



The Official

OREGON SECTION AEG NEWSLETTER

<http://www.aegoregon.org>

February Meeting Details

Wednesday, February 11th

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

Students FREE with RSVP
(\$5 if no RSVP)

Reservations:

mwegner@cornforthconsultants.com
with "AEG Reservation" in
the subject line or 971-222-
2047 by 4pm Thur. Feb. 5

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

Upcoming Meetings:

Mar 17th Scott Wallace
Apr 14th Brian McNamara
May 20th Student Poster Night

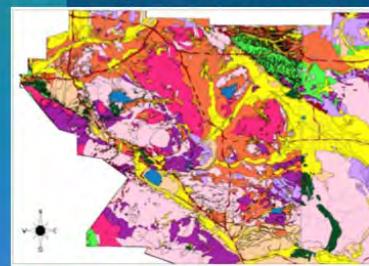
Mitigation of Surface-Fault Rupture: Updating California's Alquist-Priolo Earthquake Fault Zoning Act for the New Millennium

Guest Speaker: Eldon Gath

PLEASE NOTE
CHANGE IN DATE

Following the 1971 Sylmar earthquake, enactment of the California Alquist-Priolo (A-P) "Earthquake Fault Zoning Act" has been an important program to mitigate surface-fault rupture. While the legislative intent to prohibit new structures from being built across future fault rupture hazards was progressive for its time, the A-P has become a 42-year old law in need of revision and modernization to reflect the four decades of improved knowledge of geologic fault hazards and earthquake engineering of soils and structures. The public, and our profession, is better served by upgrading the A-P for consistency with the risks associated with other natural hazards; fault rupture mitigation be required for faults that are within 500 years of their average recurrence interval, and mitigation can include geotechnical and structural solutions for smaller displacements or avoidance if the offsets are large.

Geologic Materials

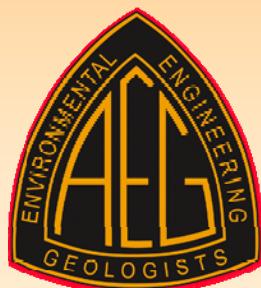


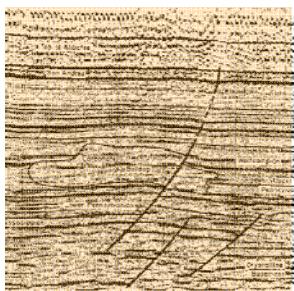
Used as data for Liquefaction, Slope Stability, Subsidence, Erosion

The Hazard Reduction Cycle



Acts of God ... Acts of Man





Bio: Eldon Gath

Eldon, a consulting engineering geologist, has more than 30 years of experience in the identification, investigation, and remediation of geologic hazards, involving land use planning, environmental assessments, field exploration programs, and presentation of findings. He has particular experience with the evaluation of active faults for construction site planning, the development of seismic safety programs and policies, and is currently engaged in efforts to modernize California's 40-year old active fault zoning act (Alquist-Priolo Earthquake Fault Zoning Act).

Eldon is the President of Earth Consultants International, a geological consulting firm *[helping our clients solve complex earth-science problems around the world]* that he co-founded in 1997, following 12 years with Leighton Consulting in southern California. He has considerable international experience including field projects in Turkey, Panama, Mexico, Costa Rica and Papua New Guinea, as well as project involvement in many others.

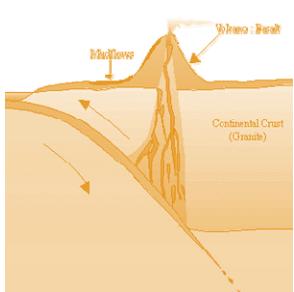


Eldon is a graduate of the University of Minnesota, Institute of Technology, with a BS degree in Geology in 1978. He has been in graduate school ever since; MS program at Cal State LA (1982-1990), PhD program at UC Riverside (1993-1996), PhD program at UC Irvine (1998-2008), but despite getting very close, he has never managed to complete the degree due to his busy consulting responsibilities, professional organization involvement, and travel schedules; or conflicted priorities, if you ask his advisors.

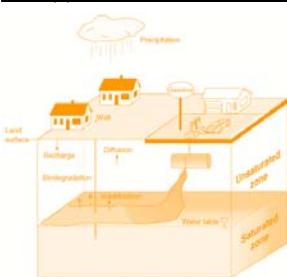


Eldon has received several research grants from the U.S. Geological Survey's National Earthquake Hazard Research Program, the Southern California Earthquake Center, and the National Science Foundation for earthquake geology research in California, including paleoseismology of the Whittier fault, tectonic development of the San Joaquin Hills, tectonic geomorphology of the Eastern Los Angeles Basin, and the seismic hazards of the Santa Ana Mountains. He served as the geosciences member on a National Research Council panel to develop the research agenda for the NEES program, he served on the LA County Land Development Technical Advisory Committee for a decade, served on the California Board for Engineering, Land Surveyors and Geologists' Technical Advisory Committee for two years, and has participated multiple times as an Occupational Expert for the US Department of Labor.

Eldon is a frequently invited speaker to local southern California colleges. Since his first professional presentation on the Whittier fault at AGU in 1987, he has given over one hundred presentations before professional, academic, and public groups, and has published dozens of papers on a wide range of geological and professional practice topics, several of which have received awards for outstanding presentations and papers.



In 1995 he was awarded the Aki Award for Outstanding Paper Presentation at the California Academy of Sciences Annual Meeting for *Active tectonic structures in the eastern Los Angeles basin*, then in 2007 received the Outstanding Presentation Award at the AAPG Annual Meeting for *Quaternary geomorphic development and seismic hazards of Orange County, California*. Along with coauthors, he has received the 2010 GSA E.B. Burwell Outstanding Paper Award for *The Geology of Los Angeles*, and the 2012 AEG Claire P. Holdredge Outstanding Paper Award for *Paleoseismology of the Pedro Miguel fault, Panama Canal*. He served as South Coast Geological Society (SCGS) President in 1987, AEG Southern California Section Chair from 1990-1992, AEG Treasurer, Vice President, and President from 1993-1997, received the AEG Floyd T. Johnston Service Award in 2008, was elected a Fellow by GSA in 2011, and was made an Honorary Member of the SCGS in 2012. He is a member of AEG, GSA, AIPG, AAPG, EERI, IAEG, IAPG, AAAS, AGU, SSA, PDAC, and all local geological societies.



Message from the Chair

Greetings! It was great to see so many of you at Ernesto's Italian Restaurant for our joint AEG/ASCE meeting. I would like to give a big thank you to **J. David Rogers, PhD, PE, PG, CEG, CHG**, of the Missouri University of Science & Technology, who gave us a lively talk on the building of the Panama Canal. Thank you David for a wonderful presentation and **Dr. Scott Burns, CEG, RG** for a wonderful introduction!

Registration for the 2015 AEG Professional Landslide Forum, *Time to Face the Landslide Hazard Dilemma: Bridging Science, Policy, Public Safety, and Potential Loss*, scheduled for February 26-28, 2015 at the University of Washington is now open. Please visit <http://www.aegweb.org/about-aeg/aeg-meetings-events/2015-landslide-forum> for more details and to register. Also, please consider attending the AEG 58th Annual Meeting, in Pittsburgh, Pennsylvania September 19-26, 2015. For more information, please visit <http://www.aegannualmeeting.org/>.

The Oregon Section Board is submitting a proposal to AEG National to host the 2019 AEG Annual Meeting in Portland. We have a great meeting committee that is working on the proposal. Please email me (lmark@esassoc.com) if you're interested in joining the effort to bring the AEG Annual Meeting to Portland.

If you haven't renewed your membership to AEG for 2015, now is a great time to do so! AEG provides you with great monthly presentations, networking opportunities, conferences, field trips, professional development opportunities, publications, and career resources. Your AEG membership enables us to provide you with all of these and more member benefits. So, if you haven't yet become a member or renewed for 2015, please consider becoming a member today!

I look forward to seeing you on Wednesday, February 11th at the Old Market Pub when we welcome **Eldon Gath, PG, EG**, the 2014-2015 Richard H. Jahns Distinguished Lecturer in Applied Geology, who will be presenting his talk *Mitigation of Surface-Fault Rupture: Updating California's Alquist-Priolo Earthquake Fault Zoning Act for the New Millennium*.

I hope to see you Wednesday February 11th at the Old Market Pub!

Cheers,

Linda Mark, RG, CPG
Chair, Oregon Section of AEG

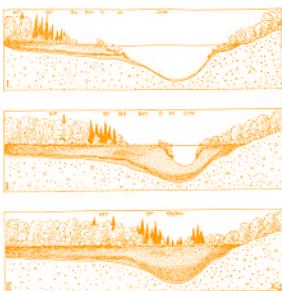
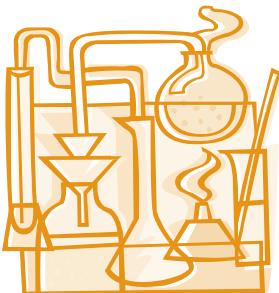


Photo of the month Courtesy of Timothy Morgan and Rich Reed



The rock is roughly 10'x10'x7'. It fell onto Warm Springs Avenue, just west of Starview Drive, Boise, Idaho, at about 3am on January 7, 2015. The City of Boise is going to take the rock "as is" and make it a signature feature in the next phase of their Whitewater Park Project located on Whitewater Park Boulevard in Boise. It was pushed to the shoulder for now and the city is working with a contractor to load it onto a lowboy with a crane and transport.





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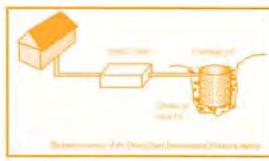
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Schematic of a Seepage Fit (Dry Well)



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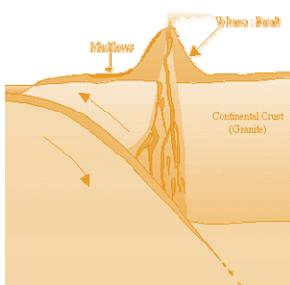
Rock Mechanics:

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



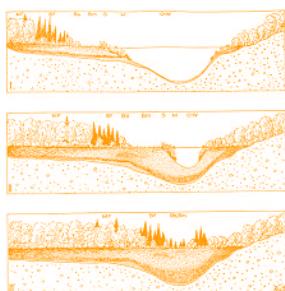
"Keen observation is at least as necessary as penetrating analysis"

Karl Terzaghi



A photograph of a red and white Mack truck. The truck is a flatbed model, and its bed is mounted with a tall, red vertical drilling rig. The rig has the word 'CASCADE' printed vertically on its side. The truck is parked on a grassy field with a forested hill in the background. The sky is clear and blue. On the side of the truck, the word 'CASCADE DRILLING' is printed, along with a phone number and website address.

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- IDW Management



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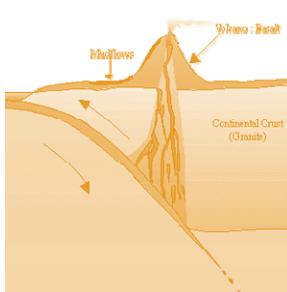
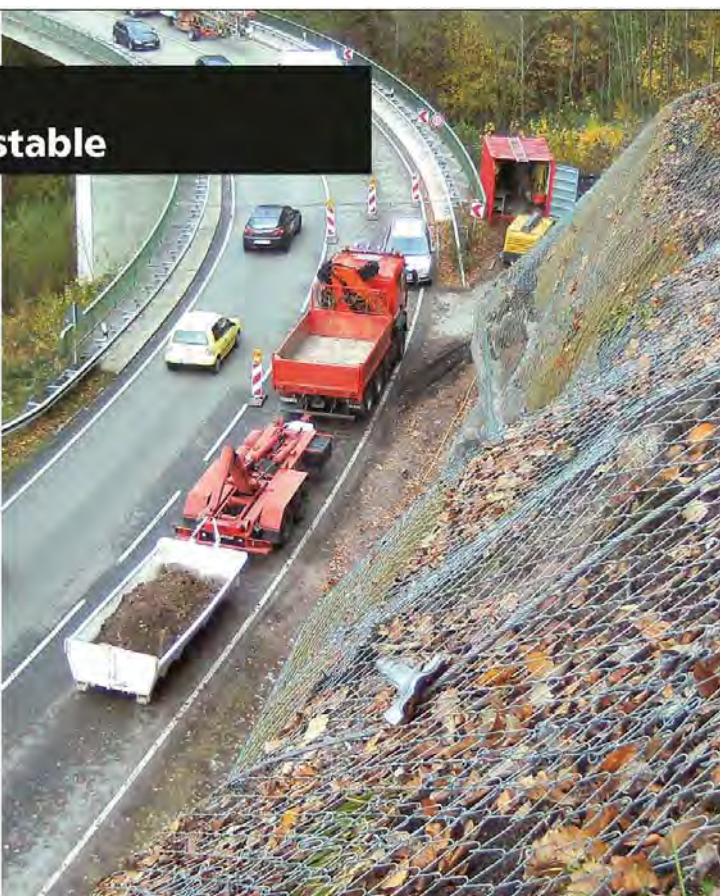
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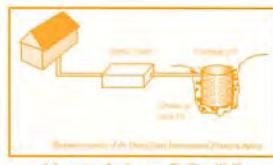
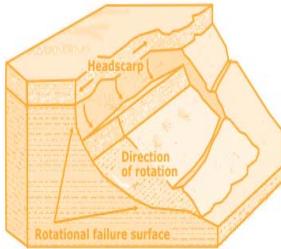


Diagram courtesy of the Oregon Department of Environmental Quality

Schematic of a Seepage Fit (Dry Well)



- 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

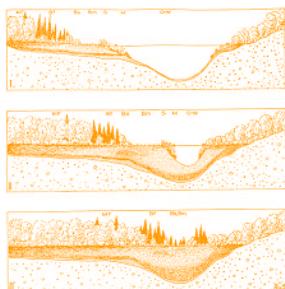
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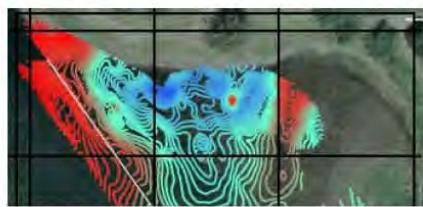
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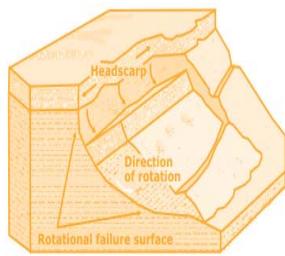
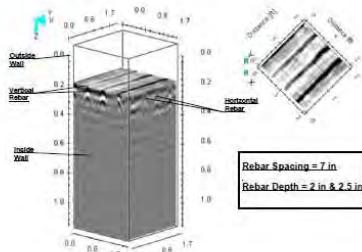
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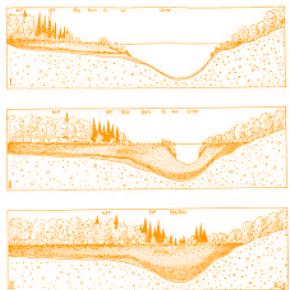
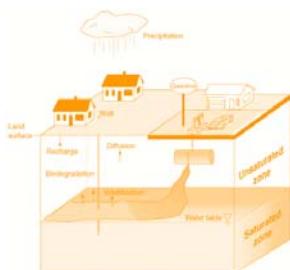
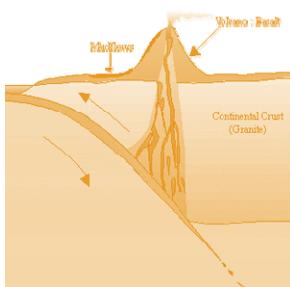
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*"The earth is large and
old enough to teach us
modesty."*

Hans Cloos



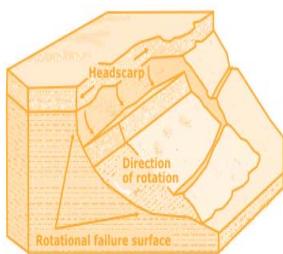
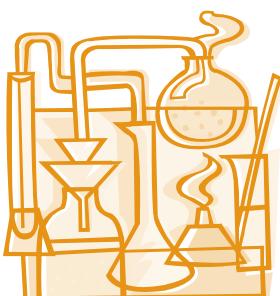
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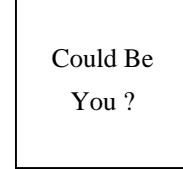
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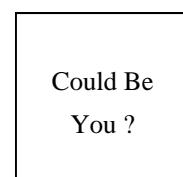
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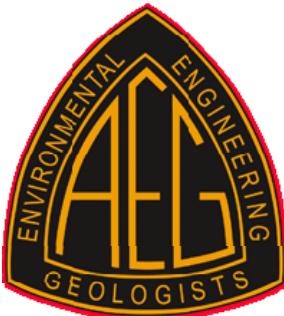
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