GEOLOGIST/HYDROGEOLOGIST

Schematic Code 16109 (31000116)

I. DESCRIPTION OF WORK

Positions in this banded class perform professional geological/hydrogeological work. They are responsible for collecting, analyzing, and interpreting geological/hydrogeological data and processes concerning surficial deposits, bedrock, groundwater resources and/or geotechnical subsurface evaluations. Work may include: data collection and evaluation, mapping, report preparation and investigations of geological/hydrogeological conditions for application to industrial/economic considerations, local government planning, regulatory, and/or environmental and public health concerns. Work assignments are performed independently and may have major environmental, public health and economic issues.

II. ROLE DESCRIPTIONS BY COMPETENCY LEVEL

Contributing	Journey	Advanced
Positions at this level perform entry-level geological/hydrogeological work of a limited degree of complexity. They are responsible for collecting, analyzing, and interpreting geological/hydrogeological data from field studies, site conditions and evaluation of earthen materials; they may conduct geological/hydrogeological mapping, studies, sampling and investigations of geological/hydrogeological conditions. Work assignments are generally of a limited scope and/or assisting higher-level Geologists/Hydrogeologists with assignments.	Positions at this level are fully functioning and perform geological/hydrogeological work of a moderate to high degree of complexity. They are responsible for collecting, analyzing, and interpreting geological/hydrogeological data and processes concerning surficial deposits, bedrock, groundwater resources and/or geotechnical subsurface evaluations. Work may include: data collection and evaluation, mapping, report preparation and investigations of geological/hydrogeological conditions for application to industrial/economic considerations, local government planning, regulatory, and/or environmental and public health concerns. Work assignments are performed independently and may have major environmental, public health and economic issues. Work assignments are generally of a higher level of complexity and are performed more independently than those recognized at the contributing level. More complex assignments are usually broader in scope and/or in a specialized field of work. Work may require professional licensure or other certifications.	Positions at this level perform advanced geological/hydrogeological work of a high degree of complexity, which may include supervisory responsibilities. They are responsible for independently planning and managing large complex projects, critical cases and/or studies of geological/hydrogeological conditions. Work typically requires adaptation of methods and procedures for interpreting data, and assessing sites, making recommendations. Work would include planning and managing multiple studies concurrently. Work may include planning day-to-day work activities, training staff members, negotiation, and providing technical expertise. Work requires considerable contact with other experts and consultants, industry-specific owners and operators, local governmental officials and others for the purpose of explaining rules and regulations, gaining compliance with rules and regulations, providing technical assistance, and resolving complex technical conflicts in the implementation of the project/program. Positions at this level serve as technical experts in the field of responsibility and may represent the agency/work unit as an expert. Work performed includes exercising judgment and decision-making that directly impacts life, health, safety and/or the environment. Work often requires professional licensure or other certifications.

III. COMPETENCIES

Competency	Definition
Knowledge - Professional	Possession of a designated level of technical skill or knowledge in geology and the ability to keep up with current developments and trends in areas of expertise. Knowledge of program procedures, methods and practices and their application to specific situations.
Program/Project Management	Ability to coordinate and administer programs/projects, activities and protocols. Ability to manage resources, monitor activities and assess environmental risks and quality control associated with the program/project.
Decision Making & Analysis	Knowledge of and ability to use effective approaches for choosing a course of action or developing appropriate solutions and/or reaching conclusions. Ability to take action consistent with available facts, constraints, and anticipated consequences. Ability to identify issues, obtain relevant information, relate and compare data from different sources, identify alternate solutions.
Communication	Ability to communicate, in written and oral form, detailed and technical geologic information, guidelines and standards to various audiences to ensure that they understand the information and the message, and to seek compliance. Ability to deliver presentations suited to the characteristics and needs of the audience such as negotiating solutions among different parties, or providing expert testimony.
Geologic/Hydrogeologic Design Analysis	Ability to evaluate geologic characteristics of sites/plans and modify investigative methods. Identifies and plans for resources. Ability to approve evaluations of geologic investigations and program/project specifications of other Geologists/Hydrogeologists to meet desired compliance with geologic principles, standards, and/or regulatory requirements. Ability to monitor and ensure that program/project meets specifications and objectives. Ability to negotiate project work plan changes.
Leadership	Skill and ability in coordinating, facilitating, and participating in a collaborative approach to the completion of tasks or assignments. Ability to plan and assign work functions of employees and provides technical oversight.

Note: Not all competencies apply to every position/employee; evaluate only those that apply. Competency statements are progressive.

IV. COMPETENCY STATEMENTS BY LEVEL

Knowledge – Professional

Possession of a designated level of technical skill or knowledge in geology and the ability to keep up with current developments and trends in areas of expertise. Knowledge of program procedures, methods and practices and their application to specific situations.

Contributing	Journey	Advanced
General knowledge of the concepts, practices, and theories used in the technical specialty area. Professional level knowledge of applicable standards, guidelines, methods, and tools involved in the performance of geological/hydrogeological work.	Working knowledge and understanding of concepts, practices, and theories used in the technical specialty area. May require general knowledge to oversee compliance in multiple geological/hydrogeological specialties. Working understanding of the organizational and business objectives of section/specialty needed to complete work.	Thorough knowledge and understanding of concepts, practices, and theories used in the technical geological/hydrogeological specialty area. Ability to serve as program expert. Expert knowledge of internal organizational structure, business needs/objectives, budget, planning, legal, public relations and/or other related factors required in the most complex situations.

Program/Project Management

Ability to coordinate and administer programs/projects, activities and protocols. Ability to manage resources, monitor activities and assess environmental risks and quality control associated with the program/project.

Contributing	Journey	Advanced
Ability to review plans and/or data for completeness, compatibility, compliance with geologic principles, standards, and design needs; ability to make recommendations to higher level Geologists/Hydrogeologists on project concerns/issues. Ability to project sufficient coverage/monitoring for proposed program/project, under the guidance of a higher-level geologist. Ability to monitor, inspect, and/or manage small or less complex programs/ projects for completeness, compatibility, compliance with geologic principles, standards, and design needs.	Ability to evaluate and approve program/project specifications for completeness, compatibility, compliance with geologic principles, standards and design needs; ability to conduct inspections/audits/reviews to ensure that proper procedures are followed. Ability to conduct evaluations for more complex proposed program/project; ability to review and approve plans submitted by others; may require ability to design specific projects such as drilling plans, remedial plans, investigation plans and aquifer tests. Ability to manage programs/projects of moderate complexity for completeness, compatibility, and compliance with geologic principles, standards and design needs. Ability to identify and resolve project changes. Ability to develop, communicate and defend moderately complex programs/projects. Ability to ensure programs/projects stay within budget.	Ability to make final approval for large, complex and critical program/project specifications for completeness, compatibility, compliance with geologic principles, standards, and design needs. Ability to research alternatives and produce special details for non-standard items of work for programs/projects. May require ability to determine program/project processes and procedures. Ability to manage complex programs/projects for completeness, compatibility, compliance with geologic principles and standards; ability to resolve/approve major design changes. Ability to develop, communicate and defend complex or novel programs/projects. Ability to approve programs/projects budget.

Decision Making & Analysis

Knowledge of and ability to use effective approaches for choosing a course of action or developing appropriate solutions and/or reaching conclusions. Ability to take action consistent with available facts, constraints, and anticipated consequences. Ability to identify issues, obtain relevant information, relate and compare data from different sources, identify alternate solutions.

Contributing	Journey	Advanced
Ability to make decisions on routine geologic matters such as compliance issues or other areas requiring technical geologic expertise. Ability to refer non-routine matters to higher-level professionals. Ability to approve routine technical work plans and program/project specifications of other Geologists/Hydrogeologists to meet desired compliance with geologic principles, standards and design.	Ability to make decisions on non-routine geologic and/or program matters; ability to frequently makes final decisions. Ability to provide technical analysis in finding solutions to moderately complex work situations. May require ability to serve as a mentor to lower level employees. Ability to approve moderately complex geologic program/project specifications of other Geologists/Hydrogeologists to meet desired compliance with geologic principles, standards and design.	Ability to independently make final decisions that require specialized geologic and/or programming knowledge (decisions are typically not reviewed). Ability to collaborate with others in finding solutions to controversial or sensitive matters that establish precedents. Ability to serve as technical expert in the field of responsibility and represent the agency/university as an expert. Ability to approve complex or novel geologic program/project specifications of other geologist to meet desired compliance with geologic principles, standards, and design.

Communication

Ability to communicate, in written and oral form, detailed and technical geologic information, guidelines and standards to various audiences to ensure that they understand the information and the message, and to seek compliance. Ability to deliver presentations suited to the characteristics and needs of the audience such as negotiating solutions among different parties, or providing expert testimony.

Contributing	Journey	Advanced
Ability to express general geologic concepts and related facts in a clear, concise and organized manner. Ability to write clear, concise and organized documents, maps and reports addressing general geologic concepts and facts. Ability to present detailed technical information, guidelines and standards to seek compliance and/or approval. Ability to assist in consultation; ability to gather information in response to an inquiry.	Ability to express moderately complex geologic concepts and related facts in a clear, concise and organized manner. Ability to modify delivery, language or content to account for the characteristics and needs of the audience. Ability to write clear, concise and organized documents, maps and reports addressing moderately complex geologic concepts and facts. Ability to develop and negotiate positions in moderately complex geologic situations. Ability to provide expert testimony. Ability to independently provide consultation to clients or others related to the specific project/program. Ability to develop and/or create informational products.	Ability to express novel or complex geologic concepts and related facts in a clear, concise and organized manner. Ability to modify delivery, language or content to account for the characteristics and needs of the audience. Ability to write clear, concise and organized documents, maps, letters and memoranda addressing novel or complex geologic concepts and facts. Ability to develop and negotiate positions in complex or novel geologic situations. Ability to provide expert testimony. Ability to provide consultation as an expert involving complex work project/program. Ability to design informational products. Ability to set/define standards.

Geologic/Hydrogeologic Design Analysis

Ability to evaluate geologic characteristics of sites/plans and modify investigative methods. Identifies and plans for resources. Ability to approve evaluations of geologic investigations and program/project specifications of other Geologists/Hydrogeologists to meet desired compliance with geologic principles, standards, and/or regulatory requirements. Ability to monitor and ensure that program/project meets specifications and objectives. Ability to negotiate project work plan changes.

Contributing	Journey	Advanced
Ability to design routine geologic projects and specifications. Ability to plan methods and resources.	Ability to develop moderately complex geologic projects and specifications. Ability to plan methods and resources. May require ability to approve design changes. Ability to monitor and ensure project meets specifications and design standards.	Ability to develop complex or novel geologic projects and specifications. Ability to plan methods and resources. Ability to approve major design changes. Ability to monitor and ensure project meets specifications and design standards.

Leadership

Skill and ability in coordinating, facilitating, and participating in a collaborative approach to the completion of tasks or assignments. Ability to plan and assign work functions of employees and provides technical oversight.

Contributing	Journey	Advanced
Ability to serve as a member on a program/project team and helps develop project solutions. Ability to follow agency/university processes and approvals for projects. Ability to understand organization and user needs. Ability to convey technical information and promotes understanding of relevant issues. May require ability to serve as a team leader.	Ability to develop and manage program/project plan. Ability to provide consultation on issues and requests from clients. Ability to consult with higher-level professionals to discuss alternative technical solutions. May require ability to supervise other Geologists/Hydrogeologists.	Ability to provide program/project leadership in planning and organizing the work of others. Ability to work collaboratively to manage issues. Ability to evaluate and recommend resource needs. Ability to build client support of work group objectives. May require ability to supervise small group of Geologists/Hydrogeologists. May require ability to develop project/program strategic goals.

V. MINIMUM TRAINING & EXPERIENCE

Bachelor's degree in geology, geosciences, or related discipline. Some positions may require licensure as a Professional Geologist by the North Carolina Board for the Licensing of Geologists. All degrees must be received from appropriately accredited institutions.

Note: This is a generalized representation of positions in this class and is not intended to identify essential work functions per ADA. Examples of competencies are primarily those of the majority of positions in this class, but may not be applicable to all positions.