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Subject

1283 Data Administration and Management (Public)

1.  Explanation of Material Transmitted:  This transmits the new release of the 1283 Data Administration and Management Manual Section.  It provides updated information on Bureau policy for data management.

2.  Reports Required:
    None

3.  Material Superseded:  The material superseded by this release is listed under "REMOVE" below. No other directives are superseded.

4.  Filing Instructions:  File as directed below.


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    All of 1283 Manual Section (Rel. 1-1678)            1283 (Rel. 1-1742)
    (Total:  17 Sheets)                                 (Total: 11 Sheets)




                            */s/ Lisa Jollay*


                            Acting Assistant Director
                            Information Resource Management

# 1283 - Data Administration and Management

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**Chapter 1.    Overview**

1.1    Purpose

This Manual Section provides policies and guidelines to direct Bureau of Land Management (BLM) efforts in the effective management of data (structured and unstructured) that is collected and used to support the BLM mission.  The BLM needs to ensure that the data it collects, uses, and disseminates relates to its mission requirements, is of known quality, and applied and used objectively.  There must also be appropriate controls to protect privacy, proprietary, and confidential information.  This policy requires a system of controls be in place to establish standards, control quality, and oversee and monitor BLM's information resources.

1.2    Objectives

The primary objectives of the BLM's Data Management program are the effective management and administration of data standardization, quality, and integrity.  To accomplish this, the BLM will standardize data, metadata, and quality efforts to reduce ambiguity, redundancy and disparity, and facilitate reusability and sharing of data across BLM Programs.  Also, the BLM will cooperate with other Federal, State, and Local Agencies to promote the identification, use and sharing of equivalent interagency data.  The BLM will provide appropriate data-related training for all employees to maintain their technical competency in their role as it relates to BLM data.  The BLM will rely on designated and trained data stewards at all levels of the organization to implement data standards for the definition, collection, maintenance and access to information to meet its mission and program requirements.

Specific Objectives include:

a.  Support Department of Interior (DOI) operations and decision making with data that meets the need in terms of availability, accuracy, timeliness, integrity, quality, and security.

b.  Structure information systems in ways that encourage horizontal, as well as vertical, sharing and exchange of data within DOI, and with other Government Agencies, non-governmental organizations (NGO), and private sector organizations, including universities.

c.  Recognize and promote the importance of data and information as valuable resource assets requiring management of their creation, use, storage, maintenance, preservation, and disposition.  Enable strategic information to be consistently and accurately derived from operational data.

d.  Establish and maintain links between Enterprise Architecture and the Data Framework.

e.  Reduce the cost and time required to transform, translate, or research the meaning of differently named but otherwise identical data elements.

1.3     Authority

This Manual implements guidance published in:

A. Executive Order 12906 Coordinating Geographic Data Acquisition and Access: The National Spatial Data Infrastructure
B. Clinger-Cohen Act of 1996 (P.L. 104-106)
C. Section 515 of the Treasury and General Governmental Appropriation Act of 2001 (Public Law 106-554) (known as the Information Quality Act)
D. Paperwork Reduction Act of 1995, as amended (44 United States Code (U.S.C.) 3501-3520)
E. Computer Matching and Personal Privacy Act of 1988 (P.L. 100-503), as amended
F. Privacy Act of 1974, as amended (5 U.S.C. 552a (1995 and Supp. IV 1998)
G. Freedom of Information Act (FOIA) of 1966, as amended (5 U.S.C. 522)
H. Federal Information Resource Management Regulations (FIRMR) (41 CFR Chapter 201)
I. OMB Circular A-119: Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities (February 10, 1998)
J. OMB Circular A-12: Internal Control Systems
K. OMB Circular A-130: Management of Federal Information Resources
L. OMB Circular A-16: Supplemental Guidance, November 10, 2010
M. Department of the Interior Manuals (DM) 375, 376, 378, 511
N. OMB M-01-05 Memorandum for Heads of Executive Departments and Agencies Subject: Guidance on Inter-Agency Sharing of Personal Data--Protecting Personal Privacy
O. Federal Register (67 F. R. 8452), February 22, 2002 Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated by Federal Agencies
P. OMB Open Government Directive, December 8, 2009
Q. US Department of Interior Open Government Plan (version 1.1) June 25, 2010
R. Executive Order 13576--Delivering an Efficient, Effective, and Accountable Government, June 13, 2011

1.4     Responsibility

Every employee is responsible for the quality, integrity, relevancy, accuracy, and currency of the data that is created, collected, or maintained, whether the data are in manual (paper copy) or electronic format. Managers will employ good data management practices to manage the data collected and maintained by their program specialists. The program specialist who uses, manages, and distributes the data must ensure that data are collected according to established standards and maintained to ensure accuracy and integrity. This section identifies specific responsibilities in support of the data management program.

A. <u>The Director and the Deputy Director</u> as the Chief Executive Officers (CEOs), are responsible for ensuring that information resources are available to BLM to meet its strategic mission requirements.

B. <u>The Assistant Director (AD), Information Resources Management (IRM)</u> administers the overall IRM program, including Data Administration, which includes providing Bureau-

wide policy and direction for its information assets. The AD-IRM supports and promotes the BLM data management program by providing adequate resources and training for data management in the BLM. The AD-IRM coordinates IRM goals, objectives, and activities using a Life Cycle Management (LCM) methodology.

C. Assistant Directors (AD) designate the National Data Stewards for the programs under their jurisdiction and are responsible for coordinating Data Administration/Data Resources Management activities within the BLM. ADs function as part of the BLM's Management Team, providing overall program direction and executive oversight necessary to identify and document Bureau-wide data management requirements.

   1. IRM Advisors are charged by the ADs with supporting data management in the program areas under their jurisdiction. They function as the portfolio manager to their respective program area, which also places them in an oversight capacity in terms of data management for the projects within their portfolios.

D. Deputy Assistant Directors (DAD) participate as members of the Data Advisory Committee (DAC) to direct the BLM's data activities and operational policies in coordination with the DADs via recommendation to the Deputy Director. The DAC provides direction and coordination of the BLM data assets and investments. They will direct the corporate vision and provide guidance for all BLM data investments.

E. The Division of Business Technology and Alignment is responsible for major information policy areas, including BLM's Data Administration and Data Management program.

   1. The Bureau Data Administrator (BDA) within the Division of Business Technology and Alignment oversees the management of the BLM's Data Administration, Data Management and Data Architecture program and ensures BLM's compliance with the Office of Management and Budget (OMB), General Services Administration (GSA), Department of the Interior, and other Federal policies, regulations, and standards within the areas of data management, data standards, data analysis, customers, training, strategic data plans, and documentation. The BDA facilitates the coordination of data management activities with other agencies through the Federal Geographic Data Committee (FGDC) and other information clearing houses. The BDA oversees the management of the BLM's corporate metadata to support the organization's data related goals and objectives. The BDA also evaluates the Data Management program and State practices and provides a yearly report to the Assistant Director (AD) of Information Resource Management.

F. BLM State Directors, National Interagency Fire Center (NIFC) Director, the National Operations Center (NOC) manage the Data Administration/Data Management program within their jurisdiction and ensure the program is carried out within BLM and Departmental guidelines.

G. The NOC provides support to the BDA in developing data standard operating procedures (SOPs) for defining, creating, processing, and storing Corporate BLM data, in support of data management functions and the data lifecycle.

1. The NOC Branch of Data Management serves as the monitor and coordinator of BLM Corporate Metadata and will be responsible for documenting all forms of metadata, including geospatial, and for ensuring metadata accuracy and currency. The NOC coordinates Technical Data Support, which supplies a number of technically trained and skilled personnel who provide expertise in the analysis of data from customer requests or BLM needs, coordinate data quality control and reporting, maintain business rules, coordinate the development of national data standards and provide access to this data.

2. The NOC Division of IRM Support Services (DIRM) provides national Investment Technology (IT) services in the management, analysis, engineering, development, testing, implementation, security and operations of applications, and systems to ensure the quality and usability of Corporate BLM data. This expertise provides the BDA with specific support in data architecture, modeling, design, storage, security, integration, interoperability and business intelligence.

H. The Director, National Training Center (NTC) assists in the development of training courses, training plans, course outlines and descriptions, and training materials to enhance Data Administration and Data Management skills and employee development. The NTC Director provides the infrastructure for their delivery.

I. BLM Field Office (FO) Managers are responsible for providing executive oversight and direction to ensure the Data Management program is carried out within BLM and Departmental guidelines for their areas of jurisdiction. They also ensure that resources are available for FO data management activities. They formally approve and designate all FO Data Stewards and FO Data Administrators who have been identified by their respective first level Manager(s). They have overall FO responsibilities for all aspects of data management including data quality, accessibility, completeness, timeliness, accuracy, and standards within their office.

J. NOC DIRM IT Project Managers (PM) lead project teams where a system or solution is requested to manage or implement data. These project teams work with the business to ensure that all relevant business data requirements and usage scenarios are gathered and that the project data objectives are met.

K. Data Stewards at the National, Center, State, and Field Office Level are experts in a specific business subject area, (e.g., geothermal, forestry, wild horse and burros, soils), and responsible for data requirements, standards, access rules, data quality, and other data activities at their level for that subject area.

1. The National Data Steward works with the NOC Branch of Data Management, Subject Matter Experts, and other Bureau Data Stewards to develop, review, modify, and/or establish data standards for bureau subject areas or business lines, in accordance with the Enterprise Data Framework, Metadata Repository, and DOI Data Standardization Manual.

The National Data Steward a) reviews data standards to determine their potential impact on Bureau subject areas or business lines; b) coordinates and promotes implementation of data standards and the Life Cycle approach for all bureau business line data ; c) identifies data quality metrics and coordinates data accuracy

and quality assurance checks, formal reviews, and information exchange relevant to DOI data standards with the Bureau Data Administrator, Subject Matter Experts, and other Business Data Stewards.

2. <u>State Program Leads</u> or their designated representative, have data stewardship responsibilities at the State program level. State Data Stewards are appointed by State level managers and work with the National Data Stewards and State Data Administrator on issues affecting data standards, definitions, and quality for particular data sets or themes. The assignment of a data steward may be made at different organizational levels within the State. While organizationally linked to specific programs or offices, Data Stewards will be required to work across organizational boundaries to include the majority of customers for a particular data set or theme. State Data Stewards review geospatial and alphanumeric metadata created within their program area for completeness and quality.

3. <u>Field Office Data Stewards</u> are resource specialists and subject matter experts designated by management, responsible for implementing data requirements, standards, access rules, and other data specific activities needed for a particular business or activity. They define the FO's business value, scope, standards and services of the organization's data within the context of their state procedures. They coordinate the Field Office Data Management program with the State Data Steward and State Data Administrator. They review geospatial and alphanumeric metadata for accuracy and completeness to ensure data quality.

L. <u>The State and Center Data Administrators (SDAs)</u> implement the Data Administration and Data Management program within their States/Centers. They participate in the development of Bureau-wide policies, strategies, and guidance for effective and efficient use of the BLM's data, and more specific procedures for their own State or Center offices. They provide critical linkage and communication among all BLM offices within their area of data management jurisdiction and between their office and the Washington Office (WO).

M. <u>State Geographic Information System (GIS) Specialists and Managers</u> are technical experts in a resource subject area discipline and GIS technology. Their responsibilities include coordinating geospatial data management, implementing Bureau/State data standards, creating and maintaining spatial metadata, and working with the business data stewards to identify and satisfy business needs into GIS applications at the State level. They participate in evaluating geospatial data management practices of the BLM.

N. <u>GIS Specialists</u> are technical experts in a resource subject area discipline and GIS technology. Their responsibilities include coordinating geospatial data management, implementing Bureau/State data standards, creating and maintaining spatial metadata, and working with the data stewards to interpret business needs to derive data requirements and input those requirements into the implementation of geospatial data standards.

O. <u>BLM Program Specialists</u> are responsible for verifying that the images and alphanumeric, and spatial data which they collect and enter into their applications or decision documents, comply with established standards. The data are verified to be authentic and

truly representative of their resource and correctly entered following the data quality requirements set forth by the national data steward.

P.  The Privacy Officer works with IT Security Managers and Data Stewards to ensure that personal data collected by BLM is limited to only relevant and necessary collection and thus protected.  BLM responsibility is to first identify all personal data and safeguard it, verify that the data is restricted, and classified as sensitive or public information as it relates to the data. Once data is collected it is the responsibility of the system owner to ensure that new collections of data have an Privacy Impact Assessment (PIA) and that old collections of data have periodic reviews of their PIAs every two years to maintain the integrity of the data collected. At the BLM, responsibility is to ensure any data collected will preserve the rights of individuals.

1.5    References

The following Departmental Manuals and guidance, and Bureau Manual and Handbooks as listed below ensure proper adherence to data resource management program components.

a.  Departmental Manual (DM) Section 375 IRM Program Management.
b.  Departmental Manual (DM) Section 376 Automated Data Processing.
c.  Departmental Manual (DM) Section 378 Data Resource Management.
d.  Departmental Manual (DM) Section 511 Coordination with State and Local Governments.
e.  BLM Manual 1220, Rel. 1-1645, Records and Information Management
f.  BLM Manual 1264 Information Technology Security.
g.  BLM Manual 1270, Records Administration;
h.  BLM Manual 1270-2, Rel. 1-1631, Cost Recovery.
i.  BLM Manual 1271, Rel. 1-1641, BLM Information Access Center.
j.  BLM Manual 1274, Rel. 1-1339, Serialized Case File System.
k.  BLM Manual 1275, Rel. 1-1380, Land Status Records.
l.  BLM Manual 1278, Rel. 1-1627, External Access to BLM Information.
m. BLM Manual 9160, Rel. 9-341, Mapping Sciences.

1.6    Policy

The BLM recognizes that its data and the processed information derived from them are a very significant and valuable resource. The BLM will protect its investment in data and its derived applications to ensure that they are efficiently managed and accessible in useful forms. The BLM will actively exchange and share appropriate information with other agencies, State and Tribal governments, local governments, and outside organizations where this can reduce duplication of effort and costs and ensure that the best quality data, outputs, and applications are being produced and used. The BLM's guidelines with respect to managing data are as follows:

A.  All IRM investments are considered federal information resources and must contain data with quality standards appropriate to meet the mission needs of the BLM. Data collected in the course of doing business in all organizational units of the BLM are owned by the BLM. These data represent corporate information assets of the BLM and are critical to its ability to achieve successful implementation of the strategies outlined in the Mission Strategic Plan and Annual Work Plans.  In accordance with the Paperwork Reduction Act

of 1995, as amended, the BLM programs will follow Departmental and BLM guidelines to ensure the integrity, objectivity, utility, and quality of data they collect and maintain.

B. The BLM's policy of stewardship extends to the use and care of its data resources. Data Stewardship requires the active involvement and participation of employees from every program and office level within the BLM. The responsibility for the management of data resides within the program that defines, identifies, collects, maintains or changes the data, the data standards, and any derived corporate data applications. This responsibility includes the protection of the integrity of the data from unauthorized tampering or access. All employees of the BLM are responsible for quality and integrity of the data assets under their control.

C. Data includes any information that BLM collects, maintains, or disseminates, including all Public, Non-public, Confidential or Sensitive Data, regardless of whether it is displayed spatially, using alphanumeric characters, in graphic form, digital form, or on written on paper.

D. The BLM will collect data according to existing, approved, and accepted data standards and procedures and will adopt other data standards where those standards adequately address a data requirement.

E. Data standards and management activities will be in accordance with the approved Data Life Cycle Methodology and the IT Investment Management process.

F. The BLM will adhere to the DOI Data Quality Management Guide (August 2008) to ensure the quality, objectivity, utility, and integrity of information that it disseminates.

G. The BLM will develop and use the Enterprise Data Framework as a guide to determine its data requirements, standards, and definitions. The Enterprise Data Framework is the categorization of the significant and critical data components that meet the mission and operations of the BLM.

H. Data quality controls provide oversight of the collection, maintenance, management, random sampling, and testing of derived applications and disposal (deleting or archiving) of data.

I. The BLM will preserve the privacy rights of individuals as mandated by the Privacy Act (PA) and/or Freedom of Information Act (FOIA), and will not collect information from the public without proper notification and compelling legal or programmatic requirement.

J. The BLM will maintain spatial and geographic information according to the standards established by the FGDC.

K. Metadata will be maintained by the BLM which will include complete metadata descriptions about how data is identified, collected, created, retrieved, updated, deleted and distributed.

1.7   Policy Implementation

Tools and guidance are being provided in the form of handbooks to assist in implementing a data management strategy. Other specific long term State, Center, or Field Office guidance resides in their respective Data Administration Manual Supplements and Handbooks.

1.8    File and Records Maintenance

See BLM Manual parts 1270 through 1278 for guidance on the creation, maintenance, use, retrieval, access, security, and disposition of records. Additional questions regarding records activities and tasks will be directed to the Bureau's Records Administrator or Records Manager. Details of records requirements are enumerated in in subsequent procedural guidance/directives. The following records will be directed and generated by these releases:

A.  Decision Documents The following records are decision documents related to data that are issued through the directives system. These decision documents are official BLM permanent records and must be retained in accordance with the BLM Records Schedule, Schedule 16, Item 1.

1.  The Enterprise Data Framework.

2.  Any data documentation developed for an application including Data Flow Diagrams (DFD), Entity Relationship Diagrams (ERD), Narrative Business Documentation, and Applications' data dictionaries are managed in cooperation with the designated National, State, Center, or FO Data Stewards. Those responsible individual data personnel are also designated as Official Records Custodians for Corporate Data Applications.

3.  The BLM Data Management Strategy and Tactical Plan are consolidated and maintained by the Bureau Data Administrator.

4.  Data Standards are adopted and approved through the National Data Stewards for Corporate Data and their Applications and are issued through Instruction Memoranda, Information Bulletins, or included in User Guides, Manuals Sections, and Handbooks issued through the Directives System. Approved data standards will be made accessible through the Directive System.

5.  Data Quality Assurance Plans include procedural and maintenance guidance and responsibilities issued by the BLM resource program areas by means of the Directives System.  Data quality results may require filing with or cross referencing Official Agency Record Documentation and should be contained in the respective BLM Office's Records Inventory and Data Quality Assurance Plan, along with their Quality Control procedures.

B.  Training Course Material.  NTC will maintain the official BLM record copy of course material in accordance with the BLM Records Schedule, Schedule 1, Item 29(a)(1).

C.  System Documentation.  The system or application owner with the assistance of the Records Manager will maintain and dispose of the supporting system documentation. These records are filed in accordance with BLM Manual 1220 and retained in accordance with the same records schedule authority as the records that are being automated.

D.  Data Repositories, Data Standards, Data Quality Assurance Plans.  The system or application owner maintains and disposes of the official record copy of these documents. The Data Administrator maintains a working copy, which can be disposed of when no longer needed. The IRM staff maintains the official files for all corporate data systems it develops and manages.

E. Inventory. Data inventory information is to be contained within the originating office's official records inventory. The disposition authority for this record is the General Records Schedule, Schedule 16, Item 2b.

F. Land, Resource, Management Plans and Information Resource Management (IRM) Plans. These plans support project activities and system management improvement for a program area of concern, e.g., wilderness. Management plans are filed in accordance with the associated subject code number and disposed of in accordance with BLM Records Schedule 16, Item 5. IRM Plans cover a period of 3 to 5 years, and, as such, all input documents from program offices and States/Centers are considered temporary records and should be disposed of in accordance with the BLM MS-1200 - Appendix 2, GRS/BLM Combined Records Schedule.

1.9    Coordination Requirements

Data management requirements shall be coordinated and disseminated through the designated Data Administrators at the WO, National Centers, State Office (SO), and FO levels. Data management is a responsibility placed on all BLM employees who collect, maintain, and/or exchange data.

A. Designated Data Stewards, at the National Program level, are charged with tracking BLM Corporate data requirements, definitions, standards, and controls on collection and management for the benefit of the Program Leader or Project Manager. One of the responsibilities of the Data Steward is to set accuracy standards for the data and track the quality of the data. The Data Stewards are also responsible for bringing data anomalies and changed or new data standards to the attention of senior management, data administrators, application owners, program leads, and other appropriate parties.

B. Project and Program managers shall provide a data management plan for all IT efforts within their approval jurisdiction. Audits shall be conducted by the Project or Program Manager to ensure that the requirements of sound data management are met. The Branch of Resource Data under the NOC  must be in contact with the Project Manager or the designated data manager to coordinate data activities, monitor data management plans, and assess whether the goals of the individual data management plans have been met. Additionally, management control reviews for BLM programs will include measures for ensuring that the data captured and maintained by the BLM conforms to legal requirements and is consistent with the BLM's data management policies. Policy conflicts will be escalated to higher levels of management for resolution as necessary.

C. The Data Management program participates actively in the BLM Enterprise Data Framework development to consolidate data requirements, expand, and refine data standards and definitions to include all BLM programs, reduce the instances of redundant data collection and maintenance, and to relate only the most critical business-related information directly to BLM's business needs. The "Data" layer of the BLM Enterprise Data Framework is developed and coordinated with the BLM's Data Administrator, State Data Administrators, and the NOC Branch of Resource Data.

1.10  Program Evaluation

Audits of data will be conducted as part of the resource program review process including Management Control Reviews and office-wide management reviews. The documentation associated with those reviews and audits will be made available to the BLM Data Administrator.

A.  Data management requirements shall be coordinated and disseminated through the designated Data Administrators at the WO, National Centers, State Office (SO), and FO levels. Data Management and the quality of data are responsibilities placed on all BLM employees who collect, maintain, and/or exchange data. While Data Stewards are not ultimately responsible for data accuracy, they are responsible for bringing data anomalies and changed or new data standards to the attention of senior management, data administrators, application owners, program leads, and other appropriate parties.

1.11  Relationship with Other BLM Programs

The BLM Data Administration is a support program for all of BLM Programs. As such, it is dependent on these Directorates for identification of their data management requirements, including: data entity and element definitions, accuracy requirements, data quality procedures and assurance plan needs, review criteria, and overall responsibilities associated with data stewardship. Implementation of data quality controls is a responsibility of the Data Steward for the particular data set.

A.  The BLM Data Administration Program is part of the overall Data Management program at the Department of the Interior, under the direction of the DOI Chief Information Officer (CIO).  Data policies are referenced in DM 378. The Office of the Inspector General (OIG) provides independent oversight through audit and evaluation of the Department's resources management program in accordance with the "Inspector General's Act of 1978."