

1316,Hydrologic Technician,GS-06

Based on PD Tracking Number 0002016

PD Tracking Number 0005098

#### Major Duties

GS-1316-06 (Standard PD)

#### Major Duties

**Surface Water:** Performs routine measurements of stage and discharge applying various methods and using different equipment depending upon the field conditions. Observes and notes hydraulic or environmental conditions which may have a bearing on the discharge. Computes and checks surface-water records from field data where hydrologic conditions are fairly stable. Reviews the plotting of discharge measurements and estimates short periods of missing records. Develops simple stage-discharge and/or velocity index curves and ratings. Reviews gage-height data and discharge measurements to check methods and accuracy of computation. Prepares plots, drafts, or sketches of surveying field notes. Checks, verifies, and conducts quality control review of data and data summaries for publication. Documents procedures and methods used to compute records. Prepares maps, tables, and other illustrative material for publication.

**Ground Water:** Performs water-level and discharge measurements from wells and springs noting various field conditions. Computes and checks ground-water records from field notes where hydrologic conditions are fairly stable. Reviews plots of water-level measurements. Performs routine statistical and technical analyses of data. Checks and verifies ground-water records and data summaries prior to publication. Documents procedures used to compute records. Prepares material for publication including maps, tables, and other illustrative material. Prepares plots, drafts, or sketches from surveying notes. Assists in aquifer tests by making ground-water measurements. Collects well characteristic and location information.

**Water Quality:** Considering field conditions, selects from a variety of well-established procedures to perform routine field water-quality measurements such as water temperature, specific conductance, pH, dissolved oxygen, and alkalinity. Observes and notes various hydraulic or environmental conditions. Collects and processes samples. Performs routine field or lab analyses of sample constituents. Prepares samples for lab analyses. Computes and checks routine water-quality records using basic techniques. Prepares summaries and basic data reports of results of field activities, including the preparation of materials for publication, such as tables of data, map, and other illustrative material. Documents procedures used to compute records. Assembles, evaluates and prepares field and laboratory data for analysis.

**Sediment:** Collects, processes, computes, and checks routine sediment samples using appropriate techniques, equipment, and protocols. Checks measurements for analyses and computation. Enters sediment data into the water-quality and/or daily-values file using automated systems. Assembles and prepares data for tabulation and subsequent publication. Documents procedures used to compute records.

Instrumentation: Installs, maintains, services and troubleshoots a variety of sensing, recording and communications equipment and instrumentation. Prepares repair logs on hydrologic instrumentation. Calibrates meters and analytical equipment using appropriate techniques and protocols.

Infrastructure: Participates in the construction of a variety of gages and supporting structures under general supervision. Assignments may include identification and procurement of materials necessary for site repairs and/or applying established procedures, protocols, and standards to assist in the construction, development, and abandonment of wells. Performs routine safety inspections of equipment and work areas.

Datums/Altitude/Elevation: Under general supervision, establishes straightforward vertical and horizontal datums applying appropriate surveying and geo-stationary reference techniques. Flags high-water marks and documents their reliability. Measures and records routine crest-stage gage high-water marks.

Operates a government motor vehicle as an incidental driver.

## FACTOR STATEMENTS

### FACTOR 1 - KNOWLEDGE REQUIRED BY THE POSITION (Level 1-4, 550 points)

Practical knowledge of hydrologic principles, practices, procedures and techniques in addition to the ability to sequentially apply a wide range of standard hydrologic data collection and office computation procedures in order to collect and/or compute and compile hydrologic data. Ability to perform standard data compilation and computation activities that include, but are not limited to, applying datum corrections, plotting and analyzing hydrographs, transferring data to maps and reconstructing short periods of inconsistent or missing records. Knowledge of and ability to follow field and lab safety procedures. Knowledge of one or more computer systems and automated databases in order to enter, transfer, retrieve and manipulate hydrologic data; to operate computerized equipment; to generate a variety of standard reports; and/or respond to routine hydrologic data requests. Practical knowledge of electronic technology and equipment mechanics in order to operate, maintain, install, and service a variety of scientific instruments and equipment.

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

Works under the general direction of the supervisor or a higher graded employee. Assignments involving prescribed or standard methods are given in terms of objectives to be achieved. The employee uses initiative to independently accomplish such assignments with the supervisor providing assistance in solving unfamiliar technical problems. Methods applied by the technician in performing tasks are not normally reviewed. Completed work is reviewed for accuracy and technical adequacy.

### FACTOR 3 - GUIDELINES (Level 3-2, 125 points)

Guidelines include a series of manuals on techniques of water resources investigations (TWRI), WRD Data Reports Preparation Guide, agency procedural directives, oral instructions, and previously established methods. These guidelines are typically detailed and are directly applicable to the assigned work. The employee can easily locate and select the appropriate guideline or procedure for each assigned task. Situations involving deviations from established methods are discussed with the supervisor for additional guidance.

#### FACTOR 4 - COMPLEXITY (Level 4-2, 75 points)

Assignments consist of performing a variety of procedural tasks or a couple of more complex tasks related to regular and recurring data collection, compilation, and computation work. The technician must recognize differences in conditions in order to select and execute the appropriate sequence of established data collection and computation procedures; to operate instruments and servicing equipment; and to recognize anomalous situations that may adversely impact or affect measurements or data collected. Assignments require accuracy and attention to detail.

#### FACTOR 5 - SCOPE AND EFFECT (Level 5-2, 75 points)

The purpose of the work is to perform data collection, compilation and computation activities in support of higher level technicians or hydrologists. Work efforts affect the accuracy, reliability, or acceptability of the data.

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

Primary contacts are with personnel within the District. 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 7-1, 20 points)

Contacts are to obtain advice or direction, and to clarify or exchange information.

#### FACTOR 8 - PHYSICAL DEMANDS

(Level 8-2, 20 points)

{ } The work requires some physical exertion such as:

long periods of standing;

walking over rough, uneven, or rocky surfaces;

recurring bending, crouching, stooping, stretching, reaching, or similar activity; or

recurring lifting of moderately heavy items weighing less than 23 kilograms (under 50 pounds) such as lifting and carrying stream gauging weights, data collection and monitoring devices, or sample trays.

Or

(Level 8-3, 50 points)

{ } The work regularly requires considerable dexterity, agility, and strenuous physical exertion such as that needed to:

climb, or work from, tall ladders or scaffolding;

work in areas where footing is treacherous such as on slippery river banks, in steep or rocky terrain, and in fast-moving water;

lift heavy objects weighing 23 kilograms (over 50 pounds) or more;

crouch or crawl in constricted areas; and

defend oneself or others against physical attack.

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

The work regularly involves moderate risks or discomforts associated with visiting field sites with limited access, under adverse weather or flooding conditions, 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: 1185

GRADE CONVERSION: GS-6

GS-1300T, JFS for Technical Work in the Physical Sciences Group 08/02

Source Document STD PD #2065

Rev 8/2004