

**GENERAL DESCRIPTION OF CLASS**

The GEOLOGIST 2 investigates, collects, and analyzes geological field samples and data and prepares maps, reports and statistics of findings, recommendations and published information. Employees in this class work in a specialization such as engineering geology, hydrogeology, economic geology, petroleum geology, geothermal geology, or hazard geology.

**DISTINGUISHING FEATURES**

This is the second level of a four-level series. Employees in this class conduct independent field investigations or surveys, requiring minimal guidance and direction, and may be assigned several concurrent projects requiring coordination with professional peers, government, and the private sector. Conducting journey-level geological project and helping defining project scope and priorities or training other geologists distinguishes this class from the lower level.

The absence of primary responsibility for coordinating projects and leading other geologists distinguishes this class from the higher level. Employees at the higher level are responsible for overseeing and coordinating long-term project, sometimes of a controversial or sensitive nature.

**DUTIES AND RESPONSIBILITIES**

The duties listed below are not inclusive but characteristic of the type and level of work associated with this class. Individual positions may perform all or some combination of the duties listed below as well as other related duties.

**1.Geologic Activities**

Research source documents and historical data to assist in analysis of projects.

Plan and conduct investigations or surveys, and collect samples for lab analysis and analyze field samples and data to identify rock and soil types, groundwater conditions and resources, quality mineral resources, and geothermal energy, petroleum and natural gas potential, or instability problems or hazards such as earthquakes, volcanos, and landslides.

**2.Mapping and Report Writing**

Review previously published maps and current project data. Draft geological maps and cross sections or reduce and analyze field data manually or with computer applications. Conduct statistical mapping and compile and interpret information from geologic source documents and laboratory test results, drill logs, and other field studies.

Prepare informational memos, field activity summary reports and preliminary and final geological reports of findings and recommendations for managerial review.

Prepare and distribute geologic, geochemical, geothermal and geophysical information by publishing maps and reports for local, state and federal officials, private industry, professional peers and the public.

### **3. Project Evaluation and Consultation**

Assist the lead geologist by reviewing preliminary contract plans and specifications to ensure that engineering designs are consistent with geologic conditions or standards. In conjunction with lead geologist, evaluate groundwater conditions and hazard potentials to determine feasibility, location, and safe and economical development of projects.

Assist the lead geologist by obtaining or providing technical information, advice, or assistance to agency personnel, private industry, professional peers, and local, State and Federal officials. Consult with property owners or private industry on specific projects to answer questions or resolve problems and ensure compliance with rules and regulations.

Accompany agency staff and outside officials on field investigations of potential or existing projects to observe the topography, evaluate findings or conditions, and recommend solutions to geological problems or concerns. Consult with professional or technical staff of the agency and various local, State, and Federal agencies to gather data, opinions and evaluations of findings and proposed recommendations.

### **4. Miscellaneous**

Assist in defining scope and establishing project priorities. Train other geologists, students or interns to use equipment and collect and analyze data, and review their work for accuracy and completeness. Provide geologic information at public meetings and conferences.

## **RELATIONSHIPS WITH OTHERS**

Employees contact exploration crews daily to discuss required type, frequency and amount of samples to be collected and to ensure that crews follow proper field sampling and testing procedures. They regularly contact, in person, by phone and in writing, professional peers, private industry, contractors, local, State and Federal officials, and the public to provide or obtain geologic information, advice, or assistance, or with outside agencies, contractors or private industry when inspecting their work for proper application and compliance with applicable rules and regulations.

## **SUPERVISION RECEIVED**

Employees in this class receive general supervision or instruction from a leadworker, supervisor or manager who assigns work orally or through written instructions. Employees conduct independent field activities but work with minimal independence in coordinating and completing projects. Work is reviewed during progress through informal meetings and upon completion of projects for accuracy, completeness, timeliness and compliance with applicable State and Federal laws, rules, and regulations.

Employees in this class follow State and Federal laws, rules, and regulations, agency policies and procedures, and reference materials related to the broad or specific area of geology, ensuring that project activities are consistent with those directives.

## **GENERAL INFORMATION**

Some positions in the class require the willingness to work in all terrains and weather or work extended hours on field trips.

**KNOWLEDGE AND SKILLS (KS)**

General knowledge of the theories, principles, practices, and techniques of geology. General knowledge of a geological field of specialization such as engineering geology, hydrogeology, or economic geology.

General knowledge of surveying and geologic mapping techniques.

General knowledge of field and laboratory techniques used in geologic investigations.

Skill in mathematical analysis.

Skill in independently conducting field investigations, recording observations, researching and analyzing data collected, and assessing the significance of geologic conditions.

Skill in collecting, organizing, interpreting, and summarizing technical information from various source documents as part of the project process.

Skill in reading geologic and topographic maps, cross sections and profiles, aerial photographs, and other imagery.

Skill in preparing detailed geological maps, cross sections, and other related maps.

Skill in classifying and maintaining detailed logs of soil and rock samples.

Skill in interpreting information from laboratory test results, drill logs, and other field studies.

Skill in making computations of geologic processes.

Skill in organizing, presenting, and writing reports and papers on geologic findings and recommendations.

Skill in setting up and monitoring geologic instrumentation.

Skill in conducting laboratory and field tests on material samples.

Skill in communicating orally with a variety of people.

Skill in interpreting and explaining laws, rules and regulations that govern geologic programs.

Skill in providing technical information, advice, or assistance to agency personnel, private industry, professional peers, local, State, and Federal agency officials and the public.

Skill in making oral presentations at public hearings, meetings, and conferences.

Skill in use of various types of hand equipment such as vane shear, borehole shear, flow meter, hand auger, rock hammer, probe, compass, microscope, and calculator.

Some positions in this class may require one or more of the following:

Basic knowledge of the use and handling of explosives.

Skill in operating a computer for analyzing and manipulating data to produce desired charts, graphs, models, and reports.

**NOTE:** The KNOWLEDGE and SKILLS are required for initial consideration. Some duties performed by positions in this class may require different KS's. No attempt is made to describe every KS required for **all** positions in this class. Additional KS requirements will be explained on the recruiting announcement.

Adopted 1/90

Revised