

**UNITED STATES DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
Oregon State Office  
P.O. Box 2965  
Portland, OR 97208**

**In Reply Refer to:**  
1283 (OR-955.2) P

September 5, 2003

EMS TRANSMISSION 09/11/2003  
Instruction Memorandum No. OR-2003-114  
Expires: 9/30/2004

To: DMs, DSDs, Staff and Branch Chiefs  
From: Associate State Director  
Subject: Procedures for Adopting and Managing Data Standards

**Program Area:** Data Management

**Purpose:** Establish consistent methods for the development and maintenance of data standards throughout Oregon/Washington (OR/WA) Bureau of Land Management (BLM).

**Policy/Action:** All new data applications (spatial and non-spatial) that are either used by or benefit multiple offices in OR/WA are to follow the procedures outlined in the Data Standards Development Process (Attachment 1) to establish standards for the data used in that application. Resulting data standards are to be documented as specified in the Data Standard Specifications (Attachment 2).

**Timeframe:** Immediate

**Background:** The objectives of data standards are to increase communication and increase productivity. Adherence to data standards reduces redundancy in the OR/WA BLM data resource and enables greater data sharing. To achieve these objectives there must be clear specifications and guidelines for the creation of data standards. The Washington Office recently issued Instruction Memorandum No. 2003-125 which established similar procedures for national level application development activities. This directive represents the interpretation of those procedures for use in OR/WA.

**Manual/Handbook Sections Affected:** None

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**Coordination:** A draft of this policy was circulated for review as Information Bulletin No. OR-2003-199. Comments and suggestions received during the review were incorporated into the final procedures.

**Contact:** Stanley Frazier, State Data Administrator, OR955.2, (503)808-6009.

**Districts with Unions** are reminded to notify their unions of this Instruction Memorandum and satisfy any bargaining obligations before implementation. Your servicing Human Resources Office or Labor Relations Specialist can provide you assistance in this matter.

Signed by  
Charles E. Wassinger

Authenticated by  
Mary O'Leary  
Management Assistant

2 Attachments

- 1 - [Data Standards Development Process](#) (6pp)
- 2 - [Data Standard Specifications](#) (3pp)

Distribution

WO-560 (725 LS)

**OR/WA DATA STANDARDS DEVELOPMENT PROCESS**  
**8/15/2003**

<b>TASK</b>	<b>REQUIRED PRODUCTS</b>	<b>WHO</b>
A. Identify Need for New/Revised Spatial Layer or Database 1. Business Requirement 2. Management Approval	Statement of Work (scaled to the complexity of the project) 1. Data Standards Proposal or 2. Project Charter	Project Manager or State Data Steward
B. Develop/Verify Data Standard (see Attachment 2) 1. Establish Team 2. Draft Standard 3. Review 4. Finalize Standard 5. Management Approval	Data Standards Document (draft and final documents submitted to State Data Administrator)  Documented in State Data Dictionary (Power Designer CASE tool)	Project Manager or State Data Steward with assistance from State Data Administrator
C. Implementation Plan 1. Develop Plan 2. Review 3. Management Approval	Instruction Memorandum (officially establishing data standard and initiating data development)	Project Manager or State Data Steward and Data Administrator
D. Maintain Data Standard 1. Periodic Review 2. Propose Changes 3. Review 4. Finalize Changes 5. Management Approval 6. Retire and Archive	Instruction Memorandum Revising Data Standard  Instruction Memorandum to Retire Data Standard	State Data Steward and State Data Administrator

Attachment 1 – 1

Supporting Activities – These activities occur at all phases of data standard development and management.

A. Develop/Verify Metadata 1. Geospatial Metadata for GIS Layers 2. Corporate Metadata Repository for National-Level Systems 3. State Data Dictionary	Draft and Final Metadata (submitted to State Data Administrator) 1. FGDC-Compliant Spatial Metadata 2. Bureau Repository 3. OR/WA Data Dictionary	Project Manager or State Data Steward with assistance from State Data Administrator
B. Project Status 1. Project Name 2. Current Step in this Process that is in Progress 3. Next Step 4. Who Has the Current/Next Action	Project Status Posted on Web	Project Manager or State Data Steward and State Data Administrator

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## Data Standards Development Process 8/15/2003

The objectives of data standards are to increase communication and increase productivity. To achieve these objectives there must be clear specifications and guidelines for the creation of data standards. Such specifications and guidelines enable different teams to produce data definitions of consistent quality. These specifications and guidelines achieve their purpose when data is defined in ways that increase communication and productivity among business areas across the enterprise, between business and information systems personnel, and between data management and application development personnel.

The following procedure/process contains the specifications and guidelines for the creation of data standards in OR/WA BLM. These procedures are to be followed for all new application development, both spatial and non-spatial.

### **A. Identify Need for New/Revised Spatial Layer or Database**

The process for developing a data standard assumes that a business-driven need exists and has been approved by appropriate managers. Appropriate business process modeling should be completed prior to development of a data standard. A data standards' proposal ([see Washington Office Instruction Memorandum No. 2003-125, Procedures for Adopting and Managing Data Standards](#)) or a project charter, results from this phase.

### **B. Develop/Verify Data Standards**

1. The BLM business community requests that the appropriate State Data Steward provide a new data standard. In general, the Data Steward will serve as a conduit to the affected business community.
2. A Data Standard Adoption Team leader and Data Standard Adoption Team are appointed by the State Data Steward. This team develops a proposal for the new standard. This proposal (see Attachment 2 for data standard contents) sets out all the information needed by management to decide whether this effort should go forward.
3. The draft proposal is evaluated by the business community, State Data Administrator, and others, and eventually is finalized by the Data Standard Adoption Team. A request for approval is routed to the management of the benefiting activities.

### **C. Implement Data Standard**

This step begins with developing an *implementation plan*, which prioritizes and schedules the transition of existing data and new data collection to the new standard. Implementation may require years, and the implementation plan may dictate that the new standard will never be applied to older data sets that are not re-used in current decisions. An implementation plan may be simple or very detailed, depending on the complexity of the data set.

The approved implementation plan will be executed under leadership of the State Data Steward.

## **D. Maintain Data Standard**

Once approved and implemented, a standard will be assessed periodically for adequacy and usefulness, and the need for any changes will be evaluated regularly. In this step, changes are made and implemented whenever business needs justify the effort. This process includes archiving data standards as dictated by the appropriate records retention schedule.

Maintenance steps will typically include the following:

*Evaluate Data Standard Usefulness* - Solicit and analyze feedback about how well each standard is working. Also, evaluate the actual adherence of data content to each data standard as an indicator of problems or inadequacies in the standard. Ensure that the experience and interests of external agencies and customers are considered fully; a revision will have impacts beyond the bounds of the BLM.

Implementation of any data standard, as well as programmatic experience in using the standard, may generate requirements for changes to the data standard. These would normally begin the maintenance process for a data standard.

*Evaluate Change Requests* - Evaluate requests for changes to determine whether they are valid and whether they represent a need to modify the data standard, or whether they are simply minor maintenance needs. This evaluation requires balancing decisions by the Data Standard Adoption Team. They must balance the value of changing a standard against the problems and costs associated with updating and modifying the standard, the actual data governed by the standard, and the metadata.

*Modify the Data Standard* - A “modification” requires changes to the structure or definitions of the data standard. These are the types of changes that would cause existing data to be re-collected, edited or converted to meet this new structure or definition. Some examples are as follows:

- The addition of new data elements.
- The splitting of an existing data element into multiple data elements.
- Redefining a data element so that the meaning is different than originally established.

A modification request goes through the same steps involved in proposing a data standard to ensure that all stakeholders are aware of this proposed change and agreement has been reached.

*Maintain the Data Standard* - “Maintenance” is limited to minor changes that would not cause the re-collection of or edits to data.

Maintenance work does not significantly change the structure or definitions contained in the data standard. Examples are the correction of spelling or the addition of a domain value that is within the original meaning of the data element.

*Revise Data Standard* - Make maintenance changes to the data standard. The revised data standard is sent to the State Data Administrator for posting to the State Data Dictionary and for notification to affected stake holders.

Attachment 1 - 4

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*Retire and Archive the Data Standard* - Standards that are no longer needed, nor are suitable for the revision process, will be formally retired by Instruction Memorandum. These standards will be archived, along with all records associated with their development and revision history, in accordance with records retention policy.

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## Data Standards Supporting Activities

### **Documentation**

Generating a quality data standard is of little use unless that information is documented and stored in a manner that is accessible to all interested parties. The data administration staff maintains an OR/WA State Data Dictionary for this purpose. Once standards are finalized, reports from this dictionary are generated and placed on the OR/WA Intranet site in order to make this information available to all users. If the data system being developed is a spatial data layer, then the requirements of the Federal Geographic Data Committee (under Executive Order 12906) must also be met. This means that geospatial metadata must be created for the data layer and this information posted to the geospatial data clearinghouse (<http://www.or.blm.gov/metaweb>).

### **Review Process**

All proposed data standards must be subjected to full and open review by all interested parties. This is done by issuing proposed standards as an Information Bulletin and asking for comments. These draft standards are also shared with interagency partners, as appropriate. Once comments are received, the State Data Steward, in collaboration with the subject matter experts chosen to assist in the standards development, review those comments and make any needed changes in the proposed data standard. If those changes are considered major, then the standard will be re-issued for another round of review and comment.

### **Publish Data Standard**

Data standards are issued as an Instruction Memorandum. This action places them into the Bureau directives system and designates them an officially adopted standard. Any future changes to the data standard must go through this same process. Changes are not officially adopted until a directive has been issued.

The latest version of the data standards are maintained on the OR/WA Intranet. A list of the current data standards is published via a directive at least once a year; more often if there have been many new/revised standards developed. This makes the Intranet listing an official repository of the data standards, even if the original directive that issued the standard expires.

