South River Road – 25 Year Rockfall Case Study

Guest Speaker: George Freitag and Michael Zimmerman

South River Road (SRR) is located in the southwest portion of Salem, Oregon, at the toe of the west slope of the Salem Hills, an upland area composed of Neogene-aged Columbia River Basalt (CRB) and marine Eugene Formation. SRR occupies a narrow space between the toe of the slope and the Portland & Western railroad and Willamette River floodplain to the west. East of SRR at the top of the Salem Hills bluff are public utilities including stormwater and sanitary sewer and residences. The rock cuts made in CRB on the east side of SRR have been the location of 20+ rockfall events over the past 11 years. A draped mesh system, narrow catchment zone, and concrete barrier with top fence were installed in 1990 and have been effective in reducing damage to SRR from rockfall debris up to about 2 ft in diameter. Several large-diameter rockfall events (including a single 8 ft diameter boulder in 2011) and large rockslides have also impacted the mesh system and barrier.

Maintenance completed in summer 2015 included scaling and slope grading in the area of a December 2014 rockslide, replacement of the draped mesh system damaged in this area, and removal of trees and woody vegetation in the area near the crest of the slope. Cable anchors supporting the new mesh are attached to braking elements to reduce potential damage to the anchors if subsequent rockslide occurs in this area.
Bio: George Freitag, RG, CEG

George Freitag, CEG, is an associate at GRI, and has practiced in the Pacific Northwest for over 23 years. He holds a BS/MS degree in Geology from California State University Northridge, and enjoys playing ice hockey.

Bio: Michael Zimmerman, PE, GE, CEG

Michael Zimmerman, PE, GE, CEG, is a senior engineer/geologist at GRI, and started with the firm in 1997 after completing a MS in Geological Engineering at Michigan Technological University. He completed a BS in Geological Engineering at University of Missouri-Rolla. Michael enjoys tinkering with his vintage Land Rover.

Message from the Chair

Holiday Greetings from the Oregon Section of AEG!

I hope that you all had a great Thanksgiving. With that, I’ll start this Message by taking the opportunity to say “Thanks” to my fellow Section Board members, committee chairs, and other principal volunteers. Among those volunteers, I’d like to wish a special “Congratulations” to our newsletter editor Scott Braunsfien who became a father on November 23rd! Big “Thanks” to our monthly presenters who make our section great by preparing and delivering top notch presentations throughout the year. “Thanks” also to our newsletter advertisers for their generous financial support of our Section. And finally, “Thanks” to those members who support the Section by routinely attending our monthly meetings. I recognize that it’s often difficult to fit these in among the many other time demands, but your participation the meetings is the bedrock of our organization, sustaining our professional culture and making it possible to help support students – the professionals of the future.

For those who attended the November meeting, we were treated to a terrific presentation by former Oregon Section Chair Dave Scofield about the past, present and future engineering responses of the US Army Corps of Engineers to the 1980 Mount St. Helens eruption. Dave’s firsthand experience with the Corps’ Mount St. Helens operations provided unparalleled insight to the challenges faced and innovative solutions developed as critical responses to this massive region-altering event.

We also were fortunate to have insight from other Oregon Section professionals in the room who were involved with the response, most notably John Sager (who, at the time, was on his way to becoming the Corps’ Geotechnical Branch Chief). And the vibrant discussion spawned new opportunities, including an offer by Scott Burns to lead a spring Mount St. Helens field trip. Exciting things to come!

“Keen observation is at least as necessary as penetrating analysis”

Karl Terzaghi
Message from the Chair (cont.)

As a follow-up to Ian Madin’s “State of DOGAMI” topic from our October meeting, I was interested to learn that Oregon now has a new State Geologist and DOGAMI Executive Director. Based on his resume, Mr. Brad Avy brings a rare combination of agency leadership experience and technical background as a geologist, with experience in the private (consulting and industry) and public sectors. With this strategic hire, we can anticipate that DOGAMI will be in good hands for the foreseeable future. Most recently employed by the Washington State Department of Agriculture, I look forward to welcoming Mr. Avy to attend one of our future Oregon Section meetings.

On Tuesday, December 8th we will be back at the Old Market Pub for our final meeting of 2015. The December presenters will be George Freitag and Michael Zimmerman of GRI, who will deliver a case study summary of 25 years of rockfall along South River Road in Salem. Please note that the meeting will be a week earlier than usual in order to avoid conflicts with other mid-December holiday events. But what better way to celebrate the season than by spending an evening with your Oregon Section colleagues learning about rockfall mitigation in the Salem Hills?

On behalf of the officers of the Oregon Section, I would like to wish you all a festive holiday season and a Happy New Year!

See you next week,

Adam Reese, CEG
Oregon AEG Section Chair

Brad Avy appointed Oregon’s State Geologist

The Governing Board of the Oregon Department of Geology and Mineral Industries (DOGAMI) has appointed Brad Avy as the State Geologist and Agency Executive Director.

“Mr. Avy brings a rare combination of state agency leadership, public policy and research experience, and geologic understanding to the Agency,” says Governing Board Chairman Larry Givens. “He is uniquely qualified to lead DOGAMI in increasing Oregon’s understanding of geologic resources and hazards through science and stewardship.”

Avy is a registered engineering geologist, hydrogeologist, and geologist. He earned a bachelor’s degree in geological sciences from the University of Washington and a master’s degree in geology from the University of Alaska Fairbanks. He comes to DOGAMI from the Washington State Department of Agriculture, where he served as the assistant director of the commodity inspection division. Before joining the Department of Agriculture, he was a senior research analyst with the Washington House of Representatives. He previously held management positions with the Washington State Department of Health and the Washington State Department of Ecology.

Avy began his career performing geotechnical field studies as an engineering geologist in Alaska, co-founded the Eureka Drilling Company, and worked as a hydrogeologist in Washington on toxics site cleanup investigations.

As the State Geologist and Agency Executive Director, Avy will lead a staff of 41 people. The Agency’s Mineral Land Reclamation & Regulation program oversees the state’s mineral production, and works to minimize impacts of natural resource extraction and maximize opportunities for land reclamation. The Agency’s Geological Survey & Services program develops maps, reports and data to help Oregon manage natural resources and prepare for natural hazards.

Avy will join DOGAMI December 1.
Congratulations Scott Braunsten!
Our Newsletter Editor welcomed his first born in November
Meet Micah, born 11/23/15 at 8:06 am, 10 lbs 8 oz, 20”

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