



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

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May 24, 2012

EMS TRANSMISSION 05/29/2012

Instruction Memorandum No. OR-2012-051

Expires: 9/30/2013 **Extended to 09/30/2014**

To: DMs, DSDs, Staff and Branch Chiefs

From: State Director, Oregon/Washington

Subject: Monitoring and Sample Points Spatial Data Standard

Program Area: Multiple programs are involved in monitoring and sampling points including, but not limited to, wildlife, recreation, range, and fisheries.

Purpose: Establishes the Oregon/Washington (OR/WA) spatial data standard for sample points. Sample points represent places where a measurement of some type has occurred. The data standard (Attachment 1) defines how this type of data is to be captured in a Geographic Information System (GIS), defines attributes used, and defines coding schemes (domains). This data standard is composed of one data set (SAMPLE_PT). This data set has been added to the corporate spatial data editing system. The data can now be edited by approved field personnel following established procedures. This data is also now available for display and analytical purposes by all users.

Policy/Action: This data standard is to be followed for all spatial data about monitoring and sampling points. These data sets have many relationships to other data sets and databases that are described in the data standard.

Timeframe: This data standard is effective immediately.

Budget Impact: All field offices are currently capturing sample point data in a variety of ways. Implementation of this data standard will simplify this variety and should have a positive budget effect. Consolidation of sample point data into a statewide set of data will make display and analytical activities easier and less time-consuming.

Background: Sample points are a companion data set to the treatment data sets (issued by Instruction Memorandum (IM) OR-2012-039). Treatments are often monitored, and knowing the location of the sample points used in this monitoring is important for re-visit (an aid to physically find the point) and for determining the effectiveness of the treatment.

Manual/Handbook Sections Affected: None.

Coordination: A draft version of this data standard was reviewed by all OR/WA field offices (Information Bulletin OR-2011-068) and comments and suggestions for changes were received. These comments and suggestions were incorporated into this final data standard, where appropriate.

Contact: Stan Frazier, OR/WA State Data Administrator, at 503-808-6009; Pamela Keller, GIS Technical Support, at 541-573-4486; or Bob Hopper, State Data Steward for sample points, at 503-808-6118.

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

Signed by
Andrew M. Smith
Acting Associate State Director

Authenticated by
Rhondalyn J. Darnell
Records Section

Attachment
1 – Sample Points Spatial Data Standard (28pp)

Distribution
WO570 (Hawkinson)
OC530 (Chatfield)



SAMPLE POINTS SPATIAL DATA STANDARD



SAMPLE POINTS SPATIAL DATA STANDARD**TABLE OF CONTENTS**

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1. GENERAL INFORMATION

Dataset (Theme) Name: Monitoring and sample points

Dataset (Feature Class): SAMPLE_PT

1.1 ROLES AND RESPONSIBILITIES

Roles	Responsibilities
State Data Steward	The State Data Steward, Robert Hopper at 503-808-6118, is responsible for approving data standards and business rules, developing Quality Assurance/Quality Control procedures, and ensuring that data is managed as a corporate resource. The State Data Steward coordinates with field office data stewards, the State Data Administrator, Geographic Information System (GIS) coordinators, and with national data stewards. The State Data Steward reviews geospatial metadata for completeness and quality.
Lead GIS Specialist	The Lead GIS Specialist, Pamela Keller at 541-573-4486, works with data stewards to interpret business needs to derive data requirements and input those requirements into the development of data standards. The GIS Specialist coordinates with system administrators and GIS coordinators to manage the GIS databases.
State Data Administrator	The State Data Administrator, Stanley Frazier at 503-808-6009, provides information management leadership, data modeling expertise, and custodianship of the state data models. The State Data Administrator ensures that defined processes for development of data standards and metadata are followed and that they are consistent and complete. The Data Administrator is responsible for making data standards and metadata accessible to all users. The Data Administrator coordinates with data stewards and GIS coordinators to respond to national spatial data requests.
State Records Administrator	The State Records Administrator, Sherrie Reid at 503-808-6655, is responsible for identifying any privacy issues related to spatial data. The Records Administrator also provides direction and guidance on data release and fees. The Records Administrator assures that data has been classified under the proper records retention schedule and determines the appropriate Freedom of Information Act category.

Table 1 Roles and Responsibilities

1.2 FOIA CATEGORY

Public

1.3 RECORDS RETENTION SCHEDULE(S)

20/52c (Electronic Records/Geographic Information Systems)

TEMPORARY. Delete when no longer needed for administrative, legal, audit, or other operational purposes.

1.4 SECURITY/ACCESS/SENSITIVITY

The monitoring and sample points (SAMPLE_PT) theme does not require any additional security other than that provided by the General Support System (the hardware/software infrastructure of the Oregon/Washington (OR/WA BLM)).

This data is not sensitive and there are no restrictions on access to this data either from within the BLM or external to the BLM.

There are no privacy issues or concerns associated with these data themes. To avoid any potential privacy issues, the attribute VERSION_NAME is only maintained in the edit version of the dataset. In addition, the attribute CLASSIFIER is withheld from the dataset when published for public consumption (e.g., on the internet).

1.5 KEYWORDS

Keywords that can be used to locate this dataset include: sample points, samples, monitoring points, and monitoring.

2. DATASET OVERVIEW

2.1 DESCRIPTION

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 particular standard method. The measurements are taken at a particular point (or transect extending from a point) on a particular date. Generally, the intent is to repeat the same measurements over many years.

2.2 USAGE

This dataset is used to depict sample points on maps. For any particular area or resource, the dataset shows all types of monitoring and sampling that has occurred. In addition, for any particular type of 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 landcover.

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.

2.3 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 (e.g., soil descriptions follow Natural Resources Conservation Service protocols). It is sometimes necessary or advisable to coordinate sampling with other agencies or private organizations.

2.4 RELATIONSHIP TO OTHER THEMES

Relationship between SAMPLE_PT, Aquatic Resources Information Management System (ARIMS) and Geographic Biotic Observations System (GeoBOB):

Sample points taken in water features (streams, springs, and lakes) should be entered into the OR/WA BLM ARIMS. For example, Fish population, Macro invertebrate and Water Quality sample locations and channel cross-sections should all be entered into the ARIMS feature classes.

Greenline and Riparian photo points can be entered either into ARIMS or SAMPLE_PT. River campsites should be entered into the OR/WA geospatial dataset for recreation sites (RECSITE).

Monitoring points for specific flora and fauna species should be entered into the OR/WA BLM GeoBOB. Monitoring and sampling of plant **communities** (e.g., ecological sites, forest stands, and rangeland health) should be entered into SAMPLE_PT.

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.

2.5 DATA CATEGORY/ARCHITECTURE LINK

This data theme is a portion of the Oregon Data Framework (ODF). 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, 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 you get to a basic dataset that cannot be further sub-divided. Those basic datasets inherit all characteristics of all groups/categories above them. The basic datasets are where physical data gets populated (those groups/categories above them do not contain actual data but set parameters that all data of that type must follow).

See the ODF, Figure 2, for a simplified schematic of the entire ODF showing the overall organization and entity inheritance. The monitoring and sample points entity is highlighted. For additional information about the ODF, contact:

Stanley Frazier
OR/WA State Data Administrator
Bureau of Land Management
P.O. Box 2965
Portland, OR 97208
503-808-6009

For monitoring and sample points, the categories/groups that the dataset is part of are:

ODF

Activities

Sampling

SAMPLE_PT

2.6 RELATIONSHIP TO THE DEPARTMENT OF THE INTERIOR ENTERPRISE ARCHITECTURE – DATA RESOURCE MODEL

The Department of the Interior's (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 dataset, these are as follows:

Data Subject Area: Geospatial

Information Class: Location

For a complete list of all DOI Data Subject Areas and Information Classes, contact:

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2.7 SAMPLE POINTS DATA ORGANIZATION/STRUCTURE

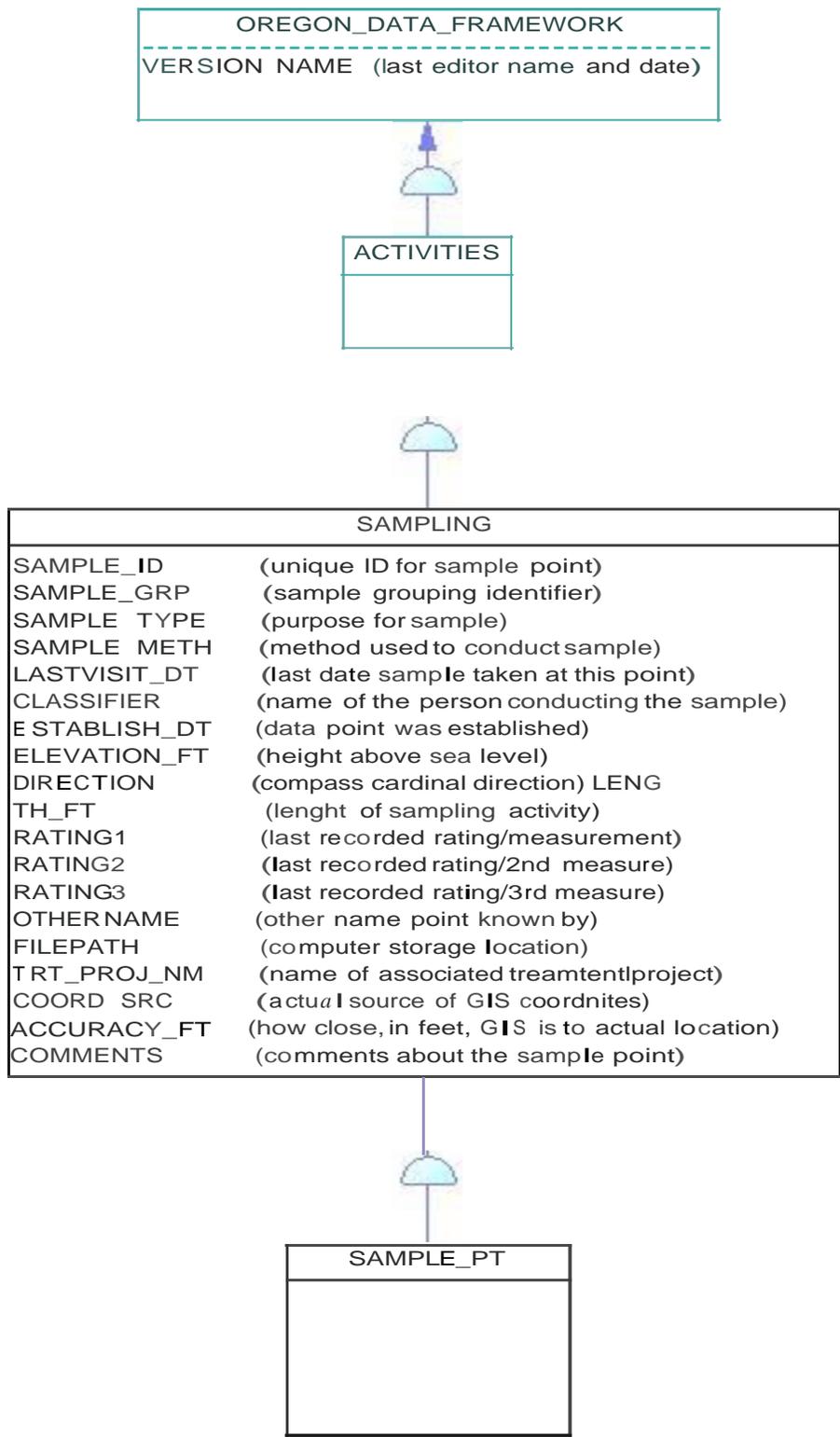


Figure 1 Data Organization Structure

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 particular 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.

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 particular 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. An alphabetical listing of the attributes with additional information is found in the Attribute Characteristics and Definitions section. 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. For a complete list of domains, contact:

Stanley Frazier
 OR/WA State Data Administrator
 Bureau of Land Management
 P.O. Box 2965
 Portland, OR 97208
 503-808-6009

4.1 SAMPLE_PT (Monitoring and Sampling Points)

				required?	Domain
SAMPLE_ID	String	60		Yes	
SAMPLE_GRP	String	20		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	String	50		No	
COORD_SRC	String	7	Unknown	No	dom_COORD_SRC
ACCURACY_FT	Integer	short	0	No	
COMMENTS	String	100		No	
VERSION_NAME	String	50	InitialLoad	Yes	

5. PROJECTION AND SPATIAL EXTENT

All feature classes and feature datasets are in Geographic, North American Datum 83. Units are decimal degrees. Spatial extent (area of coverage) includes all lands managed by the BLM in OR/WA, but is not “wall-to-wall,” and may cover only a small percentage of the total. See the metadata for this dataset for more precise description of the extent.

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
Description	<p>Inherited from Entity SAMPLING</p> <p>Used in Feature Class: SAMPLE_PT</p> <p><u>Definition</u> 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.</p>
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
Description	Inherited from SAMPLING Used in Feature Class: SAMPLE_PT <u>Definition</u> 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	Variable Characters (30)

7.3 COMMENTS

Geodatabase Name	COMMENTS
BLM Structured Name	COMMENTS_TEXT
Description	Inherited from SAMPLING Used in Feature Class: SAMPLE_PT <u>Definition</u> Free text for comments about the sample point.
Required/Optional	Optional
Domain (Valid Values)	No Domain. Examples: Mary Smith, John Doe
Data Type	Variable Characters (30)

7.4 COORD_SRC

Geodatabase Name BLM Structured Name	COORD_SRC COORDINATE_SOURCE_CODE
Description	Inherited from Entity POLITICAL ADMIN SMA LINE Used in Feature Class: SAMPLE_PT <u>Definition</u> The actual source of the GIS coordinates for the points.
Required/Optional	Optional
Domain (Valid Values)	dom_COORD_SRC
Data Type	Variable Characters (7)

7.5 DIRECTION

Geodatabase Name BLM Structured Name	DIRECTION COMPASS_CARDINAL_DIRECTION_CODE
Description	Inherited from SAMPLING Used in Feature Class: SAMPLE_PT <u>Definition</u> 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	Variable Characters (3)

7.6 ELEVATION_FT

Geodatabase Name	ELEVATION_FT
BLM Structured Name	Elevation_Feet_Measure
Description	Not Inherited Used in Feature Class: SAMPLE_PT <u>Definition</u> The height of the ground above mean sea level.
Required/Optional	Optional
Domain (Valid Values)	No Domain.
Data Type	Short Integer

7.7 ESTABLISH_DT

Geodatabase Name	ESTABLISH_DT
BLM Structured Name	SAMPLE_POINT_ESTABLISH_DATE
Description	Inherited from SAMPLING Used in Feature Class: SAMPLE_PT <u>Definition</u> 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	Variable Characters (8)

7.8 FILEPATH

Geodatabase Name BLM Structured Name	FILEPATH FILENAME_PATH_TEXT
Description	Inherited from SAMPLING Used in Feature Class: SAMPLE_PT <u>Definition</u> Computer storage location for a photo file (e.g., jpg), Word document, spreadsheet or other 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 that opens for further browsing (where multiple files are being referenced).
Required/Optional	Optional
Domain (Valid Values)	No Domain. Example: G:\bns\DistrictMonitoring\Upland\Andrews_Allotments\Alvord_Peak_6038\Pace_180\6038_001\6038-001.xls \EM_6.4.docx
Data type	Variable Characters (150)

7.9 LASTVISIT_DT

Geodatabase Name BLM Structured Name	LASTVISIT_DT LAST_VISIT_SAMPLE_DATE
Description	Inherited from SAMPLING Used in Feature Class: SAMPLE_PT <u>Definition</u> 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	Variable Characters (8)

7.10 LENGTH_FT

Geodatabase Name	LENGTH_FT
BLM Structured Name	SAMPLE_LENGTH_FEET_MEASURE
Description	Inherited from SAMPLING Used in Feature Class: SAMPLE_PT <u>Definition</u> 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

7.11 OTHERNAME

Geodatabase Name	OTHERNAME
BLM Structured Name	OTHER_NAME
Description	Inherited from SAMPLING Used in Feature Class: SAMPLE_PT <u>Definition</u> 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	Variable Characters (50)

7.12 RATING 1

Geodatabase Name	RATING1
BLM Structured Name	FIRST_RATING_VALUE_TEXT
Description	<p>Inherited from SAMPLING</p> <p>Used in Feature Class: SAMPLE_PT</p> <p><u>Definition</u> 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.</p> <p>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.</p> <p>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.</p>
Required/Optional	Optional
Domain (Valid Values)	No Domain
Data Type	Variable Characters (20)

7.13 RATING2

Geodatabase Name	RATING2
BLM Structured Name	SECOND_RATING_VALUE_TEXT
Description	<p>Inherited from SAMPLING</p> <p>Used in Feature Class: SAMPLE_PT</p> <p><u>Definition</u> 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.</p> <p>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</p>

	<p>recorded in RATING1 and RATING3 is only used if there is a third measure besides what is in RATING1 and 2.</p> <p>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.</p>
Required/Optional	Optional
Domain (Valid Values)	No Domain
Data Type	Variable Characters (20)

7.14 RATING3

Geodatabase Name	RATING3
BLM Structured Name	THIRD_RATING_VALUE_TEXT
Description	<p>Inherited from SAMPLING</p> <p>Used in Feature Class: SAMPLE_PT</p> <p><u>Definition</u> 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.</p> <p>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.</p> <p>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.</p>
Required/Optional	Optional
Domain (Valid Values)	No Domain
Data Type	Variable Characters (20)

7.15 SAMPLE_GRP

Geodatabase Name BLM Structured Name	SAMPLE_GRP SAMPLE_GROUP_IDENTIFIER
Description	Inherited from SAMPLING Used in Feature Class: SAMPLE_PT <u>Definition</u> A sample grouping identifier, if needed.
Required/Optional	Optional
Domain (Valid Values)	No Domain. Examples: A, Rattlesnake, North, South
Data Type	Variable Characters (20)

7.16 SAMPLE_ID

Geodatabase Name BLM Structured Name	SAMPLE_ID SAMPLE__IDENTIFIER
Description	Inherited from SAMPLING Used in Feature Class: SAMPLE_PT <u>Definition</u> Unique identifier for each sample point for the particular type of 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	Variable Characters (60)

7.17 SAMPLE_METH

Geodatabase Name	SAMPLE_METH
BLM Structured Name	SAMPLE_METHOD_CODE
Description	Inherited from SAMPLING Used in Feature Class: SAMPLE_PT <u>Definition</u> 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_SAMPLE_METH
Data Type	Variable Characters (30)

7.18 SAMPLE_TYPE

Geodatabase Name	SAMPLE_TYPE
BLM Structured Name	SAMPLE_TYPE_CODE
Description	Inherited from SAMPLING Used in Feature Class: SAMPLE_PT <u>Definition</u> The purpose for taking the sample at this location.
Required/Optional	Required
Domain (Valid Values)	dom_SAMPLE_TYPE
Data Type	Variable Characters (30)

7.19 TRT_PROJ_NM

Geodatabase Name BLM Structured Name	TRT_PROJ_NM TREATMENT_PROJECT_NAME
Description	Inherited from SAMPLING Used in Feature Class: SAMPLE_PT
Required/Optional	<u>Definition</u> The name of the associated treatment or project that is being monitored, measured or otherwise sampled.
Domain (Valid Values)	Optional
Data Type	No domain Variable Characters (50)

7.20 VERSION_NAME

Geodatabase Name BLM Structured Name	VERSION_NAME GEODATABASE_VERSION_TEXT
Description	Inherited from Entity ODF. Only appears in the transactional (edit) version. Public version (which is also the version used internally for mapping or analysis) does not contain this attribute. Used in Feature Class: SAMPLE_PT
Required/Optional	<u>Definition</u> Name of the corporate geodatabase version previously used to edit the record. InitialLoad = feature has not been edited in ArcSDE. Format: username.XXX-mmddyy-hhmmss = version name of last edit (hours might be a single digit; leading zeros are trimmed for hours only). XXX=theme abbreviation
Domain (Valid Values)	Required
Data Type	No Domain. Example: sfrazier.GRA-121211-111034 Variable Characters (50)

8. ASSOCIATED FILES OR DATABASES

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

9. LAYER FILES (PUBLICATION VIEWS)

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:

- A. Copied completely with no changes (replicated).
- B. Copied with no changes except to omit one or more feature classes from a feature dataset.
- C. 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).

10. EDITING PROCEDURES

10.1 OVERLAPPING POINTS

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

10.2 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).

10.3 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.

11.0 OREGON DATA FRAMEWORK OVERVIEW

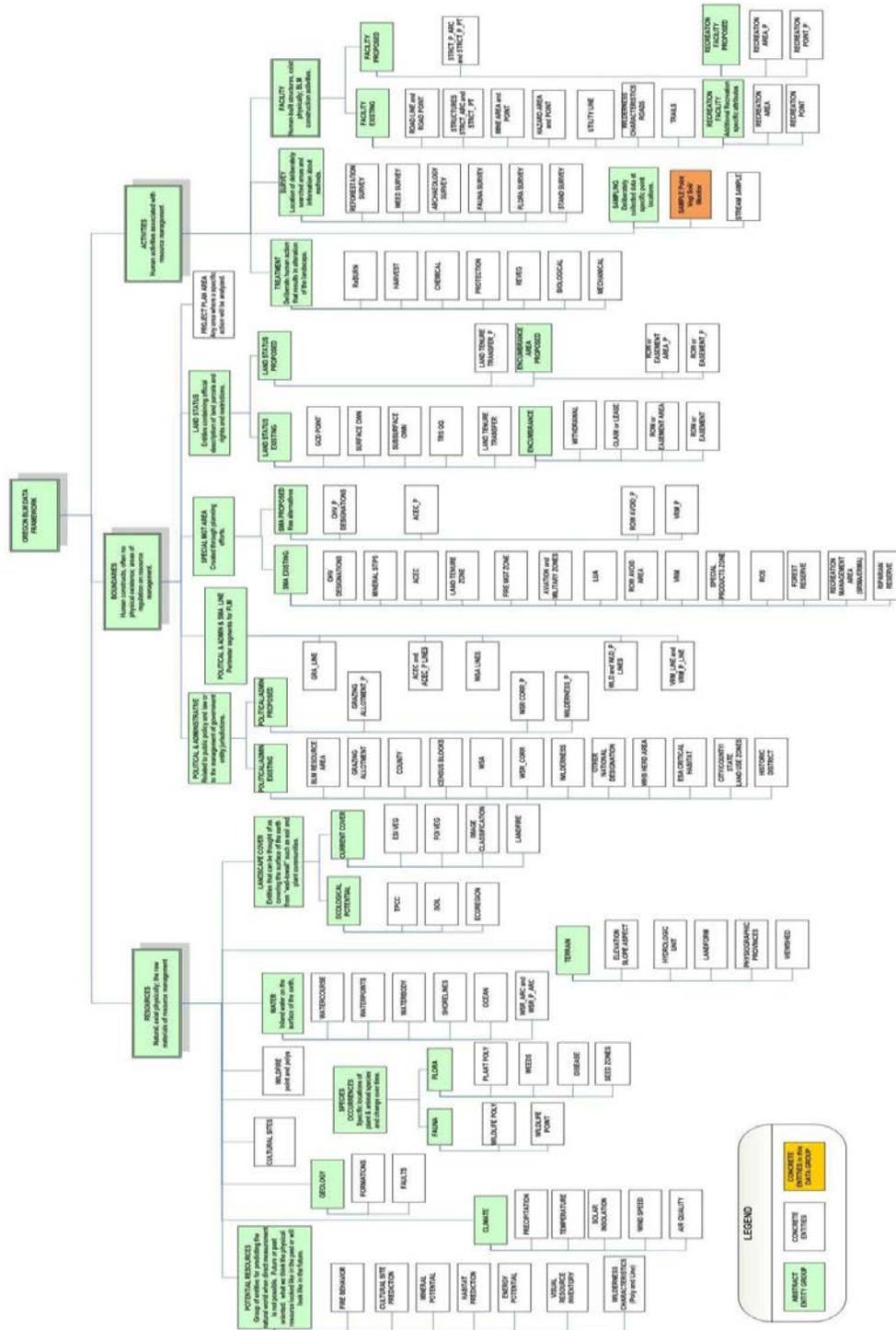


Figure 2 Oregon Data Framework Overview

12.0 ABBREVIATIONS AND ACRONYMS USED IN THIS STANDARD

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

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

Table 2 Abbreviations/Acronyms Used

Remainder of page left intentionally blank.

APPENDIX A. DOMAINS (VALID VALUES)

The domains listed below are those that were in effect at the time the data standard was approved and may not be current. Contact the State Data Administrator for current lists:

Stanley Frazier
 OR/WA State Data Administrator
 Bureau of Land Management
 P.O. Box 2965
 Portland, OR 97208
 503-808-6009

Note that 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 COMPASS_DIR [\[BACK\]](#)

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 COORD_SRC [\[BACK\]](#)

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
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GCD	GCD – Lines snapped to Geographic Coordinate Database Points
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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)

7.6 ELEVATION_FT

Geodatabase Name	ELEVATION_FT
BLM Structured Name	Elevation_Feet_Measure
Description	<p>Not Inherited</p> <p>Used in Feature Class: SAMPLE_PT</p> <p><u>Definition</u> The height of the ground above mean sea level.</p>
Required/Optional	Optional
Domain (Valid Values)	No Domain.
Data Type	Short Integer

7.7 ESTABLISH_DT

Geodatabase Name	ESTABLISH_DT
BLM Structured Name	SAMPLE_POINT_ESTABLISH_DATE
Description	<p>Inherited from SAMPLING</p> <p>Used in Feature Class: SAMPLE_PT</p> <p><u>Definition</u> The date the monitoring or sampling point was established in the field.</p>
Required/Optional	Optional
Domain (Valid Values)	No Domain. Examples: 20080624, 1998, 200109, UNKNOWN
Data Type	Variable Characters (8)

7.8 FILEPATH

Geodatabase Name BLM Structured Name	FILEPATH FILENAME_PATH_TEXT
Description	Inherited from SAMPLING Used in Feature Class: SAMPLE_PT <u>Definition</u> Computer storage location for a photo file (e.g., jpg), Word document, spreadsheet or other 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 that opens for further browsing (where multiple files are being referenced).
Required/Optional	Optional
Domain (Valid Values)	No Domain. Example: G:\bns\DistrictMonitoring\Upland\Andrews_Allotments\Alvord_Peak_6038\Pace_180\6038_001\6038-001.xls \EM_6.4.docx
Data type	Variable Characters (150)

7.9 LASTVISIT_DT

Geodatabase Name BLM Structured Name	LASTVISIT_DT LAST_VISIT_SAMPLE_DATE
Description	Inherited from SAMPLING Used in Feature Class: SAMPLE_PT <u>Definition</u> 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	Variable Characters (8)

7.10 LENGTH_FT

Geodatabase Name	LENGTH_FT
BLM Structured Name	SAMPLE_LENGTH_FEET_MEASURE
Description	Inherited from SAMPLING Used in Feature Class: SAMPLE_PT <u>Definition</u> 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

7.11 OTHERNAME

Geodatabase Name	OTHERNAME
BLM Structured Name	OTHER_NAME
Description	Inherited from SAMPLING Used in Feature Class: SAMPLE_PT <u>Definition</u> 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	Variable Characters (50)

7.12 RATING 1

Geodatabase Name	RATING1
BLM Structured Name	FIRST_RATING_VALUE_TEXT
Description	<p>Inherited from SAMPLING</p> <p>Used in Feature Class: SAMPLE_PT</p> <p><u>Definition</u> 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.</p> <p>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.</p> <p>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.</p>
Required/Optional	Optional
Domain (Valid Values)	No Domain
Data Type	Variable Characters (20)

7.13 RATING2

Geodatabase Name	RATING2
BLM Structured Name	SECOND_RATING_VALUE_TEXT
Description	<p>Inherited from SAMPLING</p> <p>Used in Feature Class: SAMPLE_PT</p> <p><u>Definition</u> 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.</p> <p>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</p>

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Required/Optional	Optional
Domain (Valid Values)	No Domain
Data Type	Variable Characters (20)

7.14 RATING3

Geodatabase Name	RATING3
BLM Structured Name	THIRD_RATING_VALUE_TEXT
Description	<p>Inherited from SAMPLING</p> <p>Used in Feature Class: SAMPLE_PT</p> <p><u>Definition</u> 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.</p> <p>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.</p> <p>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.</p>
Required/Optional	Optional
Domain (Valid Values)	No Domain
Data Type	Variable Characters (20)

7.15 SAMPLE_GRP

Geodatabase Name BLM Structured Name	SAMPLE_GRP SAMPLE_GROUP_IDENTIFIER
Description	Inherited from SAMPLING Used in Feature Class: SAMPLE_PT <u>Definition</u> A sample grouping identifier, if needed.
Required/Optional	Optional
Domain (Valid Values)	No Domain. Examples: A, Rattlesnake, North, South
Data Type	Variable Characters (20)

7.16 SAMPLE_ID

Geodatabase Name BLM Structured Name	SAMPLE_ID SAMPLE__IDENTIFIER
Description	Inherited from SAMPLING Used in Feature Class: SAMPLE_PT <u>Definition</u> Unique identifier for each sample point for the particular type of 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	Variable Characters (60)

7.17 SAMPLE_METH

Geodatabase Name	SAMPLE_METH
BLM Structured Name	SAMPLE_METHOD_CODE
Description	Inherited from SAMPLING Used in Feature Class: SAMPLE_PT <u>Definition</u> 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_SAMPLE_METH
Data Type	Variable Characters (30)

7.18 SAMPLE_TYPE

Geodatabase Name	SAMPLE_TYPE
BLM Structured Name	SAMPLE_TYPE_CODE
Description	Inherited from SAMPLING Used in Feature Class: SAMPLE_PT <u>Definition</u> The purpose for taking the sample at this location.
Required/Optional	Required
Domain (Valid Values)	dom_SAMPLE_TYPE
Data Type	Variable Characters (30)

7.19 TRT_PROJ_NM

Geodatabase Name BLM Structured Name	TRT_PROJ_NM TREATMENT_PROJECT_NAME
Description	Inherited from SAMPLING Used in Feature Class: SAMPLE_PT
Required/Optional	<u>Definition</u> The name of the associated treatment or project that is being monitored, measured or otherwise sampled.
Domain (Valid Values)	Optional
Data Type	No domain Variable Characters (50)

7.20 VERSION_NAME

Geodatabase Name BLM Structured Name	VERSION_NAME GEODATABASE_VERSION_TEXT
Description	Inherited from Entity ODF. Only appears in the transactional (edit) version. Public version (which is also the version used internally for mapping or analysis) does not contain this attribute. Used in Feature Class: SAMPLE_PT
Required/Optional	<u>Definition</u> Name of the corporate geodatabase version previously used to edit the record. InitialLoad = feature has not been edited in ArcSDE. Format: username.XXX-mmddyy-hhmmss = version name of last edit (hours might be a single digit; leading zeros are trimmed for hours only). XXX=theme abbreviation
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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 SAMPLE_METH [\[BACK\]](#)

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
Belt Transect	Belt Transect – For vegetation
Ocular Cover	Ocular Cover – Vegetation cover 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 –
ESI Veg Plot	ESI Veg Plot – Ecological Site Inventory
NRCS 232	NRCS 232 – Soil description
NRCS NRI	NRCS NRI – National Resources Inventory
HOBO Temp Probe	HOBO Temp Probe –
Hanna Multisensor Probe	Hanna Multisensor Probe –
Other	Other –
Unknown	Unknown –

A.4 SAMPLE_TYPE [\[BACK\]](#)

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
Greenline	Greenline – Riparian measurement
Shade	Shade – Measurement
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
Wildlife Utilization	Wildlife Utilization – Measurement
Erosion	Erosion – Monitoring

UNK	UNK – Unknown coordinate source
WOD	WOD – WODDB Photogrammetric

A.3 SAMPLE_METH [\[BACK\]](#)

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Nested Frequency	Nested Frequency – For vegetation
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Herbaceous Utilization	Herbaceous Utilization –
ESI Veg Plot	ESI Veg Plot – Ecological Site Inventory
NRCS 232	NRCS 232 – Soil description
NRCS NRI	NRCS NRI – National Resources Inventory
HOBO Temp Probe	HOBO Temp Probe –
Hanna Multisensor Probe	Hanna Multisensor Probe –
Other	Other –
Unknown	Unknown –

A.4 SAMPLE_TYPE [\[BACK\]](#)

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
Greenline	Greenline – Riparian measurement
Shade	Shade – Measurement
HMA	HMA – Wild horse use or count
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ACEC	ACEC – RNA monitoring
Stand Exam-EcoSurvey	Stand Exam-EcoSurvey –
Stand Exam	Stand Exam –
Aspen	Aspen – Stand monitoring
Treatment	Treatment – Effectiveness or implementation monitoring
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
NRI	NRI – National Resources Inventory plot
Study Plot	Study Plot – Research
Other	Other –
Unknown	Unknown –