Oregon/Washington Bureau of Land Management

SAMPLE POINTS

SPATIAL DATA STANDARD

Bureau of Land Management Hydrologist Andy Hamilton and Chelsea Aquino use liquid nitrogen to freeze core soil samples to measure whether wetland restoration actions are having the intended benefit of rebuilding the lost organic soils needed to restore wetland vegetation and functions. Photo by Kevin Abel, BLM. Image taken on 9/19/2013.

Document Revisions

Revision	Date	Author	Description	Affected Pages
1.0	5/24/2012		1st released version.	All
2.0	5/6/2014		Corrections to text.	
2.1	02/07/2017	Eric Hiebenthal	Added Document revisions section. Added new field SAMPLE_GUID for mobile editing.	Page 2, Section 4.1, Page 11
2.2	03/11/17	Kyler Diershaw	Updated State Data Administrator contact 4 places	Section 1.1, 2.5, 4.0, 12.0
2.3	03/17/17	Kyler Diershaw	Add automated TOC Updated State Records Administrator Update Records Retention Schedule Update Org Table	Section 1.1 1.3 12.1
2.4	05/15/2019	Al Thompson	Edit and update format	All
2.5	01/15/202	Al Thompson	Edit and update to revised format	All
2.6	8/7/2020	Dana Baker-Allum	Added DRAINAGE_AREA_AC field.	12, 16
3.0	2/9/2021	Dana Baker-Allum	Increased length of SAMPLE_GRP field. Added new field CURRENT_CD. Corrected errors in section 1. Corrected field lengths in section 7. Updated section 2.3 (relationships). Updated figure 1 and 2. Updated title page image. Released 3rd version.	Many

Navigation

This document uses hyperlinks to display additional information on topics. External links are displayed with an underline. Internal links are blue text, not underlined. After clicking on an internal link, press the **Alt +left arrow** keys to return to the original location from the target location.

Table of Contents

1 General Information

This dataset represents monitoring and sample locations (points). Monitoring is a generic term describing various kinds of assessment that the BLM makes on public land natural resources and/or management actions undertaken. The SAMPLE_PT dataset represents places where a measurement of some type has occurred. Examples of measurement types are vegetation transects or plots, soil pit descriptions, and observations/photos of resource use or impact. A measurement is a specific quantitative or qualitative value obtained with a standard method. The measurements are taken at a point (or transect extending from a point) on a date. Generally, the intent is to repeat the same measurements over many years.

- Dataset (Theme) Name: Monitoring and Sample Points
- Dataset (Feature Class): SAMPLE_PT

1.1 Roles and Responsibilities

Table 1 Roles and Responsibilities

Roles	Responsibilities
State Data Steward	The State Data Steward responsibilities include approving data standards and business rules, developing Quality Assurance/Quality Control procedures, identifying potential Privacy issues, and managing that data as a corporate resource. The State Data Steward coordinates with field office data stewards, the State Data Administrator, Geographic Information System (GIS) coordinators, and national data stewards. The State Data Steward reviews geospatial metadata for completeness and quality.
GIS Technical Lead	The GIS Technical Lead works with data stewards to convert business needs into GIS applications and derive data requirements and participates in the development of data standards. The GIS technical lead coordinates with system administrators and GIS coordinators to manage the GIS databases. The GIS technical lead works with data editors to ensure the consistency and accordance with the established data standards of data input into the enterprise Spatial Database Engine (SDE) geodatabase. The GIS technical lead provides technical assistance and advice on GIS analysis, query, and display of the dataset.
State Data Administrator	The State Data Administrator provides information management leadership, data modeling expertise, and custodianship of the state data models. The State Data Administrator ensures compliance with defined processes for development of data standards and metadata, and process consistency and completeness. The State Data Administrator is responsible for making data standards and metadata accessible to all users. The State Data Administrator coordinates with data stewards and GIS coordinators to respond to national spatial data requests.
State Records Administrator	The State Records Administrator assists the state data steward to identify any privacy issues related to spatial data. The state records administrator also provides direction and guidance on data release and fees. The state records administrator classifies data under the proper records retention schedule and determines the appropriate Freedom of Information Act category.

1.2 FOIA Category

Public

1.3 Records Retention Schedule

The DRS/GRS/BLM Combined Records Schedule under Schedule 20/52a (Electronic Records/Geographic Information Systems) does NOT list this theme as one of the system-centric themes that are significant for BLM's mission that must be permanently retained.

TEMPORARY. Delete when no longer needed for administrative, legal, audit, or other operational purposes (subject to any records freeze or holds that may be in place).

Oregon/Washington (OR/WA) Bureau of Land Management (BLM) Guidebook for Management of Geospatial Data (v1) Section 15.2 - Corporate Data Online Archives prescribes:

"Vector annual archives are retained online for 12 years. Each year, data that has reached 12 years old is copied off-line, to be retained until no longer needed (determined by data stewards and program leads), with format and readability maintained in a five (5) year "tech refresh" update cycle."

1.4 Security/Access/Sensitivity

The Sample Points theme does not require any additional security other than that provided by the General Support System (the hardware/software infrastructure of the OR/WA BLM).

This dataset is not sensitive and there are no restrictions on access to this data, either from within the BLM or external to the BLM. This dataset falls under the standard Records Access Category 1A-Public Data.

There are no privacy issues or concerns associated with these data themes. A privacy impact assessment was submitted for this dataset on September 15, 2016. To avoid any potential privacy issues, the attribute VERSION_NAME is only maintained in the edit version of the dataset. In addition, the attributes CLASSIFIER and FILEPATH are withheld from the dataset when published for public consumption.

1.5 Keywords

Keywords that can be used to locate this dataset include:

- BLM Thesaurus: Management, Vegetation, Wilderness, Wildlife, and Forest
- Additional keywords: Drinking Water, Ecosystem, Environment, Environmental Impact Assessment (EIA), Environmental Impact Statement (EIS), Environmental risk, Ground Water, Landscape, Meteorology, Monitoring, National Environmental Policy Act (NEPA), Natural resources, Nature, Nature preserves, Risk, Sites, Solid Waste, Spills, Surface Water, Waste storage, Water quality.
- ISO Thesaurus: biota, environment

1.6 Subject Function Codes

BLM Subject Function codes used to describe this dataset include:

- 1283 - Data Administration
- 1735 - Renewable Resource Monitoring

2 Dataset Overview

2.1 Usage

This dataset is used to depict sample points on maps. For any area or resource, the dataset shows all types of monitoring and sampling that has occurred. In addition, for any sampling, the dataset lists all the sample locations with basic information about type and methodology, along with the date the sample point was established and last date it was visited. The dataset does not provide the actual, measured values because there are potentially a great number of measurements over a great number (and ever increasing) number of years. The dataset includes an identifier (SAMPLE_ID) which is unique for each sample type (SAMPLE_TYPE) and can be used to link to an external table, spreadsheet, or database with the detailed information. The dataset also includes a field (FILEPATH) to hold the actual photo, file, table, or directory location. The FILEPATH can be used in GIS to hyperlink the spatial points so that the photo or other file appears when the point is clicked.

Sample points might be used for classifying satellite or other imagery patterns. Similarly, they might be used along with other data inputs to create polygons of generalized or summary land cover.

There may be many sample points within a small area. New sample points are added every year while some are discontinued. Data associated with discontinued points are usually retained for long-term studies.

2.2 Sponsor/Affected Parties

The sponsor for this dataset is the Deputy State Director, Resource Planning, Use, and Protection.

Monitoring and sample points are defined by and specific to the BLM and occur on BLM lands. However, some sampling methods are standardized by other agencies. For example, soil descriptions follow Natural Resources Conservation Service protocols. It is sometimes necessary or advisable to coordinate sampling with other agencies or private organizations.

2.3 Relationship to Other Datasets, Databases, or Files

Relationship between SAMPLE_PT and other GIS Datasets:

- Monitoring and sample points are potentially related to all other GIS feature classes.
- Sample points are related to many vegetation datasets. Ecological Site Inventory vegetation observation points document the mapped current vegetation and potential vegetation communities. Soil description locations document soil map units. Stand Exam points are aggregated to document (or create) Forest Stand polygons. Sample points might serve to monitor and document Aspen stands, Old Growth, Soil Crusts, and other special vegetation areas.
- Sample points are used to monitor resource use such as grazing and recreation. Grazing allotments, recreation sites and special management areas are all described in separate data standards.
- Sample points are sometimes used to monitor the effectiveness of land treatments such as a prescribed burn, mechanical or protection treatment. Treatments are described in a separate data standard. These relationships are identified by the SAMPLE_TYPE attribute and TRT_PROJ_NM.
- Sample points taken in water features (streams, springs, and lakes) may also have additional attributes recorded in tables described in the Water Quality and Quantity data standard.
- Greenline and Riparian photo points are recorded in SAMPLE_PT.
- River campsites should be entered into the OR/WA geospatial dataset for recreation sites (RECSITE).

It is expected that SAMPLE_PT will have many associated files and databases relevant to programs and/or BLM districts. Examples might include water temperature spreadsheets, vegetation plot plant species database, soil description database, or photo library.

2.4 Data Category/Architecture Link

This data theme is a portion of the Oregon Data Framework (ODF) shown in Figure 1, Oregon Data Framework (ODF) Overview on page 9. The illustration is a simplified schematic of the entire ODF showing the overall organization and entity inheritance. The ODF utilizes the concept of inheritance to define specific instances of data. The ODF divides all OR/WA resource-related data into three general categories:

- Activities
- Resources
- Boundaries

These data themes are a portion of the Oregon Data Framework (ODF). The ODF utilizes the concept of inheritance to define specific instances of data. All OR/WA resource-related data are divided into three general categories: Activities, Resources, and Boundaries.

These general categories are broken into sub-categories that inherit spatial characteristics and attributes from their parent category. These sub-categories may be further broken into more specific groups until the basic data set cannot be further sub-divided. Those basic data sets inherit all characteristics of all groups/categories above them. The basic data sets are where physical data gets populated. Those groups/categories above them do not contain actual data but set parameters which all data of that type must follow.

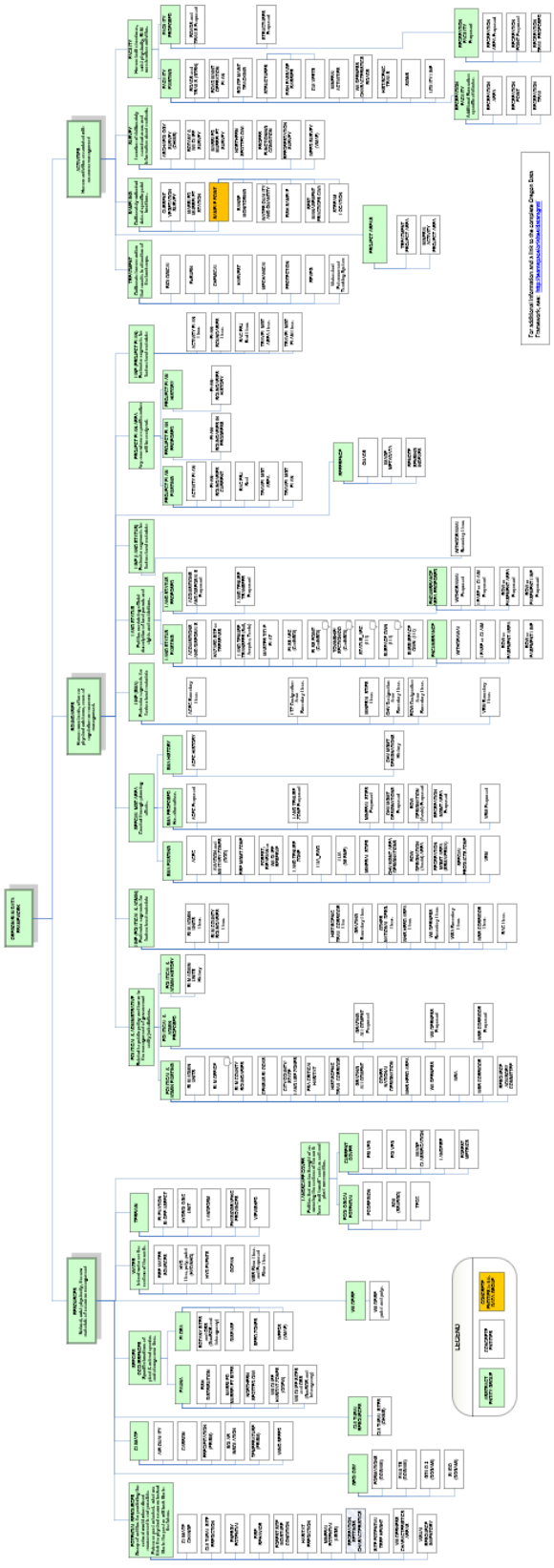

Figure 1 Oregon Data Framework Overview

Physical data is populated in the basic data sets. Those groups/categories above them do not contain actual data but set parameters that all data of that type must follow. See Figure 2, Data Organization Structure for a simplified schematic of the entire ODF showing the overall organization and entity inheritance. The Sample Points entities are highlighted. For additional information about the ODF, contact the State Data Administrator. The State Data Administrator's contact information can be found at the following link:

https://www.blm.gov/about/data/oregon-data-management

In the ODF, Sample Points are considered an Activity and are categorized as follows:

ODF

Activities

Sampling

SAMPLE_PT

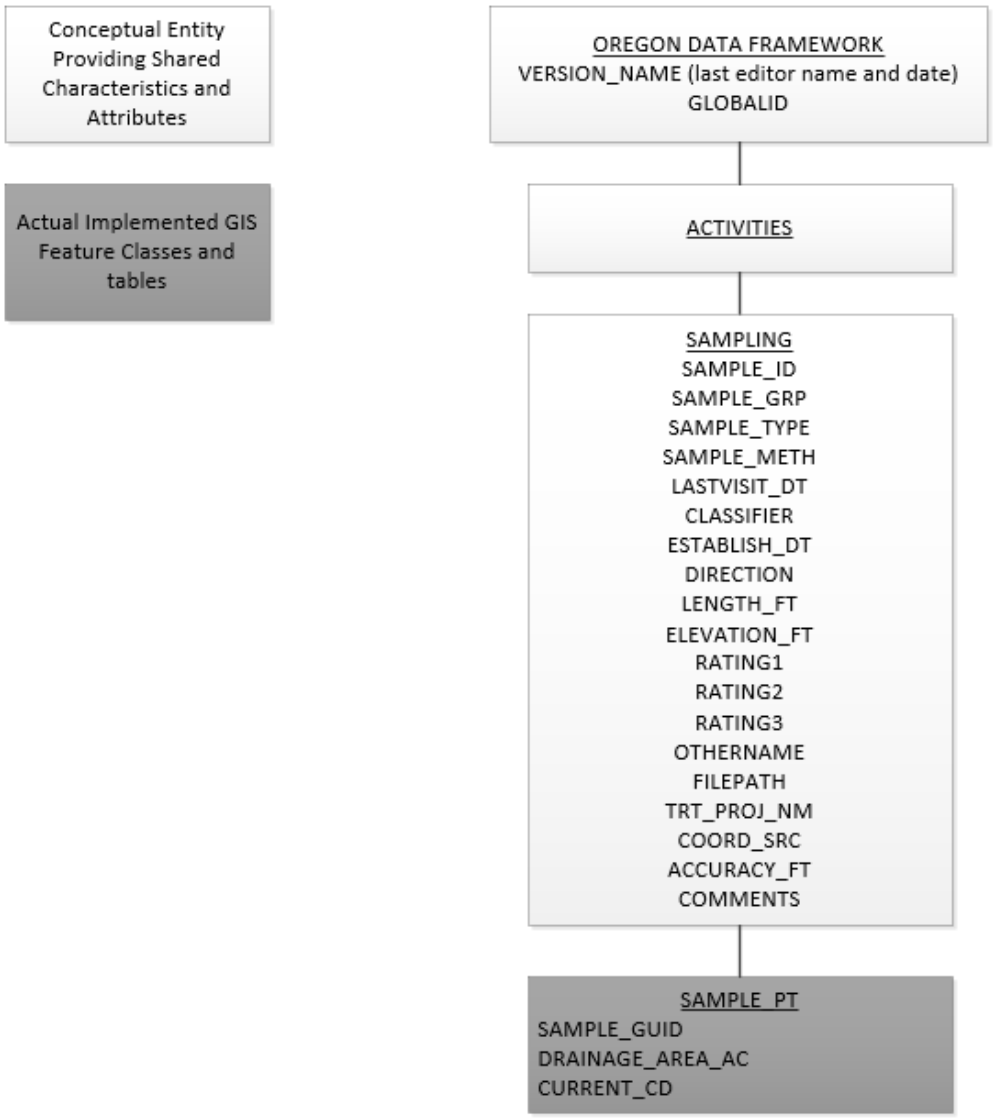

Figure 2 Sample Points Data Organization/Structure

2.5 Relationship to DOI Enterprise Architecture Data Resource Mode

The Department of the Interior (DOI) Enterprise Architecture contains a component called the Data Resource Model. This model addresses the concepts of data sharing, data description, and data context. This data standard provides information needed to address each of those areas. Data sharing is addressed through complete documentation and simple data structures which make sharing easier. Data description is addressed through the section on Attribute Descriptions. Data context is addressed through the data organization and structure portions of this document. In addition, the DOI Data Resource Model categorizes data by use of standardized Data Subject Areas and Information Classes. For this data set, the Data Subject Area and Information Class are:

- Data Subject Area: Geospatial
- Information Class: Location

3 Data Management Protocols

3.1 Accuracy Requirements

Required attributes have an accuracy of at least ninety percent.

Sample points require a high level of positional accuracy (generally within 50 feet) in order to be useful for intended purposes. A sample point represents the location of specific measurement of a resource at a point in time. The resource being measured may not even exist in a different (even if nearby) location. It may be critical that a point is located on one side or the other of a stream or road. There may be many sample points close together and different Global Positioning System (GPS) locations obtained with every visit. Accurate location is critical to being able to distinguish points that are supposed to be different from points that are supposed to be in the same location. The attribute ACCURACY_FT provides the accuracy of each sample point.

3.2 Collection, Input, and Maintenance Protocols

Most monitoring and sampling points are input from GPS coordinates or using Digital Raster Graphic (DRG) or Digital Orthoquad (DOQ) backdrops for heads-up digitizing. Some are digitized from paper maps. The source of the coordinates is captured in the attribute COORD_SRC. It is possible and likely that there will be multiple sampling points in the same location, so it is important to check for unintentional duplicates. Often a district will have a long history of monitoring and sampling locations and there may be multiple sets of coordinates and multiple different names for the same spot. When the correct location and current name is determined, the other locations should be deleted. Former name(s) can be placed in OTHERNAME to retain the reference to older records. Other agencies, universities or private organizations might also have monitoring or sampling points on BLM land. Data sharing is possible if there is an agreement on sample locations and collection protocols.

3.3 Update Frequency and Archival Protocols

Data is updated annually, after field season or as needed. Also, it is archived annually, at the end of the fiscal year.

3.4 Statewide Monitoring

The State Data Stewards are responsible for checking consistency across districts in the amount, type and method of monitoring and sampling relevant to their programs.

4 Monitoring and Sample Points Geodatabase Schema (Simplified)

General Information: Attributes are listed in the order they appear in the geodatabase feature class. The order is an indication of the importance of the attribute for theme definition and use. There are no aliases unless specifically noted. The domains used in this data standard can be found in Appendix A. These are the domains at the time the data standard was approved. Domains can be changed without a re-issue of the data standard. Current domains are found on the internal OR/WA SharePoint data management page. Some of the domains used in this data standard are also available at the following web site: https://www.blm.gov/about/data/oregon-data-management

For domains not listed at that site contact: State Data Administrator.

4.1 SAMPLE_PT (Monitoring and Sampling Points)

Attribute Name	Data Type	Length	Default Value	Required	Domain
SAMPLE ID	String	60		Yes	
SAMPLE_GRP	String	50		No	
SAMPLE_TYPE	String	30		Yes	dom_SAMPLE_TYPE
SAMPLE_METH	String	30		No	dom_SAMPLE_METH
LASTVISIT_DT	String	8		Yes	
CLASSIFIER	String	30		No	
ESTABLISH_DT	String	8		No	
DIRECTION	String	3		No	dom_COMPASS_DIR
LENGTH_FT	Integer	short		No	
ELEVATION_FT	Integer	short		No	
RATING1	String	20		No	
RATING2	String	20		No	
RATING3	String	20		No	
OTHERNAME	String	50		No	
FILEPATH	String	150		No	
TRT_PROJ_NM	Sting	50		No	
	String	7	Unknown	No	dom_COORD_SRC

COORD_SRC					
ACCURACY_FT	Integer	short	0	No	
COMMENTS	String	255		No	
VERSION_NAME	String	50	InitialLoad	Yes	
SAMPLE_GUID	GUID	38		Yes	
DRAINAGE_AREA_AC	Double			No	
CURRENT_CD	String	1	C	Yes	dom_CURRENT_CD

5 Projection and Spatial Extent

All feature classes and feature datasets are in Geographic, North American Datum 83. Units are decimal degrees. Spatial extent includes all lands managed by the BLM OR/WA, bordered on the North by Latitude 49.5, on the South by Latitude 41.5, on the East by Longitude -116 and on the West by Longitude -125. The area of coverage is not "wall-to-wall," and may cover only a small percentage of the total.

6 Spatial Entity Characteristics

- SAMPLE_PT
  - Description: Instance of Sampling group.
  - Geometry: Points may be coincident.
  - Topology: No.
  - Integration Requirements: None.

7 Attribute Characteristics and Definitions

In alphabetical order.

7.1 ACCURACY_FT

Geodatabase Name	ACCURACY_FT
BLM Structured Name	Accuracy_Feet_Measure
Inheritance	Inherited from Entity SAMPLING
Alias Name	None
Feature Class Use/Entity Table	Used in Feature Class: SAMPLE_PT
Definition	How close, in feet, the spatial GIS depiction is to the actual location on the ground. There are several factors to consider in GIS error: scale and accuracy of map-based sources, accuracy of GPS equipment, and the skill level of the data manipulators. A value of "0" indicates no entry was made. This is the correct value when the COORD_SRC is another GIS theme (Digital Line Graphs (DLG), Geographic Coordinate Database (GCD), and Digital Elevation Model (DEM)) because the accuracy is determined by that theme. However, if COORD_SRC is MAP (digitized from a paper map) or GPS, a value of "0" indicates a missing value that should be filled in either with a non-zero number or "-1." A value of "-1" indicates that the accuracy is unknown, and no reliable estimate can be made.
Required/Optional	Optional
Domain (Valid Values)	No Domain. Examples: 3 (for high accuracy GPS), 40 (best possible for USGS 24K topo map), 200
Data Type	Short Integer

7.2 CLASSIFIER

Geodatabase Name	CLASSIFIER
BLM Structured Name	Classifier_Name
Inheritance	Inherited from Entity SAMPLING
Alias Name	None
Feature Class Use/Entity Table	Used in Feature Class: SAMPLE_PT
Definition	Name (mixed case, first and last) of the subject matter specialist most knowledgeable about the sample point (contact).
Required/Optional	Optional
Domain (Valid Values)	No Domain. Examples: Mary Smith, John Doe
Data Type	String (30)

7.3 COMMENTS

Geodatabase Name	COMMENTS
BLM Structured Name	Comments_Text
Inheritance	Inherited from Entity SAMPLING
Alias Name	None
Feature Class Use/Entity Table	Used in Feature Class: SAMPLE_PT
Definition	Free text for comments about the sample point.
Required/Optional	Optional
Domain (Valid Values)	No Domain. Examples: Mary Smith, John Doe
Data Type	String (255)

7.4 COORD_SRC

Geodatabase Name	COORD_SRC
BLM Structured Name	Coordinate_Source_Code
Inheritance	Inherited from Entity POLITICAL ADMIN SMA LINE
Alias Name	None
Feature Class Use/Entity Table	Used in Feature Class: SAMPLE_PT
Definition	The actual source of the GIS coordinates for the points.
Required/Optional	Optional
Domain (Valid Values)	dom_COORD_SRC
Data Type	String (7)

7.5 CURRENT_CD

Geodatabase Name	CURRENT_CD
BLM Structured Name	Feature_Current_Code
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	All feature classes
Definition	Whether the sample point is currently in use or historic. Date/age does not determine this but whether the entity is now removed, obsolete, replaced, or erased in some sense.
Required/Optional	Required (default value “C”)
Domain (Valid Values)	dom_CURRENT_CD

Data Type	String (1)

7.6 DIRECTION

Geodatabase Name	DIRECTION
BLM Structured Name	Coordinate_Source_Code
Inheritance	Inherited from Entity SAMPLING
Alias Name	None
Feature Class Use/Entity Table	Used in Feature Class: SAMPLE_PT
Definition	Direction of the sampling activity, if applicable. For example, the direction the camera is pointed or of a transect line. Expressed as one- or two-character compass cardinal direction points (eight choices, starting at N).
Required/Optional	Optional
Domain (Valid Values)	dom_COMPASS_DIR
Data Type	String (3)

7.7 DRAINAGE_AREA_AC

Geodatabase Name	DRAINAGE_AREA_AC
BLM Structured Name	Drainage_Area_Acres_Number
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	Used in Feature Class: SAMPLE_PT
Definition	The land area, measured in acres, that drains to the point where equipment is deployed.
Required/Optional	Optional
Domain (Valid Values)	No Domain.
Data Type	Double

7.8 ELEVATION_FT

Geodatabase Name	ELEVATION_FT
BLM Structured Name	Elevation_Feet_Measure
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	Used in Feature Class: SAMPLE_PT
Definition	The height of the ground above mean sea level.

Required/Optional	Optional
Domain (Valid Values)	No Domain.
Data Type	Short Integer

7.9 ESTABLISH_DT

Geodatabase Name	ESTABLISH_DT
BLM Structured Name	Sample_Point_Establish_Date
Inheritance	Inherited from SAMPLING
Alias Name	None
Feature Class Use/Entity Table	Used in Feature Class: SAMPLE_PT
Definition	The date the monitoring or sampling point was established in the field.
Required/Optional	Optional
Domain (Valid Values)	No Domain. Examples: 20080624, 1998, 200109, UNKNOWN
Data Type	String (8)

7.10 FILEPATH

Geodatabase Name	FILEPATH
BLM Structured Name	Filename_Path_Text
Inheritance	Inherited from SAMPLING
Alias Name	None
Feature Class Use/Entity Table	Used in Feature Class: SAMPLE_PT
Definition	Computer storage location for a photo file (e.g., jpg), Word document, spreadsheet, or another associated document. The value in this field serves as a hyperlink to that location and the file it opens. Could also be a directory or dataset where multiple files are being referenced that opens for further browsing.
Required/Optional	Optional
Domain (Valid Values)	No Domain. Examples: G:\bns\DistrictMonitoring\Upland\Andrews_Allotments\Alvord_Peak_6038\Pace_180\6038_001\6038-001.xls \EM_6.4.docx
Data Type	String (150)

7.11 LASTVISIT_DT

Geodatabase Name	LASTVISIT_DT
BLM Structured Name	Last_Visit_Sample_Date

Inheritance	Inherited from SAMPLING
Alias Name	None
Feature Class Use/Entity Table	Used in Feature Class: SAMPLE_PT
Definition	The last date that a sample was taken or measured at this point.
Required/Optional	Required
Domain (Valid Values)	No Domain. Examples: 20080624, 1998, 200109, UNKNOWN
Data Type	String (8)

7.12 LENGTH_FT

Geodatabase Name	LENGTH_FT
BLM Structured Name	Sample_Length_Feet_Measure
Inheritance	Inherited from SAMPLING
Alias Name	None
Feature Class Use/Entity Table	Used in Feature Class: SAMPLE_PT
Definition	Length of the sampling activity, if applicable. The sample point is taken as the starting point. Combined with DIRECTION, a line can be created if needed.
Required/Optional	Optional
Domain (Valid Values)	No Domain. Examples: 10, 25, 200
Data Type	Short Integer

7.13 OTHERNAME

Geodatabase Name	OTHERNAME
BLM Structured Name	Other_Name_Text
Inheritance	Inherited from SAMPLING
Alias Name	None
Feature Class Use/Entity Table	Used in Feature Class: SAMPLE_PT
Definition	It is not uncommon for the same monitoring or sampling point to have more than one name because of changes in staff and databases. Knowing the other names is sometimes critical to determining if the sample location is indeed the same or different than another named location. One or more historical names can be placed in this field.
Required/Optional	Optional
Domain (Valid Values)	No Domain.
Data Type	String (50)

7.14 RATING1

Geodatabase Name	RATING1
BLM Structured Name	First_Rating_Value_Text
Inheritance	Inherited from SAMPLING
Alias Name	None
Feature Class Use/Entity Table	Used in Feature Class: SAMPLE_PT
Definition	For monitoring and sampling activities that have only one or two ratings or measurements and a related table or database is not needed. This attribute holds the last recorded rating or measurement only. RATING1, 2, and 3 all refer to the same measurement date. The RATING2 is only used if there is a second measure besides what is recorded in RATING1 and RATING3 is only used if there is a third measure besides what is in RATING1 and 2. Acceptable values depend on SAMPLE_TYPE and SAMPLE_METH and are established by the program. They might be qualitative such as “Good” or “Stable” or a number.
Required/Optional	Optional
Domain (Valid Values)	No Domain.
Data Type	String (20)

7.15 RATING2

Geodatabase Name	RATING2
BLM Structured Name	Second_Rating_Value_Text
Inheritance	Inherited from SAMPLING
Alias Name	None
Feature Class Use/Entity Table	Used in Feature Class: SAMPLE_PT
Definition	For monitoring and sampling activities that have only one or two ratings or measurements and a related table or database is not needed. This attribute holds the last recorded rating or measurement only. RATING1, 2, and 3 all refer to the same measurement date. The RATING2 is only used if there is a second measure besides what is recorded in RATING1 and RATING3 is only used if there is a third measure besides what is in RATING1 and 2. Acceptable values depend on SAMPLE_TYPE and SAMPLE_METH and are established by the program. They might be qualitative such as “Good” or “Stable” or a number.
Required/Optional	Optional
Domain (Valid Values)	No Domain.
Data Type	String (20)

7.16 RATING3

Geodatabase Name	RATING3
BLM Structured Name	Third_Rating_Value_Text
Inheritance	Inherited from SAMPLING
Alias Name	None
Feature Class Use/Entity Table	Used in Feature Class: SAMPLE_PT
Definition	For monitoring and sampling activities that have only one or two ratings or measurements and a related table or database is not needed. This attribute holds the last recorded rating or measurement only. RATING1, 2, and 3 all refer to the same measurement date. The RATING2 is only used if there is a second measure besides what is recorded in RATING1 and RATING3 is only used if there is a third measure besides what is in RATING1 and 2. Acceptable values depend on SAMPLE_TYPE and SAMPLE_METH and are established by the program. They might be qualitative such as “Good” or “Stable” or a number.
Required/Optional	Optional
Domain (Valid Values)	No Domain.
Data Type	String (20)

7.17 SAMPLE_GRP

Geodatabase Name	SAMPLE_GRP
BLM Structured Name	Sample_Group_Identifier
Inheritance	Inherited from SAMPLING
Alias Name	None
Feature Class Use/Entity Table	Used in Feature Class: SAMPLE_PT
Definition	A sample grouping identifier, if needed.
Required/Optional	Optional
Domain (Valid Values)	No Domain. Examples: A, Rattlesnake, North, South
Data Type	String (50)

7.18 SAMPLE_GUID

Geodatabase Name	SAMPLE_GUID
BLM Structured Name	Sample_Globally_Unique_Identifier
Inheritance	Inherited from SAMPLING

Alias Name	None
Feature Class Use/Entity Table	SAMPLE_PT
Definition	Unique identifier for the Sample Points feature class.
Required/Optional	Required
Domain (Valid Values)	Example value: "{E37EF156-4C20-4A78-A9BE-9EB4E6F00544}"
Data Type	GUID

7.19 SAMPLE ID

Geodatabase Name	SAMPLE_ID
BLM Structured Name	Sample_Identifier
Inheritance	Inherited from SAMPLING
Alias Name	None
Feature Class Use/Entity Table	Used in Feature Class: SAMPLE_PT
Definition	Unique identifier for each sample point for the sampling indicated in SAMPLE_TYPE. Serves as the link to an external table (if any) with detailed measurement information by date (a one-to-many relationship). Districts are encouraged to develop standard naming schemes.
Required/Optional	Required
Domain (Valid Values)	No Domain. Examples: 5531-009, YA_1.5, WLD_RD_7, LUBI-01
Data Type	String (60)

7.20 SAMPLE_METH

Geodatabase Name	SAMPLE_METH
BLM Structured Name	Sample_Method_Code
Inheritance	Inherited from SAMPLING
Alias Name	None
Feature Class Use/Entity Table	Used in Feature Class: SAMPLE_PT
Definition	The method or standard protocol used to conduct the sampling activity at this point. The method is dependent on the SAMPLE_TYPE.
Required/Optional	Optional
Domain (Valid Values)	dom_CURRENT_CD **Feature Current Code.** Whether the entity is now removed, obsolete, replaced or erased in some sense. Has also been known as Treatment Current Code, Structure Current Code, Sample Point Current Code.

	<table><tr><th>Code</th><th>Value</th></tr><tr><td>C</td><td>C - Entity is still present on the ground</td></tr><tr><td>H</td><td>H - Entity is obsolete, obliterated or removed</td></tr><tr><td>N</td><td>N - Not applicable, entity still proposed</td></tr></table> dom_SAMPLE_METH
Data Type	String (30)

7.21 SAMPLE_TYPE

Geodatabase Name	SAMPLE_TYPE
BLM Structured Name	Sample_Type_Code
Inheritance	Inherited from SAMPLING
Alias Name	None
Feature Class Use/Entity Table	Used in Feature Class: SAMPLE_PT
Definition	The purpose for taking the sample at this location.
Required/Optional	Optional
Domain (Valid Values)	dom_SAMPLE_TYPE
Data Type	String (30)

7.22 TRT_PROJ_NM

Geodatabase Name	TRT_PROJ_NM
BLM Structured Name	Treatment_Project_Name
Inheritance	Inherited from SAMPLING
Alias Name	None
Feature Class Use/Entity Table	Used in Feature Class: SAMPLE_PT
Definition	The name of the associated treatment or project that is being monitored, measured, or otherwise sampled.
Required/Optional	Optional
Domain (Valid Values)	No domain
Data Type	String (50)

7.23 VERSION_NAME

Geodatabase Name	VERSION_NAME

BLM Structured Name	Geodatabase_Version_Text
Inheritance	Inherited from Entity ODF.
Alias Name	None
Feature Class Use/Entity Table	Used in Feature Class: SAMPLE_PT
Definition	Name of the corporate geodatabase version previously used to edit the record.
Required/Optional	Required
Domain (Valid Values)	No Domain. Example: sfrazier.GRA-121211-111034
Data Type	String (50)

8 Layer Files (Publication Views)

8.1 General Background

Master corporate feature classes/datasets maintained in the edit database (currently ORSOEDIT) are "published" to the user database (currently ORSOVCTR) in several ways:

- Copied completely with no changes (replicated).
- Copied with no changes except to omit one or more feature classes from a feature dataset.
- Minor changes made (e.g., clip, dissolve, union with ownership) in order to make the data easier to use.

These "Publication feature classes" are indicated by "PUB" in their name. They are created through scripts that can be automatically executed and are easily rebuilt from the master (ORSOEDIT) data whenever necessary.

Layer files are not new data requiring storage and maintenance but point to existing data. They have appropriate selection and symbolization for correct use and display of the data. They provide the guidance for data published on the web. Layer files are created by simple, documented processes, and can be deleted and recreated at any time.

All datasets are published, both internally and externally, with the attributes CLASSIFIER and VERSION_NAME removed (for privacy reasons).

SAMPLE_PUB_PT, intersected with ownership and non-BLM points removed, is created when the data is published from ORSOEDIT to ORSOVCTR. Both SAMPLE_PT and SAMPLE_PUB_PT are in ORSOVCTR, only SAMPLE_PUB_PT is published to BLMReplication and to the Web.

9 Editing Procedures

9.1 Overlapping Points

Overlapping points is not as big of a problem as with polygon data because they have no spatial extent. However, check for and delete duplicates.

9.2 Editing and Quality Control Guidelines

Checking for undesired duplicates is critical. Occasionally there are points inadvertently created with no geometry. Zoom to all, then select graphically and look for points that were not selected (there are records, but no geometry).

9.3 Snapping Guidelines

Sometimes, but not always, a sample point should be snapped to some other GIS feature, such as a road, stream, or boundary marker.

10 Abbreviations and Acronyms

Does not include abbreviations/acronyms used as codes for data attributes.

Table 2 Abbreviations/Acronyms Used

Abbreviations	Descriptions
BLM	Bureau of Land Management
DLG	Digital Line Graphs
DRG	Digital Raster Graphic
FOIA	Freedom of Information Act
GCD	Geographic Coordinate Database
GIS	Geographic Information System
NAD	North American Datum
NARA	National Archives and Records Administration
NRCS	Natural Resources Conservation Service
ODF	Oregon Data Framework
OR/WA	Oregon / Washington
SDE	Spatial Data Engine

A Domains (Valid Values)

These are the domains at the time the data standard was approved. Domains can be changed without a re-issue of the data standard. Current domains are found on the internal OR/WA SharePoint data management page. Some of the domains used in this data standard are also available at the following web site: http://www.blm.gov/or/datamanagement/index.php

For domains not listed at that site contact: contact the State Data Administrator.

Note	
Note	Domain CODE, as seen in the geodatabase, is added to the DESCRIPTION. For example, the domain CODE "ADMIN" has the DESCRIPTION of "ADMIN−Access only for BLM administrative purposes."

A.1 dom_COMPASS_DIR

Compass Cardinal Direction Code. Cardinal (North, South, East, West) Directions.

Code	Description
N	N - North
NW	NW - Northwest
W	W - West
SW	SW - Southwest
S	S - South
SE	SE - Southeast
E	E - East
NE	NE - Northeast

A.2 dom_COORD_SRC

Coordinate Source Code. The source of the geographic coordinates (lines, points, polygons).

Code	Description
CADNSDI	CADNSDI - Lines from or snapped to the CADNSDI dataset
CFF	CFF - Lines duplicated or buffered from Cartographic Feature Files (USFS)
DEM	DEM - Digital Elevation Model (30m or better accuracy) used for creation of contours
DIS	DIS - Lines generated to connect discontinuous features
DLG	DLG - Lines duplicated or buffered from (24K scale accuracy) USGS Digital Line Graphs
DOQ	DOQ - Screen digitized linework over Digital Orthoquad backdrop
DRG	DRG - Screen digitized linework over Digital Raster Graphic backdrop
GCD	GCD - Lines snapped to Geographic Coordinate Database Points
GPS	GPS - Lines obtained from a Global Positioning System device

Code	Description
IMG	IMG - Linework derived from interpretation of satellite or other non-photographic imagery
MAP	MAP - Digitized linework from hardcopy map
MTP	MTP - Lines duplicated from Digital Master Title Plat
SOURCEL	SOURCEL - Source Layer from BLM GIS
SRV	SRV - Survey methods were used to create the linework (e.g., COGO)
TIGER	TIGER - Tiger Data
TRS	TRS - Coordinates only given as a legal description (township, range, section)
UNK	UNK - Unknown coordinate source
WOD	WOD - WODDB Photogrammetric

A.3 dom_CURRENT_CD

Feature Current Code. Whether the entity is now removed, obsolete, replaced or erased in some sense. Has also been known as Treatment Current Code, Structure Current Code, Sample Point Current Code.

Code	Value
C	C - Entity is still present on the ground
H	H - Entity is obsolete, obliterated or removed
N	N - Not applicable, entity still proposed

A.4 dom_SAMPLE_METH

Sample Method Code. Method used to conduct a sampling activity.

Code	Description
BAF Variable Radius Plot	BAF Variable Radius Plot - For timber stand exams
Fixed Radius Plot	Fixed Radius Plot - For timber stand exams
AIM Upland Core Method	AIM Upland Core Method - assessment inventory and monitoring core methods consist of a series of monitoring methods described in Herrick et. Al. Intended to differentiate AIM sample points that have been collected at an upland or aquatic site.
BLM Tech Ref 1737-23 2011	BLM Tech Ref 1737-23 2011
BLM Tech Ref 1735-2 2016	BLM Tech Ref 1735-2 2016
BLM Tech Ref 1735-2 2017	BLM Tech Ref 1735-2 2017
Pace 180	Pace 180 - For vegetation
Nested Frequency	Nested Frequency - For vegetation
Line Transect	Line Transect - For vegetation or surface
Line Point-Intercept	Line Point-Intercept
Circle Plot	Circle Plot - For vegetation

Code	Description
Belt Transect	Belt Transect - For vegetation
Ocular Cover	Ocular Cover - Vegetation cover estimate
Ocular Count	Ocular Count - Visual estimate
Photo	Photo
Fred Hall 2002	Fred Hall 2002 - Photo method
Winward 2000	Winward 2000 - Greenline method
Counter	Counter - Traffic counter
Cole Browse	Cole Browse
Woody Utilization	Woody Utilization
Herbaceous Utilization	Herbaceous Utilization
Utilization Cage	Utilization Cage
ESI Veg Plot	ESI Veg Plot - Ecological Site Inventory
NRCS 232	NRCS 232 - Soil description
HOBO Temp Probe	HOBO Temp Probe
Hanna Multisensor Probe	Hanna Multisensor Probe
Trapping	Trapping
Other	Other
Unknown	Unknown

A.5 dom_SAMPLE_TYPE

Sample Type Code. The purpose for taking the sample.

Code	Description
Wilderness Use	Wilderness Use - Monitoring
Recreation Use	Recreation Use - Monitoring
Range Trend	Range Trend - Monitoring
Range Utilization	Range Utilization - Measurement
Vegetation	Vegetation - Plant Community
Riparian	Riparian - Monitoring
MIM	Mim - Multiple Indicator Monitoring
AIM Upland	AIM Upland - Assessment, Inventory, & Monitoring - Sample points that have been collected at an upland or aquatic site.
HAF	HAF - Habitat Assessment Framework Monitoring
Photo	Photo - Photo Sample Point
Greenline	Greenline - Riparian measurement

Code	Description
Shade	Shade - Measurement
Fish	Fish -
HMA	HMA - Wild horse use or count
Contract	Contract - Monitoring of a contract or permit
ACEC	ACEC - RNA monitoring
Stand Exam-EcoSurvey	Stand Exam-EcoSurvey -
Stand Exam	Stand Exam -
Aspen	Aspen - Stand monitoring
Treatment	Treatment - Effectiveness or implementation monitoring
Riparian Utilization	Riparian Utilization -
Wildlife Utilization	Wildlife Utilization - Measurement
Erosion	Erosion - Monitoring
Road/Trail	Road/Trail - Documentation
Soil	Soil - Description
Soil Crust	Soil Crust - Monitoring
Sensitive Plants	Sensitive Plants - Monitoring
Sensitive Birds	Sensitive Birds - Monitoring
Juniper	Juniper - Measurement
Mineral Potential	Mineral Potential - Test wells or drill sites
Water Temperature	Water Temperature - Measurement
Water Contaminants	Water Contaminants - Measurement
Study Plot	Study Plot - Research
Other	Other -
Unknown	Unknown -