Oregon/Washington Bureau of Land Management

NATIONAL SYSTEM OF PUBLIC LANDS
U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Multiple Indicator Monitoring

Spatial Data Standard

Photo of Paulina Creek taken during MIM protocol. Photo by Prineville BLM, 10/19/2020.

Document Revisions

Revision	Date	Author	Description	Affected Pages
1.0	4/14/2022	Dana Baker-Allum	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 [Alt] + Left Arrow [←] keys to return to the original location from the target location.

Contents

1   General Information

The Multiple Indicator Monitoring (MIM) dataset represents spatial location and information for riparian area management Multiple Indicator Monitoring of stream channels and streamside vegetation. This dataset is used to record data from the MIM document in BLM Technical Reference 1737-23, Revised 2011. A citation for this document is available in the references section of this document. This dataset may also be used to record MIM data gathered according to earlier technical references.

According to TR 1737-23:

> The MIM protocol is designed to be objective, efficient, and effective for monitoring streambanks, stream channels, and streamside riparian vegetation. Indicators and procedures in this protocol were selected and developed primarily to monitor impacts of livestock and other large herbivores on wadable streams (usually less than 10 m wide). The MIM protocol integrates annual grazing use and long-term trend indicators allowing for evaluation of livestock grazing management. (Burton et al., 2011, p. 1).

The MIM dataset includes the following feature class and tables:

- MIM_PT - contains descriptive information about the designated monitoring area (DMA). The location of the point represents the downstream marker of the monitoring plot or DMA.

  A MIM_PT record can have zero, one or many related MIM_DMA_TBL, MIM_DMA_SS_TBL, MIM_SUBSTRATE_TBL, and MIM_THALWEG_TBL records. This dataset corresponds to the header tab of the MIM Excel spreadsheet.

- MIM_DMA_TBL - contains raw data for streambank alteration, streambank stability, greenline-to-greenline width, and bankfull width.

  A MIM_DMA_TBL record can have zero, one, or many related MIM_DMA_GC_TBL, MIM_DMA_SH_TBL, MIM_DMA_WSACL_TBL, and MIM_DMA_WSU_TBL records.

- MIM_DMA_GC_TBL - contains raw data for greenline species and height.

- MIM_DMA_SH_TBL - contains raw data for stubble height species and height.

- MIM_DMA_SS_TBL - contains data on DMA sample sizes needed.

- MIM_DMA_WSACL_TBL - contains raw data for woody species and counts of plants at different age classes.

- MIM_DMA_WSU_TBL - contains raw data for woody species use.

- MIM_PLOT_CMTS_TBL - contains comments for individual plots.

- MIM_SUBSTRATE_TBL - contains raw data for substrate collected in the field.

- MIM_THALWEG_TBL - contains raw data for residual pool depth and pool frequency.

- Dataset (Theme) Name: MIM

- Dataset (Feature Class): MIM_PT, MIM_DMA_TBL, MIM_DMA_GC_TBL, MIM_DMA_SH_TBL, MIM_DMA_SS_TBL, MIM_DMA_WSACL_TBL, MIM_DMA_WSU_TBL, MIM_PLOT_CMTS_TBL, MIM_SUBSTRATE_TBL, MIM_THALWEG_TBL

1.1   Roles and Responsibilities

Table 1 Roles and Responsibilities

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

1.2   FOIA Category

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

1.3   Records Retention Schedule

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

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

(subject to any records freeze or holds that may be in place).

Oregon/Washington (OR/WA) 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 MIM 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 1(B) – BLM records that may contain protected information that must be considered for segregation prior to release. See section 8 for more information on which data are available to the public.

There are no privacy issues or concerns associated with these data themes. A privacy impact assessment was submitted for this dataset on 3/17/2022.

1.5   Keywords

Keywords that can be used to locate this dataset include:

- BLM Thesaurus: Hydrology

- Additional keywords: Multiple Indicator Monitoring, MIM, Riparian, Aquatic, Lentic, Lotic

- ISO Thesaurus: environment, inlandWaters

1.6   Subject Function Codes

BLM Subject Function codes used to describe this dataset include:

- 1283 - Data Administration

- 9167 - Geographic Information System (GIS)

- 4000 - Range Management

- 6720 - Aquatic Resource Management

- 6762 - Stream Management

- 7000 - Soil, Water, and Air Management

2   Dataset Overview

2.1   Usage

The MIM protocol is designed to provide a consistent approach for monitoring streambanks, stream channels, and streamside riparian vegetation. The protocols also help establish and prioritize management, monitoring, and restoration activities.

2.2   Sponsor/Affected Parties

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

Affected parties are:

- BLM Montana/Dakotas and BLM Wyoming State Offices. This dataset was developed in cooperation with resource staff from these two state offices.

2.3   Relationship to Other Datasets, Databases, or Files

This dataset is related to the following datasets:

- This dataset inherits its attributes from excel spreadsheets developed for the MIM protocol. For more information on the MIM protocol, see: [Multiple Indicator Monitoring (MIM) of Stream Channels and Streamside Vegetation | Bureau of Land Management (blm.gov)](#).

- Hydrography - MIM monitoring occurs along streams that are likely recorded in the National Hydrography Dataset (NHD).

- Sample Points - Historically, resource specialists have entered MIM monitoring locations into the OR/WA Sample Points dataset. There may be some duplication between these two datasets until records are cleaned up.

- Grazing Allotments - MIM is used to monitor grazing resource use. Grazing allotments are described in separate OR/WA and National data standards.

2.4   Data Category/Architecture Link

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

- Activities

- Resources

- Boundaries

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

Figure 1 **Oregon Data Framework Overview**

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 MIM 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, MIM is considered an Activity and categorized as follows:
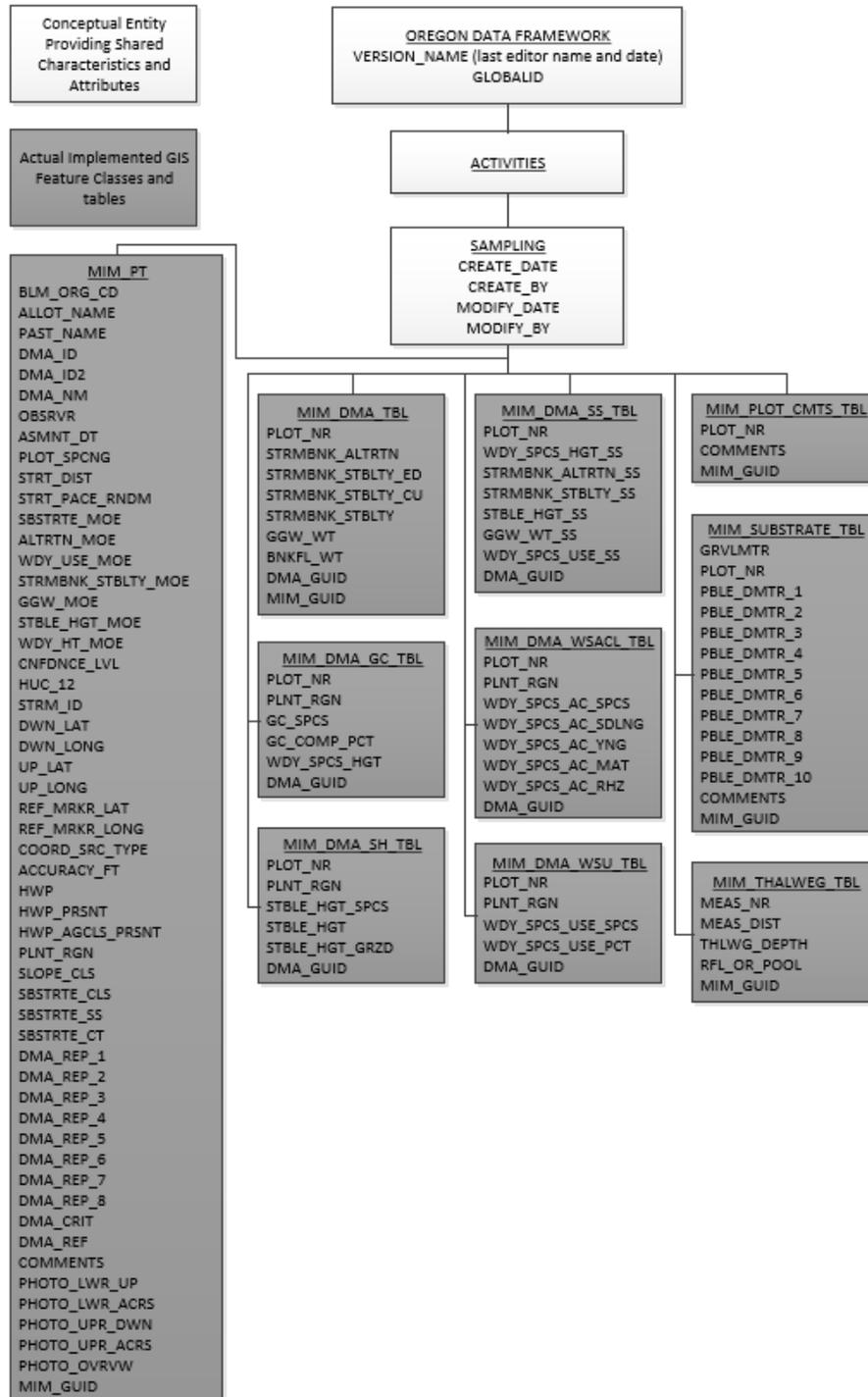
Figure 2   Data Organization Structure

2.5   Relationship to DOI Enterprise Architecture Data Resource Mode

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

- Data Subject Area: Geospatial

- Information Class: Location

3   Data Management Protocols

3.1   Accuracy Requirements

MIM is intended to be performed by trained and experience resource specialists following the technical reference and associated field guide (see Section 11 References for references to these documents). Following the guidance in the field guide, accurate GPS readings should be collected at the location of the DMA. Accuracy is, however, variable because of a wide variety of sources. The claimed +/- range is captured in the attribute ACCURACY_FT.

Entering structure locations using the Global Positioning System (GPS) or by careful mapping improves the accuracy.

3.2   Collection, Input, and Maintenance Protocols

Data is collected in the field using the procedures documented in the MIM Technical Reference and associated documentation available at: https://www.blm.gov/documents/national-office/blm-library/technical-reference/multiple-indicator-monitoring-mim-stream.

Resource specialists have the option of entering data from the MIM Excel data entry template in the office using Desktop ArcGIS or field-going staff may collect data using the S1 Mobile for Android application.

To collect mobile data, a staff member must first obtain the appropriate mobile editor user account within the BLM ArcGIS Online (AGOL) organization. Then, administrators will add mobile editors to the designated group in AGOL which allows them to access the editable feature service. Specific decisions about how to manage AGOL users can be made at the District or Field Office level.

Once added to the correct group, users can log in to the S1 Mobile for Android Application and download an editable replica of the Maintenance Tracking System dataset to their device for offline use in the field. This application allows users to create new features or edit existing features.

When the user returns to the office and re-establishes wireless internet connectivity on the device, they will then choose the option to sync and submit their data from the mobile application. This will add the created, updated, and/or deleted features/records to a BLM SDE Version queue. Authorized editors will then import this mobile version into ArcGIS Desktop, where they will review the data, perform any needed corrections or updates, and submit the version for automated QAQC, reconcile, and posting. The automated QAQC process performed during version submission will check the version for missing values in required fields, values outside of applied range and/or coded value domains, and other data rules.

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

3.3   Update Frequency and Archival Protocols

Data is updated annually, after field season or as needed.

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

3.4   Statewide Monitoring

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

Each year, the Resource Science Data team of the BLM Division of Resources, Lands, Minerals and Fire meets with each state data steward for every corporate geospatial theme to conduct an annual review of the data. During the annual review, geospatial staff present the state data stewards with a report detailing Quality Assurance/Quality

Control (QAQC) results performed on the data. The QAQC does the following:

- Checks that all attribute values conform to the range or coded-value domains to which they are applied.

- Checks that all attributes marked as required in the data standard have values.

- Checks for duplicate features which have the same geometry and attributes.

- Checks for overlapping features if forbidden by the data standard.

- Checks for invalid geometry.

- Other checks as necessary (can be customized according to the data standard).

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

4   Multiple Indicator Monitoring Schema (simplified)

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

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

4.1   MIM Feature Classes

4.1.1   MIM_PT Feature Class (Multiple Indicator Monitoring Points)

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

Attribute Name	Data Type	Length	Default Value	Required	Domain
BLM_ORG_CD	String	5		Yes **	dom_BLM_ORG_CD
ALLOT_NAME	String	50		No	
PAST_NAME	String	50		No	
DMA_ID	String	60		Yes	
DMA_ID2	String	60		No	
DMA_NM	String	100		No	
OBSRVR	String	100		Yes	
ASMNT_DT	Date			Yes	
PLOT_SPCNG	Double		2.5	Yes	
STRT_DIST	Short Integer		2	Yes	
STRT_PACE_RNDM	Short Integer			Yes	
SBSTRTE_MOE	Double		0.15	Yes	
ALTRTN_MOE	Double		0.5	Yes	
WDY_USE_MOE	Double		0.5	Yes	
STRMBNK_STBLTY_MOE	Double		0.15	Yes	
GGW_MOE	Double		0.1	Yes	
STBLE_HGT_MOE	Double		0.2	Yes	
WDY_HT_MOE	Double		0.2	Yes	
CNFDNCE_LVL	Double		0.95	Yes	
HUC_12	String	12		Yes **	
STRM_ID	String	65		Yes **	
DWN_LAT	Double			Yes **	
DWN_LONG	Double			Yes **	
UP_LAT	Double			Yes **	

Attribute Name	Data Type	Length	Default Value	Required	Domain
UP_LONG	Double			Yes **	
REF_MRKR_LAT	Double			Yes **	
REF_MRKR_LONG	Double			Yes **	
COORD_SRC_TYPE	String	5		No	DOM_COORD_SOURCE_TYPE
ACCURACY_FT	Long			No	
HWP	String	2		Yes **	dom_YN_NA
HWP_PRSNT	String	2		Yes **	dom_YN_NA
HWP_AGCLS_PRSNT	String	2		Yes **	dom_YN_NA
PLNT_RGN	Short Integer			Yes	dom_MIM_PLNT_RGN
SLOPE_CLS	String	10		Yes	dom_MIM_SLOPE_CLS
SBSTRTE_CLS	String	4		Yes **	dom_MIM_SBSTRTE_CLS
SBSTRTE_SS	Double			No	
SBSTRTE_CT	Short Integer			No	
DMA_REP_1	String	2		Yes	dom_YN_NA
DMA_REP_2	String	2		Yes	dom_YN_NA
DMA_REP_3	String	2		Yes	dom_YN_NA
DMA_REP_4	String	2		Yes	dom_YN_NA
DMA_REP_5	String	2		Yes	dom_YN_NA
DMA_REP_6	String	2		Yes	dom_YN_NA
DMA_REP_7	String	2		Yes	dom_YN_NA
DMA_REP_8	String	2		Yes	dom_YN_NA
DMA_CRIT	String	2		Yes	dom_YN
DMA_REF	String	2		Yes	dom_YN
COMMENTS	String	2000		Yes	
PHOTO_LWR_UP	String	150		Yes **	
PHOTO_LWR_ACRS	String	150		Yes **	
PHOTO_UPR_DWN	String	150		Yes **	
PHOTO_UPR_ACRS	String	150		Yes **	
PHOTO_OVRVW	String	150		No	
PROTOCOL	String	20	BLM TR 1737 23 2011	Yes	dom_MIM_PROTOCOL
CREATE_DATE	Date		9/9/9999	No *	
CREATE_BY	String	30	UNK	No *	
MODIFY_DATE	Date		9/9/9999	No *	
MODIFY_BY	String	30	UNK	No *	
MIM_GUID	GUID			Yes	

Attribute Name	Data Type	Length	Default Value	Required	Domain
VERSION_NAME	String	50	InitialLoad	Yes *	
GLOBALID	GUID			Yes *	

   *   Values automatically generated

   **   Enforced during quality control, may appear in data as not required and is not required in field collection

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

4.2 MIM Standalone Tables

4.2.1 MIM_DMA_TBL Table (Multiple Indicator Monitoring Designated Monitoring Areas Table)

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

Attribute Name	Data Type	Length	Default Value	Required	Domain
PLOT_NR	Short Integer			Yes	
STRMBNK_ALTRTN	Short Integer			No	dom_MIM_STRMBNK_ALTRTN
STRMBNK_STBLTY_ED	String	1		No	dom_MIM_STRMBNK_STBLTY_ED
STRMBNK_STBLTY_CU	String	1		No	dom_MIM_STRMBNK_STBLTY_CU
STRMBNK_STBLTY	String	2		No	dom_MIM_STRMBNK_STBLTY
GGW_WT	Double			No	
BNKFL_WT	Double			No	
CREATE_DATE	Date		9/9/9999	No *	
CREATE_BY	String	30	UNK	No *	
MODIFY_DATE	Date		9/9/9999	No *	
MODIFY_BY	String	30	UNK	No *	
DMA_GUID	GUID			Yes	
MIM_GUID	GUID			Yes	
VERSION_NAME	String	50	InitialLoad	Yes *	
GLOBALID	GUID			Yes *	

   *   Values automatically generated

   **   Enforced during quality control, may appear in data as not required and is not required in field collection

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

4.2.2 MIM_DMA_GC_TBL Table (Multiple Indicator Monitoring Designated Monitoring Areas Greenline Composition Table)

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

Attribute Name	Data Type	Length	Default Value	Required	Domain
PLOT_NR	Short Integer			Yes	
PLNT_RGN	Short Integer			Yes	dom_MIM_PLNT_RGN
GC_SPCS	String	10		Yes	dom_MIM_SPCS_ALL_AW dom_MIM_SPCS_ALL_GP dom_MIM_SPCS_ALL_WM
GC_COMP_PCT	Short Integer			Yes	dom_PCT100_Neg
WDY_SPCS_HGT	Short Integer			Yes	dom_MIM_WDY_SPCS_HGT
CREATE_DATE	Date		9/9/9999	No *	
CREATE_BY	String	30	UNK	No *	
MODIFY_DATE	Date		9/9/9999	No *	
MODIFY_BY	String	30	UNK	No *	
DMA_GUID	GUID			Yes	
VERSION_NAME	String	50	InitialLoad	Yes *	
GLOBALID	GUID			Yes *	

*   Values automatically generated

**   Enforced during quality control, may appear in data as not required and is not required in field collection

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4.2.3 MIM_DMA_SH_TBL Table (Multiple Indicator Monitoring Designated Monitoring Areas Stubble Height Table)

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

Attribute Name	Data Type	Length	Default Value	Required	Domain
PLOT_NR	Short Integer			Yes	
PLNT_RGN	Short Integer			Yes	dom_MIM_PLNT_RGN
STBLE_HGT_SPCS	String	10		Yes	dom_MIM_SPCS_ALL_AW dom_MIM_SPCS_ALL_GP dom_MIM_SPCS_ALL_WM
STBLE_HGT	Short Integer			No	
STBLE_HGT_GRZD	String	1		Yes	dom_YN
CREATE_DATE	Date		9/9/9999	No *	
CREATE_BY	String	30	UNK	No *	

Attribute Name	Data Type	Length	Default Value	Required	Domain
MODIFY_DATE	Date		9/9/9999	No *	
MODIFY_BY	String	30	UNK	No *	
DMA_GUID	GUID			Yes	
VERSION_NAME	String	50	InitialLoad	Yes *	
GLOBALID	GUID			Yes *	

*   Values automatically generated

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4.2.4 MIM_DMA_SS_TBL Table (Multiple Indicator Monitoring Designated Monitoring Areas Sample Sizes Table)

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

Attribute Name	Data Type	Length	Default Value	Required	Domain
PLOT_NR	Short Integer			Yes	
WDY_SPCS_HGT_SS	Short Integer			No	
STRMBNK_ALTRTN_SS	Short Integer			No	
STRMBNK_STBLTY_SS	Short Integer			No	
STBLE_HGT_SS	Short Integer			No	
GGW_WT_SS	Short Integer			No	
WDY_SPCS_USE_SS	Short Integer			No	
CREATE_DATE	Date		9/9/9999	No *	
CREATE_BY	String	30	UNK	No *	
MODIFY_DATE	Date		9/9/9999	No *	
MODIFY_BY	String	30	UNK	No *	
DMA_GUID	GUID			Yes	
VERSION_NAME	String	50	InitialLoad	Yes *	
GLOBALID	GUID			Yes *	

*   Values automatically generated

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4.2.5 MIM_DMA_WSACL_TBL Table (Multiple Indicator Monitoring Designated Monitoring Areas Woody Species Age Class Table)

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

Attribute Name	Data Type	Length	Default Value	Required	Domain
PLOT_NR	Short Integer			Yes	
PLNT_RGN	Short Integer			Yes	dom_MIM_PLNT_RGN
WDY_SPCS_AC_SPCS	String	10		Yes	dom_MIM_SPCS_ALL_AW dom_MIM_SPCS_ALL_GP dom_MIM_SPCS_ALL_WM
WDY_SPCS_AC_SDLNG	Short Integer			Yes	
WDY_SPCS_AC_YNG	Short Integer			Yes	
WDY_SPCS_AC_MAT	Short Integer			Yes	
WDY_SPCS_AC_RHZ	Short Integer			No	
CREATE_DATE	Date		9/9/9999	No *	
CREATE_BY	String	30	UNK	No *	
MODIFY_DATE	Date		9/9/9999	No *	
MODIFY_BY	String	30	UNK	No *	
DMA_GUID	GUID			Yes	
VERSION_NAME	String	50	InitialLoad	Yes *	
GLOBALID	GUID			Yes *	

     *   Values automatically generated

     **   Enforced during quality control, may appear in data as not required and is not required in field collection

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

4.2.6 MIM_DMA_WSU_TBL Table (Multiple Indicator Monitoring Designated Monitoring Areas Woody Species Use Table)

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

Attribute Name	Data Type	Length	Default Value	Required	Domain
PLOT_NR	Short Integer			Yes	
PLNT_RGN	Short Integer			Yes	dom_MIM_PLNT_RGN
WDY_SPCS_USE_SPCS	String	10		Yes	dom_MIM_SPCS_ALL_AW dom_MIM_SPCS_ALL_GP dom_MIM_SPCS_ALL_WM
WDY_SPCS_USE_PCT	Short Integer			Yes	dom_PCT100_Neg
CREATE_DATE	Date		9/9/9999	No *	
CREATE_BY	String	30	UNK	No *	
MODIFY_DATE	Date		9/9/9999	No *	
MODIFY_BY	String	30	UNK	No *	

Attribute Name	Data Type	Length	Default Value	Required	Domain
DMA_GUID	GUID			Yes	
VERSION_NAME	String	50	InitialLoad	Yes *	
GLOBALID	GUID			Yes *	

*   Values automatically generated

**   Enforced during quality control, may appear in data as not required and is not required in field collection

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

4.2.7 MIM_PLOT_CMTS_TBL Table (Multiple Indicator Monitoring Plot Comments Table)

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

Attribute Name	Data Type	Length	Default Value	Required	Domain
PLOT_NR	Short Integer			Yes	
COMMENTS	String	2000		Yes	
CREATE_DATE	Date		9/9/9999	No *	
CREATE_BY	String	30	UNK	No *	
MODIFY_DATE	Date		9/9/9999	No *	
MODIFY_BY	String	30	UNK	No *	
MIM_GUID	GUID			Yes	
VERSION_NAME	String	50	InitialLoad	Yes *	
GLOBALID	GUID			Yes *	

*   Values automatically generated

**   Enforced during quality control, may appear in data as not required and is not required in field collection

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

4.2.8 MIM_SUBSTRATE_TBL Table (Multiple Indicator Monitoring Substrate Table)

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

Attribute Name	Data Type	Length	Default Value	Required	Domain
GRVLMTR	String	1		Yes	dom_YN
PLOT_NR	Short Integer			Yes	
PBLE_DMTR_1	Short Integer			Yes	dom_MIM_PBL_SIZE
PBLE_DMTR_2	Short Integer			Yes	dom_MIM_PBL_SIZE
PBLE_DMTR_3	Short Integer			Yes	dom_MIM_PBL_SIZE

Attribute Name	Data Type	Length	Default Value	Required	Domain
PBLE_DMTR_4	Short Integer			Yes	dom_MIM_PBL_SIZE
PBLE_DMTR_5	Short Integer			Yes	dom_MIM_PBL_SIZE
PBLE_DMTR_6	Short Integer			Yes	dom_MIM_PBL_SIZE
PBLE_DMTR_7	Short Integer			Yes	dom_MIM_PBL_SIZE
PBLE_DMTR_8	Short Integer			Yes	dom_MIM_PBL_SIZE
PBLE_DMTR_9	Short Integer			Yes	dom_MIM_PBL_SIZE
PBLE_DMTR_10	Short Integer			Yes	dom_MIM_PBL_SIZE
COMMENTS	String	255		No	
CREATE_DATE	Date		9/9/9999	No *	
CREATE_BY	String	30	UNK	No *	
MODIFY_DATE	Date		9/9/9999	No *	
MODIFY_BY	String	30	UNK	No *	
MIM_GUID	GUID			Yes	
VERSION_NAME	String	50	InitialLoad	Yes *	
GLOBALID	GUID			Yes *	

*   Values automatically generated

**   Enforced during quality control, may appear in data as not required and is not required in field collection

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

4.2.9 MIM_THALWEG_TBL Table (Multiple Indicator Monitoring Thalweg Table)

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

Attribute Name	Data Type	Length	Default Value	Required	Domain
MEAS_NR	Short Integer			Yes	
MEAS_DIST	Double			Yes	
THLWG_DEPTH	Double			Yes	
RFL_OR_POOL	String	1		Yes	dom_MIM_RFL_POOL
CREATE_DATE	Date		9/9/9999	No *	
CREATE_BY	String	30	UNK	No *	
MODIFY_DATE	Date		9/9/9999	No *	
MODIFY_BY	String	30	UNK	No *	
MIM_GUID	GUID			Yes	
VERSION_NAME	String	50	InitialLoad	Yes *	
GLOBALID	GUID			Yes *	

*   Values automatically generated

**   Enforced during quality control, may appear in data as not required and is not required in field collection

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

4.3   MIM Relationship Classes

4.3.1 REL_MIM_PT_DMA_TBL

Origin Table / Feature class	MIM_PT
Origin Primary Key	MIM_GUID
Destination Table / Feature class	MIM_DMA_TBL
Destination Foreign Key	MIM_GUID
Relationship Type	Simple
Labels	DMA Table, MIM PT
Messages	None
Cardinality	One to Many

4.3.2 REL_MIM_PT_DMA_SS_TBL

Origin Table / Feature class	MIM_PT
Origin Primary Key	MIM_GUID
Destination Table / Feature class	MIM_DMA_SS_TBL
Destination Foreign Key	MIM _GUID
Relationship Type	Simple
Labels	DMA Sample Size Table, MIM Points
Messages	None
Cardinality	One to Many

4.3.3 REL_MIM_PT_PLOT_CMTS_TBL

Origin Table / Feature class	MIM_PT
Origin Primary Key	MIM_GUID
Destination Table / Feature class	MIM_PLOT_CMTS_TBL
Destination Foreign Key	MIM_GUID
Relationship Type	Simple
Labels	Plot Comments Table, MIM PT
Messages	None
Cardinality	One to Many

4.3.4 REL_MIM_PT_SUBSTRATE_TBL

Origin Table / Feature class	MIM_PT
Origin Primary Key	MIM_GUID
Destination Table / Feature class	MIM_SUBSTRATE_TBL
Destination Foreign Key	MIM_GUID
Relationship Type	Simple
Labels	Substrate Table, MIM PT
Messages	None
Cardinality	One to Many

4.3.5 REL_MIM_PT_THALWEG_TBL

Origin Table / Feature class	MIM_PT
Origin Primary Key	MIM_GUID
Destination Table / Feature class	MIM_THALWEG_TBL
Destination Foreign Key	MIM_GUID
Relationship Type	Simple
Labels	Thalweg Table, MIM PT
Messages	None
Cardinality	One to Many

4.3.6 REL_DMA_DMA_GC_TBL

Origin Table / Feature class	MIM_DMA_TBL
Origin Primary Key	DMA_GUID
Destination Table / Feature class	MIM_DMA_GC_TBL
Destination Foreign Key	DMA_GUID
Relationship Type	Simple
Labels	DMA Greenline Composition Table, DMA Table
Messages	None
Cardinality	One to Many

4.3.7 REL_DMA_DMA_SH_TBL

Origin Table / Feature class	MIM_DMA_TBL
Origin Primary Key	DMA_GUID
Destination Table / Feature class	MIM_DMA_SH_TBL
Destination Foreign Key	DMA_GUID

Relationship Type	Simple
Labels	DMA Stubble Height Table, DMA Table
Messages	None
Cardinality	One to Many

4.3.8 REL_DMA_DMA_WSACL_TBL

Origin Table / Feature class	MIM_DMA_TBL
Origin Primary Key	DMA_GUID
Destination Table / Feature class	MIM_DMA_WSACL_TBL
Destination Foreign Key	DMA_GUID
Relationship Type	Simple
Labels	DMA Woody Species Age Class Table, DMA Table
Messages	None
Cardinality	One to Many

4.3.9 REL_DMA_DMA_WSU_TBL

Origin Table / Feature class	MIM_DMA_TBL
Origin Primary Key	DMA_GUID
Destination Table / Feature class	MIM_DMA_WSU_TBL
Destination Foreign Key	DMA_GUID
Relationship Type	Simple
Labels	DMA Woody Species Use Table, MIM PT
Messages	None
Cardinality	One to Many

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

When this data standard is implemented in other BLM States, the spatial extent will reflect that geographic area.

6   Spatial Entity Characteristics

- MIM_PT
  - Description: Instance of the Sampling group. Contains descriptive information about the designated monitoring area (DMA). The location of the point represents the downstream marker of the DMA.
  - Geometry: Points may be coincident.
  - Topology: No
  - Integration Requirements: None

7　Attribute Characteristics and Definition (In alphabetical order)

7.1　ACCURACY_FT

Geodatabase Name	ACCURACY_FT
BLM Structured Name	Accuracy_Feet_Measure
Inheritance	Inherited from BLM National Feature Level Metadata
Alias Name	Accuracy (ft)
Feature Class Use/Entity Table	MIM_PT
Definition	The accuracy measurement defines how close, in feet, the actual ground location is to the spatial depiction in GIS. This value would typically be determined by one of three methods: 1) the map accuracy value, if a USGS map was used to define the boundary;2) the expected spatial accuracy achieved with GPS; or 3) the measurement of that accuracy as is noted in the National Standard for Spatial Data Accuracy (NSSDA) which is a data usability standard issued by the Federal Geographic Data Committee (FGDC). A value of -1 indicates that the accuracy is unknown or that no reliable estimate can be made.
Required/Optional	Optional
Domain (Valid Values)	No domain. Examples: -1, 1, 10, 20, 100
Data Type	Long Integer

7.2　ALLOT_NAME

Geodatabase Name	ALLOT_NAME
BLM Structured Name	Grazing_Alloment_Name
Inheritance	Inherited from BLM National GRA - Grazing (Allotments and Pastures)
Alias Name	Allotment
Feature Class Use/Entity Table	MIM_PT
Definition	The name by which the allotment is commonly known where the DMA occurs.
Required/Optional	Optional
Domain (Valid Values)	No domain. Examples: West Fork, ANDORNO
Data Type	String (50)

7.3   ALTRTN_MOE

Geodatabase Name	ALTRTN_MOE
BLM Structured Name	Alteration_Margin_Error_Number
Inheritance	Not Inherited
Alias Name	Alteration Margin of Error
Feature Class Use/Entity Table	MIM_PT
Definition	The desired precision level for streambank alteration samples expressed as half of the maximum acceptable confidence interval width. The default value for this field is 0.5.
Required/Optional	Required
Domain (Valid Values)	No domain. Examples: 0.5, 0.06,
Data Type	Double

7.4   ASMNT_DT

Geodatabase Name	ASMNT_DT
BLM Structured Name	Assessment_Date
Inheritance	Not Inherited
Alias Name	Date
Feature Class Use/Entity Table	MIM_PT
Definition	Date the MIM protocol was completed.
Required/Optional	Required
Domain (Valid Values)	No domain. Examples: 7/10/2000, 10/1/2022
Data Type	Date

7.5   BNKFL_WT

Geodatabase Name	BNKFL_WT
BLM Structured Name	Bankfull_Width_Meters_Measure
Inheritance	Not Inherited
Alias Name	Bankfull Width (m)
Feature Class Use/Entity Table	MIM_DMA_TBL
Definition	The horizontal distance in meters across a stream channel measured at bankfull stage. "Bankfull is the stage at which water completely fills the channel and begins to flow onto the floodplain" (Burton et al., 2018, p. 16).
Required/Optional	Optional
Domain (Valid Values)	No domain. Examples: 11.3, 6.1
Data Type	Double

7.6   BLM_ORG_CD

Geodatabase Name	BLM_ORG_CD
BLM Structured Name	Administrative_Unit_Organization_Code
Inheritance	Inherited from entity Administrative Units
Alias Name	BLM Org Code
Feature Class Use/Entity Table	MIM_PT
Definition	A combination of the BLM administrative state and field office which has administrative responsibility for the spatial entity. This includes which office covers the entity for planning purposes and which office is the lead for GIS edits. Another agency or individual may have the physical management responsibility for the on-the-ground entity. This field applies particularly when a spatial entity crosses resource area or district boundaries and the administrative responsibility is assigned to one or the other rather than splitting the spatial unit. Similarly, BLM OR/WA may have administrative responsibility over some area that is physically located in Nevada, Idaho, and California and vice versa. When appropriate, the office can be identified only to the district or state level rather than to the resource area level.
Required/Optional	Required This field is not required on the mobile device. However, the field must be filled in the office out prior to submitting the data to the corporate dataset.
Domain (Valid Values)	dom_BLM_ORG_CD
Data Type	String (5)

7.7   CNFDNCE_LVL

Geodatabase Name	CNFDNCE_LVL
BLM Structured Name	Confidence_Level_Number
Inheritance	Not Inherited
Alias Name	Confidence Level
Feature Class Use/Entity Table	MIM_PT
Definition	The level of precision used to derive the appropriate sample size. The default value for this field is 0.95.
Required/Optional	Required
Domain (Valid Values)	No domain. Examples: 0.95, 0.90, 0.85
Data Type	Double

7.8   COMMENTS

Geodatabase Name	COMMENTS
BLM Structured Name	Comments_Text
Inheritance	Not Inherited

Alias Name	Comments
Feature Class Use/Entity Table	MIM_PT, MIM_PLOT_CMTS_TBL, MIM_SUBSTRATE_TBL
Definition	Additional information about the DMA, plot, or substrate record.
Required/Optional	This field is optional in the Substrate table and required in the MIM Points feature class and Plot Comments table.
Domain (Valid Values)	No domain.
Data Type	String (2000)

7.9   COORD_SRC_TYPE

Geodatabase Name	COORD_SRC_TYPE
BLM Structured Name	Coordinate_Source_Type_Code
Inheritance	Inherited from BLM National Feature Level Metadata
Alias Name	Coord Source
Feature Class Use/Entity Table	MIM_PT
Definition	The name that identifies the general category for the origin of the location coordinate, representing a compilation of the state adopted codes. The domain contains those values that would most likely be used in the determination of source codes for the dataset.
Required/Optional	Optional
Domain (Valid Values)	DOM_COORD_SOURCE_TYPE
Data Type	String (5)

7.10   CREATE_BY

Geodatabase Name	CREATE_BY
BLM Structured Name	Record_Created_By_Text
Inheritance	Not Inherited
Alias Name	Created By
Feature Class Use/Entity Table	All feature classes and tables
Definition	The BLM login ID of the person who entered the data. The default value for this field is UNK. This field is auto populated during editing.
Required/Optional	Optional
Domain (Valid Values)	No domain. Examples: jdoe, msmith
Data Type	String (30)

7.11 CREATE_DATE

Geodatabase Name	CREATE_DATE
BLM Structured Name	Record_Created_Date
Inheritance	Not Inherited
Alias Name	Created Date
Feature Class Use/Entity Table	All feature classes and tables
Definition	The date the record was entered. The default value for this field is 9/9/9999. This field is auto populated during editing.
Required/Optional	Optional
Domain (Valid Values)	No domain. Examples: 1/5/1999, 10/15/2021
Data Type	Date

7.12 DMA_CRIT

Geodatabase Name	DMA_CRIT
BLM Structured Name	Designated_Management_Area_Critical_Reach_Code
Inheritance	Not Inherited
Alias Name	Is DMA Critical Reach
Feature Class Use/Entity Table	MIM_PT
Definition	Indicates if the DMA is critical. A critical DMA is "a reach that is not representative of a larger area but is important enough that specific information is needed at that particular site" (Burton et al., 2011, p. 8).
Required/Optional	Required
Domain (Valid Values)	dom_YN
Data Type	String (2)

7.13 DMA_GUID

Geodatabase Name	DMA_GUID
BLM Structured Name	Designated_Management_Area_Unique_Identifier
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MIM_DMA_TBL, MIM_DMA_SS_TBL, MIM_DMA_GC_TBL, MIM_DMA_SH_TBL, MIM_DMA_WSACL_TBL, MIM_DMA_WSU_TBL
Definition	Unique identifier for the DMA table. Used as a linking field to tables related to the DMA table.
Required/Optional	Required
Domain (Valid Values)	No domain. Example: {6B29FC40-CA47-1067-B31D-00DD010662DA}

Data Type	GUID

7.14 DMA_ID

Geodatabase Name	DMA_ID
BLM Structured Name	Designated_Monitoring_Area_Identifier
Inheritance	Not Inherited
Alias Name	DMA ID
Feature Class Use/Entity Table	MIM_PT
Definition	An identifier for the designated management area. It should be unique to the district or field office. Each district or field office may develop their own convention for format and content.
Required/Optional	Required
Domain (Valid Values)	No domain. Examples: 10847_R_02, AR10
Data Type	String (60)

7.15 DMA_ID2

Geodatabase Name	DMA_ID
BLM Structured Name	Second_Designated_Monitoring_Area_Identifier
Inheritance	Not Inherited
Alias Name	DMA ID 2
Feature Class Use/Entity Table	MIM_PT
Definition	A second designated management area identifier used to contain an alternate identifier.
Required/Optional	Optional
Domain (Valid Values)	No domain. Examples: Rock Island_02, mineral hill cow pond
Data Type	String (60)

7.16 DMA_NM

Geodatabase Name	DMA_NM
BLM Structured Name	Designated_Management_Area_Name
Inheritance	Not Inherited
Alias Name	DMA Name
Feature Class Use/Entity Table	MIM_PT
Definition	Name or description of the designated management area.
Required/Optional	Optional

Domain (Valid Values)	No domain. Examples: Mills Cyn Trib 2, 2608 Rattray, Lower Pete Enyart 09
Data Type	String (100)

7.17 DMA_REF

Geodatabase Name	DMA_REF
BLM Structured Name	Designated_Management_Area_Reference_Reach_Code
Inheritance	Not Inherited
Alias Name	Is DMA Reference Reach
Feature Class Use/Entity Table	MIM_PT
Definition	Indicates if the DMA is a reference reach. A reference DMA is "a reach chosen to obtain reference data useful for identifying potential condition and for establishing initial desired condition objectives for a similar riparian complex" (Burton et al., 2011, p. 9).
Required/Optional	Required
Domain (Valid Values)	dom_YN
Data Type	String (2)

7.18 DMA_REP_1

Geodatabase Name	DMA_REP_1
BLM Structured Name	First_Criteria_Representative_Designated_Management_Area_Code
Inheritance	Not Inherited
Alias Name	1. Riparian complex selected by ID Team
Feature Class Use/Entity Table	MIM_PT
Definition	The first question for determining if the monitoring site is representative of a larger area. This field indicates if "the riparian complex for the DMA was selected by an experienced interdisciplinary team." (Burton et al., 2011, p. 7)
Required/Optional	Required
Domain (Valid Values)	dom_YN_NA
Data Type	String (2)

7.19 DMA_REP_2

Geodatabase Name	DMA_REP_2
BLM Structured Name	Second_Criteria_Representative_Designated_Management_Area_Code
Inheritance	Not Inherited
Alias Name	2. DMA Represents and is accessible to management activity
Feature Class Use/Entity Table	MIM_PT

Definition	The second question for determining if the monitoring site is representative of a larger area. This field indicates if "the DMA is located in a complex that represents and is accessible to the management activities of interest." (Burton et al., 2011, p. 7)
Required/Optional	Required
Domain (Valid Values)	dom_YN_NA
Data Type	String (2)

7.20 DMA_REP_3

Geodatabase Name	DMA_REP_3
BLM Structured Name	Third_Criteria_Representative_Designated_Management_Area_Code
Inheritance	Not Inherited
Alias Name	3. DMA Randomly located in the riparian complex most sensitive to management
Feature Class Use/Entity Table	MIM_PT
Definition	The third question for determining if the monitoring site is representative of a larger area. This field indicates if "the DMA is randomly located in the riparian complex that is the most sensitive to the management activities of interest." (Burton et al., 2011, p. 7)
Required/Optional	Required
Domain (Valid Values)	dom_YN_NA
Data Type	String (2)

7.21 DMA_REP_4

Geodatabase Name	DMA_REP_4
BLM Structured Name	Fourth_Criteria_Representative_Designated_Management_Area_Code
Inheritance	Not Inherited
Alias Name	4. DMA sensitive to disturbance (not armored)
Feature Class Use/Entity Table	MIM_PT
Definition	The fourth question for determining if the monitoring site is representative of a larger area. This field indicates if "the DMA is located on a site that is sensitive to disturbance and is not located on reaches impervious to disturbance." (Burton et al., 2011, p. 8)
Required/Optional	Required
Domain (Valid Values)	dom_YN_NA
Data Type	String (2)

7.22 DMA_REP_5

Geodatabase Name	DMA_REP_5
BLM Structured Name	Fifth_Criteria_Representative_Designated_Management_Area_Code
Inheritance	Not Inherited
Alias Name	5. Will DMA respond to management
Feature Class Use/Entity Table	MIM_PT
Definition	The fifth question for determining if the monitoring site is representative of a larger area. This field indicates if the "site has the potential to respond to and demonstrate measurable trends in condition resulting from changes in grazing management or other activities influencing stream channels and riparian vegetation." (Burton et al., 2011, p. 8)
Required/Optional	Required
Domain (Valid Values)	dom_YN_NA
Data Type	String (2)

7.23 DMA_REP_6

Geodatabase Name	DMA_REP_6
BLM Structured Name	Sixth_Criteria_Representative_Designated_Management_Area_Code
Inheritance	Not Inherited
Alias Name	6. If stream over 4% gradient, does it have a well-developed floodplain
Feature Class Use/Entity Table	MIM_PT
Definition	The sixth question for determining if the monitoring site is representative of a larger area. This field indicates if "the gradient of the stream reach at the DMA is generally less than 4 percent. The gradient may exceed 4 percent if the reach has a distinctly developed floodplain and the riparian vegetation heavily influences channel stability" (Burton et al., 2011, p. 8)
Required/Optional	Required
Domain (Valid Values)	dom_YN_NA
Data Type	String (2)

7.24 DMA_REP_7

Geodatabase Name	DMA_REP_7
BLM Structured Name	Seventh_Criteria_Representative_Designated_Management_Area_Code
Inheritance	Not Inherited
Alias Name	7. Is DMA located outside of livestock concentration area
Feature Class Use/Entity Table	MIM_PT
Definition	The seventh question for determining if the monitoring site is a representative of a larger area. This field indicates if "the DMA is located outside of a livestock concentration area." (Burton et al., 2011, p. 8)

Required/Optional	Required
Domain (Valid Values)	dom_YN_NA
Data Type	String (2)

7.25 DMA_REP_8

Geodatabase Name	DMA_REP_8
BLM Structured Name	Eighth_Criteria_Representative_Designated_Management_Area_Code
Inheritance	Not Inherited
Alias Name	8. Is DMA free from influence of compounding activities
Feature Class Use/Entity Table	MIM_PT
Definition	The eighth question for determining if the monitoring site is representative of a larger area. This field indicates if "the DMA is free from the influence of compounding activities. DMAs should not be in areas compounded by activities that make it difficult to establish cause-and-effect relationships." (Burton et al., 2011, p. 8)
Required/Optional	Required
Domain (Valid Values)	dom_YN_NA
Data Type	String (2)

7.26 DWN_LAT

Geodatabase Name	DWN_LAT
BLM Structured Name	Downstream_Marker_Latitude_Coordinate_Number
Inheritance	Not Inherited
Alias Name	Downstream Marker Latitude
Feature Class Use/Entity Table	MIM_PT
Definition	Latitudinal planar component of point location on the earth's surface for the lower end of the sample reach. Recorded in decimal degrees.
Required/Optional	Required This field is not required on the mobile device. However, the field must be filled in the office out prior to submitting the data to the corporate dataset.
Domain (Valid Values)	No domain. Examples: 44.052071, 46.877186
Data Type	Double

7.27 DWN_LONG

Geodatabase Name	DWN_LONG
BLM Structured Name	Downstream_Marker_Longitude_Coordinate_Number
Inheritance	Not Inherited

Alias Name	Downstream Marker Longitude
Feature Class Use/Entity Table	MIM_PT
Definition	Longitudinal planar component of point location on the earth's surface for the lower end of the sample reach. Recorded in decimal degrees.
Required/Optional	Required This field is not required on the mobile device. However, the field must be filled in the office out prior to submitting the data to the corporate dataset.
Domain (Valid Values)	No domain. Examples: -123.086754, -96.789803
Data Type	Double

7.28   GC_COMP_PCT

Geodatabase Name	GC_COMP_PCT
BLM Structured Name	Greenline_Composition_Percent_Number
Inheritance	Not Inherited
Alias Name	Greenline Composition %
Feature Class Use/Entity Table	MIM_DMA_GC_TBL
Definition	The relative amount of foliar cover for the identified species in the sample area. Embedded rock and anchored wood are included in the relative amounts. The total amounts for all species all species at the sample area must not exceed 100 percent. Enter a -1 if values should not be used in calculations.
Required/Optional	Required
Domain (Valid Values)	dom_PCT100_Neg
Data Type	Short Integer

7.29   GC_SPCS

Geodatabase Name	GC_SPCS
BLM Structured Name	Greenline_Composition_Species_Code
Inheritance	Inherited from USDA Plants
Alias Name	Greenline Composition Species Rock/Wood
Feature Class Use/Entity Table	MIM_DMA_GC_TBL
Definition	The USDA plant symbol for the greenline composition species recorded at the plot. "The greenline can also be composed partially or entirely of embedded rock and/or anchored wood" (Burton et al., 2011, p. 39), therefore domains include codes for embedded rock (RK) and anchored wood (WD). The plant region (PLNT_RGN) subtype value selected, determines the domain used by this field. Many species can be recorded at the plot by entering multiple records in the MIM_DMA_WSU_TBL table. When PLT_RGN equals: 1 (AW - Arid West), then the domain is: dom_MIM_SPCS_WDY_AW

	2 (GP - Great Plains), then the domain is: dom_MIM_SPCS_WDY_GP
	3 (WM - Western Mountains), then the domain is: dom_MIM_SPCS_WDY_WM
Required/Optional	Required
Domain (Valid Values)	dom_MIM_SPCS_WDY_AW dom_MIM_SPCS_WDY_GP dom_MIM_SPCS_WDY_WM
Data Type	String (10)

7.30 GGW_MOE

Geodatabase Name	GGW_MOE
BLM Structured Name	Greenline_to_Greenline_Margin_Error_Number
Inheritance	Not Inherited
Alias Name	GGW Margin of Error
Feature Class Use/Entity Table	MIM_PT
Definition	The desired precision level for greenline-to-greenline width samples expressed as half of the maximum acceptable confidence interval width. The default value for this field is 0.1.
Required/Optional	Required
Domain (Valid Values)	No domain. Examples: 0.1, 0.32
Data Type	Double

7.31 GGW_WT

Geodatabase Name	GGW_WT
BLM Structured Name	Greenline_to_Greenline_Width_Measure
Inheritance	Not Inherited
Alias Name	Greenline-to-Greenline Width (m)
Feature Class Use/Entity Table	MIM_DMA_TBL
Definition	"The non-vegetated width of a stream channel measured from the greenline on one side of the channel perpendicular to the streamflow to the greenline on the opposite side" (Burton et al., 2011, p. 146). Values are recorded in meters.
Required/Optional	Optional
Domain (Valid Values)	No domain. Examples: 11.1, 16
Data Type	Double

7.32   GGW_WT_SS

Geodatabase Name	GGW_WT_SS
BLM Structured Name	Greenline_to_Greenline_Width_Sample_Size_Number
Inheritance	Not Inherited
Alias Name	GGW Width Sample Size
Feature Class Use/Entity Table	MIM_DMA_SS_TBL

Definition	The estimated greenline to greenline width sample size needed to predict the mean for various levels of confidence and precision.
	The formula to calculate this value is:
	$(a^2 * b^2) / (c^2)$
	Where:
	    If the Confidence Level (CNFDNCE_LVL) =
	        0.8, then a = 1.28
	        0.85, then a = 1.49
	        0.9, then a = 1.64
	        0.95, then a = 1.96
	        0.99, then a = 2.58
	b = Standard Deviation of all Greenline-to-Greenline Width (GGW_WT) values related to the DMA record.
	c = Average of all Greenline-to-Greenline Width (GGW_WT) values related to the DMA record multiplied by the Greenline-to-Greenline Margin of Error (GGW_MOE).
	^{2} = Raised to the 2nd power

Required/Optional	Optional
Domain (Valid Values)	No domain. Examples: 25, 107
Data Type	Short Integer

7.33   GLOBALID

Geodatabase Name	GLOBALID
BLM Structured Name	Global_Unique_Identifier
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	All feature classes and tables
Definition	An alpha-numeric code that services as the universal and unique identifier for each feature within the feature class or table of a geodatabase. Software generated value. A field of type UUID (Universal Unique Identifier) in which values are automatically assigned by the geodatabase when a row is created. This field is not editable and is automatically populated when it is added for existing data.
Required/Optional	Required
Domain (Valid Values)	No domain. Example: {6B29FC40-CA47-1067-B31D-00DD010662DA}

Data Type	GUID

7.34 GRVLMTR

Geodatabase Name	GRVLMTR
BLM Structured Name	Gravelometer_Used_Code
Inheritance	Not Inherited
Alias Name	Gravelometer Used
Feature Class Use/Entity Table	MIM_SUBSTRATE_TBL
Definition	Indicates if a gravelometer was used to sort particles during substrate sampling.
Required/Optional	Required
Domain (Valid Values)	dom_YN
Data Type	String (1)

7.35 HUC_12

Geodatabase Name	HUC_12
BLM Structured Name	Hydrologic_Unit_Code_12_Code
Inheritance	Inherited from USGS Hydrologic Unit Codes
Alias Name	HUC 12
Feature Class Use/Entity Table	MIM_PT
Definition	12-digit Hydrologic Unit Code (HUC) used to identify a sub-watershed hydrologic area. This is also known as a 6th field watershed and appears on the MIM spreadsheet as "6th Field HUC."
Required/Optional	Required This field is not required on the mobile device. However, the field must be filled in the office out prior to submitting the data to the corporate dataset.
Domain (Valid Values)	No domain. Examples: 180101010502, 170702030106
Data Type	String (12)

7.36 HWP_AGCLS_PRSNT

Geodatabase Name	HWP_AGCLS_PRSNT
BLM Structured Name	Hydric_Woody_Plants_Age_Classes_Present_Code
Inheritance	Not Inherited
Alias Name	Are all age classes of hydric woody plants present
Feature Class Use/Entity Table	MIM_PT
Definition	Indicates if all age classes of hydric woody plants are present at the site. If there are seedlings, young, and mature (S, Y, M) hydric woody plants present

	along the DMA, this would be yes. If one of these three age-classes is absent (or nearly absent) it would be no. See Appendix B Additional Information on Woody Plants Questions for expanded information on this topic.
Required/Optional	Required This field is not required on the mobile device. However, the field must be filled in the office out prior to submitting the data to the corporate dataset.
Domain (Valid Values)	dom_YN_NA
Data Type	String (2)

7.37   HWP_PRSNT

Geodatabase Name	HWP_PRSNT
BLM Structured Name	Hydric_Woody_Plants_Present_Code
Inheritance	Not Inherited
Alias Name	Are there any hydric woody plants present
Feature Class Use/Entity Table	MIM_PT
Definition	Indicates if hydric woody wetland plants are present at the site. If <u>any</u> hydric woody plants are present on the DMA, this would be yes. If none exist, it would be no. See Appendix B Additional Information on Woody Plants Questions for expanded information on this topic.
Required/Optional	Required This field is not required on the mobile device. However, the field must be filled in the office out prior to submitting the data to the corporate dataset.
Domain (Valid Values)	dom_YN_NA
Data Type	String (2)

7.38   HWP

Geodatabase Name	HWP
BLM Structured Name	Hydric_Woody_Plants_Code
Inheritance	Not Inherited
Alias Name	Are hydric woody plants supposed to be present
Feature Class Use/Entity Table	MIM_PT
Definition	Indicates if woody wetland plants should be present at the site. If the stream at the DMA has a gradient over 0.5% and has water forces adequate to periodically cut banks and deposit bars, it likely should support a hydric woody component and would be yes. If the gradient is less than 0.5% and depositional features are absent, it would be no. Groundwater near the surface can also limit the establishment of woody species and should also be considered. See Appendix B Additional Information on Woody Plants Questions for expanded information on this topic.
Required/Optional	Required

	This field is not required on the mobile device. However, the field must be filled in the office out prior to submitting the data to the corporate dataset.
Domain (Valid Values)	dom_YN_NA
Data Type	String (2)

7.39 MEAS_DIST

Geodatabase Name	MEAS_DIST
BLM Structured Name	Measure_Distance_Number
Inheritance	Not Inherited
Alias Name	Distance (meters)
Feature Class Use/Entity Table	MIM_THALWEG_TBL
Definition	The distance from the last measurement recorded in meters.
Required/Optional	Required
Domain (Valid Values)	No domain. Examples: 5, 10.5
Data Type	Double

7.40 MEAS_NR

Geodatabase Name	MEAS_NR
BLM Structured Name	Measure_Number
Inheritance	Not Inherited
Alias Name	Measure #
Feature Class Use/Entity Table	MIM_THALWEG_TBL
Definition	The thalweg measurement number for the record. This number is used to maintain the order of the thalweg measurements.
Required/Optional	Required
Domain (Valid Values)	No domain. Examples: 1, 3, 20
Data Type	Short Integer

7.41 MIM_GUID

Geodatabase Name	MIM_GUID
BLM Structured Name	Multiple_Indicator_Monitoring_Global_Unique_Identifier
Inheritance	Not Inherited
Alias Name	None
Feature Class Use/Entity Table	MIM_PT, MIM_DMA_TBL
Definition	Unique identifier for the MIM_PT feature class. Used as a linking field between MIM_PT and related tables.

Required/Optional	Required
Domain (Valid Values)	No domain. Example: {6B29FC40-CA47-1067-B31D-00DD010662DA}
Data Type	GUID

7.42 MODIFY_BY

Geodatabase Name	MODIFY_BY
BLM Structured Name	Record_Last_Modified_By_Text
Inheritance	Not Inherited
Alias Name	Modified By
Feature Class Use/Entity Table	All feature classes and tables
Definition	The BLM login ID of the person who last edited the data. The default value for this field is UNK. This field is auto populated during editing.
Required/Optional	Optional
Domain (Valid Values)	No domain. Examples: jdoe, msmith
Data Type	String (30)

7.43 MODIFY_DATE

Geodatabase Name	MODIFY_DATE
BLM Structured Name	Record_Last_Modified_Date
Inheritance	Not Inherited
Alias Name	Modified Date
Feature Class Use/Entity Table	All feature classes and tables
Definition	The date the record was last edited. The default value for this field is 9/9/9999. This field is auto populated during editing.
Required/Optional	Optional
Domain (Valid Values)	No domain. Examples: 1/5/1999, 10/15/2021
Data Type	Date

7.44 OBSRVR

Geodatabase Name	OBSRVR
BLM Structured Name	Observer_Name
Inheritance	Not Inherited
Alias Name	Observer(s)
Feature Class Use/Entity Table	MIM_PT
Definition	The name of the person who conducted the MIM protocol.

Required/Optional	Required
Domain (Valid Values)	No domain. Examples: Joe Smith, Jane Doe
Data Type	String (100)

7.45   PAST_NAME

Geodatabase Name	PAST_NAME
BLM Structured Name	Grazing_Allotment_Pasture_Name
Inheritance	Inherited from BLM National GRA - Grazing (Allotments and Pastures)
Alias Name	Pasture Name
Feature Class Use/Entity Table	MIM_PT
Definition	The name of the specific pasture within a grazing allotment where the DMA occurs.
Required/Optional	Optional
Domain (Valid Values)	No domain. Examples: GRANDE RONDE RM39, POWDER RIVER CANYON
Data Type	String (50)

7.46   PBLE_DMTR_1

Geodatabase Name	PBLE_DMTR_1
BLM Structured Name	Pebble_1_Diameter_Number
Inheritance	Not Inherited
Alias Name	Pebble 1 Diameter (mm)
Feature Class Use/Entity Table	MIM_SUBSTRATE_TBL
Definition	At each transect, 10 pebbles are collected, and the diameter is measured. This field records the size of the 1st pebble measured. Allowable values are between 1 and 4096 millimeters.
Required/Optional	Required
Domain (Valid Values)	dom_MIM_PBL_DMTR
Data Type	Short Integer

7.47   PBLE_DMTR_10

Geodatabase Name	PBLE_DMTR_10
BLM Structured Name	Pebble_10_Diameter_Number
Inheritance	Not Inherited
Alias Name	Pebble 10 Diameter (mm)
Feature Class Use/Entity Table	MIM_SUBSTRATE_TBL

Definition	At each transect, 10 pebbles are collected, and the diameter is measured. This field records the size of the 10th pebble measured. Allowable values are between 1 and 4096 millimeters.
Required/Optional	Required
Domain (Valid Values)	dom_MIM_PBL_DMTR
Data Type	Short Integer

7.48 PBLE_DMTR_2

Geodatabase Name	PBLE_DMTR_2
BLM Structured Name	Pebble_2_Diameter_Number
Inheritance	Not Inherited
Alias Name	Pebble 2 Diameter (mm)
Feature Class Use/Entity Table	MIM_SUBSTRATE_TBL
Definition	At each transect, 10 pebbles are collected, and the diameter is measured. This field records the size of the 2nd pebble measured. Allowable values are between 1 and 4096 millimeters.
Required/Optional	Required
Domain (Valid Values)	dom_MIM_PBL_DMTR
Data Type	Short Integer

7.49 PBLE_DMTR_3

Geodatabase Name	PBLE_DMTR_3
BLM Structured Name	Pebble_3_Diameter_Number
Inheritance	Not Inherited
Alias Name	Pebble 3 Diameter (mm)
Feature Class Use/Entity Table	MIM_SUBSTRATE_TBL
Definition	At each transect, 10 pebbles are collected, and the diameter is measured. This field records the size of the 3rd pebble measured. Allowable values are between 1 and 4096 millimeters.
Required/Optional	Required
Domain (Valid Values)	dom_MIM_PBL_DMTR
Data Type	Short Integer

7.50 PBLE_DMTR_4

Geodatabase Name	PBLE_DMTR_4
BLM Structured Name	Pebble_4_Diameter_Number
Inheritance	Not Inherited

Alias Name	Pebble 4 Diameter (mm)
Feature Class Use/Entity Table	MIM_SUBSTRATE_TBL
Definition	At each transect, 10 pebbles are collected, and the diameter is measured. This field records the size of the 4th pebble measured. Allowable values are between 1 and 4096 millimeters.
Required/Optional	Required
Domain (Valid Values)	dom_MIM_PBL_DMTR
Data Type	Short Integer

7.51   PBLE_DMTR_5

Geodatabase Name	PBLE_DMTR_5
BLM Structured Name	Pebble_5_Diameter_Number
Inheritance	Not Inherited
Alias Name	Pebble 5 Diameter (mm)
Feature Class Use/Entity Table	MIM_SUBSTRATE_TBL
Definition	At each transect, 10 pebbles are collected, and the diameter is measured. This field records the size of the 5th pebble measured. Allowable values are between 1 and 4096 millimeters.
Required/Optional	Required
Domain (Valid Values)	dom_MIM_PBL_DMTR
Data Type	Short Integer

7.52   PBLE_DMTR_6

Geodatabase Name	PBLE_DMTR_6
BLM Structured Name	Pebble_6_Diameter_Number
Inheritance	Not Inherited
Alias Name	Pebble 6 Diameter (mm)
Feature Class Use/Entity Table	MIM_SUBSTRATE_TBL
Definition	At each transect, 10 pebbles are collected, and the diameter is measured. This field records the size of the 6th pebble measured. Allowable values are between 1 and 4096 millimeters.
Required/Optional	Required
Domain (Valid Values)	dom_MIM_PBL_DMTR
Data Type	Short Integer

7.53   PBLE_DMTR_7

Geodatabase Name	PBLE_DMTR_7
BLM Structured Name	Pebble_7_Diameter_Number
Inheritance	Not Inherited
Alias Name	Pebble 7 Diameter (mm)
Feature Class Use/Entity Table	MIM_SUBSTRATE_TBL
Definition	At each transect, 10 pebbles are collected, and the diameter is measured. This field records the size of the 7th pebble measured. Allowable values are between 1 and 4096 millimeters.
Required/Optional	Required
Domain (Valid Values)	dom_MIM_PBL_DMTR
Data Type	Short Integer

7.54   PBLE_DMTR_8

Geodatabase Name	PBLE_DMTR_8
BLM Structured Name	Pebble_8_Diameter_Number
Inheritance	Not Inherited
Alias Name	Pebble 8 Diameter (mm)
Feature Class Use/Entity Table	MIM_SUBSTRATE_TBL
Definition	At each transect, 10 pebbles are collected, and the diameter is measured. This field records the size of the 8th pebble measured. Allowable values are between 1 and 4096 millimeters.
Required/Optional	Required
Domain (Valid Values)	dom_MIM_PBL_DMTR
Data Type	Short Integer

7.55   PBLE_DMTR_9

Geodatabase Name	PBLE_DMTR_9
BLM Structured Name	Pebble_9_Diameter_Number
Inheritance	Not Inherited
Alias Name	Pebble 9 Diameter (mm)
Feature Class Use/Entity Table	MIM_SUBSTRATE_TBL
Definition	At each transect, 10 pebbles are collected, and the diameter is measured. This field records the size of the 9th pebble measured. Allowable values are between 1 and 4096 millimeters.
Required/Optional	Required
Domain (Valid Values)	dom_MIM_PBL_DMTR

Data Type	Short Integer

7.56 PHOTO_LWR_ACRS

Geodatabase Name	PHOTO_LWR_ACRS
BLM Structured Name	Photo_Lower_Across_File_Name_Text
Inheritance	Not Inherited
Alias Name	Photo Lower Across
Feature Class Use/Entity Table	MIM_PT
Definition	Computer storage location for a photo file (e.g., jpg). This field records the photo taken across the stream from the lower marker. The value in this field serves as a hyperlink to that location and the file it opens.
Required/Optional	Required This field is not required on the mobile device. However, the field must be filled in the office out prior to submitting the data to the corporate dataset.
Domain (Valid Values)	No domain
Data Type	String (150)

7.57 PHOTO_LWR_UP

Geodatabase Name	PHOTO_LWR_UP
BLM Structured Name	Photo_Lower_Upstream_File_Name_Text
Inheritance	Not Inherited
Alias Name	Photo Lower Upstream
Feature Class Use/Entity Table	MIM_PT
Definition	Computer storage location for a photo file (e.g., jpg). This field records the photo taken from the lower marker looking upstream. The value in this field serves as a hyperlink to that location and the file it opens.
Required/Optional	Required This field is not required on the mobile device. However, the field must be filled in the office out prior to submitting the data to the corporate dataset.
Domain (Valid Values)	No domain
Data Type	String (150)

7.58 PHOTO_OVRVW

Geodatabase Name	PHOTO_OVRVW
BLM Structured Name	Photo_Overview_File_Name_Text
Inheritance	Not Inherited
Alias Name	Photo Overview

Feature Class Use/Entity Table	MIM_PT
Definition	Computer storage location for a photo file (e.g., jpg). This field records the file name of the overview photo taken of the designated management area. The value in this field serves as a hyperlink to that location and the file it opens.
Required/Optional	Optional
Domain (Valid Values)	No domain
Data Type	String (150)

7.59 PHOTO_UPR_ACRS

Geodatabase Name	PHOTO_UPR_ACRS
BLM Structured Name	Photo_Upper_Across_File_Name_Text
Inheritance	Not Inherited
Alias Name	Photo Upper Across
Feature Class Use/Entity Table	MIM_PT
Definition	Computer storage location for a photo file (e.g., jpg). This field records the photo taken across the stream from the upper marker. The value in this field serves as a hyperlink to that location and the file it opens.
Required/Optional	Required This field is not required on the mobile device. However, the field must be filled in the office out prior to submitting the data to the corporate dataset.
Domain (Valid Values)	No domain
Data Type	String (150)

7.60 PHOTO_UPR_DWN

Geodatabase Name	PHOTO_UPR_DWN
BLM Structured Name	Photo_Upper_Downstream_File_Name_Text
Inheritance	Not Inherited
Alias Name	Photo Upper Downstream
Feature Class Use/Entity Table	MIM_PT
Definition	Computer storage location for a photo file (e.g., jpg). This field records the photo taken downstream from the upstream marker. The value in this field serves as a hyperlink to that location and the file it opens.
Required/Optional	Required This field is not required on the mobile device. However, the field must be filled in the office out prior to submitting the data to the corporate dataset.
Domain (Valid Values)	No domain
Data Type	String (150)

7.61   PLNT_RGN

Geodatabase Name	PLNT_RGN
BLM Structured Name	Plant_Region_Code
Inheritance	Not Inherited
Alias Name	Plant Region
Feature Class Use/Entity Table	MIM_PT, MIM_DMA_GC_TBL, MIM_DMA_SH_TBL, MIM_DMA_WSACL_TBL
Definition	The US Army Corps of Engineers wetlands region code for the area where the data collection occurs. For more information on wetland regions, see: https://wetland-plants.sec.usace.army.mil/nwpl_static/v34/home/home.html. This field is defined a short integer because it is being used as a Geodatabase Subtype to control the species lists that appear in many of the MIM tables. The value selected determines the species lists available for data entry at the site. For more information about subtypes, see: https://www.esri.com/news/arcuser/0400/files/subtypes.pdf.
Required/Optional	Required
Domain (Valid Values)	dom_MIM_PLNT_RGN
Data Type	Short Integer

7.62   PLOT_NR

Geodatabase Name	PLOT_NR
BLM Structured Name	Plot_Number
Inheritance	Not Inherited
Alias Name	Plot #
Feature Class Use/Entity Table	MIM_DMA_TBL, MIM_DMA_GC_TBL, MIM_DMA_SH_TBL, MIM_DMA_WSACL_TBL, MIM_SUBSTRATE_TBL, MIM_PLOT_CMTS_TBL
Definition	A plot is a location where data is collected. Plots are separated from each other by the sampling interval. The plot number is an identifying number for the location within the designated monitoring area.
Required/Optional	Required
Domain (Valid Values)	No domain. Examples: 1, 3, 11
Data Type	Short Integer

7.63   PLOT_SPCNG

Geodatabase Name	PLOT_SPCNG
BLM Structured Name	Plot_Spacing_Number
Inheritance	Not Inherited
Alias Name	Plot Spacing (m)

Feature Class Use/Entity Table	MIM_PT
Definition	The sample interval between plots, recorded in meters. The typical distance between sample plots is 2.5 to 2.75 meters. The default value for this field is 2.5.
Required/Optional	Required
Domain (Valid Values)	No domain. Examples: 2.5, 2.75
Data Type	Double

7.64   PROTOCOL

Geodatabase Name	PROTOCOL
BLM Structured Name	MIM_Protocol_Code
Inheritance	Not Inherited
Alias Name	Protocol
Feature Class Use/Entity Table	MIM_PT
Definition	The version of the BLM technical reference that was used to collect the data. The default value for this field is: "BLM TR 1737 23 2011".
Required/Optional	Required
Domain (Valid Values)	dom_MIM_PROTOCOL
Data Type	String (20)

7.65   REF_MRKR_LAT

Geodatabase Name	REF_MRKR_LAT
BLM Structured Name	Reference_Marker_Latitude_Coordinate_Number
Inheritance	Not Inherited
Alias Name	Reference Marker Latitude
Feature Class Use/Entity Table	MIM_PT
Definition	Latitudinal planar component of point location on the earth's surface for the DMA permanent reference marker. Used to relocate the DMA. Recorded in decimal degrees.
Required/Optional	Required This field is not required on the mobile device. However, the field must be filled in the office out prior to submitting the data to the corporate dataset.
Domain (Valid Values)	No domain. Examples: 44.052071, 46.877186
Data Type	Double

7.66   REF_MRKR_LONG

Geodatabase Name	REF_MRKR_LONG
BLM Structured Name	Reference_Marker_Longitude_Coordinate_Number
Inheritance	Not Inherited
Alias Name	Reference Marker Longitude
Feature Class Use/Entity Table	MIM_PT
Definition	Longitudinal planar component of point location on the earth's surface for the DMA permanent reference marker. Used to relocate the DMA. Recorded in decimal degrees.
Required/Optional	Required This field is not required on the mobile device. However, the field must be filled in the office out prior to submitting the data to the corporate dataset.
Domain (Valid Values)	No domain. Examples: -123.086754, -96.789803
Data Type	Double

7.67   RFL_OR_POOL

Geodatabase Name	RFL_OR_POOL
BLM Structured Name	Thalweg_Riffle_or_Pool_Code
Inheritance	Not Inherited
Alias Name	Riffle or Pool
Feature Class Use/Entity Table	MIM_THALWEG_TBL
Definition	Indicates if the measurement is being taken at a riffle crest (or pool tail) or pool bottoms (or maximum depth of pools). A pool is "a depression or deeper part of a stream channel that usually has slower moving water" and a riffle crest is "the point at the lower end of a pool where water flows to a riffle" (Burton et al., 2011, p. 146).
Required/Optional	Required
Domain (Valid Values)	dom_MIM_RFL_POOL
Data Type	String (1)

7.68   SBSTRTE_CLS

Geodatabase Name	SBSTRTE_CLS
BLM Structured Name	Substrate_Class_Code
Inheritance	Not Inherited
Alias Name	Substrate Class
Feature Class Use/Entity Table	MIM_PT
Definition	The dominant type of substrate for the streambed.

Required/Optional	Required
	This field is not required on the mobile device. However, the field must be filled in the office out prior to submitting the data to the corporate dataset.
Domain (Valid Values)	dom_MIM_SBSTRTE_CLS
Data Type	String (4)

7.69   SBSTRTE_MOE

Geodatabase Name	SBSTRTE_MOE
BLM Structured Name	Substrate_Margin_Error_Number
Inheritance	Not Inherited
Alias Name	Substrate Margin of Error
Feature Class Use/Entity Table	MIM_PT
Definition	The desired precision level for substrate samples expressed as half of the maximum acceptable confidence interval width.
	The default value for this field is 0.15.
Required/Optional	Required
Domain (Valid Values)	No domain. Examples: 0.15
Data Type	Double

7.70   SBSTRTE_CT

Geodatabase Name	SBSTRTE_CT
BLM Structured Name	Substrate_Pebble_Count_Number
Inheritance	Not Inherited
Alias Name	Substrate Pebble Count
Feature Class Use/Entity Table	MIM_PT
Definition	The total number of substrate pebble size measurements taken.
	This field is calculated by counting the number of values entered the Substrate Pebble Diameter (PBLE_DMTR_#1-10) fields for records in the MIM_SUBSTRATE_TBL related to the MIM_PT record.
Required/Optional	Optional
Domain (Valid Values)	No domain. Examples: 10, 100, 140
Data Type	Double

7.71   SBSTRTE_SS

Geodatabase Name	SBSTRTE_SS
BLM Structured Name	Substrate_Sample_Size_Number
Inheritance	Not Inherited

Alias Name	Substrate Sample Size
Feature Class Use/Entity Table	MIM_PT

Definition	The estimated substrate sample size needed to predict the mean for various levels of confidence and precision.
	
	The formula to calculate this value is:
	
	(a^2 * b^2) / (c^2)
	
	Where:
	
	      If the Confidence Level (CNFDNCE_LVL) =
	          0.8, then a = 1.28
	          0.85, then a = 1.49
	          0.9, then a = 1.64
	          0.95, then a = 1.96
	          0.99, then a = 2.58
	
	      b = Standard Deviation of all Pebble Diameter measurement (PBLE_DMTR_1-10) values related to the DMA record.
	
	      c = Average of all Pebble Diameter measurement (PBLE_DMTR_1-10) values related to the DMA record multiplied for the Substrate Margin of Error (SBSTRTE_MOE).

Required/Optional	Optional
Domain (Valid Values)	No domain. Examples: 74, 100, 229
Data Type	Double

7.72   SLOPE_CLS

Geodatabase Name	SLOPE_CLS
BLM Structured Name	Slope_Class_Code
Inheritance	Not Inherited
Alias Name	Slope Class
Feature Class Use/Entity Table	MIM_PT
Definition	Also known as gradient, this is the amount of vertical drop along the stream channel per unit of horizontal distance, expressed as a percentage.
Required/Optional	Required
Domain (Valid Values)	dom_MIM_SLOPE_CLS
Data Type	String (10)

7.73   STBLE_HGT

Geodatabase Name	STBLE_HGT
BLM Structured Name	Stubble_Height_Inches_Number
Inheritance	Not Inherited
Alias Name	Stubble Height (inches)

Feature Class Use/Entity Table	MIM_DMA_TBL
Definition	Records the stubble height of the identified species. "Stubble height is a measure of the residual height of key herbaceous vegetation species remaining after grazing" (Burton et al., 2011, p. 23). Values are recorded in inches. This field should be left blank (null) if the key species does not occur within the sampling quadrant.
Required/Optional	Optional
Domain (Valid Values)	No domain. Example: 5, 7
Data Type	Short Integer

7.74 STBLE_HGT_GRZD

Geodatabase Name	STBLE_HGT_GRZD
BLM Structured Name	Stubble_Height_Grazed_Code
Inheritance	Not Inherited
Alias Name	Stubble Height Grazed
Feature Class Use/Entity Table	MIM_DMA_SH_TBL
Definition	Records if the leaves of the plants for the identified species have been grazed by large animals.
Required/Optional	Required
Domain (Valid Values)	dom_YN
Data Type	String (1)

7.75 STBLE_HGT_MOE

Geodatabase Name	STBLE_HGT_MOE
BLM Structured Name	Stubble_Height_Margin_Error_Number
Inheritance	Not Inherited
Alias Name	Stubble Ht Margin of Error
Feature Class Use/Entity Table	MIM_PT
Definition	The desired precision level for stubble height samples expressed as half of the maximum acceptable confidence interval width. The default value for this field is 0.2.
Required/Optional	Required
Domain (Valid Values)	No domain. Examples: 0.2, 0.93
Data Type	Double

7.76   STBLE_HGT_SPCS

Geodatabase Name	STBLE_HGT_SPCS
BLM Structured Name	Stubble_Height_Species_Code
Inheritance	Not Inherited
Alias Name	Stubble Height Species
Feature Class Use/Entity Table	MIM_DMA_SH_TBL
Definition	The USDA plant symbol for the stubble height species recorded at the plot. The plant region (PLNT_RGN) subtype value selected, determines the domain used by this field. Many species can be recorded at the plot by entering multiple records in the MIM_DMA_SH_TBL table. When PLT_RGN equals: 1 (AW - Arid West), then the domain is: dom_MIM_SPCS_WDY_AW 2 (GP - Great Plains), then the domain is: dom_MIM_SPCS_WDY_GP 3 (WM - Western Mountains), then the domain is: dom_MIM_SPCS_WDY_WM
Required/Optional	Required
Domain (Valid Values)	dom_MIM_SPCS_WDY_AW dom_MIM_SPCS_WDY_GP dom_MIM_SPCS_WDY_WM
Data Type	String (10)

7.77   STBLE_HGT_SS

Geodatabase Name	STBLE_HGT_SS
BLM Structured Name	Stubble_Height_Sample_Size_Number
Inheritance	Not Inherited
Alias Name	Stubble Height Sample Size
Feature Class Use/Entity Table	MIM_DMA_SS_TBL
Definition	The estimated stubble height sample size needed to predict the mean for various levels of confidence and precision. The formula to calculate this value is: $(a^2 * b^2) / (c^2)$ Where: If the Confidence Level (CNFDNCE_LVL) = 0.8, then a = 1.28 0.85, then a = 1.49 0.9, then a = 1.64 0.95, then a = 1.96 0.99, then a = 2.58 b = Standard Deviation of all Stubble Height (STBLE_HGT) values related to the DMA record.

	c = Average of all Stubble Height (STBLE_HGT) values related to the DMA record multiplied by Stubble Height Margin of Error (STBLE_HGT_MOE). ^{2} = Raised to the 2nd power.
Required/Optional	Optional
Domain (Valid Values)	No domain. Examples: 25, 107
Data Type	Short Integer

7.78   STRM_ID

Geodatabase Name	STRM_ID
BLM Structured Name	Stream_Identifier
Inheritance	Not Inherited
Alias Name	Stream
Feature Class Use/Entity Table	MIM_PT
Definition	An identifier for the stream reach. Values can include the stream GNIS Name, a local name, or an NHD Reach Code Identifier.
Required/Optional	Required This field is not required on the mobile device. However, the field must be filled in the office out prior to submitting the data to the corporate dataset.
Domain (Valid Values)	No domain. Examples: Cedar Creek, Mosby Creek, 17100306002623
Data Type	String (65)

7.79   STRMBNK_ALTRTN

Geodatabase Name	STRMBNK_ALTRTN
BLM Structured Name	Streambank_Alteration_Number
Inheritance	Not Inherited
Alias Name	Streambank Alteration
Feature Class Use/Entity Table	MIM_DMA_TBL
Definition	This field records the number of monitoring frame lines within the plot that intersect the streambank alteration. Streambank alternation is "disturbance caused by animals … walking along the streambanks or the margins of the stream. The animals' weight can cause shearing that results in a breakdown of the streambank and subsequent widening of the stream channel." (Burton et al., 2011, p. 147)
Required/Optional	Optional
Domain (Valid Values)	dom_MIM_STRMBNK_ALTRTN
Data Type	Short Integer

7.80　STRMBNK_ALTRTN_SS

Geodatabase Name	STRMBNK_ALTRTN_SS
BLM Structured Name	Streambank_Alteration_Sample_Size_Number
Inheritance	Not Inherited
Alias Name	Streambank Alteration Sample Size
Feature Class Use/Entity Table	MIM_DMA_SS_TBL
Definition	The estimated streambank alteration sample size needed to predict the mean for various levels of confidence and precision. The formula to calculate this value is: $(a^2 * b^2) / c^2 + (0.15 * ((a^2 * b^2) / (c^2)))$ Where: 　　　If the Confidence Level (CNFDNCE_LVL) = 　　　　　0.8, then a = 1.28 　　　　　0.85, then a = 1.49 　　　　　0.9, then a = 1.64 　　　　　0.95, then a = 1.96 　　　　　0.99, then a = 2.58 b = Standard Deviation of all Streambank Alteration (STRMBNK_ALTRTN) values related to the DMA record. c = Average of all Streambank Alteration (STRMBNK_ALTRTN) values related to the DMA record multiplied by the Alteration Margin of Error (ALTRTN_MOE). ^{2} = Raised to the 2nd power.
Required/Optional	Optional
Domain (Valid Values)	No domain. Examples: 81, 132
Data Type	Short Integer

7.81　STRMBNK_STBLTY

Geodatabase Name	STRMBNK_STBLTY
BLM Structured Name	Streambank_Stability_Code
Inheritance	Not Inherited
Alias Name	Streambank Stability
Feature Class Use/Entity Table	MIM_DMA_TBL
Definition	Indicator of the stability of the streambank. For depositional banks, this field should be null.
Required/Optional	Optional
Domain (Valid Values)	dom_MIM_STRMBNK_STBLTY
Data Type	String (2)

7.82   STRMBNK_STBLTY_CU

Geodatabase Name	STRMBNK_STBLTY_CU
BLM Structured Name	Streambank_Stability_Covered_or_Uncovered_Code
Inheritance	Not Inherited
Alias Name	Covered or Uncovered
Feature Class Use/Entity Table	MIM_DMA_TBL
Definition	Describes if the streambank is covered or uncovered. "Covered … applies to banks with at least 50 percent foliar cover of perennial vegetation (including roots); at least 50 percent cover of rocks 15 cm or larger; at least 50 percent cover of anchored large woody debris (LWD) with a diameter of 10 cm or greater; or a combination of the vegetation, rock, and/or LWD covering at least 50 percent of the bank area (50 cm wide from the scour line to the first bench). Uncovered … applies to all banks that are not 'Covered.' (Burton et al., 2011, p. 50)
Required/Optional	Optional
Domain (Valid Values)	dom_MIM_STRMBNK_STBLTY_CU
Data Type	String (1)

7.83   STRMBNK_STBLTY_ED

Geodatabase Name	STRMBNK_STBLTY_ED
BLM Structured Name	Streambank_Stability_Erosional_or_Depositional_Code
Inheritance	Not Inherited
Alias Name	Erosional or Depositional
Feature Class Use/Entity Table	MIM_DMA_TBL
Definition	Describes if the streambank is erosional or depositional. "Depositional … applies to all streambanks associated with sand, silt, clay, or gravel deposited by the stream. These are recognizable as 'bars' in the channel margins adjacent to the greenline and at or above the scour line. Stream bars are typically lenticular-shaped mounds of deposition on the bed of the stream channel adjacent to or on the streambank. Depositional streambanks are usually at a low angle from the water surface and are not associated with a bench. Erosion … applies to all banks that are not 'Depositional.' Erosional streambanks are normally at a steep angle to the water surface and are usually associated with a bench and/or terrace. Such banks typically occur on the outside of meander bends and on both sides of the stream in straight reaches. When there is sufficient stream energy, they may also occur on the inside bank of a meander bend." (Burton et al., 2011, p. 49-50)
Required/Optional	Optional
Domain (Valid Values)	dom_MIM_STRMBNK_STBLTY_ED
Data Type	String (1)

7.84   STRMBNK_STBLTY_MOE

Geodatabase Name	STRMBNK_STBLTY_MOE
BLM Structured Name	Streambank_Stability_Margin_Error_Number
Inheritance	Not Inherited
Alias Name	Streambank Stability Margin of Error
Feature Class Use/Entity Table	MIM_PT
Definition	The desired precision level for streambank stability samples expressed as half of the maximum acceptable confidence interval width. The default value for this field is 0.15.
Required/Optional	Required
Domain (Valid Values)	No domain. Examples: 0.15
Data Type	Double

7.85   STRMBNK_STBLTY_SS

Geodatabase Name	STRMBNK_STBLTY_SS
BLM Structured Name	Streambank_Stability_Sample_Size_Number
Inheritance	Not Inherited
Alias Name	Streambank Stability Sample Size
Feature Class Use/Entity Table	MIM_DMA_SS_TBL

Definition	The estimated streambank stability sample size needed to predict the mean for various levels of confidence and precision.
	
	The formula to calculate this value is:
	
	$(a^2 * b^2) / c^2 + (0.15 * ((a^2 * b^2) / (c^2)))$
	
	Where:
	
	        If the Confidence Level (CNFDNCE_LVL) =
	
	           0.8, then a = 1.28
	           0.85, then a = 1.49
	           0.9, then a = 1.64
	           0.95, then a = 1.96
	           0.99, then a = 2.58
	
	        b = Standard Deviation of all Streambank Alteration (STRMBNK_STBLTY) values related to the DMA record.
	
	        c = Average of all Streambank Alteration (STRMBNK_STBLTY) values related to the DMA record multiplied by the Alteration Margin of Error (ALTRTN_MOE).
	
	^{2} = Raised to the 2nd power.

Required/Optional	Optional
Domain (Valid Values)	No domain. Examples: 81, 132
Data Type	Short Integer

7.86 STRT_DIST

Geodatabase Name	STRT_DIST
BLM Structured Name	Starting_Distance_Number
Inheritance	Not Inherited
Alias Name	Starting Distance (m)
Feature Class Use/Entity Table	MIM_PT
Definition	Distance between the beginning of the DMA and the first sample. "The first sample plot is randomly placed on the greenline upstream from the downstream reach marker (left side looking upstream). A random number (STRT_PACE_RNDM) is selected …The random number is used to determine the number of paces from the marker to the first plot." (Burton et al., 2018, p. 2)
Required/Optional	Required
Domain (Valid Values)	No domain. Examples: 0.68, 1
Data Type	Short Integer

7.87 STRT_PACE_RNDM

Geodatabase Name	STRT_PACE_RNDM
BLM Structured Name	Starting_Pace_Random_Number
Inheritance	Not Inherited
Alias Name	Starting Pace Random Number
Feature Class Use/Entity Table	MIM_PT
Definition	A random number greater than or equal to zero and less than ten. Used for calculating the distance from start to the first sample.
Required/Optional	Required
Domain (Valid Values)	No domain. Examples: 0, 2, 10
Data Type	Short Integer

7.88 THLWG_DEPTH

Geodatabase Name	THLWG_DEPTH
BLM Structured Name	Thalweg_Depth_Number
Inheritance	Not Inherited
Alias Name	Thalweg Depth (meters)
Feature Class Use/Entity Table	MIM_THALWEG_TBL
Definition	Measurement of the deepest point of the channel to calculate the difference in depth between riffle crests and pool bottoms. (Burton et al, 2011) Values are recorded in meters.
Required/Optional	Required

Domain (Valid Values)	No domain. Examples: 2, 4.5
Data Type	Double

7.89   UP_LAT

Geodatabase Name	UP_LAT
BLM Structured Name	Upstream_Marker_Latitude_Coordinate_Number
Inheritance	Not Inherited
Alias Name	Upstream Marker Latitude
Feature Class Use/Entity Table	MIM_PT
Definition	Latitudinal planar component of point location on the earth's surface for the upper end of the sample reach. Recorded in decimal degrees.
Required/Optional	Required This field is not required on the mobile device. However, the field must be filled in the office out prior to submitting the data to the corporate dataset.
Domain (Valid Values)	No domain. Examples: 44.052071, 46.877186
Data Type	Double

7.90   UP_LONG

Geodatabase Name	UP_LONG
BLM Structured Name	Upstream_Marker_Longitude_Coordinate_Number
Inheritance	Not Inherited
Alias Name	Upstream Marker Longitude
Feature Class Use/Entity Table	MIM_PT
Definition	Longitudinal planar component of point location on the earth's surface for the upper end of the sample reach. Recorded in decimal degrees.
Required/Optional	Required This field is not required on the mobile device. However, the field must be filled in the office out prior to submitting the data to the corporate dataset.
Domain (Valid Values)	No domain. Examples: -123.086754, -96.789803
Data Type	Double

7.91   VERSION_NAME

Geodatabase Name	VERSION_NAME
BLM Structured Name	Geodatabase_Version_Name
Inheritance	Inherited from entity ODF
Alias Name	None

Feature Class Use/Entity Table	All feature classes and tables
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.
	Example: sfrazier.FIRE_POLY-121210-111034
	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.
	This attribute may not appear in non-Oregon/Washington datasets.
Required/Optional	Required (automatically generated)
Domain (Valid Values)	No domain.
Data Type	String (50)

7.92   WDY_HT_MOE

Geodatabase Name	WDY_HT_MOE
BLM Structured Name	Woody_Height_Margin_Error_Number
Inheritance	Not Inherited
Alias Name	Woody Height Margin of Error
Feature Class Use/Entity Table	MIM_PT
Definition	The desired precision level for woody height samples expressed as half of the maximum acceptable confidence interval width.
	The default value for this field is 0.5.
Required/Optional	Required
Domain (Valid Values)	No domain. Examples: 0.5, 0.15
Data Type	Double

7.93   WDY_SPCS_AC_MAT

Geodatabase Name	WDY_SPCS_AC_MAT
BLM Structured Name	Woody_Species_Age_Class_Mature_Count_Number
Inheritance	Not Inherited
Alias Name	Mature
Feature Class Use/Entity Table	MIM_DMA_WSACL_TBL
Definition	The number of mature plants for the designated woody species at the plot.
	For single-stemmed species, a mature plant "is > 1 m tall and >7.6 cm in diameter at 50% of height from ground level" (Burton et al., 2011, p. 53).
	For multi-stemmed species, mature are ">10 stems over 1 m tall" (Burton et al., 2011, p. 53).

Required/Optional	Required
Domain (Valid Values)	No domain. Examples: 0, 1, 5
Data Type	Short Integer

7.94   WDY_SPCS_AC_RHZ

Geodatabase Name	WDY_SPCS_AC_RHZ
BLM Structured Name	Woody_Species_Age_Class_Rhizomatous_Count_Number
Inheritance	Not Inherited
Alias Name	Rhizomatous
Feature Class Use/Entity Table	MIM_DMA_WSACL_TBL
Definition	Record a 1 in this column if "root sprouting and rhizomatous species occur in the plot" (Burton et al., 2011, p. 53). Otherwise, leave this field blank.
Required/Optional	Optional
Domain (Valid Values)	dom_MIM_WDY_RHZ
Data Type	Short Integer

7.95   WDY_SPCS_AC_SDLNG

Geodatabase Name	WDY_SPCS_AC_SDLNG
BLM Structured Name	Woody_Species_Age_Class_Seedling_Count_Number
Inheritance	Not Inherited
Alias Name	Seedling
Feature Class Use/Entity Table	MIM_DMA_WSACL_TBL
Definition	The number of seedlings for the designated woody species at the plot. For single-stemmed species, a seedling "is <1 m tall or > 2.5 cm in diameter at 50% of height from ground level" (Burton et al., 2011, p. 53). For multi-stemmed species, a seedling is "1 stem <0.5 cm in diameter at the base and <0.5 m tall" (Burton et al., 2011, p. 53).
Required/Optional	Required
Domain (Valid Values)	No domain. Examples: 0, 1, 5
Data Type	Short Integer

7.96   WDY_SPCS_AC_SPCS

Geodatabase Name	WDY_SPCS_AC_SPCS
BLM Structured Name	Woody_Species_Age_Class_Species_Code
Inheritance	Inherited from USDA Plants Database
Alias Name	Woody Age Class Species

Feature Class Use/Entity Table	MIM_DMA_WSACL_TBL
Definition	The USDA plant symbol for the woody species recorded at the plot. The plant region (PLNT_RGN) subtype value selected, determines the domain used by this field. Many species can be recorded at the plot by entering multiple records in the MIM_DMA_WSACL_TBL table.
	When PLT_RGN equals:
	1 (AW - Arid West), then the domain is: dom_MIM_SPCS_WDY_AW
	2 (GP - Great Plains), then the domain is: dom_MIM_SPCS_WDY_GP
	3 (WM - Western Mountains), then the domain is: dom_MIM_SPCS_WDY_WM
Required/Optional	Required
Domain (Valid Values)	dom_MIM_SPCS_WDY_AW
	dom_MIM_SPCS_WDY_GP
	dom_MIM_SPCS_WDY_WM
Data Type	String (10)

7.97   WDY_SPCS_AC_YNG

Geodatabase Name	WDY_SPCS_AC_YNG
BLM Structured Name	Woody_Species_Age_Class_Young_Count_Number
Inheritance	Not Inherited
Alias Name	Young
Feature Class Use/Entity Table	MIM_DMA_WSACL_TBL
Definition	The number of young plants for the designated woody species at the plot.
	For single-stemmed species, a young plant "is >1 m tall and 2.5 cm to 7.6 cm in diameter at 50% of height from ground level" (Burton et al., 2011, p. 53).
	For multi-stemmed species, young are "2 to 10 stems less than 1 m tall or 1 stem >0.5 cm in diameter at the base and less than 1 m tall (Burton et al., 2011, p. 53).
Required/Optional	Required
Domain (Valid Values)	No domain. Examples: 0, 1, 5
Data Type	Short Integer

7.98   WDY_SPCS_HGT

Geodatabase Name	WDY_SPCS_HGT
BLM Structured Name	Woody_Species_Height_Class_Code
Inheritance	Not Inherited
Alias Name	Woody Species Height Class
Feature Class Use/Entity Table	MIM_DMA_GC_TBL
Definition	Height of the designated greenline composition woody species. Values are recorded in meters.

Required/Optional	Required
Domain (Valid Values)	dom_MIM_WDY_SPCS_HGT
Data Type	Short Integer

7.99 WDY_SPCS_HGT_SS

Geodatabase Name	WDY_SPCS_HGT_SS
BLM Structured Name	Woody_Species_Height_Sample_Size_Number
Inheritance	Not Inherited
Alias Name	Woody Species Height Sample Size
Feature Class Use/Entity Table	MIM_DMA_SS_TBL
Definition	The estimated greenline composition sample size needed to predict the mean for various levels of confidence and precision. The formula to calculate this value is: $(a^2 * b^2) / (c^2)$ Where: 　　　If the Confidence Level (CNFDNCE_LVL) = 　　　　　0.8, then a = 1.28 　　　　　0.85, then a = 1.49 　　　　　0.9, then a = 1.64 　　　　　0.95, then a = 1.96 　　　　　0.99, then a = 2.58 b = Standard Deviation of all Greenline-to-Greenline Woody Species Height (GC_WDY_SPCS_HGT) values related to the DMA record. c = Average of all Greenline-to-Greenline Woody Species Height (GC_WDY_SPCS_HGT) values related to the DMA record multiplied by the Stubble Height Margin of Error (WDY_HT_MOE). ^{2} = Raised to the 2nd power
Required/Optional	Optional
Domain (Valid Values)	No domain. Examples: 89, 135
Data Type	Short Integer

7.100 WDY_SPCS_USE_PCT

Geodatabase Name	WDY_SPCS_USE_PCT
BLM Structured Name	Woody_Species_Use_Percent_Number
Inheritance	Inherited from Plants Database
Alias Name	Woody Species Use %
Feature Class Use/Entity Table	MIM_DMA_WSU_TBL
Definition	Each key woody species in a plot is judged to determine the amount of grazing usage.

	Enter a -1 if values should not be used in calculations.
Required/Optional	Required
Domain (Valid Values)	dom_PCT100_Neg
Data Type	Short Integer

7.101 WDY_SPCS_USE_SPCS

Geodatabase Name	WDY_SPCS_USE_SPCS
BLM Structured Name	Woody_Species_Use_Species_Code
Inheritance	Inherited from USDA Plants Database
Alias Name	Woody Species Use Species Code
Feature Class Use/Entity Table	MIM_DMA_TBL
Definition	The USDA plant symbol for the woody species recorded at the plot. The plant region (PLNT_RGN) subtype value selected, determines the domain used by this field. Many species can be recorded at the plot by entering multiple records in the MIM_DMA_WSU_TBL table. When PLT_RGN equals: 1 (AW - Arid West), then the domain is: dom_MIM_SPCS_WDY_AW 2 (GP - Great Plains), then the domain is: dom_MIM_SPCS_WDY_GP 3 (WM - Western Mountains), then the domain is: dom_MIM_SPCS_WDY_WM
Required/Optional	Required
Domain (Valid Values)	dom_MIM_SPCS_WDY_AW dom_MIM_SPCS_WDY_GP dom_MIM_SPCS_WDY_WM
Data Type	String (10)

7.102 WDY_SPCS_USE_SS

Geodatabase Name	WDY_SPCS_USE_SS
BLM Structured Name	Woody_Species_Use_Sample_Size_Number
Inheritance	Not Inherited
Alias Name	Woody Species Use Sample Size
Feature Class Use/Entity Table	MIM_DMA_SS_TBL

Definition	The estimated woody species use sample size needed to predict the mean for various levels of confidence and precision.
	 The formula to calculate this value is:
	 $(a^2 * b^2) / (c^2)$
	 Where:
	     If the Confidence Level (CNFDNCE_LVL) =
	         0.8, then a = 1.28
	         0.85, then a = 1.49

	0.9, then a = 1.64
	0.95, then a = 1.96
	0.99, then a = 2.58
	b = Standard Deviation of all Woody Species Use % (WDY_SPCS_USE_PCT) values related to the DMA record.
	c = Average of all Woody Species Use % values related to the DMA record multiplied by Woody Use Margin of Error (WDY_USE_MOE).
	$\wedge 2$ = Raised to the 2nd power.
Required/Optional	Optional
Domain (Valid Values)	No domain. Examples: 32, 262
Data Type	Short Integer

7.103 WDY_USE_MOE

Geodatabase Name	WDY_USE_MOE
BLM Structured Name	Woody_Use_Margin_Error_Number
Inheritance	Not Inherited
Alias Name	Woody Use Margin of Error
Feature Class Use/Entity Table	MIM_PT
Definition	The desired precision level for woody use samples expressed as half of the maximum acceptable confidence interval width. The default value for this field is 0.5.
Required/Optional	Required
Domain (Valid Values)	No domain. Examples: 0.5, 5.73
Data Type	Double

8   Publication Views

8.1   General

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

- Copied completely with no changes (replicated).

- Copied with no changes except to omit one or more feature classes from a feature dataset.

- Minor changes made (e.g., clip, dissolve, union with ownership) to make the data easier to use. Feature classes that have been changed are indicated by "PUB" in their name. They are created through scripts that can be automatically executed and are easily rebuilt from the master (ORSOEDIT) data whenever necessary.

8.2   Specific to This Dataset

A publication dataset will be provided that meets these requirements:

- All data objects will be published as-is with the following changes:

    o   VERSION_NAME field will be removed because it has no meaning outside of the internal editing environment.

    o   The Observer Name (OBSRVR) field will be removed from the public (web published) dataset for privacy reasons.

    o   The photo link (PHOTO_LWR_ACRS, PHOTO_LWR_UP, PHOTO_UPR_ACRS, PHOTO_UPR_DWN) fields will be removed from the public (web published) dataset for security reasons.

    o   All comments (COMMENTS) fields will be removed from the public (web published) dataset for security reasons.

8.3   Layer Files

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

8.4   MIM to ODF Sample Points Crosswalk

While MIM is a type of Sampling within the ODF, the dataset does not share the same attributes as Sample Points. This is because this dataset maintains the same attributes and domains as the data elements identified in the MIM excel templates.

The following table shows the crosswalk between MIM_PT and SAMPLE_PT.

Source (MIM_PT)	Target (ODF SAMPLE_PT)
DMA_ID	SAMPLE_ID (Required)
ALLOTNAME	SAMPLE_GRP
Fill with "MIM"	SAMPLE_TYPE (Required)
PROTOCOL	SAMPLE_METH

Source (MIM_PT)	Target (ODF SAMPLE_PT)
ASMNT_DT	LASTVISIT_DT (Required)
OBSRVR (Trim to 30 characters)	CLASSIFIER
ASMNT_DT	ESTABLISH_DT
Null	DIRECTION
Null	LENGTH_FT
Null	ELEVATION_FT
Null	RATING1
Null	RATING2
Null	RATING3
Null	OTHERNAME
Null	FILEPATH
Null	TRT_PROJ_NM

Derive from COORD_SRC_TYPE. Value conversion:
  MAP to MAP
  IMG to IMG
  GPS to GPS
  GCD to GCD
  NHD to SOURCEX
  SRV to SRV
  TRS to TRS
  LLD to TRS
  GIS to SOURCEL
  UNK to UNK
  OTH to OTH
  WBD to SOURCEX
  GISO to SOURCEL
	COORD_SRC

ACCURACY_FT	ACCURACY_FT
NRTVE_CMT (Trim to 255 characters)	COMMENTS
VERSION_NAME	VERSION_NAME (Required)
MIM_GUID	SAMPLE_GUID (Required)
Null	DRAINAGE_AREA_AC
Fill with "C" (Current)	CURRENT_CD
GLOBALID	GLOBALID

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.

- 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.

9.1.1 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   Theme Specific Guidance

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

9.3.1 Assigning Unique Identifiers

The MIM Point feature class (MIM_PT) and DMA table (MIM_DMA_TBL) contain a unique identifier field. These fields contain a GUID (Globally Unique Identifier, which is also referred to as a UUID (Universally Unique Identifier).

These GUID fields are used to link records between data objects, for example: linking a MIM point to its related DMA records. The relationships between MIM data objects are presented in Figure 3 MIM Data Relationships. They are also described in Section 4.3 MIM Relationship Classes of this document.
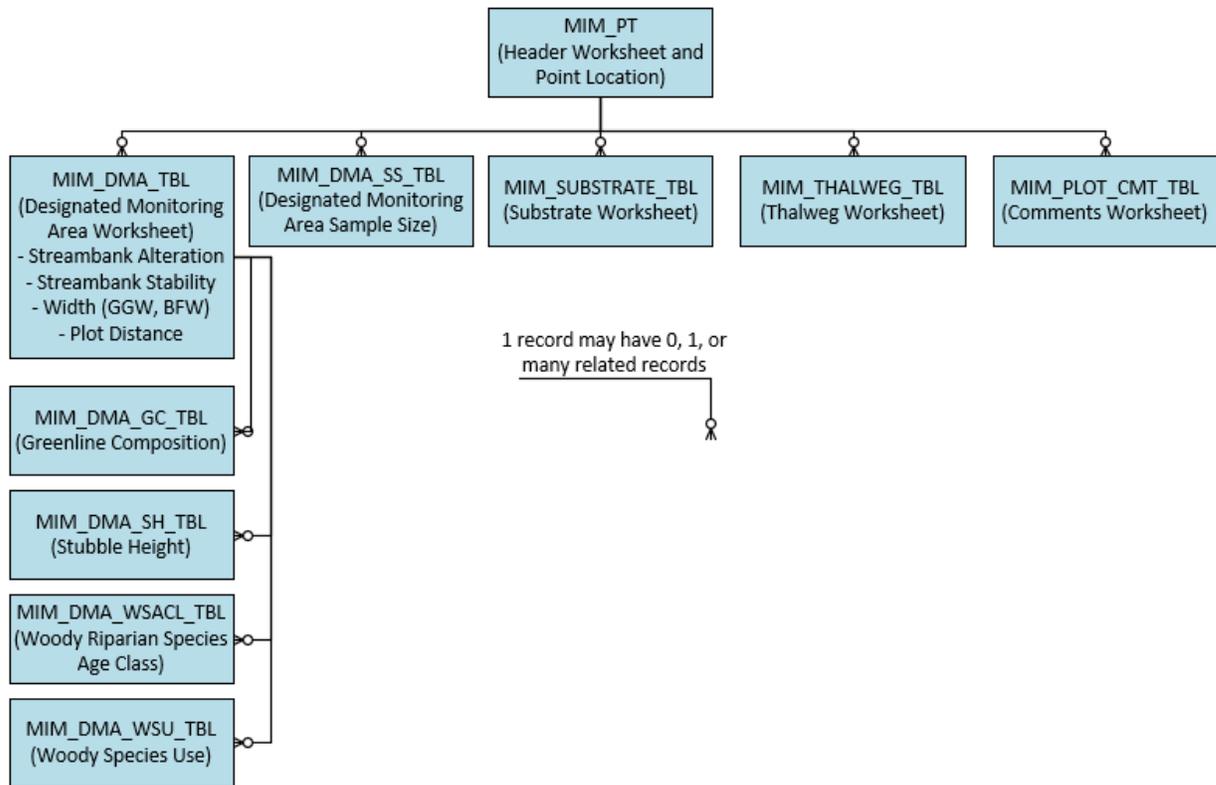
Figure 3   MIM Data Relationships

For users collecting data using the S1 Mobile Mapper for Android application, these GUID values will be automatically assigned for you when a new record is created.

For users editing with ESRI ArcMap in the ORWA BLM Citrix environment the GUID values will be automatically assigned for you when a new record is created. The screenshot below is an example of a newly created resource polygon:

MIM_GUID	{7AC3EAED-F884-4B14-B881-F6411C754A39}
Version Name	InitialLoad
GlobalID	{76573434-09C3-45EA-ACB4-BCC90291A3E9}

For users editing with ESRI ArcPro:

At the time this document was published, GUID values are not automatically assigned for ORWA corporate datasets. To manually assign a GUID to a new record:

- Create the new record in ArcGIS Pro.

- With the new record selected, open the Attributes window.

- Click in the empty GUID field. A + (plus) sign will appear to the right of the field.
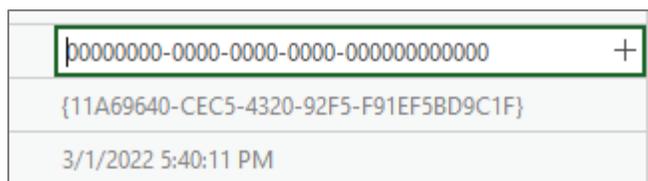
- Click the + (plus) sign and click New Guid.
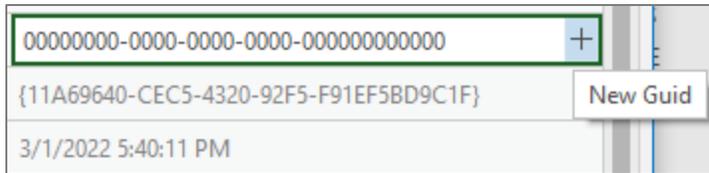
A new GUID value will appear in the attributes window.

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
GIS	Geographic Information System
GNIS	Geographic Names Information System
GPS	Global Positioning System
IDP	Interdisciplinary
NAD	North American Datum
NARA	National Archives and Records Administration
NEPA	National Environmental Policy Act
ODF	Oregon Data Framework
OR/WA	Oregon/Washington BLM Administrative State
POLY	GIS polygon feature
PUB	Publication
RMP	Resource Management Plan
USFS	United States Forest Service, U.S. Department of Agriculture
USGS	United States Geological Survey, U.S. Department of the Interior
SDE	Spatial Database Engine
WEB	Worldwide Web (internet)

11   References

Burton, T.A., S.J. Smith, and E.R. Cowley. 2011. Riparian area management: Multiple indicator monitoring (MIM) of stream channels and streamside vegetation. Technical Reference 1737-23. BLM/OC/ST-10/003+1737+REV. U.S. Department of the Interior, Bureau of Land Management, National Operations Center, Denver, CO. 155 pp

https://www.blm.gov/sites/blm.gov/files/documents/files/TR_1737-23.pdf

Burton, T. A., S. J. Smith, E. R. Cowley. 2018. Field Guide, Riparian Area Management, Multiple Indicator Monitoring (MIM) of Stream Channels and Streamside Vegetation. U. S. Department of the Interior, Bureau of Land Management, National Operations Center, Denver, CO. 10 pp. https://www.blm.gov/sites/blm.gov/files/documents/files/MIM%20Field%20Guide%20May%202018.docx

US Army Corps of Engineers National Wetland Plant List. 2020. https://wetland-plants.sec.usace.army.mil/nwpl_static/v34/home/home.html.

A   Domains (Valid Values)

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

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

A.1   dom_BLM_ORG_CD

Administrative Unit Organization Code. Standard BLM organization codes generated from the national list. This is a lengthy domain used by multiple datasets. For the full list of values go to:
https://gis.blm.gov/ORDownload/Domains/dom_BLM_ORG_CODE.xls

A.2   DOM_COORD_SOURCE_TYPE

Coordinate Source Type Code. The general category for the origin of the location coordinate. This domain is inherited from BLM National Feature Level Metadata.

Code	Description
MAP	Manuscript Lines
IMG	DOQ or other imagery backdrops
GPS	Lines Obtained from a GPS Device
GCD	Lines Snapped to Geographic Coordinate Database
NHD	USGS National Hydrologic Dataset
SRV	Survey
TRS	Township, Range, Section
LLD	Legal Land Description
GIS	BLM GIS Layer
UNK	Unknown
OTH	Other
WBD	Watershed Boundary Dataset
GISO	GIS Other

A.3   dom_MIM_PBL_SIZE

MIM Substrate Pebble Diameter Size. A domain for allowable pebble diameter sizes, recorded as short integer data type.

Code	Description
2	2
3	3
4	4
6	6
8	8

Code	Description
11	11
16	16
23	23
32	32
45	45
64	64
90	90
128	128
180	180
190	190
200	200
210	210
220	220
230	230
240	240
250	250
260	260
270	270
280	280
290	290
300	300
310	310
320	320
330	330
340	340
350	350
360	360
370	370
380	380
390	390
400	400
410	410
420	420
430	430
440	440
450	450
460	460
470	470
480	480
490	490
500	500

A.4 dom_MIM_PLNT_RGN

MIM Plant Region. The wetland region code. For more information on wetland regions, see: https://wetland-plants.sec.usace.army.mil/nwpl_static/v34/home/home.html

This field is defined a short integer because it is being used as a Geodatabase Subtype to control the species lists that appear in many of the MIM tables. The value selected determines the species lists available for data entry at the site. For more information about subtypes, see: https://www.esri.com/news/arcuser/0400/files/subtypes.pdf.

Code	Description
1	AW - Arid West
2	GP - Great Plains
3	WM - Western Mountains, Valleys & Coast

A.5 dom_MIM_PROTOCOL

MIM Protocol Name. The name of the MIM technical reference used to collect the data.

Code	Description
BLM TR 1737 23 2011	BLM TR 1737 23 2011 - Multiple Indicator Monitoring (MIM) of Stream Channels and Streamside Vegetation. Technical Reference 1737-23. 2011.

A.6 dom_MIM_RFL_POOL

MIM Riffle or Pool Code. Code to record if a Thalweg measurement is being taken at a riffle crest (or pool tail) or pool bottoms (or maximum depth of pools).

Code	Description
r	r - Riffle Crest
p	p - Pool Bottom

A.7 dom_MIM_SBSTRTE_CLS

MIM Substrate Class Code. The dominant type of substrate for the stream.

Code	Description
bd	bd - Boulder
cb	cb - Cobble
gr	gr - Gravel
cons	cons - Consolidated sand/silt/clay
nonc	nonc - Nonconsolidated sand/silt/clay

A.8 dom_MIM_SLOPE_CLS

Slope Classification Code. Slope (gradient) classification codes recorded as a percent.

Code	Description
<.5	<.5 - Less than 0.5%, flat meadow streams
<2	<2 - Between 0.5 and 2%, well drained meadows
2-4	2-4 - Between 2 and 4%, "B" type channels
>4	>4 - Between 4 and 10%, "A" type channels
>10	>10 - Greater than 10%

A.9 dom_MIM_SPCS_ALL_AW

MIM All Arid West Species Code. All vegetation species contained in the MIM Arid West species list. The code is the USDA Plants Symbol, and the description is a combination of Plant Symbol, Scientific Name, and Common name. The following table shows the first ten codes in the domain as an example. For a full list of codes in this domain, see the spreadsheet: https://gis.blm.gov/ORDownload/Domains/dom_MIM_SPCS_ALL_WM.xlsx.

Code	Description
ABLA	ABLA - ABIES LASIOCARPA - Subalpine fir
ACCO2	ACCO2 - ACACIA CONSTRICTA - Whitethorn acacia
ACCO4	ACCO4 - ACONITUM COLUMBIANUM - Columbian monkshood
ACER	ACER - ACER SPP. - Maple spp.
ACGL	ACGL - ACER GLABRUM - Rocky Mountain Maple
ACGR	ACGR - ACACIA GREGGII - Catclaw acacia
ACGR3	ACGR3 - ACER GRANDIDENTATUM - Big tooth maple
ACHNA	ACHNA - ACHNATHERUM Spp. - Needlegrass (STIPA)
ACMI2	ACMI2 - ACHILLEA MILLEFOLIUM - Common yarrow
ACNE2	ACNE2 - ACER NEGUNDO - Boxelder

A.10 dom_MIM_SPCS_ALL_GP

MIM All Great Plains Species Code. All vegetation species contained in the MIM Arid West species list. The code is the USDA Plants Symbol, and the description is a combination of Plant Symbol, Scientific Name, and Common name. The following table shows the first ten codes in the domain as an example. For a full list of codes in this domain, see the spreadsheet: https://gis.blm.gov/ORDownload/Domains/dom_MIM_SPCS_ALL_GP.xlsx.

Code	Description
ACMA3	ACMA3 - ACER MACROPHYLLUM - Big leaf maple
ACMI2	ACMI2 - ACHILLEA MILLEFOLIUM - Common yarrow
ACNE2	ACNE2 - ACER NEGUNDO - Boxelder
ACNE9	ACNE9 - ACHNATHERUM NELSONII - Columbia needlegrass (STCO3)
AGGI2	AGGI2 - AGROSTIS GIGANTEA - Redtop
AGRE2	AGRE2 - AGROPYRON REPENS - Quackgrass (ELRE2)
AGSC5	AGSC5 - AGROSTIS SCABRA - Rough Bentgrass

Code	Description
AGSM	AGSM - AGROPYRON SMITHII - Western Wheatgrass (PASM)
AGST2	AGST2 - AGROSTIS STOLONIFERA - Creeping bentgrass
AGUR	AGUR - AGASTACHE URTICIFOLIA - Needleleaf giant hyssop

A.11 dom_MIM_SPCS_ALL_WM

MIM All Western Mountains Species Code. All vegetation species contained in the MIM Arid West species list. The code is the USDA Plants Symbol, and the description is a combination of Plant Symbol, Scientific Name, and Common name. The following table shows the first ten codes in the domain as an example. For a full list of codes in this domain, see the spreadsheet: https://gis.blm.gov/ORDownload/Domains/dom_MIM_SPCS_ALL_WM.xlsx

Code	Description
ACCI	ACCI - ACER CIRCINATUM - Vine maple
ACCO2	ACCO2 - ACACIA CONSTRICTA - Whitethorn acacia
ACCO4	ACCO4 - ACONITUM COLUMBIANUM - Columbian monkshood
ACER	ACER - ACER SPP. - Maple spp.
ACGL	ACGL - ACER GLABRUM - Rocky Mountain Maple
ACGR	ACGR - ACACIA GREGGII - Catclaw acacia
ACGR3	ACGR3 - ACER GRANDIDENTATUM - Big tooth maple
ACHNA	ACHNA - ACHNATHERUM Spp. - Needlegrass (STIPA)
ACMA3	ACMA3 - ACER MACROPHYLLUM - Big leaf maple
ACMI2	ACMI2 - ACHILLEA MILLEFOLIUM - Common yarrow

A.12 dom_MIM_SPCS_HERB_AW

MIM Herbaceous Arid West Species Code. All herbaceous species contained in the MIM Arid West species list. The code is the USDA Plants Symbol, and the description is a combination of Plant Symbol, Scientific Name, and Common name. The following table shows the first ten codes in the domain as an example. For a full list of codes in this domain, see the spreadsheet:
https://gis.blm.gov/ORDownload/Domains/dom_MIM_SPCS_HERB_AW.xlsx.

Code	Description
ACCO4	ACCO4 - ACONITUM COLUMBIANUM - Columbian monkshood
ACHNA	ACHNA - ACHNATHERUM Spp. - Needlegrass (STIPA)
ACMI2	ACMI2 - ACHILLEA MILLEFOLIUM - Common yarrow
ACNE9	ACNE9 - ACHNATHERUM NELSONII - Columbia needlegrass (STCO3)
ACRU2	ACRU2 - ACTAEA RUBRA - Baneberry
AGGI2	AGGI2 - AGROSTIS GIGANTEA - Redtop
AGGR2	AGGR2 - AGRIMONIA GRYPOSEPALA - Tall hairy agrimony
AGRE2	AGRE2 - AGROPYRON REPENS - Quackgrass (ELRE2)

Code	Description
AGROS2	AGROS2 - AGROSTIS SPP. - Bentgrass
AGSC5	AGSC5 - AGROSTIS SCABRA - Rough Bentgrass

A.13 dom_MIM_SPCS_HERB_GP

MIM Herbaceous Great Plains Species Code. All herbaceous species contained in the MIM Arid West species list. The code is the USDA Plants Symbol, and the description is a combination of Plant Symbol, Scientific Name, and Common name. The following table shows the first ten codes in the domain as an example. For a full list of codes in this domain, see the spreadsheet:
https://gis.blm.gov/ORDownload/Domains/dom_MIM_SPCS_HERB_GP.xlsx.

Code	Description
ACMI2	ACMI2 - ACHILLEA MILLEFOLIUM - Common yarrow
ACNE9	ACNE9 - ACHNATHERUM NELSONII - Columbia needlegrass (STCO3)
AGGI2	AGGI2 - AGROSTIS GIGANTEA - Redtop
AGRE2	AGRE2 - AGROPYRON REPENS - Quackgrass (ELRE2)
AGSC5	AGSC5 - AGROSTIS SCABRA - Rough Bentgrass
AGSM	AGSM - AGROPYRON SMITHII - Western Wheatgrass (PASM)
AGST2	AGST2 - AGROSTIS STOLONIFERA - Creeping bentgrass
AGUR	AGUR - AGASTACHE URTICIFOLIA - Needleleaf giant hyssop
ALAE	ALAE - ALOPECURUS AEQUALIS - Short-awned foxtail
ALAR	ALAR - ALOPECURUS ARUNDINACEUS - Creeping meadow foxgrass

A.14 dom_MIM_SPCS_HERB_WM

MIM Herbaceous Western Mountains Species Code. All herbaceous species contained in the MIM Arid West species list. The code is the USDA Plants Symbol, and the description is a combination of Plant Symbol, Scientific Name, and Common name. The following table shows the first ten codes in the domain as an example. For a full list of codes in this domain, see the spreadsheet:
https://gis.blm.gov/ORDownload/Domains/dom_MIM_SPCS_HERB_WM.xlsx.

Code	Description
ACCO4	ACCO4 - ACONITUM COLUMBIANUM - Columbian monkshood
ACHNA	ACHNA - ACHNATHERUM Spp. - Needlegrass (STIPA)
ACMI2	ACMI2 - ACHILLEA MILLEFOLIUM - Common yarrow
ACNE9	ACNE9 - ACHNATHERUM NELSONII - Columbia needlegrass (STCO3)
ACRU2	ACRU2 - ACTAEA RUBRA - Baneberry
AGFO	AGFO - AGASTACHE FOENICULUM - Blue giant hyssop
AGGI2	AGGI2 - AGROSTIS GIGANTEA - Redtop
AGGR2	AGGR2 - AGRIMONIA GRYPOSEPALA - Tall hairy agrimony
AGRE2	AGRE2 - AGROPYRON REPENS - Quackgrass (ELRE2)

Code	Description
AGSC5	AGSC5 - AGROSTIS SCABRA - Rough Bentgrass

A.15 dom_MIM_SPCS_WDY_AW

MIM Woody Arid West Species Code. All woody species contained in the MIM Arid West species list. The code is the USDA Plants Symbol, and the description is a combination of Plant Symbol, Scientific Name, and Common name. The following table shows the first ten codes in the domain as an example. For a full list of codes in this domain, see the spreadsheet: https://gis.blm.gov/ORDownload/Domains/dom_MIM_SPCS_WDY_AW.xlsx.

Code	Description
ABLA	ABLA - ABIES LASIOCARPA - Subalpine fir
ACCO2	ACCO2 - ACACIA CONSTRICTA - Whitethorn acacia
ACER	ACER - ACER SPP. - Maple spp.
ACGL	ACGL - ACER GLABRUM - Rocky Mountain Maple
ACGR	ACGR - ACACIA GREGGII - Catclaw acacia
ACGR3	ACGR3 - ACER GRANDIDENTATUM - Big tooth maple
ACNE2	ACNE2 - ACER NEGUNDO - Boxelder
ALIN2	ALIN2 - ALNUS INCANA - Mountain Alder
ALOB2	ALOB2 - ALNUS OBLONGIFOLIA - Arizona alder
ALOC2	ALOC2 - ALLENROLFEA OCCICENTALIS - Iodine Bush

A.16 dom_MIM_SPCS_WDY_GP

MIM Woody Great Plains Species Code. All woody species contained in the MIM Arid West species list. The code is the USDA Plants Symbol, and the description is a combination of Plant Symbol, Scientific Name, and Common name. The following table shows the first ten codes in the domain as an example. For a full list of codes in this domain, see the spreadsheet: https://gis.blm.gov/ORDownload/Domains/dom_MIM_SPCS_WDY_GP.xlsx.

Code	Description
ACMA3	ACMA3 - ACER MACROPHYLLUM - Big leaf maple
ACNE2	ACNE2 - ACER NEGUNDO - Boxelder
AMFR	AMFR - AMORPHA FRUTICOSA - False Indigo
AMNA	AMNA - AMORPHA NANA - Dwarf wild indigo
CELA	CELA - CELTIS LAEVIGATA - Sugarberry
CHLI2	CHLI2 - CHILOPSIS LINEARIS - Desert willow
CHNA2	CHNA2 - CHRYSOTHAMNUS NAUSEOSUS - Rubber rabbitbrush (ERNA10)
CHSP11	CHSP11 - CHLORACANTHA SPINOSA - Spiny chloracantha
CHVI8	CHVI8 - CHRYSOTHAMNUS VISCIDIFLORUS - Yellow rabbitbrush
CLLI2	CLLI2 - CLEMATIS LIGUSTIFOLIA - White Clematis

A.17 dom_MIM_SPCS_WDY_WM

MIM Woody Western Mountains Species Code. All woody species contained in the MIM Arid West species list. The code is the USDA Plants Symbol, and the description is a combination of Plant Symbol, Scientific Name, and Common name. The following table shows the first ten codes in the domain as an example. For a full list of codes in this domain, see the spreadsheet:
https://gis.blm.gov/ORDownload/Domains/dom_MIM_SPCS_WDY_WM.xlsx.

Code	Description
ACCI	ACCI - ACER CIRCINATUM - Vine maple
ACCO2	ACCO2 - ACACIA CONSTRICTA - Whitethorn acacia
ACER	ACER - ACER SPP. - Maple spp.
ACGL	ACGL - ACER GLABRUM - Rocky Mountain Maple
ACGR	ACGR - ACACIA GREGGII - Catclaw acacia
ACGR3	ACGR3 - ACER GRANDIDENTATUM - Big tooth maple
ACMA3	ACMA3 - ACER MACROPHYLLUM - Big leaf maple
ACNE2	ACNE2 - ACER NEGUNDO - Boxelder
ALIN2	ALIN2 - ALNUS INCANA - Mountain Alder
ALOB2	ALOB2 - ALNUS OBLONGIFOLIA - Arizona alder

A.18 dom_MIM_STRMBNK_ALTRTN

MIM Streambank Alteration. The number of monitoring frame lines within the plot that intersect the streambank alteration.

Code	Description
0	0
1	1
2	2
3	3
4	4
5	5

A.19 dom_MIM_STRMBNK_STBLTY_ED

MIM Streambank Stability Erosional or Depositional. Code to describe if the streambank is erosional or depositional.

Code	Description
E	E - Erosional. All banks not associated with bars.
D	D - Depositional. Any bank containing a sand or gravel bar.

A.20 dom_MIM_STRMBNK_STBLTY_CU

MIM Streambank Stability Covered or Uncovered Code. Code to describe if the streambank is covered or uncovered.

Code	Description
C	C - Covered. Mostly covered by vegetation, rock, logs.
U	U - Uncovered. Mostly not covered by vegetation, rock, logs.

A.21 dom_MIM_STRMBNK_STBLTY

MIM Streambank Stability Code. Indicator of the stability of the streambank.

Code	Description
F	F - Fracture. Crack visibly obvious on the bank.
S	S - Slump. Block of bank breaking or sliding down bank into stream.
SL	SL - Slough. Sluff material moving down bank or into stream.
E	E - Eroding. Usually steep and bare faced actively eroding.
A	A - Absent. No features of instability are present.

A.22 dom_MIM_WDY_RHZ

MIM Woody Species Rhizomatous Code. Used to describe if root sprouting and rhizomatous species occur in the plot.

Code	Description
1	1 - Root sprouting and rhizomatous species occur at the plot

A.23 dom_MIM_WDY_SPCS_HGT

MIM Woody Species Height Class Code. Height of the designated greenline composition woody species.

Code	Description
1	1 - 0 - .5 m
2	2 - .5 - 1 m
3	3 - 1 - 2 m
4	4 - 2 - 4 m
5	5 - 4 - 8 m
6	6 - > 8 m

A.24 dom_PCT100_Neg

Percentage (-1-100) Range Domain. A valid range domain for short fields that represents a percentage number. Allows for entry of -1 to indicate no data is available.

Valid values are -1 to 100

A.25 dom_YN

Yes No Code. Generic domain for Yes/No coding.

Code	Description
Y	Yes
N	No
U	Unknown

A.26 dom_YN_NA

Yes No Not Applicable Code. Generic domain for Yes/No/Not Applicable coding.

Code	Description
Y	Yes
N	No
NA	Not Applicable

B   Additional Information on Woody Plants Questions

Prepared by Steven Smith, Team Leader, National Riparian Service Team (NRST) USDI Bureau of Land Management March 2022

Woody Plants Question on MIM Header

The MIM header sheet requires the observer to populate three key questions regarding 1) the potential for hydric (hydrophytic) woody plants to occur on the DMA, 2) if they are presently there, and 3) if the three primary age-classes of hydric woody plants are represented (S-seedling, Y-young, M-mature). Hydric plants are those with a wetland indicator status rating of Obligate or Facultative Wetland. The specific questions are as follows with general guidance on how to answer each:

> ***Are hydric woody plants supposed to be present at this site (y/n)?** If the stream at the DMA has a gradient over 0.5% and has water forces adequate to periodically cut banks and deposit bars, it likely should support a hydric woody component and would be yes. If the gradient is less than 0.5% and depositional features are absent, it would be no. Groundwater near the surface can also limit the establishment of woody species and should also be considered.

> ***Are there any hydric woody plants present (y/n)?** If <u>any</u> hydric woody plants are present on the DMA, this would be yes. If none exist, it would be no.

> ***Are all age classes of hydric woody plants present (y/n)?** If there are seedlings, young, and mature (S, Y, M) hydric woody plants present along the DMA, this would be yes. If one of these three age-classes is absent (or nearly absent) it would be no.

These questions must be answered for the ecological status metric in the Data Analysis Module (data summary sheet) to be populated. Answering these questions will adjust the ecological status rating downward if a hydric woody component should be present but isn't, and/or if all three age classes (S, Y, M) are not represented.

For a detailed discussion of these concepts, see pages 27 and 28 in: Winward, A.H. 2000. Monitoring the vegetation resources in riparian areas. GTR RMRS-GTR46. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Ogden, UT. 49pp.