

Course description

Students will learn how to improve their trench and outcrop logs and descriptions of soils uncovered during seismic investigations. The course is taught by Dr. Glenn Borchardt, Ph.D, a recognized expert in the fields of paleoseismology and pedology. The course consists of classroom lecture on Friday, June 18. Saturday June 19 includes a trip to examine exposures at Point Pinole Regional shoreline.

Dr. Glenn Borchardt, Ph.D

**Soil Stratigrapher/
Earthquake Hazard Specialist**

Dr. Borchardt is the Principal Soil Scientist for Soil Tectonics, Berkeley, California. Dr. Borchardt has a Ph.D in Soil Mineralogy from Oregon State University, an M.S. in Clay Mineralogy from the University of Wisconsin, and a B.S. in Soil Science from the University of Wisconsin. Dr. Borchardt is a Certified Professional Soil Scientist.

**Association of Environmental and Engineering-
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Association of
Environmental
and Engineering
Geologists
San Francisco
Section

**Soil
Stratigraphy for
Trench Logging**



Date: June 18-19, 2010
Time: 8 am to 5 pm
Preservation Park

Oakland, California

Soil Tectonics

Interactions Between Soils and Faults

Soil tectonics is the study of the interaction between soil formation and tectonism. It is a branch of both paleoseismology and pedology. The complex interactions between these dynamic processes may record a history of fault offset and other ground movements that can be discovered in no other way. The formation and alteration of minerals in the soil are used as timekeepers in recording these interactions. Most soil tectonics work involves analysis of seismic hazard from fault offsets.

This short course was given in 2004 at the AEG Great Basin Section meeting and it sold out. We expect the course to sell out again, so act now to reserve your spot.

Topics to be Discussed

1. ABCs of soils: Soil horizons from simple to complex
2. CT POT: the factors influencing soil formation
3. Climate: how water "improves" rocks
4. Topography: how gravity helps water improve rocks
5. Parent materials: how rocks control soils
6. Organisms: construction and destruction in soils
7. Pedochronology: perspective and book-keeping for the ages
8. Relative age dating methods: chronosequences
9. Absolute dating methods: U/Th, C-14 and others
10. Laboratory methods: PSD and soil mineralogy
11. Recognizing important soil features
12. Soil Tectonics

Course location: Preservation Park, Park Way (Martin Luther King Jr. Way between 12th and 14th Streets, Oakland, CA 94606

Date: Friday, June 18 (classroom) and Saturday, June 19 (field trip to Point Pinole Regional Shoreline)

Cost: \$350 (AEG members), \$400 non-members)

Provided: Text, lunch (second day). The first day you may enjoy lunch at one of many excellent restaurants in the Oakland City Center area.

Bring: Friday—typical classroom supplies
Saturday—field clothing and supplies.

REGISTRATION

Phone, fax, email or mail your registration. Payment in full is due no later than June 1, 2010. Cancellations received by June 7 will be refunded. Checks payable to AEG SF.

Name

Address

Phone

Fax

Email

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