Oregon/Washington Bureau of Land Management

Marbled Murrelet

Spatial Data Standard

Marbled murrelet on the water. Credit: R. Lowe, USFWS, 9/10/2010.

Document Revisions

Revision	Date	Author	Description	Affected Pages
1.0	5/20/2020	Dana Baker-Allum, Chelsea Waddell, Bruce Hollen	Initial Release	All

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

Contents

1 General Information

The marbled murrelet dataset represents spatial location and basic information about survey activities for marbled murrelet birds. BLM wildlife biologists and GIS specialists enter and query data that was collected by district staff or contractors. The dataset includes three feature classes and three tables to support the following data collection:

1. MAMU_SRV_SITE – Survey areas. These polygons record the area where the survey is conducted. A Survey Site may encompass many Stations. While not available for historic data, all Surveys with a survey date of 2016 or later must have a related Survey Site.
2. MAMU_STATION – Survey observation stations. A station is where the observer stands when conducting a survey visit. Stations are stored as point features.
3. MAMU_OCC_SITE – Marbled murrelet occupied stand refers to all forest stands, regardless of age or structure, within ¼ mile (1,320 feet) of the location of marbled murrelet behavior indicating occupancy and not separated from the location of marbled murrelet behavior indicating occupancy by more than 328 feet of non-forest. Occupied Sites are stored as polygon features.
4. MAMU_SURVEY – A survey visit represents a single morning's survey. The survey period is the 2-hour period in which a survey visit is conducted; it begins 45 minutes before official sunrise and continues for at least 75 minutes after sunrise.
5. MAMU_DETECTION – A tabular record of the number of marbled murrelets detected, visual and audible, and their behavior. A detection represents the detection of a single bird or a group of birds, defined as the sighting or hearing of one or more birds acting in a similar manner and initially occurring at the same time. Sequential detections are distinguished by a break of five seconds or more.
6. MAMU_WEATHER – This table records environmental conditions as observed at the survey station at the beginning and end of the survey visit and as significant changes in the conditions occur throughout the survey visit.

- Dataset (Theme) Name: Marbled Murrelet
- Dataset (Feature Class): MAMU_SRV_SITE, MAMU_STATION, MAMU_OCC_SITE
- Dataset (Table): MAMU_DETECTION, MAMU_SURVEY, MAMU_WEATHER

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.

Table 1 Roles and Responsibilities

Roles	Responsibilities
State Data Administrator	The State Data Administrator provides information management leadership, data modeling expertise, and custodianship of the state data models. The State Data Administrator ensures compliance with defined processes for development of data standards and metadata, and process consistency and completeness. The State Data Administrator is responsible for making data standards and metadata accessible to all users. The State Data Administrator coordinates with data stewards and GIS coordinators to respond to national spatial data requests.
State Records Administrator	The State Records Administrator assists the state data steward to identify any privacy issues related to spatial data. The state records administrator also provides direction and guidance on data release and fees. The state records administrator classifies data under the proper records retention schedule and determines the appropriate Freedom of Information Act category.

1.2 FOIA Category

Public

1.3 Records Retention Schedule

The DRS/GRS/BLM Combined Records Schedule, under Schedule 20/52a3 (Electronic Records/Geographic Information Systems), lists this theme 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

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

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

There are no privacy issues or concerns associated with these data themes. A privacy impact assessment was submitted for this dataset on July 22, 2016. The Privacy Impact Assessment (PIA) number is not available.

1.5 Keywords

Keywords that can be used to locate this dataset include:

- BLM Thesaurus: Wildlife
- Additional keywords: Fauna, Threatened & Endangered
- ISO Thesaurus: biota, environment

1.6 Subject Function Codes

BLM Subject Function codes used to describe this dataset include:

- 1283 – Data Administration
- 6500 – Wildlife Management
- 6800 – Wildlife Population Management

2 Dataset Overview

2.1 Usage

This dataset is used to document BLM marbled murrelet (*Brachyramphus marmoratus*) observations, discrete locations, occupied sites, and surveys for use in NEPA analysis, ESA consultation for BLM actions, and for conservation planning strategies. This dataset can be used to track the status of the species through time (trend) and to document areas that have been surveyed and 'cleared' prior to BLM actions that could adversely affect the Marbled murrelet. The data set is an important resource for historic, current, and potential habitat for where this species may or may not occur within the region. Data collected and retained in the MAMU datasets follows guidelines outlined in the Pacific Seabird Group's marbled murrelet survey protocol, and designations of management areas (i.e. occupied sites) is outlined in the Western Oregon Resource Management Plans Records of Decision. MAMU data is often requested by and shared upon request with other federal agencies and state government agencies as well as a variety of requesting non-government organizations, interested parties, and the public through various data sharing agreements.

Marbled murrelet editors include BLM Oregon & Washington wildlife biologists, technicians, and GIS staff who have received formal training on their district to use the database and conduct murrelet surveys. Districts that contribute to, and utilize this dataset, include the Northwest Oregon, Roseburg, and Coos Bay District. Data are entered into the database for all projects and monitoring as they occur on BLM lands, and annually by March 1st of each year. Managers, planners and other specialists can view and query the dataset through the Oregon State Office GIS Layer Browser in Citrix ArcGIS.

2.2 Sponsor/Affected Parties

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

Affected parties include partner agencies, the Pacific Seabird Group, and the Oregon State University Nelson laboratory.

2.3 Relationship to Other Datasets, Databases, or Files

This dataset is located within the Oregon Data Framework (ODF) within the Resources section under Species Occurrences and within the Activities section under Surveys. The dataset includes several affiliations and relationships with other datasets within the Oregon Data Framework:

- **Botany and Wildlife Observations and Surveys:** This dataset is often used in conjunction with the MAMU dataset to inform and document species locations in support of National Environmental Policy Act (NEPA) evaluation of proposed federal actions. Project scoping, surveys, and Endangered Species Act consultation will also use data housed in both datasets, depending on the project and scope. Occasionally, when Threatened, Endangered and Sensitive Species that are tracked in the Botany and Wildlife Observations and Surveys dataset are documented during marbled murrelet surveys, they are documented in the Botany and Wildlife Observations and Surveys dataset.
- **Land Use Allocation for Resource Management Plans for Western Oregon:** Marbled murrelet occupied site polygons are used by the process that derives the LUA_RWO_POLY feature class.
- **Micro*Storms:** This is inherently affiliated with the Forestry database, Micro*Storms, which includes a Vegetation Publication (forest_MicroStorms_veg_pub.gdb). Often, the Forest Operations Inventory (FOI) Vegetation Publication dataset polygons or Harvest treatment polygons are used to define survey polygons, especially on O&C lands in Western Oregon. Stand age and other stand exam data within FOI may play a role in where surveys are performed.

2.4 Data Category/Architecture Link

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

* Activities
* Resources
* Boundaries

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

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

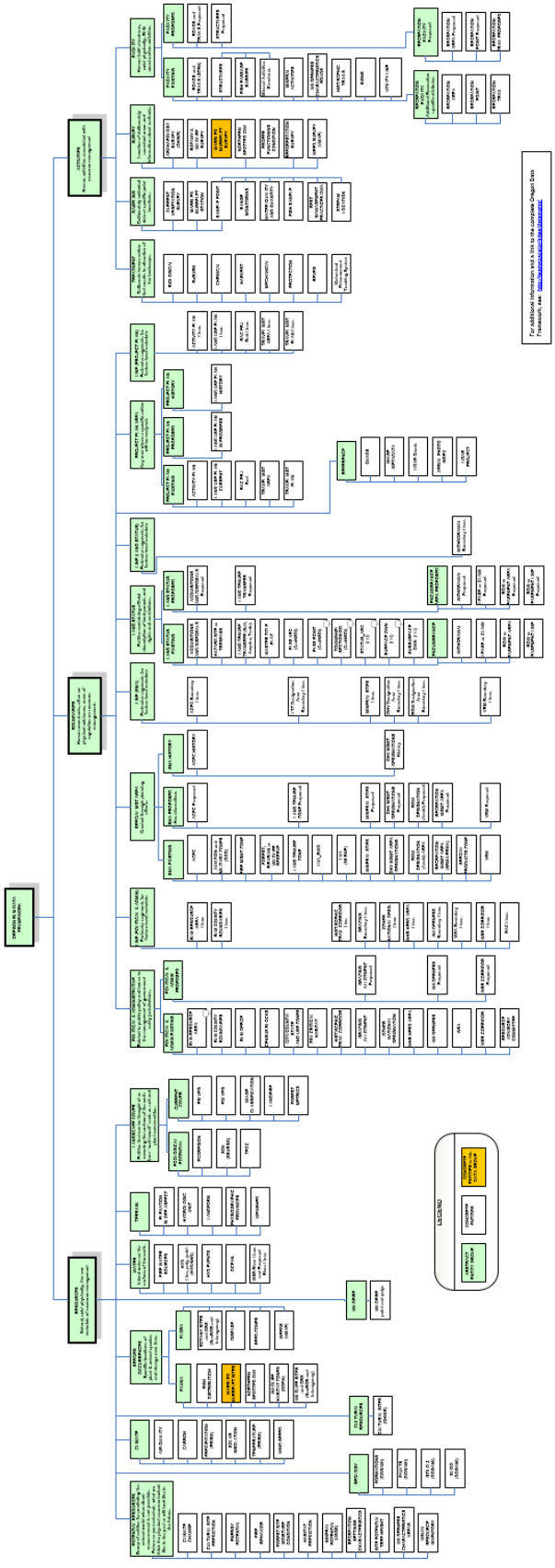

Figure 1 Oregon Data Framework Overview

Physical data is populated in the basic data sets. Those groups/categories above them do not contain actual data but set parameters that all data of that type must follow. See Figure 2, Data Organization Structure for a simplified schematic of the entire ODF showing the overall organization and entity inheritance. The marbled murrelet 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, marbled murrelet is considered an activity and a natural resource and categorized as follows:

ODF

- Activities
  - Survey
    - MAMU_SRV_SITE
  - Sampling
    - MAMU_STATION
    - MAMU_SURVEY
    - MAMU_DETECTION
    - MAMU_WEATHER
- Resources
  - Species Occurrences
    - Fauna
      - MAMU_OCC_SITE

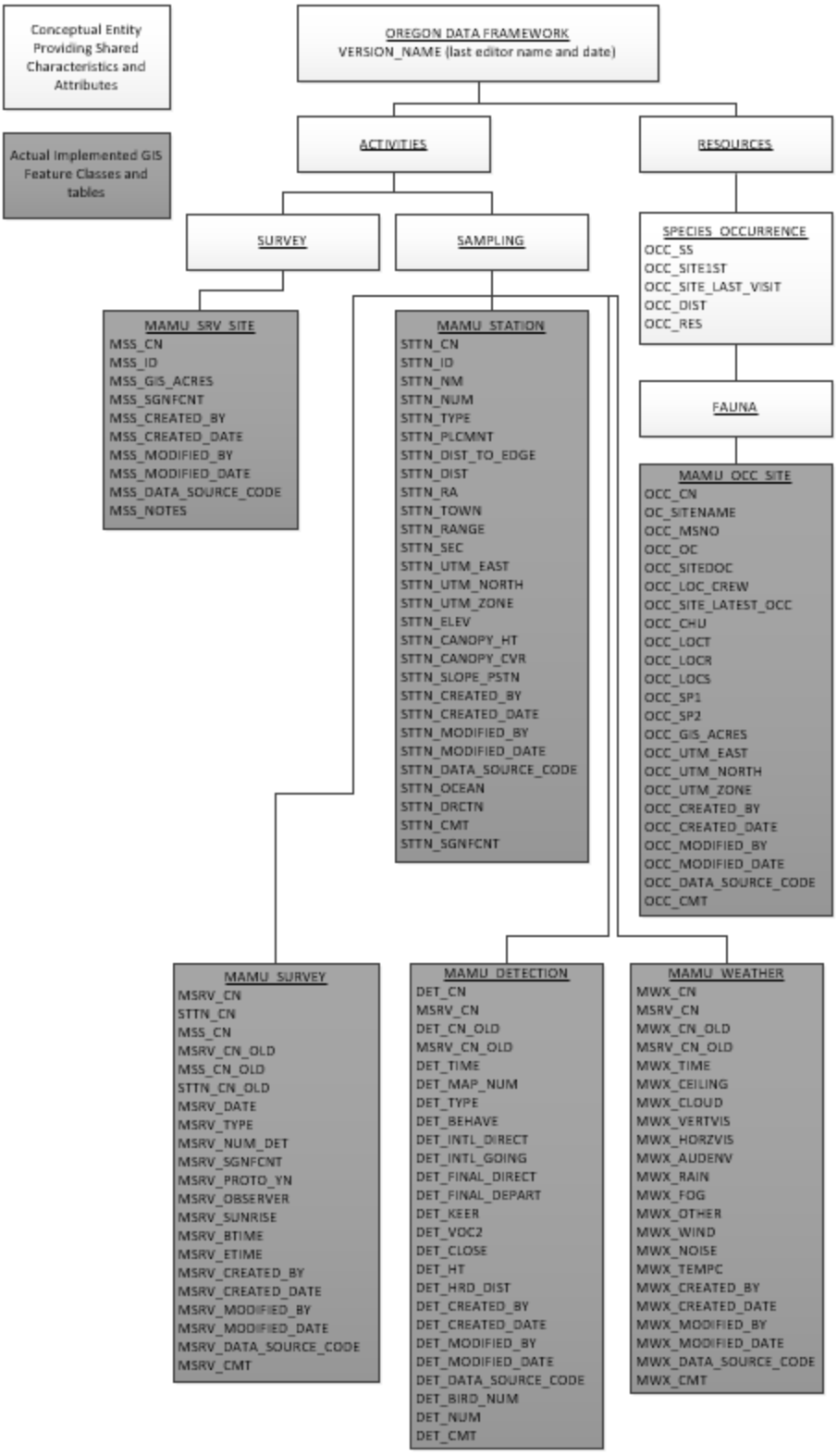

Figure 2 Data Organization Structure

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

This dataset requires the best possible spatial accuracy based on the tools and technologies available to document polygons, points and their associated data. The values of required attributes have an accuracy of at least 95 percent. GPS location accuracy for spatial features is usually +- 30ft, but this GPS accuracy is often limited by site conditions (ex. canopy cover).

3.2 Collection, Input, and Maintenance Protocols

Biologists, technicians, seasonal staff, specialists, and contractors collect data using the marbled murrelet survey protocol published by the Pacific Seabird Group (https://pacificseabirdgroup.org/).

3.3 Update Frequency and Archival Protocols

Data is updated as needed, but at least annually. It is archived annually at the end of the fiscal year. Additionally, to maintain a current representation of data, all records collected in the previous year should be entered into the database by March 1st of the following year. An annual or 3-year Instruction Memorandum is issued that identities and outlines this requirement.

3.4 Statewide Monitoring

The State Data Stewards, District Data Stewards, and GIS Technical Lead, are responsible for ensuring data is managed as a corporate resource, that new and existing users are trained and supported, and that information for marbled murrelet is being entered into the database annually. They coordinate with field office data stewards, the state data administrator, Geographic Information System (GIS) coordinators, and national data stewards. The State Data Stewards are responsible for approving and drafting data standards and business rules, reviewing metadata, providing technical support, developing Quality Assurance/Quality Control procedures, coordinating data exchange with agencies and the public, and identifying potential privacy issues.

4 Marbled Murrelet Schema (simplified)

General Information: Attributes are listed in the order they appear in the geodatabase feature class or table. 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 MAMU_SRV_SITE Feature Class (Marbled Murrelet Survey Sites)

For domain and default values, see Section 7, **Attribute Characteristics and Definition** in this document.

Attribute Name	Data Type	Length	Required	Domain
MSS_CN	GUID		Yes	
MSS_ID	String	50	No	
MSS_GIS_ACRES	Double		Yes *	
MSS_SGNFCNT	String	2	No	dom_MM_MSRV_SGNFCNT
MSS_CREATED_BY	String	30	No *	
MSS_CREATED_DATE	Date		No *	
MSS_MODIFIED_BY	String	30	No *	
MSS_MODIFIED_DATE	Date		No *	
MSS_DATA_SOURCE_CODE	String	10	Yes *	dom_GB_Data_Source
MSS_VERSION_NAME	String	75	Yes *	
MSS_NOTES	String	1000	No	

* Values automatically generated

4.2 MAMU_STATION Feature Class (Marbled Murrelet Station Points)

For domain and default values, see Section 7, **Attribute Characteristics and Definition** in this document.

Attribute Name	Data Type	Length	Required	Domain
STTN_CN	GUID		Yes *	
STTN_ID	String	17	Yes	
STTN_NM	String	25	No	
STTN_NUM	String	3	Yes	
STTN_TYPE	String	1	No	dom_MM_STTN_TYPE
STTN_PLCMNT	String	1	No	dom_MM_STTN_PLCMNT
STTN_DIST_TO_EDGE	String	5	No	

STTN_DIST	String	15	Yes *	dom_MM_STTN_DIST
STTN_RA	String	15	Yes *	dom_MM_STTN_RA
STTN_TOWN	String	5	Yes *	
STTN_RANGE	String	5	Yes *	
STTN_SEC	String	2	Yes *	
STTN_UTM_EAST	Long Integer		Yes *	
STTN_UTM_NORTH	Long Integer		Yes *	
STTN_UTM_ZONE	Short Integer		Yes *	
STTN_ELEV	Short Integer		No	
STTN_CANOPY_HT	Short Integer		No	
STTN_CANOPY_CVR	Short Integer		No	dom_MM_STTN_CANOPY_CVR
STTN_SLOPE_PSTN	String	1	No	dom_MM_STTN_SLOPE_PSTN
STTN_CREATED_BY	String	30	No *	
STTN_CREATED_DATE	Date		No *	
STTN_MODIFIED_BY	String	30	No *	
STTN_MODIFIED_DATE	Date		No *	
STTN_DATA_SOURCE_CODE	String	10	Yes *	dom_GB_Data_Source
STTN_VERSION_NAME	String	75	Yes *	
STTN_OCEAN	Double		No	
STTN_DRCTN	String	2000	No	
STTN_CMT	String	2000	No	
STTN_SGNFCNT	String	2	No	dom_MM_MSRV_SGNFCNT

* Values automatically generated

4.3 MAMU_OCC_SITE Feature Class (Marbled Murrelet Occupied Site Polygons)

For domain and default values, see Section 7, **Attribute Characteristics and Definition** in this document.

Attribute Name	Data Type	Length	Required	Domain
OCC_CN	GUID		Yes *	
OCC_SITENAME	String	25	Yes	
OCC_MSNO	String	5	No	
OCC_SS	String	1	Yes	dom_MM_OCC_STATUS
OCC_OC	String	2	No	dom_MM_MSRV_SGNFCNT
OCC_SITE1ST	String	4	No	
OCC_SITEDOC	String	4	No	
OCC_LOC_CREW	String	50	No	dom_MM_OCC_LOCCREW

OCC_SITE_LATEST_OCC	String	4	No	
OCC_SITE_LAST_VISIT	String	4	No	
OCC_CHU	String	10	No	
OCC_DIST	String	15	No *	dom_MM_STTN_DIST
OCC_RES	String	15	No *	dom_MM_STTN_RA
OCC_LOCT	String	5	No *	
OCC_LOCR	String	5	No *	
OCC_LOCS	String	2	No *	
OCC_SP1	String	2	No	dom_MM_OCC_SP1
OCC_SP2	String	3	No	dom_MM_OCC_SP2
OCC_GIS_ACRES	Double		No *	
OCC_UTM_EAST	Long Integer		No	
OCC_UTM_NORTH	Long Integer		No	
OCC_UTM_ZONE	Short Integer		No	
OCC_CREATED_BY	String	30	No *	
OCC_CREATED_DATE	Date		No *	
OCC_MODIFIED_BY	String	30	No *	
OCC_MODIFIED_DATE	Date		No *	
OCC_DATA_SOURCE_CODE	String	10	Yes *	dom_GB_Data_Source
OCC_VERSION_NAME	String	75	Yes *	
OCC_CMT	String	2000	No	

* Values automatically generated

4.4 MAMU_DETECTION Table (Marbled Murrelet Detections)

For domain and default values, see Section 7, **Attribute Characteristics and Definition** in this document.

Attribute Name	Data Type	Length	Required	Domain
DET_CN	GUID		Yes *	
MSRV_CN	GUID		Yes *	
DET_TIME	String	4	No	
DET_MAP_NUM	String	2	No	
DET_TYPE	String	1	No	dom_MM_DET_TYPE
DET_BEHAVE	String	1	No	dom_MM_DET_BEHAVE
DET_INTL_DIRECT	String	2	No	dom_MM_DIRECTION
DET_INTL_GOING	String	2	No	dom_MM_DIRECTION
DET_FINAL_DIRECT	String	2	No	dom_MM_DIRECTION
DET_FINAL_DEPART	String	2	No	dom_MM_DIRECTION

DET_KEER	String	5	No	dom_MM_DET_KEER
DET_VOC2	String	5	No	dom_MM_DET_VOC2
DET_CLOSE	Short Integer		No	
DET_HT	Double		No	
DET_HRD_DIST	String	1	No	dom_MM_DET_HRD_DIST
DET_CREATED_BY	String	30	No *	
DET_CREATED_DATE	Date		No *	
DET_MODIFIED_BY	String	30	No *	
DET_MODIFIED_DATE	Date		No *	
DET_DATA_SOURCE_CODE	String	10	Yes *	dom_GB_Data_Source
DET_VERSION_NAME	String	75	Yes *	
DET_BIRD_NUM	Short Integer		No	
DET_NUM	Long Integer		No	
DET_CMT	String	2000	No	

* Values automatically generated

4.5 MAMU_SURVEY Table (Marbled Murrelet Surveys)

For domain and default values, see Section 7, **Attribute Characteristics and Definition** in this document.

Attribute Name	Data Type	Length	Required	Domain
MSRV_CN	GUID		Yes *	
STTN_CN	GUID		Yes *	
MSS_CN	GUID		No *	
MSRV_DATE	Date		Yes	
MSRV_TYPE	String	1	Yes	dom_MM_MSRV_TYPE
MSRV_NUM_DET	Short Integer		Yes	
MSRV_SGNFCNT	String	2	Yes	dom_MM_MSRV_SGNFCNT
MSRV_PROTO_YN	String	1	Yes	dom_MM_MSRV_PROTO_YN
MSRV_OBSERVER	String	3	Yes	
MSRV_SUNRISE	String	4	Yes	
MSRV_BTIME	String	4	Yes	
MSRV_ETIME	String	4	Yes	
MSS_CREATED_BY	String	30	No *	
MSRV_CREATED_DATE	Date		No *	
MSRV_MODIFIED_BY	String	30	No *	
MSRV_MODIFIED_DATE	Date		No *	
MSRV_DATA_SOURCE_CODE	String	10	Yes *	dom_GB_Data_Source

MSRV_VERSION_NAME	String	75	Yes *	
MSRV_CMT	String	2000	No	

* Values automatically generated

4.6 MAMU_WEATHER Table (Marbled Murrelet Weather Observations)

For domain and default values, see Section 7, **Attribute Characteristics and Definition** in this document.

Attribute Name	Data Type	Length	Required	Domain
MWX_CN	GUID		Yes *	
MSRV_CN	GUID		Yes *	
MWX_TIME	String	4	No	
MWX_CEILING	String	2	No	dom_MM_MWX_CEILING
MWX_CLOUD	String	1	No	dom_MM_MWX_CLOUD
MWX_VERTVIS	String	1	No	dom_MM_MWX_VERTVIS
MWX_HORZVIS	String	1	No	dom_MM_MWX_HORZVIS
MWX_AUDENV	String	1	No	dom_MM_MWX_AUDENV
MWX_RAIN	String	1	No	dom_MM_MWX_RAIN
MWX_FOG	String	1	No	dom_MM_MWX_FOG
MWX_OTHER	String	10	No	dom_MM_MWX_OTHER
MWX_WIND	String	1	No	dom_MM_MWX_WIND
MWX_NOISE	String	10	No	dom_MM_MWX_NOISE
MWX_TEMPC	Short Integer		No	
MWX_CREATED_BY	String	30	No *	
MWX_CREATED_DATE	Date		No *	
MSS_MODIFIED_BY	String	30	No *	
OCC_MODIFIED_DATE	Date		No *	
MWX_DATA_SOURCE_CODE	String	10	Yes *	dom_GB_Data_Source
MWX_VERSION_NAME	String	75	Yes *	
MWX_CMT	String	2000	No	

* Values automatically generated

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 OR/WA in Western Oregon. See the metadata for this data for a more precise description of the extent.

6 Spatial Entity Characteristics

- Survey Sites (MAMU_SRV_SITE)

  Description: A Survey Site represents a geographic area within a Survey Area. Survey Areas are divided up into smaller Survey Sites.

  Geometry: Polygon; disjoint large areas or scattered small areas. Features may have donut holes or islands; features may overlap (stack) on each other.

  Topology: No topology enforced.

  Integration Requirements: None.

- Stations (MAMU_STATION)

  Description: A Station is where the observer stands when conducting a survey visit.

  Geometry: Point; disjoint large areas or scattered small areas. Features may overlap (stack) on each other.

  Topology: No topology enforced.

  Integration Requirements: None.

- Occupied Sites (MAMU_OCC_SITE)

  Description: Represents an area where murrelets have been detected.

  Geometry: Polygon; disjoint large areas or scattered small areas. Features may have donut holes or islands; features may overlap (stack) on each other.

  Topology: No topology enforced.

  Integration Requirements: None.

7 Attribute Characteristics and Definition (In alphabetical order)

7.1 DET_BEHAVE

Geodatabase Name	DET_BEHAVE
BLM Structured Name	Detection_Behavior_Code
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_DETECTION
Definition	Records the behavior type of the bird(s).
Required/Optional	Optional
Domain (Valid Values)	dom_MM_DET_BEHAVE
Data Type	String (1)

7.2 DET_BIRD_NUM

Geodatabase Name	DET_BIRD_NUM
BLM Structured Name	Detection_Bird_Number_Text
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_DETECTION
Definition	Number of birds detected. Value “U” can be used for unknown value.
Required/Optional	Optional
Domain (Valid Values)	No Domain. Examples: “3”, “U”
Data Type	String (5)

7.3 DET_CLOSE

Geodatabase Name	DET_CLOSE
BLM Structured Name	Detection_Closest_Distance_Number
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_DETECTION
Definition	The closest horizontal distance from the observer to the murrelet(s). A bird flying directly overhead is equivalent to a horizontal distance of zero.
Required/Optional	Optional
Domain (Valid Values)	No domain. Examples: 0, 10, 100, 150
Data Type	Short Integer

7.4 DET_CMT

Geodatabase Name	DET_CMT
BLM Structured Name	Detection_Comment_Text
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_DETECTION
Definition	Detection short notes.
Required/Optional	Optional
Domain (Valid Values)	No domain. Example: “seen overhead for a moment just about canopy or at canopy height”
Data Type	String (2000)

7.5 DET_CN

Geodatabase Name	DET_CN
BLM Structured Name	Detection_Control_Number_Identifier
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_DETECTION
Definition	This attribute is a primary key, unique GUID identifier assigned to records as they are entered. This key is used for the various table relationships.
Required/Optional	Required
Domain (Valid Values)	No Domain. Example: “{AC54B9BA-CCFF-448F-A565-244EBB952C6E}”
Data Type	GUID

7.6 DET_CREATED_BY

Geodatabase Name	DET_CREATED_BY
BLM Structured Name	Detection_Created_By_Name
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_DETECTION
Definition	Name of the user that created the record. This field is automatically populated by the GIS software.
Required/Optional	Required
Domain (Valid Values)	No Domain. Examples: “JDOE”, “MSMITH”

Data Type	String (30)

7.7 DET_CREATED_DATE

Geodatabase Name	DET_CREATED_DATE
BLM Structured Name	Detection_Created_Date
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_DETECTION
Definition	Date that the record was created. This field is automatically populated by the GIS software.
Required/Optional	Required
Domain (Valid Values)	No Domain. Examples: “9/16/2019”, “1/7/1999”
Data Type	Date

7.8 DET_DATA_SOURCE_CODE

Geodatabase Name	DET_DATA_SOURCE_CODE
BLM Structured Name	Detection_Data_Source_Code
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_DETECTION
Definition	An alphanumeric code designating the source of a database record. In conjunction with the GeoBOB application, this field controls if a user can edit or delete a record.
Required/Optional	Required
Domain (Valid Values)	dom_GB_Data_Source
Data Type	String (10)

7.9 DET_FINAL_DEPART

Geodatabase Name	DET_FINAL_DEPART
BLM Structured Name	Detection_Final_Departing_Direction_Code
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_DETECTION
Definition	The direction the murrelet was last detected heading, i.e., the direction the bird was traveling when last detected.
Required/Optional	Optional

Domain (Valid Values)	dom_MM_DIRECTION
Data Type	String (2)

7.10 DET_FINAL_DIRECT

Geodatabase Name	DET_FINAL_DIRECT
BLM Structured Name	Detection_Final_Direction_Code
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_DETECTION
Definition	The final direction the murrelet was detected relative to the observer.
Required/Optional	Optional
Domain (Valid Values)	dom_MM_DIRECTION
Data Type	String (2)

7.11 DET_HRD_DIST

Geodatabase Name	DET_HRD_DIST
BLM Structured Name	Detection_Heard_Only_Distance_Code
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_DETECTION
Definition	Estimates how far birds are without having the distance. Used for auditory observations only.
Required/Optional	Optional
Domain (Valid Values)	dom_MM_DET_HRD_DIST
Data Type	String (1)

7.12 DET_HT

Geodatabase Name	DET_HT
BLM Structured Name	Detection_Height_Above_Canopy_Number
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_DETECTION
Definition	The height of birds above canopy estimated based on bird location relative to the height of the forest canopy, i.e., the tallest trees observable from the survey station. The height of the tallest observable tree is equivalent to a unit of 1.0 canopy height. If a bird was seen flying halfway beneath the height of the tallest observable tree, the bird height is 0.5 canopy heights. A

	bird seen flying over the canopy at one quarter the height of the tallest tree observed is at 1.25 canopy heights.
Required/Optional	Optional
Domain (Valid Values)	No domain. Examples: 0.5, 1.2
Data Type	Double

7.13 DET_INTL_DIRECT

Geodatabase Name	DET_INTL_DIRECT
BLM Structured Name	Detection_Initial_Direction_Code
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_DETECTION
Definition	Initial direction detected (from observer). Record the direction where the murrelet is first detected relative to the observer.
Required/Optional	Optional
Domain (Valid Values)	dom_MM_DIRECTION
Data Type	String (2)

7.14 DET_INTL_GOING

Geodatabase Name	DET_INTL_GOING
BLM Structured Name	Detection_Initial_Flight_Direction_Code
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_DETECTION
Definition	This is the direction that the murrelets are seen heading when initially detected, i.e., the direction the birds are traveling when first detected.
Required/Optional	Optional
Domain (Valid Values)	dom_MM_DIRECTION
Data Type	String (2)

7.15 DET_KEER

Geodatabase Name	DET_KEER
BLM Structured Name	Detection_Keer_Code
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_DETECTION

Definition	The number of keers, groans, and alternate calls heard. When more than 5 calls are heard in the same detection, record M for multiple.
Required/Optional	Optional
Domain (Valid Values)	dom_MM_DET_KEER
Data Type	String (5)

7.16 DET_MAP_NUM

Geodatabase Name	DET_MAP_NUM
BLM Structured Name	Detection_Map_Number_Text
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_DETECTION
Definition	Refers to the page number of the hard copy field form.
Required/Optional	Optional
Domain (Valid Values)	No Domain. Examples: 1, 2, 3
Data Type	String (2)

7.17 DET_MODIFIED_BY

Geodatabase Name	DET_MODIFIED_BY
BLM Structured Name	Detection_Modified_By_Name
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_DETECTION
Definition	Name of the user that last modified the record. This field is automatically populated by the GIS software.
Required/Optional	Optional
Domain (Valid Values)	No Domain. Examples: “JDOE”, “MSMITH”
Data Type	String (30)

7.18 DET_MODIFIED_DATE

Geodatabase Name	DET_MODIFIED_DATE
BLM Structured Name	Detection_Modified_Date
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_DETECTION

Definition	Date that the record was last modified. This field is automatically populated by the GIS software.
Required/Optional	Optional
Domain (Valid Values)	No Domain. Examples: “9/16/2019”, “1/7/1999”
Data Type	Date

7.19 DET_NUM

Geodatabase Name	DET_NUM
BLM Structured Name	Detection_Number
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_DETECTION
Definition	The sequential number of an individual detection during a survey visit. Useful for connecting the database record to the detection on a hard copy visit form. This field corresponds to the Detection # field on the data sheet.
Required/Optional	Optional
Domain (Valid Values)	No Domain. Examples: 2, 48
Data Type	Long Integer

7.20 DET_TIME

Geodatabase Name	DET_TIME
BLM Structured Name	Detection_Time_Text
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_DETECTION
Definition	The 24-hour time when a murrelet detection occurred.
Required/Optional	Optional
Domain (Valid Values)	No Domain. Examples: “0601”, “0544”
Data Type	String (4)

7.21 DET_TYPE

Geodatabase Name	DET_TYPE
BLM Structured Name	Detection_Type_Code
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_DETECTION

Definition	Describes how the bird was detected.
Required/Optional	Optional
Domain (Valid Values)	dom_MM_DET_TYPE
Data Type	String (1)

7.22 DET_VERSION_NAME

Geodatabase Name	DET_VERSION_NAME
BLM Structured Name	Geodatabase_Version_Text
Inheritance	Inherited from Entity ODF
Alias Name	None
Feature Class Use/Entity Table	MAMU_DETECTION
Definition	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.
Required/Optional	Required (automatically generated)
Domain (Valid Values)	None. Example: JDOE.GEOBOB_101119-100721
Data Type	String (50)

7.23 DET_VOC2

Geodatabase Name	DET_VOC2
BLM Structured Name	Detection_Additional_Audio_Detections_Code
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_DETECTION
Definition	Additional Audio Detections.
Required/Optional	Optional
Domain (Valid Values)	dom_MM_DET_VOC2
Data Type	String (5)

7.24 MSRV_BTIME

Geodatabase Name	MSRV_BTIME
BLM Structured Name	Survey_Begin_Time_Text
Inheritance	Not Inherited

Alias Name	None
Feature Class Use/Entity Table	MAMU_SURVEY
Definition	Actual time survey visit started using 24-hour time. A morning visit should begin at least 45 minutes before official sunrise.
Required/Optional	Required
Domain (Valid Values)	No domain. Examples: “0442”, “0512”
Data Type	String (4)

7.25 MSRV_CMT

Geodatabase Name	MSRV_CMT
BLM Structured Name	Survey_Comments_Text
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_SURVEY
Definition	Comments about the survey.
Required/Optional	Optional
Domain (Valid Values)	No domain. Example: “0545 BEGINNING TO HEAR SOME TRAFFIC FROM THE NE. VERY, VERY DISTANT. STELLER'S JAY. PROTOCOL SURVEY WITH 32 DETECTIONS WITH THE MOST SIGNIFICANT BEHAVIOR SHOWING OCCUPANCY.”
Data Type	String (2000)

7.26 MSRV_CN

Geodatabase Name	MSRV_CN
BLM Structured Name	Survey_Control_Number_Identifier
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_SURVEY, MAMU_DETECTION, MAMU_WEATHER
Definition	This attribute is a primary key, unique GUID identifier assigned to records as they are entered. This key is used for the various table relationships. This is a foreign key field in the Detection and Weather tables.
Required/Optional	Required
Domain (Valid Values)	No Domain. Example: “{AC54B9BA-CCFF-448F-A565-244EBB952C6E}”
Data Type	GUID

7.27 MSRV_CREATED_BY

Geodatabase Name	MSRV_CREATED_BY
BLM Structured Name	Survey_Created_By_Name
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_SURVEY
Definition	Name of the user that created the record. This field is automatically populated by the GIS software.
Required/Optional	Required
Domain (Valid Values)	No Domain. Examples: “JDOE”, “MSMITH”
Data Type	String (30)

7.28 MSRV_CREATED_DATE

Geodatabase Name	MSRV_CREATED_DATE
BLM Structured Name	Survey_Created_Date
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_SURVEY
Definition	Date that the record was created. This field is automatically populated by the GIS software.
Required/Optional	Required
Domain (Valid Values)	No Domain. Examples: “9/16/2019”, “1/7/1999”
Data Type	Date

7.29 MSRV_DATA_SOURCE_CODE

Geodatabase Name	MSRV_DATA_SOURCE_CODE
BLM Structured Name	Survey_Data_Source_Code
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_SURVEY
Definition	An alphanumeric code designating the source of a database record. In conjunction with the GeoBOB application, this field controls if a user can edit or delete a record.
Required/Optional	Required
Domain (Valid Values)	dom_GB_Data_Source
Data Type	String (10)

7.30 MSRV_DATE

Geodatabase Name	MSRV_DATE
BLM Structured Name	Survey_Date
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_SURVEY
Definition	Date survey is conducted.
Required/Optional	Required
Domain (Valid Values)	No domain. Examples: “6/15/1995”, “7/7/2009”
Data Type	Date

7.31 MSRV_ETIME

Geodatabase Name	MSRV_ETIME
BLM Structured Name	Survey_End_Time_Text
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_SURVEY
Definition	Actual time survey visit is completed using 24-hour time. A morning visit generally ends 75 minutes after official sunrise; more time is added depending on whether murrelet detections occur at the end of a visit and/or if overcast conditions with rain and fog are present at the end of the standard survey period.
Required/Optional	Required
Domain (Valid Values)	No domain. Examples: “0709”, “0642”
Data Type	String (4)

7.32 MSRV_MODIFIED_BY

Geodatabase Name	MSRV_MODIFIED_BY
BLM Structured Name	Survey_Modified_By_Name
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_SURVEY
Definition	Name of the user that last modified the record. This field is automatically populated by the GIS software.
Required/Optional	Optional
Domain (Valid Values)	No Domain. Examples: “JDOE”, “MSMITH”

Data Type	String (30)

7.33 MSRV_MODIFIED_DATE

Geodatabase Name	MSRV_MODIFIED_DATE
BLM Structured Name	Survey_Modified_Date
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_SURVEY
Definition	Date that the record was last modified. This field is automatically populated by the GIS software.
Required/Optional	Optional
Domain (Valid Values)	No Domain. Examples: “9/16/2019”, “1/7/1999”
Data Type	Date

7.34 MSRV_NUM_DET

Geodatabase Name	MSRV_NUM_DET
BLM Structured Name	Survey_Number_of_Detections_Number
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_SURVEY
Definition	The total number of murrelet detections recorded during a survey visit.
Required/Optional	Required
Domain (Valid Values)	No domain. Examples: 17, 0, 1
Data Type	Short Integer

7.35 MSRV_OBSERVER

Geodatabase Name	MSRV_OBSERVER
BLM Structured Name	Survey_Observer_Initials_Text
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_SURVEY
Definition	Initials of the Observer.
Required/Optional	Required
Domain (Valid Values)	No domain. Examples: “SMB”, “TAB”
Data Type	String (3)

7.36 MSRV_PROTO_YN

Geodatabase Name	MSRV_PROTO_YN
BLM Structured Name	Survey_Protocol_Flag_Code
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_SURVEY
Definition	Indicates if the survey was conducted following the guidelines of the Pacific Seabird Group protocol.
Required/Optional	Required
Domain (Valid Values)	dom_MM_MSRV_PROTO_YN
Data Type	String (1)

7.37 MSRV_SGNFCNT

Geodatabase Name	MSRV_SGNFCNT
BLM Structured Name	Survey_Significant_Behavior_Code
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_SURVEY
Definition	Records the most biologically significant behavior observed during the survey visit.
Required/Optional	Required
Domain (Valid Values)	dom_MM_MSRV_SGNFCNT
Data Type	String (2)

7.38 MSRV_SUNRISE

Geodatabase Name	MSRV_SUNRISE
BLM Structured Name	Survey_Sunrise_Time_Text
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_SURVEY
Definition	The official sunrise time using 24-hour time derived from the U.S. Naval Observatory, with location of sunrise to be determined by the district MAMU data steward.
Required/Optional	Required
Domain (Valid Values)	No domain. Examples: “0548”, “0601”

Data Type	String (4)

7.39 MSRV_TYPE

Geodatabase Name	MSRV_TYPE
BLM Structured Name	Survey_Type_Code
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_SURVEY
Definition	Type of survey.
Required/Optional	Required
Domain (Valid Values)	dom_MM_MSRV_TYPE
Data Type	String (1)

7.40 MSRV_VERSION_NAME

Geodatabase Name	MSRV_VERSION_NAME
BLM Structured Name	Geodatabase_Version_Text
Inheritance	Inherited from Entity ODF
Alias Name	None
Feature Class Use/Entity Table	MAMU_SURVEY
Definition	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.
Required/Optional	Required (automatically generated)
Domain (Valid Values)	None. Example: “JDOE.GEOBOB_101119-100721”
Data Type	String (50)

7.41 MSS_CN

Geodatabase Name	MSS_CN
BLM Structured Name	Survey_Site_Control_Number_Identifier
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_SRV_SITE, MAMU_SURVEY

Definition	This attribute is a primary key, unique GUID identifier assigned to records as they are entered. This key is used for the various table relationships. This is a foreign key field in the Survey table.
Required/Optional	Required
Domain (Valid Values)	No Domain. Example: "{AC54B9BA-CCFF-448F-A565-244EBB952C6E}"
Data Type	GUID

7.42 MSS_CREATED_BY

Geodatabase Name	MSS_CREATED_BY
BLM Structured Name	Survey_Site_Created_By_Name
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_SRV_SITE
Definition	Name of the user that created the record. This field is automatically populated by the GIS software.
Required/Optional	Required
Domain (Valid Values)	No Domain. Examples: "JDOE", "MSMITH"
Data Type	String (30)

7.43 MSS_CREATED_DATE

Geodatabase Name	MSS_CREATED_DATE
BLM Structured Name	Survey_Site_Created_Date
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_SRV_SITE
Definition	Date that the record was created. This field is automatically populated by the GIS software.
Required/Optional	Required
Domain (Valid Values)	No Domain. Examples: "9/16/2019", "1/7/1999"
Data Type	Date

7.44 MSS_DATA_SOURCE_CODE

Geodatabase Name	MSS_DATA_SOURCE_CODE
BLM Structured Name	Survey_Site_Data_Source_Code
Inheritance	Not Inherited

Alias Name	None
Feature Class Use/Entity Table	MAMU_SRV_SITE
Definition	An alphanumeric code designating the source of a database record. In conjunction with the GeoBOB application, this field controls if a user can edit or delete a record.
Required/Optional	Required
Domain (Valid Values)	dom_GB_Data_Source
Data Type	String (10)

7.45 MSS_GIS_ACRES

Geodatabase Name	MSS_GIS_ACRES
BLM Structured Name	Survey_Site_GIS_Acres_Number
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_SRV_SITE
Definition	The number of acres in the Survey Site. Auto-populated based on the area of the digitized polygon.
Required/Optional	Required
Domain (Valid Values)	No domain. Examples: 160.129, 16.93
Data Type	Double

7.46 MSS_ID

Geodatabase Name	MSS_ID
BLM Structured Name	Survey_Site_Identifier_Text
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_SRV_SITE
Definition	Identifier for the Survey Site.
Required/Optional	Optional
Domain (Valid Values)	No domain. Examples: “Camas Heights CT Adj CH-TATE”, “EDSON REGEN 2009 I”
Data Type	String (50)

7.47 MSS_MODIFIED_BY

Geodatabase Name	MSS_MODIFIED_BY
BLM Structured Name	Survey_Site_Modified_By_Name

Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_SRV_SITE
Definition	Name of the user that last modified the record. This field is automatically populated by the GIS software.
Required/Optional	Optional
Domain (Valid Values)	No Domain. Examples: “JDOE”, “MSMITH”
Data Type	String (30)

7.48 MSS_MODIFIED_DATE

Geodatabase Name	MSS_MODIFIED_DATE
BLM Structured Name	Survey_Site_Modified_Date
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_SRV_SITE
Definition	Date that the record was last modified. This field is automatically populated by the GIS software.
Required/Optional	Optional
Domain (Valid Values)	No Domain. Examples: “9/16/2019”, “1/7/1999”
Data Type	Date

7.49 MSS_NOTES

Geodatabase Name	MSS_NOTES
BLM Structured Name	Survey_Site_Notes_Text
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_SRV_SITE
Definition	Notes about the Survey Site.
Required/Optional	Optional
Domain (Valid Values)	No Domain. Example: “No detections in 2009. Second year of surveys needed in 2010. Original CREW value = MRB”
Data Type	String (2000)

7.50 MSS_SGNFCNT

Geodatabase Name	MSS_SGNFCNT
BLM Structured Name	Survey_Site_Significant_Behavior_Code

Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_SRV_SITE
Definition	Most biologically significant behavior summarized from all related surveys.
Required/Optional	Optional
Domain (Valid Values)	dom_MM_MSRV_SGNFCNT
Data Type	String (2)

7.51 MSS_VERSION_NAME

Geodatabase Name	MSS_VERSION_NAME
BLM Structured Name	Geodatabase_Version_Text
Inheritance	Inherited from Entity ODF
Alias Name	None
Feature Class Use/Entity Table	MAMU_SURVEY_SITE
Definition	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. 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.
Required/Optional	Required (automatically generated)
Domain (Valid Values)	None. Example: “JDOE.GEOBOB_101119-100721”
Data Type	String (50)

7.52 MWX_AUDENV

Geodatabase Name	MWX_AUDENV
BLM Structured Name	Weather_Audibility_Environment_Code
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_WEATHER
Definition	From the survey station, note whether audibility is unimpaired within a 200 m (656 ft) radius.
Required/Optional	Optional
Domain (Valid Values)	dom_MM_MWX_AUDENV
Data Type	String (1)

7.53 MWX_CEILING

Geodatabase Name	MWX_CEILING
BLM Structured Name	Weather_Vertical_Ceiling_Code
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_WEATHER
Definition	The height of the primary cloud/fog layer relative to the canopy of the survey site as viewed from the station.
Required/Optional	Optional
Domain (Valid Values)	dom_MM_MWX_CEILING
Data Type	String (2)

7.54 MWX_CLOUD

Geodatabase Name	MWX_CLOUD
BLM Structured Name	Weather_Cloud_Percent_Category_Code
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_WEATHER
Definition	Select the class code that best describes the amount of overhead cloud cover visible from the station. This is an ocular estimate.
Required/Optional	Optional
Domain (Valid Values)	dom_MM_MWX_CLOUD
Data Type	String (1)

7.55 MWX_CMT

Geodatabase Name	MWX_CMT
BLM Structured Name	Weather_Comments_Text
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_WEATHER
Definition	Note any other pertinent information that can help to better describe or explain the conditions during the survey visit.
Required/Optional	Optional
Domain (Valid Values)	No domain. Examples: “fog moving down over stand but can still see”, “clouds breaking up”

Data Type	String (2000)

7.56 MWX_CN

Geodatabase Name	MWX_CN
BLM Structured Name	Weather_Control_Number_Identifier
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_WEATHER
Definition	This attribute is a primary key, unique GUID identifier assigned to records as they are entered. This key is used for the various table relationships.
Required/Optional	Required
Domain (Valid Values)	No Domain. Example: "{AC54B9BA-CCFF-448F-A565-244EBB952C6E}"
Data Type	GUID

7.57 MWX_CREATED_BY

Geodatabase Name	MWX_CREATED_BY
BLM Structured Name	Weather_Created_By_Name
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_WEATHER
Definition	Name of the user that created the record. This field is automatically populated by the GIS software.
Required/Optional	Required
Domain (Valid Values)	No Domain. Examples: "JDOE", "MSMITH"
Data Type	String (30)

7.58 MWX_CREATED_DATE

Geodatabase Name	MWX_CREATED_DATE
BLM Structured Name	Weather_Created_Date
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_WEATHER
Definition	Date that the record was created. This field is automatically populated by the GIS software.
Required/Optional	Required

Domain (Valid Values)	No Domain. Examples: “9/16/2019”, “1/7/1999”
Data Type	Date

7.59 MWX_DATA_SOURCE_CODE

Geodatabase Name	MWX_DATA_SOURCE_CODE
BLM Structured Name	Weather_Data_Source_Code
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_WEATHER
Definition	An alphanumeric code designating the source of a database record. In conjunction with the GeoBOB application, this field controls if a user can edit or delete a record.
Required/Optional	Required
Domain (Valid Values)	dom_GB_Data_Source
Data Type	String (10)

7.60 MWX_FOG

Geodatabase Name	MWX_FOG
BLM Structured Name	Weather_Fog_Condition_Code
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_WEATHER
Definition	Indicates fog intensity at the survey site as observed from the station.
Required/Optional	Optional
Domain (Valid Values)	dom_MM_MWX_FOG
Data Type	String (1)

7.61 MWX_HORZVIS

Geodatabase Name	MWX_HORZVIS
BLM Structured Name	Weather_Horizontal_Visibility_Code
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_WEATHER
Definition	From the survey station, note whether horizontal visibility is unimpaired within 100 m (328 ft).
Required/Optional	Optional

Domain (Valid Values)	dom_MM_MWX_HORZVIS
Data Type	String (1)

7.62 MWX_MODIFIED_BY

Geodatabase Name	MWX_MODIFIED_BY
BLM Structured Name	Weather_Modified_By_Name
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_WEATHER
Definition	Name of the user that last modified the record. This field is automatically populated by the GIS software.
Required/Optional	Optional
Domain (Valid Values)	No Domain. Examples: “JDOE”, “MSMITH”
Data Type	String (30)

7.63 MWX_MODIFIED_DATE

Geodatabase Name	MWX_MODIFIED_DATE
BLM Structured Name	Weather_Modified_Date
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_WEATHER
Definition	Date that the record was last modified. This field is automatically populated by the GIS software.
Required/Optional	Optional
Domain (Valid Values)	No Domain. Examples: “9/16/2019”, “1/7/1999”
Data Type	Date

7.64 MWX_NOISE

Geodatabase Name	MWX_NOISE
BLM Structured Name	Weather_Noise_Environment_Code
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_WEATHER
Definition	Record the appropriate code to indicate conditions that affect ability to hear clearly within a 200m radius.
Required/Optional	Optional

Domain (Valid Values)	dom_MM_MWX_NOISE
Data Type	String (10)

7.65 MWX_OTHER

Geodatabase Name	MWX_OTHER
BLM Structured Name	Weather_Other_Weather_Code
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_WEATHER
Definition	Indicates other weather conditions at the survey site as observed from the station.
Required/Optional	Optional
Domain (Valid Values)	dom_MM_MWX_OTHER
Data Type	String (10)

7.66 MWX_RAIN

Geodatabase Name	MWX_RAIN
BLM Structured Name	Weather_Rain_Condition_Code
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_WEATHER
Definition	Indicates precipitation (rain) intensity at the survey site as observed from the station.
Required/Optional	Optional
Domain (Valid Values)	dom_MM_MWX_RAIN
Data Type	String (1)

7.67 MWX_TEMPC

Geodatabase Name	MWX_TEMPC
BLM Structured Name	Weather_Observation_Temperature_Celsius_Number
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_WEATHER
Definition	Temperature in Celsius.
Required/Optional	Optional

Domain (Valid Values)	No domain. Examples: 9, 8
Data Type	Short Integer

7.68 MWX_TIME

Geodatabase Name	MWX_TIME
BLM Structured Name	Weather_Observation_Time_Text
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_WEATHER
Definition	Time of weather reading in 4-digit 24-hour time.
Required/Optional	Optional
Domain (Valid Values)	No Domain. Examples: “0500”, “1425”
Data Type	String (4)

7.69 MWX_VERSION_NAME

Geodatabase Name	MWX_VERSION_NAME
BLM Structured Name	Geodatabase_Version_Text
Inheritance	Inherited from Entity ODF
Alias Name	None
Feature Class Use/Entity Table	MAMU_WEATHER
Definition	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. 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.
Required/Optional	Required (automatically generated)
Domain (Valid Values)	None. Example: JDOE.GEOBOB_101119-100721
Data Type	String (50)

7.70 MWX_VERTVIS

Geodatabase Name	MWX_VERTVIS
BLM Structured Name	Weather_Vertical_Visibility_Code
Inheritance	Not Inherited

Alias Name	None
Feature Class Use/Entity Table	MAMU_WEATHER
Definition	From the survey station, note whether vertical visibility is unimpaired to 2 canopy heights.
Required/Optional	Optional
Domain (Valid Values)	dom_MM_MWX_VERTVIS
Data Type	String (1)

7.71 MWX_WIND

Geodatabase Name	MWX_WIND
BLM Structured Name	Weather_Wind_Speed_Code
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_WEATHER
Definition	Record the wind speed based on the Beaufort Wind Scale. Observe the effects of wind conditions on trees and vegetation visible at ground level at the station and record the appropriate code.
Required/Optional	Optional
Domain (Valid Values)	dom_MM_MWX_WIND
Data Type	String (1)

7.72 OCC_CHU

Geodatabase Name	OCC_CHU
BLM Structured Name	Occupied_Site_Critical_Habitat_Unit_Text
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_OCC_SITE
Definition	Site MAMU Critical Habitat Unit.
Required/Optional	Optional
Domain (Valid Values)	No domain. Examples: “OR-04-f”, “OR-03-a”
Data Type	String (10)

7.73 OCC_CMT

Geodatabase Name	OCC_CMT
BLM Structured Name	Occupied_Site_Comments_Text
Inheritance	Not Inherited

Alias Name	None
Feature Class Use/Entity Table	MAMU_OCC_SITE
Definition	Comments about the Site.
Required/Optional	Optional
Domain (Valid Values)	No domain. Example: “Surveyed as Baker Cr Sites E & H. Split into 2 occupied sites (C3031 & C3055) in 1998.”
Data Type	String (2000)

7.74 OCC_CN

Geodatabase Name	OCC_CN
BLM Structured Name	Occupied_Site_Control_Number_Identifier
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_OCC_SITE
Definition	This attribute is a primary key, unique GUID identifier assigned to records as they are entered.
Required/Optional	Required
Domain (Valid Values)	No Domain. Example: “{AC54B9BA-CCFF-448F-A565-244EBB952C6E}”
Data Type	GUID

7.75 OCC_CREATED_BY

Geodatabase Name	OCC_CREATED_BY
BLM Structured Name	Occupied_Site_Created_By_Text
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_OCC_SITE
Definition	Name of the user that created the record. This field is automatically populated by the GIS software.
Required/Optional	Required
Domain (Valid Values)	No Domain. Examples: “JDOE”, “MSMITH”
Data Type	String (30)

7.76 OCC_CREATED_DATE

Geodatabase Name	OCC_CREATED_DATE
BLM Structured Name	Occupied_Site_Created_Date_Text

Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_OCC_SITE
Definition	Date that the record was created. This field is automatically populated by the GIS software.
Required/Optional	Required
Domain (Valid Values)	No Domain. Examples: “9/16/2019”, “1/7/1999”
Data Type	Date

7.77 OCC_DATA_SOURCE_CODE

Geodatabase Name	OCC_DATA_SOURCE_CODE
BLM Structured Name	Occupied_Site_Record_Owner_Code
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_OCC_SITE
Definition	An alphanumeric code designating the source of a database record. In conjunction with the GeoBOB application, this field controls if a user can edit or delete a record.
Required/Optional	Required
Domain (Valid Values)	dom_GB_Data_Source
Data Type	String (10)

7.78 OCC_DIST

Geodatabase Name	OCC_DIST
BLM Structured Name	Occupied_Site_District_Code
Inheritance	Inherited from Entity Species Occurrence
Alias Name	None
Feature Class Use/Entity Table	MAMU_OCC_SITE
Definition	District Code. Auto-populated by the GeoBOB application.
Required/Optional	Optional
Domain (Valid Values)	dom_MM_STTN_DIST
Data Type	String (15)

7.79 OCC_GIS_ACRES

Geodatabase Name	OCC_GIS_ACRES
BLM Structured Name	Occupied_Site_Acres_Number

Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_OCC_SITE
Definition	The number of acres in the occupied site. Auto-populated based on the area of the digitized polygon.
Required/Optional	Optional
Domain (Valid Values)	No domain. Example: 45.7
Data Type	Double

7.80 OCC_LOC_CREW

Geodatabase Name	OCC_LOC_CREW
BLM Structured Name	Occupied_Site_Crew_Located_Site_Text
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_OCC_SITE
Definition	Field to identify the crew or agency that found the site occupied.
Required/Optional	Optional
Domain (Valid Values)	dom_MM_OCC_LOCCREW
Data Type	String (50)

7.81 OCC_LOCR

Geodatabase Name	OCC_LOCR
BLM Structured Name	Occupied_Site_Range_Text
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_OCC_SITE
Definition	The range location of the occupied site. This attribute is auto calculated from the CadNSDI theme when features are created or modified.
Required/Optional	Optional
Domain (Valid Values)	No domain. Example: “080W”
Data Type	String (5)

7.82 OCC_LOCS

Geodatabase Name	OCC_LOCS
BLM Structured Name	Occupied_Site_Section_Text

Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_OCC_SITE
Definition	A section is a major subdivision of a Public Land Survey System township, normally one mile by one mile in size, containing 640 acres. Non-rectangular subdivisions (such as lots) are also listed under this attribute. This attribute is auto calculated from the CadNSDI theme when features are created or modified. Typically, the format is any number between 1-36. Single digit numbers should be preceded with a zero (0).
Required/Optional	Optional
Domain (Valid Values)	No Domain: Example: “11”
Data Type	String (2)

7.83 OCC_LOCT

Geodatabase Name	OCC_LOCT
BLM Structured Name	Occupied_Site_Township_Text
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_OCC_SITE
Definition	The township location of the occupied site. This attribute is auto calculated from the CadNSDI theme when features are created or modified.
Required/Optional	Optional
Domain (Valid Values)	No Domain. Example: “250S”
Data Type	String (5)

7.84 OCC_MODIFIED_BY

Geodatabase Name	OCC_MODIFIED_BY
BLM Structured Name	Occupied_Site_Modified_By_Text
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_OCC_SITE
Definition	Name of the user that last modified the record. This field is automatically populated by the GIS software.
Required/Optional	Optional
Domain (Valid Values)	No Domain. Examples: “JDOE”, “MSMITH”
Data Type	String (30)

7.85 OCC_MODIFIED_DATE

Geodatabase Name	OCC_MODIFIED_DATE
BLM Structured Name	Occupied_Site_Modified_Date
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_OCC_SITE
Definition	Date that the record was last modified. This field is automatically populated by the GIS software.
Required/Optional	Optional
Domain (Valid Values)	No Domain. Examples: “9/16/2019”, “1/7/1999”
Data Type	Date

7.86 OCC_MSNO

Geodatabase Name	OCC_MSNO
BLM Structured Name	Occupied_Site_Master_Site_Number_Text
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_OCC_SITE
Definition	A district assigned unique identifier. Each identifier begins with a letter representing the district (C – Coos Bay, R – Roseburg, E – South Northwest Oregon (formerly Eugene District), S – North Northwest Oregon (formerly Salem District). Each district keeps a running list of unique numbers and when a new site is identified they assign the next available number. MSNO is required for Occupied Sites.
Required/Optional	Conditional
Domain (Valid Values)	No Domain. Examples: “E2005”, “C3148”
Data Type	String (5)

7.87 OCC_OC

Geodatabase Name	OCC_OC
BLM Structured Name	Occupied_Site_Occupancy_Classification_Code
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_OCC_SITE
Definition	The highest status of behavior observed at the site from all surveys and detections.
Required/Optional	Optional

Domain (Valid Values)	dom_MM_MSRV_SGNFCNT
Data Type	String (2)

7.88 OCC_RES

Geodatabase Name	OCC_RES
BLM Structured Name	Occupied_Site_Resource_Area_Code
Inheritance	Inherited from Entity Species Occurrence
Alias Name	None
Feature Class Use/Entity Table	MAMU_OCC_SITE
Definition	The code of the resource area that the site is within. Automatically calculated.
Required/Optional	Optional
Domain (Valid Values)	dom_STTN_RA
Data Type	String (15)

7.89 OCC_SITE_LAST_VISIT

Geodatabase Name	OCC_SITE_LAST_VISIT
BLM Structured Name	Occupied_Site_Year_Last_Visited_Text
Inheritance	Inherited from Entity Species Occurrence
Alias Name	None
Feature Class Use/Entity Table	MAMU_OCC_SITE
Definition	The year the site was last visited.
Required/Optional	Optional
Domain (Valid Values)	No domain. Examples: “2018”, “2009”
Data Type	String (4)

7.90 OCC_SITE_LATEST_OCC

Geodatabase Name	OCC_SITE_LATEST_OCC
BLM Structured Name	Occupied_Site_Year_Latest_Occupancy_Text
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_OCC_SITE
Definition	The latest year the site has occupied status.
Required/Optional	Optional
Domain (Valid Values)	No domain. Examples: “2012”, “2004”

Data Type	String (4)

7.91 OCC_SITE1ST

Geodatabase Name	OCC_SITE1ST
BLM Structured Name	Occupied_Site_Year_First_Surveyed_Text
Inheritance	Inherited from Entity Species Occurrence
Alias Name	None
Feature Class Use/Entity Table	MAMU_OCC_SITE
Definition	The year the Site was first surveyed.
Required/Optional	Optional
Domain (Valid Values)	No domain. Examples: “1998”, “2001”
Data Type	String (4)

7.92 OCC_SITEDOC

Geodatabase Name	OCC_SITEDOC
BLM Structured Name	Occupied_Site_Year_Site_Documented_Text
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_OCC_SITE
Definition	The year the Site was first documented as occupied.
Required/Optional	Optional
Domain (Valid Values)	No Domain. Examples: 1993, 2016
Data Type	String (4)

7.93 OCC_SITENAME

Geodatabase Name	OCC_SITENAME
BLM Structured Name	Occupied_Site_Name_Text
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_OCC_SITE
Definition	Site Name.
Required/Optional	Required
Domain (Valid Values)	No Domain. Examples: “ELK BIG RIDGE A”, “LINDSEY RIDGE 18NH”
Data Type	String (25)

7.94 OCC_SP1

Geodatabase Name	OCC_SP1
BLM Structured Name	Occupied_Site_Level_1_Owner_Code
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_OCC_SITE
Definition	The level 1 landowner indicates the landowner or agency administering the land at the site. This is ownership at the actual location and may be different from the administrative unit designated in the OCC_DIST field.
Required/Optional	Optional
Domain (Valid Values)	dom_MM_OCC_SP1
Data Type	String (2)

7.95 OCC_SP2

Geodatabase Name	OCC_SP2
BLM Structured Name	Occupied_Site_Level_2_Owner_Code
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_OCC_SITE
Definition	The level 2 landowner indicates the secondary level of land ownership, such as BLM District, National Forest, or Private Company.
Required/Optional	Optional
Domain (Valid Values)	dom_MM_OCC_SP2
Data Type	String (3)

7.96 OCC_SS

Geodatabase Name	OCC_SS
BLM Structured Name	Occupied_Site_Status_Code
Inheritance	Inherited from Entity Species Occurrence
Alias Name	None
Feature Class Use/Entity Table	MAMU_OCC_SITE
Definition	Site Status Code.
Required/Optional	Required
Domain (Valid Values)	dom_OCC_STATUS
Data Type	String (1)

7.97 OCC_UTM_EAST

Geodatabase Name	OCC_UTM_EAST
BLM Structured Name	Occupied_Site_Universal_Transverse_Mercator_Site_Center_Easting_Number
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_OCC_SITE
Definition	The UTM Easting coordinate of the Site Center of Activity. UTMs are recorded using UTM Zone 10, NAD 83. This field is not automatically calculated.
Required/Optional	Optional
Domain (Valid Values)	No Domain. Example: 416964
Data Type	Long Integer

7.98 OCC_UTM_NORTH

Geodatabase Name	OCC_UTM_NORTH
BLM Structured Name	Occupied_Site_Universal_Transverse_Mercator_Site_Center_Northing_Number
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_OCC_SITE
Definition	The UTM Northing coordinate of the Site Center of Activity. UTMs are recorded using UTM Zone 10, NAD 83. This field is not automatically calculated.
Required/Optional	Optional
Domain (Valid Values)	No Domain. Example: 4763613
Data Type	Long Integer

7.99 OCC_UTM_ZONE

Geodatabase Name	OCC_UTM_ZONE
BLM Structured Name	Occupied_Site_Universal_Transverse_Mercator_Zone_Number
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_OCC_SITE
Definition	The UTM zone that the site centroid is located in. This field is not automatically calculated.
Required/Optional	Optional

Domain (Valid Values)	No domain. Examples: 10
Data Type	Short Integer

7.100OCC_VERSION_NAME

Geodatabase Name	OCC_VERSION_NAME
BLM Structured Name	Geodatabase_Version_Text
Inheritance	Inherited from Entity ODF
Alias Name	None
Feature Class Use/Entity Table	MAMU_OCC_SITE
Definition	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. 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.
Required/Optional	Required (automatically generated)
Domain (Valid Values)	None. Example: JDOE.GEOBOB_101119-100721
Data Type	String (50)

7.101STTN_CANOPY_CVR

Geodatabase Name	STTN_CANOPY_CVR
BLM Structured Name	Station_Canopy_Cover_Code
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_STATION
Definition	The canopy cover class code that best describes overhead canopy cover at the survey station. Codes: 1=0-25%, 2=26-50%, 3=51-75%, 4=76-100%. This can be derived as an ocular estimate of the area immediately adjacent (approx. 25 m radius) to the survey station, or an actual measurement using a densitometer or other device. Determined at the time the station is established.
Required/Optional	Optional
Domain (Valid Values)	dom_STTN_CANOPY_CVR
Data Type	Short Integer

7.102STTN_CANOPY_HT

Geodatabase Name	STTN_CANOPY_HT
BLM Structured Name	Station_Canopy_Height_Number
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_STATION
Definition	This field is defined as the maximum height of the forest stand being surveyed from this station.
Required/Optional	Optional
Domain (Valid Values)	No Domain. Examples: 53, 70
Data Type	Short Integer

7.103STTN_CMT

Geodatabase Name	STTN_CMT
BLM Structured Name	Station_Comments_Text
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_STATION
Definition	Comments about the station.
Required/Optional	Optional
Domain (Valid Values)	No Domain. Example: “The big trees are mostly Douglas-fir. The flags at the station which overlooks a draw are tied to a vine maple over a game trial near a large stump and a fallen log. Understory includes salal, sword fern and rhododendron.”
Data Type	String (2000)

7.104STTN_CN

Geodatabase Name	STTN_CN
BLM Structured Name	Station_Control_Number_Identifier
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_STATION, MAMU_SURVEY
Definition	This attribute is a primary key, unique GUID identifier assigned to records as they are entered. This key is used for the various table relationships. This is a foreign key field in the Survey table.
Required/Optional	Required
Domain (Valid Values)	No Domain. Example: “{AC54B9BA-CCFF-448F-A565-244EBB952C6E}”

Data Type	GUID

7.105STTN_CREATED_BY

Geodatabase Name	STTN_CREATED_BY
BLM Structured Name	Station_Created_By_Text
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_STATION
Definition	Name of the user that created the record. This field is automatically populated by the GIS software.
Required/Optional	Required
Domain (Valid Values)	No Domain. Examples: “JDOE”, “MSMITH”
Data Type	String (30)

7.106STTN_CREATED_DATE

Geodatabase Name	STTN_CREATED_DATE
BLM Structured Name	Station_Created_Date_Text
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_STATION
Definition	Date that the record was created. This field is automatically populated by the GIS software.
Required/Optional	Required
Domain (Valid Values)	No Domain. Examples: “9/16/2019”, “1/7/1999”
Data Type	Date

7.107STTN_DATA_SOURCE_CODE

Geodatabase Name	STTN_DATA_SOURCE_CODE
BLM Structured Name	Station_Record_Owner_Code
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_STATION
Definition	An alphanumeric code designating the source of a database record. In conjunction with the GeoBOB application, this field controls if a user can edit or delete a record.
Required/Optional	Required

Domain (Valid Values)	dom_GB_Data_Source
Data Type	String (10)

7.108STTN_DIST

Geodatabase Name	STTN_DIST
BLM Structured Name	Station_District_Code
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_STATION
Definition	The BLM District in which the Station is located. Automatically calculated by the GeoBOB application.
Required/Optional	Required
Domain (Valid Values)	dom_STTN_DIST
Data Type	String (15)

7.109STTN_DIST_TO_EDGE

Geodatabase Name	STTN_DIST_TO_EDGE
BLM Structured Name	Station_Distance_to_Survey_Site_Edge_Meters_Number
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_STATION
Definition	Indicates distance from the survey station to the survey site boundary. Stations are generally located <50 meters from the edge of the survey site boundary.
Required/Optional	Optional
Domain (Valid Values)	No Domain. Examples: 20, 91
Data Type	Short Integer

7.110STTN_DRCTN

Geodatabase Name	STTN_DRCTN
BLM Structured Name	Station_Directions_Text
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_STATION
Definition	Comments on how to find the station.
Required/Optional	Optional

Domain (Valid Values)	No domain. Example: "1.) Take hwy 42 to Myrtle Point and turn Left after Safeway onto MP/Sitkum Co. Rd. 2.) Go 3.8 mi and turn right onto Weekly Creek Rd. 3.) Go 5.9 mi (jeep mileage) to intersection w/-31.3 rd and stay Left. 4.) Go 0.4 mi to trailhead on Left. TRAVEL TIME: 1 hr HIKE TIME: 10 min"
Data Type	String (2000)

7.111STTN_ELEV

Geodatabase Name	STTN_ELEV
BLM Structured Name	Station_Elevation_Number
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_STATION
Definition	Elevation of the station, in feet above mean sea level.
Required/Optional	Optional
Domain (Valid Values)	No domain. Examples: 240, 500
Data Type	Short Integer

7.112STTN_ID

Geodatabase Name	STTN_ID
BLM Structured Name	Station_Identifier_Text
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_STATION
Definition	Built from the Township, Range, Section, and Station Number codes. Official identifier for the station and must remain unique.
Required/Optional	Required
Domain (Valid Values)	No domain. Examples: "0280S-0110W-34.03", "0280S-0110W-23.07"
Data Type	String (17)

7.113STTN_MODIFIED_BY

Geodatabase Name	STTN_MODIFIED_BY
BLM Structured Name	Station_Modified_By_Text
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_STATION

Definition	Name of the user that last modified the record. This field is automatically populated by the GIS software.
Required/Optional	Optional
Domain (Valid Values)	No Domain. Examples: “JDOE”, “MSMITH”
Data Type	String (30)

7.114STTN_MODIFIED_DATE

Geodatabase Name	STTN_MODIFIED_DATE
BLM Structured Name	Station_Modified_Date
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_STATION
Definition	Date that the record was last modified. This field is automatically populated by the GIS software.
Required/Optional	Optional
Domain (Valid Values)	No Domain. Examples: “9/16/2019”, “1/7/1999”
Data Type	Date

7.115STTN_NM

Geodatabase Name	STTN_NM
BLM Structured Name	Station_Name_Text
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_STATION
Definition	Name used to identify the station.
Required/Optional	Optional
Domain (Valid Values)	No Domain. Example: “TWIN JOHNSON RDG”
Data Type	String (25)

7.116STTN_NUM

Geodatabase Name	STTN_NUM
BLM Structured Name	Station_Number_Text
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_STATION

Definition	Sequentially numbered digits to identify the individual stations within a public land survey section.
Required/Optional	Required
Domain (Valid Values)	No Domain. Examples: “07”, “18”
Data Type	String (3)

7.117STTN_OCEAN

Geodatabase Name	STTN_OCEAN
BLM Structured Name	Station_Distance_to_Ocean_Number
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_STATION
Definition	This is the shortest straight-line distance from the station to the Pacific Ocean, measured to the nearest mile.
Required/Optional	Optional
Domain (Valid Values)	No Domain. Examples: 27, 44
Data Type	Double

7.118STTN_PLCMNT

Geodatabase Name	STTN_PLCMNT
BLM Structured Name	Station_Placement_Code
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_STATION
Definition	Indicates if the station is inside or outside the survey site. Stations on the survey site boundary are considered inside.
Required/Optional	Optional
Domain (Valid Values)	dom_STTN_PLCMNT
Data Type	String (1)

7.119STTN_RA

Geodatabase Name	STTN_RA
BLM Structured Name	Station_Resource_Area_Code
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_STATION

Definition	The BLM Resource Area in which the Station is located. Automatically calculated by the GeoBOB application.
Required/Optional	Required
Domain (Valid Values)	dom_STTN_RA
Data Type	String (15)

7.120STTN_RANGE

Geodatabase Name	STTN_RANGE
BLM Structured Name	Station_Range_Text
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_STATION
Definition	The public land survey range in which the station is located. This attribute is auto calculated from the CadNSDI theme when features are created or modified.
Required/Optional	Required
Domain (Valid Values)	No Domain. Example: “0100W”
Data Type	String (5)

7.121STTN_SEC

Geodatabase Name	STTN_SEC
BLM Structured Name	Station_Section_Text
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_STATION
Definition	The public land survey section in which the station is located. This attribute is auto calculated from the CadNSDI theme when features are created or modified.
Required/Optional	Required
Domain (Valid Values)	No Domain. Examples: “30”, “15”
Data Type	String (2)

7.122STTN_SGNFCNT

Geodatabase Name	STTN_SGNFCNT
BLM Structured Name	Station_Significant_Behavior_Code
Inheritance	Not Inherited

Alias Name	None
Feature Class Use/Entity Table	MAMU_STATION
Definition	Most biologically significant behavior summarized from all related surveys.
Required/Optional	Optional
Domain (Valid Values)	dom_MM_MSRV_SGNFCNT
Data Type	String (2)

7.123STTN_SLOPE_PSTN

Geodatabase Name	STTN_SLOPE_PSTN
BLM Structured Name	Station_Slope_Position_Code
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_STATION
Definition	Code that best describes the stations position on slope. To determine position on slope, use a topographic map to identify the ridgetop and valley bottom elevation at 90 degrees (perpendicular) from the contour where the station is located. Then subtract the lower value from the higher and divide by 3 to determine the position based on the station's elevation.
Required/Optional	Optional
Domain (Valid Values)	dom_STTN_SLOPE_PSTN
Data Type	String (1)

7.124STTN_TOWN

Geodatabase Name	STTN_TOWN
BLM Structured Name	Station_Township_Text
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_STATION
Definition	The public land survey township in which the station is located. This attribute is auto calculated from the CadNSDI theme when features are created or modified.
Required/Optional	Required
Domain (Valid Values)	No Domain. Example: "0290S"
Data Type	String (5)

7.125STTN_TYPE

Geodatabase Name	STTN_TYPE

BLM Structured Name	Station_Type
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_STATION
Definition	Station code used to classify the type of surveys done from this station for all surveys.
Required/Optional	Optional
Domain (Valid Values)	dom_MM_STTN_TYPE
Data Type	String (1)

7.126STTN_UTM_EAST

Geodatabase Name	STTN_UTM_EAST
BLM Structured Name	Station_Universal_Transverse_Mercator_Easting_Number
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_STATION
Definition	The UTM Easting coordinate of the Station point. For features with a longitude less than 120 degrees UTMs are calculated based on UTM Zone 11, NAD 83; features with a longitude greater than 120 degrees, UTMs are calculated based on UTM Zone 10, NAD 83.
Required/Optional	Required
Domain (Valid Values)	No Domain. Example: 416964
Data Type	Long Integer

7.127STTN_UTM_NORTH

Geodatabase Name	STTN_UTM_NORTH
BLM Structured Name	Station_Universal_Transverse_Mercator_Northing_Number
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_STATION
Definition	The UTM Northing coordinate of the Station point. For features with a longitude less than 120 degrees UTMs are calculated based on UTM Zone 11, NAD 83; features with a longitude greater than 120 degrees, UTMs are calculated based on UTM Zone 10, NAD 83.
Required/Optional	Required
Domain (Valid Values)	No Domain. Example: 4763613
Data Type	Long Integer

7.128STTN_UTM_ZONE

Geodatabase Name	STTN_UTM_ZONE
BLM Structured Name	Station_Universal_Transverse_Mercator_Zone_Number
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MAMU_STATION
Definition	The UTM zone that the Station is located in. Auto-calculated by the GeoBOB application.
Required/Optional	Required
Domain (Valid Values)	No domain. Examples: 10
Data Type	Short Integer

7.129STTN_VERSION_NAME

Geodatabase Name	STTN_VERSION_NAME
BLM Structured Name	Geodatabase_Version_Text
Inheritance	Inherited from Entity ODF
Alias Name	None
Feature Class Use/Entity Table	MAMU_STATION
Definition	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. 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.
Required/Optional	Required (automatically generated)
Domain (Valid Values)	None. Example: “JDOE.GEOBOB_101119-100721”
Data Type	String (50)

8 Layer Files (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) in order 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.

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.

8.2 Specific to This Dataset

This dataset is replicated as-is to a geodatabase called geobob.gdb in the OR/WA standard corporate data replication area. The one exception is that the _VERSION_NAME field in each table or feature class is removed in the publication copy of the data.

Layer files are available in the Layer Browser (under district OSO) under the categories:

Wildlife

GeoBOB Marbled Murrelet

This dataset is not replicated to the public web.

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.

9.1.1 Overlapping Polygons where polygons are part of a POLY/ARC feature dataset.

Topology rules apply only to the POLY/ARC relationship (Polylines in the POLY feature class covered by arcs in the ARC feature class and vice versa; Arcs must not have dangles, intersect, self-overlap or overlap adjacent arcs). The AVY_PLAN dataset allows any number of plans or projects to overlap; a new PLANID creates a new polygon. For all other POLY/ARC feature datasets, overlap is only allowed if there is a dataset for proposed entities, for example proposed ACEC (ACEC_P POLY/ARC dataset) or wilderness (WLD_P POLY/ARC dataset).

9.1.2 Overlapping Polygons where polygons are a stand-alone feature class.

* No topology rules.
* Species Occurrence Group: These are distinct sites defined by species and time. A different species creates a new polygon which may overlap another site in whole or part. A change in time (new visit date) will create a new polygon if it is desired that the old spatial extent and date is retained (as historic). Additionally, for wildlife, a different season/type of use (e.g., winter range vs. spring breeding) will create new polygon that may overlap others. Examples: WEEDS_POLY, GB_FLORA_SITE.
* Survey Group: Within each feature class a new survey is created only for a new date. This group might also include proposed surveys in separate feature classes. Examples: GB_SURVEY, Archeological Survey (CULT_SURV).
* Treatment Activity Group: Within each feature class (BURN, HARV, MECH, CHEM, BIO, REVEG, PROT), an overlapping treatment area is created only for a new date, and sometimes for a different method (if it is not possible to SPLIT the treatment area by method and it is important to capture more than one method applied to the same area on the same day). This group also includes proposed treatments which could overlap existing treatments and have additional overlap created by different treatment alternatives.
* Recreation Site Polygons (RECSITE_POLY): An overlapping site polygon is created only for different name, type or development level.
* Land Status Encumbrances Group: A new, possibly overlapping polygon is created for a new casefile number even if it is the same area. Examples: easement/ROW areas (ESMTROW_POLY) and land acquisitions/disposals (ACQ_DSP_POLY).

9.1.3 Overlapping Arcs where arcs are a stand-alone feature class.

* No topology rules.

* Examples: easement/ROW lines (ESMTROW_ARC) a new, possibly overlapping arc is created for a new casefile number; structures (STRCT_ARC) a new, possibly overlapping arc is created for a different name, type, RIPS number or construction date.

9.1.4 Overlapping Points.

Generally, these are allowed and do not cause a problem since points have no spatial extent. However, it is easy to inadvertently create more than one point making it important to search for and delete duplicates.

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.

Check tolerances. In general, set Cluster Tolerance as small as possible. This is 0.000000009 Degree (0.000007 degree is approximately 1 meter).

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 SOURCEL 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 YYYYMMDD, YYYYMM or 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 Vertical Integration

In the ODF, the need for vertical integration is confined to, and characteristic of, the "Boundaries" group of themes. Boundaries polygons have perimeters that are defined by other features and are *required* to stay that way. Activities and Resources polygon perimeters are "self-defining." For example, a road, ownership or watershed line might be used to build a prescribed burn unit, but the unit perimeter is *defined* by the actual burned area.

Boundaries polylines (arcs) have attributes DEF_FEATURE and COORD_SRC which provide the information needed for vertical integration. When the GIS feature class indicated by COORD_SRC changes, the arc might need to be re-snapped.

Many boundaries are defined largely by legal land lines and therefore should be snapped to Cadastral NSDI PLSS Points. Theoretically, whenever PLSS Points are updated, all polylines with COORD_SRC = "CADNSDI" (or "GCD") should be re-snapped, but not all themes have the same need or priority. Sub-groups of ODF Boundaries provide a prioritization with the "Land Status" group being the highest priority, followed by the "Political and Administrative" group then the "Special Management Area" group.

Vertical Integration to updated legal land lines is accomplished simply by re-snapping vertices to PLSS Points and is not difficult if the polylines have vertices that coincide with PLSS points. Datasets can be updated independently of each other and partially, as time permits.

When arcs are copied from one boundary dataset to another, DEF_FEATURE may need to be changed. For example, a Resource Area Boundary (RAB) polyline might be defined as "SUBDIVISION", but when it is copied to Plan Area Boundary (PLANBDY) the plan boundary is defined by Resource Area and DEF_FEATURE should be changed to "BLM_ADMIN". It is important that boundary lines copied from other themes NOT be merged, even though the attributes are all the same. The splits in the original source theme should be retained in order to retain exact coincidence and facilitate future updates.

9.4 Theme Specific Guidance

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

Detailed instructions for editing data using the GeoBOB Marbled Murrelet tools are available in the MAMU user guide.

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
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
GPS	Global Positioning System
GTRN	Ground Transportation GIS dataset
IDP	Interdisciplinary
NAD	North American Datum
NARA	National Archives and Records Administration
NEPA	National Environmental Policy Act
POLY	GIS polygon feature
PUB	Publication
RMP	Resource Management Plan
ODF	Oregon Data Framework
OR/WA	Oregon/Washington BLM Administrative State
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
WEB	Worldwide Web (internet)
WODDB	Western Oregon Digital Database

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_GB_Data_Source

GeoBOB Data Source Code. The source of the database record. Used to control if a user can edit or delete a record. This domain is ordered so that BLM organizations appear at the top of the list. Otherwise, it is ordered alphabetically.

Code	Description
ORB00	ORB00 – BLM Oregon Burns District Office
ORC00	ORC00 – BLM Oregon Coos Bay District Office
ORL00	ORL00 – BLM Oregon Lakeview District Office
ORM00	ORM00 – BLM Oregon Medford District Office
ORN00	ORN00 – BLM Oregon NW Oregon District Office
ORP00	ORP00 – BLM Oregon Prineville District Office
ORR00	ORR00 – BLM Oregon Roseburg District Office
ORV00	ORV00 – BLM Oregon Vale District Office
ORW00	ORW00 – BLM Oregon Spokane District Office
BLMOR950	BLMOR950 - BLM Oregon - Portland State Office
BLMCA330	BLMCA330 - BLM California - Arcata Resource Area
BLMCA340	BLMCA340 - BLM California - Ukiah Field Office
BLMCA360	BLMCA360 - BLM California - Redding Resource Area
AMPH_TL	AMPH_TL - Amphibian Taxa Lead
ARMG	ARMG - Air Resource Management Group
BRYO_TL	BRYO_TL - Bryophyte Taxa Lead
FS06	FS06 - US Forest Service PNW Region
FS0601	FS0601 - Deschutes National Forest
FS0602	FS0602 - Fremont National Forest
FS0603	FS0603 - Gifford Pinchot National Forest
FS0604	FS0604 - Malheur National Forest
FS0605	FS0605 - Mt. Baker-Snoqualmie National Forest
FS0606	FS0606 - Mt. Hood National Forest
FS0607	FS0607 - Ochoco National Forest
FS0608	FS0608 - Okanogan National Forest
FS0609	FS0609 - Olympic National Forest
FS0610	FS0610 - Rogue River National Forest
FS0611	FS0611 - Siskiyou National Forest
FS0612	FS0612 - Siuslaw National Forest
FS0614	FS0614 – Umatilla National Forest
FS0615	FS0615 - Umpqua National Forest
FS0616	FS0616 – Wallowa-Whitman National Forest
FS0617	FS0617 - Wenatchee National Forest

Code	Description
FS0618	FS0618 - Willamette National Forest
FS0620	FS0620 - Winema National Forest
FS0621	FS0621 - Colville National Forest
FS0622	FS0622 - Columbia River Gorge NSA
FS2605	FS2605 - Corvallis Forestry Sciences Lab
FUNGI_TL	FUNGI_TL - Fungi taxa lead
KSBETA	KSBETA - Known Sites Beta Data Source
MOL_TL	MOL_TL - Mollusk Taxa Lead
NPSCRLA	NPSCRLA - Crater Lake National Park
NPSMORA	NPSMORA - Mount Rainer National Park
NPSNOCA	NPSNOCA - North Cascades National Park
NPSOLYM	NPSOLYM - Olympic National Park
NPSREDW	NPSREDW - Redwood National Park
PCGPIPE	PCGPIPE – Pacific Connector Gas Pipeline
STRAT_SV	STRAT_SV - Strategic Surveys Data Entry Group

A.2 dom_MM_DET_BEHAVE

Marbled Murrelet Detection Behavior Code. Used for recording the behavior type of the birds.

Code	Description
B	B - Circle At or Below Canopy (<1.0)
C	C - Circle Over Canopy
F	F - Flight Over Canopy
L	L - Seen Landing in or Departing From a Tree
N	N - (Retired) Near observer, but not flying within or over immediate canopy
S	S - Stationary Calling (fixed-point multiple calls <100m
T	T - Fly-Through At or Below Canopy (<1.0)
U	U - Unknown (Audio Detection)

A.3 dom_MM_DET_HRD_DIST

Marbled Murrelet Detection Heard Only Distance Code. Estimates how far birds are without having a visual distance.

Code	Description
F	F - Faint
L	L - Loud
M	M - Moderate

A.4 dom_MM_DET_KEER

Marbled Murrelet Detection Keer Code. The number of Keers, Groans, and Alternate calls heard. When more than 5 calls are heard in the same detection, record M for multiple.

Code	Description
G1	G1 - Groan/alternate call (1)
G2	G2 - Groan/alternate calls (2)
G3	G3 - Groan/alternate call (3)
G4	G4 - Groan/alternate call (4)
G5	G5 - Groan/alternate call (5
GM	GM - Groan/alternate call (Multiple)
K1	K1 - Keer call (1)
K2	K2 - Keer calls (2)
K3	K3 - Keer calls (3)
K4	K4 - Keer calls (4)
K5	K5 - Keer calls (5)
KG2	KG2 - Keer call, Groan/alternate call (2)
KG3	KG3 - Keer calls, Groan/alternate calls (3)
KG4	KG4 - Keer calls, Groan/alternate calls (4)
KG5	KG5 - Keer calls, Groan/alternate calls (5)
KGM	KGM - Keer calls, Groan/alternate calls (Multiple)
KM	KM - Keer calls (Multiple)
KO2	KO2 - Keer call, Whistle or Soft Que call (2)
KO3	KO3 - Keer calls, Whistle or Soft Que calls (3)
KO4	KO4 - Keer calls, Whistle or Soft Que calls (4)
KO5	KO5 - Keer calls, Whistle or Soft Que calls (5)
KOM	KOM - Keer calls, Whistle or Soft Que calls (Multiple)
O1	O1 - Whistle or Soft Que Calls (1)
O2	O2 - Whistle or Soft Que Calls (2)
O3	O3 - Whistle or Soft Que Calls (3)
O4	O4 - Whistle or Soft Que Calls (4)
O5	O5 - Whistle or Soft Que Calls (5)
OM	OM - Whistle or Soft Que Calls (Multiple)

A.5 dom_MM_DET_TYPE

Marbled Murrelet Detection Type Code. Type of detection code.

Code	Description
B	B - Both seen and heard
H	H - Heard vocalizations only
S	S - Seen, with no vocalizations
T	T - Tallied/Summarized Detection Info
U	U - Unknown

A.6 dom_MM_DET_VOC2

Marbled Murrelet Detection Additional Audio Detection Code. Used for recording additional audio detections.

Code	Description
J	J - Jet sounds
JW	JW - Jet sounds, wingbeats
OTH	OTH - Other, describe in detection notes
W	W - Wingbeats
Y	Y - Overlapping calls heard
YJ	YJ - Overlapping calls, Jet sounds
YJW	YJW - Overlapping calls, Jet sounds, wingbeats
YW	YW - Overlapping calls, wingbeats

A.7 dom_MM_DIRECTION

Marbled Murrelet Direction Code. Used for recording the direction birds were observed.

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

A.8 dom_MM_MSRV_PROTO_YN

Marbled Murrelet Surveyed to Protocol Yes No Code. Indicates if the survey was completed in compliance with the survey protocol.

Code	Description
Y	Y - Yes
N	N - No

A.9 dom_MM_MSRV_SGNFCNT

Marbled Murrelet Survey Significant Behavior Code. Used to record the most biologically significant behavior. Codes are ordered from least significant to most significant.

Code	Description
N	N - No Murrelets
P	P – Presence
6B	6B - Circling Above Another Stand
6A	6A - Circling Above Stand
5B	5B - Beh. B in Non-Habitat

Code	Description
5A	5A - Beh. B in Habitat
4	4 - Stationary Calling
3	3 - Landing
2	2 - Chick/Egg
1	1 - Nest

A.10 dom_MM_MSRV_TYPE

Marbled Murrelet Survey Type Code. Describes the type of survey being performed. This domain is sorted in order of common usage.

Code	Description
I	I - Intensive Survey
M	M - Monitoring
N	N - Nesting Survey
C	C - Incidental Observation
D	D - Radar Detection Survey
G	G - General Survey
O	O - Other kind of survey
T	T - Tree Climbing
U	U - Unknown
V	V - Radar Validation Survey

A.11 dom_MM_MWX_AUDENV

Marbled Murrelet Weather Audibility Environment Code. From the survey station, note whether audibility is unimpaired within a 200 m (656 ft) radius.

Code	Description
N	N - Audibility is impaired within a 200m radius.
Y	Y - Audibility is unimpaired within a 200m radius.

A.12 dom_MM_MWX_CEILING

Marbled Murrelet Weather Vertical Ceiling Code. The height of the primary cloud/fog layer relative to the canopy of the survey site as viewed from the station.

Code	Description
HI	HI - > 2.0 canopy height
LO	LO - < 1.25 canopy height
MD	MD - > 1.25 to < 2.0 canopy height
U	U - Unknown; cannot see adequately to describe due to station placement
UL	UL - Unlimited (clear)

A.13 dom_MM_MWX_CLOUD

Marbled Murrelet Weather Cloud Percent Category Code. Class code to describe the amount of overhead cloud cover visible from the station. This is an ocular estimate.

Code	Description
0	0 - 0% (clear sky; no cloud cover)
1	1 - about 33% of sky covered
2	2 - about 66% of sky covered
3	3 - 100% of sky covered
U	U - Unknown; cannot see adequately to describe conditions due to station placement

A.14 dom_MM_MWX_FOG

Marbled Murrelet Weather Fog Condition Code. Indicates fog intensity at the survey site as observed from the station. This domain is sorted in order of hierarchy or prominence.

Code	Description
H	H - Heavy (dense fog)
L	L - Light (translucent haze, thin fog)
M	M - Moderate (obscuring fog)
N	N - None

A.15 dom_MM_MWX_HORZVIS

Marbled Murrelet Weather Horizontal Visibility Status Code. From the survey station, note whether horizontal visibility is unimpaired within 100 m (328 ft).

Code	Description
H	H - Heavy (dense fog)
L	L - Light (translucent haze, thin fog)
M	M - Moderate (obscuring fog)

A.16 dom_MM_MWX_NOISE

Marbled Murrelet Weather Noise Environment Code. Record the appropriate code to indicate code conditions that affect ability to hear clearly within a 200m radius.

Code	Description
A	A - Airplane
B	B - Bird song/calls
C	C - Creek or other water drainage
M	M - Machinery (logging, mining, road construction, etc.)
N	N - None
O	O - Other
P	P - Precipitation (rain/hail)
T	T - Tree drip

Code	Description
V	V - Vehicle (trucks, cars, etc.)
W	W - Wind

A.17 dom_MM_MWX_OTHER

Marbled Murrelet Weather Other Weather Code. Indicates other weather conditions at the survey site as observed from the station.

Code	Description
HH	HH - Intense Hail
HL	HL - Light Hail
HM	HM - Obscuring hail
N	N - None
SH	SH - Intense snow storms, Blizzard
SL	SL - Snow flurry
SM	SM - Obscuring snows

A.18 dom_MM_MWX_RAIN

Marbled Murrelet Weather Rain Condition Code. Indicates rain intensity at the survey site as observed from the station.

Code	Description
H	H - Heavy (intense rain)
L	L - Light (mist, drizzle, soft rain)
M	M = Moderate (obscuring rain)
N	N - None

A.19 dom_MM_MWX_VERTVIS

Marbled Murrelet Weather Vertical Visibility Code. From the survey station, note whether vertical visibility is unimpaired to two canopy heights.

Code	Description
N	N - No
U	U - Unknown; cannot see adequately to describe conditions due to station placement
Y	Y - Yes

A.20 dom_MM_MWX_WIND

Marbled Murrelet Weather Wind Speed Code. Record the wind speed based on the Beaufort Wind Scale. Observe the effects of wind conditions on trees and vegetation visible at ground level at the station and record the appropriate code.

Code	Description
0	0 - <1 mph, calm
1	1 - 1-3 mph, leaves barely move
2	2 - 4-7 mph, leaves rustle and small twigs move
3	3 - 8-12 mph, leaves and small twigs in constant motion
4	4 - 13-18 mph, small branches move
5	5 - 19-24 mph, large branches and small trees start to sway
6	6 - 25-31 mph, large branches in constant motion
7	7 - 32-38 mph, whole trees move
8	8 - 39-46 mph, twigs and small branches break

A.21 dom_MM_OCC_LOCCREW

Marbled Murrelet Occupied Site Location Crew Code. Identifies the crew or agency that found the site occupied.

Code	Description
BEC	BEC - Becker Ecoforestry
BLM	BLM - Bureau of Land Management
BPA	BPA - Bonneville Power Administration
JRE	JRE - Jared Reeves Enterprises
MRB	MRB - Mad River Biologists
NBS	NBS - USGS-National Biological Survey/Patrick Jodice
NCASI	NCASI - National Council for Air and Stream Improvement, Inc.
OSU	OSU - Oregon State University
PCGP	PCGP - Pacific Connector Gas Pipeline
TEC	TEC - Turnstone Environmental Consultants
VARJ	VARJ - Varoujean Research Study

A.22 dom_MM_OCC_SP1

Marbled Murrelet Occupied Site Owner Level 1 Code. Records the first level landowner where the site occurs.

Code	Description
01	Oregon Department of Fish and Wildlife
02	Oregon State Department of Forestry
03	Oregon State Land Board
04	Oregon State Parks
05	United States Forest Service, Region 5 (California)
06	United States Forest Service, Region 6 (Oregon/Washington)
07	Bureau of Land Management (Oregon/Washington)
08	United States Fish and Wildlife Service
09	Unites States Park Service
10	US Army Corps of Engineers
11	The Nature Conservancy
12	Indian Reservation

Code	Description
13	Oregon State University
14	Municipality
15	Private
16	Washington Department of Wildlife
18	Washington Department of Natural Resources
19	Bureau of Land Management (California)
99	Other

A.23 dom_MM_OCC_SP2

Marbled Murrelet Occupied Site Owner Level 2 Code. Records the second level landowner where the site occurs.

Code	Description
090	Eugene BLM
001	Gifford Pinchot NF
018	Klamath NF
110	Medford BLM
023	Mount Rainier NP
002	Mt. Baker-Snoqualmie NF
021	North Cascades NP
003	Olympic NF
022	Olympic NP
025	Oregon Caves NM
099	Private
026	Redwood NP
100	Roseburg BLM
080	Salem BLM
017	Shasta-Trinity NF
012	Siskiyou NF
009	Siuslaw NF
016	Six Rivers NF
034	Ukiah BLM
120	Coos Bay BLM

A.24 dom_MM_OCC_STATUS

Marbled Murrelet Occupied Site Status Code. Indicates if the site is currently occupied by a bird(s).

Code	Description
O	O - Occupied Behavior documented
P	P - Presence Detections only
U	U - Unoccupied

A.25 dom_MM_STTN_CANOPY_CVR

Marbled Murrelet Station Canopy Cover Code. Code that best describes the overhead canopy cover at the survey station.

Code	Description
1	1 - 0-25%
2	2 - 26-50%
3	3 - 51-75%
4	4 - 76-100%

A.26 dom_MM_STTN_DIST

Marbled Murrelet BLM District Code. The BLM district code where the station or site occurs.

Code	Description
ORC00	Coos Bay District, OR/WA BLM
ORM00	Medford District, OR/WA BLM
ORR00	Roseburg District, OR/WA BLM
ORN00	NW Oregon District, OR/WA BLM

A.27 dom_MM_STTN_PLCMNT

Marbled Murrelet Station Placement Code. Indicates if the station is inside or outside the survey site.

Code	Description
E	E - Edge (50 meters or less from the edge and can be in or out of the stand).
I	I - Inside
O	O - Outside

A.28 dom_MM_STTN_RA

Marbled Murrelet BLM Resource Area Code. The BLM resource area code where the station or site occurs.

Code	Description
ORC03	Umpqua Resource Area, Coos Bay District, OR/WA BLM
ORC04	Myrtlewood Resource Area, Coos Bay District, OR/WA BLM
ORM05	Butte Falls Resource Area, Medford District, OR/WA BLM
ORM06	Ashland Resource Area, Medford District, OR/WA BLM
ORM07	Grants Pass Resource Area, Medford District, OR/WA BLM
ORN01	Northwest Oregon Cascades Field Office
ORN02	Northwest Oregon Marys Peak Field Office
ORN03	Northwest Oregon Siuslaw Field Office
ORN04	Northwest Oregon Tillamook Field Office
ORN05	NW Oregon Upper Willamette Field Office
ORR04	Swiftwater Resource Area, Roseburg District, OR/WA BLM
ORR05	South River Resource Area, Roseburg District, OR/WA BLM

A.29 dom_MM_STTN_SLOPE_PSTN

Marbled Murrelet Station Slope Position Code. Code that best describes the stations position on slope. This domain is ordered by logical use.

Code	Description
B	B - Canyon bottom or coastal plain
L	L - Lower 1/3
M	M - Middle 1/3
R	R - Well defined ridge top
U	U - Upper 1/3

A.30 dom_MM_STTN_TYPE

Marbled Murrelet Station Type Code. Station code used to classify the type of surveys done from this station for all surveys. Listed in order to assist with mobile data collection. This domain is sorted in order of common usage.

Code	Description
G	G - General Surveys Only
I	I - Intensive Surveys Only
B	B - Both General Surveys and Intensive Surveys
N	N - Nest Monitoring Surveys
A	A - All Surveys
U	U - Unknown (Historic Surveys or Incidental Observations)