

FINAL



**GRAZING BOUNDARIES  
IMPLEMENTATION GUIDELINES**

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**Version 2\_2**

**United States Department of Interior  
Bureau of Land Management  
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## Implementation Guidelines for Pasture and Allotment Polygons

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## Part I: Introduction

This document is based on the national data standard for the Grazing Boundaries geospatial dataset. It is intended as a guideline for implementation only. States may deviate from this guideline, provided that when the data is pushed up to the national level, the data will be of the quality and consistency that will meet the format and rule requirements at the national level without error. The arc information and the feature level metadata will exist in the arc feature class. The Allotment information will exist within the Pastures dataset and as such the Allotments spatial dataset will be a derived product from Pastures.

The attribute data required is minimal, as the majority of the analysis information will come from the RAS database. The attribute ST\_ALLOT\_PAST in the 'gra\_past\_poly' table will serve as the unique national identifier that will allow connection to the existing RAS database.

The data for inclusion in this data set shall be collected in a known datum and coordinate system. The data stored on the EGIS server in Denver shall be stored in geographic coordinates for national layers using the Bureau standard NAD 83 datum rather than in a specific projection.

There are four tables in this implementation:

- The first represents the arc features that will make up the polygons. These arcs will have the feature level metadata attributes shown assigned to them.
- The second and third tables show the polygon features that will actually represent the pastures and allotments.
- The fourth table shows the polygon features that represent Historical Allotments. Since the data in the RAS system is about allotments and pastures, where they are used, this is where the data connection between the geospatial feature data and the RAS application will be established.

## ***Topology***

Geodatabase and map topologies will be established to relate the active feature classes together, to maintain feature geometry and to aid in the editing of features. The implementation of this data standard requires that polygons be defined by bounding arcs. Therefore, a minimum set of geodatabase topology rules are defined as part of the geodatabase to verify the coincidence between these two feature classes.

Map topology shall be established during edit sessions. Edits to the polygon shape will be performed by modifying the bounding arc. (Historical or archived polygons will not be edited once they become inactive). For additional information, refer to the best practices document available on the Spatial Data Management subsection on the EGIS web page: <http://web.blm.gov/egis/DataManagementdocs.htm> It is recommended that these tools be used and implemented to improve data quality and integrity.

## ***Data Guidelines***

Implementation of the data standards will occur at all organizational levels of the Bureau. The standards are intended to be platform-independent.

There are some attributes that are intended to eventually become system generated attributes when a system or application is developed to manage this dataset. At the present time there is no specific application for maintaining this data layer and therefore those attributes will currently need to be manually edited. Those attributes will currently be listed as generated in the attribute table.

The attributes included in this implementation are those that have been established for the national data standard and cannot be modified except through the Data Standards Maintenance process. If additional attributes or domain values are desired by individual states/offices, create a new attribute and populate with a new attribute domain assignment. Metadata for the additional attributes must be documented by that office.

The Administrative State, District and Field Office codes are part of a three tier identification system. While using these codes in combination can provide a unique identifier, they are also listed as separate attributes so that if the codes change at a single level they are easy to update. The concatenated code can then be regenerated. While some states may not use the exact naming convention, using the listing as a three tier code will allow for the creation of a unique identifier. In addition there are numerous groups within

BLM currently using this type of a system, and while it will soon be replaced by a new code system from FBMS, this will allow the codes to be linked and migrated to match the new BLM/DOI standards.

### ***Review Cycle***

The data for the grazing pasture areas and the grazing allotment areas should be reviewed on at least a semi-annual basis for updates. Based on program direction, the timing of this should be June and December. The data standard itself will also be reviewed annually or at the time of request by the users through the data steward.

## **Part II: Data Standard Implementation Details**

### ***Table Information***

#### ***A. Grazing Pasture Arcs (gra\_past\_arc)***

The arc features used to define the polygon features are described in the following table. These arc attributes serve as feature level metadata information. Some of these items will be system generated in the future and will not require any input effort by the users. Others have Domain values with appropriate definitions. The 5<sup>th</sup> through the 9th attributes describe the data collection method along with a description of the expected spatial accuracy.

The Grazing program has given the following guidelines for placement of the arcs in relation to ground features:

All pasture boundaries are physical features like fences or rim rock or water. Imaginary boundaries like parcels are only used when necessary to close the polygons. Similarly, even if a pasture boundary “follows” ownership, fence lines rarely follow ownership exactly and the line segments should come from fences, not from parcels. If the fence line locations have not been accurately mapped, and are supposed to follow imaginary boundaries like parcels, the boundary should follow the imaginary boundary.

<b>Grazing Pasture Arcs Attributes</b>										
LOGICAL NAME	ALIAS	GIS NAME	DATA FORMAT	REQUIREMENT*	ALLOW NULLS?	DEFAULT VALUE	DOMAIN NAME	FL META DATA?***	DERIVED?	SOURCE
N/A	Created Date	CREATE_DATE	Date	M	No	9/9/9999		Yes	Yes	Generated
N/A	Created By Name	CREATE_BY	Char(30)	M	No	UNK		Yes	Yes	Generated
Location Modified Date	Modified Date	MODIFY_DATE	Date	M	No	9/9/9999		Yes	Yes	Generated
N/A	Modified By Name	MODIFY_BY	Char(30)	M	No	UNK		Yes	Yes	Generated
Location Source Type Name	Coordinate Source Type Code	COORD_SRC_TYPE	Char(5)	M	No	UNK	DOM_COORD_SOURCE_TYPE	Yes	No	Operator Input
Location Source Actual Name	Coordinate Source Code	COORD_SRC2	Char(25)	O	Yes			Yes	No	Operator Input
Defining Feature Type Name	Defining Feature Type Code	DEF_FET_TYPE	Char(15)	M	No	UNK	DOM_DEF_FEATURE_TYPE	Yes	No	Operator Input
Defining Feature Description Name	Defining Feature Code	DEF_FET2	Char(30)	O	Yes			Yes	No	Operator Input
Line Form Accuracy Measure	Accuracy Measurement In Feet	ACCURACY_FT	Long Integer(4)	M	No	-1		Yes	No	Operator Input
*Requirement: M=Mandatory O=Optional C=Conditional **FL Metadata – Feature Level Metadata										

**Created Date**

This is a system generated attribute. As a new feature is added to the system its creation date will be collected and maintained. The date will be in the format of MM/DD/YYYY.

**Created By Name**

This is a system generated attribute. As a new feature is added to the system the UserID of the person creating the feature will be collected and maintained. The UserID will be the persons BLM login ID. This attribute will be deleted before providing the data to the public.

**Modified Date**

This is a system generated attribute. As a feature is edited or modified while in the system its modification date will be collected and maintained. The date will be in the format of MM/DD/YYYY.

**Modified By Name**

This is a system generated attribute. As a feature is edited or modified while in the system UserID of the person modifying the data will be collected and maintained. The UserID will be the persons BLM login ID. This attribute will be deleted before providing the data to the public.

**Coordinate Source Type Code**

The code that identifies the general category for the origin of the location coordinate (Appendix A), representing a compilation of the state adopted source codes. The domain contains those values that would most likely be used in the determination of source codes for the data set.

Attribute Domain Assignment: DOM\_COORD\_SOURCE\_TYPE

Default value: UNK

**Coordinate Source Code**

The code that identifies a more specific description of the coordinate source.

Suggested values appear in a table (Appendix A), but the user is free to enter any value they choose. This domain is not intended to be all inclusive but may be used as a starting point for state-level lists of domain values. This list is not intended to be a substitute for the accuracy values that are found in the 'Accuracy Measurement Table'. This is an optional attribute.

### Defining Feature Type Code

The name (code) that identifies the high-level category for the actual physical or mapping characteristics (features) from which the arcs are derived (Appendix A).

Attribute Domain Assignment: DOM\_DEF\_FEATURE\_TYPE

Default value: UNK

### Defining Feature Code

The code that identifies a more specific description of the feature from which the arcs are derived to create polygon boundaries. This information further describes the physical or mapping feature that makes up the polygon boundary.

Suggested values appear in a table (Appendix A) but the user is free to enter any value they choose. This domain is not intended to be all inclusive but may be used as a starting point for state-level lists of domain values. This is an optional attribute.

### Accuracy Measurement in Feet

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)*<sup>1</sup> 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.** Below is an **example** table of accuracy measurements. (Attempting to list all values in a domain table would produce an infinite list.)

<sup>1</sup> Federal Geographic Data Committee. 1998. Geospatial Positioning Accuracy Standards Part 3: National Standard for Spatial Data Accuracy, FGDC-STD-007.3-1998

Attribute Domain Assignment: none

Default value: '-1'

<b>Accuracy Measurement Example Table</b>	
<b>1</b>	<b>+/- 1 Feet</b>
<b>10</b>	<b>+/- 10 Feet</b>
<b>15</b>	<b>+/- 15 Feet</b>
<b>20</b>	<b>+/- 20 Feet</b>
<b>100</b>	<b>+/- 100 Feet</b>

***B. Grazing Pasture Polygons (gra\_past\_poly)***

The grazing pasture polygon features are defined in the following table. These pasture attributes may be duplicated in RAS but are considered minimum information for unique identification and cartographic purposes. Domain values are used when appropriate.

There will be a minimum of 10 attributes associated with the polygon features.

<b>Grazing Pasture Polygons Attributes</b>										
LOGICAL NAME	ALIAS	GIS NAME	DATA FORMAT	REQUIREMENT*	ALLOW NULLS?	DEFAULT VALUE	DOMAIN NAME	FL META DATA?***	DERIVED?	SOURCE
Allotment Number	Allotment Number	ALLOT_NO	Char(5)	M	No			No	No	Operator Input
Allotment Name	Allotment Name	ALLOT_NAME	Char(50)	M	No	UNK		No	No	Operator Input
Pasture Number	Pasture Number	PAST_NO	Char(2)	M	No	01		No	No	Operator Input
Pasture Name	Pasture Name	PAST_NAME	Char(50)	M	No			No	No	Operator Input
Polygon Form Area Measure	GIS Acres	GIS_ACRES	Double(16.6)	M	No	0		No	Yes	Generated
Administrative Office.State Alphabetic Code	Administrative State Code	ADMIN_ST	Char(2)	M	No		DOM_ADMIN_ST	No	No	Operator Input
District Office.BLM Organization Code	Managing District Office Code	ADMIN_DO	Char(2)	M	No	00		No	No	Operator Input
Field Office.BLM Organization Code	Managing Field Office Code	ADMIN_FO	Char(3)	O	No	000		No	No	Operator Input
N/A	Managing Office Code	ADMIN_OFF	Char(7)	C	Yes			No	Yes	Operator Input
State Alphabetic Code + Allotment Number + Pasture Number(PK)	Managing State Allotment Pasture Number	ST_ALLOT_PAST	Char(9)	M	No	XX0000000		No	No	Operator Input
*Requirement: M=Mandatory O=Optional C=Conditional **FL Metadata – Feature Level Metadata										

**Allotment Number**

The number that identifies an Allotment which is unique within the BLM administrative state. Note: An allotment number may never be reused. If an existing allotment is divided or combined, all changed allotments should be assigned a new allotment number.

New allotment numbers are normally assigned by the system; however users may assign unique unused numbers according to office policy. Once an allotment has been created, any office can attach authorization(s) to it. Only the office creating the allotment is allowed to modify the allotment. The leading zeros must be included in the values entered in this field. '00045' is the correct entry, not '45'.

**Allotment Name**

The name by which the allotment is commonly known.

The name given to the allotment, defined as "...the basic geographic area used in administering BLM range land." It may include private, state, and public lands under the jurisdiction of the Bureau of Land Management and/or other federal agencies.

**Pasture Number**

The number that identifies a specific pasture within one Allotment. Note: numbering usually starts at 1 for each allotment.

The pasture number is a two-digit number that is unique within an allotment if there is more than one pasture within the allotment. The default value for a Pasture Number is "01" if there is only one pasture within the allotment. This in effect means that the pasture is the allotment. All additional pastures shall be numbered sequentially from "01".

**Pasture Name**

A pasture name is given to an area that is a subset area of an allotment. Some allotments may have multiple pastures where a name would be appropriate while some allotments may have no pastures delineated in which case the default value should be 'NA'.

**GIS Acres**

This is a calculated value of area in units of acres based on the area field created by default within the ESRI Polygon data structure. For the purposes of a 'national data layer', the data are to be stored in geographic coordinates which do not correspond to ground values. This requires that there be a standard method for calculating this attribute.

The method used for these data are as follows: The data are projected into a standard projection such as the ESRI default Albers projection for the continental United States, "US Albers NAD 1983." Once the data are projected, then a calculation of "SHAPE\_Area (square meters) \* 0.0002471044 = acres" is applied to the existing 'area' field that is default area created by the ESRI software resulting in the field (Attribute) 'SHAPE\_Area'. Please note that the figure used in this calculation is the factor for converting the US Survey Foot value of for the length of a meter as opposed to the International Standard for converting meters and feet.

**Administrative State Code**

An administrative unit that identifies the state or geographic area which has administrative jurisdiction over lands, and cases, although the land for a case may not be physically located in a state. Only those states that are BLM administrative states are in the domain for this entity. Example: Montana is the Administrative State for public lands in the geographic States of Montana, South and North Dakota.

A two letter, upper case abbreviation for the administrative state office. The current list of values is: AK, AZ, CA, CO, ES, ID, MT, NM, NV, OR, UT and WY.

Attribute Domain Assignment: DOM\_ADMIN\_ST

**Managing District Office Code**

The second level of BLM administrative unit that identifies the state or geographic area which has administrative jurisdiction over lands. A District Office reports to an Administrative State Office.

This is a two digit code designating the second administrative layer down from a state office that manages the allotment. This is not the jurisdiction of the allotment.

**Managing Field Office Code**

The smallest BLM administrative unit that identifies the state or geographic area which has administrative jurisdiction over lands. A Field Office reports to a District Office.

This is a three digit code designating the third administrative layer down from a state office. This is not the jurisdiction of the allotment.

**Managing Office Code**

A BLM code for the individual office that is responsible for the administration of the allotment and pasture. This represents a concatenation of the values for State Office Code, District Office Code, and Field Office Code, if applicable.

The value for this field can be obtained using the Field Calculator in ArcMap ([ADMIN\_OFF] = [admin\_st] + [admin\_do] + [admin\_fo]). *Note: If the value for any one of the 3 office codes is changed, the ADMIN\_OFF values must be updated by running the Field Calculator function again.*

**Managing State Allotment Pasture Number**

This is a concatenation of three existing attributes but is not a substitute for having any of those three attributes. It is the existing unique code that identifies individual pastures throughout the entire United States. This concatenated value serves as a nationwide unique identifier that allows for a linkage from any unique Pasture polygon in the Geospatial dataset to the RAS dataset.

### C. Grazing Allotment Polygons (*gra\_allot\_poly*)

The Allotment polygon features are derived features from the Pasture Polygons. These attributes are allotment attributes that may be duplicated in RAS but are considered to be minimum information for unique identification and cartographic purposes. Domain values lists are utilized with their appropriate definitions.

There will be a minimum of 9 attributes associated with the allotment polygon features.

Grazing Allotment Polygons Attributes										
LOGICAL NAME	ALIAS	GIS NAME	DATA FORMAT	REQUIREMENT*	ALLOW NULLS?	DEFAULT VALUE	DOMAIN NAME	FL META DATA**	DERIVED?	SOURCE
Allotment Number(PK)	Allotment Number	ALLOT_NO	Char(5)	M	No	UNK		No	No	Operator Input
Allotment Name	Allotment Name	ALLOT_NAME	Char(50)	M	No	UNK		No	No	Operator Input
Polygon Form Area Measure	GIS Acres	GIS_ACRES	Double(16.6)	M	No	0		No	Yes	Generated
Administrative Office.State Alphabetic Code	Administrative State Code	ADMIN_ST	Char(2)	M	No		DOM_ADMIN_ST	No	No	Operator Input
District Office.BLM Organization Code	Managing District Office Code	ADMIN_DO	Char(2)	M	No	00		No	No	Operator Input
Field Office. BLM Organization Code	Managing Field Office Code	ADMIN_FO	Char(3)	O	No	000		No	No	Operator Input
N/A	Managing Office Code	ADMIN_OFF	Char(7)	C	Yes			No	Yes	Operator Input
State Alphabetic Code + Allotment Number	Managing State Allotment Number	ST_ALLOT	Char(7)	M	No	XX00000		No	No	Operator Input
Allotment Active Date	Allotment Active Date	ACTIVE_DT	Date	M	No	9/9/9999		No	No	Operator Input
*Requirement: M=Mandatory O=Optional C=Conditional **FL Metadata – Feature Level Metadata										

**Allotment Number**

The number that identifies an Allotment which is unique within the BLM administrative state. Note: An allotment number may never be reused. If an existing allotment is divided or combined, all changed allotments should be assigned a new allotment number.

New allotment numbers are normally assigned by the system. However, users may assign unique unused numbers according to office policy. Once an allotment has been created, any office can attach authorization(s) to it. Only the office creating the allotment is allowed to modify the allotment. The leading zeros must be included in the values entered in this field. '00045' is the correct entry, not '45'.

**Allotment Name**

The name by which the allotment is commonly known.

The name given to the allotment, defined as "...the basic geographic area used in administering BLM range land." It may include private, state, and public lands under the jurisdiction of the Bureau of Land Management and/or other federal agencies.

**GIS Acres**

This is a calculated value of area in units of acres based on the area field created by default within the ESRI Polygon data structure. For the purposes of a 'national data layer', the data are to be stored in geographic coordinates which do not correspond to ground values. This requires that there be a standard method for calculating this attribute.

The method used for these data are as follows: The data are projected into a standard projection such as the ESRI default Albers projection for the continental United States (US Albers NAD 1983). Once the data are projected, then a calculation of "SHAPE\_Area (square meters) \* 0.0002471044 = acres" is applied to the existing 'area' field that is default area created by the ESRI software resulting in the field (Attribute) 'SHAPE\_Area'. Please note that the figure used in this calculation is the factor for converting the US Survey Foot value for the length of a meter as opposed to the International Standard for converting meters and feet.

**Administrative State Code**

An administrative unit that identifies the state or geographic area which has administrative jurisdiction over lands, and cases, although the land for a case may not be physically located in a state. Only those states that are BLM administrative states are in the domain for this entity. Example: Montana is the Administrative State for public lands in the geographic States of Montana, South and North Dakota.

A two letter, upper case abbreviation for the administrative state office. The current list of values is: AK, AZ, CA, CO, ES, ID, MT, NM, NV, OR, UT and WY.

Attribute Domain Assignment: DOM\_ADMIN\_ST

**Managing District Office Code**

The second level of BLM administrative unit that identifies the state or geographic area which has administrative jurisdiction over lands. A District Office reports to an Administrative State Office.

This is a two digit code designating the second administrative layer down from a state office that manages the allotment. This is not the jurisdiction of the allotment.

**Managing Field Office Code**

The smallest BLM administrative unit that identifies the state or geographic area which has administrative jurisdiction over lands. A Field Office reports to a District Office.

This is a three digit code designating the third administrative layer down from a state office. This is not the jurisdiction of the allotment.

**Managing Office Code**

A BLM code for the individual office that is responsible for the administration of the allotment and pasture. This represents a concatenation of the values for State Office Code, District Office Code, and Field Office Code, if applicable.

The value for this field can be obtained using the Field Calculator in ArcMap ([ADMIN\_OFF] = [admin\_st] + [admin\_do] + [admin\_fo]). *Note: If the value for any one of the 3 office codes is changed, the ADMIN\_OFF values must be updated by running the Field Calculator function again.*

**Managing State Allotment Number**

This is a concatenation of two existing attributes but is not a substitute for having either of those two attributes. It is the existing unique code that allows identification of individual allotments throughout the entire United States. This concatenated number serves as a nationwide unique identifier that allows for a linkage from any unique Allotment polygon in the Geospatial dataset to the RAS dataset.

**Allotment Active Date**

The calendar date on which the boundary of an allotment is established and becomes effective. The format for the date will be MM/DD/YYYY, and will be entered only once for that polygon.

***D. Grazing Historical Allotment Polygons (gra\_hist\_allot\_poly)***

The Historical Allotment polygon features are a result of the Allotment Polygons being permanently changed as a result of a business need. The resulting allotments are no longer active within the RAS system but will be stored for historical reference. There are no arc features tied to these polygons since once a polygon is inactive and is moved to the historical polygon feature class it should not be edited further. If the polygon needs to be recreated a copy of the feature can be moved back to the active feature class and editing can be conducted there. These attributes are allotment attributes that may be duplicated in RAS but are considered to be minimum information for unique identification and cartographic purposes.

There will be a minimum of 10 attributes associated with the allotment polygon features.

**Grazing Historical Allotment Polygons Attributes**

LOGICAL NAME	ALIAS	GIS NAME	DATA FORMAT	REQUIREMENT*	ALLOW NULLS?	DEFAULT VALUE	DOMAIN NAME	FL META DATA?***	DERIVED?	SOURCE
Allotment Number(PK)	Allotment Number	ALLOT_NO	Char(5)	M	No			No	No	Operator Input
Allotment Name	Allotment Name	ALLOT_NAME	Char(50)	M	No	UNK		No	No	Operator Input
Polygon Form Area Measure	GIS Acres	GIS_ACRES	Double(16.6)	M	No	0		No	Yes	Generated
Administrative Office.State Alphabetic Code	Administrative State Code	ADMIN_ST	Char(2)	M	No		DOM_ADMIN_ST	No	No	Operator Input
District Office.BLM Organization Code	Managing District Office Code	ADMIN_DO	Char(2)	M	No	00		No	No	Operator Input
Field Office. BLM Organization Code	Managing Field Office Code	ADMIN_FO	Char(3)	M	No	000		No	No	Operator Input
N/A	Managing Office Code	ADMIN_OFF	Char(7)	C	Yes			No	Yes	Operator Input
State Alphabetic Code + Allotment Number	Managing State Allotment Number	ST_ALLOT	Char(7)	M	No	XX00000		No	No	Operator Input
Allotment Active Date	Allotment Active Date	ACTIVE_DT	Date	M	No	9/9/9999		No	No	Operator Input
Allotment Inactive Date	Allotment Inactive Date	INACTIVE_DT	Date	M	No	9/9/9999		No	No	Operator Input

\*Requirement: M=Mandatory O=Optional C=Conditional

\*\*FL Metadata – Feature Level Metadata

**Allotment Number**

The number that identifies an Allotment which is unique within the BLM administrative state. Note: An allotment number may never be reused. If an existing allotment is divided or combined, all changed allotments should be assigned a new allotment number.

New allotment numbers are normally assigned by the system; however users may assign unique unused numbers according to office policy. Once an allotment has been created, any office can attach authorization(s) to it. Only the office creating the allotment is allowed to modify the allotment.

The leading zeros must be included in the values entered in this field. '00045' is the correct entry, not '45'.

**Allotment Name**

The name by which the allotment is commonly known.

The name given to the allotment, defined as "...the basic geographic area used in administering BLM range land." It may include private, state, and public lands under the jurisdiction of the Bureau of Land Management and/or other federal agencies.

**GIS Acres**

This is a calculated value of area in units of acres based on the area field created by default within the ESRI Polygon data structure. For the purposes of a 'national data layer', the data are to be stored in geographic coordinates which do not correspond to ground values. This requires that there be a standard method for calculating this attribute.

The method used for these data are as follows: The data are projected into a standard projection such as the ESRI default Albers projection for the continental United States (US Albers NAD 1983). Once the data are projected, then a calculation of "SHAPE\_Area (square meters) \* 0.0002471044 = acres" is applied to the existing 'area' field that is default area created by the ESRI software resulting in the field (Attribute) 'SHAPE\_Area'. Please note that the figure used in this calculation is the factor for converting the US Survey Foot value for the length of a meter as opposed to the International Standard for converting meters and feet.

**Administrative State Code**

An administrative unit that identifies the state or geographic area which has administrative jurisdiction over lands, and cases, although the land for a case may not be physically located in a state. Only those states that are BLM administrative states are in the domain for this entity. Example: Montana is the Administrative State for public lands in the geographic States of Montana, South and North Dakota.

A two letter, upper case abbreviation for the administrative state office. The current list of values is: AK, AZ, CA, CO, ES, ID, MT, NM, NV, OR, UT and WY.

Attribute Domain Assignment: DOM\_ADMIN\_ST

### **Managing District Office Code**

The second level of BLM administrative unit that identifies the state or geographic area which has administrative jurisdiction over lands. A District Office reports to an Administrative State Office.

This is a two digit code designating the second administrative layer down from a state office that manages the allotment. This is not the jurisdiction of the allotment.

### **Managing Field Office Code**

The smallest BLM administrative unit that identifies the state or geographic area which has administrative jurisdiction over lands. A Field Office reports to a District Office.

This is a three digit code designating the third administrative layer down from a state office. This is not the jurisdiction of the allotment.

### **Managing Office Code**

A BLM code for the individual office that is responsible for the administration of the allotment and pasture. This represents a concatenation of the values for State Office Code, District Office Code, and Field Office Code, if applicable.

The value for this field can be obtained using the Field Calculator in ArcMap ([ADMIN\_OFF] = [admin\_st] + [admin\_do] + [admin\_fo]). *Note: If the value for any one of the 3 office codes is changed, the ADMIN\_OFF values must be updated by running the Field Calculator function again.*

### **Managing State Allotment Pasture Number**

This is a concatenation of three existing attributes but is not a substitute for having any of those three attributes. It is the existing unique code that identifies individual pastures throughout the entire United States. This concatenated value serves as a nationwide unique identifier that allows for a linkage from any unique Pasture polygon in the Geospatial dataset to the RAS dataset.

### **Allotment Active Date**

The calendar date on which the boundary of an allotment is established and becomes effective. The date will be in the format of MM/DD/YYYY, and will be entered only once for that polygon.

**Allotment Inactive Date**

The calendar date on which the boundary of an allotment is no longer effective because the external boundary of the allotment changed or it is no longer used as an allotment. Business Rules: Allotments with End Dates are a separate feature class from Active Allotments. The date will be in the format of MM/DD/YYYY, and will be entered only once for that polygon.

## Part III: Appendices

### *Appendix A- Domain Values and Examples*

#### **Domains Specific to Grazing**

No domain values are specific to the Grazing Data Standard.

Domain values are maintained separately from the data standard. This is due to values being more likely to have an addition or change that would not affect the data standard. Those value changes can be made without a revision to the entire standard. Individual states/offices can extend the domain table with additional values as necessary. However, metadata for the additional values must be documented by that office.

#### **Coordinate Source Type Code**

The code that identifies the general category for the origin of the location coordinate representing a compilation of the state adopted source codes. The domain contains those values that would most likely be used in the determination of source codes for the data set.

Attribute Domain Assignment: DOM\_COORD\_SOURCE\_TYPE

Default value: UNK

Allowable Codes:

<b>COORD_SOURCE_TYPE</b>	<b>Description</b>	<b>Definition</b>
MAP		Manuscripted lines. Includes hand drawing onto paper or mylar map base and capturing with a digitizing tablet and on-screen digitizing using DRG
IMG	Imagery	DOQ or other imagery backdrops at any scale
GPS	GPS	Lines obtained from a Global Positioning System device not using survey methods
DLG	Digital Line Graph	Lines duplicated or buffered from (for example, 1:24K or 1:100K scale) USGS Digital Line Graph derived data including GIS themes such as BLM Streams or transportation

CFF	Cartographic Feature Files	Lines duplicated or buffered from Cartographic Feature Files (USFS)
GCD	Geographic Coordinate Database	Lines snapped to Geographic Coordinate Database points
DEM	Digital Elevation Model	Digital Elevation Model (30m or better accuracy) used for creation of contours
NHD	National Hydrologic Dataset	USGS National Hydrologic Dataset (NHD) (For example, 1:24L or 1:100K scale)
SRV	Survey	Survey methods were used to define the line feature. This normally requires using COGO or Survey Manager to input the data
TRS	Township, Range, Section	PLSS Description
LLD	Legal Land Description	A label that identifies a specific parcel or parcels of land. LLD information includes meridian, township, range, and section, as well as geopolitical information. (Note: This is not to be confused with Legal Description/Land Description, or Land Description.)
GIS	BLM GIS Layer	Another data layer within an existing BLM GIS dataset
UNK	Unknown	Unknown source (default value)
DRG	Digital Raster Graphics	A raster image of a scanned USGS standard series topo map. The accuracy and datum of a DRG matches the accuracy and datum of the source map.
OTH	Other	A coordinate source type that does not appear as one of the other defined types in this list

## Coordinate Source Code

The code that identifies a more specific description of the coordinate source. Suggested values appear in the table but the user is free to enter any value they choose. This domain is not intended to be all inclusive but may be used as a starting point for state-level lists of domain values. This list is not intended to be a substitute for the accuracy values that are found in the 'Accuracy Measurement Table'. This is an optional attribute.

**Note: This is a suggested list only for this optional attribute. Individual states/offices are free to enter other values if they choose.**

COORD_SRC_TYPE	COORD_SRC2	Description
MAP	24K map	USGS 1:24K hard-copy map
	100K map	USGS 1:100K hard-copy map
	misc map	miscellaneous paper maps, maps at varying scales
IMG	1 m doq	1 meter digital ortho quad
	air photo	
	satellite image	
GPS	GPS recreation grade	GPS recreation grade worse than 5 meter accuracy
	GPS resource grade	GPS resource grade 30cm to 5 meter accuracy
	GPS survey grade	GPS survey grade better than 30cm accuracy
DLG	24K dlg	USGS 1:24K digital line graphs
	100K dlg	USGS 1:100K digital line graphs
	250K dlg	USGS 1:250K digital line graphs
CFF		
GCD	GCDB	Geographic Coordinate Database
DEM	30 m dem	30 meter USGS Digital Elevation Model
NHD		
SRV	Cadastral Survey	Cadastral survey description based on bearing and distance from a surveyed start point
UNK	Unknown	Unknown coordinate source
DRG	24K drg	USGS 1:24K digital raster graphics
	100K drg	USGS 1:100K digital raster graphics
	250K drg	USGS 1:250K digital raster graphics
OTH	Other	Other source not listed in these domains

### Defining Feature Type Code

The name (code) that identifies the high-level category for the actual physical or mapping characteristics (features) from which the arcs are derived (Appendix A).

Attribute Domain Assignment: DOM\_DEF\_FEATURE\_TYPE

Default value: UNK

Allowable Codes:

DEF_FEATURE	Description	Definition
ER_SLOPE	Erosion Slope Landform	This combines two standard landform classifications. The two were combined to reduce confusion between erosion and slope landform features. The detailed description includes: rim, ridges, toe of slope, etc
COAST_FLUV	Coastal Fluvial Landform	This combines two standard landform classifications. The two were combined to reduce confusion between coastal and fluvial landforms. The detailed description includes creeks, streams, rivers, shorelines, etc
OTH_LAND	Other Landform	This includes any other landform, such as Mountain, Glacial, and Volcanic landforms.
VEG	Vegetation	When the boundary is defined by a vegetative transition (ex: wildlife migration route).
CONST_FEAT	Constructed Feature	When the boundary is defined by a constructed feature. The detailed description could include: fences, roads, pipelines, campgrounds etc, along with any offset/buffer description
ADMIN_BND	Admin Boundary	When the boundary is specifically defined as following another administrative boundary, even if that administrative boundary is then described as following some other defining feature. For example part of an ACEC boundary may follow a planning boundary, and the planning boundary is defined as following a county boundary, and the county boundary is defined as following the midpoint of a river.
PLSS	PLSS	When the boundary is explicitly defined through PLSS
OTH	Other	When the boundary is not well defined by any of the other codes, ex: OBLIQUE, PT-TO-POINT etc.
UNK	Unknown	The default entry, no optional codes can be associated with this selection

**Crosswalk table from the old defining feature domain values to the new Defining Feature Type domain values**

<b>DEF_FEATURE (Old Version)</b>	<b>DEFINING_FEATURE_TYPE</b>	<b>Definition</b>
RIM	ER_SLOPE	Natural topographic barrier to the movement of livestock
FENCE	CONST_FEAT	Constructed fence
LAKE	COAST_FLUV	The shoreline of any manmade or natural standing water
ROUTE	CONST_FEAT	Road centerlines (using the name of the FAMS Feature Class)
STREAM_RBANK	COAST_FLUV	Downstream right bank of stream, manmade or natural moving water (indicates that the stream is within the downstream left pasture)
STREAM_LBANK	COAST_FLUV	Downstream left bank of stream, manmade or natural moving water (indicates that the stream is within the downstream right pasture)
STREAM_CENTER	COAST_FLUV	Centerline of stream, manmade or natural moving water
PARCEL	PLSS	Legal line such as ownership or section line
PT-TO-PT	OTH	Boundary is not a legal or geographic feature
ROUTE_OFFSET	CONST_FEAT	Boundary is offset from a route
UNK	UNK	Defining feature unknown
	ADMIN_BND	
	VEG	
	OTH_LAND	

## Defining Feature Code

The code that identifies a more specific description of the feature from which the arcs are derived to create polygon boundaries. This information further describes the physical or mapping feature that makes up the polygon boundary. Suggested values appear in the table but the user is free to enter any value they choose. This domain is not intended to be all inclusive but may be used as a starting point for state-level lists of domain values. This is an optional attribute.

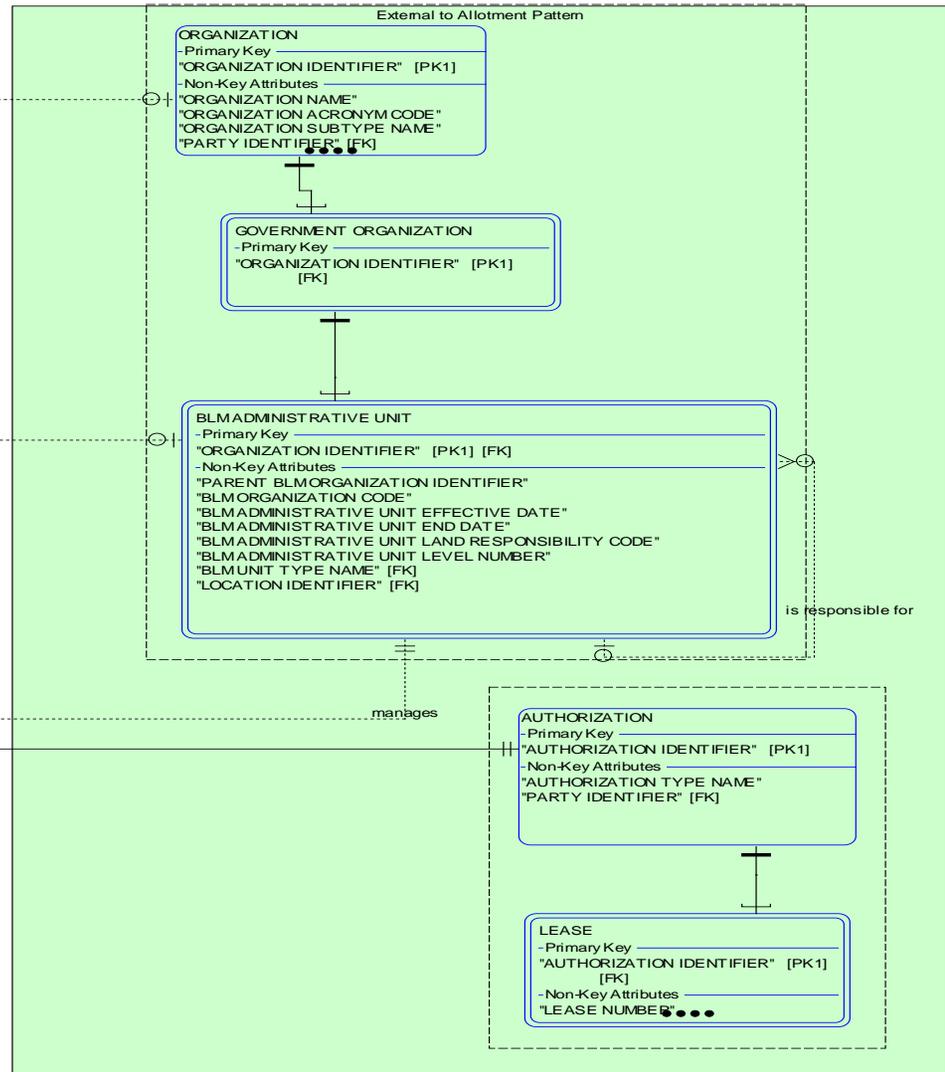
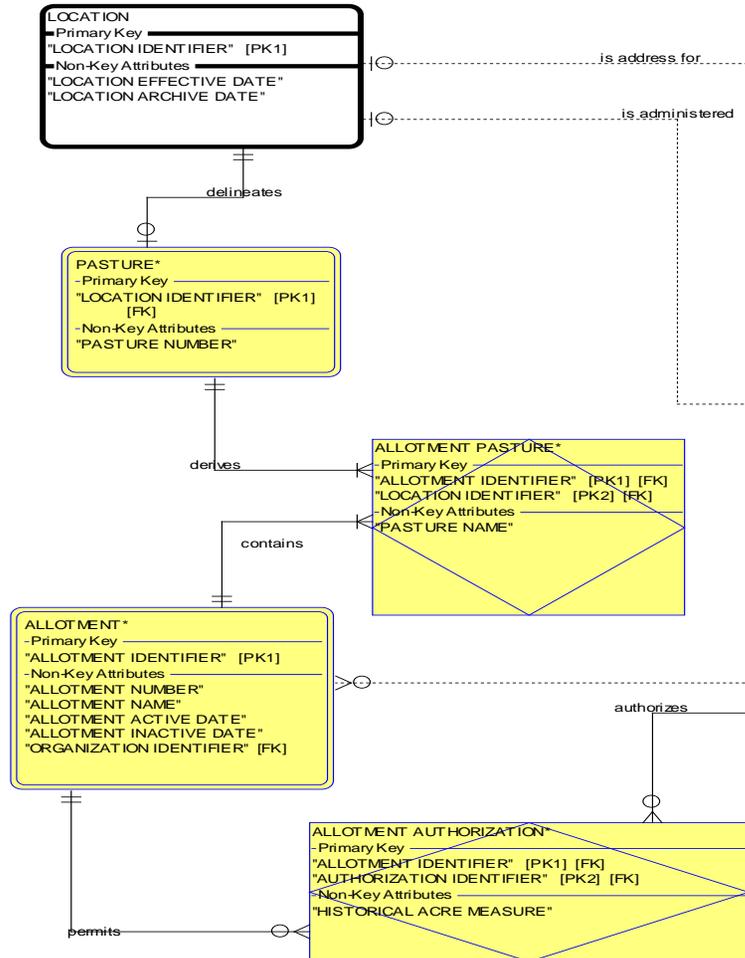
**Note: This is a suggested list only for this optional attribute. Individual states/offices are free to enter other values if they choose.**

Defining Feature Type Code	Defining Feature Code	Description
ADMIN_BND	ownership	ownership
ADMIN_BND	county	county line
ADMIN_BND	forest	forest boundary
ADMIN_BND	land grant	land grant
ADMIN_BND	military	military boundary
ADMIN_BND	national border	national border
ADMIN_BND	national park	national park boundary
ADMIN_BND	special management area	special management area boundary
ADMIN_BND	right of way edge	right of way edge
ADMIN_BND	right of way centerline	right of way centerline
ADMIN_BND	state line	state line
ADMIN_BND	tract	tract
COAST_FLUV	coast	coastline
COAST_FLUV	river edge	river edge
COAST_FLUV	hydrologic divide	hydrologic divide
COAST_FLUV	Indian trust asset	Indian trust asset boundary
COAST_FLUV	river centerline	river centerline
COAST_FLUV	stream centerline	stream centerline
COAST_FLUV	wash centerline	wash centerline
COAST_FLUV	wash edge	wash edge

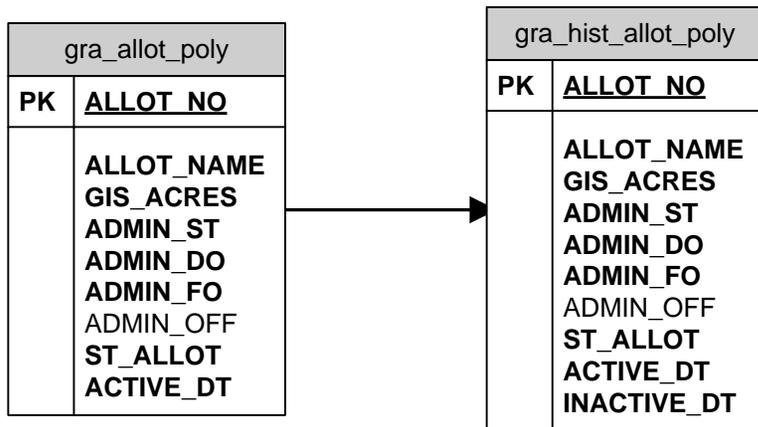
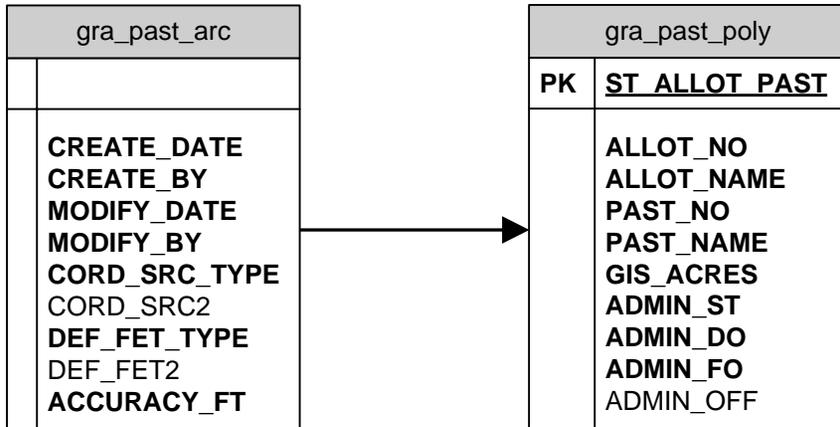
CONST_FEAT	aqueduct	aqueduct
CONST_FEAT	camp ground	camp ground
CONST_FEAT	levee	levee
CONST_FEAT	offset	offset from a constructed feature
CONST_FEAT	mine	mine
CONST_FEAT	parking area	parking area
CONST_FEAT	railroad centerline	railroad centerline
CONST_FEAT	road centerline	road centerline
CONST_FEAT	trail non-motorized	trail non-motorized
CONST_FEAT	transmission line centerline	transmission line centerline
CONST_FEAT	pipe line centerline	pipe line centerline
CONST_FEAT	water tank	water tank
CONST_FEAT	road edge	road edge
CONST_FEAT	railroad edge	railroad edge
CONST_FEAT	transmission line edge	transmission line edge
CONST_FEAT	pipe line edge	pipe line edge
ER_SLOPE	contour	elevation contour
ER_SLOPE	canyon	canyon
ER_SLOPE	ridge	ridge
ER_SLOPE	rim of canyon	rim of canyon
OTH	line between peak and contour	line between peak and contour
OTH	mineral survey	mineral survey
OTH	oblique	oblique
OTH	line between mountain peaks	line between mountain peaks
OTH_LAND		
PLSS	plss	plss
UNK	unknown	unknown
VEG		
	trail off highway vehicle	trail off highway vehicle
	survey	cadastral survey
	toe of slope	toe of slope

### Appendix B: Logical Data Model

Allotment Pasture Boundary 5/10/2008 version 7 DRAFT



**Appendix C: Physical Database Design**



**Appendix D: Attribute Field Definitions**

<b>Attribute Field</b>	<b>Field Definition</b>	<b>Field Example</b>
<i>Logical Name</i>	The business name of the attribute which includes the entity name, and representation term	Global Positioning System Receiver Type Name
<i>Alias</i>	An alternative name that is more descriptive and user-friendly than the Logical or GIS Field Name	GPS RECEIVER TYPE
<i>GIS Name</i>	The abbreviated name of the field as it appears in the database	RCVR_TYPE
<i>Data Format</i>	Specific type of data allowed/# of characters or numbers/Precision & Scale	Char(15)
<i>Requirement</i> <i>M=Mandatory</i> <i>O=Optional</i> <i>C=Conditional</i>	Whether data is minimum allowed (Mandatory), not mandatory (Optional), or dependent (Conditional) based on an "IF" "THEN" statement	O
<i>Allow Nulls?</i>	Whether or not a value of "Null" is allowed in that column	Yes
<i>Default Value</i>	Value that will apply if no other value is specified	N/A
<i>Domain Name</i>	Name of the table for that attribute, containing the Code, Description, and Definition for each value in the table	DOM_RCVR_TYPE
<i>Feature Level Metadata?</i>	Whether it is metadata that is maintained at the feature level as opposed to metadata pertaining to the whole dataset	No
<i>Derived?</i>	Whether the attribute is system-generated, meaning it requires no input by the user to be populated	No
<i>Source</i>	The source for the data, whether it is system-generated, GPS input, operator input, or an additional BLM system, such as AFMSS or LR2000	GPS