



The Official

# OREGON SECTION AEG NEWSLETTER

<http://www.aegoregon.org>

## September Meeting Details

Tuesday, September 24<sup>th</sup>

**Location: Old Market Pub**

**6959 SW Multnomah**

**Portland, Oregon**

**6:00 pm Social**

**6:45 pm Dinner**

**7:30 pm Presentation**

**Dinner: Pizza & Salad**

**\$20 Dinner (\$5 Students)**

**Reservations:**

[mwegner@cornforthconsultants.com](mailto:mwegner@cornforthconsultants.com)  
with "AEG Reservation" in  
the subject line or 971-222-  
2047 by 4pm Thur. Sept. 19

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

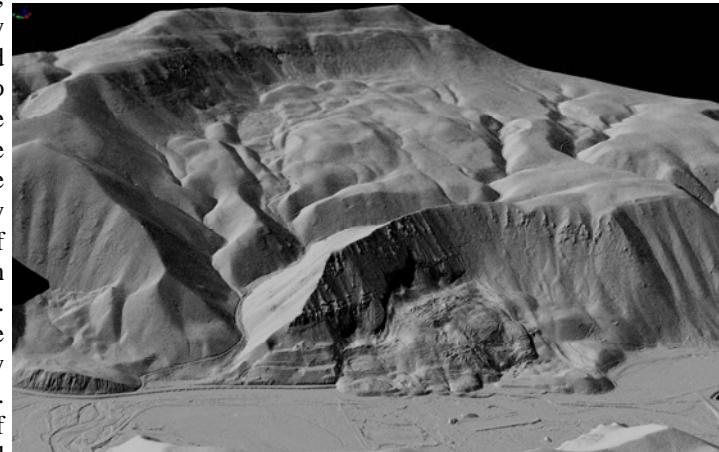
**Upcoming Meetings:**

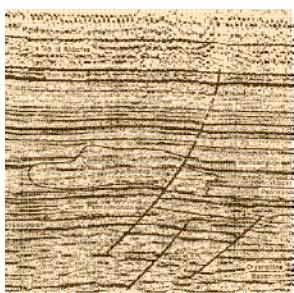
Oct 15<sup>th</sup> Troy Fowler  
Nov 19<sup>th</sup> AEG/AWG Meeting  
Dec 17<sup>th</sup> TBA  
Jan 21<sup>st</sup> ASCE/AEG Meeting  
Feb 18<sup>th</sup> Brian Atwater  
Mar 18<sup>th</sup> Laura Maffei  
Apr 15<sup>th</sup> Jeff Coe  
May 20<sup>th</sup> Student Poster Night

## The 2009 Nile Valley Landslide - from Past to Present

**Guest Speaker: Tom Badger**

The October 2009 catastrophic failure of the Nile Valley landslide destroyed more than 2500 feet of State Route 410 near the community of Nile, Washington, located 25 miles northwest of Yakima. Numerous eyewitness accounts and Pacific Northwest Seismic Network records enabled the development of a detailed timeline of landslide evolution, which proved crucial for unraveling the modes in which it failed. An extensive drilling program, basalt chemistry, and geotechnical instrumentation were used to characterize the subsurface conditions, assess the stability of the various landslide domains, differentiate between the Nile Valley landslide and the gigantic Sanford Pasture landslide complex, and to develop mitigation designs. The failure was attributed to two separate translational mechanisms, one shallow and one deep, controlled by an adversely dipping assemblage of Grande Ronde Basalt flows with very weak sedimentary interbeds. Large portions of the landslide remain in a state of marginal stability or have exhibited post-failure creep. After evaluating a number of mitigation alternatives, a favored alternative was selected that balanced a range of risk, geotechnical, environmental, societal, and cost factors. It entailed relocating the highway around and partially onto the landslide toe. The relocation, completed in August 2012, required re-channelizing a half-mile-long reach of the Naches River that had been inundated by the landslide, construction of a large shear key-buttress, and partial excavation and fill placement on the landslide toe. For the foreseeable future, instrumentation monitoring will continue to assess for reactivation or acceleration of landslide movements. Controversy continues over the potential resumption of gravel mining within the limits of the landslide.

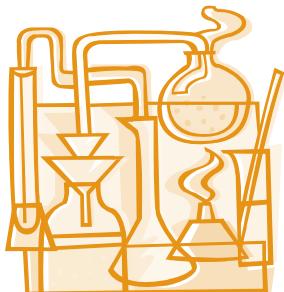




## Bio: Tom Badger, LEG, PE

Tom has a BS in geology from Western Washington University (1983) and an MS in geological engineering from the University of Nevada, Reno (2002). In 1984, he started work with the Washington State Department of Transportation on the I-90 Mt. Baker Tunnel project. Tom has been employed with WSDOT since, and currently serves as the Chief Engineering Geologist. During his nearly 30 year tenure with WSDOT, he's had the good fortune of working with and for many talented professionals on a great variety of transportation-related earthworks and structures, as well as many landslide and rockfall remediation projects. His geomorphologist mate has also hugely expanded his geological universe. He is a past chair (2000 and 2002) of the Washington Section of AEG, and a past chair (2003-2009) of the Engineering Geology Committee for the Transportation Research Board, National Academy of Sciences. He is licensed in Washington State as an engineering geologist, hydrogeologist, and professional engineer.

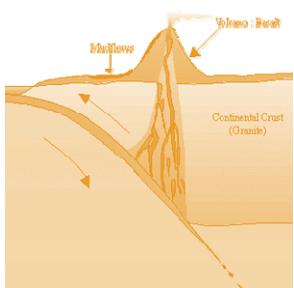
## Message from the Chair



It is fall again and time for AEG. We welcome the 2013-2014 season with gratitude to outgoing AEG Oregon Chair Robin Johnston (AMEC) who served with gusto and dedication to the student and professional members. Past-Chair, Kevin Schleh (Reterro) has completed his tenure serving the Oregon Section, thanks Kevin! We welcome incoming secretary Stephen Hay (ODOT), thanks for joining the team Stephen! Linda Mark (ESA Vigil-Agrimis) will now step into the Chair-Elect role and Adam Reese (Apex) will become Treasurer. Mike Marshall (GRI) continues to fulfill the demanding position of program chair while Scott Braunsten (PBS) continues on as our newsletter editor. Keith Olsen (OSU) will continue as our website editor, and Ruth Wilmoth (Columbia Geotechnical, Inc.) continues as our membership chair. I (Darren Beckstrand, Cornforth Consultants) am stepping into the role as Section Chair, where I have big shoes to fill. We look forward to an exciting season!

The 56th Annual AEG National Meeting in Seattle is scheduled for September 8 through 15. Please make the short drive north for great presentations showcasing your colleague's recent work. If you are unable to make it, I will provide an update during the September meeting.

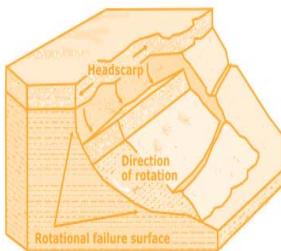
Please help to make this a fun and successful year by attending the meetings and staying engaged. See you soon.



Warm Regards,

Darren Beckstrand, CEG

Cornforth Consultants



## Western States Soil Conservation, Inc.

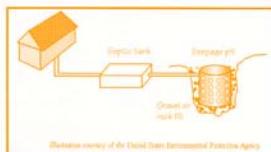
There is no limit to the depths we will go!



### Geotechnical & Environmental Drilling Services

3100 Schmidt Ln • PO BOX 128 • Hubbard, OR 97032  
(503) 982-1777 Office • (503) 982-5220 Fax

[westernstates@centurytel.net](mailto:westernstates@centurytel.net) • [www.westernstatessoil.com](http://www.westernstatessoil.com)



(Illustration courtesy of the United States Environmental Protection Agency)

Schematic of a Seepage Pit (Dry Well)



### ENVIRONMENTAL & EXPLORATION GEOPHYSICS

22323 East Wild Fern Lane, Brightwood, Oregon 97011  
PH (503) 622-0154 FAX (503) 622-0526

WEB <http://www.geopotential.biz>  
E-MAIL [GeoPotential@geopotential.biz](mailto:GeoPotential@geopotential.biz)

### SUBSURFACE MAPPING SURVEYS



RIVERS & LAKES



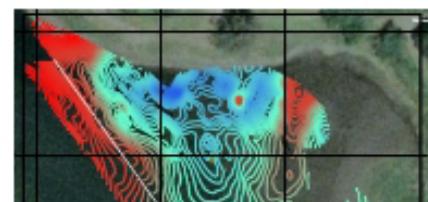
MOBILE  
LABORATORY

### GROUND PENETRATING RADAR SURVEYS

### MAGNETOMETER & ELECTROMAGNETIC SURVEYS

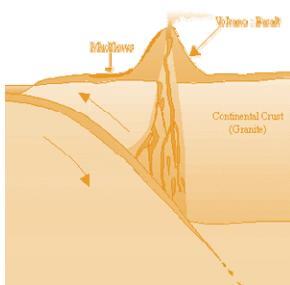
### GRAVITY SURVEYS

### RESISTIVITY SURVEYS



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

*Karl Terzaghi*



## Shallow Landslide Solution – Accomplish your priorities with slope instabilities.



Specifically designed for landslide properties of higher velocities, smaller volume, and less drainage.

- Field tested
- Dimensioned
- Simple installation
- Eco-friendly

Matching your cost-saving priorities for:

- Strength and durability
- Easy installation
- Simple maintenance

See more [www.geobrugg.com](http://www.geobrugg.com)



**GEORUGG**  
BRUGG

Geobrugg North America, LLC

Tim Shevlin, PG

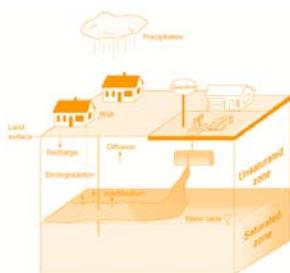
Northwestern USA & Western Canada

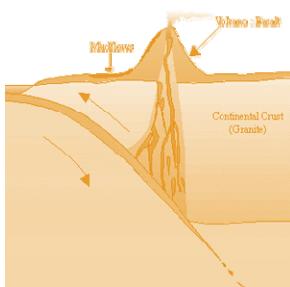
Phone: (503) 423-7258

Fax: (505) 771-4081

[tim.shevlin@geobrugg.com](mailto:tim.shevlin@geobrugg.com)

[www.geobrugg.com](http://www.geobrugg.com)





**PACIFIC GEOPHYSICS**  
Applied Geophysics

GEOPHYSICAL SURVEYING  
for environmental  
and geotechnical  
applications

503.501.7846  
[nikos@pacificgeophysics.com](mailto:nikos@pacificgeophysics.com)  
[www.pacificgeophysics.com](http://www.pacificgeophysics.com)

**PBS** Engineering + Environmental

Geo-Environmental Environmental Engineering  
Health & Safety Civil Engineering  
Natural Resources Geotechnical Engineering

4412 SW Corbett Avenue, Portland, Oregon 97239  
503.248.1939 [www.pbsenv.com](http://www.pbsenv.com)

Restoration and Mitigation  
Environmental Studies  
Civil Engineering  
Landscape Architecture  
Permitting and Compliance

503.274.2010  
[vigil-agrimis.com](http://vigil-agrimis.com)

**ESA VIGIL-AGRIMIS**

## Thanks For Supporting AEG

AMEC Environment & Infrastructure, Inc.

Apex Companies, LLC

Columbia Geotechnical

Cornforth Consultants

ESA Vigil-Agrimis

GRI

Oregon Department of Transportation

PBS Engineering and Environmental

Portland State University

PRISM Climate Group, NACSE, OSU

## Section Officers & Committee Chairs



Chair:  
Darren Beckstrand  
Cornforth Consultants  
[dbeckstrand@cornforthconsultants.com](mailto:dbeckstrand@cornforthconsultants.com)



Program Co-Chair:  
Michael Marshall  
GRI  
[mmarshall@gri.com](mailto:mmarshall@gri.com)

Could Be  
You ?

Legislature Chair:  
Vacant



Chair Elect:  
Linda Mark  
ESA Vigil-Agrimis  
[lmark@vigil-agrimis.com](mailto:lmark@vigil-agrimis.com)



Program Co-Chair:  
Vacant

Could Be  
You ?

Visiting Professional Pro-  
gram (VPP) Chair :  
Vacant



Treasurer:  
Adam Reese  
Apex Companies, LLC  
[AReese@apexcos.com](mailto:AReese@apexcos.com)



Field-Trip Chair:  
Vacant



Newsletter Editor:  
Scott Braunsten  
PBS Engineering and Environmental  
[scott.braunsten@pbsenv.com](mailto:scott.braunsten@pbsenv.com)



Secretary:  
Stephen Hay  
Oregon Department of Transportation  
[Stephen.HAY@odot.state.or.us](mailto:Stephen.HAY@odot.state.or.us)



Membership Chair:  
Ruth Wilmoth  
Columbia Geotechnical, Inc.  
[ruthwilmouth@comcast.net](mailto:ruthwilmouth@comcast.net)



Webpage Editor:  
Keith Olson  
PRISM Climate Group, NACSE,  
OSU  
[olsonke@nacse.org](mailto:olsonke@nacse.org)



Past Chair:  
Robin Johnston  
AMEC Environment & Infrastructure  
[Robin.johnston@amec.com](mailto:Robin.johnston@amec.com)

**The Oregon Section is also on the web at**  
**<http://www.aegoregon.org>**  
**National AEG webpage:**  
**<http://aegweb.org>**

## The Oregon Section Newsletter

OREGON SECTION AEG NEWSLETTER 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. E-mail subscriptions are free. News items are invited and should be sent to: Scott Braunsten, OR Section AEG Newsletter Editor, PBS Engineering and Environmental, 4412 SW Corbett Avenue, Portland, OR 97239, e-mail: [scott.braunsten@pbsenv.com](mailto:scott.braunsten@pbsenv.com), phone (503) 417-7737. Electronic media is preferred. Deadline for submittal is the 25th of the month. Advertising: business card \$100/yr; 1/4 page \$200/yr; 1/2 page \$350/yr; 1 page \$450/yr. Please notify Scott if you have a change to your email or mailing address.

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.

