

Roles to Support Data Management in the BLM

Assistant Director (National level – one position per Directorate)

Assistant Directors support data management for the program areas under their jurisdiction.

Responsibilities:

- Ensure resources are available for data management activities for their respective program areas
- Accountable for integrity and quality of business data personally created/updated.

Knowledge Required:

Data management principles and concepts

Chief Information Officer (National level - one position)

The Chief Information Officer, or CIO, administers the overall Information Resources Management program.

Responsibilities:

- Provide Bureauwide policy and direction for its information assets.
- Support and promote the BLM data management program by providing adequate resources for data management in the BLM.
- Accountable for integrity and quality of business data personally created/updated.

Knowledge Required:

Data management principles and concepts

National IRM Advisor/Portfolio Managers

An Information Resources Management (IRM) Advisor is the Directorate's link to relating Information Technology (IT) issues to the business, and therefore, has a role in supporting data management activities at the national level. The Portfolio Manager may or may not be an IRM Advisor and oversees the Directorate's portion of the BLM's IT Portfolio.

Responsibilities:

- Assist data stewards in developing data standards and business rules
- Recommend, develop, and assess the impact of changes to data standards, procedures, guidelines, and documentation as related to a particular project, including metadata standards.
- Apply Bureau data architecture principles
- Designate the appropriate national data stewards for their specific activities (in coordination with Group Managers).
- Work with data stewards to interpret business needs into applications.
- Accountable for integrity and quality of business data personally created/updated.

Knowledge Required:

Knowledge of Data Management principles and concepts

Knowledge of Data Stewardship responsibilities

Knowledge of Data Architecture principles

Knowledge of XML concepts

Records Administrator (National level-one position, one per state or center)

Records Administrators are responsible for the Records program at the National, State, or Center levels.

Responsibilities:

- Certify application data through the Official Agency Record Designation and Documentation (OARDD).
- Create and maintain internal and external data sharing agreements.
- Assist in identifying Privacy Act issues and access requirements for Bureau, State, and Center level data standards.
- Support the creation of Business Rules by developing access requirements, archiving, backup, and disposition requirements
- State and Center levels would assist in the function of archiving, backup, and restoring data by developing procedures for the archiving and backup to meet disposition requirements.
- Accountable for integrity and quality of business data personally created/updated.

Knowledge Required:

Data management principles and concepts

Bureau Data Administrator (National level - one position)

The Bureau Data Administrator is a technical expert with a corporate/national role. He/she promotes data as a valued resource.

Responsibilities:

- Provide information management policy and leadership for the Bureau's data management program.
- Develop Bureau Strategic Data Plans.
- Provide and promote the framework for consistency in scope, meaning, and handling of data across the entire organization.
- Oversee the management of the BLM's corporate metadata, including the Federal Geographic Data Committee node, to support the organization's data related goals and objectives.
- Oversee procedures and processes to ensure timely, accurate, and shareable data across diverse program areas and organizations.
- Serve as the Bureau's representative on national data standards boards and committees.
- Evaluate the Data Management program and State practices and provide yearly report to the Bureau Chief Information Officer (CIO) (Section 515 report).
- Oversee compliance to data standards.
- Coordinate data sharing and data management activities across functional business areas.
- Provide Data Management training program.
- Accountable for integrity and quality of business data personally created/updated.

Knowledge Required:

Knowledge of data stewardship responsibilities

Knowledge of XML concepts

Abilities/Skills Required:

Data planning and policy formulation
Data modeling and data repository management
Data management principles and concepts
Metadata management
FGDC requirements for spatial metadata
Data Quality principles and concepts

Program Lead (one per organizational unit at any level)

Program Leads have one or more data stewards in their organizational unit; and are responsible for ensuring that funding for approved standards efforts or any other sanctioned data activity is allocated and protected from diversion.

Responsibilities:

- Actively support data stewards in creating, implementing and enforcing all data management activities.
- Accountable for integrity and quality of business data personally created/updated.

Knowledge Required:

Data Management principles and concepts
Designated resource programs

National Data Steward (one per business subject area at the national level)

National Data Stewards are experts for their respective business subject area (e.g. geothermal, forestry, wild horse and burros, soils). The National Data Steward is responsible to ensure that new standards, as well as all modifications of standards, are supplied to the SCO Data Management Branch for incorporation into the Corporate Metadata Repository.

Responsibilities:

- Create data standards and business rules. Follow formal established process.
- Responsible for developing data requirements, standards, access rules, business rules, data quality, and other data activities on a national level for their subject area of expertise.
- Ensure the content and accuracy of automated data is representative of the BLM's policies and procedures.
- Lead data standard development projects for his/her subject area; and maintain a consensus list of priorities for standards development. Support state standards efforts.
- Coordinate data sharing and data management activities across functional business areas.
- Participate in committees supporting data consistency within the agency and among our data sharing partners.
- Disburse data findings and documentation to the states and work closely with State Data Stewards.
- Ensure new data standards, changed data standards, and common data elements are recorded in the Corporate Metadata Repository.
- Accountable for integrity and quality of business data personally created/updated.

Abilities/Skills Required:

Knowledge of basic data management principles and concepts
Knowledge of how to create data standards, business data requirements and business rules through following the nationally established formal process.
Ability to lead and coordinate data stewardship program in BLM
Expertise in coordination and communication (internal and external)
Expertise in data quality procedures
Familiar with data modeling and analysis to the data element level
Skill in applying metadata requirements (including geo-spatial and alphanumeric)

System Coordination Office (SCO) Data Manager (national level- one position)

The System Coordination Office Data Manager represents the operational data management activities at the national level.

Responsibilities:

- Responsible for management of the Corporate Metadata Repository (CMR), which includes metadata documentation of all national applications, documentation of all official data standards, business rules, and change management.
- Responsible for the Data and Applications parts of the Bureau Enterprise Architecture.
- Ensure all data models are documented in an accessible location.
- Maintain the Data Architecture.
- Review business cases and other parts of the project life cycle for data requirements as outlined in the Best Management Practices for Data in Projects.
- Provide Project Managers with a data analysis of relevant and common data elements to be used in their projects.
- Assist Project Managers in other aspects of data requirements.
- Manage data store infrastructure.
- Support data standards efforts by researching the CMR, reviewing proposed standards for completeness, and CMR requirements.
- Accountable for all aspects of data within their program or geographic area. Includes responsibility for quality, accessibility, completeness, timeliness, accuracy, and standards.
- Accountable for integrity and quality of business data personally created/updated.

Knowledge Required:

Project Management skills
Knowledge of XML concepts

Abilities/Skills Required:

Data planning and policy formulation
Data modeling and data repository management
Data management principles and concepts
Metadata management
Data Quality principles and concepts
Knowledge of data architecture

Group Manager/Supervisor (National level – multiple positions)

Group Managers/Supervisors in the WO are responsible for all aspects of their respective programs.

Responsibilities:

- Designate the appropriate national data stewards for their specific activities.
- Determine what data will be maintained consistent with the objectives of the BLM.
- Ensure resources are available for data management activities for their respective program areas.
- Accountable for all aspects of data within their program or geographic area. Includes responsibility for quality, accessibility, completeness, timeliness, accuracy, and standards.
- Accountable for integrity and quality of business data personally created/updated.

Knowledge Required:

Data management principles and concepts

Knowledge of data stewardship responsibilities

Project Manager (one position per project, all levels)

A Project Manager leads an individual land use plan project, plan amendment project, IT Investment Project, or any other type of recognized project driven by a BLM business need.

Responsibilities:

- Provide oversight during development of projects to ensure the data needs and requirements are documented.
- Ensure adherence to Bureau requirements for metadata and data standards.
- Implement the Best Management Practices for Data in Projects.
- Accountable for all aspects of data within their program or geographic area. Includes responsibility for quality, accessibility, completeness, timeliness, accuracy, and standards.
- Accountable for integrity and quality of business data personally created/updated.

Abilities/Skills Required:

Knowledge of basic data management principles and concepts

State/Center Director, DSD, Supervisor (multiple positions per State or Center)

The State or Center Director, DSD, and supervisor is responsible for the Data Administration and Data Resources Management programs within their jurisdiction. They also promote data as a valued resource.

Responsibilities:

- Ensure the Data Management program is carried out within BLM and Departmental guidelines.
- Determine what data will be maintained consistent with the objectives of the BLM.
- Ensure resources are available for data management activities for their respective program areas.
- Appoint and support data stewards for their areas of responsibility.
- Accountable for all aspects of data within their program or geographic area. Includes responsibility for quality, accessibility, completeness, timeliness, accuracy, and standards.
- Accountable for integrity and quality of business data personally created/updated.

Knowledge Required:

Data management principles and concepts

State/Center Chief Information Officer (one position per State or Center level)

The State Chief Information Officer (CIO) administers the Information Resources Management program for each state, which includes many of the data-related positions at the State Office level.

Responsibilities:

- Provide State/Center-wide policy and direction for its information assets.
- Ensure resources are available for data management activities for their respective program areas.
- Accountable for integrity and quality of business data personally created/updated.

Knowledge Required:

Data management principles and concepts

Knowledge of data stewardship responsibilities

State/Center Data Administrator (one position per State or Center level)

State or Center Data Administrators are responsible for overall management, design, and documentation of data supporting BLM's mission at the State level.

Responsibilities:

- Provide information management leadership, data modeling expertise, and custodianship of the state data models.
- Implement data policy and Best Management Practices.
- Develop consistent, documented, accessible data, and metadata resources for the State with shareable data across programs.
- Coordinate data sharing and data management activities across functional business areas.
- Serve as representatives on State data standards committees; and support national efforts as required.
- Facilitate data standardization among data sharing partners.
- Document business rules and data standards for their State.
- Manage State data store infrastructure.
- Accountable for integrity and quality of business data personally created/updated.

Knowledge Required:

Knowledge of relational database management systems (RDBMS), including design

Knowledge of data stewardship responsibilities

Project Management skills

Knowledge of XML concepts

Abilities/Skills Required:

Data planning and policy formulation

Data modeling and data repository management

Data management principles and concepts

Metadata management

FGDC requirements for spatial metadata

Data Quality principles and concepts

GIS Manager (State level – one position per State)

GIS Managers lead and/or support the development of spatial databases, standards, and metadata at the State level.

Responsibilities:

- Spatial data development.
- Support establishing data sharing agreements.
- Participate in Inter-agency data coordination/data development planning groups.
- Support the creation of metadata.
- Support and/or lead data standards development at the State level.
- Support evaluating data management practices in BLM.
- Support the development of data standards at all levels.
- Support the data store infrastructure.
- Participate in the Bureau Data Architecture activities and help determine data requirements.
- Accountable for integrity and quality of business data personally created/updated.

Knowledge Required:

*Knowledge of spatial databases, data architecture, data standards, and metadata.
Knowledge of XML concepts.*

Abilities/Skills Required:

Development of GIS databases, Enterprise GIS architecture, and spatial database infrastructure and technology

Development of spatial data requirements

Staff and team supervision, and contract management

FGDC Metadata development

Development of data standards

XML standards and technology

Database Administrator (where needed – multiple positions)

Database Administrators are technical experts with detailed knowledge of database management, design, optimization and operation.

Responsibilities:

- Develop and implement physical data structures in consultation with the Data Administrator.
- Ensure efficient database architecture, security, recoverability and performance of shareable databases to meet multiple needs.
- Accountable for integrity and quality of business data personally created/updated.

Abilities/Skills Required:

Detailed knowledge and skills in relational database management systems (RDBMS), including design, optimization and operation

Database security and access

Database architecture

Database archiving, back-up and restoration of data

Support for RDBMS and client software

XML standards and technology

State Data Steward (one per business subject area per state)

State Data Stewards are subject matter experts for their respective business subject area as designated by management.

Responsibilities:

- Create data standards and business rules.
- Coordinate within State for QA/QC process and procedures on program data.
- Ensure data is managed as a corporate resource.
- Coordinate field office data management program with the National Data Steward and State Data Administrator.
- Coordinate data sharing and data management activities across functional business areas.
- Distribute information on Bureau/State data management initiatives to the program specialists.
- Organize data sharing with other entities.
- Review geo-spatial and alphanumeric metadata for completeness and quality (including FGDC).
- Accountable for integrity and quality of business data personally created/updated.

Abilities/Skills Required:

Knowledge of basic data management principles and concepts

Knowledge of how to create data standards, business data requirements, and business rules

Ability to lead and coordinate data stewardship program in BLM

Expertise in coordination and communication (internal and external)

Expertise in data quality procedures

Familiar with data modeling and analysis to the data element level

Skill in applying metadata requirements (including geo-spatial and alphanumeric)

Data Architect (where needed – multiple positions)

A Data Architect or Data Modeler is an expert in data modeling and provides support for data and computer systems analysis, and logical database design.

Responsibilities:

- Develop logical data models for database design.
- Assist data stewards in developing data standards and business rules.
- Recommend, develop, and assess the impact of changes to data standards, procedures, guidelines, and documentation as related to a particular project, including metadata standards.
- Apply CASE tools and other data software tools to support projects.
- Apply bureau data architecture principles.
- Accountable for integrity and quality of business data personally created/updated.

Abilities/Skills Required:

Data management principles and concepts

Data modeling and data repository management

CASE tool proficiency

RDBMS and spatial database skills

Data Analyst (where needed – multiple positions)

A Data Analyst is an expert in any type of scrutiny or analysis of the data.

Responsibilities:

- Assist in establishing data business rules and standards documentation in the State or national repository.
- Analyze the logical current projects data against the component of the Architecture for consistencies and use of data standards.
- Work with the state or national repository, analyzing whatever data analysis requests may come in from the field.
- Evaluate project logical data model to identify redundancies and overlaps with the repository and make recommendations to the project.
- Develop programs to extract data for data stewards to support QA/QC process.
- Conduct analysis to convert data between systems.
- Apply Bureau data architecture principles.
- Accountable for integrity and quality of business data personally created/updated.

Abilities/Skills Required:

Data modeling and data repository management

Data management principles and concepts

Data quality principles and concepts

Data integration skills (to convert, import/export, combining, and comparing data)

RDBMS and spatial database skills

SQL programming skills

Geo-spatial analytical skills

System Administrator (where needed – multiple positions)

System Administrators plan and coordinate the installation, testing, operation, troubleshooting, and maintenance of hardware and software systems.

Responsibilities:

- Manage user access and system security.
- Install and support the physical RDBMS and client software.
- Accountable for integrity and quality of business data personally created/updated.

Abilities/Skills Required:

Database security, access and archiving

Resource/Program Specialist (where needed – multiple positions)

The Resource/Program Specialist is a technical expert in Resource discipline technology. This category includes all employees working any functional business area.

Responsibilities:

- Responsible to know resource data requirements, standards, access rules, and training.
- Work with data stewards to interpret business needs into applications.
- Facilitate educational opportunities for the treatment, application, and value of spatial data.
- Create and maintain metadata to quality specifications.
- Provide consistent interpretation and application of Bureau/State policies to their respective State Offices.
- Manage databases containing spatial data.
- Implement data standards.
- Accountable for integrity and quality of business data personally created/updated.

Abilities/Skills Required:

*Technical expertise in a natural resource or other program
Knowledge of data management principles*

Resource/GIS Specialist (where needed – multiple positions)

The Resource/GIS Specialist is a technical expert in a resource subject area discipline and GIS technology.

Responsibilities:

- Coordinate geo-spatial data management (internal and external).
- Implement State/Bureau data standards; and may participate in the development of standards.
- Create/maintain spatial metadata.
- Work with data stewards to interpret business needs into GIS applications and derive data requirements.
- Facilitate educational opportunities for the treatment, application, and value of spatial data.
- Provide consistent interpretation and application of Bureau GIS policies to their respective offices.
- Manage databases containing spatial data.
- Research potential data sources.
- Provide input in the evaluation of data management practices.
- Accountable for integrity and quality of business data personally created/updated.

Knowledge Required:

*Data modeling and database design
Knowledge of Resource Program
Knowledge of geodesy
Knowledge of XML concepts*

Abilities/Skills Required:

Technical expertise in GIS technology and applications

Graphical map-making skills
Knowledge of data management principles
Conduct geo-spatial analysis
XML standards and technology

Field Manager/Supervisor (multiple positions)

Field Managers at locations all across the Bureau are responsible for all aspects of activities in their jurisdiction.

Responsibilities:

- Ensure resources are available for data management activities for their respective program areas.
- Determine what data will be maintained consistent with the objectives of the BLM.
- Accountable for all aspects of data within their program or geographic area. Includes responsibility for quality, accessibility, completeness, timeliness, accuracy, and standards.
- Appoint and support data stewards for their areas of responsibility.
- Accountable for all aspects of data within their program or geographic area. Includes responsibility for quality, accessibility, completeness, timeliness, accuracy, and standards.
- Accountable for integrity and quality of business data personally created/updated.

Knowledge Required:

Data management principles and concepts

Field Office Data Steward (where needed—multiple positions)

A Field Office Data Steward is a resource specialist and subject matter expert designated by management.

Responsibilities:

- Coordinate field office data management program with the State Data Steward and State Data Administrator.
- Coordinate data sharing and data management activities across functional business areas.
- Determine data requirements and business rules.
- Work to ensure data quality.
- Review geo-spatial and alphanumeric metadata for completeness and quality (including FGDC).
- Capitalize on data sharing opportunities at the local level.
- Accountable for integrity and quality of business data personally created/updated.

Abilities/Skills Required:

Knowledge of basic data management principles and concepts

Knowledge of how to create data standards, business data requirements, and business rules

Ability to lead and coordinate data stewardship program in BLM

Expertise in coordination and communication (internal and external)

Expertise in data quality procedures

Familiar with data modeling and analysis to the data element level

Skill in applying metadata requirements (including geo-spatial and alphanumeric)

Field Office Data Administrator/Database Administrator (one per field office)

A Field Office Data Administrator/Database Administrator is a combined position with some of both skill sets. Database Administrators are technical experts with detailed knowledge of database management, design, optimization and operation. Data Administrators are responsible for overall management, design, and documentation of data supporting BLM's mission at the field office level.

Responsibilities:

- Provide information management leadership, data modeling expertise, and custodianship of the field office data models.
- Implement data policy and Best Management Practices.
- Develop consistent, documented, accessible data, and metadata resources for the field office with shareable data across programs.
- Coordinate data sharing and data management activities across functional business areas.
- Document business rules and data standards.
- Accountable for integrity and quality of business data personally created/updated.

Knowledge Required:

Knowledge of data stewardship responsibilities

Data management principles and concepts

FGDC requirements for spatial metadata

Knowledge of XML concepts

Abilities/Skills Required:

Data modeling and data repository management

Metadata management

Data Quality principles and concepts

Detailed knowledge and skills in spatial relational database management systems (RDBMS), including design, optimization and operation

Database security and access

Database archiving, back-up and restoration of data

Develop and implement physical data structures

XML standards and technology