

Master Record Number: RD0339

Title/Pay Plan/Series/Grade: Social Science Information Specialist/Natural Resource Specialist/Physical Scientist, GS-0101/401/1301-09

FLSA Code: Exempt

INTRODUCTION

This position serves at a Research Station in a Forest Inventory and Analysis (FIA) Work Unit. The Unit is one of four FIA Units across the country that comprises the national Forest Inventory and Analysis program. The FIA program is charged with conducting a nationally-consistent strategic annual forest inventory of the United States and its territories. Annual inventory results are widely used by public agencies, private companies and organizations to make informed natural resource decisions and policies.

The incumbent performs advanced work utilizing Geographic Information Systems (GIS) supporting managers and research scientists in the creation of interactive web maps and applications that display research material in a creative manner. Additional responsibilities include publication of geospatial data online as web services, creation and management of FGDC compliant metadata, and the creation of basic statistical reports using a variety of statistical tools.

MAJOR DUTIES

Geospatial Analysis

Applies applicable principles to facilitate geospatial model design and analysis procedures related to natural resource and relevant forestry-related socio-economic data and products. Manipulates and analyzes geospatial data to support biometrics, data visualization and analytics, field and office inventory techniques, and data applications, for large geographical regions. Performs multi-scale and/or multi-resource analysis in support of planning, analysis, and monitoring activities.

Web application development

Assist research scientists in the creation, publication, and maintenance of geospatial web services, applications, and data visualizations. Interface with scientists to provide technical assistance in developing web content based on FIA data and publications.

Training and Support

Provides advice and recommendations on sources, standards, integrity, compatibility, and cost efficiency of natural resource and forestry-related socio-economic information. Conducts

formal and informal training and provides technical assistance regarding the development, storage, retrieval, analysis, and visualization of forest inventory data.

Cartography and Map Design/Production

Compiles natural resource, topographic, and cartographic data for creation of thematic map products and presentation materials for research scientists and field research personal. Operates complex computer systems and software packages and uses established procedures to produce maps and graphics for partners and other inventory specialists. Provides advice and responds to frequent user requests regarding cartographic depictions of resource information. Applies geographic and cartographic principles to address complex resource issues.

Data Management

Works with managers and research scientists to determine type, amount and level of information required to develop and analyze inventory information. Techniques applied may include remote sensing, image processing and analysis, forest inventory, data collection, geographic information systems (GIS), geospatial analysis, database management, database retrivals, statistical reports, and computer science. Assists with developing data dictionaries, data models, and metadata for multi-disciplinary information and geospatial applications. Converts geospatial information and remote sensing imagery into GIS databases. Assists with the organization and maintenance of resource information and data to facilitate analysis in relationship to strategic forest inventories.

FACTOR STATEMENTS

Factor 1. Knowledge Required by the Position	Factor Level 1-6	950 Points
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Professional knowledge of the theories, principles, concepts, practices, standards, and methods of geography and related social sciences; natural resources and ecosystem management and related biological sciences; or related physical sciences to assume routine duties related to the analysis of relationships between varous natural and cultural resources, and apply established geospatial analysis processes, protocols and solutions to support a strategic forest inventory.

Knowledge of geospatial technology (e.g., geographic information systems; image processing; remote sensing; web, mobile and global positioning systems) sufficient to apply established methods and procedures to assist the local and regional geospatial program.

Knowledge of Forest Service information management policies and processes to assist with geospatial data management on the unit.

Knowledge of cartographic principles and conventions sufficient to create maps for internal and external use displaying natural resource and forestry-related socio-economic data, highlight particular analysis results, and convey basic geospatial information.

Ability to communicate and work effectively with a variety of groups and individuals concerning geospatial programs and data, and to assist with the management and analysis of resource information.

Factor 2. Supervisory Controls

Factor Level 2-3

275 Points

The supervisor establishes goals, overall objectives, priorities, and deadlines.

Work assignments involving concepts and methods typically familiar to the incumbent are made in terms of objectives to be achieved without explicit instructions on work methods. Incumbent works independently and as a member of interdisciplinary teams to solve technical problems with work methods and materials. Considerable freedom of operation is allowed in day-to-day work, with progress reviews only on an irregular basis. Unusual or controversial problems are brought to the attention of the supervisor for direction. The supervisor is kept informed of project progress and accomplishment.

Completed work is reviewed by the supervisor for accomplishment of goals and objectives, technical soundness and conformity with applicable policy.

Factor 3. Guidelines

Factor Level 3-3

275 Points

Guidelines consist of technical policies and directives governing the use of geospatial technology; professional journals, technical publications and supplemental guides; and verbal and written directives.

Incumbent uses judgment in selecting, interpreting, and applying or adapting these guidelines to specific situations. Available precedents provide guidance to more general problems or issues.

Factor 4. Complexity

Factor Level 4-3

150 Points

Assignments involve project planning, data management, geospatial analysis, training and support.

The incumbent determines procedures to be applied to situations to transform large amounts of data into understandable and meaningful end-results or conclusions. The assignments typically require the analysis of and solution to problems characterized by differences between the information needs of various resource specialists and managers.

The incumbent assesses the scope and nature of the research unit's needs for geographic information and analysis, to determine or recommend processes and procedures for compiling, analyzing, manipulating, and displaying large amounts of research data.

Factor 5. Scope and Effect**Factor Level 5-3****150 Points**

The purpose of the position is to participate in the implementation and management of GIS technology at the research unit and to provide resource information services with high standards of accuracy, quality and quantity of resource analysis to support a strategic forest inventory.

The work products affects the operations of the overall forest inventory and analysis unit.

Factor 6. Personal Contacts**Factor Level 6-2**

Contacts are made within the unit, federal, state, or local officials, tribes, private individuals, and agency employees from other units. Persons contacted engage in a variety of functions, missions, and activities. Contacts are occasionally made with specialists in private industry and other agencies.

Factor 7. Purpose of Contacts**Factor Level 7-B****75 Points**

The purpose of contacts is to influence or persuade people who all are working toward mutual program goals. All parties involved typically have cooperative attitudes. Incumbent plans, coordinates, or advises on work efforts to resolve issues.

Factor 8. Physical Demands**Factor Level 8-1****5 Points**

The work is primarily sedentary. However, some walking, bending, or carrying of light items may be involved. Occasional field trips may require some physical exertion such as walking over rough terrain.

Factor 9. Work Environment**Factor Level 9-1****5 Points**

The work is typically performed in a climate controlled office environment involving everyday risks or discomforts that require normal safety precautions typical of office settings.