

POSITION DESCRIPTION (Please Read Instructions on the Back)

1. Agency Position No.

2. Reason for Submission

☐ Redescription
☐ Reestablishment☐ New
☒ Other

3. Service

☐ Hdqtrs ☒ Field

4. Employing Office Location

5. Duty Station

6. OPM Certification No.

Explanation (Show any positions replaced)

NPS Standard Position Description
Resources Careers

7. Fair Labor Standards Act

☐ Exempt ☒ Nonexempt

8. Financial Statements Required

☐ Executive Personnel
Financial Disclosure☐ Employment and
Financial Interest

9. Subject to IA Action

☒ Yes ☐ No

10. Position Status

☒ Competitive
☐ Excepted (Specify in Remarks)
☐ SES (Gen.) ☐ SES (CR)

11. Position Is

☐ Supervisory
☐ Managerial
☒ Neither

12. Sensitivity

☒ 1--Non-Sensitive
☐ 2--Noncritical Sensitive
☐ 3--Critical
☐ 4--Special Sensitive

13. Competitive Level Code

14. Agency Use

*R70

15. Classified/Graded by

Official Title of Position

Pay Plan

Occupational Code

Grade

Initials

Date

a. Office of Personnel
Managementb. Department,
Agency or
Establishmentc. Second Level
Review

Cartographic Technician

GS

1371

07

d. First Level
Reviewe. Recommended by
Supervisor or
Initiating Office

16. Organizational Title of Position (if different from official title)

Cartographic Technician

17. Name of Employee (if vacant, specify)

18. Department, Agency, or Establishment

Department of the Interior

c. Third Subdivision

a. First Subdivision

National Park Service

d. Fourth Subdivision

b. Second Subdivision

e. Fifth Subdivision

Signature of Employee (optional)

19. Employee Review-This is an accurate description of the major
duties and responsibilities of my position.20. 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 thatthis information is to be used for statutory purposes relating to
appointment and payment of public funds, and that 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

21. 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

J. LYNN SMITH
HUMAN RESOURCES PROGRAM MANAGER

Signature

Date

JUN 30 1999

22. Position Classification Standards Used in Classifying/Grading Position

Cartographic Technician Series, GS-1371, 03/82

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.

23. Position Review

Initials

Date

Initials

Date

Initials

Date

Initials

Date

Initials

Date

a. Employee (optional)

b. Supervisor

c. Classifier

24. Remarks *Agency Use Code should be entered in FPPS as last three spaces of position allocation number.

25. Description of Major Duties and Responsibilities (See Attached)

**NATIONAL PARK SERVICE
BENCHMARK POSITION DESCRIPTION**

**Cartographic Technician
GS-1371-07**

Introduction

This position is located in a National Park Service organization. the purpose of the position is to perform a wide variety of tasks involved in the development of cartographic products including, but not limited to field data collection, compilation, editing and production (manual or digital, manual and/or color); Global Positioning System (GPS); and Geographic Information System (GIS) technical support functions.

Technician work is typically associated with and supportive of a professional field; work may involve substantial elements of the work of the professional field, but requires less than full knowledge of the field involved. This position is intended to report to a specialist or resources manager in the same or a related field. If the incumbent is not supervised by a professional specialist in a related profession, then technical direction must be obtained from a specialist in a central office or center.

The position is distinguished from similar positions at the GS-06 level in the following ways: assignments require that the incumbent have greater knowledge, experience and judgment in order to complete a variety of conventional projects of relatively limited scope; independently resolve problems for which precedents exist; select, from several alternatives, the most appropriate course of action for planning executing work; and apply a wide range of conventional methods and solutions to new situations. As a result, the position has a broader scope and effect; unlike lower graded positions, this position directly affects the design, content, resolution and accuracy of cartographic products and/or the design, operation and adequacy of GIS activities.

Major Duties (80-100%)

Visits field sites to gather information, utilizing accepted field mapping techniques which may include GPS, total stations, tape and compass, alidade and plane table or any combination thereof. Mapping techniques may be disciplinary specific (i.e. geological mapping and symbology, archeological field mapping etc.)

Independently inputs both routine and complex spatial and non-spatial digital data to draft format, field compilation, CAD or GIS and performs necessary and proper verification and checking procedures to ensure the resultant database or drawing files are as free as possible from error.

Provides advice in response to park requests. Informs staff of the types of information that can be derived from various remote sensor, GPS, GIS, and field mapping techniques in relation to the purpose and scope of proposed projects, and

recommends methodology based on user needs and skills. Utilizes GIS, GPS, CAD and related programs and technology to analyze data to recommend the most appropriate course of action to meet park objectives.

Plots data to meet user's requirements for various kinds of displays. Also makes plots to check and verify the results of map file construction. Selects plot contents, appropriate scales, suitable colors, shading patterns, line types, fonts and text, and line thickness'. Designs and plots legend information as required. Utilizes drawing standards where available and applicable (NPS-10, USGS etc.)

Produces user-ready original or derived thematic maps in variable formats and media at various scales with appropriate symbols, legends, and title blocks. Produces publication-ready materials with appropriate printer information, collation sheets, layout, paste-up, and photograph preparation.

Operates, updates, and maintains CAD/GIS software, hardware, and associated peripheral devices. Loads operating system upgrades. Maintains GPS equipment and peripherals.

Maintains the GIS database. Assures the acceptable quality of data. Effects archiving, restoring and long-term preservation of the organization's baseline GIS/GPS/CAD data and other benchmark data, including original field maps and survey notes, aerial photography and archival documents related to mapping.

Performs backups as appropriate, purges unnecessary files, and ensures all files are organized and properly distributed for effective and efficient protection, access and use. Locates, obtains, and imports commercial and other government sources for necessary data (digital and paper); translates this and other data from a variety of sources, converting to a useable format.

Prepares and maintains digital and hard copy versions of data, data histories (metadata), and data dictionaries that explain and document the nature, contents and evaluation of information sources for the GIS database, CAD system, and GPS files.

Verifies and/or establishes data site locations through on-site inspections; may carry out literature searches for the purpose of gathering information for data theme development or verification of data accuracy.

Shares/exchanges CAD, GIS, GPS and other digital information (including relevant metadata) with state, county and local governments; other federal agencies, private agency and non-profit partners, etc. to facilitate the optimum and most efficient use of data.

Factor 1. Knowledge Required by Position (Level 1-5; 750 points)

Substantial practical and technical knowledge of the methods, procedures and

technology of cartographic production, GPS and GIS and the skill to apply that knowledge with only general supervision in order to solve practical problems in a wide range of functions.

Skill in operating and utilizing standard types of peripheral GIS, GPS and field equipment (altimeters, total station or field survey) to include but not be limited to scanners, digitizers, plotters used to develop, digitize, maintain, manipulate and produce CAD, GPS and GIS map products and associated data.

Knowledge of the operation and maintenance of global positioning systems (GPS); base station file download and conversion as necessary.

Knowledge of the operation and use of field data collection tools, including but not limited to CAD, total survey station equipment, tape and compass, alidade and plane table, standard field mapping technique and recording systems.

Basic understanding of the UNIX, DOS and Microsoft-Windows operating systems.

Knowledge of database and drawing file management; CAD/GIS hardware and software (e.g. Autocad, Arc/Info, ArcView, Microsoft Office, Access, Excel, etc.)

Knowledge and skill in the research, compilation, design, editing, review and production process (manual and digital) of thematic maps.

Knowledge of map preparation for digitizing and scanning which may include metadata confirmation, source data verification, specifications and media transfer format/software.

Skill in reading and interpreting data from maps, field notes, and other sources for integration into GPS, CAD, GIS.

Understanding of the basic concepts and practices of park operations including maintenance, resource management, visitor protection, interpretation etc.

Ability to communicate in a clear and concise manner, including effectively portraying data for use by others.

Factor 2. Supervisory Controls (Level 2-3; 275 points)

Digital databases and information systems such as GIS, GPS and CAD typically represent and utilize integrated data formats/products which are derived to provide management with information to make decisions on critical park needs and objectives.

The supervisor, often after consultation with other division chiefs, defines the incumbent's priorities and deadlines for assignments, and provides assistance on the more complex assignments. The incumbent is relied upon to use cumulative experience and training in making judgments and in planning phases of work, and is expected to exercise initiative and independent judgment. Completed work is edited

and reviewed for appropriateness and technical soundness. Methods are not typically reviewed in detail.

Factor 3. Guidelines (Level 3-2; 125 points)

Available guidelines include technical hardware and software publications and reference materials; NPS-10; USGS cartographic production standards; precedents; planning guidelines; accepted techniques and methodology; and guidance provided by regional and support office staff which may include GIS Specialists, Cartographers, Planners, Landscape Architects, and others. The incumbent is required to exercise judgment in selecting and adapting guides to meet the work situation.

Factor 4. Complexity (Level 4-3; 150 points)

Work can be technically complex. The incumbent must integrate the disciplines of cartography, remote sensing, computer science, resources management, and land use planning. The incumbent works within the limitations of the hardware, software and data to create accurate, useful products. The employee regularly uses scientific data and terminology. Insight and judgment are required. Considerable ingenuity is needed to determine needs, identify sources of information, develop methodologies to interpret data and present the information through written reports, maps and briefing sessions.

Factor 5. Scope and Effect (Level 5-3; 150 points)

This position uses or assists in the use and application of GIS, GPS, CAD technologies, field mapping techniques (or combinations thereof) to plan and complete assignments that contribute to the effectiveness of the organization's management and operations. Accuracy and reliability of completed work is important in that management uses this information to aid in making decisions, developing management plans, evaluating resources and developing interpretive presentations.

Factor 6. Personal Contacts (Level 6-2; 25 points)

Contacts are with co-workers, regional and support office employees, cooperators, and at times the general public.

Factor 7. Purpose of Contacts (Level 7-1; 20 points)

The purpose of contacts is to obtain, relay and exchange information.

Factor 8. Physical Demands (Level 8-2; 20 points)

The work requires long periods of sitting in front of computer terminals. Some prolonged bending, crouching, lifting (up to 50 pounds), climbing and reaching are required to perform routine hardware maintenance and move equipment. Digitizing data requires extended periods of standing, sitting and stretching over large drafting tables while recording/measuring map data with a computer mouse.

Factor 9. Work Environment (Level 9-1; 5 points)

The work is usually performed in an office setting. Outdoor field work in varied climatic and terrain conditions is required.



Resources Careers

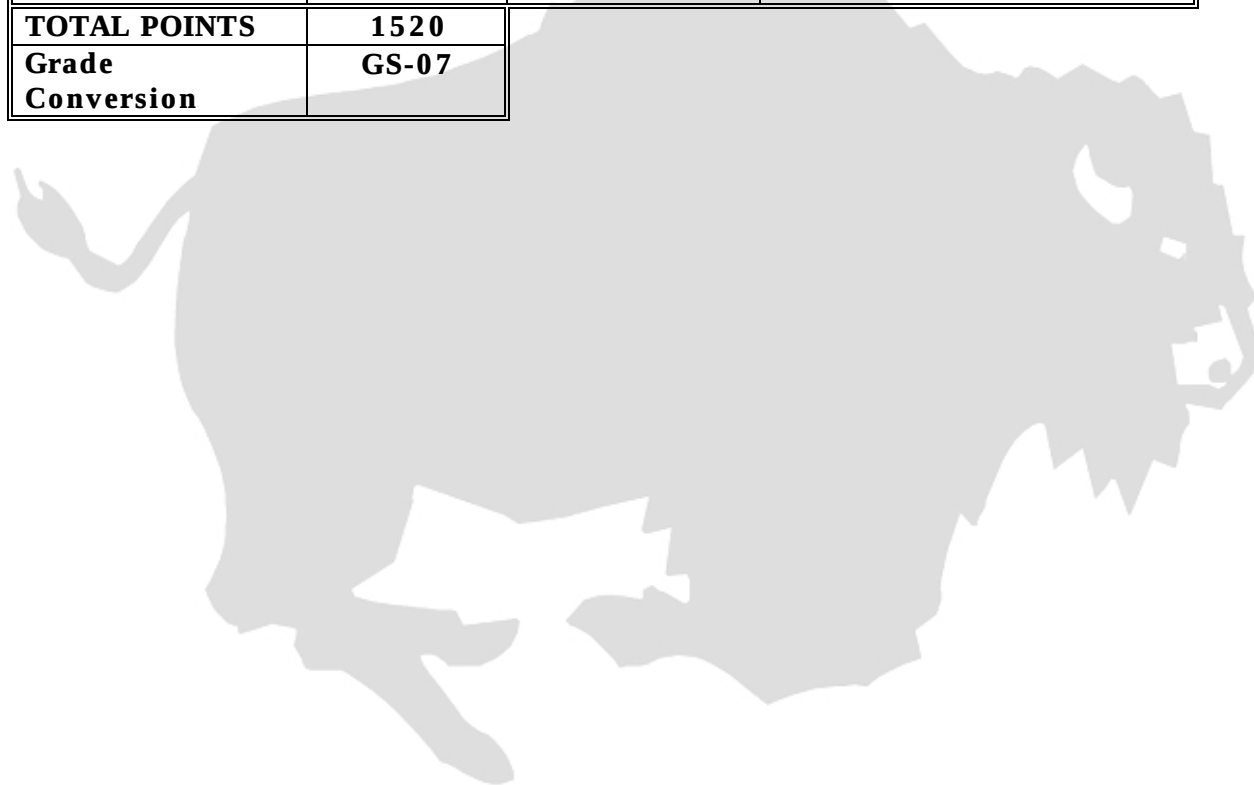
POSITION EVALUATION STATEMENT

Title, Series, and Grade: Cartographic Technician (GIS), GS-1371-07

Standard Used: Cartographic Technician Series, GS-1371, 3/82

EVALUATION FACTORS	POINTS ASSIGNED	FACTOR LEVEL	COMMENTS
1. Knowledge Required	750	1-5	Assignments involve use of specialized techniques, require skill and substantial knowledge of equipment; constructs maps from beginning to end.
2. Supervisory Controls	275	2-3	Supervisor assists with the more complex situations; incumbent plans and carries out steps; work reviewed for appropriateness and technical soundness.
3. Guidelines	125	3-2	Incumbent must choose the most appropriate from several guidelines; makes minor deviations.
4. Complexity	150	4-3	Work consists of a number of detailed, exacting steps to complete each stage; problems require judgment to determine course of action.
5. Scope and Effect	150	5-3	Assignments include responsibility for entire process; work requires substantive knowledge of CAD, GPS, and GIS principles and practices and equipment operation; work affects timeliness, accuracy, acceptability, and reliability of the <u>product being produced.</u>

6. Personal Contacts	25	6-2	Contacts include other employees, cooperators, the public.
7. Purpose of Contacts	20	7-1	Exchange information.
8. Physical Demands	20	8-2	Prolonged standing, bending, and lifting.
9. Work Environment	5	9-1	Typical office setting.
TOTAL POINTS	1520		
Grade Conversion	GS-07		



Resources Careers