

POSITION DESCRIPTION							
1. Position Number			2. Explanation (show any positions replaced)				
3. Reason for Submission <input type="checkbox"/> New <input type="checkbox"/> Redescription <input type="checkbox"/> Reestablishment <input type="checkbox"/> Standardized PD <input type="checkbox"/> Other							
4. Service <input type="checkbox"/> HQ <input type="checkbox"/> Field	5. Subject to Identical Addition (IA) Action <input type="checkbox"/> Yes (multiple use) <input type="checkbox"/> No (single incumbent)						
6. Position Specifications Subject to Random Drug Testing <input type="checkbox"/> Yes <input type="checkbox"/> No Subject to Medical Standards/Surveillance <input type="checkbox"/> Yes <input type="checkbox"/> No Telework Suitable <input type="checkbox"/> Yes <input type="checkbox"/> No Fire Position <input type="checkbox"/> Yes <input type="checkbox"/> No Law Enforcement Position <input type="checkbox"/> Yes <input type="checkbox"/> No			7. Financial Statement Required <input type="checkbox"/> Executive Personnel-OGE-278 <input type="checkbox"/> Employment and Financial Interest-OGE-450 <input type="checkbox"/> None required		10. Position Sensitivity and Risk Designation <u>Non-Sensitive</u> <input type="checkbox"/> Non-Sensitive: Low-Risk <u>Public Trust</u> <input type="checkbox"/> Non-Sensitive: Moderate-Risk <input type="checkbox"/> Non-Sensitive: High-Risk <u>National Security</u> <input type="checkbox"/> Noncritical-Sensitive: Moderate-Risk <input type="checkbox"/> Noncritical-Sensitive: High-Risk <input type="checkbox"/> Critical-Sensitive: High-Risk <input type="checkbox"/> Special Sensitive: High-Risk		
		8. Miscellaneous Functional Code: -- BUS: --	9. Full Performance Level Pay Plan: Grade:				
11. Position is <input type="checkbox"/> 2-Supervisory <input type="checkbox"/> 4-Supervisor (CSRA) <input type="checkbox"/> 5-Management Official <input type="checkbox"/> 6-Leader: Type I <input type="checkbox"/> 7-Leader: Type II <input type="checkbox"/> 8-Non-Supervisory		12. Position Status <input type="checkbox"/> Competitive <input type="checkbox"/> SES <input type="checkbox"/> Excepted (specify in remarks) <input type="checkbox"/> SL/ST		13. Duty Station			
		14. Employing Office Location		15. Fair Labor Standards Act <input type="checkbox"/> Exempt <input type="checkbox"/> Nonexempt			
		16. Cybersecurity Code #1:                      #2: --                      #3: --		17. Competitive Area Code: Competitive Level Code:			
18. Classified/Graded by	Official Title of Position		Pay Plan	Occupational Code	Grade	Initial	Date
a. Department, Bureau, or Office							
b. Second Level Review			--		--		
19. Organizational Title of Position (if different from, or in addition to, official title)			20. Name of Employee (if vacant, specify)				
21. Department, Agency, or Establishment U.S. Department of the Interior			c. Third Subdivision				
a. Bureau/First Subdivision			d. Fourth Subdivision				
b. Second Subdivision			e. Fifth Subdivision				
22. Supervisory Certification. I certify that this is an accurate statement of the major duties and responsibilities of this position and its organizational relationships and that the position is necessary to carry out Government functions for which I am responsible. This certification is made with the knowledge that this information is to be used for statutory purposes relating to, but not limited to: FLSA determinations; position sensitivity and requirements; and appointment/payment of public funds. False or misleading statements may constitute violations of such statutes or their implementing regulations.							
a. Typed Name and Title of Immediate Supervisor			b. Typed Name and Title of Higher-Level Supervisor or Manager (optional)				
Signature		Date	Signature		Date		
23. Classification/Job Grading Certification. I certify that this position has been classified/graded as required by Title 5, U.S. Code, in conformance with standards published by the U.S. Office of Personnel Management or, if no published standards apply directly, consistently with the most applicable published standards.			24. Position Classification Standards Used in Classifying/Grading Position				
Typed Name and Title of Official Taking Action							
Signature		Date					
25. Position Review	Initials	Date	Initials	Date			
a. Supervisor				Information for Employees. The standards, and information on their application, are available in the personnel office. The classification of the position may be reviewed and corrected by the agency or the U.S. Office of Personnel Management. Information on classification/job grading appeals, and complaints on exemption from FLSA, is available from the personnel office or the U.S. Office of Personnel Management.			
b. Classifier							
26. Remarks							

1316 Hydrologic Technician GS-10  
PD #SPD0010

INTRODUCTION

This position performs technical work in hydrologic data collect activities in support of professionals and/or to support data collection and technical requirements of the office and its cooperators. Work requires independent application of subject matter experience and exercise of judgment within the context of a full range of advanced technical operations.

A standard Position Description (PD) covers similar positions in multiple locations of an organization. Use of a Standard Position Description does not diminish management's responsibilities to adhere to position management principles and DOI/USGS policies.

MAJOR DUTIES (include percentages of time equal to 100%)

Surface Water (Field): Makes stream discharge measurements at all stages, at times under extremely adverse conditions. Applies seasoned judgment to compensate for field conditions and subtle problems. Determines appropriate methods for measurements, adapting equipment and techniques as needed to accommodate unusual conditions. Observes and makes detailed notes of various hydraulic or environmental conditions which may have a bearing on discharge. Computes and checks the full range of surface-water records from field data. Plots discharge measurements, develops stage-discharge, velocity index curves and/or other complex ratings such as those used at culverts, gates, pumps, etc. and estimates extensive periods of missing record and non-routine flow of tidal, backwater, or ice periods. \_\_\_\_\_%

Surface Water (Analysis) Documents the procedure used to compute records. Performs and reviews statistical and/or technical analyses of a wide variety of hydrologic data collected in the field. Prepares material for publication, including maps, tables and other illustrative material. Prepares plots, drafts, or sketches from surveying notes. Performs general office review and/or quality-assurance review for complex surface-water records checking methods and accuracy of computation, plotting and analyzing differences in hydrographs and making necessary changes to correct inconsistencies in data. Assures accuracy, uniformity, and compliance with technical standards. \_\_\_\_\_%

Ground Water (Field): Performs a full range of water-level and discharge measurements from wells and springs. Observes and makes detailed notes of various hydraulic or environmental conditions. Plans and conducts a variety of aquifer tests. Computes, checks, and reviews a wide variety of ground-water level records. Tasks involve analyzing possible courses of action, techniques and procedures. Performs and reviews statistical and/or technical analyses of hydrologic data collected in the field. Manages the files of geophysical logs, makes additions and provides retrieval and indexing of logs. \_\_\_\_\_%

Ground Water (Analysis): Conducts quality-assurance review of a wide variety of ground-water records to assure accuracy, uniformity, and compliance with technical standards. Verifies the accuracy of data summaries completed by others. Documents procedure used to compute records. Instructs others in the proper methods of record computation. Checks and reviews record computations and insures timely processing and proper storage of data. Operates a variety of well logging instrumentation and records detailed findings. Computes and analyzes data for interpretation and review. \_\_\_\_\_%

Water Quality: Independently performs full range of field measurements such as water temperature, specific conductance, pH, dissolved oxygen and alkalinity. Collects, processes, and prepares for lab analysis, the full range of samples using the most appropriate technique and protocol depending upon complex field conditions. Utilizes multiple techniques to compute, check and review a wide variety of water-quality monitoring records. Performs and reviews statistical and/or technical analysis of the hydrologic data collected. Prepares summaries and data reports of results of field activities, including the preparation of materials for publications, such as tables of data, maps, and other illustrative material. Determines the accuracy of results obtained. Assembles, evaluates, and prepares field and laboratory data for tabulation, analysis and subsequent

publication. Documents procedure used to compute records. Applying seasoned judgment, conducts quality-assurance review of water-quality records and data summaries to ensure accuracy, uniformity, and compliance with technical standards. Instructs technical personnel regarding field and laboratory methods and procedures. \_\_\_\_\_%

Sediment: Collects and processes a wide variety of complex suspended sediment, bedload, and bed material samples. Computes, checks and reviews a wide variety of measurements for analyses and computation. Utilizes transport curves and other methods to estimate when sample data are lacking. Designs monitoring networks to collect data; selects sampling equipment and techniques; and provides for quality assurance and control, entry into appropriate data bases, and the publication of all related data. Configures, installs, maintains, services, calibrates, and makes minor adjustments to a full range of sensing, recording, and communications equipment and instruments. Performs and reviews statistical and/or technical analysis of the hydrologic data collected. Enters sediment data into the water-quality and/or daily-values file using automated systems. Assembles and prepares data for tabulation and subsequent publication. Writes analyses describing the procedure used to compute records. Uses appropriate sediment computation programs to process a wide variety of sediment load data. Applies quality-assurance techniques and makes corrections based on review of the sediment data. \_\_\_\_\_%

Instrumentation: Configures, installs, maintains and services a wide variety of sensing, recording and communications equipment and instrumentation. Troubleshoots a wide range of hydrologic instrumentation in the office. Maintains a detailed inventory and repair log on hydrologic instrumentation. Calibrates meters and analytical equipment. Determines appropriate equipment for complex field or laboratory activities depending upon data collection needs and field conditions. Leads a team in the construction and removal of a variety of gages and supporting structures. Develops plans for new gaging stations, artificial controls, and other supporting structures; and for the rehabilitation of existing stations. Identifies and procures materials for construction and repair jobs. Schedules and/or obtains appropriate vehicles, equipment, and supplies. Performs safety inspection of equipment and work area. \_\_\_\_\_%

Datums/Altitude/Elevation: Makes complex determinations of vertical and horizontal datums using appropriate geo-stationary reference techniques and documents the procedure used to compute records adapting conventional procedures when needed. Performs surveys of indirect measurements. Performs technical investigations of a wide variety of hydrologic data collected in the field. Reviews collected data and prepares a wide variety of complex material for publication, including maps, tables and other illustrative material. Prepares plots, drafts, or sketches from surveying notes, filling in gaps in data based on seasoned judgment. Performs general office review and/or quality-assurance review of in-house and/or contractor performed complex surface-water records checking methods and accuracy of computation, plotting and investigating differences in hydrographs and making necessary changes to correct for inconsistencies in data. \_\_\_\_\_%

Data Management: Enters, retrieves, edits, and analyzes hydrologic data using one or more of several databases, spreadsheets, and graphics software programs. Monitors water-quality sampling frequencies for timely data collection and reports discrepancies. Provides technical assistance for office personnel concerning the application and use of hydrologic software. Gathers, tabulates, and enters hydrologic data from other agencies into the appropriate databases, some of which may be complex. Maintains log of lost records and contributing factors, and briefs project chief on any data issues that require attention. Compiles, retrieves, assembles, and formats hydrologic data for routine and customized recurring and one-time reports. \_\_\_\_\_%

Operates a Government vehicle as an incidental driver.

Operates and/or maintains motorized watercraft.

#### Factor Statements

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

Extensive practical knowledge of hydrologic principles and programs. Ability to sequentially plan the full range of standard and non-routine hydrologic field activities and office procedures in order to collect, compute, and analyze hydrologic data. Applies seasoned judgment and experience in order to resolve hydrologic problems with multiple intangible and subtle variables, to collect data during unusual or extreme events, and to modify procedures and methods to obtain and interpret accurate results.

Data compilation and computations require the ability to integrate, customize and make non-routine interpretations of data in order to prepare datum corrections, plot and analyze hydrographs, transfer data to maps and reconstruct long periods of inconsistent or missing records. Knowledge of and ability to follow field and lab safety procedures.

Extensive knowledge of computer hardware and software programs in order to perform a wide range of activities related to the maintenance of hydrologic data, instrumentation and equipment such as the storage, manipulation and retrieval of data for complex reports or hydrologic inquiries, database administration, equipment program changes, or web programming and maintenance to display hydrologic information. Extensive practical knowledge of electronic technology, equipment mechanics and instrumentation in order to install, operate, maintain and calibrate a variety of electronic equipment and a wide range of hydrologic data-measuring instruments.

Skill and ingenuity to modify techniques and conventional applications in order to accomplish assignment objectives under, at times, difficult field conditions or with limited resources.

#### FACTOR 2 - SUPERVISORY CONTROLS (Level 2-4, 450 points)

The technician works under general direction of the supervisor, who outlines long-term goals, indicating desired objectives and overall deadlines. The technician works independently to plan and implement investigations, field studies, etc., determining methods, techniques, and resources to complete assignments, guiding other technicians and/or contractors in completing the work.

Keeps the supervisor informed of complex situations encountered, resolving all but the most complex work problems without assistance. Completed work is reviewed in terms of feasibility, compliance with established standards and policies, and adequacy of technical results achieved.

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

Guidelines include a series of manuals on techniques of water resources investigations (TWRI), USGS and DOI procedural directives, oral instructions, standard accepted recording forms, protocols and previously established methods. The employee locates and selects the appropriate guideline or procedure; however, the guidelines may not be completely applicable to the assignment or contain gaps in specificity.

The employee independently resolves technical problems by deviating from or adapting guides. The technician formulates and recommends revised approaches and procedures. Situations involving significant deviation from established guidelines are generally discussed with the supervisor for additional guidance.

#### FACTOR 4 – COMPLEXITY (Level 4-4, 225 points)

Work consists of collecting water resource data by computing and validating instrument readings, reconciling anomalies of various hydrologic factors, selecting, calibrating, and adjusting instrumentation, and monitoring a full range of site conditions to ensure the reliability of data collected. Technician utilizes methods of hydrologic examination to develop mathematical models that address various field and laboratory conditions. A high level of skill and knowledge is required to develop appropriate procedures to execute field studies and laboratory investigations. Assignments require continuing use of ingenuity and originality to develop work plans, recognize incomplete or conflicting data, interpret data, make compensating judgments, and refine techniques, methods, and procedures.

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

The purpose of the work is to perform conventional assignments involving the collection, computation and compilation of hydrologic data that affect the understanding of the hydrologic environment and to disseminate hydrologic data through reports and other mediums. Work efforts have an impact on the accuracy and

adequacy of field, office and/or laboratory processes and methods used, the data and resulting reports, and/or data-resource management decisions.

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

Primary contacts are with personnel within the Center or Office. On occasion, contacts may be made with personnel from higher-level organizations, State or local governments, or other Federal agencies. Contacts with the general public occur during the performance of routine field or office activities.

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

Contacts are chiefly to clarify or exchange information, provide advice, plan or coordinate work activities, resolve technical problems, and provide technical assistance or training.

**FACTOR 8 - PHYSICAL DEMANDS**

(Level 8-1, 5 points) Work of the position takes place mostly in an office or laboratory setting. No special physical effort is required.

(Level 8-2, 20 points) The position requires moderate periods of standing and sitting while in the office. While in the field, considerable walking, lifting, bending, climbing and stream wading is necessary to collect data.

(Level 8-3, 50 points) The work regularly requires considerable dexterity, agility, and strenuous physical exertion such as: climbing and/or working from tall ladders and scaffolding; work in areas where footing is treacherous such as slippery or icy river banks, steep rocky terrain, or fast-moving water; lifting heavy objects weighing 23 kilograms (50 pounds) or more, or crouching or crawling in restricted areas.

**FACTOR 9 - WORK ENVIRONMENT**

(Level 9-1, 5 points) The work takes place in office and laboratory settings with adequate heat, light, and ventilation.

(Level 9-2, 20 points) Office conditions do not require special safety precautions; field conditions may include extreme heat or cold, rain or snow, and hazardous conditions such as ice or flooding, or exposure to irritant or toxic chemicals. Work may require the use of special clothing or gear such as masks, coats, boots, goggles, respirators, or life jackets.

**TOTAL POINTS: 2135 - 2195**

**GRADE CONVERSION: GS-10**

**CLASSIFICATION STANDARD(S) USED**

Job Family Position Classification Standard for Technical Work in the Physical Sciences Group, GS-1300, August 2002

Positions with a field work component require a pre-employment medical exam to ensure the technician can perform the essential duties of the position, with or without accommodation. (Replaces abolished SPD)

<b>Series Determination</b>	The 1316 series covers one-grade interval technical positions that perform nonprofessional work that requires practical knowledge of the methods, procedures, and instrumentation used in hydrologic studies. Hydrologic technicians gather information on the quantity, quality, availability, movement, and distribution of ground water and surface water. They also evaluate water samples and data and carry out related duties that support professional work in hydrology. Work in this series does not require full professional knowledge of hydrology	
<b>Evaluation Summary</b>		<b>Points</b>
<b>Knowledge Required by the Position</b>	Position requires knowledge and skill in applying the full range of hydrologic collection and measurement techniques to, for example, select gauging sites, recommend well establishment or abandonment, or modify techniques and conventional applications accomplish assignment objectives under, at times, difficult field conditions or with limited resources. Like work at 1-6 in the standard, the employee compiles and analyzes data and results for inclusion in briefings, study papers, or project reports.	<b>950</b>
<b>Supervisory Controls</b>	The supervisor makes assignments by outlining overall project objectives and resources. Like 2-4 in the standard, the employee carries out assignments independently, resolving most conflicts or problems that arise. The employee informs the supervisor or project chief of any potential controversies. Work is reviewed in terms of meeting objective and overall approach.	<b>450</b>
<b>Guidelines</b>	The employee uses standard instructions, USGS policies, DOI directives, and equipment catalogues and instructions. Like work at 3-3, the employee uses judgement to modify approaches to accommodate varying conditions or recommend revised procedures.	<b>275</b>
<b>Complexity</b>	Work involves applying varied processes and procedures to carry out a variety of data collection and analysis activities. Like work at 4-4, the employee must adapt methods, equipment and approaches based on varying conditions. The employee uses	<b>225</b>
<b>Scope and Effect</b>	Work involves using established criteria and methods to collect, analyze, and interpret data. Like work at 5-3, work affects the accuracy of reports and the quality of studies performed by hydrologists.	<b>150</b>
<b>Personal Contacts</b>	Contacts are USGS employees in the Center or Office, with the general public in field work assignments, and with representative of other agencies and organizations. 6-2	<b>75</b>
<b>Purpose of Contacts</b>	Contacts are to consult on or resolve technical problems and coordinate work activities. 7-B	
<b>Physical Demands</b>	Varies – see check boxes on PD	

<b>Work Environment</b>	Varies – see check boxes on PD	
<b>Total Points</b>	2135-2195	
<b>Points Range</b>	2105-2350	
<b>Final Grade</b>		<b>10</b>
<b>Official Title</b>	Hydrologic Technician	
<b>Standard(s) used to evaluate the position</b>	Job Family Position Classification Standard for Technical Work in the Physical Sciences Group, GS-1300, August 2002; Aid and Technical Work in the Biological Sciences Series, GS-0400 TS-111 December 1991	
<b>Comments:</b>		

*Tamara Lamb-Ghenee, 4/27/20 revised 12/4/20*