

## ***CURRICULUM VITAE - PHILIP L. JOHNSON***

Supervising Engineering Geologist

COTTON, SHIRES AND ASSOCIATES  
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### **Registration**

Professional Geologist in California, PG 6196  
Certified Engineering Geologist in California, EG 2019

### **Education**

M.S., Geology: San Jose State University, San Jose, California, 1990  
B.A., Geology: San Francisco State University, San Francisco, California, 1987

### **Representative Experience**

Mr. Johnson has over 26 years of experience in the field of engineering geology, working on projects throughout California. He has been involved with numerous geologic investigations involving slope stability, faults, seismic hazards, sea bluff retreat, groundwater, and other geotechnical issues. He also regularly participates in peer review for communities in the San Francisco Bay Area. He has a variety of areas of expertise including:

- Geologic characterization of landslides for design of mitigation measures. He has investigated numerous landslides ranging from large, deep-seated landslide complexes to shallow colluvial landslides and debris flows.
- Landslide mapping and interpretation of aerial imagery. He has mapped landslides in a wide variety of terrain utilizing field mapping, aerial photograph interpretation, and interpretation of LIDAR-based hillshades and topographic maps.
- Subsurface investigation of landslides and faults utilizing downhole logging of large-diameter boreholes, core logging, and trench logging methods. He also regularly interprets slope inclinometer data.
- Assessment of fault rupture hazard and seismic ground motions for large engineered structures as well as conventional site development. Projects include fault rupture hazard investigations on the San Andreas, Las Positas, Valley Side, and Hayward faults as well as the Foothills fault system in the Sierra Nevada range. Other investigations included trenching of thrust faults in the East Bay and on the San Francisco peninsula. Many of these investigations involved both interpretation of landforms and fault trenching studies to evaluate fault rupture hazards.
- Engineering geologic aspects of surface mine reclamation with emphasis on stability of former mine slopes.
- Investigation of geotechnical construction defects and building distress related to expansive soils, fill settlement, incipient slope deformation, and landsliding.

## **PHILIP L. JOHNSON (cont.)**

- Engineering geologic investigation of dam sites. He was Project Geologist for two potential dam sites for East Bay Municipal Utility District. He also participated in a seismic hazard investigation of the Foothills fault system for the New Hogan Dam in the Sierra Nevada foothills. He also mapped the geology exposed during construction of a soft ground tunnel at Crystal Springs Reservoir.
- Fluvial sedimentology with particular emphasis on the use of detailed fluvial architecture to evaluate tectonic basin subsidence and basin history.
- Hydrostratigraphic investigations utilizing core samples, borehole geophysical, and hydrogeologic data.

Recent projects include landslide mapping, air photo interpretation, and downhole logging of large diameter borings for a landslide investigation in San Ramon; geologic investigation for design of landslide mitigation measures in Contra Costa County; fault rupture hazard investigations along the Hayward fault; mapping and subsurface investigation of deep-seated landslides in the Ridge Basin in Los Angeles County; surface and subsurface investigation of deep-seated landslides in San Mateo and Sonoma counties; and fault trenching investigation along the San Andreas fault in Santa Clara County.

### **Professional History**

Supervising Engineering Geologist, 1995-Present; Cotton, Shires and Associates, Los Gatos, California.

Staff Geologist, 1992-1995; Dames & Moore, San Francisco, California.

Staff Geologist, 1990-1992; Earth Sciences Associates, Palo Alto, California.

### **Professional Affiliations**

American Geophysical Union  
Association of Environmental & Engineering Geologists  
Geological Society of America  
International Association of Sedimentologists  
Rocky Mountain Association of Geologists  
Society for Sedimentary Geology (SEPM)

### **Honors/Awards**

ASSOCIATION OF ENVIRONMENTAL AND ENGINEERING GEOLOGISTS, BEST PAPER OF THE YEAR AWARD 2016 for the article "Geologic and geotechnical factors controlling incipient slope instability at a gravel quarry, Livermore Basin, California" in the journal *Environmental & Engineering Geoscience*.

### **Publications**

Philip L. Johnson, William R. Cotton, and Patrick O. Shires, 2016, Alluvium-buttressed landslides - conceptual models and examples from California: abstract NH41B-1784 presented at *2016 Fall Meeting, American Geophysical Union*, San Francisco, California.

Philip L. Johnson, Patrick O. Shires, and Timothy P. Sneddon, 2016, Geologic and geotechnical factors controlling incipient slope instability at a gravel quarry, Livermore Basin, California: *Environmental & Engineering Geoscience*, v. 22, p. 141-155.

**PHILIP L. JOHNSON (cont.)**

- Philip L. Johnson and Ted M. Sayre, 2015, Local thrust faulting along the southern Hayward fault in Fremont, California: abstract T23C-2958 presented at 2015 Fall Meeting, American Geophysical Union, San Francisco, California.
- Philip L. Johnson and Patrick O. Shires, 2013, The subsurface complexity of alluvium-buttressed landslides at Knights Valley, California: *Geological Society of America, Abstracts with Programs*, v. 45, no.7, p. 150.
- Philip L. Johnson and John M. Wallace, 2012, The hidden complexity of a deep-seated landslide, Richmond, California, in Eberhardt, E., Froese, C., Turner, A. K. and Leroueil S. (editors), *Landslides and Engineered Slopes: Proceedings of the 11<sup>th</sup> International Symposium on Landslides & 2<sup>nd</sup> North American Symposium on Landslides*, CRC Press, p. 641-645.
- John M. Wallace and Philip L. Johnson, 2012, Detailed geologic mapping uncovers prehistoric landslide dam at Posey Canyon in the Ridge Basin, California, in Eberhardt, E., Froese, C., Turner, A. K. and Leroueil S. (editors), *Landslides and Engineered Slopes: Proceedings of the 11<sup>th</sup> International Symposium on Landslides & 2<sup>nd</sup> North American Symposium on Landslides*, CRC Press, p. 581-585.
- Philip L. Johnson, 2011, Landslides and stream capture in the southern Mayacamas Mountains, California: *Geological Society of America, Rocky Mountain/Cordilleran Sections, Abstracts with Programs*, v. 43, No. 4, p. 10.
- Philip L. Johnson, 2009, Landslides and geomorphic mapping along the Rodgers Creek – Healdsburg fault, Sonoma County, California: *Proceedings of the 52<sup>nd</sup> Annual Meeting of the Association of Engineering and Environmental Geologists*, Lake Tahoe, California, p. 81.
- Philip L. Johnson and David W. Andersen, 2009, Concurrent growth of uplifts with dissimilar orientations in the southern Green River Basin, Wyoming: implications for Paleocene-Eocene patterns of foreland shortening: *Rocky Mountain Geology*, v. 44, p. 1-16.
- Philip L. Johnson and Dale R. Marcum, 2007, The Northridge Bluff Landslide: rapid bluff retreat associated with a major coastal landslide in Daly City, California in Schaefer, V. R., Schuster, R. L., and Turner, A. K., (editors), *Landslides and Society: Integrated Science, Engineering, Management, and Mitigation, 1st North American Landslide Conference: Association of Environmental and Engineering Geologists Special Publication No. 23*, p. 1694-1706.
- Philip L. Johnson and Patrick O. Shires, 2007, Engineering geologic evaluation of quarry slopes and compliance with California's Surface Mining and Reclamation Act: *Proceedings of the 50<sup>th</sup> Annual Meeting of the Association of Engineering Geologists*, Los Angeles, California, p. 94.
- Philip L. Johnson, 2005, The Glen Creek Landslide: a case study in the misuse of the Jahnsian steps during hillside development: in Ehlen, J., Haneberg, W.C., and Larson, R. (eds.) *Humans as Geologic Agents*, Geological Society of America, Reviews in Engineering Geology, v. 16, p. 111-121.
- Philip L. Johnson and William R. Cotton, 2005, The Santiago landslide and associated ridge-top graben: implications for paleoseismic landslide studies: *Environmental and Engineering Geoscience*, v. 11, no. 1, p. 5-16.
- Philip L. Johnson and William R. Cotton, 2003, An alluvium-buttressed landslide complex and the impact of late Quaternary sea level change on landslide topography: *Proceedings of the 46<sup>th</sup> Annual Meeting of the Association of Engineering Geologists*, Vail, Colorado, p. 62.

**PHILIP L. JOHNSON** (cont.)

Philip L. Johnson and William F. Cole, 2001, The use of large-diameter boreholes and downhole logging in landslide investigations: *in* Horacio Ferriz (ed.) *Engineering Geology in Northern California*, California Department of Conservation, Division of Mines and Geology, Bulletin 210, p. 95-106.

John M. Wallace and Philip L. Johnson, 1999, The use of large-diameter boreholes and downhole logging techniques in landslide investigations: *Proceedings of the 42<sup>nd</sup> Annual Meeting of the Association of Engineering Geologists*, Salt Lake City, Utah, p. 88.

Philip L. Johnson and David W. Andersen, 1990, Laramide basin subsidence and fluvial architecture of the Fort Union and Wasatch Formations in the southern greater Green River basin, Wyoming: *American Association of Petroleum Geologists Bulletin*, v. 74, p. 687.