

CURRICULUM VITAE – JOHN M. WALLACE



Principal Engineering Geologist

Current Address

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Registration

California Professional Geologist, PG 6151, February 8, 1995

California Certified Engineering Geologist, CEG 1923, February 8, 1995

Education

M.S. Geology: San Jose State University, San Jose, California, 1991

B.S. Geology: University of Southern California, Los Angeles, California, 1985

Professional History

Staff to Principal Engineering Geologist, 1990 - Present; Cotton, Shires and Associates, Inc., Los Gatos, California.

Field Geologist, 1986-1988; Electrowatt Engineers/Gibbs and Hill, North Fork Stanislaus Hydroelectric Project, Murphys, California.

Field Geologist, 1986; United States Geological Survey, Denver, Colorado.

Representative Experience

Mr. Wallace has over 36 years of experience in the fields of geology and engineering geology, working on projects in both northern and southern California as well as Colorado, Utah, Idaho, Hawaii, and North and South Dakota. Mr. Wallace has performed geologic mapping and evaluation of steep rock slopes affecting more than 30 penstocks, 20 dams and powerhouses, 60 canals, and 4 tunnels primarily within PG&E's hydro-generation facilities in the northern, central and southern Sierra Nevada, in addition to extensive experience in hydro-projects such as mapping dam abutments, tunnels and penstock alignments, as well as tunnel, dam abutment, and portal rock bolting. Many of these projects involved using rock climbing techniques to safely access steep rock slopes. Mr. Wallace has been involved in numerous rock slope instability investigations on steep rock slopes within the City of San Francisco, involving steep rock slope mapping, characterization, and identifying mechanisms of rock slope failure.

He has extensive experience in coastal geologic processes, coastal landslide investigation, characterization, and mitigation, and recently performed detailed geologic investigations of coastal bluff properties in San Luis Obispo County, San Mateo County, Santa Cruz County, Mendocino County and Santa Barbara County. In addition, he has recently investigated several large, active

landslides that severely distressed roadways and residential areas, including the Sycamore Ranchito Landslide in Santa Barbara, the Northbeach Rockslide in San Francisco, the Ocean Trails Landslide in Rancho Palos Verdes, and the Montellano Landslide in Los Angeles. He has investigated large landslides in Utah and Idaho, including the Green Hollow Landslide in Cedar City, and the North Alto Via Landslide in Boise. These projects involved detailed surface and subsurface investigation, instrumentation, and analysis. Mr. Wallace has also been involved with geologic mapping and siting studies for several fault and landslide constrained reservoirs, and recently mapped unstable coastal bluffs in Santa Barbara, San Luis Obispo, Mendocino, Bodega Bay, Capitola, Aptos, Montara and Pacifica.

Mr. Wallace's extensive experience on a wide variety of large- and small-scale investigations has provided a solid background for performing peer reviews for various communities over several decades, including Portola Valley, Cupertino, San Luis Obispo County, and San Francisco. Mr. Wallace has also been involved in very large, select peer reviews on large landslides and proposed developments in Rancho Palos Verdes, Rolling Hills Estates, and for the California Coastal Commission.

As a field geologist with Electrowatt/Gibbs and Hill from 1986 to 1988, Mr. Wallace participated in the exploration and construction phases of the North Fork Stanislaus Hydroelectric Project, where he was involved in siting studies for four dam sites (including one thin-arch concrete dam, one concrete-face rockfill dam, and two concrete gravity dams) and over ten miles of pressure tunnel and shafts. His responsibilities included geologic mapping, exploratory drilling and core logging, rock bolt support layout for dam abutments, geotechnical instrumentation installation and monitoring, exploratory trench logging, and extensive tunnel mapping of 10 miles of pressure tunnels and shafts, tunnel rock bolt support layout, and pressure grouting supervision.

Mr. Wallace's current duties include: research and compilation of pertinent geologic data; photogeologic mapping from aerial photographs; large-scale and regional engineering geologic field mapping; coordination, logging, and analysis of subsurface exploration programs, including downhole logging of large-diameter exploratory borings; geologic mapping of precipitous rock slopes using rock climbing techniques; installation and monitoring of slope inclinometers and piezometers; the final preparation of technical reports, maps and cross sections; attendance at and giving technical talks at professional conferences, and expertise witness testimony.

Mr. Wallace has considerable experience as an expert witness for a variety of geologic issues, including landsliding, debris flows, rock characterization, seacliff instability, and rockfalls. Mr. Wallace has testified in 6 trials, 1 binding arbitration, and been deposed on 14 separate occasions as an expert witness.

Professional Affiliations

Association of Engineering Geologists
Earthquake Engineering Research Institute

Professional Short Course Instructor: 2012 - 2015

University of Wisconsin-Madison, College of Engineering and Department of Engineering and Professional Development; *Slope Stability and Landslides, Course #904*. Yearly 3-day professional development course. Professor James M. Tinjum Program Director.

Selected Publications/Abstracts

HISTORY AND MECHANISMS OF ROCK SLOPE INSTABILITY ALONG TELEGRAPH HILL, SAN FRANCISCO CALIFORNIA, 2015, (with Dale R. Marcum), Published Paper accepted for the 49th U.S. Rock Mechanics/Geomechanics Symposium.

GEOLOGIC ENGINEERING TOUR OF SAN FRANCISCO AND THE SAN FRANCISCO PENINSULA, 2015, (with R. GOODMAN, D. MARCUM and E. Medley) American Rock Mechanics Association, 49th US Rock Mechanics/Geomechanics Symposium, Guide Book co-author and field trip co-leader.

DEEP ROCK TOPPLING DISTRESS AT BELDEN TUNNEL AND SIPHON, SIERRA NEVADA, CALIFORNIA, 2011, (with D. Marcum), Paper submitted and accepted for the 13th International Conference and Field Trips on Landslides, Kyoto, Japan.

WOODLEAF ROCKFALL, NORTHERN SIERRA NEVADA, CALIFORNIA: KEEPING THE POWERHOUSE OPERATING AFTER A NEAR MISS, 2011, (with D. MARCUM), Paper submitted and accepted for the 13th International Conference and Field Trips on Landslides, Kyoto, Japan.

THE HIDDEN COMPLEXITY OF A DEEP-SEATED LANDSLIDE IN RICHMOND, CALIFORNIA, 2011, (with JOHNSON, Philip L.), Abstract submitted and accepted for the 11th International & 2nd North American Symposium on Landslides, Banff, Canada.

DETAILED GEOLOGIC MAPPING UNCOVERS PREHISTORIC LANDSLIDE DAM IN THE RIDGE BASIN, CALIFORNIA, 2011, (with JOHNSON, Philip L.), Abstract submitted and accepted for the 11th International & 2nd North American Symposium on Landslides, 2012, Banff, Canada.

COMPLEX INTERPLAY BETWEEN TOPPLING, SLIDING, AND STRESS CHANGES ASSOCIATED WITH A MASSIVE LANDSLIDE, SANTA BARBARA, (with SHIRES, Patrick O., DURDELLA, Milton J., SNEDDON, Tim P.), in Program with Abstracts, 2009 Association of Engineering Geologists Annual Convention, South Lake Tahoe.

ROCKFALL HAZARD EVALUATION AT THE KERN INTAKE, KERN CANYON PENSTOCK, KERN RIVER, CALIFORNIA: 2003 (with William D. Page, Dale R. Marcum and Joseph M. Durdella), in Program with Abstracts, Association of Engineering Geologists, 2003, Annual Meeting, Page 70.

UNSTABLE SLOPES IN THE FRANCISCAN COMPLEX TERRANE: LESSONS LEARNED FROM URBAN QUARRY SLOPES IN THE SAN FRANCISCO BAY AREA, 2007, (with Ted M. Sayre), in Program with Abstracts, First North American Landslide Conference, Vail Colorado, Page 81.

GEOLOGIC CHARACTERIZATION OF RANGE-FRONT THRUST FAULTS, WESTERN MARGIN OF SANTA CLARA VALLEY, CALIFORNIA, 2005, (with Ted M. Sayre, Ron S. Rubin), in Abstracts with Programs, Geological Society of America 101st Annual Meeting, Cordilleran Section, Page 43.

CATASTROPHIC DEBRIS FLOW FAILURE OF THE LA CONCHITA HILLSIDE: LESSONS REVISITED, VENTURA COUNTY, CALIFORNIA; 2005 (with William R. Cotton), in Abstracts with Programs, Geological Society of America 101st Annual Meeting, Cordilleran Section, 2005, Page 43.

THE OCEAN TRAILS LANDSLIDE: DEFINING SAFE ZONES ALONG HIGH COASTAL BLUFFS, RANCHO PALOS VERDES, CALIFORNIA; 2005 (with William R. Cotton), in Abstracts with Programs, Geological Society of America 101st Annual Meeting, Cordilleran Section, 2005, Page 43.

INSTABILITY OF AN ABANDONED QUARRY SLOPE: LESSONS LEARNED FROM FRANCISCAN COMPLEX CHERT, SAN FRANCISCO, CALIFORNIA: 2002 (with Dale R. Marcum, and William R. Cotton), in Program with Abstracts, Association of Engineering Geologists, 2002, Annual Meeting, Page 89.

LIVING WITH MOVING GROUND- LANDSLIDES AND COASTAL EROSION IN SAN MATEO COUNTY, CALIFORNIA: 2000 (with W.F. Cole, M.G. Smelser, E. Hay, T. Sayre, J. Van Velsor, T. Whitman, C. Snell and D.S. Kieffer) Association of Engineering Geologist Field Trip Guidebook.

GEOLOGIC AND GEOTECHNICAL CHARACTERIZATION OF THE WEEKS CREEK LANDSLIDE, SAN MATEO COUNTY, CALIFORNIA: 1994 (with William F. Cole and Patrick O. Shires), National Earthquake Hazards Reduction Program, U. S. Geological Survey grant 1434-93-G-2340.

GEOLOGIC INVESTIGATION OF MECHANISMS CAUSING DEFORMATION OF COYOTE LAKE DAM, SANTA CLARA COUNTY, CALIFORNIA: 1994 (with Tim Hall, Michael Angell, and William F. Cole), in Geological Society of America, Cordilleran Section 90th Annual Meeting, March 21-23, 1994, San Bernardino, California, Abstracts with Programs, p. 56.

GEOLOGIC CONSTRAINTS ON THE QUATERNARY TECTONIC HISTORY OF THE NORTHEASTERN MARGIN OF THE CENTRAL SANTA CRUZ MOUNTAINS, CALIFORNIA: 1994 (with William R. Cotton, and William F. Cole), in EOS, Transactions, American Geophysical Union, 1994, Fall Meeting, p. 682.