



Reforestation and Forest Surveys

Spatial Data Standard



*Scientists collect tree data around Mary's Peak, NW Oregon District.
Photo by Maria Thi Mai, BLM, July 22, 2009.*

Document Revisions

Revision	Date	Author	Description	Affected Pages
1.0	11/3/2014	Pam Keller, Kristen Wobbe, Dan Couch	Initial Release	All
1.1	3/10/2017	Kyler Diershaw	Updated contact information for State Data Steward, Lead GIS Specialist, State Data Administrator, State Records Administrator. Added Document Revision Table.	Section 1.1, 2.5, 2.6, 4.0, Appendix A This page
1.2	3/17/2017	Kyler Diershaw	Added automatic TOC	3/17/2017
1.3	8/6/2019	Al Thompson	Update format and edit. Updated BLM_ORG_CD. Updated Records Retention Schedule	All
1.4	10/30/2020	Dana Baker-Allum	Modified CMT_FUND_DT, CMT_FUND_FY, and district defined fields to make them optional. Other formatting and error corrections.	Most
2.0	10/18/2023	Dana Baker-Allum	Reformatted for accessibility, added default values for required fields, added edit tracking fields, changed format of date field, changed format of percent fields to whole numbers, and added date accuracy field, added calculation and constraint data rule sections to section 9.4. Updated publication dataset section.	All



Navigation

This document is easier to view if the Microsoft Word Navigation pane is displayed (View -> Navigation Pane). If viewing

in PDF format, open the document in Acrobat and click the Contents button.



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.

Contents

1	General Information	6
1.1	Roles and Responsibilities	6
1.2	FOIA Category.....	7
1.3	Records Retention Schedule.....	7
1.4	Security/Access/Sensitivity	7
1.5	Keywords	8
1.6	Subject Function Codes.....	8
2	Dataset Overview	8
2.1	Usage	8
2.2	Sponsor/Affected Parties	8
2.3	Relationship to Other Datasets, Databases, or Files	8
2.4	Data Category/Architecture Link.....	9
2.5	Relationship to DOI Enterprise Architecture Data Resource Mode	10
3	Data Management Protocols	11
3.1	Accuracy Requirements	11
3.2	Collection, Input, and Maintenance Protocols	11
3.3	Update Frequency and Archival Protocols.....	12
3.4	Statewide Monitoring	12
4	FOREST_SURV Schema (simplified)	13
4.1	FOREST_SURV_POLY Feature Class (Reforestation and Forest Surveys Polygons).....	13
5	Projection and Spatial Extent	14
6	Spatial Entity Characteristics	15
7	Attribute Characteristics and Definition (In alphabetical order).....	15
7.1	ACCURACY_FT	15
7.2	BLM_ORG_CD	15
7.3	BUDGET_CD	16
7.4	CLASSIFIER	16
7.5	CMT_FUND_DT	17
7.6	CMT_FUND_FY.....	17
7.7	COMMENTS	17
7.8	CONTRACTID	18
7.9	CONTRACTOR.....	18
7.10	COORD_SRC.....	18
7.11	CREATE_BY	19
7.12	CREATE_DATE.....	19
7.13	DST_DEF_NR.....	19
7.14	DST_DEF_TXT	20

7.15	EST_COST_AC	20
7.16	FILEPATH	20
7.17	GIS_ACRES	21
7.18	GLOBALID	21
7.19	LOCAL_LINK	22
7.20	MODIFY_BY	22
7.21	MODIFY_DATE	22
7.22	PRIORITY	23
7.23	PROJ_NAME	23
7.24	REASON	23
7.25	REASON2	24
7.26	REGENSTOCKINGCLS	24
7.27	SURV_ACRES	24
7.28	SURV_DATE	25
7.29	SURV_DATE_ACC	25
7.30	SURV_DESC	25
7.31	SURV_FY	26
7.32	SURV_GUID	26
7.33	SURV_NAME	26
7.34	SURV_SRC	27
7.35	SURV_STATUS	27
7.36	SURV_STOCK_PCT	27
7.37	SURV_TOT_TPA	28
7.38	SURV_TPA_SERR	28
7.39	SURV_TYPE	29
7.40	SURV_WS_SERR	29
7.41	SURV_WS_TPA	30
7.42	UNIT_NUM	30
7.43	VERSION_NAME	30
7.44	WORKAGENT	31
8	Publication Views	31
8.1	General	31
8.2	Specific to This Dataset	31
8.3	Layer Files	32
9	Editing Procedures	32
9.1	Managing Overlap (General Guidance)	32
9.2	Editing Quality Control	32
9.3	Theme Specific Guidance	33

9.3.1 Calculation Data Rules.....33

9.3.2 Constraint Data Rules.....34

10 Abbreviations and Acronyms.....35

A Domains (Valid Values)36

A.1 dom_BLM_ORG_CD.....36

A.2 dom_COORD_SRC.....36

A.3 dom_DT_ACC.....37

A.4 dom_FOI_TPA.....37

A.5 dom_PCT100.....37

A.6 dom_PRIORITY.....37

A.7 dom_REASON.....37

A.8 dom_REGENSTOCKINGCLS.....39

A.9 dom_SURV_DESC.....39

A.10 dom_SURV_SRC.....40

A.11 dom_SURV_TYPE.....40

A.12 dom_TRT_STATUS.....41

A.13 dom_WORKAGENT.....41

1 General Information

The Reforestation and Forest Surveys (FOREST_SURV) dataset represents information related to the following:

- Conducting surveys on BLM forested lands to determine results from reforestation efforts. In the life cycle of a forest, these surveys provide a measure of establishment, growth, and development of a forest stand.
- Measuring forest stand attributes. The Forest Operations Inventory Vegetation Spatial Data Standard describes the summary of forest stand attributes resulting from stand exam surveys residing in the FOI-VEG feature class.
- Preparing for or documenting treatment results. This dataset provides limited summary results from reforestation efforts to establish a young forest (i.e., stocking percentage, trees per acre). It does not contain summary data of older forest stand attributes commonly the results of a stand exam.

There are three types of surveys:

- Regeneration - surveys are related to reforestation efforts and establishing a viable forest stand.
- Pre-Treatment - surveys are related to measures of an established or developing forest stand and occur prior to specific treatments.
- Post-Treatment - surveys are related to measures of an established or developing forest stand and occur after specific treatments.

The FOREST_SURV dataset is part of the overall Micro*Storms (M*S) dataset, which includes polygon-based vegetation classification, recording vegetation treatments both completed and proposed, and recording treatment surveys both completed and proposed. M*S is daily use, mission critical tool which support a variety of day-to-day operations in forest management by the districts and supports corporate level reporting of forest conditions.

- Dataset (Theme) Name: Reforestation and Forest Surveys
- Dataset (Feature Class): FOREST_SURV_POLY

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 FOIA/Privacy Act Team Lead	The State FOIA/Privacy Act team lead assists the state data steward to identify any privacy issues related to spatial data. The State FOIA/Privacy Act team lead also provides direction and guidance on data release, fees, and classification under the appropriate Freedom of Information Act exemption.
State Records Administrator	The state records administrator classifies data under the proper records retention schedule.

1.2 FOIA Category

This dataset falls under the standard Records Access Category 1(B) - BLM records that may contain protected information that must be considered for segregation prior to release. See section 8 for more information on which data are available to the public.

1.3 Records Retention Schedule

The DRS/GRS/BLM Combined Records Schedule, under Schedule **20/52a4** (Electronic Records/Geographic Information Systems), lists this theme (**Vegetation Treatment and Management**) as one of the system-centric themes that are significant for BLM’s mission that must be permanently retained.

"PERMANENT. Cutoff at the end of each Fiscal Year (FY) or when significant changes and additions have been made, before and after the change. Use BLM 20/52a. Transfer to the National Archives every three years after cutoff. Under the instruction in 36 CFR 1235.44-50 or whichever guidance is in place at the time of the transfer. Submissions are full datasets and are in addition to, not replacements of, earlier submissions."

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

This 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 within the BLM or external to the BLM. This dataset falls under the standard Records Access Category 1(B) - BLM records that may contain protected information that must be considered for segregation prior to release. All classifier and comments fields should be removed from external datasets.

There are no privacy issues or concerns associated with these data themes. A privacy impact assessment was signed for this dataset on 9/12/2023.

1.5 Keywords

Keywords that can be used to locate this dataset include:

- BLM Thesaurus: Forest, Vegetation
- Additional keywords: Forestry, Trees, Reforestation Survey, Harvest, Treatments, Western Oregon, Land Use Planning, Forest Regeneration, Forest Restocking, Natural Resources
- ISO Thesaurus: environment, biota

1.6 Subject Function Codes

BLM Subject Function codes used to describe this dataset include:

- 1283 - Data Administration
- 5700 - Forest Development
- 9167 - Geographic Information System (GIS)

2 Dataset Overview

2.1 Usage

This dataset is the spatial corporate repository for forest surveys. For reforestation, use this dataset to identify survey assessments that the BLM makes on forested public lands representing the health and survival of seedlings within a particular unit (i.e., elk or deer damage to seedlings, brush-overtaking seedlings, seedling survival). For surveys associated with treatments, the dataset is a record of pre- or post-treatment stand conditions. Use this dataset as a comprehensive record of BLM lands surveys and as a means of identifying accomplishments and needs at the District or State level. Use changes in the treatment date (SURV_DATE) and status (SURV_STATUS) from 'Proposed' to 'Completed' to manage the BLM Silviculture program of work and accomplishments.

2.2 Sponsor/Affected Parties

The sponsor for this data set is the Deputy State Director for the Division of Resources, Lands, and Minerals.

Affected parties include the BLM Division of Forest, Rangeland, and Vegetation (WO-220) Forest Management section who are the Micro*Storms business owners.

This dataset is defined by and specific to the BLM and occurs on BLM Lands. No interagency data standard exists for the current version of Forest and Regeneration Surveys.

2.3 Relationship to Other Datasets, Databases, or Files

Reforestation and Forest Surveys are related to the following datasets:

- Treatments - Treatments are often recommended or proposed as the result of a survey. Pre-Treatment surveys depict stand conditions prior to, and Post-Treatment surveys depict stand conditions following the treatment or serve as part of contract compliance for a treatment.
- Forest Operations Inventory Vegetation (FOI-VEG) - Reforestation and Forest Surveys maintains the location of stand exam surveys proposed or completed, but the summary of forest stand attributes resulting from the stand exam surveys reside in the FOI-VEG dataset.
- Micro*Storms (M*S) - The Treatment feature classes also have M*S related tables with additional

information about forestry treatments. Surveys may have information directly correlated to the preparation for or the results of these treatments. For example, before performing a survey it may be beneficial to identify the different stock types and species planted in the Revegetation Treatment feature class for a particular unit.

- EcoSurvey - Stand exam surveys are often the result of tree and vegetation data collected and summarized with the EcoSurvey application. The EcoSurvey dataset contains tree data collected on a point-by-point basis. The EcoSurvey application can summarize and export the stand attributes to the FOI-VEG feature class. Reforestation and Forest Surveys only maintains the spatial location and type of stand exam survey completed.

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 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.

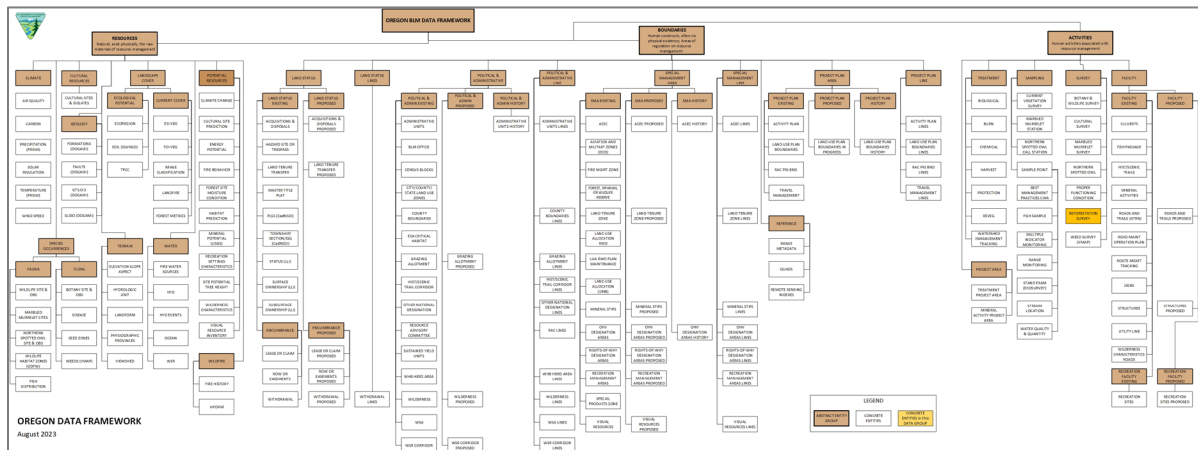


Figure 1 Oregon Data Framework Overview

For an easier to view version of the Oregon Data Framework diagram, go to: https://gis.blm.gov/ORDownload/DataFramework/BLM_ODF_Model_Mini_Status.pdf.

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 FOREST_SURV 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, FOREST_SURV is considered an Activity and categorized as follows:

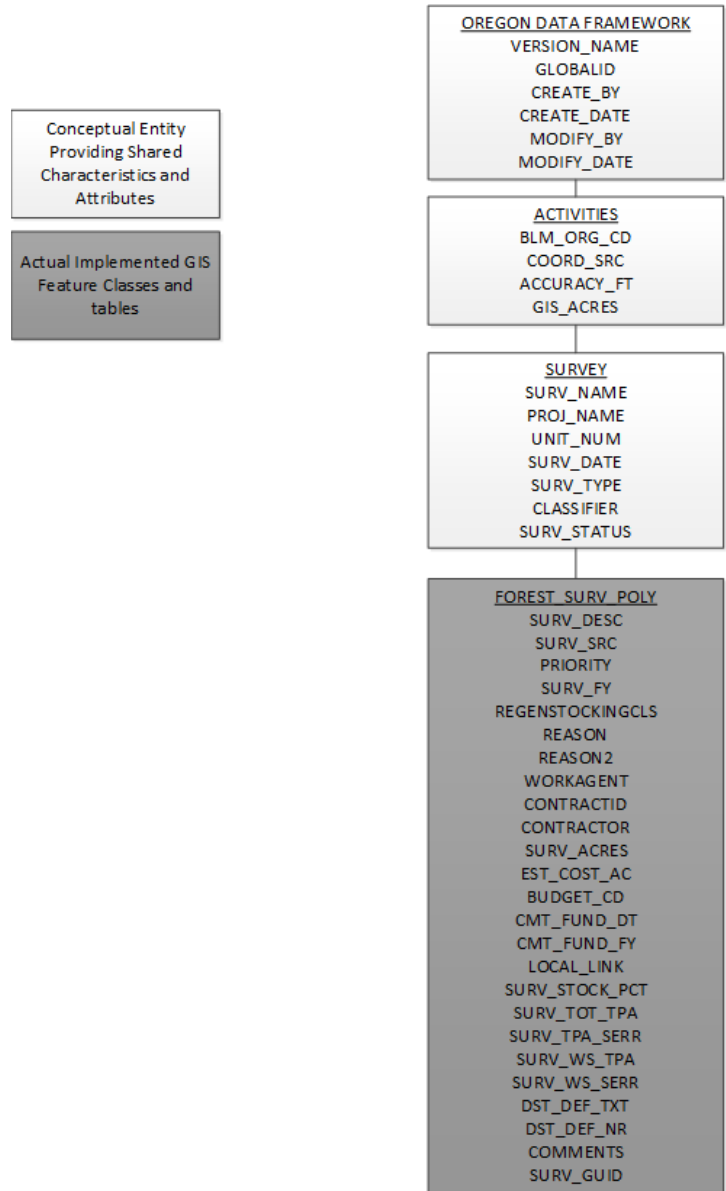


Figure 2 Data Organization Structure

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

Reforestation and Forest Surveys boundary accuracy is determined by the programmatic requirements for the survey. These data have a wide range of accuracies. Locational accuracy is specified in the attribute `ACCURACY_FT`, but there are many instances where the value is unknown. Many features were imported from the legacy data and the attributes are very incomplete. However, newer features will have more complete information and over time the dataset will become more accurate. Although a high degree of accuracy is not required for forest surveys as the nature of surveys does not lend itself to precise boundaries.

3.2 Collection, Input, and Maintenance Protocols

This section provides information on the digital capture of the spatial survey information.

The baseline standards and guidelines for conducting regeneration surveys can be found in the Regeneration Stocking Surveys Manual and Handbook (Instruction Memorandum OR-2003-083).

Creating Survey Entities: Polygons are duplicated and possibly modified either from treatments or survey polygons. A new survey entity is always created if it is of a different type or description or if it occurs on a different date. Surveys can overlap (occupy the same footprint space) in whole or part.

Other attributes are attached to a survey entity and do not drive creation of new entities. Survey entities are defined by "what" was done, and "when."

Overlapping survey polygons (polys covering the same acre of ground) are common and represent different surveys over time on the same piece of ground from initial surveys through establishment and beyond. Significant differences in survey results as indicated by the Regeneration Stocking Class for the same date might split a polygon, but not overlap the same area on the same date.

Example 1: An Initial PrePlanting survey was completed on a timber sale unit. The entire unit was planted, and first- and third-year surveys were completed with acceptable results. In this case, the three survey polygons (Initial PrePlanting, PreEstablishment1, and PreEstablishment2) would overlap. Each would have a unique `SURV_ID`, the same `SURV_TYPE` of Regeneration, but a unique `SURV_DESC`.

Example 2: A PreEstablishment1 survey was completed on a unit. The survey results showed that the south aspect had poor seedling survival (sub-minimum stocking) and should be replanted, while the northern aspect was at target stocking. The polygon would be split on the aspect with no overlap based on the Regeneration Stocking Class and the trees per acre findings. The two polygons would have unique `SURV_IDs`, but the same `SURV_NAME`, `SURV_TYPE`, `SURV_DESC`, `SURV_SRC`, and `SURV_DATE`.

Survey Name, Project Name, and ID: `SURV_NAME` is required and may be duplicated for many different survey polygons. A survey unit is often called by the name of the timber sale that created the unit and this name may carry on through the life of the surveys. `SURV_ID` is unique. A new survey entity is given a new ID and every polygon will have a unique `SURV_ID`. There is an ArcMap tool to get the next available `SURV_ID`. It is important to not overwrite existing `SURV_ID`, unless the survey is being completely removed or replaced with another Identification (ID), and all linking databases and tables have been updated accordingly. There can be many `SURV_ID` with the same `SURV_NAME`. `PROJ_NAME` may also be duplicated for different survey polygons. `PROJ_NAME` is optional.

Example 1: The "Bland Mtn. #1" unit has had multiple surveys over the years resulting in three separate survey polygons. The `SURV_NAME` is "Bland Mtn. #1" for all three, but each has a unique `SURV_ID` (e.g., 1006, 1007 and 1008). The individual survey polygons might be of the same survey type.

Example 2: All of the regeneration surveys for 2014 were completed under contract. In this case, the `PROJ_NAME` may be "Regen Survey Contract 2014". The `SURV_NAME` for each unit may be different and identified by the timber sale name such as "Bland Mtn. #1", "Lavadoire Creek #2", Flea Flicker #1, etc.

Digitizing Surveys: Survey polygons can be collected and input in a variety of ways including manuscripting on maps and digitizing, Global Positioning System (GPS), on-screen digitizing using a Digital Orthophoto Quad or Digital Raster Graphic backdrop, duplicating lines from ownership, roads or stream layers, or a combination of these. Survey boundaries that are based on identifiable physical features such as roads, ridgelines, streams, or on ownership changes should utilize those source line features to illustrate the cartographic relationship.

The coordinate source of the polylines is documented in COORD_SRC, and the claimed +/-accuracy (total of all input errors) of the GIS representation compared to actual location is stored in ACCURACY_FT.

Linking Fields: For Western Oregon survey data prior to 2014, the LOCAL_LINK provides a bridge to the Forest Operations Inventory number and can be related to those Forest Operations Inventory polygons. However, after implementation of the Reforestation and Forest Survey feature class, survey polygons may not be as closely associated with the FOI-VEG polygons.

Proposed vs. Completed: As surveys move from proposed to completed, the value in SURV_STATUS is changed. Adjustments to the survey perimeter may occur based on the survey results. It is up to the district data steward to determine whether it is necessary to retain past boundaries, split units, or create a new boundary. It is important to be able to show the history of surveys from year to year. It is also important to show proposed surveys that were never completed. The silviculture program of work for surveys can be managed in this way.

Attachments: The software used for editing the FOREST_SURV_POLY data allows photos or documents to be related to a record. When the photos or documents are inserted, they are stored as geodatabase attachments - a special form of geodatabase data item. When the edited data is finalized as corporate data, the attachments are removed from the edit environment and relocated to a network repository. The FILEPATH field in the tables will store the location of where the attachments exist.

Additional editing guidance is available in section 9 of this document.

3.3 Update Frequency and Archival Protocols

The State Data Steward and/or the program lead will establish the policy for update frequency and completeness for the Reforestation and Forest Surveys data and the associated applications. Updates are potentially very frequent. Surveys are added frequently to keep current with planning and activities. District resource specialists work with GIS specialists to map spatial extents of the surveys. The theme is checked for spatial and attribute accuracy as data is input. Additions might be weekly, monthly, or quarterly but, at least, annually to follow a reporting schedule for the Program Lead. District specialists need to ensure that data in the Forest Survey theme are complimentary with associated records in the EcoSurvey and Micro*Storms applications.

Data is archived annually at the end of the fiscal year.

3.4 Statewide Monitoring

The State Data Steward, assisted by the GIS Technical Lead, are responsible for checking consistency across districts for the theme. The State Data Steward is responsible for coordinating the response to national BLM and interagency data calls.

Each year, the Resource Science Data team of the BLM Division of Resources, Lands, Minerals and Fire meets with each state data steward for every corporate geospatial theme to conduct an annual review of the data. During the annual review, geospatial staff present the state data stewards with a report detailing Quality Assurance/Quality Control (QAQC) results performed on the data. The QAQC does the following:

- Checks that all attribute values conform to the range or coded-value domains to which they are applied.
- Checks that all attributes marked as required in the data standard have values.
- Checks for duplicate features which have the same geometry and attributes.

- Checks for overlapping features if forbidden by the data standard.
- Checks for invalid geometry.
- Other checks as necessary (can be customized according to the data standard).

In addition to this report, geospatial staff conduct a qualitative needs assessment with the steward to identify any unmet needs or problems with the status of the data. At the conclusion of the review, the team records the steward's approvals of the datasets reviewed. These approvals are then added to the corporate metadata.

4 FOREST_SURV 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 FOREST_SURV_POLY Feature Class (Reforestation and Forest Surveys Polygons)

For domain and default values, see [Section 7 Attribute Characteristics and Definition \(In alphabetical order\)](#) in this document.

Attribute Name	Data Type	Length	Default Value	Required	Domain
SURV_NAME	String	60		Yes	
PROJ_NAME	String	100		No	
UNIT_NUM	String	10		No	
LOCAL_LINK	String	30		No	
SURV_TYPE	String	30	Unknown	Yes	dom_SURV_TYPE
SURV_DESC	String	30	Unknown	Yes	dom_SURV_DESC
REGENSTOCKINGCLS	String	30		Conditional	dom_REGENSTOCKINGCLS
SURV_SRC	String	25	Unknown	Yes	dom_SURV_SRC
SURV_STATUS	String	12	Proposed	Yes	dom_TRT_STATUS
CLASSIFIER	String	30		Yes	
SURV_DATE	Date		1/1/8888	Yes	
SURV_DATE_ACC	String	7	Day	Yes	dom_DT_ACC
SURV_FY	String	4		Yes *	
CMT_FUND_DT	String	8		No	
CMT_FUND_FY	String	4		No *	
PRIORITY	String	12		No	dom_PRIORITY
WORKAGENT	String	40	Unknown	Yes	dom_WORKAGENT
EST_COST_AC	Double			Yes	

Attribute Name	Data Type	Length	Default Value	Required	Domain
BUDGET_CD	String	50		No	
CONTRACTID	String	50		Conditional	
CONTRACTOR	String	30		No	
REASON	String	30	Unknown	Yes	dom_REASON
REASON2	String	30		No	dom_REASON
BLM_ORG_CD	String	5	OR000	Yes *	dom_BLM_ORG_CD
SURV_ACRES	Double			Yes	
GIS_ACRES	Double			Yes *	
SURV_STOCK_PCT	Double			No	dom_PCT100
SURV_TOT_TPA	Short Integer			No	dom_FOI_TPA
SURV_TPA_SERR	Double			No	dom_PCT100
SURV_WS_TPA	Short Integer			No	dom_FOI_TPA
SURV_WS_SERR	Double			No	dom_PCT100
COORD_SRC	String	7		No	dom_COORD_SRC
ACCURACY_FT	Short Integer			No	
DST_DEF_TXT	String	255		No	
DST_DEF_NR	Double			No	
COMMENTS	String	2000		No	
FILEPATH	String	150		No	
SURV_GUID	GUID			Yes *	
VERSION_NAME	String	50	InitialLoad	Yes ***	
GLOBALID	GUID			Yes *	
CREATE_BY	String	50		No *	
CREATE_DATE	Date			No *	
MODIFY_BY	String	50		No *	
MODIFY_DATE	Date			No *	

* Values automatically generated

*** Maintained through versioning tools, may appear not required in database

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. See the metadata for this data for a more precise description of the extent.

6 Spatial Entity Characteristics

- FOREST_SURV_POLY
 - Description: Instance of the Survey group.
 - Geometry: Polygons may overlap entirely or in part. Simple polygons, not multi-part, are used.
 - Topology: No
 - Integration Requirements: None

7 Attribute Characteristics and Definition (In alphabetical order)

7.1 ACCURACY_FT

Geodatabase Name	ACCURACY_FT
BLM Structured Name	Accuracy_Feet_Measure
Inheritance	Inherited from entity Activities
Alias Name	Accuracy (Feet)
Feature Class Use/Entity Table	FOREST_SURV_POLY
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 (e.g., DLG, CADNSDI) 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
Data Type	Short Integer

7.2 BLM_ORG_CD

Geodatabase Name	BLM_ORG_CD
BLM Structured Name	Administrative_Unit_Organization_Code
Inheritance	Inherited from entity Activities
Alias Name	BLM Org Code
Feature Class Use/Entity Table	FOREST_SURV_POLY
Definition	A combination of the BLM administrative state and field office which has administrative responsibility for the spatial entity. This includes which office covers the entity for planning purposes and which office is the lead for GIS edits. Another agency or individual may have the physical management responsibility for the on-the-ground entity. This field applies particularly when a spatial entity crosses field office or district boundaries, and the

	administrative responsibility is assigned to one or the other rather than splitting the spatial unit. Similarly, OR/WA BLM may have administrative responsibility over some area that is physically located in Nevada, Idaho, or California and vice versa. When appropriate, the office can be identified only to the district or even the state level rather than to the field office level. This field is auto calculated on data entry based on the spatial location of the polygon or point centroid. The value may be changed to reflect the actual organization code responsible for the record.
Required/Optional	Required
Domain (Valid Values)	dom_BLM_ORG_CD
Data Type	String (5)

7.3 BUDGET_CD

Geodatabase Name	BUDGET_CD
BLM Structured Name	Funding_Program_Code
Inheritance	Not Inherited
Alias Name	Budget Code
Feature Class Use/Entity Table	FOREST_SURV_POLY
Definition	Primary funding program activity for a survey.
Required/Optional	Optional
Domain (Valid Values)	No domain.
Data Type	String (50)

7.4 CLASSIFIER

Geodatabase Name	CLASSIFIER
BLM Structured Name	Classifier_Name
Inheritance	Inherited from entity Survey
Alias Name	Classifier
Feature Class Use/Entity Table	FOREST_SURV_POLY
Definition	Name (mixed case, first and last) of the subject matter specialist most knowledgeable about the survey (contact). This field is auto calculated on data entry based on the name of the editor. The value may be changed if needed.
Required/Optional	Required
Domain (Valid Values)	No domain. Examples: Joe Smith, Mary Doe
Data Type	String (30)

7.5 CMT_FUND_DT

Geodatabase Name	CMT_FUND_DT
BLM Structured Name	Commit_Funds_Date
Inheritance	Not Inherited
Alias Name	Funding Committed Date
Feature Class Use/Entity Table	FOREST_SURV_POLY
Definition	Date when funds are committed for the survey.
Required/Optional	Optional
Domain (Valid Values)	No domain. 10/22/2009, 9/1/2001
Data Type	Date

7.6 CMT_FUND_FY

Geodatabase Name	CMT_FUND_FY
BLM Structured Name	Commit_Funds_Fiscal_Year
Inheritance	Not Inherited
Alias Name	Funding Committed FY
Feature Class Use/Entity Table	FOREST_SURV_POLY
Definition	The fiscal year when funds are committed for the survey. Auto calculated from the CMT_FUND_DT field on record update.
Required/Optional	Optional
Domain (Valid Values)	No domain. Examples: 2010, 1999
Data Type	String (4)

7.7 COMMENTS

Geodatabase Name	COMMENTS
BLM Structured Name	Comments_Text
Inheritance	Not Inherited
Alias Name	Comments
Feature Class Use/Entity Table	FOREST_SURV_POLY
Definition	Free text for comments.
Required/Optional	Optional
Domain (Valid Values)	No domain.
Data Type	String (2000)

7.8 CONTRACTID

Geodatabase Name	CONTRACTID
BLM Structured Name	Contract_Identification_Number
Inheritance	Not Inherited
Alias Name	Contract ID
Feature Class Use/Entity Table	FOREST_SURV_POLY
Definition	Survey contract number if relevant to the survey. If WORKAGENT = "Service Contract", "IDIQ Contract", "Stewardship", or "Purchase Order", then CONTRACTID is required.
Required/Optional	Conditional
Domain (Valid Values)	No domain. Examples: "140L4322P0099", "140L4322P0138"
Data Type	String (50)

7.9 CONTRACTOR

Geodatabase Name	CONTRACTOR
BLM Structured Name	Contractor_Name
Inheritance	Not Inherited
Alias Name	Contractor Name
Feature Class Use/Entity Table	FOREST_SURV_POLY
Definition	Contractor name for the contract identified by CONTRACTID.
Required/Optional	Optional
Domain (Valid Values)	No domain. Examples: Greyback, Pacific Oasis
Data Type	String (30)

7.10 COORD_SRC

Geodatabase Name	COORD_SRC
BLM Structured Name	Coordinate_Source_Code
Inheritance	Inherited from entity Activities
Alias Name	Coordinate Source
Feature Class Use/Entity Table	FOREST_SURV_POLY
Definition	The actual source of the GIS coordinates for the Polylines/Polygons. If the line is copied from another theme, and already has COORD_SRC, it should be reviewed and may need to be changed for use in this dataset.
Required/Optional	Optional
Domain (Valid Values)	dom_COORD_SRC
Data Type	String (7)

7.11 CREATE_BY

Geodatabase Name	CREATE_BY
BLM Structured Name	Record_Created_By_Text
Inheritance	Inherited from entity ODF
Alias Name	Created By
Feature Class Use/Entity Table	FOREST_SURV_POLY
Definition	The BLM login ID of the person who entered the data. This field is auto populated during editing.
Required/Optional	Optional
Domain (Valid Values)	No domain. Examples: jdoe, msmith
Data Type	String (50)

7.12 CREATE_DATE

Geodatabase Name	CREATE_DATE
BLM Structured Name	Record_Created_Date
Inheritance	Inherited from entity ODF
Alias Name	Created Date
Feature Class Use/Entity Table	FOREST_SURV_POLY
Definition	The date the record was entered. This field is auto populated during editing.
Required/Optional	Optional
Domain (Valid Values)	No domain. Examples: 1/5/1999, 10/15/2021
Data Type	Date

7.13 DST_DEF_NR

Geodatabase Name	DST_DEF_NR
BLM Structured Name	District_Defined_Number
Inheritance	Not Inherited
Alias Name	District Defined 2
Feature Class Use/Entity Table	FOREST_SURV_POLY
Definition	This describes the number assigned for the unit by the District. Controlled by District and Regional Stewards.
Required/Optional	Optional
Domain (Valid Values)	No domain.
Data Type	Double

7.14 DST_DEF_TXT

Geodatabase Name	DST_DEF_TXT
BLM Structured Name	District_Defined_Text
Inheritance	Not Inherited
Alias Name	District Defined 1
Feature Class Use/Entity Table	FOREST_SURV_POLY
Definition	District-assigned text field. Controlled by District and Regional Stewards.
Required/Optional	Optional
Domain (Valid Values)	No domain.
Data Type	String (255)

7.15 EST_COST_AC

Geodatabase Name	EST_COST_AC
BLM Structured Name	Estimated_Cost_Per_Acre_Number
Inheritance	Not Inherited
Alias Name	Estimated Cost/ac
Feature Class Use/Entity Table	FOREST_SURV_POLY
Definition	Estimated cost per acre for the survey. This an estimate for budget purposes before the contract is awarded, not the CONTRACT COST/AC but just. May be based on previous years' contract costs or the user's own estimate. For costs that are typically a cost per plot, such as stand exams, convert those costs to a per acre cost for this field.
Required/Optional	Required
Domain (Valid Values)	No domain.
Data Type	Double

7.16 FILEPATH

Geodatabase Name	FILEPATH
BLM Structured Name	Filename_Path_Text
Inheritance	Not Inherited
Alias Name	File Path
Feature Class Use/Entity Table	FOREST_SURV_POLY
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 that opens for further browsing (where multiple files are being referenced).
Required/Optional	Optional
Domain (Valid Values)	No domain

Data Type	String (150)
-----------	--------------

7.17 GIS_ACRES

Geodatabase Name	GIS_ACRES
BLM Structured Name	GIS_Acres_Measure
Inheritance	Inherited from entity Activities
Alias Name	GIS Acres
Feature Class Use/Entity Table	FOREST_SURV_POLY
Definition	<p>GIS_ACRES is auto calculated when the record is created or modified. The standard spatial reference of Geographic (NAD 1983) cannot be used for calculating acres, so the features are projected as determined by the BLM_ORG_CD of the record. These projections all utilize linear units of meters, so the ESRI Geodatabase-controlled field SHAPE.AREA can be used to convert to acres with the factor based on the U.S. Survey Foot: $GIS_ACRES = SHAPE.AREA * 0.0002471044$.</p> <p>GIS_ACRES is calculated using the NAD 1983 Albers Equal Area project except for the following OR/WA Districts: Prineville: NAD 1983 USFS R6 Albers Coos Bay, Eugene, Lakeview, Medford, Roseburg, Salem: NAD 1983 UTM Zone 10N Burns, Spokane, Vale: NAD 1983 UTM Zone 11N</p>
Required/Optional	Required
Domain (Valid Values)	No domain
Data Type	Double

7.18 GLOBALID

Geodatabase Name	GLOBALID
BLM Structured Name	Global_Unique_Identifier
Inheritance	Inherited from entity ODF
Alias Name	None
Feature Class Use/Entity Table	FOREST_SURV_POLY
Definition	<p>An alpha-numeric code that serves as the universal and unique identifier for each feature within the feature class or table of a geodatabase. A field of type UUID (Universal Unique Identifier) in which values are automatically assigned by the geodatabase when a row is created. This field is not editable and is automatically populated.</p>
Required/Optional	Required
Domain (Valid Values)	No domain. Example: {4747B796-44B4-4628-B069-2D496422E59F}
Data Type	GUID

7.19 LOCAL_LINK

Geodatabase Name	LOCAL_LINK
BLM Structured Name	Local_Database_Identifier
Inheritance	Not Inherited
Alias Name	Example
Feature Class Use/Entity Table	FOREST_SURV_POLY
Definition	District legacy identifier or database link for a survey. For legacy Micro*Storms data this is the Forest Operations Inventory number used for the survey polygon.
Required/Optional	Optional
Domain (Valid Values)	No domain. Examples: 41022, 954869
Data Type	String (50)

7.20 MODIFY_BY

Geodatabase Name	MODIFY_BY
BLM Structured Name	Record_Last_Modified_By_Text
Inheritance	Inherited from entity ODF
Alias Name	Modified By
Feature Class Use/Entity Table	FOREST_SURV_POLY
Definition	The BLM login ID of the person who last edited the data. This field is auto populated during editing.
Required/Optional	Optional
Domain (Valid Values)	No domain. Examples: jdoe, msmith
Data Type	String (50)

7.21 MODIFY_DATE

Geodatabase Name	MODIFY_DATE
BLM Structured Name	Record_Last_Modified_Date
Inheritance	Inherited from entity ODF
Alias Name	Modified Date
Feature Class Use/Entity Table	FOREST_SURV_POLY
Definition	The date the record was last edited. This field is auto populated during editing.
Required/Optional	Optional
Domain (Valid Values)	No domain. Examples: 1/5/1999, 10/15/2021
Data Type	Date

7.22 PRIORITY

Geodatabase Name	PRIORITY
BLM Structured Name	Survey_Priority_Text
Inheritance	Not Inherited
Alias Name	Priority
Feature Class Use/Entity Table	FOREST_SURV_POLY
Definition	Priority of reforestation or survey.
Required/Optional	Optional
Domain (Valid Values)	dom_PRIORITY
Data Type	String (12)

7.23 PROJ_NAME

Geodatabase Name	PROJ_NAME
BLM Structured Name	Project_Name_Text
Inheritance	Inherited from entity Survey
Alias Name	Project Name
Feature Class Use/Entity Table	FOREST_SURV_POLY
Definition	District-assigned name for a project that could encompass multiple survey units. It is not the same as the SURV_NAME and there may be many SURV_NAMES for one PROJ_NAME.
Required/Optional	Optional
Domain (Valid Values)	No domain. Examples: "South River Stand Exams 2013", "Third Year Surveys 2014"
Data Type	String (100)

7.24 REASON

Geodatabase Name	REASON
BLM Structured Name	Primary_Reason_Benefiting_Resource_Text
Inheritance	Not Inherited
Alias Name	Reason
Feature Class Use/Entity Table	FOREST_SURV_POLY
Definition	The intended main or primary reason for the survey or benefitting resource. Consider only officially acknowledged reasons or benefits contained in the domain. REASON will contain the most important reason or benefit. List secondary reason or benefit in REASON2.
Required/Optional	Required
Domain (Valid Values)	dom_REASON
Data Type	String (30)

7.25 REASON2

Geodatabase Name	REASON2
BLM Structured Name	Secondary_Reason_Benefiting_Resource_Text
Inheritance	Not Inherited
Alias Name	Reason
Feature Class Use/Entity Table	FOREST_SURV_POLY
Definition	A secondary reason for the survey or benefiting resource. Only reasons or benefits that are officially acknowledged (contained in the domain) can be considered.
Required/Optional	Optional
Domain (Valid Values)	dom_REASON
Data Type	String (30)

7.26 REGENSTOCKINGCLS

Geodatabase Name	REGENSTOCKINGCLS
BLM Structured Name	Regeneration_Stocking_Class_Code
Inheritance	Not Inherited
Alias Name	Stocking Class
Feature Class Use/Entity Table	FOREST_SURV_POLY
Definition	Regeneration Stocking Class is based on the density standard and the state of development for the regeneration, whether there is a high potential for juvenile mortality or whether it is past that stage. It includes a reference to whether target/minimum standards are met or not met and whether the stand is accepted or not accepted. If SURV_TYPE = "Regeneration", then REGENSTOCKINGCLS is required.
Required/Optional	Conditional
Domain (Valid Values)	dom_REGENSTOCKINGCLS
Data Type	String (30)

7.27 SURV_ACRES

Geodatabase Name	SURV_ACRES
BLM Structured Name	Surveyed_Acres_Measure
Inheritance	Not Inherited
Alias Name	Survey Acres
Feature Class Use/Entity Table	FOREST_SURV_POLY
Definition	The number of acres surveyed. Field measured and manually entered, not GIS calculated. The actual acres surveyed may be less than or equal to, but not more, than the GIS_ACRES.
Required/Optional	Required

Domain (Valid Values)	No domain.
Data Type	Double

7.28 SURV_DATE

Geodatabase Name	SURV_DATE
BLM Structured Name	Survey_Date
Inheritance	Inherited from entity Survey
Alias Name	Survey Date
Feature Class Use/Entity Table	FOREST_SURV_POLY
Definition	Date the survey was completed, or the date proposed in the future.
Required/Optional	Required
Domain (Valid Values)	No domain.
Data Type	Date

7.29 SURV_DATE_ACC

Geodatabase Name	SURV_DATE_ACC
BLM Structured Name	Survey_Date_Accuracy_Code
Inheritance	Inherited from entity Survey
Alias Name	Date Accuracy
Feature Class Use/Entity Table	FOREST_SURV_POLY
Definition	Describes the accuracy of the SURV_DATE field. The default value for this field is "Day."
Required/Optional	Required
Domain (Valid Values)	dom_DT_ACC
Data Type	Date

7.30 SURV_DESC

Geodatabase Name	SURV_DESC
BLM Structured Name	Forest_Survey_Description_Code
Inheritance	Not Inherited
Alias Name	Description
Feature Class Use/Entity Table	FOREST_SURV_POLY
Definition	A more detailed description for the type of survey (Regeneration, Pre-, or Post-Treatment) based on the purpose and timing of the survey being done.
Required/Optional	Required
Domain (Valid Values)	dom_SURV_DESC

Data Type	String (30)
-----------	-------------

7.31 SURV_FY

Geodatabase Name	SURV_FY
BLM Structured Name	Survey_Fiscal_Year
Inheritance	Not Inherited
Alias Name	Survey FY
Feature Class Use/Entity Table	FOREST_SURV_POLY
Definition	The BLM Fiscal year the survey occurred in or is planned for. Automatically calculated from SURV_DATE when the record is modified.
Required/Optional	Optional
Domain (Valid Values)	No domain. Examples: 2010, 1999
Data Type	String (4)

7.32 SURV_GUID

Geodatabase Name	SURV_GUID
BLM Structured Name	Survey_Unique_Identifier
Inheritance	Not Inherited
Alias Name	Survey Unique Identifier
Feature Class Use/Entity Table	FOREST_SURV_POLY
Definition	Unique number identifier for the survey entity. This field is automatically generated.
Required/Optional	Required
Domain (Valid Values)	No domain.
Data Type	GUID

7.33 SURV_NAME

Geodatabase Name	SURV_NAME
BLM Structured Name	Survey_Name_Text
Inheritance	Inherited from entity Survey
Alias Name	Survey Name
Feature Class Use/Entity Table	FOREST_SURV_POLY
Definition	Free text name that identifies the survey entity. Legacy data from M*S will be filled with the Unit Name which was commonly the timber sale name. Multiple survey polygons can have the same SURV_NAME.
Required/Optional	Required
Domain (Valid Values)	No domain. Examples: Deadbolt, Kernel John

Data Type	String (60)
-----------	-------------

7.34 SURV_SRC

Geodatabase Name	SURV_SRC
BLM Structured Name	Forest_Survey_Method_Text
Inheritance	Not Inherited
Alias Name	Survey Source
Feature Class Use/Entity Table	FOREST_SURV_POLY
Definition	The method by which the survey data was collected. For example: aerial, walk-through, plots, EcoSurvey stand exam etc.
Required/Optional	Required
Domain (Valid Values)	dom_SURV_SRC
Data Type	String (30)

7.35 SURV_STATUS

Geodatabase Name	SURV_STATUS
BLM Structured Name	Survey_Status_Text
Inheritance	Inherited from entity Survey
Alias Name	Status
Feature Class Use/Entity Table	FOREST_SURV_POLY
Definition	The status of the survey whether proposed, active, or completed.
Required/Optional	Required
Domain (Valid Values)	dom_TRT_STATUS
Data Type	String (12)

7.36 SURV_STOCK_PCT

Geodatabase Name	SURV_STOCK_PCT
BLM Structured Name	Survey_Stocking_Percent
Inheritance	Not Inherited
Alias Name	% Stocking
Feature Class Use/Entity Table	FOREST_SURV_POLY
Definition	<p>The percentage of sample plots containing at least one suitable tree. Determined by the number of stocked plots divided by the total number of plots, excluding any plots which fell on non-forest land. Values from 0 to 1. Example: Seventeen plots are stocked out of a possible twenty plots that are capable of growing suitable trees.</p> <p>Stocking Percent = (Stocked Plots)/(Total Plots) $(17/20) * 100 = 85\%$</p>

Required/Optional	Optional
Domain (Valid Values)	dom_PCT100
Data Type	Double

7.37 SURV_TOT_TPA

Geodatabase Name	SURV_TOT_TPA
BLM Structured Name	Surveyed_Total_Trees_per_Acre_Measure
Inheritance	Not Inherited
Alias Name	Total TPA
Feature Class Use/Entity Table	FOREST_SURV_POLY
Definition	<p>The actual number of suitable trees per acre determined by counting all suitable trees found on the plot. Calculated by multiplying the average number of trees found on the plots times the full stocking equivalent trees per acre.</p> <p>Example: Where 37 trees are found on 20 plots using a regeneration plot size = 7.8' radius = 0.0044 acres = 1/229th acre</p> <p>Total Trees per Acre = (Total Trees)/(Total Plots) × 1/(Plot area (acres)) = 37/20 × 1/0.0044 = 1.85 × 229 = 424 trees per acre</p> <p>Example: where 37 trees are found on 20 plots using a regeneration plot size of 7.8 feet.</p> <p>Step 1: Calculate the area of the plot in acres. $Area = \pi r^2$ Plot Area sq ft: $\pi \cdot 7.8^2 \approx 191.1345$ Plot Area acres: $191.1345 / 43560 \approx 0.0044$</p> <p>Step 2: Convert the plot area from a decimal to a fraction. $0.0044 \approx 1/227$</p> <p>Step 3: Calculate TPA $TPA = (Total\ Trees)/(Total\ Plots) * 1/(Plot\ area\ (acres))$ $TPA = 37 / 20 * 1 / 227$ $TPA \approx 420$</p>
Required/Optional	Optional
Domain (Valid Values)	dom_FOI_TPA
Data Type	Short Integer

7.38 SURV_TPA_SERR

Geodatabase Name	SURV_TPA_SERR
------------------	---------------

BLM Structured Name	Total_Trees_Per_Acre_Sampling_Error_Measure
Inheritance	Not Inherited
Alias Name	TPA Sample Error %
Feature Class Use/Entity Table	FOREST_SURV_POLY
Definition	This describes the statistical quality of a survey by defining the range within which the "true" value of the total trees per acre lies. A confidence level of 80% should be used.
Required/Optional	Optional
Domain (Valid Values)	dom_PCT100
Data Type	Double

7.39 SURV_TYPE

Geodatabase Name	SURV_TYPE
BLM Structured Name	Forest_Survey_Type_Code
Inheritance	Inherited from entity Survey
Alias Name	Survey Type
Feature Class Use/Entity Table	FOREST_SURV_POLY
Definition	The type of a survey conducted whether regeneration, pre-treatment, or post-treatment.
Required/Optional	Required
Domain (Valid Values)	dom_SURV_TYPE
Data Type	String (30)

7.40 SURV_WS_SERR

Geodatabase Name	SURV_WS_SERR
BLM Structured Name	Well_Spaced_Trees_per_Acre_Sampling_Error_Measure
Inheritance	Not Inherited
Alias Name	WS Sample Error %
Feature Class Use/Entity Table	FOREST_SURV_POLY
Definition	This describes the statistical quality of a survey by defining the range within which the "true" value of the well-spaced trees per acre lies. A confidence level of 80% should be used.
Required/Optional	Optional
Domain (Valid Values)	dom_PCT100
Data Type	Double

7.41 SURV_WS_TPA

Geodatabase Name	SURV_WS_TPA
BLM Structured Name	Well_Spaced_Trees_Per_Acre_Number
Inheritance	Not Inherited
Alias Name	Well Spaced TPA
Feature Class Use/Entity Table	FOREST_SURV_POLY
Definition	<p>The number of well-spaced suitable trees per acre determined by counting only one suitable tree found per plot. Calculated by multiplying the stocking percent times the full stocking equivalent trees per acre.</p> <p>Example: Where seventeen plots are stocked out of a possible twenty plots that are capable of growing suitable trees and a regeneration plot size of 1/229th acre was used.</p> <p>Well Spaced Trees per Acre = (Stocked Plots)/(Total Plots) = 17/20 = .85 × 229 = 195 Well Spaced Trees per Acre</p>
Required/Optional	Optional
Domain (Valid Values)	dom_FOI_TPA
Data Type	Short Integer

7.42 UNIT_NUM

Geodatabase Name	UNIT_NUM
BLM Structured Name	Unit_Number_Identifier
Inheritance	Inherited from entity Survey
Alias Name	Unit #
Feature Class Use/Entity Table	FOREST_SURV_POLY
Definition	Unit number for a survey, usually occurs when there are multiple polygons representing a survey.
Required/Optional	Optional
Domain (Valid Values)	No domain.
Data Type	String (10)

7.43 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	FOREST_SURV_POLY
Definition	<p>Name of the corporate geodatabase version previously used to edit the record. This field is auto calculated.</p> <p>InitialLoad = feature has not been edited in ArcSDE.</p>

	Format: username.XXX-mmddyy-hhmmss = version name of the last edit (hours might be a single digit; leading zeros are trimmed for hours only). XXX = theme abbreviation. Only appears in the transactional (edit) version. Publication version (which is also the version used internally for mapping or analysis) does not contain this attribute.
Required/Optional	Required
Domain (Valid Values)	No domain
Data Type	String (50)

7.44 WORKAGENT

Geodatabase Name	WORKAGENT
BLM Structured Name	Workagent_Text
Inheritance	Not Inherited
Alias Name	Workagent
Feature Class Use/Entity Table	FOREST_SURV_POLY
Definition	"Who" did the work (or the type of procurement instrument).
Required/Optional	Required
Domain (Valid Values)	dom_WORKAGENT
Data Type	String (40)

8 Publication Views

8.1 General

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) to make the data easier to use. Feature classes that have been changed 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.

8.2 Specific to This Dataset

A publication dataset is provided that is designed to meet the requirements below.

Publication feature classes will be created for internal use where:

- The attribute VERSION_NAME is removed (for privacy reasons).
- The edit tracking attributes CREATE_BY, CREATE_DATE, MODIFY_BY, MODIFY_DATE are removed.

- Add STATE, DISTRICT, and FIELD_OFFICE attributes, derived from BLM_ORG_CD.
- Append the CONTRACT attributes for the related Contract record.

Publication feature classes will be created for publishing to the web, release to the public, where:

- Only records with SURV_STATUS = "Completed" are included.
- The attribute VERSION_NAME is removed (for privacy reasons).
- The edit tracking attributes CREATE_BY, CREATE_DATE, MODIFY_BY, MODIFY_DATE are removed.
- The attributes FILEPATH and COMMENTS are removed (for security reasons).
- Add STATE, DISTRICT, and FIELD_OFFICE attributes, derived from BLM_ORG_CD.
- Append the CONTRACT attributes for the related Contract record.

8.3 Layer Files

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.

9 Editing Procedures

9.1 Managing Overlap (General Guidance)

"Overlap" means there are potentially more than one feature in the same feature class that occupies the same space ("stacked" polygons). Depending on the query, acres will be double counted.

In this discussion, an area entity may consist of more than one polygon, and a line entity may consist of more than one arc. They would have multiple records in the spatial table (with identical attributes). Multi-part features are not allowed. Multi-part features are easily created inadvertently and not always easy to identify. If they are not consciously and consistently avoided, feature classes will end up with a mixture of single and multi-part features. Multi-part features can be more difficult to edit, query, and select, along with impacting overall performance.

Overlap is only allowed in the ODF in limited and controlled scenarios. In each case, the "cause" of the overlap (the attribute changes that "kick off" a new feature which may overlap an existing feature) is carefully defined and controlled. In other words, in feature classes that permit overlap for a change in spatial extent, there is always a new feature created which may overlap an existing feature, but in addition there are certain attribute(s) that will result in a new feature even if there is no spatial change. The feature classes (and the one feature dataset) that allow overlap, and the attributes that lead to a new, possibly overlapping feature, are described below.

Within the FOREST_SURV_POLY feature class, an overlapping survey area is created only for a new date. Overlapping polygons are allowed. This group also includes proposed surveys which could overlap existing surveys.

9.2 Editing Quality Control

Duplicate features. Checking for undesired duplicates is critical. Polygons or arcs that are 100% duplicate are easily found by searching for identical attributes along with identical Shape_Area and/or Shape_Length. Searching for partially overlapping arcs or polygons is harder, and each case must be inspected to determine if the overlap is desired or not.

To avoid overlapping polygons on the same area, polygons from different input themes are incorporated with the Union spatial overlay tool, not copied.

Union rather than Intersect is used to prevent unintended data loss.

Gap and overlap slivers. These can be hard to find if there are no topology rules. A temporary map topology can be created to find overlap slivers. Gap slivers can be found by constructing polygons from all arcs and checking polygons with very small area.

Buffer and dissolve considerations. Where polygons are created with the buffer tool, the correct option must be selected. The default option is "None," which means overlap will be retained. Sometimes the overlap should be dissolved, and the option changed to "All." Lines resulting from buffer have vertices too close together, especially around the end curves. They should be generalized to thin the vertices. If the dissolve tool is used on polygons or arcs, the "Create multipart features" should be unchecked.

GPS considerations. GPS linework is often messy and should always be checked and cleaned up as necessary. Often vertices need to be thinned (generalize) especially at line ends. Multi-part polygons are sometimes inadvertently created when GPS files with vertices too close together or crossing lines or spikes are brought into ArcGIS. Tiny, unwanted polygons are created but are "hidden" because they are in a multi-part.

Be careful when merging lines. Multi-part lines will be created if there are tiny unintentional (unknown) gaps, and it can be difficult to find these unless the multi-parts are exploded.

Null geometry. Check any features that have 0 or very small Shape_Area or Shape_Length. If a feature has 0 geometry and you can't zoom to it, it is probably an inadvertently created "Null" feature and should be deleted. Very small features may also be unintended, resulting from messy line work.

Snapping considerations. Where line segments with different COORD_SRC meet, the most accurate or important (in terms of legal boundary representation) are kept unaltered, and other lines snapped to them. In general, the hierarchy of importance is PLSS (CadNSDI points/lines) first, with DLG or SOURCE next, then DEM, and MAP last. When snapping to the data indicated in COORD_SRC (as opposed to duplicating with copy/paste), be sure there are the same number of vertices in the target, and source theme arcs. When the DEF_FEATURE is "SUBDIVISION," snap the line segment to PLSS points, and make sure there are the same number of vertices in the line as PLSS points.

Check that all date fields contain valid dates in MM/DD/YYYY format. If an attribute has a domain, check for invalid values. The values must be exact.

Check for capitalization and spacing differences in attribute values that should be the same. Check for leading or trailing blanks what will make a different value even if it looks identical.

9.3 Theme Specific Guidance

There is much in the data standard that addresses editing and provides guidance especially in the Data Management Protocols (Section 3).

- Use the Micro*Storms Contract Manager tool to assign a contract record to the survey.

9.3.1 Calculation Data Rules

The following are a list of calculation rules that occur during editing. Calculation rules are used to automatically populate attributes in a field. These are in addition to the default values defined in Sections 4 and 7.

- Fill SURV_GUID with a new GUID value on create.
- Calculate BLM_ORG_CD on create.
- Calculate GIS_ACRES on create or modify.

9.3.2 Constraint Data Rules

The following are a list of data constraint rules that are enforced during editing. Constraint rules specify allowable combinations of values between two or more fields in a record. They are used to ensure that specific conditions are met.

- If SURV_TYPE = "Regeneration", then REGENSTOCKINGCLS is required.
- If SURV_STATUS = "Completed", then SURV_DATE cannot be in the future.
- If WORKAGENT = "Service Contract", "IDIQ Contract", "Stewardship", or "Purchase Order", then CONTRACTID is required.
- If SURV_TYPE = "Regeneration", then SURV_DESC must be "Backlog", "Initial PrePlanting", "PreEstablishment1", "PreEstablishment2", or "PreEstablishmentAdd."
- If SURV_TYPE = "PreTreatment" or "PostTreatment", then SURV_DESC must be "PreCommercialSurvey", "HardwoodShrub Survey", "Prune Survey", or "Stand Exam."
- SURV_ACRES may be less than or equal to, but not more, than the GIS_ACRES.

10 Abbreviations and Acronyms

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

Table 2 Abbreviations/Acronyms Used

Abbreviations	Descriptions
AC	Acres
ARC	GIS line feature
BLM	Bureau of Land Management, U.S. Department of the Interior
CADNSDI	Cadastral National Spatial Data Infrastructure
DEM	Digital Elevation Model
DLG	Digital Line Graphs
FOIA	Freedom of Information Act
FOIVEG	Forest Operations Inventory
GIS	Geographic Information System
GNIS	Geographic Names Information System
GPS	Global Positioning System
ID	Identifier
IDIQ	Indefinite Delivery/Indefinite Quantity
M*S	Micro*Storms Application
NAD	North American Datum
NARA	National Archives and Records Administration
NEPA	National Environmental Policy Act
ODF	Oregon Data Framework
OR/WA	Oregon/Washington BLM Administrative State
POLY	GIS polygon feature
PUB	Publication
RMP	Resource Management Plan
USFS	United States Forest Service, U.S. Department of Agriculture
USGS	United States Geological Survey, U.S. Department of the Interior
SDE	Spatial Database 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](#).

A.1 dom_BLM_ORG_CD

Administrative Unit Organization Code. Standard BLM organization codes generated from the national list.

This is a lengthy domain used by multiple datasets. For the full list of values go to:

https://gis.blm.gov/ORDownload/Domains/dom_BLM_ORG_CODE.xls

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
DGPS	DGPS - Feature obtained from a Global Positioning System device with Real Time Correction (SBAS)
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 orthophotography backdrop (DOQ, NAIP, OSIP, or others)
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
IMG	IMG - Linework derived from interpretation of satellite or other non-photographic imagery
LiDAR	LiDAR - LiDAR points, lines, or polygons generated through interpretation or analysis.
MAP	MAP - Digitized coordinates from hardcopy map or onto a map backdrop
MTP	MTP - Lines duplicated from Digital Master Title Plat
SOURCEL	SOURCEL - Coordinates duplicated from a BLM GIS source layer.
SOURCEX	SOURCEX - Source Layer from non-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_DT_ACC

Date Accuracy Code. Describes the accuracy of a date field.

Code	Description
Day	Day - Only the exact day, month, and year is known.
Month	Month - Only the exact month and year is known.
Year	Year - Only the exact year is known.
Unknown	Unknown - The accuracy of the date is unknown

A.4 dom_FOI_TPA

FOI Range Trees per Acre Domain. Range domain where the allowable values are 0 to 9999.

A.5 dom_PCT100

Percentage (0-100) Range Domain. Range domain where the allowable values are whole numbers 0 to 100.

A.6 dom_PRIORITY

Priority Code.

Code	Description
High	High - High priority
Medium High	Medium High - Medium to high priority
Medium	Medium - Medium priority
Medium Low	Medium Low - Medium to low priority
Low	Low - Low priority

A.7 dom_REASON

Reason Code. Reason for, or benefit from, an action.

Code	Description
Access	Access - Road rights limit ability to obtain legal access to certain units or portions of units.
Administration	Administration - Administration
Aspen	Aspen - Action protects or improves health of Aspen
Bald Eagle	Bald Eagle - Action benefits Bald Eagle
Biomass Value	Biomass Value - Commodity production
Birds-General	Birds-General - Habitat improve, restore or protect
Communication	Communication - Communication Towers and Relays
Contract Default/Buyback/other	Contract Default/Buyback/other

Code	Description
Cultural	Cultural - Protection of cultural resources
EDRR	EDRR - Early Detection Rapid Response
Fire Rehab	Fire Rehab - Restoration after fire
Fish-General	Fish-General - Habitat improve, restore or protect
Forest Regeneration	Forest Regeneration - Action to improve, restore, or protect the establishment of a forest stand.
Forest Stand	Forest Stand - Improve, restore or protect an established/accepted forest stand.
Fuels Reduction	Fuels Reduction - Ladder, Surface, Canopy
Green Tree Retention	Green Tree Retention - Retain trees to provide for various long-term ecological functions.
Human Safety	Human Safety - Health and safety measures
Invasives Control	Invasives Control - Remove or contain invasive species. Weed control must be entered into NISIMS first.
Livestock	Livestock - Commodity production
Log Value	Log Value - Commodity production
MAMU	MAMU - Marbled Murrelet habitat improve, restore, or protect.
Mineral Activity	Mineral Activity
Mngt Dec/Agreement/Settlement	Mngt Dec/Agreement/Settlement
NSO	NSO - Northern Spotted Owl habitat improve, restore, or protect.
Operations	Operations - Harvest operation limitations prevent reaching certain units or portions of units.
Post-Treat Cleanup	Post-Treat Cleanup - Pile, Burn
Pre-Treat Prep	Pre-Treat Prep - Soil/site preparation
Rangeland Veg	Rangeland Veg - Improve, restore or protect
Recreation Use	Recreation Use - Manage or enhance recreation use
Research	Research - Study area
Restore Forest Growth	Restore Forest Growth - Actions such as late precommercial thin to improve growth of a forest stand.
Riparian Veg	Riparian Veg - Improve, restore or protect
Road Access Restriction	Road Access Restriction - Road or Trail closure or blockage
Sage-grouse	Sage-grouse - Action benefits Sage-grouse
Salvage Harvest	Salvage Harvest - Removal of dead, dying, or damaged trees
Sensitive Fish	Sensitive Fish - Protect or improve specific fish populations or habitat
Sensitive Plants	Sensitive Plants - Protect or improve specific plant populations or habitat
Sensitive Species	Sensitive Species - Habitat improve, restore, protect.
Slope Stability	Slope Stability - Erosion control
Soils	Soils - Protect or improve soils.

Code	Description
Stand Conversion	Stand Conversion - Conversion of hardwoods or non-commercial species to a commercial forest stand.
Stocking Stand Condition	Stocking Stand Condition - Forest conditions do not meet required tree stocking levels.
Streambank Stability	Streambank Stability - Erosion control
Tree Disease	Tree Disease - Action to limit the spread or define the extent of a particular tree disease.
Unknown	Unknown - Reason for the action or benefiting resource not specifically identified.
Utility Infrastructure	Utility Infrastructure - Utility Infrastructure
Water Quality	Water Quality - Watershed improve, restore or protect
Water Use	Water Use - Water source and flow management
Wetlands	Wetlands - Improve, restore or protect
Wilderness Character	Wilderness Character - Protection measure
Wildhorses	Wildhorses - Action benefits Wildhorses or Burros.
Wildlife-General	Wildlife-General - Habitat improve, restore or protect

A.8 dom_REGENSTOCKINGCLS

Forest Survey Regeneration Stocking Class Code.

Code	Description
NonProductive	Non-Productive lands
NonStocked	Nonstocked forest lands
Regen Unaccepted Min	Regen Unaccepted Minimum - Forest lands with unaccepted regeneration occupying 60-79% of the surveyed area.
Regen Unaccepted Sub-min	Regen Unaccepted Sub-minimum - Forest lands with unaccepted regeneration occupying less than 60% of the area.
Regen Unaccepted Target	Regen Unaccepted Target - Forest lands with unaccepted regeneration occupying 80-100% of the surveyed area.
Regen Accepted Min	Regen Accepted Minimum - Forest lands with accepted regeneration occupying 60-79% of the surveyed area.
Regen Accepted Sub-min	Regen Accepted Sub-minimum - Forest lands with accepted regeneration occupying less than 60% of the surveyed area.
Regen Accepted Target	Regen Accepted Target - Forest lands with accepted regeneration occupying 80-100% of the surveyed area.

A.9 dom_SURV_DESC

Forest Survey Description Code. The description of the survey.

Code	Description
Backlog	Backlog - Survey evaluating understocked unit usually 6+ years old.

Code	Description
Initial PrePlanting	Initial PrePlanting - Initial survey made prior to first planting.
PreEstablishment1	PreEstablishment1 - Survey evaluating quality of planted seedlings.
PreEstablishment2	PreEstablishment2 - Second survey evaluating quality of planted seedlings.
PreEstablishmentAdd	PreEstablishmentAdd - Additional survey evaluating quality of planted seedlings.
PreCommercial Survey	PreCommercial Survey - Survey made prior to (Pre) or after (Post) a pre-commercial thinning.
HardwoodShrub Survey	HardwoodShrub Survey - Survey made prior to (Pre) or after (Post) a hardwood shrub control treatment.
Prune Survey	Prune Survey - Survey made prior to (Pre) or after (Post) a pruning treatment.
Stand Exam	Stand Exam - Survey made prior to (Pre) or after (Post) a harvest treatment.
Unknown	Unknown - needs data entry

A.10 dom_SURV_SRC

Forest Survey Source Code. The source of the survey data.

Code	Description
Aerial Exam	Survey data from helicopter or fixed wing aircraft.
Photo Interpretation	Survey data from photo interpretation.
Walk through Exam	Survey data interpreted from a walk through the forest.
Stand Exam-NonEcoSurvey	Survey data from stand exam (not using EcoSurvey).
Stand Exam-EcoSurvey	EcoSurvey generated stand exam data (tree data for each plot coordinate are found in the corporate EcoSurvey database).
Stocking Survey-Other	Stocking survey plot summary data using a method other than EcoSurvey.
Stocking Survey-EcoSurvey	EcoSurvey generated stocking survey trees per acre summary data.
LiDAR	Survey summary results from Light Detection and Ranging interpolated data.
CVS Plot	Survey data from Current Vegetation Survey plot.
FIA Plot	Survey data from Forest Inventory and Analysis plot.
Stand Exam	Stand Exam (for legacy M*S data only, not a valid choice for new data).
MicroStorms	MicroStorms (for legacy M*S data only, not a valid choice for new data).
Unknown	Survey data source unknown (not a valid choice for new data).

A.11 dom_SURV_TYPE

Forest Survey Type Code. The type of survey.

Code	Description
Regeneration	Regeneration - Surveys completed during the establishment of a forest stand
Pre-Treatment	Pre-Treatment - Surveys completed after forest stand established but prior to a treatment to determine next proposal.

Code	Description
Post-Treatment	Post-Treatment - Surveys completed after forest stand established but after a treatment to determine success of treatment.
Unknown	Unknown - needs data entry

A.12 dom_TRT_STATUS

Treatment Status Code. Status of the treatment action.

Code	Description
Completed	Completed - Treatment action completed
Proposed	Proposed - Action not yet started
Active	Active - Treatment action underway
Deferred	Deferred - Treatment deferred; Reason for deferment is given in Reason.
Suspended	Suspended - Treatment action halted
Rejected	Rejected - Considered by BLM and found unsuitable

A.13 dom_WORKAGENT

Workagent Code. "Who" did the work (or procurement instrument).

Code	Description
Assistance Agreement	Assistance Agreement
Coop Agreement	Coop Agreement - ODFW, ODA, County, etc.
Federal Labor	Federal Labor
GNA	GNA - Good Neighbor Agreement
Grantee	Grantee
IDIQ Contract	IDIQ Contract - Non-stewardship
Landowner	Landowner
Micro-Purchase	Micro-Purchase - Check or Credit Card limited amount purchase
Permittee	Permittee
Purchase Order	Purchase Order
Service Contract	Service Contract
Service Contract Time and Materials	Service Contract Time and Materials
Stewardship Contract	Stewardship Contract
Timber Sale	Timber Sale
Unknown	Unknown
Volunteer	Volunteer