

DEPARTMENT OF CONSERVATION
POSITION DUTY STATEMENT

PROPOSED

NAME Vacant	MCR I
CLASSIFICATION Engineering Geologist	POSITION NUMBER 538-102-3756-XXX
WORKING TITLE	DIVISION/UNIT California Geological Survey/Seismic Hazards Unit
EFFECTIVE DATE	LOCATION Los Angeles
BARGAINING UNIT R09	CONFLICT OF INTEREST CATEGORY 3, 7

GENERAL STATEMENT: Under the direction of the Senior Engineering Geologist (Supervisor), the Engineering Geologist is responsible for preparing highly specialized review comments on geologic and geotechnical reports prepared for critical facilities throughout California, including schools and hospitals, that address the potential for geologic and seismic hazards. Duties include, but are not limited to:

A. **SPECIFIC ACTIVITIES: ESSENTIAL / MARGINAL FUNCTIONS**

• **ESSENTIAL FUNCTIONS**

- **40%**
Reviews engineering geologic and geotechnical reports that were prepared by others for compliance with the California Building Code and other governing regulations. Using knowledge of engineering geology, field exploration techniques and laboratory testing procedures, determines if the investigations adequately document the site conditions and describe the geologic hazards relevant to project-related engineered structures.
- **30%**
Uses spreadsheets and other analytical tools, statewide probabilistic ground motion models, geotechnical and material test results, and borehole evaluations. Applies professional judgment regarding significance of site conditions. Determines the applicability of recommended mitigation techniques to the site conditions described in the consultants' report. Corresponds with State permitting agencies (Division of State Architect, Office of Statewide Health Planning and Development), and with consultants as needed, to communicate the results of reviews and adequacy of reports.
- **10%**
Compiles digital geologic map data from available sources and knowledge of earthquake-induced landslides and/or soil liquefaction to prepare hazard maps using geographic information systems (GIS). Writes reports summarizing regional geology, landslide characteristics, evidence of active faulting, seismic hazard zone delineation, geologic material engineering properties, seismicity, and the analyses used to prepare maps. Develops probabilistic methods of analysis of liquefaction and slope stability. Works with professional peers in CGS, other governmental agencies, academia, and private industry to advance professional engineering geology practice.

- **10%**
Participates in outreach efforts to local government, news media, professional organizations, and the general public. Assists public safety agencies by inspecting and assessing life-safety, utility, transportation, and private property damage in areas affected by earthquakes, severe storm events and post-fire rainstorms. Finds and maps ground-failure features following large earthquakes. Conducts field review studies at school, hospital and other essential facilities sites.

- **MARGINAL FUNCTIONS**

- **5%** Provide technical presentations of work products at scientific and engineering professional meetings, contribute written technical articles to peer-reviewed journals, and provide technical peer-review of work products for co-workers.
- **5% Administrative**
Performs administrative duties including, but not limited to: adheres to Department policies, rules and procedures; submits administrative requests including leave, overtime (if applicable), travel, and training in a timely and appropriate manner; accurately reports time in the Daily Log system; and submits timesheets by the due date.

B. **SUPERVISION RECEIVED**

The Engineering Geologist works under the supervision of the Senior Engineering Geologist (Supervisor) within the Seismic Hazards Program of CGS.

C. **SUPERVISION EXERCISED**

NONE

D. **ADMINISTRATIVE RESPONSIBILITIES FOR SUPERVISORS AND MANAGERS**

NONE

E. **PERSONAL CONTACTS**

The Engineering Geologist routinely interacts with other CGS and DOC staff, federal, state and local agencies, and may include extensive public and professional contact. Contacts may be made via personal interaction, written correspondence, telephone, email, and/or virtual meetings.

F. **ACTIONS AND CONSEQUENCES**

If these functions are not adequately performed, consequences may include, but are not limited to:

- CGS will not meet its legislative mandates to identify earthquake hazards, potentially exposing the citizens of California to threats to life, health, or property damages.
- Negative impacts to CGS's relationships with our state and federal partners.

G. **WORKING CONDITIONS/PHYSICAL REQUIREMENTS**

- Work in an office environment sitting at a desk during core office hours using a desktop computer, keyboard, mouse, monitor and printers under non-natural lighting for prolonged periods of time.
- Moving about the office and standing or sitting during in person meetings.
- Bending and stooping to retrieve and replace files and records.

- Use of multi-line telephone console or a cordless telephone.
- Reaching (above and below shoulder level).
- Work in a high-rise building.
- Field work includes visits to seismic stations for engineering geological evaluations and local government agencies.
- Field work in mountainous, forested and desert terrains; in road cuts, mines or other excavations; around drilling and excavation equipment; in trench excavations or large diameter borings; on foot, in off road vehicles, or in fixed-wing or rotary wing aircraft.
- Post-earthquake or landslide field response may expose employee to additional hazards created by event ground failures or shaking.
- Occasional walking on minimally irregular surfaces at field-sites may be required.

H. **OTHER INFORMATION**

Knowledge of: Stratigraphic, structural, historical, and economic geology as related to civil engineering projects; geological processes and survey techniques, equipment, and procedures; fundamental principles of mineralogy, petrography, soil mechanics, and hydrogeology; photogeology, geological mapping and drafting, and the application of geology to engineering problems; grouting methods, techniques, and equipment; geological literature; and subsurface exploration and sampling procedures.

Ability to: Conduct geological and geophysical exploration investigations; conduct independent technical research work; make, record, and evaluate observations on geological engineering problems; make accurate tests, observations, and measurements; analyze situations accurately and take effective action; and prepare and analyze technical reports.

Desired Qualifications:

- Registered as a California Professional Geologist and Certified Engineering Geologist
- Possession of a valid California Driver's License
- Ability to communicate effectively (verbally/written).
- Ability to work independently and in a team environment.
- Ability to organize and prioritize multiple assignments.
- Ability to promote a positive working environment and relationships with others.
- Proficiency with modern computer technology, including word processing, spreadsheets, e-mail, and associated software.

I have read and understand the duties listed above and I can perform these duties with or without reasonable accommodation (if you believe reasonable accommodation is necessary, discuss your concerns with your supervisor).		
Employee Signature	Employee Printed Name	Date

I have discussed the duties of this position with and have provided a copy of this duty statement to the employee named above.		
Supervisor Signature	Supervisor Printed Name	Date