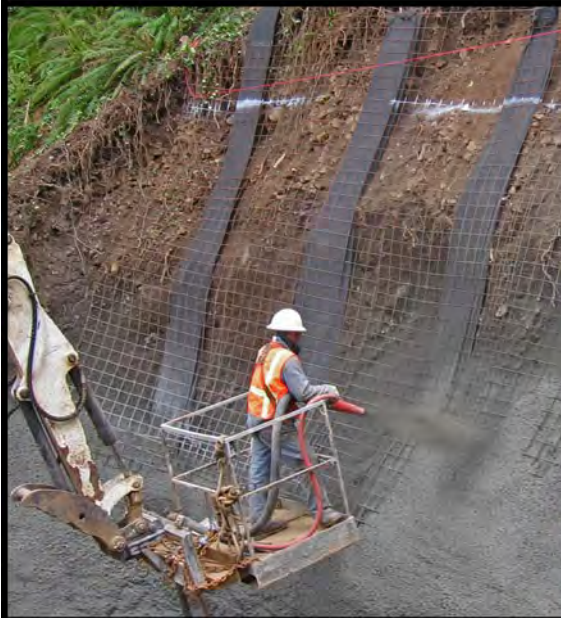
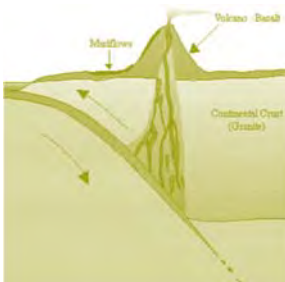




**SOIL and FOUNDATION
STABILIZATION SOLUTIONS**
in OREGON and WASHINGTON
503.649.8111 info@plisystems.com

- 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





HGS HYATT GEOSCIENCES
GEOLOGY & GROUNDWATER SERVICES

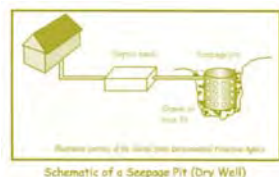
Environmental Geology / Hydrogeology / Groundwater Resources

Aquifer Characterization
Groundwater Supply Development
Water Rights Support

Environmental Assessments
Soil and Groundwater Investigations
Water Quality Analysis

Portland, Oregon
(503) 887-9323
ChrisHyatt@HyattGeo.com
www.HyattGeo.com

Certified Emerging Small Business (ESB)



Thanks For Supporting AEG

Aspect Consulting

Columbia Geotechnical

Cornforth Consultants

Federal Energy Regulatory Commission (FERC)

GRI

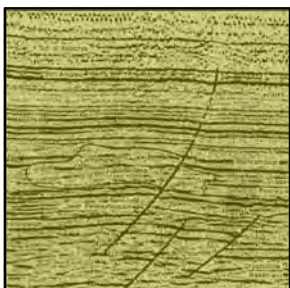
NACSE

Oregon Department of Transportation

OSU

PBS Engineering and Environmental

Portland State University



Chapter Officers & Committee Chairs



Chair:
Mark Swank
Aspect Consulting
markswank@comcast.net



Chair Elect:
Chris Humphrey
FERC
geohumphrey@yahoo.com



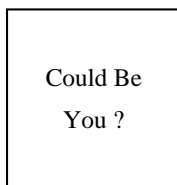
Treasurer:
Benjamin George
Cornforth Consultants, Inc.
bgeorge@cornforthconsultants.com



Secretary:
Michael Marshall
GRI
mmmarshall@gri.com



Past Chair:
Stephen Hay
Oregon Department of Transportation
stephen56362@gmail.com



Could Be
You ?

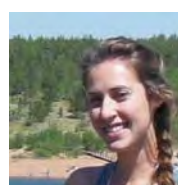


Program Chair:
Vacant

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



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



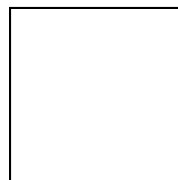
Legislature Chair:
Jennifer DiGiulio
National Energy Technology Laboratory,
U.S. Department of Energy
jennifer.digiulio@netl.doe.gov



Newsletter Editor:
Scott Braunsten
PBS Engineering and Environmental



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



PSU Student Chapter President:

Portland State University

The Oregon Chapter is also on
the web at

<http://www.aegoregon.org>

National AEG webpage:

<http://aegweb.org>

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

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: Scott Braunsten, AEG Oregon Chapter Newsletter Editor, PBS Engineering and Environmental, 4412 SW Corbett Avenue, Portland, OR 97239, e-mail: scott.braunsten@pbsusa.com, phone (503) 417-7737. Electronic media is preferred. Deadline for submittal is the 25th of the month. Advertising: business card \$100/yr; ¼ page \$200/yr; ½ page \$350/yr; 1 page \$450/yr.

