POSITION DESCRIPTION

1. Position Number SPD0049

2. Explanation (show any positions replaced)

3. Reason for Submission
☐ New ☐ Redescription ☐ Reestablishment ☒ Standardized PD ☐ Other

4. Service
☐ HQ ☐ Field

5. Subject to Identical Addition (IA) Action
☒ Yes (multiple use) ☐ No (single incumbent)

6. Position Specifications
Subject to Random Drug Testing ☐ Yes ☒ No
Subject to Medical Standards/Surveillance ☒ Yes ☐ No
Telework Suitable ☐ Yes ☐ No
Fire Position ☐ Yes ☒ No
Law Enforcement Position ☐ Yes ☒ No

7. Financial Statement Required
☐ Executive Personnel-OGE-278
☐ Employment and Financial Interest-OGE-450
☒ None required

8. Miscellaneous
Functional Code: --
BUS: 7777

9. Full Performance Level
Pay Plan: GS
Grade: --

10. Position Sensitivity and Risk Designation
Non-Sensitive
☒ Non-Sensitive: Low-Risk
Public Trust
☐ Non-Sensitive: Moderate-Risk
☐ Non-Sensitive: High-Risk
National Security
☐ Noncritical-Sensitive: Moderate-Risk
☐ Noncritical-Sensitive: High-Risk
☐ Critical-Sensitive: High-Risk
☐ Special Sensitive: High-Risk

11. Position is
☐ 2-Supervisory
☐ 4-Supervisor (CSRA)
☐ 5-Management Official
☐ 6-Leader: Type I
☐ 7-Leader: Type II
☒ 8-Non-Supervisory
☐ 14.

12. Position Status
☒ Competitive ☐ SES
☐ Excepted (specify in remarks) ☐ SL/ST

13. Duty Station

Employing Office Location

15. Fair Labor Standards Act
☐ Exempt ☒ Nonexempt

16. Cybersecurity Code
#1: 000 #2: 000 #3: 000

17. Competitive Area Code: TBD
Competitive Level Code: TBD

18. Classified/Graded by	Official Title of Position	Pay Plan	Occupational Code	Grade	Initial	Date
a. Department, Bureau, or Office	Hydrologic Technician	GS	1316	10	CS	7/11/23
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

a. Bureau/First Subdivision
U.S. Geological Survey

b. Second Subdivision

c. Third Subdivision

d. Fourth 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

Signature **Date**

b. Typed Name and Title of Higher-Level Supervisor or Manager *(optional)*

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.*

Typed Name and Title of Official Taking Action

Signature LORETTA POPE Digitally signed by LORETTA POPE Date: 2023.10.11 11:28:10 -04'00' **Date**

24. Position Classification Standards Used in Classifying/Grading Position
Job Family Position Classification Standard for Technical
Work in the Physical Sciences Group, GS-1300, August
2002

25. Position Review	Initials	Date	Initials	Date
a. Supervisor				
b. Classifier				

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.

26. Remarks

Hydrologic Technician, GS-1316-10

INTRODUCTION

Position serves as a senior hydrologic technician responsible for data collection activities in support of professional hydrologists or in support of technical data collection 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. Us of a Standard Position Description does not diminish management's responsibilities to adhere to position management principles and DOI/USGS policies.

MAJOR DUTIES

Data Validation, Analysis and Publication 30%

- Ensures proper documentation and data storage of all field data and supporting meta-data. Measures, documents, checks, reviews, and approves hydrologic field data measurements.

- Conducts final quality-assurance audits and review of office hydrologic records for field and laboratory data to ensure accuracy, uniformity, and compliance with technical standards.9

- Calculates, validates, and aids in the development of center approved methods to estimate extensive periods of missing record and non-routine flow (e.g. equipment error, tidal, backwater, or ice periods).

- Ensures automated and manually collected hydrologic data along with associated analyzed, approved, audited, and supplied records are published using standard USGS approved media and maintain USGS/center standards for quality and timeliness.

- Performs audits on all records, maintaining established USGS/center records analysis, approval, and auditing standards and timelines.

- Develops stage-discharge, velocity index curves and/or other complex ratings.

- Prepares summaries and data reports for the publication of field activities results, including the preparation of materials, such as tables of data, maps,
and other illustrative material.

Data Management 25%

- Ensures data and related documents for a wide variety of local measurements and hydrologic records are properly evaluated and stored in appropriate archives, databases, spreadsheets, and graphics software following established USGS policy.

- Compiles, tabulates, enters, reviews, and finalizes hydrologic data from other Federal,

State, and local agencies, cooperators, Tribes, and the private sector, into the appropriate databases,

- Maintains, reviews, and compiles summaries for local logs of lost records and contributing factors.

Provides technical assistance for personnel concerning the application and use of hydrologic software.

Focused Areas of Leadership 20%

- Recognized as a local resource in one of many specific technical areas including maintaining documentation for their area of specific knowledge (i.e., hydroacoustic, local database manager, records, indirect measurements, electronics, etc.)

- Interacts with the public, cooperators, and the media to explain the general mission of the USGS, field data collection activities.

- Provides training for local, lower graded personnel in data-collection methods, recording, analyzing, finalizing hydrologic records, and policies and procedures related to the subject matter expert designation.

- Assists with the development of new USGS/center techniques and methods (e.g. computer programs, instrumentation, indirect measurement methods, water quality methods, etc.)

- Develops and/or adapts safety protocols in accordance with USGS and DOI policies. Trains others in safety procedures for field data collection, reports deficiencies to appropriate supervisory personnel, and actively collaborates to mitigate safety-related issues.

- Assists in the creation and/or maintenance of tip sheets and Standard Operating Procedures for employee's area of expertise (i.e., instrumentation, indirect measurements, records, techniques, etc.).

- Leads teams in the office to determine locations, and perform, high- accuracy surveys for cross sections and determine vertical and horizontal datums using appropriate survey and geo-stationary reference techniques.

- Performs problem solving for the office in their area of expertise with minimal guidance and/or input from others.

- Interacts with the public, cooperators, and the media to explain the general mission of the USGS and field data collection activities.

Data Collection 15%

- Applies broad knowledge to collect high- quality data in a variety of difficult field conditions and unforeseen problems.

- Assists in the establishment of monitoring and sampling frequencies to ensure timely and

appropriate data collection.

- Determines locations and performs moderately complicated spatial surveys using a variety of surveying techniques and equipment.

- Performs the most effective data collection method to collect representative hydrologic data following established USGS/center/project policies, techniques, and protocols and assists/recommends the development of new policies, techniques, and protocols when needed.
- Leads and assists others in performing hydrologic field measurements in all conditions, at times under adverse conditions, applies adept judgment to compensate for changing field conditions and difficult situations, uses the most effective methods, techniques, and protocols for the collection of representative data with minimal supervision.

- Observes and makes detailed notes of various hydraulic or environmental conditions which will have an impact on the quality of the collected hydrologic data.

- Adeptly applies pre-approved modifications to existing, or newly developed, data collection techniques when standard methods cannot be applied.

- Follows field and workplace safety protocols.

Instrumentation/Field Infrastructure 10%

- Expertly performs and oversees the calibration of meters and analytical equipment.

- Configures, installs, maintains, and services a wide variety of sensing, recording and communications equipment and instrumentation.

- Determines appropriate equipment for complex field or laboratory ctivities depending upon data collection needs and field conditions.

- Develops plans for new gaging stations, artificial controls, and other supportive infrastructure, and for the rehabilitation of existing stations.

- Expertly installs, upgrades, maintains, and instructs on the correct data collection techniques using field infrastructure.

- Leads a team in the construction and removal of a variety of gages and supporting infrastructure.

- Maintains and monitors detailed inventory and repair logs for hydrologic instrumentation.

- Performs safety inspection of equipment and work area.

- Schedules and/or obtains appropriate vehicles, equipment, and supplies.

- Troubleshoots a wide range of hydrologic instrumentation in the office.

Performs other duties as assigned.

FES FACTORS

FACTOR 1 - Knowledge Required by the Position

Knowledge of technical methods, principles, and practices of hydrology programs. Ability to sequentially plan standard and non-routine hydrologic field activities and office procedures to collect, compute, and analyze hydrologic data. Applies seasoned judgment and experience 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, to prepare datum corrections, plot and analyze hydrographs, transfer data to maps and reconstruct long periods of inconsistent or missing records. Extensive knowledge of and ability to follow field and lab safety procedures.

Extensive knowledge of computer hardware and software programs 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 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 to accomplish assignment objectives under, at times, difficult field conditions or with limited resources.

FACTOR 2 - Supervisory Controls

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

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 and documenting any deviations according to applicable USGS policy. 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

Work consists of collecting water resource data by computing and validating instrument readings, reconciling anomalies of various hydrologic factors, selecting, calibrating, and adjusting data, 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.

An elevated level of skill and knowledge is required to develop appropriate procedures to execute field studies and laboratory investigations. Assignments require knowledge to recognize incomplete or conflicting data, make compensating judgments, and propose refinements to techniques, methods, and procedures.

FACTOR 5 - Scope and Effect

The purpose of the work is to perform conventional to complex 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 / Factor 7 - Purpose of Contacts

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

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

FACTOR 8 - Physical Demands

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 riverbanks, 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

Office conditions do not require special safety precautions; field conditions may include extreme heat or cold, rain or snow, possible aggressive wildlife encounters, 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.

OTHER SIGNIFICANT
FACTS

Choose the selective factors and/or conditions of employment that apply to this position. If you do not see a choice listed for your particular position, choose "other" and write in the description.

SELECTIVE FACTORS- At the time of appointment, minimum qualification requirements, more specific than the published OPM qualification requirements, that defines knowledge, skills, abilities, or other worker characteristics basic to and essential for satisfactory performance in the position.

- ❒ Dive Safety Certification if required at time of appointment
- ❒ Commercial Driver's License if required at time of appointment
- ❒ Other: _____

- ❒ CONDITIONS OF EMPLOYMENT - Personnel policies, practices, and matters, whether established by rule, regulations, or otherwise, affecting working conditions.
- ❒ Pre-employment and random drug testing
- ❒ Pre-employment medical examination
- ❒ Periodic surveillance medical examination
- ❒ Obtain and maintain _____ security clearance
- ❒ Valid state driver's license and clean driving record
- ❒ Frequency of travel (specify days per month):_____
- ❒ Other licenses or certification (specify the license/certification):_____
- ❒ Other:_____

Series Determination	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	
Evaluation Summary		**Points**
Knowledge Required by the Position	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.	**950**
Supervisory Controls	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.	**450**
Guidelines	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.	**275**
Complexity	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	**225**

Scope and Effect	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.	**150**
Personal Contacts	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	**75**
Purpose of Contacts	Contacts are to consult on or resolve technical problems and coordinate work activities. 7-B	
Physical Demands	Work requires strenuous physical exertion.	50
Work Environment	Field conditions include extreme weather and safety precautions.	20
Total Points	2195	
Points Range	2105-2350	
Final Grade	10	
Official Title	Hydrologic Technician	
Standard(s) used to evaluate the position	Job Family Position Classification Standard for Technical Work in the Physical Sciences Group, GS-1300, August 2002	