

NATURAL RESOURCE SPECIALIST (Air Quality)  
GS-0401-12

POSITION NUMBER:

Introduction:

The incumbent serves as the Air Program Manager for the Bridger-Teton and Shoshone National Forests. The position is a shared-services position located at the Pinedale Ranger District. Incumbent serves as a member of the Resources/Planning/Fire Staff on the Bridger-Teton National Forest and the Resources Staff of the Shoshone National Forest. (50%)

The incumbent also serves as the Regional Natural Resource Information System (NRIS) Air Module Program Data Coordinator, a member of the Regional Interdisciplinary NRIS Implementation team, and represents Regional interests at national meetings and workshops.

NRIS Air Module (NRIS Air), is the corporate software for managing the agency's air quality information, and is the primary software that will be used by the Air Quality Resources staff to accomplish the agency's business functions for these activities.

The incumbent is a member of the National NRIS Air User Board and as such accepts and completes national related projects as called upon. (50%)

Major Duties:

Forest Air Program Management (15%) - Manages air program for the Bridger-Teton and Shoshone National Forests. Develops long and short-term goals for program. Develops out year and current year budgets. Coordinates monitoring and research relating to air quality on the forests. Coordinates with Regional Air Program personnel in both the Rocky Mountain and Intermountain Regional offices. Coordinates with National Air Program managers as necessary. Serves as the Forests' representative to the Governor's Southwest Wyoming Technical Air Forum. Serves on Green River Basin Visibility Study Steering Committee.

Technical Leadership (15%) - Reviews Forests' activities for compliance with air quality laws and regulations and possible impacts to Forest resources including Class I air sheds. Serves as the primary contact with the air regulatory agencies, the Wyoming Department of Environmental Quality and the Environmental Protection Agency, regarding technical aspects of industrial pollution permits, such as Prevention of Significant Deterioration Permit Applications, and other environmental review of major sources of pollutants. Negotiates and provides technical assistance to these and other land management agencies, including the Bureau of Land Management and the National Park Service, in the evaluation of projects and their possible impacts to Forest resources. With the coordination of Region 2 and 4 personnel and other Forest personnel, develops and drafts Forests' responses to Federal and State officials for the Forest Supervisors' signature. Provides briefings, training, and presentations for District, Forest, National and Regional FS personnel. Develops and gives informational

presentations for other agencies and local governments, special interest groups, and school groups about air quality and current issues. Leads air quality monitoring Center of Excellence as outlined in the Region 4 manual direction.

**Management of Wind River Air -Quality Monitoring Program (10 )** - Oversees monitoring program including providing supervision, training, and assistance to field personnel carrying out program. This monitoring program involves year-round participation as part of the national IMPROVE visibility monitoring network and the National Atmospheric Deposition Program network. The Wind River Air Quality monitoring program includes a year-round bulk deposition, lake chemistry monitoring, macroinvertebrate monitoring, zooplankton monitoring, and lichen monitoring within wilderness areas. The Air Quality Program Manager supervises a full-time air quality technician who carries out the actual monitoring on the Bridger-Teton and provides oversight, coordination, and technical assistance to the Shoshone National Forest for their portion of the monitoring program. Coordinates with interagency groups overseeing national programs, researchers, and analytical laboratory managers. Ensures strict adherence to safety and quality assurance/quality control procedures. Maintains cooperative agreements with industry, state and interagency groups. Serves as Contracting Officer's Representative for contracts with analytical laboratories. Maintains budgets and expenditure accounting as required in cooperative agreements with industry. Develops project proposals for additional monitoring with groups and agencies such as the Environmental Protection Agency. Develops and reviews monitoring plans and quality assurance/quality control plans for these special projects.

**Data analysis and information management (10% )** - Builds and maintains air quality monitoring database, providing data and reports to various users. Conducts initial qualitative and, quantitative analysis of monitoring data. Trains users of database to enter and query data. Assists with NRIS Air database development and implementation in the role of National Core Team member and a National Pilot Project leader. Acts as Forest Data Steward for NRIS Air data.

**R4 NRIS Air Module Coordinator (50% )** - Serves as the Regional technical authority in the management and analysis of the NRIS Air data base system; provides technical and management direction for the Region; makes major decisions on data consistency, standards, development, management and implementation in support of the Region's resource management programs.

Establishes and maintains the process (NRIS Air) for natural resource and ecological features information and data to facilitate subsequent analysis (i.e., map and tabular data). Assures the integrity, compatibility, and cost efficiency of NRIS Air implementation.

Provides coordination with all air quality inventories within the region. Ensures quality control of inventories. Develops programs of work to meet workload needs. Acts as the regional data steward for air quality data and information.

Responsible for coordinating the activities of various Regional office staffs and Forests to assure that quality software is available, training and technical support are provided, and quality, integrated information is maintained for use by a variety of customers.

Establishes and implements National and Regional policies and procedures that support the integrated corporate database concept. Coordinates assigned activities and programs with other Forest Resource programs. Supporting and explaining program requirements and negotiating or resolving conflicts with other program areas to assure acceptance and implementation of assigned goals.

Coordinates the installation of system software Region-wide. Reviews release notices of updated system versions. Makes decision on appropriate time for installation of release at the Forests, taking into consideration current status of data entry and upward reporting situations. Assigns Regional NRIS Air roles and privileges (approval of accessibility and level of accessibility to the data base system).

Initiates and directs Regional NRIS Air training including making sure the training facility is adequate and all hardware and software are available and in working condition.

Responds to requests for information from Regional Office Staffs, Forest Supervisors, other Regions, Washington Office Staff, and the public. Prepares position statements regarding implementation, use, and management of the corporate database software and maintenance of data. Coordinates the development of ORACLE scripts required to download and summarize data from the system; and scripts, methods, and interfaces needed to efficiently populate, and otherwise electronically interact with, the NRIS Air database to the degree required for NRIS Air to become a useable, working tool for the Regional Office Staffs, Forest Supervisors, the WO Staffs, and the public.

Communicates and establishes rapport and working relationships with a wide range of individuals including Forest Supervisors, Regional Office Staff Directors, Regional and Forest Air Quality Data Stewards and Regional NRIS Module Coordinators. Establishes and maintains contacts with individuals who have similar program responsibilities in Universities, EPA, BLM, and State Departments of Natural Resources and/or Conservation.

Serves as the Intermountain Region's representative and spokesperson at National NRIS Air meetings, workshops, and conferences. Provides input to and coordinates with the Washington Office and other Regional Air Quality Program Managers on development of policies and implementation of NRIS Air. Communicates directly with National NRIS Air Program Manager, Deployment Manager, System Analyst, National development team, and other Regional NRIS Air Program Managers.

Factor 1: Knowledge Required by the Position:

Professional knowledge of State and Federal laws, regulations, policies and procedures that relate to air quality, wilderness, planning, and environmental analysis to provide effective leadership in the air quality program and to provide sound advice to decision makers dealing with issues which could affect or be affected by air quality issues.

Knowledge of the origin, transformation and transportation of air pollutants to evaluate the possible environmental and/or public health effects of air pollution.

Knowledge of the effects of forest management activities on air quality, including prescribed fire, minerals, timber, recreation, and wilderness management.

Skill in effective oral communications with a broad range of audiences from other technical experts to schoolchildren. Skill in negotiating and crafting agreements with other agencies, industry, and special interest groups. Ability to write effective and clear official Forest responses, position papers, technical reports, briefings, scientific and general presentations, course materials, and program documentation.

Applied knowledge of program management including specific skills in supervision, long-term program development, budgeting, and contracting.

Knowledge of air quality related values monitoring techniques used in the Wind River Wilderness Air Quality Monitoring Program. This monitoring includes the field and laboratory techniques of the National Acid Deposition Program, field protocol and equipment for the national IMPROVE aerosol modules, IMPROVE transmissometer optical field techniques and protocol, long term lake chemistry, bulk deposition, macroinvertebrates, zooplankton, and lichens.

Familiarity of laboratory techniques used in field lab chemical analysis, including standard protocols.

Knowledge of models used in air quality analysis such as VISCREEN, CALPUFF/CALMET, MAGIC, and NFSPUFF to analyze both external and FS activities for possible impacts to human health, Class I air sheds, and other Forest resources.

Extensive knowledge of concepts, principles, and practices of social science, biological science, physical science, geomorphology, geology, and ecology that is applicable to a broad range of business and resource practices to evaluate and make recommendation on project technical requirements, to understand project functional requirements, evaluate the effectiveness of proposals in meeting program direction requirements, and to determine the consequences of program decisions and integration of programs.

In-depth knowledge of the Forest Service NRIS Air database system in order to serve as the Regional technical expert and to provide guidance and management direction to the Forest and other Resource program areas.

Comprehensive knowledge and skills in ORACLE, SQL, ACCESS, GIS and PC spreadsheet and database software sufficient to coordinate the development of scripts needed to obtain data and summaries from the NRIS Air database, and interface with other corporate and non-corporate software.

A working knowledge of land management planning and resource program assessments in order to support the integrated corporate database concept.

In depth knowledge of National Forest resource activities, including engineering, recreation, heritage, wilderness, wildlife, range, watershed, special uses and minerals management sufficient to evaluate relationships and management requirements for a unified database.

Knowledge and skill to analyze, evaluate, and incorporate the latest developments in database development and management technology into technical guidelines and direction for the Intermountain Region.

Knowledge and skill in written and oral communications sufficient to conduct workshops, training sessions, management briefings and to make oral presentations to large groups; write/formulate complex reports, program plans, policies, system documentation and converse with others of different backgrounds and interests.

**Factor 2: Supervisory Controls:**

General supervision is provided by the Forest Staff Officer for the Ecology Resources Group. Program priorities and definition of work to be accomplished are set by a steering committee with representatives from both forests and the regional offices. The incumbent is responsible for planning and carrying out the assignment, resolving most of the conflicts, coordinating the work with others including the two regional offices, and interpreting policy on his/her own initiative in terms of established objectives.

Regional NRIS Air work is under the general direction and guidance of the Regional Natural Resources Information Officer, who provides administrative direction with assignments in terms of broadly defined missions or functions. Regional work will be coordinated with the Forest Staff Officer for the Ecology Resources Group and the incumbent.

The incumbent independently initiates new projects, carries out programs, projects, and studies, approves technical deviations, coordinates activities with other staff units, and assures that missions and objectives are met or exceeded.

The completed work is considered technically authoritative and is normally accepted without change. If the work should be reviewed, the review concerns such matters as fulfillment of program objectives, effect of advise and influence on the overall program, or the contribution of the advancement of technology.

**Factor 3: Guidelines:**

The Clean Air Act and its amendments, Forest Service policy and guidelines, the Code of Federal Regulations, specific agency guideline documents, written protocols, and technical publications provide general guidance to the incumbent in providing a viable and scientifically sound air resource program on the Forests.

Incumbent must select appropriate guides from alternative approaches and must develop new methods when established practices are inadequate. Judgment and experience are used to develop solutions or compromises.

Guides are often inadequate or insufficient for dealing with the more complex problems concerned with novel, undeveloped, or controversial aspects of the assignment, and there are few precedents or guides that are pertinent to the specific problems encountered. Considerable

judgment and ingenuity are required to resolve diverse problems. The incumbent must exercise leadership and ingenuity in researching new techniques and developing new or substantially modifying existing specifications and criteria for the input of resource information into the NRIA-Air system.

The incumbent is expected to identify the latest appropriate technological concepts and practices and to incorporate them in the resource plans and programs. The incumbent is recognized as a technical authority in the development and interpretation of guides for the NRIS-Air system.

Factor 4: Complexity:

This work involves developing, implementing and maintaining an effective air resource management program for the Bridger-Teton National Forest. To accomplish this task, extensive coordination with Federal, State, county and tribal agencies must be accomplished. This area is complex geographically and politically, and the air quality program requires extensive coordination across two National Forests in two different regions, three states, two national parks which are Class I air sheds protected from degradation, six USFS - managed Class air sheds, nine wilderness areas, two BLM districts, and the Wind River Indian Reservation. This effective program protects the National Forest from anthropogenic pollution sources both in and outside the Forest. Forest, Wilderness, and Resource management plans are written to incorporate the necessities of this program. This requires departing from past approaches as necessary and modifying or developing new ones to achieve the objective of attainment and maintenance of State and National ambient air quality standards and protection of the air quality related values of the Forest.

NRIS work assignments involve many complex technical and administrative aspects in the implementation of the Forest Service corporate database within the Intermountain Region. Decisions regarding what needs to be done include major areas of uncertainty in approach, methodology, or interpretation and evaluation processes that result from such elements as continuing changes in the program, technological developments or conflicting requirements.

The incumbent considers such factors as, Forest workloads and priorities, hardware system capabilities, National reporting requirements and priorities, National direction, condition of existing data for entry, and impacts on Forests of the data collection and entry effort. Position requires the analysis of situations that are generally without precedent and therefore require the definition of issues, problems, and tasks and development of new concepts and approaches.

The work typically requires in-depth analysis and development of new and unprecedented approaches to complex problems. The work is further complicated by the lack of adequate and experienced help available within the agency. The incumbent serves in an authoritative capacity as the Regional expert for the NRIS Air database system. The incumbent must research problems and develop unique solutions without benefit of assistance.

Factor 5: Scope and Effect:

The incumbent provides technical support to the Forest Supervisor on Air Resource Management issues and directs the Air Resource Management program on the Forests. The incumbent serves as a link between the Regional offices and the Forests in transferring technology and information. The incumbent determines the relationships between planning and management decisions and air quality and information from scientific study. Actions in response to proposed pollution sources may be nationally precedent setting.

Regarding the NRIS related work, the purpose of the position is to provide leadership and direction to Regional Office Staffs and Forests in the implementation and management of the Forest Service corporate database with prime concern for data accuracy, accountability, and reporting. The work contributes to the integrated corporate database project, efficiency, and financial health of the agency.

Accomplishment of the work improves data management and the proficiency and accuracy of work of computer users throughout the Forest Service. The result of the improved efficiency of users and systems allows for rapid, accurate response to requests for information by management, Congress, and the public.

**Factor 6: Personal Contacts:**

Contacts are with natural resource professionals, industry representatives and contractors, and agency administrators both inside and outside the Forest Service. Forest Service contacts include Regional staff, National air program leaders, Forest and district staff, field technicians in monitoring program, other air quality managers and specialists, and research scientists and technicians. Agency contacts outside the Forest Service include managers and technical experts in the Bureau of Land Management, National Park Service, Environmental Protection Agency, Department of Energy, Wyoming Department of Environmental Quality, and the Wind River Tribal Council. Frequent additional contacts include researchers and technical experts in air quality, as well as, industry representatives and special interest groups.

NRIS related contacts are with Forest Supervisors and their staffs, Washington Office Staff directors, and group leaders, Regional Office Directors and staff, National and Regional Air Program Managers, NRIS Development staffs, computer specialists, and vendors with whom contracts exist.

Communicates and establishes rapport and working relationships with a wide range of individuals including Forest Supervisors, Regional Office Staff Directors, Forest Air Quality Data Stewards. Establishes and maintains contacts with individuals who have similar program responsibilities in Universities, EPA, BLM, and State Departments of Natural Resources and/or Conservation.

**Factor 7: Purpose of contacts:**

Contacts within the Forest service are primarily to discuss proposed projects and activities and to resolve differences, that are often controversial. In addition, contacts serve to provide technical assistance, to ensure that technical standards are being met, to fulfill administrative duties such as budgeting, contracting, and program planning, to supervise field monitoring

personnel and to oversee air quality monitoring program. Contacts also serve to provide training, information, and to recommend courses of action. Contacts with other agencies are to obtain and share information or to influence or negotiate on permitting decisions that affects resources and Forest Service programs.

For NRIS related work, contacts are for the purpose of providing advice, coordination, leadership, and direction. Contacts often involve influencing and motivating skeptical and unreceptive audiences to change both their thought processes and work procedures. Contacts also require the development and acceptance of compromise solutions to resolve controversial issues.

**Factor 8: Physical Demands:**

The work is primarily sedentary. Travel is required to attend meetings, conferences, and to coordinate work with other units. The physical demands are varied and, when overseeing and participating in field operations, often severe. Sample collection occurs at high elevations in all seasons, requiring extended exposure to harsh and unpredictable weather, winter camping, ski mountaineering with a heavy backpack (up, to 90 lbs) and pulling a sled, snow shoeing, accessing trailheads using snowmobiles and 4 wheel drive vehicles, lifting heavy loads, extended hiking over rough terrain with heavy packs, wading and standing in streams, rafting and float-tubing in high elevation lakes. Packing stock including horses and llamas requires physical strength and dexterity.

**Factor 9: Work Environment:**

Work will be performed in field, office, and the laboratory. Field work includes exposure to severe weather at high elevations in all seasons and occasional hazards such as cold-water immersion, avalanches, falls, insect bites, steep, slippery slopes, and pack animals.

The nature of the position will involve many very stressful situations and may require periods of non-traditional work hours/days in order to meet specific implementation and/or reporting requirements.