



# **PASTURE AND ALLOTMENT BOUNDARIES DATA STANDARD REPORT**

**July 17, 2008  
Version 2.1**

**United States Department of Interior  
Bureau of Land Management  
Program Management Office  
OC-120  
Denver Federal Center  
Denver, Colorado 80225**

Final  
**Data Standard Report**

<b>1. Introduction:</b> <i>General Information about the standard (For more information see WO-IM-2003-125 attachment 2: Guidance for Managing BLM Data Standards: How to Adopt, Implement, and Maintain Data Standards, pages 17-20)</i>	
<b>Description of Standard</b> Grazing Allotments and Pasture Boundaries. An Allotment is an area of land designated and managed for grazing of livestock. It may include private, state, and public lands under the jurisdiction of the Bureau of Land Management and/or other federal agencies. An allotment is derived from its pastures.	
<b>Affected Groups</b> (who is effected, who should care)	Land Use Planners, GIS Specialists, Rangeland Management Specialists
<b>Sponsor</b> (business of sponsor)	Deb Rawhouser - Division Chief, Planning and Science Policy

<b>2. Data Category:</b> <i>How this standard fit into/support the Bureau Enterprise Architecture.</i>	
What data Subject Area/Information Class(es) does this standard cover? (i.e. Agreement/Contract, Asset/Fixed Asset, Communication/Correspondence)	Geospatial and Geography/Map Geospatial and Geography/Spatial Data Set

<b>3. Data Steward/GIS Contact Identification:</b> <i>Include lead agency if appropriate; who is/are the data steward(s) and GIS Contact(s)</i>			
<b>Office</b>	<b>Role</b>	<b>Name</b>	<b>Contact Information</b>
<b>WO-210</b>	<b>BLM Business Data Steward</b>	<b>Bob Bewley</b>	Bob_Bewley@blm.gov 202 452-5111

<b>4. Data Set Characteristics</b>		
<b>Overall Security:</b> <b>Identify security level</b> (e.g. public/ non-public) If non-public state why	<b>Public</b>	
<b>Who has create, read, update, and/or delete privileges</b>	<b>GIS Specialists, Rangeland Management Specialists</b>	
<b>Data Collection &amp; Maintenance Protocols:</b> data collection and maintenance procedures that would apply	a) Accuracy Requirements: what level is required?	The expected spatial accuracy is included within the attributes of the data. Spatial Accuracy: ACCURACY MEASUREMENT IN FEET
	b) Collection & Input Protocols: what are approved methods?  For Geospatial Data the information relating to collection datum and projection should be included in this section.	There is currently no single method for data collection and input for this data set. Data may be collected and input from a variety of sources as long as the data are documented with metadata. BLM has not yet migrated enough of its existing data stores to any specific format to eliminate any methods for digital data collection.
	c) Update Procedures: On what basis are updates completed (e.g. township basis, case file basis); how often; by when?	The allotments data should be reviewed for update at least semi-annually (June and December) by each field office. Any changes should be made as appropriate.
<b>Data Quality:</b> measures that will be applied to the data	a) Transaction level data quality: how will the review of data quality take place during data entry	Implementation will include domain value edits during data entry.
	b) Monitoring level data quality: what systematic review of data quality will take place and how will it be done?	GIS Specialist and Range Specialist should both review the data for quality upon entry and then during at least annual reviews.

<p><b>Relationship to Other Standards:</b> Identify any other data standards (or applications) that are related; these can include national, state, local, or other agencies/organizations; identify data element that would tie them together (e.g. RIPS by allotment number)</p>	<p>BLM IM- 2006-149 Livestock Grazing Allotment and Pasture Spatial Database Standards</p>
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**5. Data Model Characteristics:** *Each data standard is to be supported by a data model which includes entities and relationships between entities*

	<p>a) <b>Logical Data Model</b> – a graphical depiction of logical data showing entities (tables) and how they relate to each other.</p>
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b) Entity Descriptions: places, persons, things, or concepts described in the data set (aka tables)

Notes: Data Element Names (aka fields) - must adhere to WO IM-2004-60 Attachment 3: Data Element Naming Conventions

Data Element Definition - avoid using data element name to describe, include whether this makes it non-public or not, if there is a data steward for this particular element give name

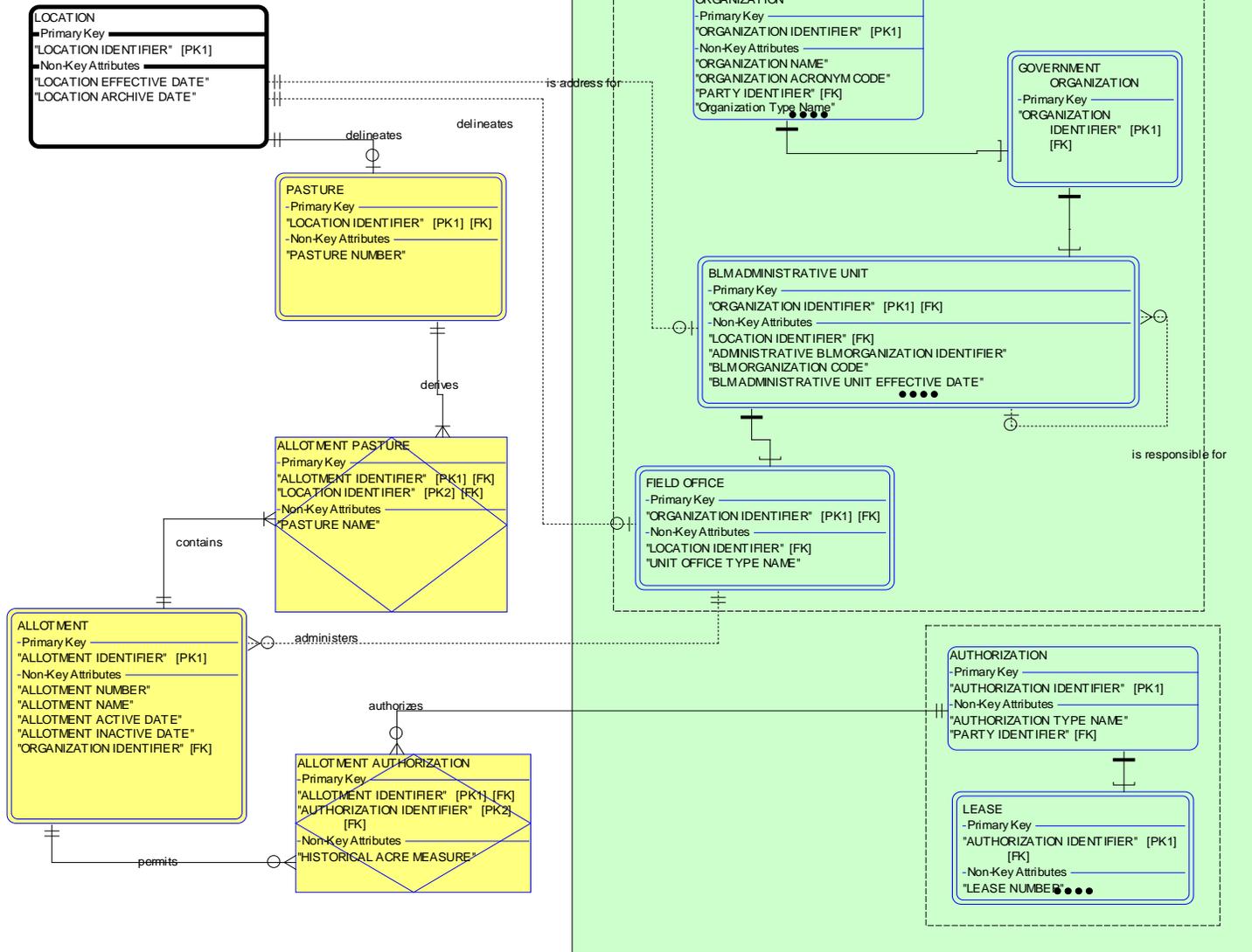
Data Type/Field Size – e.g. Char(12) or Text(12) or Decimal(5,2)

Domain codes and definitions – if has codes, list and define them or refer to authoritative source where they can be found (e.g. Yes, No or list of weed codes)

**Grazing (Allotment Pasture) Data Model**

The entities in the shaded area (green) are not part of this data standard (and do not need to be reviewed). They are provided to show context and provide relationships to other data only.

Allotment Pasture Boundary 5/10/2008 version 7 DRAFT



Entity Name	Entity Description	Logical Data Element Name	Physical Element Name (TBD)	Type	Size	Required?	Definition
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Entity Name	Entity Description	Logical Data Element Name	Physical Element Name (TBD)	Type	Size	Required?	Definition
<b>ALLOTMENT</b>							
Allotment is the basic geographic area used in administering BLM range land. An allotment is derived from its pastures.							
		ALLOTMENT NAME		character	50	Mandatory	The name by which the allotment is commonly known.
		ALLOTMENT NUMBER		character	5	Mandatory	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.
		ALLOTMENT IDENTIFIER		integer		Mandatory	The designed primary key that will uniquely identify a single occurrence of the entity.
		ALLOTMENT ACTIVE DATE		date		Mandatory	The calendar date on which the boundary of an allotment is established and becomes effective. The date will be in FGDC standard format of YYYYMMDD, and will be entered only once for that polygon.
		ALLOTMENT INACTIVE DATE		date		Optional	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 FGDC standard format of YYYYMMDD, and will be entered only once for that polygon.
		ORGANIZATION IDENTIFIER		integer		Mandatory	The designed primary key that will uniquely identify a single occurrence of the entity.
<b>ALLOTMENT AUTHORIZATION</b>							
The authorization that is associated with an allotment for a given time period.							

Entity Name	Entity Description	Logical Data Element Name	Physical Element Name (TBD)	Type	Size	Required?	Definition
		HISTORICAL ACRE MEASURE		decimal		Mandatory	The size of the allotment in acres that was associated with the lease, not necessarily the actual size of the allotment.
		ALLOTMENT IDENTIFIER		integer		Mandatory	The designed primary key that will uniquely identify a single occurrence of the entity.
		AUTHORIZATION IDENTIFIER		integer		Mandatory	The designed primary key that will uniquely identify a single occurrence of the entity.

**ALLOTMENT PASTURE**

The association of which pastures belong to a given allotment. Business Rule: if the internal boundaries of pastures change, the allotment does not change. If the allotment size changes for administrative reasons, a new allotment number is created and the old allotment becomes inactive.

		PASTURE NAME		character	50	Mandatory	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'.
		ALLOTMENT IDENTIFIER		integer		Mandatory	The designed primary key that will uniquely identify a single occurrence of the entity.
		LOCATION IDENTIFIER		integer		Mandatory	The designed primary key that will uniquely identify a single occurrence of the entity.

**PASTURE**

A pasture is an area that is a subset area of an allotment. Allotments may have one or more pastures.

		PASTURE NUMBER		character	2	Mandatory	The number that identifies a specific pasture within one Allotment. Note: numbering usually starts at 1 for each allotment.
		LOCATION IDENTIFIER		integer		Mandatory	The designed primary key that will uniquely identify a single occurrence of the entity.

The following entities shown on the logical data model are not part of this standard but are here for informational purposes.

Entity Name	Entity Description	Logical Data Element Name	Physical Element Name (TBD)	Type	Size	Required?	Definition
<b>AUTHORIZATION</b>							
Documentation of a management decision allowing a request, application or proposal and/or granting the right to use, enjoy, remove, or occupy the land, resources, or real property.							
		AUTHORIZATION IDENTIFIER		integer		Mandatory	The designed primary key that will uniquely identify a single occurrence of the entity.
		PARTY IDENTIFIER		integer		Mandatory	The designed primary key that will uniquely identify a single occurrence of the entity.
<b>BLM ADMINISTRATIVE UNIT</b>							
An organizational unit within BLM which has distinct jurisdictional responsibility for all activities in a geographic area. The formal grouping of positions into designated units and the assignment of functions and responsibilities to those units. This also includes the identification of supervisory/subordinate relationships and the interdependent activity between units.							
		ORGANIZATION IDENTIFIER		integer		Mandatory	The designed primary key that will uniquely identify a single occurrence of the entity.
		LOCATION IDENTIFIER		integer		Mandatory	The designed primary key that will uniquely identify a single occurrence of the entity.
		ADMINISTRATIVE BLM ORGANIZATION IDENTIFIER		integer		Optional	The identifier for the administrative unit that has responsibility for other units. For example, the Administrative Office is responsible for the Administrative State Office, which is responsible for District Offices. District Offices are responsible for
		BLM ORGANIZATION CODE		character	7	Mandatory	The code that indicates the formal grouping of positions into designated units and the assignment of functions and responsibilities to those units.
		BLM ADMINISTRATIVE UNIT END DATE		date		Mandatory	The date on which a BLM Administrative unit ends.
		BLM ADMINISTRATIVE UNIT EFFECTIVE DATE		date		Mandatory	The date on which a BLM Administrative unit begins.

Entity Name	Entity Description	Logical Data Element Name	Physical Element Name (TBD)	Type	Size	Required?	Definition
<b>FIELD OFFICE</b>							
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.							
		ORGANIZATION IDENTIFIER		integer		Mandatory	The designed primary key that will uniquely identify a single occurrence of the entity.
		LOCATION IDENTIFIER		integer		Mandatory	The designed primary key that will uniquely identify a single occurrence of the entity.
		UNIT OFFICE TYPE NAME		character	10	Mandatory	
<b>GOVERNMENT ORGANIZATION</b>							
A type of organization that is a governmental unit, at any level of the government, including state, federal, local.							
		ORGANIZATION IDENTIFIER		integer		Mandatory	The designed primary key that will uniquely identify a single occurrence of the entity.
<b>LEASE</b>							
An authorization (usually long term) to use public lands or resources for a fixed period of time.							
		LEASE NUMBER		character	15	Mandatory	The number associated with a specific authorization to use public lands or resources.
		AUTHORIZATION IDENTIFIER		integer		Mandatory	The designed primary key that will uniquely identify a single occurrence of the entity.
<b>LOCATION</b>							
A defined place that requires a way to locate it by some means. Note: Entities linked to Location have the potential for a geospatial aspect.							
		LOCATION ARCHIVE DATE		date		Optional	The date which is the calendar year, month, and day when the position of the Location is considered no longer valid but has historical value.
		LOCATION EFFECTIVE DATE		date		Mandatory	The date which is the calendar year, month, and day when the position of the Location was produced.
		LOCATION IDENTIFIER		integer		Mandatory	The designed primary key that will uniquely identify a single occurrence of the entity.
<b>ORGANIZATION</b>							
A formal group of people organized for a purpose.							

Entity Name	Entity Description	Logical Data Element Name	Physical Element Name (TBD)	Type	Size	Required?	Definition
		PARTY IDENTIFIER		integer		Mandatory	The designed primary key that will uniquely identify a single occurrence of the entity.
		Organization Class Name		character	15	Mandatory	A description of a super class of organizations (e.g., Federal, State, Local, Private, etc.).
		ORGANIZATION IDENTIFIER		integer		Mandatory	The designed primary key that will uniquely identify a single occurrence of the entity.
		ORGANIZATION NAME		character	100	Mandatory	The official name by which the organization is known. An organization may include businesses, agencies, or corporations, but not individual persons.
		Organization Type Name		character varying	20	Mandatory	A description of the type of organization within an organization class (e.g., department, region, agency, etc.).
		Organization Secondary Name		character varying	100	Mandatory	The name that is the second line of a Party which is an organization. An organization may include businesses, agencies, or corporations, but not individual persons. The second line may be used to store long names or an organizational sub-unit name, such a

<b>6. Business Rules:</b> Rules under which data is used and modified (See WO-IM 2003 247 Attachment 1: Business Rules Collection)						
<b>Rule Name</b>		Allotment Data Collection				
Rule source (e.g. handbook, guidance, directive)		Taylor Grazing Act				
Source Description (brief explanation of where the rule comes from)		Taylor Grazing Act directs BLM to collect information on Grazing Allotments				
Rule Statement (what is the rule?)		BLM is authorized to collect information on Grazing				
Type of Rule (e.g. Business Term, Standard, Guideline)				Standard		
Is it Mandatory, Optional or Not Applicable because it is a Business Term?	Mandatory	Automation Restriction? (Yes, No – <i>caused by the limits of technology</i> )		No		
How is Rule Implemented? (Manual Process, Computer Application, Not Applicable)	Manual and Computer Application					
Name of Application or Manual Process	RAS and Grazing Processes					
Rule Status (Active, Inactive)	Active	Rule Effective Dates (rules kept for historical purposes)	Beginning Date		Ending Date	

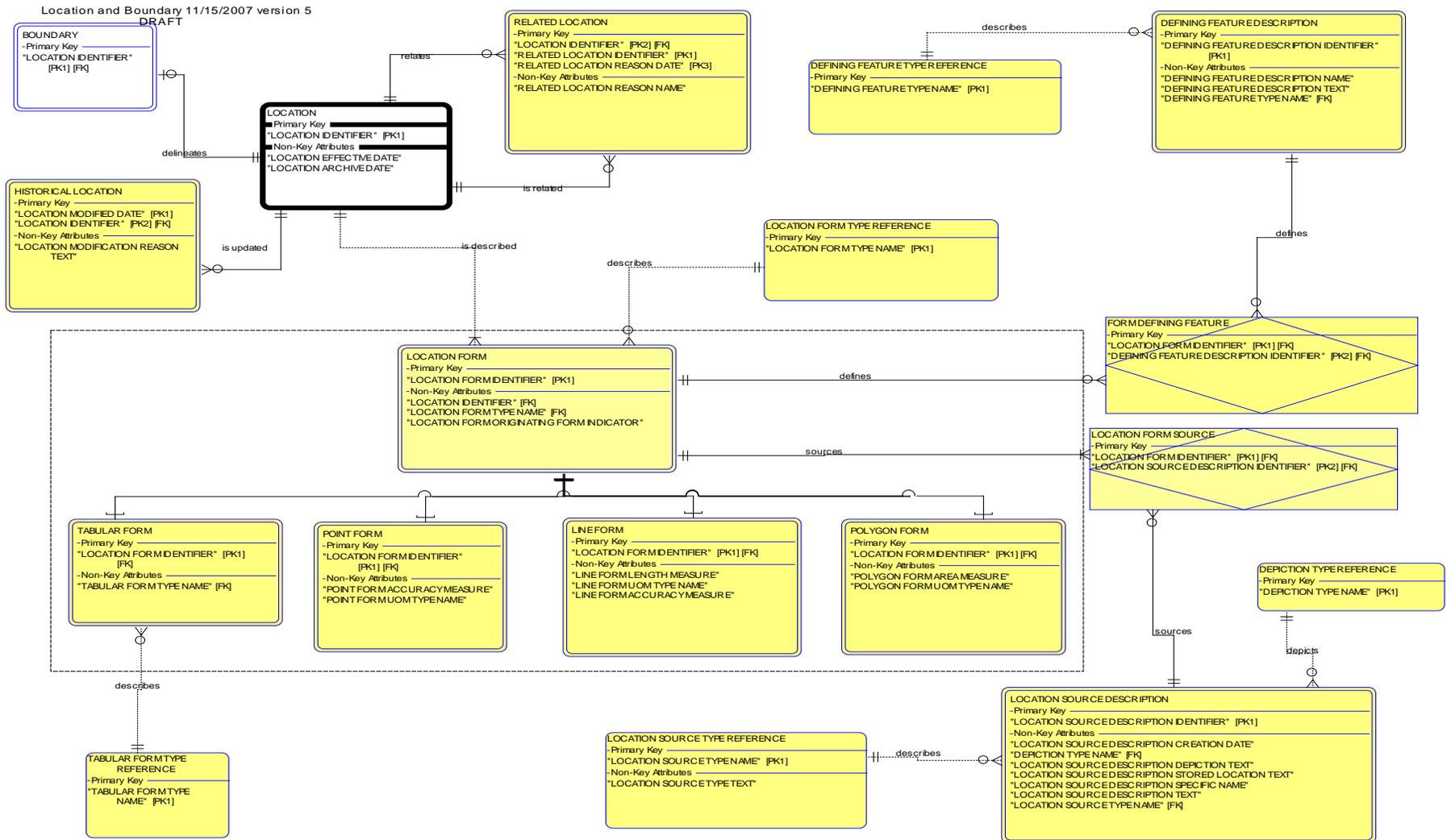
<b>7. Other Material:</b> Any other supporting material that aids in the understanding or use of the data standard; include specific geographic, organizational, or applicability constraints for non-national standards
<ul style="list-style-type: none"> <li>- Pasture and Allotment Boundaries Data Standard Proposal</li> <li>- Pasture and Allotment Polygons Implementation Guidelines</li> <li>- <u>Pasture and Allotment Domain Values Document</u></li> </ul>

## **Appendix A – Domains Specific to Grazing**

No domain values are specific to the Grazing Data Standard.

### Appendix B – Location

Data Model that provides information on standard attributes for feature level metadata. It is not part of this data standard and does not need to be reviewed for the data standard, merely provides more information and relationships.



Entity Name	Entity Description	Logical Data Element Name	Physical Element Name (tbd)	Type	Size	Required?	Definition
<b>BOUNDARY</b>							
The edge of a location that demarks the change from one location to another location.							
		LOCATION IDENTIFIER		integer		Mandatory	The designed primary key that will uniquely identify a single occurrence of the entity.
<b>DEFINING FEATURE DESCRIPTION</b>							
The values associated with second level of detail that can be used to define / create the location, based on the Defining Feature Type Name. There is not a finite set of values for this.							
		DEFINING FEATURE DESCRIPTION NAME		character	40	Mandatory	The name 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.
		DEFINING FEATURE TYPE NAME		character	20	Mandatory	The name that identifies the high-level category for the actual physical or mapping characteristics (features) from which the arcs are derived.
		DEFINING FEATURE DESCRIPTION TEXT		character	200	Mandatory	The text that provides further details on the Defining Feature Description.
<b>DEFINING FEATURE TYPE REFERENCE</b>							
A domain for the description of the characteristic (feature) constructed from a geographic feature that was used to create the location boundary.							
		DEFINING FEATURE TYPE NAME		character	20	Mandatory	The name that identifies the high-level category for the actual physical or mapping characteristics (features) from which the arcs are derived.
<b>DEPICTION TYPE REFERENCE</b>							
The domain of values for the way a location is depicted either in scale or resolution.							
		DEPICTION TYPE NAME		character	10	Mandatory	The name that designates the detail with which the location is depicted, either in resolution or scale.
<b>FORM DEFINING FEATURE</b>							
The defining features associated with a specific location form.							

Entity Name	Entity Description	Logical Data Element Name	Physical Element Name (tbd)	Type	Size	Required?	Definition
		DEFINING FEATURE DESCRIPTION IDENTIFIER		integer		Mandatory	The designed primary key that will uniquely identify a single occurrence of the entity.
		DEFINING FEATURE DESCRIPTION NAME		character	40	Mandatory	The name 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.

**HISTORICAL LOCATION**

The date and reason why a location's information has changed. Business Rule: this is for administrative changes, not necessarily for corrections to data.

		LOCATION MODIFICATION REASON TEXT		character	200	Mandatory	The text which is the explanation for why data about a location has changed for administrative reasons.
		LOCATION MODIFIED DATE		date		Mandatory	The date which is the calendar year, month, and day when the position of the Location was last modified.
		LOCATION IDENTIFIER		integer		Mandatory	The designed primary key that will uniquely identify a single occurrence of the entity.

**LINE FORM**

A series of connected, co-ordinate points forming a simple linear feature. It is used to represent rivers, and roads, or to form the boundary of polygons. (GIS dictionary) Note: In our current physical environment this includes all types of straight and curved lines including ones that intersection.

		LOCATION FORM IDENTIFIER		integer		Mandatory	The designed primary key that will uniquely identify a single occurrence of the entity.
		LINE FORM LENGTH MEASURE		decimal		Mandatory	The measure of the length of the line described in the Line Form UOM Type Name.
		LINE FORM UOM TYPE NAME		character	20	Mandatory	The domain value associated with the Unit of Measure used for the Line Form Length Measure.
		LINE FORM ACCURACY MEASURE		decimal		Mandatory	The measure that describes how close, in Line Form UOM Type Name the actual location is to the spatial depiction.

**LOCATION**

Entity Name	Entity Description	Logical Data Element Name	Physical Element Name (tbd)	Type	Size	Required?	Definition
A defined place that requires a way to locate it by some means. Note: Entities linked to Location have the potential for a geospatial aspect.							
		LOCATION ARCHIVE DATE		date		Optional	The date which is the calendar year, month, and day when the position of the Location is considered no longer valid but has historical value.
		LOCATION EFFECTIVE DATE		date		Mandatory	The date which is the calendar year, month, and day when the position of the Location was produced.
		LOCATION IDENTIFIER		integer		Mandatory	The designed primary key that will uniquely identify a single occurrence of the entity.
<b>LOCATION FORM</b>							
The form in which the location is described such as the description, shape, or appearance of the location.							
		LOCATION FORM IDENTIFIER		integer		Mandatory	The designed primary key that will uniquely identify a single occurrence of the entity.
		LOCATION IDENTIFIER		integer		Mandatory	The designed primary key that will uniquely identify a single occurrence of the entity.
		LOCATION FORM TYPE NAME		character	10	Mandatory	The type of form in which the location is described or appears. point, line, polygon, tabular
		LOCATION FORM ORIGINATING FORM INDICATOR		character	3	Mandatory	The value that indicates if this is the way in which the location was first drawn/described. (yes, no)
<b>LOCATION FORM SOURCE</b>							
The actual origin of the location sources that were used to create a specific location form.							
		LOCATION FORM IDENTIFIER		integer		Mandatory	The designed primary key that will uniquely identify a single occurrence of the entity.
		LOCATION SOURCE DESCRIPTION IDENTIFIER		integer		Mandatory	The designed primary key that will uniquely identify a single occurrence of the entity.
<b>LOCATION FORM TYPE REFERENCE</b>							
The domain for the type of form in which the location is described or appears whether in words, numbers of features (point line, polygon). This has been called feature in geospatial communities.							
		LOCATION FORM TYPE NAME		character	10	Mandatory	The type of form in which the location is described or appears. point, line, polygon, tabular

Entity Name	Entity Description	Logical Data Element Name	Physical Element Name (tbd)	Type	Size	Required?	Definition
<b>LOCATION SOURCE DESCRIPTION</b>							
The values that provide a second level of detail about the location (coordinate) source origin. Note: there is not a finite set of these values.							
		LOCATION SOURCE DESCRIPTION CREATION DATE		date		Mandatory	The date on which the location source was originally created . This could just be a year (ccyy).
		LOCATION SOURCE DESCRIPTION STORED LOCATION TEXT		character	100	Mandatory	The text that provides the additional description of where the coordinate source can be found
		LOCATION SOURCE DESCRIPTION DEPICTION TEXT		character	20	Mandatory	The text that describes the actual resolution or scale in which the location is depicted. Examples for Resolution: 1 meter, 10 feet. Examples for Scale: 1 in 10,000, 1 in 100. This does not have a domain or list of valid values.
		DEPICTION TYPE NAME		character	10	Mandatory	The name that designates the detail with which the location is depicted, either in resolution or scale.
		LOCATION SOURCE DESCRIPTION IDENTIFIER		integer		Mandatory	The designed primary key that will uniquely identify a single occurrence of the entity.
		LOCATION SOURCE DESCRIPTION TEXT		character	200	Mandatory	The text that provides further details on the Location (coordinate) Source Description.
		LOCATION SOURCE DESCRIPTION SPECIFIC NAME		character	40	Mandatory	The name that identifies a more specific description of the location (coordinate source).
		LOCATION SOURCE TYPE NAME		character	40	Mandatory	The name 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.
<b>LOCATION SOURCE TYPE REFERENCE</b>							
The domain for the types of sources for the original location description / form.							

Entity Name	Entity Description	Logical Data Element Name	Physical Element Name (tbd)	Type	Size	Required?	Definition
		LOCATION SOURCE TYPE NAME		character	40	Mandatory	The name 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.
		LOCATION SOURCE TYPE TEXT		character	100	Mandatory	The text that describes the Location Source Type.

**POINT FORM**

A zero-dimensional abstraction of an object, with its location specified by a set of coordinates. (GIS dictionary)

		LOCATION FORM IDENTIFIER		integer		Mandatory	The designed primary key that will uniquely identify a single occurrence of the entity.
		POINT FORM ACCURACY MEASURE		decimal		Mandatory	The measure that describes how close the spatial depiction of the point is to the actual location.
		POINT FORM UOM TYPE NAME		character	20	Mandatory	The name of the domain value associated with the Unit of Measure used for the Point Form Accuracy Measure.

**POLYGON FORM**

An area bounded by a closed line. It is used to describe spatial elements, such as administrative and political boundaries and areas of homogeneous land use and soil types. (GIS dictionary). Note: In our physical environment, this includes all types of polygons, including ones that overlap.

		LOCATION FORM IDENTIFIER		integer		Mandatory	The designed primary key that will uniquely identify a single occurrence of the entity.
		POLYGON FORM UOM TYPE NAME		character	20	Mandatory	The domain value associated with the Unit of Measure used for the Polygon Form Length Measure.
		POLYGON FORM AREA MEASURE		decimal		Mandatory	The area of the polygon described in the Polygon Form UOM Type Name.

**RELATED LOCATION**

A valid relationship between two LOCATIONS for a specific reason.

Entity Name	Entity Description	Logical Data Element Name	Physical Element Name (tbd)	Type	Size	Required?	Definition
		RELATED LOCATION IDENTIFIER		integer		Mandatory	The designed primary key that will uniquely identify a single occurrence of the entity. The first location that has a relationship with another location.
		RELATED LOCATION REASON NAME		character	40	Mandatory	The name that indicates the reason why two locations are related. Possible values: "multi-part polygon", "polygon lines", "overlapping polygons".
		RELATED LOCATION REASON DATE		date		Mandatory	The date when two locations became related for the reason stated.
		LOCATION IDENTIFIER		integer		Mandatory	The designed primary key that will uniquely identify a single occurrence of the entity.

**TABULAR FORM**

Descriptive information about a location, usually alphanumeric. This can be a single name or a combination of attributes that make up an address.

		LOCATION FORM IDENTIFIER		integer		Mandatory	The designed primary key that will uniquely identify a single occurrence of the entity.
		TABULAR FORM TYPE NAME		character	20	Mandatory	The name of the sub-category of the location form type which is true for tabular or alphanumeric descriptions of a location.

**TABULAR FORM TYPE REFERENCE**

The domain for the type of tabular form that is being used to describe the location.

		TABULAR FORM TYPE NAME		character	20	Mandatory	The name of the sub-category of the location form type which is true for tabular or alphanumeric descriptions of a location.
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