FINAL

Land Use Planning Area (LUPA) Boundaries Implementation Guidelines

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Version 2.2

United States Department of Interior
Bureau of Land Management
National Operations Center
Division of Resource Services
Denver Federal Center
Denver, Colorado

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Part I: Introduction

This document describes the physical design of the national data standard for the Land Use Planning Area (LUPA) Boundaries geospatial dataset. It is intended as a guideline for implementation. States may extend and expand upon this guideline in order to meet their specific needs, provided that when the data is pushed up to the national level, it will meet the minimum requirements as set forth in the Data Standard. The arc information and the feature level metadata will exist in the arc feature class.

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. While the standard datum is NAD 83, there are multiple realizations of that datum in existence. The metadata for each data set shall contain more specific labeling of the datum as appropriate. Examples of this would include: NAD 83 (2007) or NAD 83 (CORS 96) (1997). Every effort should be made to be as specific as possible in delineating the appropriate datum.

There are five tables in this implementation:

1) *lupa_prgs_arc* represents the arc features that will define the in-progress land use planning area boundary polygons. These arcs will have the feature level metadata attributes assigned to them.
2) *lupa_prgs_poly* represents the polygon features that show the boundaries for the in-progress land use planning areas.
3) *lupa_exist_arc* represents the arc features that will define the existing land use planning area boundary polygons. These arcs will have the feature level metadata attributes assigned to them.
4) *lupa_exist_poly* represents the polygon features that show the boundaries for the existing land use planning areas.
5) *lupa_hist_arc* represents the arc features that will define the historical land use planning area boundary polygons. These arcs will have the feature level metadata assigned to them.
6) *lupa_hist_poly* represents the polygon features that show the historical land use planning area boundary polygons

Domains

This geodatabase does not include the following shared domains (common to other datasets). These domains are common with other data standards and feature classes, and as such they must be implemented differently than those domains that are specific to the data standard (reference Domain Information Section located at http://web.blm.gov/data_mgt/std_proc.htm).

The domain names are included in the tables, in italic text. The domain values may be located in the Access Database located at http://web.blm.gov/data_mgt/std_proc.htm.

- *DOM_COORD_SOURCE_TYPE*
- *DOM_DEF_FEATURE_TYPE*
- *DOM_ADMIN_ST*
- *DOM_LUP_TYPE*

The following domains are unique to the dataset; therefore, they are associated in the geodatabase and are included in the XML schema. The domain names are included in the tables, in normal text.

- LUPA_DOM_CHNG_TYPE

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 features.

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 located at http://web.blm.gov/data_mgt/std_proc.htm. It is recommended that these tools be used and implemented to improve data quality and integrity.

The following Geodatabase Topology Rules are the minimum that should be implemented. Additional topology rules may be added depending on data requirements for each office:

- *lupa_prgs_arc* **Must Not Overlap**
- *lupa_prgs_arc* **Must Be Covered By Boundary Of** *lupa_prgs_poly*
- *lupa_prgs_arc* **Must Not Self-Overlap**
- *lupa_prgs_poly* **Must Not Overlap**

- *lupa_prgs_poly* **Boundary Must Be Covered By** *lupa_prgs_arc*
- *lupa_exist_arc* **Must Not Overlap**
- *lupa_exist_arc* **Must Be Covered By Boundary Of** *lupa_exist_poly*
- *lupa_exist_arc* **Must Not Self-Overlap**
- *lupa_exist_poly* **Must Not Overlap**
- *lupa_exist_poly* **Boundary Must Be Covered By** *lupa_exist_arc*

If you are creating new data where the polygons are being created by the bounding arcs, you may want to include the GDB topology rule "*Must not have dangles"* for the arc feature class(es). This way any gaps in the lines defining your polygon boundaries can be discovered and corrected before you construct your polygons.

Data Guidelines

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

There are some attributes that are intended to eventually become system generated 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.

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 format for entering the date in the geodatabase (GDB) will be MM/DD/YYYY. The ESRI software displays the date field according to how dates are formatted for display on the computer. The FGDC-compliant format for the date field is YYYYMMDD. There are two methods in which the FGDC format could be used for storing the date. The date format on the computer can be reset which may introduce unintended consequences within other programs, or the date field could be defined as a text field which would leave ample room for errors being introduced to the data. Although the National Data Standards are intended to be platform-independent, the ESRI GDB format is the current platform implemented throughout the BLM.

National Unique Identifier for LUP Planning Areas

Land Use Planning Areas have not had a unique national primary key (identifier). Each state has used its own design for what the identifier is for that state. Now that the Planning Areas will be a national data set, a unique national identifier is required. The existing state identifiers for Land Use Planning Areas will be included with the data set, but will not be the primary key for the data set.

The primary key for the dataset will be a 10-digit National Unique Identifier (LUPA_ID). The first four characters will be "LUPA" and the last six digits will be a sequential number. ePlanning will store this identifier which will link the geospatial data to the ePlanning information for a Land Use Plan. The LUPA_ID will carry from the in-progress feature class to the existing feature class.

- Creating the Initial Data Set
There are existing land use planning area data sets for the BLM. Each state has been assigned a range of unique identifiers to use. As the land use plans are converted to the new standard and pushed up to the national level, the state will use an identifier within their assigned range for each individual land use plan.

- New Planning Areas
For new Planning Areas, the person creating the new record in the geodatabase will assign an unused unique identifier from the range assigned to that state.

Review Cycle

The data for the Land Use Plan Boundaries 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

A. Land Use Planning Area Boundary In-Progress Arcs (lupa_prgs_arc)

The arc features used to define the Land Use Planning Area Boundary In-Progress polygon features are described in the following table. The 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 fifth through ninth attributes describe the data collection method along with a description of the expected spatial accuracy.

Land Use Planning Area Boundary In-Progress Arcs Attributes						
GIS NAME	ALIAS	DATA FORMAT	REQUIRED?	DEFAULT VALUE	DOMAIN NAME	DERIVED?
CREATE_DATE	Created Date	Date	YES	09/09/9999		No
CREATE_BY	Created By Name	Char(30)	YES	UNK		No
MODIFY_DATE	Modified Date	Date	YES	09/09/9999		No
MODIFY_BY	Modified By Name	Char(30)	YES	UNK		No
COORD_SRC_TYPE	Coordinate Source Type Code	Char(5)	YES	UNK	*DOM_COORD_SOURCE_TYPE*	No
COORD_SRC2	Coordinate Source Code	Char(25)	NO			No
DEF_FET_TYPE	Defining Feature Type Code	Char(15)	YES	UNK	*DOM_DEF_FEATURE_TYPE*	No
DEF_FET2	Defining Feature Code	Char(30)	NO			No
ACCURACY_FT	Accuracy Measurement In Feet	Long Integer(4)	YES	-1		No
ADMIN_ST	Administrative State Code	Char(2)	YES		*DOM_ADMIN_ST*	No
GlobalID	GlobalID	UUID	YES			No

GIS Name	Logical Name	Definition/Design Considerations
CREATE_ DATE	Location Effective Date	**Logical Definition**: The date which is the calendar year, month, and day when the position of the Location was produced. **Design Considerations:** 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. Default: 09/09/9999

GIS Name	Logical Name	Definition/Design Considerations
CREATE_BY	Not Applicable	**Logical Definition**: Not on the logical model. **Design Considerations:** The UserID (BLM login ID) of the person who created or imported the data into the BLM GIS system. This attribute will be deleted before providing the data to the public. Default: UNK
MODIFY_ DATE	Location Modified Date	**Logical Definition**: The date which is the calendar year, month, and day when the position of the Location was last modified. **Design Considerations:** 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. Default: 09/09/9999
MODIFY_BY	Not Applicable	**Logical Definition**: Not on the logical model. **Design Considerations:** The UserID (BLM login ID) of the person who edited or modified data in the BLM GIS system will be collected and maintained. This attribute will be deleted before providing the data to the public. Default: UNK
COORD_ SRC_TYPE	Location Source Type Name	**Logical Definition** 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. **Design Considerations:** Attribute Domain Assignment: *DOM_COORD_SOURCE_TYPE* Default: UNK
COORD_ SRC2	Location Source Description Specific Name	**Logical Definition**: The name that identifies a more specific description of the location (coordinate source). **Design Considerations:** Suggested values for codes appear in the domains appendix. The user may leave this value "null", choose one of the suggested codes, or enter another value appropriate to the data. 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.

<table>
<tr><th>GIS Name</th><th>Logical Name</th><th>Definition/Design Considerations</th></tr>
<tr><td>DEF_
FET_TYPE</td><td>Defining Feature Type Name</td><td>Logical Definition: The name that identifies the high-level category for the actual physical or mapping characteristics (features) from which the arcs are derived.
Design Considerations:
Attribute Domain Assignment: DOM_DEF_FEATURE_TYPE Default: UNK</td></tr>
<tr><td>DEF_FET2</td><td>Defining Feature Description Name</td><td>Logical Definition: 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.
Design Considerations: Suggested code values appear in the domains appendix. The user may leave this value “null”, choose one of the suggested codes, or enter another value appropriate to the data. 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.</td></tr>
<tr><td>ACCURACY_
FT</td><td>Line Form Accuracy Measure</td><td>Logical Definition: The measure that describes how close, in Line Form UOM Type Name the actual location is to the spatial depiction.
Design Considerations: 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)[1] which is a data usability standard issued by the Federal Geographic Data Committee (FGDC).
Default: -1
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.)
<table>
<tr><th colspan="2">Accuracy Measurement Example Table</th></tr>
<tr><td>1</td><td>+/- 1 Feet</td></tr>
<tr><td>10</td><td>+/- 10 Feet</td></tr>
<tr><td>15</td><td>+/- 15 Feet</td></tr>
<tr><td>20</td><td>+/- 20 Feet</td></tr>
<tr><td>100</td><td>+/- 100 Feet</td></tr>
</table>
[1] Federal Geographic Data Committee. 1998. Geospatial Positioning Accuracy Standards Part 3: National Standard for Spatial Data Accuracy, FGDC-STD-007.3-1998</td></tr>
</table>

GIS Name	Logical Name	Definition/Design Considerations
ADMIN_ST	State Alphabetic Code	**Logical Definition**: An administrative unit that identifies the state or geographic area which has administrative jurisdiction over lands, and cases. The land for a case may not be physically located in the associated administrative 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. **Design Considerations:** 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. In the FBMS Organization Codes, use the second 2 characters (after the LL). (e.g. LL**AK**039000) Note: This attribute is included for purposes of replication. Attribute Domain Assignment: *DOM_ADMIN_ST*
GlobalID	Not Applicable	**Logical Definition**: Not on the logical model. **Design Considerations:** 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. Note: This attribute is included for purposes of replication. It is not used as a unique identifier for relationships between feature classes/tables.

B. Land Use Planning Area Boundary In-Progress Polygons (lupa_prgs_poly)

The polygon features for Land Use Planning Area Boundary In-Progress Polygon features are defined below. Domain values are used when appropriate.

If the Land Use Plan is in ePlanning, the Unique Identifier (LUPA_ID) will be stored in ePlanning to link the planning area boundaries to land use plans. The Unique Identifier associated with the features in this dataset will remain unchanged throughout the "In-Progress" stage of planning. The "In-Progress" polygon feature with its unique identifier and its associated poly_arc feature will be moved into the "Existing" dataset once the land use plan has been approved. These "In Progress" Planning Area Boundaries are created during the planning process and do not have a Record of Decision. An "In Progress" Planning Area Boundary can become an "existing" planning area boundary once the land use plan has been approved. Changes "In Progress" are not considered records and old boundaries will not be archived but may be kept locally for historical purposes. (Refer to business rule number 4 documented in the Data Standard Report.)

The Project Plan (LUP Name) attribute should be populated from the official plan. If the Land Use Plan is in ePlanning, the appropriate LUPA_ID will be populated in ePlanning.

There will be a minimum of 8 attributes associated with the lupa_prgs_poly features. If a required data element value is missing, either select "MSG" from the domain values, or you may enter "Missing But Required" for text fields with no domain. (Refer to business rule number 6 documented in the Data Standard Report.)

Land Use Planning Area Boundaries In-Progress Polygons Attributes

GIS NAME	ALIAS	DATA FORMAT	REQUIRED?	DEFAULT VALUE	DOMAIN NAME	DERIVED?
LUPA_ID	LUPA Natl Identifier	Char(10)	YES			No
PA_LOCAL_ID	Local Identifier	Char(20)	NO			No
LUP_NAME	LUP Project Name	Char(255)	YES			No
ADMIN_ST	Administrative State Code	Char(2)	YES		*DOM_ADMIN_ST*	No
GIS_ACRES	GIS Acres	Double	YES			Yes
LUP_TYPE	Type of Land Use Plan	Char(3)	YES		*DOM_LUP_TYPE*	No
LUP_SHT_NM	Land Use Plan Short Name	Char(40)	YES			No
GlobalID	GlobalID	UUID	YES			No

GIS Name	Logical Name	Definition
LUPA_ID	Location Identifier	**Logical Definition:** The designed primary key that will uniquely identify a single occurrence of the entity. **Design Considerations:** Unique National Identifier comprised of 10 alpha-numeric digits, "LUPA" followed by a six digit sequential number. ePlanning will store this data element to link the land use planning area boundaries to a Land Use Plan, should one exist.
PA_LOCAL_ID	Not Applicable	**Logical Definition:** Not on the logical data model. **Design Considerations:** Optional Local Identifier assigned to the Planning Area by the BLM Administrative State or District Office.
LUP_NAME	Project Name	**Logical Definition:** The name given to a project that represents the full, official name associated with the project. **Design Considerations:** The name by which the plan is known and set apart from other plans. Example: Kemmerer RMP is an acceptable name designation. This value may or may not be unique at the national level.
ADMIN_ST	State Alphabetic Code	**Logical Definition**: An administrative unit that identifies the state or geographic area which has administrative jurisdiction over lands, and cases. The land for a case may not be physically located in the associated administrative 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. **Design Considerations:** 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. In the FBMS Organization Codes, use the second 2 characters (after the LL). (e.g. LL**AK**039000) Attribute Domain Assignment: *DOM_ADMIN_ST*

GIS Name	Logical Name	Definition
GIS_ACRES	Polygon Form Area Measure	**Logical Definition**: The area of the polygon described in the Polygon Form UOM Type Name. **Design Considerations:** The entire acreage of the polygon regardless of land status. Default: 0 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: Project the data into a standard projection such as the ESRI default Albers equal-area projection for the continental United States, "US Albers NAD 1983." (Make sure the area measure of your data is square meters, as opposed to square feet.) Then use the field calculator in ArcMap with the expression: [GIS_ACRES] = [SHAPE_Area] * 0.0002471044. Please note that the figure used in this calculation is the factor for converting the US Survey Foot value from the length of a meter, as opposed to the International Standard for converting meters and feet.
LUP_TYPE	Land Use Plan Type Code	**Logical Definition:** A code that indicates the type of land use plan (an RMP or an MFP). **Design Considerations:** Attribute Domain Assignment: *DOM_LUP_TYPE*
LUP_SHT_NM	Project Short Name	**Logical Definition:** A name by which the project can be identified that is a shorter version of the full Project Name. **Design Considerations:** A shortened version of the LUP Project Name for purposes of cartographic representation.
GlobalID	Not Applicable	**Logical Definition**: Not on the logical model. **Design Considerations:** 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. Note: This attribute is included for purposes of replication. It is not used as a unique identifier for relationships between feature classes/tables.

C. Land Use Planning Area Boundary Existing Arcs (lupa_exist_arc)

The arc features used to define the Land Use Planning Area Boundary Existing Polygon features are described in the following table. The 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 last five attributes describe the data collection method along with a description of the expected spatial accuracy.

Land Use Planning Area Boundary Existing Arcs Attributes						
GIS NAME	ALIAS	DATA FORMAT	REQUIRED?	DEFAULT VALUE	DOMAIN NAME	DERIVED?
CREATE_DATE	Created Date	Date	YES	09/09/9999		No
CREATE_BY	Created By Name	Char(30)	YES	UNK		No
MODIFY_DATE	Modified Date	Date	YES	09/09/9999		No
MODIFY_BY	Modified By Name	Char(30)	YES	UNK		No
COORD_SRC_TYPE	Coordinate Source Type Code	Char(5)	YES	UNK	*DOM_COORD_SOURCE_TYPE*	No
COORD_SRC2	Coordinate Source Code	Char(25)	NO			No
DEF_FET_TYPE	Defining FeatureType Code	Char(15)	YES	UNK	*DOM_DEF_FEATURE_TYPE*	No
DEF_FET2	Defining Feature Code	Char(30)	NO			No
ACCURACY_FT	Accuracy Measurement In Feet	Long Integer(4)	YES	-1		No
ADMIN_ST	Administrative State Code	Char(2)	YES		*DOM_ADMIN_ST*	No
GlobalID	GlobalID	UUID	YES			No

GIS Name	Logical Name	Definition
CREATE_ DATE	Location Effective Date	**Logical Definition**: The date which is the calendar year, month, and day when the position of the Location was produced. **Design Considerations:** 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. Default: 09/09/9999

GIS Name	Logical Name	Definition
CREATE_BY	Not Applicable	**Logical Definition**: Not on the logical model. **Design Considerations:** The UserID (BLM login ID) of the person who created or imported the data into the BLM GIS system. This attribute will be deleted before providing the data to the public. Default: UNK
MODIFY_ DATE	Location Modified Date	**Logical Definition**: The date which is the calendar year, month, and day when the position of the Location was last modified. **Design Considerations:** 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. Default: 09/09/9999
MODIFY_BY	Not Applicable	**Logical Definition**: Not on the logical model. **Design Considerations:** The UserID (BLM login ID) of the person who edited or modified data in the BLM GIS system will be collected and maintained. This attribute will be deleted before providing the data to the public. Default: UNK
COORD_ SRC_TYPE	Location Source Type Name	**Logical Definition** 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. **Design Considerations:** Attribute Domain Assignment: *DOM_COORD_SOURCE_TYPE* Default: UNK
COORD_ SRC2	Location Source Description Specific Name	**Logical Definition**: The name that identifies a more specific description of the location (coordinate source). **Design Considerations:** Suggested values for codes appear in the domains appendix. The user may leave this value "null", choose one of the suggested codes, or enter another value appropriate to the data. 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.

<table>
<tr><th>GIS Name</th><th>Logical Name</th><th>Definition</th></tr>
<tr><td>DEF_
FET_TYPE</td><td>Defining Feature Type Name</td><td>Logical Definition: The name that identifies the high-level category for the actual physical or mapping characteristics (features) from which the arcs are derived.
Design Considerations:
Attribute Domain Assignment: DOM_DEF_FEATURE_TYPE Default: UNK</td></tr>
<tr><td>DEF_FET2</td><td>Defining Feature Description Name</td><td>Logical Definition: 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.
Design Considerations: Suggested code values appear in the domains appendix. The user may leave this value “null”, choose one of the suggested codes, or enter another value appropriate to the data. 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.</td></tr>
<tr><td>ACCURACY_
FT</td><td>Line Form Accuracy Measure</td><td>Logical Definition: The measure that describes how close, in Line Form UOM Type Name the actual location is to the spatial depiction.
Design Considerations: 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)[1] which is a data usability standard issued by the Federal Geographic Data Committee (FGDC).
Default: -1
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.)
<table>
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<tr><td>100</td><td>+/- 100 Feet</td></tr>
</table>
[1] Federal Geographic Data Committee. 1998. Geospatial Positioning Accuracy Standards Part 3: National Standard for Spatial Data Accuracy, FGDC-STD-007.3-1998</td></tr>
</table>

GIS Name	Logical Name	Definition
ADMIN_ST	State Alphabetic Code	**Logical Definition**: An administrative unit that identifies the state or geographic area which has administrative jurisdiction over lands, and cases. The land for a case may not be physically located in the associated administrative 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. **Design Considerations:** 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. In the FBMS Organization Codes, use the second 2 characters (after the LL). (e.g. LL**AK**039000) Note: This attribute is included for purposes of replication. Attribute Domain Assignment: *DOM_ADMIN_ST*
GlobalID	Not Applicable	**Logical Definition**: Not on the logical model. **Design Considerations:** 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. Note: This attribute is included for purposes of replication. It is not used as a unique identifier for relationships between feature classes/tables.

D. Land Use Planning Area Boundary Existing Polygons (lupa_exist_poly)

The polygon features for Land Use Planning Area Boundary Existing Polygons features are defined below. Domain values are used when appropriate.

If the Land Use Plan is in ePlanning, the Unique Identifier (LUPA_ID) will be stored in ePlanning to link the planning area boundaries to those land use plans. These polygons are for "Existing" Land Use Plans which have a Record of Decision Date and are being implemented. The Project Plan (LUP Name) and the Record of Decision Date (ROD_DT) attributes should be populated from the official plan. Please refer to the Business Rules regarding amendments/revisions in the Data Standard Report. Please refer to the Business Rules and the Land Use Planning Business Rule Matrix in Appendix E.

There will be a minimum of 7 attributes associated with the lupa_exist_poly features.

Land Use Planning Area Boundary Existing Polygons Attributes

GIS NAME	ALIAS	DATA FORMAT	REQUIRED?	DEFAULT VALUE	DOMAIN NAME	DERIVED?
LUPA_ID	LUPA Natl Identifier	Text(10)	YES			No
PA_LOCAL_ID	Local Identifier	Text(20)	NO			No
LUP_NAME	LUP Project Name	Text(255)	YES			No
ADMIN_ST	Administrative State Code	Char(2)	YES		*DOM_ADMIN_ST*	No
GIS_ACRES	GIS Acres	Double	YES			Yes
LUP_TYPE	Type of Land Use Plan	Text(3)	YES		*DOM_LUP_TYPE*	No
LUP_SHT_NM	Land Use Plan Short Name	Text(40)	YES			No
ROD_DT	Record of Decision Date	Date	YES	09/09/9999		No
LUP_URL	Land Use Plan URL	Text(250)	NO			No
GlobalID	GlobalID	UUID	YES			No

GIS Name	Logical Name	Definition
LUPA_ID	Location Identifier	**Logical Definition**: The designed primary key that will uniquely identify a single occurrence of the entity. **Design Considerations:** Unique National Identifier comprised of 10 alpha-numeric digits, "LUPA" followed by a six digit sequential number. ePlanning will store this data element to link the land use planning area boundaries to a Land Use Plan, should one exist.
PA_LOCAL_ID	Not Applicabe	**Logical Definition**: Not on the logical data model. **Design Considerations:** Optional Local Identifier assigned to the Planning Area by the BLM Administrative State or District Office.
LUP_NAME	Project Name	**Logical Definition**: The name given to a project that represents the full, official name associated with the project. **Design Considerations:** The name by which the plan is known and set apart from other plans. Example: Kemmerer RMP is an acceptable name designation. This value may or may not be unique at the national level.
ADMIN_ST	State Alphabetic Code	**Logical Definition**: An administrative unit that identifies the state or geographic area which has administrative jurisdiction over lands, and cases. The land for a case may not be physically located in the associated administrative 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. **Design Considerations:** 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. In the FBMS Organization Codes, use the second 2 characters (after the LL). (e.g. LL**AK**039000) Attribute Domain Assignment: *DOM_ADMIN_ST*

GIS Name	Logical Name	Definition
GIS_ACRES	Polygon Form Acre Measure	**Logical Definition**: The area of the polygon described in the Polygon Form UOM Type Name. **Design Considerations:** The entire acreage of the polygon regardless of land status. Default: 0 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: Project the data into a standard projection such as the ESRI default Albers equal-area projection for the continental United States, "US Albers NAD 1983." (Make sure the area measure of your data is square meters, as opposed to square feet.) Then use the field calculator in ArcMap with the expression: [GIS_ACRES] = [SHAPE_Area] * 0.0002471044. Please note that the figure used in this calculation is the factor for converting the US Survey Foot value from the length of a meter, as opposed to the International Standard for converting meters and feet.
LUP_TYPE	Land Use Plan Type Code	**Logical Definition**: A code that indicates the type of land use plan (an RMP or an MFP). **Design Considerations:** Attribute Domain Assignment: *DOM_LUP_TYPE*
LUP_SHT_NM	Project Short Name	**Logical Definition**: A name by which the project can be identified that is a shorter version of the full Project Name. **Design Considerations:** A shortened version of the LUP Project Name for purposes of cartographic representation
ROD_DT	Land Related Project Decision Date	**Logical Definition**: The date on which the decision is signed by the person who has approval authority for the decisions. **Design Considerations:** Default: 09/09/9999

GIS Name	Logical Name	Definition
LUP_URL	Not Applicable	**Logical Definition**: Not on the logical model **Design Considerations:** The URL for the specific Land Use Plan.
GlobalID	Not Applicable	**Logical Definition**: Not on the logical model. **Design Considerations:** 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. Note: This attribute is included for purposes of replication. It is not used as a unique identifier for relationships between feature classes/tables.

E. Land Use Planning Area Boundary Historical Arcs (lupa_hist_arc)

The arc features used to define the Land Use Planning Area Boundary Historical Polygon features are described in the following table.

Land Use Planning Area Boundary Historical Arcs Attributes						
GIS NAME	ALIAS	DATA FORMAT	REQUIRED?	DEFAULT VALUE	DOMAIN NAME	DERIVED?
CREATE_DATE	Created Date	Date	YES	09/09/9999		No
CREATE_BY	Created By Name	Char(30)	YES	UNK		No
MODIFY_DATE	Modified Date	Date	YES	09/09/9999		No
MODIFY_BY	Modified By Name	Char(30)	YES	UNK		No
COORD_SRC_TYPE	Coordinate Source Type Code	Char(5)	YES	UNK	*DOM_COORD_SOURCE_TYPE*	No
COORD_SRC2	Coordinate Source Code	Char(25)	NO			No
DEF_FET_TYPE	Defining Feature Type Code	Char(15)	YES	UNK	*DOM_DEF_FEATURE_TYPE*	No
DEF_FET2	Defining Feature Code	Char(30)	NO			No
ACCURACY_FT	Accuracy Measurement In Feet	Long Integer(4)	YES	-1		No
ADMIN_ST	Administrative State Code	Char(2)	YES		*DOM_ADMIN_ST*	No
GlobalID	GlobalID	UUID	YES			No

GIS Name	Logical Name	Definition
CREATE_ DATE	Location Effective Date	**Logical Definition**: The date which is the calendar year, month, and day when the position of the Location was produced. **Design Considerations:** 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. Default: 09/09/9999

GIS Name	Logical Name	Definition
CREATE_BY	Not Applicable	**Logical Definition**: Not on the logical model. **Design Considerations:** The UserID (BLM login ID) of the person who created or imported the data into the BLM GIS system. This attribute will be deleted before providing the data to the public. Default: UNK
MODIFY_ DATE	Location Modified Date	**Logical Definition**: The date which is the calendar year, month, and day when the position of the Location was last modified. **Design Considerations:** 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. Default: 09/09/9999
MODIFY_BY	Not Applicable	**Logical Definition**: Not on the logical model. **Design Considerations:** The UserID (BLM login ID) of the person who edited or modified data in the BLM GIS system will be collected and maintained. This attribute will be deleted before providing the data to the public. Default: UNK
COORD_ SRC_TYPE	Location Source Type Name	**Logical Definition** 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. **Design Considerations:** Attribute Domain Assignment: *DOM_COORD_SOURCE_TYPE* Default: UNK
COORD_ SRC2	Location Source Description Specific Name	**Logical Definition**: The name that identifies a more specific description of the location (coordinate source). **Design Considerations:** Suggested values for codes appear in the domains appendix. The user may leave this value "null", choose one of the suggested codes, or enter another value appropriate to the data. 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.

<table>
<tr><th>GIS Name</th><th>Logical Name</th><th>Definition</th></tr>
<tr><td>DEF_
FET_TYPE</td><td>Defining Feature Type Name</td><td>Logical Definition: The name that identifies the high-level category for the actual physical or mapping characteristics (features) from which the arcs are derived.
Design Considerations:
Attribute Domain Assignment: DOM_DEF_FEATURE_TYPE Default: UNK</td></tr>
<tr><td>DEF_FET2</td><td>Defining Feature Description Name</td><td>Logical Definition: 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.
Design Considerations: Suggested code values appear in the domains appendix. The user may leave this value “null”, choose one of the suggested codes, or enter another value appropriate to the data. 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.</td></tr>
<tr><td>ACCURACY_
FT</td><td>Line Form Accuracy Measure</td><td>Logical Definition: The measure that describes how close, in Line Form UOM Type Name the actual location is to the spatial depiction.
Design Considerations: 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)[1] which is a data usability standard issued by the Federal Geographic Data Committee (FGDC).
Default: -1
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.)
<table>
<tr><th colspan="2">Accuracy Measurement Example Table</th></tr>
<tr><td>1</td><td>+/- 1 Feet</td></tr>
<tr><td>10</td><td>+/- 10 Feet</td></tr>
<tr><td>15</td><td>+/- 15 Feet</td></tr>
<tr><td>20</td><td>+/- 20 Feet</td></tr>
<tr><td>100</td><td>+/- 100 Feet</td></tr>
</table>
[1] Federal Geographic Data Committee. 1998. Geospatial Positioning Accuracy Standards Part 3: National Standard for Spatial Data Accuracy, FGDC-STD-007.3-1998</td></tr>
</table>

GIS Name	Logical Name	Definition
ADMIN_ST	State Alphabetic Code	**Logical Definition**: An administrative unit that identifies the state or geographic area which has administrative jurisdiction over lands, and cases. The land for a case may not be physically located in the associated administrative 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. **Design Considerations:** 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. In the FBMS Organization Codes, use the second 2 characters (after the LL). (e.g. LL**AK**039000) Note: This attribute is included for purposes of replication. Attribute Domain Assignment: *DOM_ADMIN_ST*
GlobalID	Not Applicable	**Logical Definition**: Not on the logical model. **Design Considerations:** 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. Note: This attribute is included for purposes of replication. It is not used as a unique identifier for relationships between feature classes/tables.

F. Land Use Planning Area Boundary Historical Polygons (lupa_hist_poly)

The Land Use Planning Area Boundary Historical Polygons are a result of the Land Use Planning Area Boundary Existing polygons being permanently changed as a result of a business need. The resulting lupa_hist_poly polygons are no longer active, but will be stored for historical reference. Domain values are used when appropriate. These features and associated attributes are not an archival dataset and should be stored locally as "read only".

If the Land Use Plan is in ePlanning, the Unique Identifier (LUPA_ID) will be stored in ePlanning to link the historic planning area boundaries to the land use plan. The LUPA_ID in this dataset may be duplicated across several features as the planning area changes. Features will be moved into this dataset upon any changes to the boundary of the planning area, or upon changes to the plan (i.e. amendments, revisions, etc). The Project Plan (LUP_NAME) attribute should have been populated from the official plan. The Land Use Plan Inactive Date (LUP_INACTIVE_DT) is an optional attribute that corresponds to the date that the Plan was changed and thus moved from the "existing" to the "historical" feature class. The Land Use Plan Boundary Inactive Date (BNDRY_INACTIVE_DT) is an optional attribute that corresponds to the date that the boundary changed and thus moved from the "existing" to the "historical" feature class. Please refer to the Business Rules documented in the Data Standard Report.

There will be a minimum of 11 attributes associated with the lupa_hist_poly features.

Land Use Planning Area Boundary Historical Polygons Attributes

GIS NAME	ALIAS	DATA FORMAT	REQUIRED?	DEFAULT VALUE	DOMAIN NAME	DERIVED?
LUPA_ID	LUPA Natl Identifier	Text(10)	YES			No
PA_LOCAL_ID	Local Identifier	Text(20)	NO			No
LUP_NAME	LUP Project Name	Text(255)	YES			No
ADMIN_ST	Administrative State Code	Char(2)	YES		*DOM_ADMIN_ST*	No
GIS_ACRES	GIS Acres	Double	YES			Yes
LUP_TYPE	Type of Land Use Plan	Text(3)	YES		*DOM_LUP_TYPE*	No
LUP_SHT_NM	Land Use Plan Short Name	Text(40)	YES			No
LUP_INACTIVE_DT	Land Use Plan Inactive Date	Date	NO			No
BNDRY_INACTIVE_DT	Land Use Plan Boundary Inactive Date	Date	NO			No
CHNG_TYPE	Reason for Change to LUP or Bndry	Char(20)	NO		LUPA_DOM_CHNG_TYPE	No
GlobalID	GlobalID	UUID	YES			No

GIS Name	Logical Name	Definition
LUPA_ID	Location Identifier	**Logical Definition**: The designed primary key that will uniquely identify a single occurrence of the entity. **Design Considerations:** Unique National Identifier comprised of 10 alpha-numeric digits, "LUPA" followed by a six digit sequential number. ePlanning will store this data element to link the land use planning area boundaries to a Land Use Plan, should one exist.
PA_LOCAL_ID	Not Applicable	**Logical Definition**: Not on the logical data model. **Design Considerations:** Optional Local Identifier assigned to the Planning Area by the BLM Administrative State or District Office.
LUP_NAME	Project Name	**Logical Definition**: The name given to a project that represents the full, official name associated with the project. **Design Considerations:** The name by which the plan is known and set apart from other plans. Example: Kemmerer RMP is an acceptable name designation. This value may or may not be unique at the national level.
ADMIN_ST	State Alphabetic Code	**Logical Definition**: An administrative unit that identifies the state or geographic area which has administrative jurisdiction over lands, and cases. The land for a case may not be physically located in the associated administrative 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. **Design Considerations:** 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. In the FBMS Organization Codes, use the second 2 characters (after the LL). (e.g. LL**AK**039000) Attribute Domain Assignment: *DOM_ADMIN_ST*

GIS Name	Logical Name	Definition
GIS_ACRES	Polygon Form Acre Measure	**Logical Definition**: The area of the polygon described in the Polygon Form UOM Type Name. **Design Considerations:** The entire acreage of the polygon regardless of land status. Default: 0 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: Project the data into a standard projection such as the ESRI default Albers equal-area projection for the continental United States, "US Albers NAD 1983." (Make sure the area measure of your data is square meters, as opposed to square feet.) Then use the field calculator in ArcMap with the expression: [GIS_ACRES] = [SHAPE_Area] * 0.0002471044. Please note that the figure used in this calculation is the factor for converting the US Survey Foot value from the length of a meter, as opposed to the International Standard for converting meters and feet.
LUP_TYPE	Land Use Plan Type Code	**Logical Definition**: A code that indicates the type of land use plan (an RFP or an MFP). **Design Considerations:** Attribute Domain Assignment: *DOM_LUP_TYPE*
LUP_SHT_NM	Project Short Name	**Logical Definition**: A name by which the project can be identified that is a shorter version of the full Project Name. **Design Considerations:** A shortened version of the LUP Project Name for purposes of cartographic representation
LUP_INACTIVE_DT	Not Applicable	**Logical Definition**: Not on the logical model **Design Considerations:** The date when a Land Use Plan is no longer active. In general this inactive date should correspond to the Record of Decision Date of the Land Use Plan that replaces the prior Land Use Plan. Please refer to the Data Standard Report for the Business Rules regarding the inactive date.

GIS Name	Logical Name	Definition
BNDRY_INACTIVE_DT	Location Archive Date	**Logical Definition**: 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. **Design Considerations:** The date on which a portion of the Land Use Plan Boundary is no longer active. This could be due to another land use plan that expanded and now includes an area from another land use plan. This is the area that is now inactive. This Boundary Inactive Date would be the same as the new Land Use Plan record of decision.
CHNG_TYPE	Not Applicable	**Logical Definition**: Not on the logical model **Design Considerations:** Reason that the LUP or boundary changed. Optional attribute. Attribute Domain Assignment: LUPA_DOM_CHNG_TYPE
GlobalID	Not Applicable	**Logical Definition**: Not on the logical model. **Design Considerations:** 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. Note: This attribute is included for purposes of replication. It is not used as a unique identifier for relationships between feature classes/tables.

Part III: Appendices

Appendix A- Domain Values and Examples

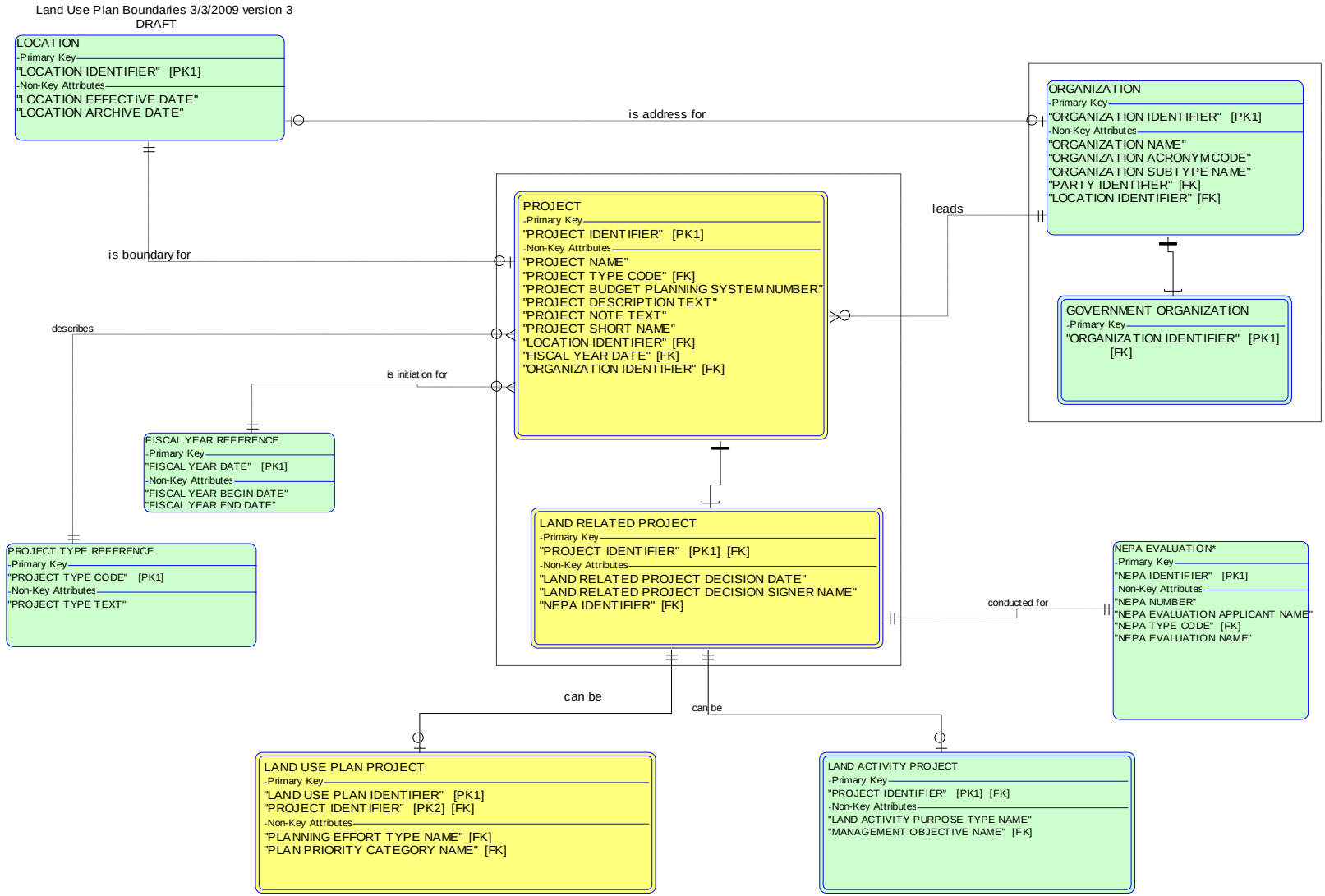
Domain values are maintained separately from the data standard. This is due to values being more likely to have an addition or change that would not affect the data standard. Domain values cannot be added to attributes specific to the standard (except thru the data standardization maintenance step). A state can extend the data standard with a new attribute which can have a state specific domain list. However, all attributes that are required as part of the standard must have a value from the data standard domain list. Any additional attributes and their associated domain values must be documented with metadata by that office.

For domain values that are specific to the Land Use Planning Area Boundaries, please see http://teamspace/sites/blmnds/est2010/default.aspx

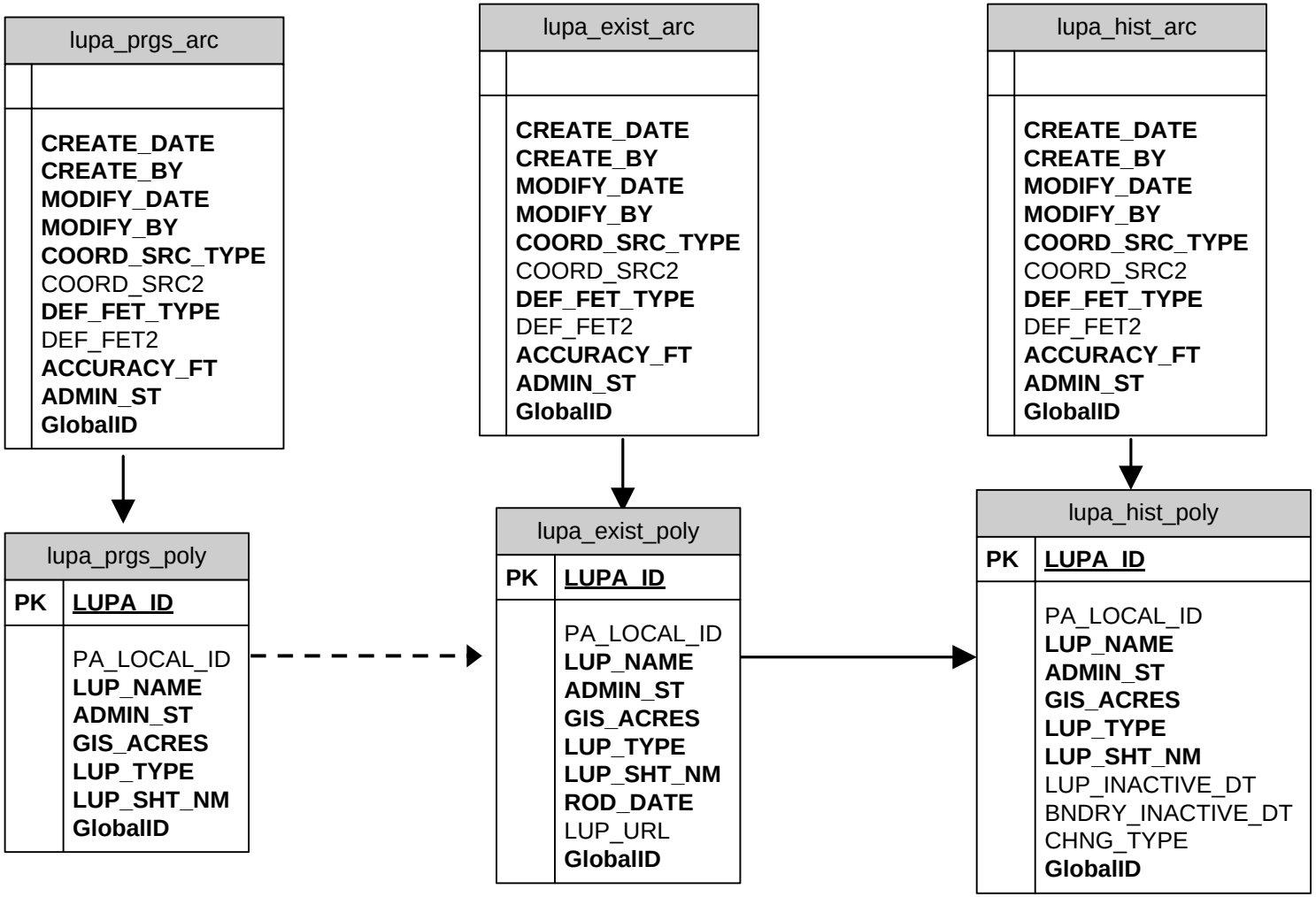
For Feature Level Metadata Domains, please see the Domain Information Section, located at http://web.blm.gov/data_mgt/std_proc.htm

Appendix B: Logical Data Model

To improve viewing, zoom to 150%; to print a larger version, use the 11'x17' model on the same webpage as this document.



Appendix C: Physical Database Diagram



Appendix D: Attribute Field Definitions

Attribute Field	Field Definition	Field Example
Logical Name	The business name of the attribute which includes the entity name, and representation term	Global Positioning System Receiver Type Name
Alias	An alternative name that is more descriptive and user-friendly than the Logical or GIS Field Name	GPS RECEIVER TYPE
GIS Name	The abbreviated name of the field as it appears in the database	RCVR_TYPE
Data Format	Specific type of data allowed/# of characters or numbers/Precision & Scale	Char(15)
Required?	If an attribute does or does not have to have a value. If "YES", the attribute is required, if "NO", the attribute is optional.	NO (is optional)
Default Value	Value that will apply if no other value is specified	N/A
Domain Name	Name of the table for that attribute, containing the Code, Description, and Definition for each value in the table	DOM_RCVR_TYPE
Derived?	If the attribute value is derived from the value of one or more other attribute values (Yes) otherwise, (No) the value is not derived.	No

Appendix E: LUPA Business Rules Matrix

The following matrix provides information on Planning Area feature classes for existing polygons and historical polygons. ePlanning creates new Plan IDs for any new or amended LUPs. These identifiers are not the same as the unique identifier for the Planning Area Boundaries (LUPA_ID). The LUPA_ID is what uniquely identifies a planning area boundary. If a planning area boundary changes, for any reason, a new LUPA_ID will be created in the LUPA_EXIST_POLY feature class and the old one will be moved to the historical feature class. ePlanning will need to link the LUPA_ID to the appropriate Plan Id in ePlanning.

Situation	**LUPA_EXIST_POLY**		**LUPA_HIST_POLY**			**ePlanning** (LUPA_ID is data element attached to a Plan in ePlanning)
	LUPA_ID	**ROD DATE**	**LUPA_ID**	**LUP_ INACTIVE_ DT**	**BNDY_ INACTIVE_ DT**	
New Land Use Plan replaces Old Land Plan	New Polygon with new ID	New ROD Date	Old ID	New LUP ROD Date	Blank	ePlanning links LUPA_ID to Plan ID
New LUP (X) replaces part of another LUP (Y)	X gets new polygon with new ID	X gets New ROD Date	Old X ID	New LUP X ROD Date	Blank	ePlanning links LUP X PLAN ID to its new LUPA_ID
	Y gets new polygon with new ID	Y keeps its ROD for remaining area	OLD Y ID	Blank	Use LUP X New ROD Date	ePlanning links LUP Y PLAN ID to its new LUPA_ID
LUP is amended*, boundary not changed	No change	New ROD Date	No record			ePLanning links amendment PLAN_ID to existing LUPA_ID
LUP is amended*, boundary changes	New Polygon with new ID	New ROD Date	Old ID	New LUP ROD Date	Blank	ePLanning links LUP amendment PLAN_ID to new LUPA_ID
Maintenance (correction) to LUP changes boundary	New Polygon with new ID	Existing ROD Date	Old ID	Blank	Maintenance date	ePlanning replaces LUPA_ID in existing Plan

* Revisions will be handled the same as amendments.