

New York State Department of Civil Service
Division of Classification & Compensation

Classification Standard

Occ Code 4028031

Assistant Geologist, Grade 20	4028031
Professional Geologist 1, Grade 24	4028032
Professional Geologist 2, Grade 27	4028033
Professional Geologist 3, M-4	4029300

Brief Description of Class Series

Geologists review, analyze, and investigate geologic data for the resolution of environmental and transportation related concerns. These positions exist primarily in the Department of Environmental Conservation and the Department of Transportation. Field assignments may be required for all positions in this series in each agency. Incumbents working for the Department of Environmental Conservation review and analyze geologic data related to water supply, solid or hazardous waste disposal sites or investigations of groundwater. Positions within the Department of Transportation are involved with issues concerning bedrock and surficial geology, including structure foundations on rock, rock slope work, rock outcrop mapping, water wells in rock, investigating rock falls, providing assistance in rock blasting issues, evaluating aggregate sources for transportation projects, reviewing geologic source reports, evaluating bedrock and surficial deposits for construction aggregate suitability, evaluating mineral aggregate mining and processing methods relating to aggregate performance, and conducting geologic studies and lithological evaluations.

Distinguishing Characteristics

Assistant Geologist: full performance level; performs work that is technically accurate, complete, and in compliance with principles and theories; may act as project manager on less complex projects.

Professional Geologist 1: first supervisory level/advanced performance level; supervises lower-level Geologists and technicians; may serve as project manager for specific projects, work sites or contracted projects and directs all on-site activities; operates with a high degree of independence.

Professional Geologist 2: functions as a section head or regional program manager; operates with the highest level of independence; supervises at least two teams headed by Professional Geologists 1; performs the full range of supervisory duties including approving leave and tracking time and attendance, identifying staff

development needs, evaluating staff performance, and completing performance evaluations.

Professional Geologist 3: functions as a bureau chief or regional manager, managing multiple sections and/or programs headed by Professional Geologists 2.

Related Classes

Professional Engineers (Civil/Transportation) perform professional engineering work in planning, design, inspection, construction supervision, maintenance and technical review and evaluation of roads, bridges, railroads, airport structures, materials, bedrock and geotechnical conditions, waterways, traffic control systems and intersections, and related structures and equipment.

Professional Engineers (Environmental) perform professional environmental engineering work in areas such as wastewater disposal, air and water pollution control, hazardous waste remediation, solid waste disposal, hazardous substances regulations, or spill prevention, response and remediation.

Illustrative Tasks

Assistant Geologist

Plans and conducts field and laboratory tests for characterizing geologic conditions.

Performs rock fall inspections.

Makes recommendations for environmental remediation and cleanup.

Performs or reviews water well pump tests to determine well yield and recommends ways to improve yield.

Evaluates and tests rock core for bridge foundation designs.

Inspects and rates rock slopes for inclusion in rock slope rating database.

Performs rock outcrop and rock slope mapping with aid of Global Positioning System unit and laser rangefinder.

Performs seismic investigations to determine depth to bedrock.

Performs field inspections and geologic evaluation of quarries and sand/gravel sources.

Evaluates bedrock and surficial deposits for construction aggregates.

Assists with field inspections of mineral aggregate performance in highway construction.

Reviews geologic, hydrologic and engineering reports submitted as part of permit activities or remedial programs.

Conducts investigations to characterize subsurface soil, bedrock, and groundwater.

Assists in the preparation of the technical comments detailing geotechnical deficiencies.

Collects geotechnical field data to ensure quality control of construction activities.

Performs groundwater flow analysis and evaluates the migration of contaminants in groundwater, soil, and bedrock.

Prepares groundwater operations and maintenance inspection reports required by federal mandate.

Assists in the evaluation of well head protection plans.

Evaluates groundwater resources as part of aquifer determinations.

Assists in the implementation of the comprehensive groundwater protection plan and groundwater management plans for New York State.

Conducts annual inspections of permitted facilities to ensure groundwater monitoring compliance.

Responds to citizen inquiries and provides technical assistance.

Assists with the preparation or written responses to inquiries from the public.

Provides technical expertise in the construction of rock slopes.

Reviews and evaluates aggregates.

Professional Geologist 1

Participates in and may lead negotiations and technical meetings with consultants and contractors, water suppliers and municipalities.

Provides technical expertise to ensure implementation of appropriate site and application evaluations .

Prepares case reports and assists in the preparation and presentation of expert testimony and direct material testimony in adjudicatory hearings, in court and in other legal proceedings.

Works jointly with Professional Engineers (Environmental), Mineral Resource Specialists, or independently in developing detailed work plans and environmental monitoring systems.

Reviews and provides in-depth analysis of geologic and hydrologic reports prepared for water supply or solid and hazardous waste facility owners as part of permit applications for construction or cleanup.

Makes independent assessments of the more complex geologic field conditions.

Prepares reports and letters summarizing findings, recommendations and directions to other Department personnel, and contractors/consultants.

Prepares technical comments detailing geographic deficiencies that are sent to the Permit applicant for response.

Develops draft permits containing special conditions.

Participates in geotechnical meetings with applicants and concerned citizens, conducts comprehensive groundwater monitoring inspections and evaluations of groundwater monitoring and geotechnical activities related at permitted hazardous waste management facilities and determines compliance with federal and State regulations.

Assists attorneys in preparing warning letters, legal complaints, and Consent Orders. Identifies appropriate elements of Well Head Protection Plans.

Works directly with communities and planning agencies providing technical expertise and guidance for groundwater management.

Evaluates or supervises blasting operations.

Designs, evaluates and makes recommendations concerning bridge foundations on rock and rock slope stability.

Prepares specifications, physical and chemical testing requirements and limits and quality assurance procedures for mineral aggregates.

Investigates mineral aggregate-related problems in asphalt or concrete pavements and structures.

Evaluates mineral aggregate sources for suitability in transportation construction projects.

Evaluates the engineering properties of mineral aggregates.

Conducts mineral aggregate friction studies for pavement skid resistance.

Performs and authorizes petrographic analysis of mineral aggregate samples.

Supervises geologic laboratory testing including forensic microscopy of mineral aggregates, asphalt and concrete.

Determines suitability of mineral aggregates for use in State construction projects and identifies potential use restrictions or requirements.

Professional Geologist 2

Drafts new or revised policies and procedures related to geological principles and practices.

Develops management techniques and guidance for the protection and management of groundwater resources.

Consults and advises Division, Region, or Bureau Directors.

Interprets, evaluates, and applies Department policies.

Represents the Department on advisory committees, task forces and other inter-agency, regional, statewide and national activities.

Serves as technical coordinator of Departments staff for program-relevant training; makes technical presentations to professional societies, municipal governments, industry and the public.

Participates in geotechnical meetings with applicants and concerned citizens.

Gives expert testimony at legislative and adjudicatory hearings on the technical soundness of the permit application.

Hosts and conducts public meetings to explain the rationale for the Departments choice of actions and remedies at sites.

Performs special geological and mineralogical studies.

Develops laboratory and field testing methods for mineral aggregate quality control and quality assurance.

May act as Bureau Director or Bureau Chief, in their absence, fulfilling all requirements of that position.

Professional Geologist 3

Provides policy oversight and directs the Bureau or Regional staff.

Develops work plans and program budgets.

Oversees program managers and conducts performance reviews.

Administers programs to ensure statutory and regulatory compliance.

Represents the agency with representatives of federal, State, and local agencies and the public.

Minimum Qualifications

Assistant Geologist

Open Competitive: successful completion of the National Association of State Boards of Geology (ASBOG) Fundamentals of Geology (FG) examination.

Professional Geologist 1

Promotion: New York State Professional Geologist's (PG) license and current registration, and one year of service as an Assistant Geologist.

Open Competitive: New York State PG license and current registration.

Professional Geologist 2

Promotion: New York State PG license and current registration, and one year of service as a Professional Geologist 1.

Professional Geologist 3

Promotion: New York State PG license and current registration, and one year of service as a Professional Geologist 2.

Note: Classification Standards illustrate the nature, extent and scope of duties and responsibilities of the classes they describe. Standards cannot and do not include all of the work that might be appropriately performed by a class. The minimum qualifications above are those which were required for appointment at the time the Classification Standard was written. Please contact the Division of Staffing Services for current information on minimum qualification requirements for appointment or examination.

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