

GENERAL DESCRIPTION OF CLASS

The GEOLOGIST 3 assists in planning and developing geologic projects or programs and coordinates and participates in geological activities. Employees in this class lead other geologists in investigating, collecting, and analyzing geological field samples and data or may individually conduct controversial or sensitive projects involving contacts and coordination with outside agencies. At this level, employees prepare detailed maps, reports and statistics of findings, recommendations and published information for agency management, local, State, and Federal officials, private industry, professional peers, and the public. They work in a specialization such as engineering geology, hydrogeology, economic geology, petroleum geology, geothermal geology, and/or hazard geology.

DISTINGUISHING FEATURES

This is the third level of a four-level series. Employees in this class work with a high level of technical expertise and are expected to represent the agency in their subject area of specialty when interacting with local, State, and Federal agencies, private industry, professional peers, and the public. Primary responsibility for coordinating projects or leading other geologists in accomplishing the work distinguishes this class from the lower level.

The lack of responsibility for directing major programs or technical projects of major, long-term statewide significance distinguishes this class from the higher level.

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. Project Planning and Coordination

In conjunction with supervisor, plan, develop and determine project or program priorities, establishes goals and objectives and defines the scope for each project file. Assist with budget by estimating project costs and evaluating field supplies and equipment needs. Accompany supervisors, managers, engineers, designers, and external agency officials on field investigations of potential or existing projects to observe the topography, evaluate findings or conditions, and recommend solutions to geologic problems and concerns. Advise management on geologic policy issues.

2. Leadwork

Plan, assign, and coordinate the work of other geologists, review their work for accuracy, completeness, and conformance with State and Federal guidelines and provide technical assistance or information. Orient and train staff in geological activities of the job and provide input for performance appraisals.

3. Geological Activities

Plan and conduct or assign to other geologists field investigations or surveys and collect samples for lab analysis. Conduct or assign various geologic, geochemical, geothermal and geophysical projects.

Conduct or assign and coordinate the analysis of field samples and data to identify rock/soil types, groundwater conditions and resources, geothermal energy potential, quality mineral resources, petroleum and natural gas potential, or instability problems or hazards such as earthquakes, volcanoes, and landslides.

Review findings of work performed by outside agencies and contractors related to policy concern for Oregon and conduct comparison studies (field tests or computer simulation modeling, for example) to ensure accuracy of findings by outside sources.

4.Mapping and Report Writing

Review previously published maps and current project data. Draft geological maps and cross sections and 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 through publication of maps and reports for local, State and Federal officials, private industry, professional peers, and the public. Edit, review, and critique reports, papers, or articles written by professional colleagues.

5.Project Evaluation and Consultation

Assist supervisor by reviewing preliminary contract plans and specifications to ensure that engineering design is consistent with geologic conditions or standards and drafting contract specifications for specialized services provided by private contractors, exploration companies, and private testing laboratories. In conjunction with supervisor, evaluate groundwater conditions and hazard potential to determine feasibility, location and safe and economical development of projects.

Serve as resource contact, providing technical geologic information, advice, or assistance to agency personnel, private industry, professional peers, and local, State, and Federal officials and consult with property owners or private industry on specific projects to answer questions, resolve problems and ensure compliance with regulations. 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. Schedule and conduct public hearings and informational meetings and conferences. Provide testimony and documentation in area of specialization, when requested.

RELATIONSHIPS WITH OTHERS

Employees in this class contact agency supervisors, leadworkers, managers, engineering designers, and external agency officials, in-person or by phone, daily to discuss, evaluate, and recommend solutions to geological problems or concerns. They regularly contact outside agencies and contractors or private industry when inspecting their work for proper application and compliance with rules and regulations and with professional peers, private industry, contractors, local, State, and Federal officials, and the public, in person, by phone or in writing, to provide or obtain geologic information, advice, or assistance. They occasionally contact exploration crews to discuss the required type, frequency and amount of samples to be collected and to ensure that crews follow proper field sampling and testing procedures.

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 work with substantial independence, coordinating and completing projects. Work is reviewed through periodic meetings and on completion of assigned projects for accuracy, consistency and compliance with 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 to work extended hours on field trips.

KNOWLEDGE AND SKILLS (KS)

Extensive knowledge of the theories, principles, practices, and techniques of geology.

Extensive knowledge of a geological field of specialization such as engineering geology, hydrogeology, or economic geology.

Extensive knowledge of surveying and other geologic mapping techniques.

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

Basic knowledge of leadworker activities (e.g., orient and motivate others; schedule, assign, review, and direct work; and recommend performance evaluations).

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

Skill in evaluating potential or existing projects and recommending solutions to geological problems.

Skill in editing, reviewing, and criticizing reports, papers, or articles written by other geologists and professional peers.

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

Skill in setting up and monitoring geologic instrumentation.

Skill in conducting laboratory tests on material samples.

Skill in communicating orally with a variety of people.

Skill in interpreting and explaining the laws, rules, and regulations governing geologic projects.

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

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

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

Skill in use and handling of explosives.

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