

AEG SACRAMENTO

Monthly Bulletin and Meeting Announcement

Watch for Falling Rock!

April is turning out to be something of an unofficial "Rock Slope Stability" month here in the Sacramento Section! On April 20th and 21st, AEG Sacramento is putting on the 2007 Rock Slope Stability Analysis & Design short course. The course is sold out, the speaker list is loaded with awesome speakers at the very top of their game, and we are looking forward to a very successful event! And for this month's meeting we've got our own Section secretary, Nate Manley, presenting a portion of his Master's thesis research as it applies to slope stability in the Shoo Fly Complex of the Sierra foothills. Best of all...we're going to be holding this month's meeting at California Fat's in Old Sacramento, a restaurant well known for it's excellent food. So be sure to come join us for great food, good company and an informative talk at the April meeting! Hope to see you there!

Section Meeting Date: April 24, 2007

Meeting Location: **California Fat's Asian Grill & Steakhouse**
 1015 Front Street (at J Street)
 Sacramento, California
 (Located in historic Old Sacramento)
RSVP's are enthusiastically encouraged!

Meeting Schedule:

- 5:30 - 6:30 Sign-In & Social Hour
- 6:30 - 7:30 Dinner & Announcements
- 7:30 - 8:30 Speaker Talk & Slide Show
- 8:30 - 8:45 Questions & Answers

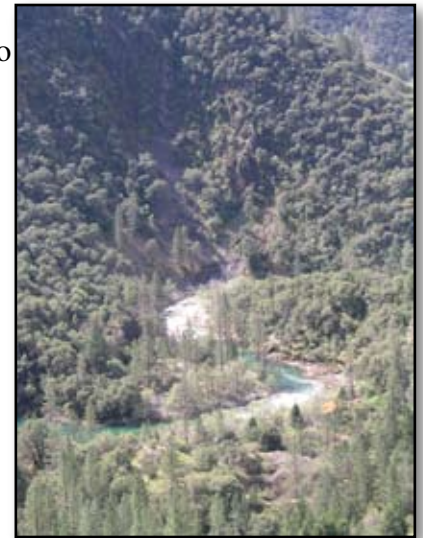


The Influence of Geologic Structures on Slope Stability and Geomorphic Development in the Shoo Fly Complex

Nate Manley, AEG Sacramento Section Secretary

Abstract:

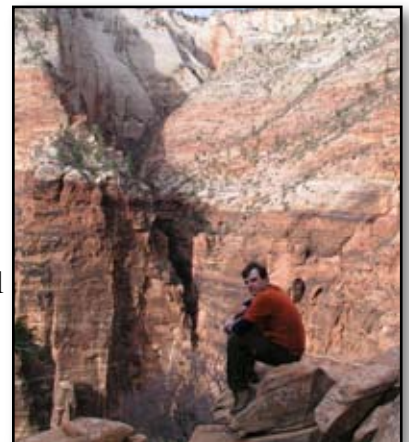
The predominantly north trending, vertically oriented structural fabric of the Shoo Fly Complex within the Middle Fork American River canyon is punctuated by discrete zones of more highly deformed bedrock containing at least two distinct generations of folding, along with evidence of oblique, right lateral shearing. Geologic mapping and detailed structural analysis of the Shoo Fly Complex shows a strong correlation between zones of more highly deformed bedrock and unusually sinuous reaches of the Middle Fork American River and its tributaries near Ralston Afterbay. Additionally, outcrops within and around these zones exhibit significant differences in engineering performance characteristics with respect to slope stability. Two more prominent zones of deformed bedrock are associated with large rock slope failures within the Middle Fork canyon.



Based on field evidence and geographic correlation, meander development of the rivers in this area appears to have been strongly influenced by the orientation, distribution and size of these structurally weaker zones of more highly deformed bedrock. These same zones also appear to have influenced drainage development in this region and appear to be the dominant controlling factor in many of the larger slope failures. Observations drawn from this study demonstrate that targeted investigation of specific geomorphic clues (e.g., unusually sinuous stream channels, anomalous slope morphology) can provide valuable information for the evaluation of slope stability problems within the Shoo Fly Complex. With respect to maintenance of pre-existing improvements and future site development, this improved understanding of both local rock geometry and broader structural trends across a specific operations area can increase the efficiency of preliminary planning, engineering design, and resource allocation for slope protection systems.

T. Nathan Manley, Senior Staff Geologist Sanders & Associates Geostructural Engineering, Inc.

Nate Manley is a geologist currently working for SAGE in Granite Bay, California. Nate completed his undergraduate studies in geology in 1990 at Humboldt State University and he recently finished his Master's degree in structural geology at California State University, Sacramento. For the past five years he has served as the section secretary for the Association of Environmental and Engineering Geologists in Sacramento. Nate's research interests have focused on the influence of geologic structures on long term morphologic development and slope stability issues in the Sierra Nevada. When he isn't crawling through poison oak-covered slopes in the field, Nate enjoys climbing, cycling and hiking with his (exceptionally understanding) wife and two labrador retrievers.



Chairman's Message

by
Eric Chase

Thanks to the fine work done by our spring workshop chair Pat Jenks, ably assisted by Drew Kennedy and several other support personnel, the two day short course on Rock Slope Stability and Design scheduled for April 20 and 21 is filled to capacity! I sincerely hope that those of you who are members of AEG and wanted to attend were able to get a seat! The course is sure to be the best way to bring you right up to the state of the art in analysis and design of rock slopes, which is an increasingly important part of engineering geology practice as our area continues to urbanize and expand into the Sierra foothills.

I have been meaning to express my appreciation, to pay tribute where tribute is long overdue, to certain organizations with whom we are allied. We Sacramento Section members benefit month in and month out, year in and year out, from the generous support of many of the geotechnical and environmental consulting firms in our metro area. Notable among many such companies are Wallace-Kuhl and Associates, Kleinfelder, Youngdahl Consulting Group, Geocon, Blackburn Consulting, Taber Consulting, Wheeldon Geologic, and others. Also of note is the support we receive from associated vendors such as Test America, Kiff Analytical, Direct Traffic Control, and the many drilling companies throughout the area who continue to support and participate in our programs, workshops, and short courses year after year. We want these companies to know how much we appreciate their long-standing and continued support.

In my Chairman's Message last month I included remarks regarding rumored potential contracting practices involving the California Geological Survey which offended several of my friends and colleagues in that fine organization. I regret very deeply any offense taken with my statements, and apologize most sincerely. My intention was to engender debate on the larger topic of how CGS is funded, how this funding has changed over many years, and was not intended to impugn or malign in any way the professionalism or integrity of members of that organization.

Our speaker this month is Section Secretary Nate Manley, who will share with us his discoveries in detailed geologic and engineering geologic studies of the Shoo Fly Complex. This was Nate's master's degree thesis area, and I am looking forward to his insights. It is wonderful for me as an older practitioner to have seen Nate as a student member of AEG grow professionally to become not only a fulltime practicing professional in our community but also our featured speaker this month. Along those lines at our upcoming meeting I will be sharing great news about recent developments in our outreach to U.C. Davis earth science students. See you all there!

Eric Chase
AEG Sacramento Section Chair

April 2007 AEG Meeting Facsimile Transmittal Sheet

(or e-mail to the address below)

To: Lisa Breckenridge (Wallace-Kuhl & Associates, Inc.)

email: LBreckenridge@wallace-kuhl.com

Phone: (916) 372-1434

Fax: (916) 290-5429

From: _____

Or You Can Sign Up Online at: www.aegsacto.org

Subject: April 2007 AEG Sacramento Section Meeting

Date: April 24th, 2007

Place: **California Fat's Asian Grill & Steakhouse**

(Located in historic Old Sacramento near the corner of Front St. & J St., parking is available in the lot at Front St. & Capitol Mall)

RSVP's are strongly recommended for this venue!

Time: 5:30 - 6:30 PM - Sign In and Social Hour
6:30 - 7:30 PM - Dinner & Announcements
7:30 - 8:30 PM - Speaker Talk and Slide Show
8:30 - 8:45 PM - Questions and Answers

On the Menu: Chicken Pot Stickers & Crispy Vegetable Spring Rolls
Orange Chicken Honey Walnut Prawns
Vegetarian Stir Fry Chicken Chow Mein
Garlic Green Beans Steamed White Rice

Dinner is served family style and includes dessert and coffee.

Cost: \$28 member (w/ RSVP) \$30 nonmember and walk-ins

Notes: First 5 Students (w/RSVP) Eat For Free!
Additional Student RSVPs: \$10.00 Student Walk-ins: \$15.00
Alcoholic beverages are available for those 21 and over on a cash basis.



AEG Sacramento 2007

Event Calendar

January 30th	Keith Millard, Youngdahl Consulting Group Landslide Repair on a Gold Rush Era Roadway
February 27th	Dr. Sandy Figuers Construction vibrations and their effect on adjacent improvements
March 27th	Dick Hilton, Sierra College Dinosaurs and Other Mesozoic Reptiles in California
April 20-21st	Rock Slope Stability Workshop
April 24th	Nate Manley, Sanders & Associates Geotechnical Engineering, Inc. The Influence of Geologic Structures on Slope Stability and Geomorphic Development in the Shoo Fly Complex
May 29th	Dr. Edward Kavazanjian, Arizona State University Post-Closure Development of Waste Landfills
June 26th	Yogesh Prashar, M2 Consultants Numerical Modeling of Fault Rupture and Lateral Spreading related PGD for a Natural Gas Pipeline
July	No Meeting
August 28th	Ken Glotzbach (City of Roseville) and Chris Petersen (MWH) Roseville Aquifer Storage and Recovery Project
September 24-29	AEG's 50th Anniversary and Annual National Meeting, Sheraton Universal Studios, Los Angeles, California
October 30th	AEG's Annual Student Night at CSUS James G. Moore, USGS Clarence King - Exploration and Discovery in the American West
November	No Meeting
December	AEG/GRA Annual Joint Holiday Meeting TBA