Eric J. Hubbard
Principal Engineering Geologist
Great Basin Geoscience
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SUMMARY OF EXPERIENCE

Mr. Hubbard has 28 years of progressive Engineering Geology and Hydrogeology experience for large projects in the Western United States. Mr. Hubbard was Senior Engineering Geologist and Field Task Leader for the Truckee Meadows Flood Control Project in Washoe County, Nevada. This $1 billion+ US Army Corps of Engineers (USACE) effort will be the largest public works project ever completed in Northern Nevada. The project included development of a surface and subsurface geological model of the project area and vicinity.

Mr. Hubbard has specialized expertise in paleoseismic investigations, slope stability, dam and levee investigations and hydrogeology. He was Senior Engineering Geologist and Field Task Manager for the Martis Creek Dam geotechnical investigation. This project included investigation of dam failure modes and development of a detailed subsurface geologic model of the dam site. Martis Creek Dam is identified by the USACE as one of the top three at-risk dams in the United States.

In 2011, Mr. Hubbard founded Great Basin Geoscience to provide engineering geology consultation on large projects throughout the Western U.S. Projects in 2011 and 2012 included large wind and geothermal energy projects in California, Nevada and New Mexico.

In addition to his private consultation practice, Mr. Hubbard is employed as a Senior Engineering Geologist with Telesto Nevada, a mining engineering firm in Reno, Nevada. His duties include geologic and hydrogeologic investigations of mine sites and permit preparation.

Mr. Hubbard has served in both local and national leadership roles with the Association of Environmental & Engineering Geologists and continues to do so. He serves on the Nevada Earthquake Safety Council.

REGISTRATIONS

Professional Geologist #4807, California

Certified Engineering Geologist #1733, California

Certified Hydrogeologist #773, California

Professional Geologist #1171, Wyoming

Certified Environmental Manager #1846, Nevada

MSHA 30 CFR 48.31 Certified

CFR 1910.120 Certified

REPRESENTATIVE EXPERIENCE

Vasco Wind Repower, Contra Costa County, California 2011

Senior Engineering Geologist. This project involved replacement of obsolete wind turbines with very large, state of the art turbines in the Altamont Hills, a geologic setting known for extensive and complex landslide hazards. Mr. Hubbard was responsible for engineering geologic assessment of wind tower foundations and landslide hazard identification and mitigation.

Truckee Meadows Flood Control Project (USACE) 2009 - 2011

Senior Engineering Geologist and Field Task Leader for preliminary geotechnical site characterization for proposed flood control elements along six miles of the Truckee River, including levees, floodwalls, and floodplain restoration. The field investigation included 68 hollow stem auger borings, 99 sonic borings, 18 piezometers and 35 cone penetrometer tests. The office and laboratory phase included 900 laboratory tests and drafting nearly 12,000 feet of boring logs. Significant logistical challenges included obtaining Rights of Entry on approximately 40 parcels with many owners, identifying, training and scheduling experienced loggers from multiple offices, utility location for nearly 200 sites, moving multiple drill rigs between locations safely and efficiently, and quality management and data management. This project received a Very Good ACASS rating from the USACE.

Martis Creek Dam (USACE) 2008 - 2010

Senior Engineering Geologist and Field Task Manager for the multi-phased geotechnical investigation of Martis Creek Dam. Martis Creek Dam provides flood protection to the cities of Reno and Sparks, Nevada. The USACE rated this structure as the third most dangerous to human health and property in their inventory. The site characterization included over 7,000 feet of sonic and hollow-stem auger drilling and sampling, laboratory testing and analyses for soil samples, geophysical testing including seismic reflection and refraction, surface resistivity, downhole EM, gamma and shear wave surveys, and piezometer installation and pump testing.

Lake Tahoe Environmental Improvement Project (CalTrans) 2007 - 2008

Senior Engineering Geologist and Task Order Manager. This project included drilling, sampling, infiltration testing, laboratory testing, data analysis, and reporting for the investigation of over 150 infiltration basin sites in the Lake Tahoe Basin. The purpose of this work was to design sedimentation and infiltration basins to intercept sediment and nutrients, and ultimately improve the water quality in Lake Tahoe.

Reno-Sparks Indian Colony, Reno, Nevada 2008 - 2010

Senior Engineering Geologist and Client-Regulator Liaison. The objective of this project was to assess multiple sources of soil and groundwater contamination including: auto repair, auto painting, printing and radiator repair facilities; identify cleanup goals; and achieve post-cleanup "No Further Action" status. The work was overseen by multiple County, State and Federal agencies. The project was successfully completed, and achieved state and national recognition.

Indian Colony Tribal Chairman Arlan Melendez noted at the completion of the project: "It is a joyous time on this property. One of our goals is not only to create economic opportunities but first and foremost to protect the land, water and resources. It's a win-win situation." This project was the first of its kind in Nevada and the first to occur on Indian-Owned land in the Environmental Protection Agency's (EPA) Pacific Southwest Region IX.

In addition to successful completion of the project, we coordinated with the Indian Colony and the EPA and were successful in obtaining a $200,000 grant and a $950,000 low interest loan from the State of Nevada's Brownfields program for assessment and cleanup.

"The Reno-Sparks Indian Colony is extremely pleased with the cooperation between all of the entities and the outcome of the collaboration that has led to the cleanup of this site. Without the loan, it would have been very difficult for the Colony to redevelop this site."

- *Arlan Melendez, Tribal Chairman*

"This successful project is the first Brownfields loan made to a Tribal nation in EPA's Pacific Southwest Region and we're proud to have funded NDEP's program."

- *David Lloyd, National Director of the EPA's Brownfields and Land Revitalization Office*

Aquifer Testing, Nevada and California 1990 -Present

Senior Engineering Geologist/Hydrogeologist for large capacity (greater than 1000 gpm) water supply well siting, design, drilling, aquifer testing, and analysis for numerous water providers in Northern California and Nevada.

Groundwater Conjunctive Use Study, Sacramento Valley, California 1998

Senior Geologist and Project Manager for a regional conjunctive use study to evaluate coordination of groundwater and surface water use, rice farming, and waterfowl habitat enhancement in the Northern Sacramento Valley. This innovative project involved technical and legal water issues, and working with a group of diverse stakeholders, including Ducks Unlimited (the Client), a wetlands conservation group, rice farmers, Federal, State and Local agencies, water districts, and noted Western U.S. water expert and author, the late Marc Reisner.

Huffaker Reservoir (Washoe County Department of Water Resources) 2010

Senior Engineering Geologist for a reservoir seepage evaluation. Huffaker Reservoir had a history of significant seepage. Based on geologic understanding of the area, a scope of work was developed to evaluate whether the seepage was occurring along fault fissures. The results of the study confirmed that significant seepage was occurring through the fissures. Reconnaissance of the reservoir located the fissures, and an HDPE liner was designed and placed over the fissured area resulting in a dramatic reduction in infiltration loss at the reservoir. This project resulted in significant savings to the client, both in reduced liner area, and water savings.

Seismic and Geologic Hazards Studies, California and Nevada 1990 - Present

Senior Engineering Geologist for seismic hazards studies at numerous schools, hospitals and other critical facilities. These typically included site reconnaissance, subsurface exploration, literature research, qualitative analysis of non-seismic hazards, and probabilistic and deterministic analysis of site-specific ground shaking potential. Reports for these projects in California were reviewed by the California Geological Survey and/or the Office of Statewide Health Planning and Development and in Nevada by local agencies.

Pony Canyon Water Resources (Town of Austin, Nevada) 2006

Senior Geologist for this unique groundwater supply well siting study that resulted in installation of a vertically inclined water supply well for the town of Austin, Nevada. The successful completion of the well allowed the Town of Austin to maintain an adequate water supply and avoid costly pumping from distant, lower elevation wells.

Regional Geology and Seismicity Study, Western United States 2002

Senior Engineering Geologist for a Regional Geology and Seismicity Study for an international internet auction company based in San Jose, California. The project was designed to develop criteria for siting critical computer operations facilities.

Earthquake Fault Investigation, Spanish Springs Valley, Nevada 2005

Senior Engineering Geologist and Project Manager for an Earthquake Fault Investigation of a “big box” retail site in Washoe County, Nevada. The fault was assessed as Holocene in age and a fault rupture hazard; successful collaboration with the structural engineer resulted in a design that incorporated mitigation for the hazard.

On-Call Environmental Services (State of Nevada) 2004

Project and Quality Control Manager. Services included soil and groundwater assessments and cleanup as well as development of Storm Water Pollution Prevention Plans for numerous facilities.

Explosive Research and Development Facility, Storey County, Nevada 2006

Led site characterization of explosive residue in soil, buildings and groundwater at a 7,000-acre facility that developed and manufactured vehicle airbag propellant devices. This project was completed on an accelerated schedule as part of a property transaction and required coordination with explosive, safety and demolition experts.

Coeur Rochester Mine, Pershing County, Nevada

Project manager for infiltration modeling of a heap leach pad cover. Historical climatological data were used to model infiltration and evaluate the effectiveness of a heap leach pad cover in preventing leachate from contaminating groundwater.

EMPLOYMENT HISTORY

US Bureau of Mines Field Geologist, White-Inyo Mountains. 1982-1983 Field Seasons

Colorado State Engineers Office, 1985-1986, Geologist, Arkansas River Project

Anderson Consulting Group, Staff/Project Engineering Geologist, 1986-1990. Duties included planning and implementing medium to large geologic and geotechnical investigations for projects in the California Coast Range, Central Valley and Sierra Nevada

Wallace-Kuhl and Associates, Senior Engineering Geologist and Geologic Services Group Manager, 1990-2003. Responsibilities included planning and implementing a variety of geotechnical, geologic and hydrogeologic investigations, marketing, managing a team of up to 15 geologists, engineers and technicians, negotiating with regulators, and project quality management.

Kleinfelder, Senior Engineering Geologist and Group Manager, 2003-2011. Responsibilities included project management and technical lead for a variety of medium to large engineering geology, hydrogeology and environmental geology projects. Managed a diverse staff of geologists, engineers, biologists and technicians. Responsibilities also included technical review, mentoring and professional development and performance assessment.

Great Basin Geoscience, 2011-Present, Owner and Principal Engineering Geologist. Engineering Geology consultant to wind and geothermal energy projects in California and New Mexico, as well as geotechnical projects in Nevada. Consultant to USGS-funded paleoseismic research project: Kings Canyon Fault Investigation, Carson City, Nevada.

Telesto Nevada, 2012-Present. Senior Engineering Geologist for various gold and industrial mineral mining projects including mine permitting, and preparation and implementation of mine reclamation plans.

PUBLICATIONS

Surface Fault Rupture Hazards in Nevada and the Law, Association of Environmental & Engineering Geologists Annual Meeting, Abstracts with Programs, 2012.

Geotechnical Investigation of the Truckee Meadows for Future Levee Design, Association of Environmental & Engineering Geologists Annual Meeting, Abstracts with Programs, 2010.

Managing an Extensive Drilling Project in an Urban Environment, Kleinfelder Technical Seminar, 2010

How to Build a Big Box on an Active Fault, Association of Engineering Geologists Annual Meeting, Abstracts with Programs, 2005.

Comparison of Measured Versus Modeled Surface Flux of VOC's from Contaminated Groundwater, Air and Waste Management Association Annual Meeting, 2000.

EDUCATION

California State University, Fresno

Bachelor of Science, Geology, 1983

Colorado State University
Post Graduate Study, Fluvial Sedimentology and Geomorphology, 1983-1985

AFFILIATIONS

Association of Environmental & Engineering Geologists

Board of Directors, Section Chair, Governance Committee, Nominating Committee, Web Site Committee, Sponsor Chair 2009 Annual Meeting, Field Trip Leader.

Geological Society of Nevada

Geological Society of America

American Geophysical Union

AWARDS

President's Award
Martis Creek Dam Safety Evaluation
2009 Kleinfelder Technical Seminar

Excellence Award
Martis Creek Dam Safety Evaluation
2009 Kleinfelder Technical Seminar

Outstanding Environmental Engineering Project
1992 California Geotechnical Engineers Association
California Hills Lead Remediation Project

OTHER RELEVANT EXPERIENCE

Lecturer, California State University, Sacramento
1995 - 2000
In addition to his consulting work, Mr. Hubbard held a lecture position in the Civil Engineering Department teaching Engineering Geology.