

Major Duties

The incumbent of this position is a hydrologist with responsibility for participating on hydrologic studies of considerable scope and complexity, or serving as a Project Chief for studies that are more conventional or limited in nature. Project activity typically involves { }.

Plans, conducts, and reports on assigned parts of hydrologic interpretive studies which typically adhere to established techniques and conventional methods of investigation.

Collects and analyzes hydrologic data relating to one or more of the three disciplinary fields (ground-water, surface-water, quality-water), determining apparent reasons for data anomalies, and correlating the wide variety of factors that affect the information presented.

Maintains an awareness and understanding of the latest state-of-the-art techniques, instrumentation, and technology applicable to the conduct of hydrologic studies and data collection/analysis activities. Conceives new approaches or modifies existing methods of collecting, analyzing, and interpreting hydrologic information.

Prepares reports of findings for assigned parts of interpretive studies summarizing the results of hydrologic investigations.

Participates with higher level project hydrologists in the development of project proposals or descriptions, which summarize critical information relating to the objective, approach, funding, and expected results of proposed investigations.

Contacts government, State, or local agencies to obtain data and information necessary for the conduct of hydrologic studies, or private citizens to obtain landholder permission for access to study sites.

Directs the work of technicians and lower grade scientists serving as members of project teams in the collection and analysis of hydrologic information collected.

Operates a motor vehicle as an incidental driver.

Factor Statements

FACTORS 1 - KNOWLEDGE REQUIRED BY THE POSITION (Level 1-6, 950 points)

- A professional knowledge of scientific hydrologic principles and concepts and a practical knowledge of conventional hydrologic data collection methods, techniques, and field/lab equipment sufficient to undertake routine hydrologic investigative projects involving water resource occurrence, use, and development.

- Knowledge sufficient to interpret the effect and impact of any change in the level or use of water resources for geographic areas under study.
- A limited knowledge of hydrology-related disciplines such as civil engineering, geology, biology, chemistry, and soil science sufficient to recognize how they relate to water management issues and to recognize when specialized advice is needed.
- Knowledge of USGS and WRD publication requirements and skill in the preparation of reports which clearly present scientific findings, interpretations, conclusions and recommendations.

FACTOR 2 - SUPERVISORY CONTROLS (Level 2-3, 275 points)

The supervisor outlines program objectives and the material, money, and personnel available for conducting project studies. The hydrologist, supervisor, and other staff scientists or project team members consult on coordination of work plans, objectives, and accomplishments, as required. The hydrologist independently plans the steps and techniques necessary to complete the assignments in accordance with established hydrologic practices and techniques. Where unusual or unconventional study conditions are encountered, or where problems require modification of established methods or procedures, the hydrologist generally discusses the action he/she plans to take beforehand with the supervisor or project chief, as appropriate. Completed work is reviewed for technical adequacy and soundness, as well as accomplishment of overall objectives for assigned project responsibilities.

FACTOR 3 - GUIDELINES (Level 3-3, 275 points)

Guidelines are usually applicable and include policy, procedural, and technical manuals and handbooks, standard professional practices, published research results and related scientific reports, annual work plans, and oral instructions from the supervisor or project chief. The guides do not always address specific sets of problems or circumstances encountered, therefore, requiring periodic departure from standardized procedures or conventional study approaches for completion of assignments. The hydrologist, in view of the considerations listed above, must select from alternative methods or procedures that appear appropriate to the existing situation, and make or recommend compromises required by technical considerations.

FACTOR 4 - COMPLEXITY (Level 4-3, 150 points)

Primary assignments relate to the collection, analysis, and interpretation of hydrologic information collected in field studies and to the preparation of reports that summarize study findings. Complicating features encountered in conducting water resources studies typically include: seasonally varied hydrologic conditions and use of water resources, difficulty in accurately assessing hydrologic anomalies, a need to vary study approaches to provide for existing environmental or field conditions, and a lack of adequate and reliable hydrologic data on which to base interpretive findings and conclusions. Problems associated with project assignments carried out by the hydrologist are typically addressed in precedent studies and are generally amenable to the application of standard techniques and practices.

FACTOR 5 - SCOPE AND EFFECT (Level 5-3, 150 points)

The purpose of the work is to investigate and analyze any of a variety of hydrologic problems and to provide or recommend alternatives for water resources planning, management, and decision-making. Results of the work can potentially affect the quantity or quality of water available for use in local areas and the socio-economic well-being of dependent communities and industries. Study procedures, techniques, or results may also serve as a basis for similar hydrologic assignments or studies carried out by other hydrologists.

FACTOR 6 - PERSONAL CONTACTS (Level 6-2, 25 points)

Contacts are primarily with technicians and other hydrologists in the immediate office and with specialists at higher levels within the organization. Some contacts are with state agency scientists and local officials as well as with landowners, the general public, and contract personnel.

FACTOR 7 - PURPOSE OF CONTACTS (Level 7-2, 50 points)

Contacts are for the purpose of planning and coordinating work efforts with co-workers; to provide and obtain advice regarding study problems; to ensure correctness of study methodology employed; for compliance with cooperative agreements; and to reconcile conflicting technical viewpoints and ideas.

FACTOR 8 - PHYSICAL DEMANDS (Level 8-2, 20 points)

The work requires frequent physical exertion while conducting field portions of project work and with inspection of ongoing operations, including walking over rough, rocky, or uneven terrain; lifting and carrying equipment and supplies; and wading in streams in all types of weather.

FACTOR 9 - WORK ENVIRONMENT (Level 9-2, 20 points)

The work involves some degree of risk when conducting on-the-ground assessment of operations as well as exposure to moderate discomfort from such extremes as heat, cold, and inclement weather.

TOTAL POINTS - 1915

GRADE CONVERSION - GS-09

GS-1300, Job Family Standard for Professional Physical Science Work, 10/97

Primary Standard

(Source Document Std PD S092)