# AREAS OF CRITICAL ENVIRONMENTAL CONCERN (ACEC) IMPLEMENTATION GUIDELINES

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## Version 1.2

## FINAL

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

# Implementation Guidelines for Areas of Critical Environmental Concern (ACEC)

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# Part I: Introduction

This document describes the national data standard for the Areas of Critical Environmental Concern (ACEC) 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. For the full physical implementation, including instructions and files to build a geodatabase, please go to http://web.blm.gov/data_mgt/standards/in_progress/acec/index.htm

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 nine tables in this implementation:

1. *acec_predesig_arc* represents the arc features that will define the Pre-designated ACEC polygons. These arcs will have the feature level metadata attributes shown assigned to them.
2. *acec_predesig_poly* represents the polygon features that show the boundaries for the Pre-Designated ACECs.
3. *acec_desig_arc* represents the arc features that will define the Designated ACEC polygons. These arcs will have the feature level metadata attributes shown assigned to them.
4. *acec_desig_poly* represents the polygon features that show the boundaries for the Designated ACECs.
5. *acec_hist_poly* represents the polygon features that show Historical ACECs.
6. *acec_predesig_desig_type_tbl* will contain the legally recognizable/designated reason(s) that an area that has been nominated or considered as an ACEC.
7. *acec_predesig_mgmt_const_tbl* will contain the legally recognizable/designated management constraint(s) placed on an area that has been nominated or considered as an ACEC.
8. *acec_desig_type_tbl* will contain the legally recognizable/designated reason(s) that an area that has been designated as an ACEC.
9. *acec_mgmt_const_tbl* will contain the legally recognizable/designated management constraint(s) placed on an area that has been designated as an ACEC.

### *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.

The following Geodatabase Topology Rules apply:

- *acec_predesig_arc* **Must Not Overlap**
- *acec_predesig_arc* **Must Be Covered By Boundary Of** *acec_predesig_poly*
- *acec_predesig_arc* **Must Not Self-Overlap**
- *acec_predesig_poly* **Must Not Overlap**
- *acec_predesig_ poly* **Boundary Must Be Covered By** *acec_predesig_arc*
- *acec_desig_arc* **Must Not Overlap**
- *acec_desig_arc* **Must Be Covered By Boundary Of** *acec_desig_poly*
- *acec_desig_arc* **Must Not Self-Overlap**
- *acec_desig_poly* **Must Not Overlap**
- *acec_desig_ poly* **Boundary Must Be Covered By** *acec_desig_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. 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 format for storing the date field in the geodatabase (GDB) will be MM/DD/YYYY due to ESRI software limitations. 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, YYYYMMDD, is for publishing/displaying the date field. 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.

The Administrative State, District and Field Office codes were part of a three tier identification system, which has been replaced by the ten-character DOI FBMS Organization Code. For BLM national data standards, we will be using only the last eight characters of the FBMS organization code (the two-character BLM Administrative State Code and the six-character Administrative Office Code). While using these codes in combination can contribute to the creation of a unique identifier, they are also listed as separate attributes so that if the codes change at a single level, the concatenated code can then be regenerated. However, if the 8 character code is used as part of a unique identifier, the unique identifier is not re-generated if the organization code changes.

To populate the field for the Administrative Unit Code attribute in the geodatabase (ADM_UNIT_CD), individual offices should find the code for their specific office at the following website: http://web.blm.gov/data_mgt/fpps_org_codes.htm (click on the link for "GIS Administrative Unit Codes"). The field should be populated with the office code for the lowest level of the organization that has jurisdiction.

### *Review Cycle*

The data for the ACECs should be reviewed on at least an annual basis for updates. The data standard itself will also be reviewed annually or at the time of request by the users through the data steward.

### *National Unique Identifier for ACEC*

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

The primary key for ACEC will be ten digits. The first four will be "ACEC" and the last six digits will be a sequential number.

**- Creating the Initial Data Set**

There are currently over 1100 ACECs designated for the BLM. Each state has been assigned a range of unique identifiers to use. As the ACECs 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 ACEC.

# Part II: Data Standard Implementation Details

### *Table Information*

### *A. Areas of Critical Environmental Concern Pre-designated Arcs (acec_predesig_arc)*

The arc features used to define the pre-designated 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.

**ACEC Pre-designated Arcs Attributes**

| GIS NAME | ALIAS | DATA FORMAT | * Req'd? | ALLOW NULLS? | DEFAULT VALUE | DOMAIN NAME | **FL META | DE-RIVED? | *** SRC |
|---|---|---|---|---|---|---|---|---|---|
| CREATE_DATE | Created Date | Date | M | No | 9/9/9999 | | Yes | Yes | G |
| CREATE_BY | Created By Name | Char(30) | M | No | UNK | | Yes | Yes | G |
| MODIFY_DATE | Modified Date | Date | M | No | 9/9/9999 | | Yes | Yes | G |
| MODIFY_BY | Modified By Name | Char(30) | M | No | UNK | | Yes | Yes | G |
| COORD_SRC_TYPE | Coordinate Source Type Code | Char(5) | M | No | UNK | DOM_COORD_ SOURCE_TYPE | Yes | No | O/I |
| COORD_SRC2 | Coordinate Source Code | Char(25) | O | Yes | | | Yes | No | O/I |
| DEF_FET_TYPE | Defining Feature Type Code | Char(15) | M | No | UNK | DOM_DEF_ FEATURE_TYPE | Yes | No | O/I |
| DEF_FET2 | Defining Feature Code | Char(30) | O | Yes | | | Yes | No | O/I |
| ACCURACY_FT | Accuracy Measurement In Feet | Long Integer(4) | M | No | -1 | | Yes | No | O/I |

*Req"d (Required?): M=Mandatory O=Optional C=Conditional
**FL META – Feature Level Metadata; ***SRC (SOURCE): G(enerated) O/I (Operator Input)

| GIS Name | Logical Attribute Name | Definition |
|---|---|---|
| CREATE_DATE | Not Applicable | Not on the logical model.<br><br>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.<br><br>The format for storing the date field in the geodatabase (GDB) will be MM/DD/YYYY due to ESRI software limitations. 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, YYYYMMDD, is for publishing/displaying the date field. 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. |
| CREATE_BY | Not Applicable | Not on the logical data model.<br><br>This is a system Gen 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. |
| MODIFY_DATE | Not Applicable | Not on the logical model.<br><br>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.<br><br>The format for storing the date field in the geodatabase (GDB) will be MM/DD/YYYY due to ESRI software limitations. 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, YYYYMMDD, is for publishing/displaying the date field. 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 |

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| | | 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. |
| MODIFY_BY | Not Applicable | Not on the logical data model.<br><br>This is a system Gen 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. |
| COORD_SRC_TYPE | Location Source Type Name | The name (code) that identifies the general category for the origin of the location coordinate (Appendix A), representing a compilation of the state adopted source codes.<br><br>The domain contains those values that would most likely be used in the determination of source codes for the data set.<br>Attribute Domain Assignment: DOM_COORD_SOURCE_TYPE Default: UNK |
| COORD_SRC2 | Location Source Description Specific Name | The name (code) that identifies a more specific description of the coordinate source.<br><br>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. |
| DEF_FET_TYPE | Defining Feature Type Name | 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)<br>Attribute Domain Assignment: DOM_DEF_FEATURE_TYPE Default: UNK |
| DEF_FET2 | Defining Feature Description Name | The name (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.<br><br>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_FT | Line Form Accuracy | 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) |

<table>
<tr>
<td></td>
<td>Measure</td>
<td>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).<br><br>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>

### *B. Areas of Critical Environmental Concern Pre-designated Polygons (acec_predesig_poly)*

The polygon features for pre-designated Areas of Critical Environmental Concern are defined below. Domain values are used when appropriate.

There will be a minimum of 16 attributes associated with the pre-designated ACEC polygon features.

| ACEC Pre-designated Polygons Attributes | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| GIS NAME | ALIAS | DATA FORMAT | * Req'd? | ALLOW NULLS? | DEFAULT VALUE | DOMAIN NAME | **FL META | DE-RIVED? | *** SRC |
| ACEC_ID | ACEC Unique Identifier | Char(10) | M | No | | | No | No | G |
| LOC_ACEC_ID | Local ACEC Identifier | Char(20) | O | Yes | | | No | No | O/I |
| ACEC_NAME | ACEC Name | Char(60) | M | No | UNK | | No | No | O/I |
| CASEFILE_NO | ACEC Casefile Number | Char(15) | O | Yes | N/A | | No | No | O/I |
| LUP_NAME | Land Use Plan Name | Char(50) | M | No | UNK | | No | No | O/I |
| ACEC_DESIG_STATUS | Status | Char(25) | M | No | UNK | DOM_DESIG _STATUS | No | No | O/I |
| STATUS_EFF_DATE | Status Effective Date | Date | M | No | 9/9/9999 | | No | No | O/I |
| STATUS_END_DATE | Status End Date | Date | C | No | 9/9/9999 | | No | No | O/I |
| GIS_ACRES | GIS Acres | Double (16.6) | M | No | 0 | | No | Yes | G |
| ADMIN_ST | Administrative State Code | Char(2) | M | No | | DOM_ADMIN_ST | No | No | O/I |
| ADM_OFC_CD | Administrative Office Code | Char(6) | M | No | 000000 | | No | No | O/I |
| ADM_UNIT_CD | Administrative Unit Code | Char(8) | M | No | | DOM_ADM_UNIT_CD | No | No | O/I |
| SENSITIVITY | View Sensitivity Code | Char(3) | M | No | UNK | DOM_SEN_CODE | No | No | O/I |
| COMMENTS | Comments | Char(250) | O | Yes | | | No | No | O/I |

*Req"d (Required?): M=Mandatory O=Optional C=Conditional
**FL META – Feature Level Metadata; ***SRC (SOURCE): G(enerated) O/I (Operator Input)

| GIS Name | Logical Attribute Name | Definition |
|---|---|---|
| ACEC_ID | Area of Critical | The designed primary key that will uniquely identify a single occurrence of the entity. |

| | | |
|---|---|---|
| | Environmental Concern Identifier | The primary key for ACEC will be 10 digits. The first four will be “ACEC” and the last six digits will be a sequential number. |
| LOCAL_ACEC_ID | Not Applicable | Not on the logical data model.<br><br>The current identifier that was used by a state or field office to identify an ACEC at the state or field office level. |
| ACEC_NAME | Area Critical Environmental Concern Name | The name of the ACEC taken from the Record of Decision and Land Use Plan which officially designated the ACEC. |
| CASEFILE_NO | Case File Number | The number that refers to the serialized case file number of the group of official documents that record the facts, or actions taken, on a specific application, such as an oil and gas lease, exchange, airport lease, easement acquisition, etc. (CMR). This field should be in uppercase (for example, OR035582).<br><br>This is a BLM International Organization for Standardization (ISO) assigned number used for identification of all lands and minerals case files including ACECs. This is the link to the LR2000 database. N/A - Not Applicable is the default code and will be used when no casefile number has been assigned. A value of "UNK" indicates unknown. |
| LUP_NAME | Project Name | The name given to a project that represents the full, official name associated with the project.<br><br>For ACECs, this attribute will be the Land Use Plan Name. |
| ACEC_DESIG_STATUS | ACEC Designation Status Name | The name that represents the stage of authorization category for an area being reviewed for the Land Use Plan.<br>Attribute Domain Assignment: DOM_DESIG_STATUS Default: UNK |
| STATUS_EFF_DATE | Pre-designated Status Effective Date | The date on which the pre-designation status of the area becomes effective.<br><br>The date will be in the format of MM/DD/YYYY.<br><br>The format for storing the date field in the geodatabase (GDB) will be MM/DD/YYYY due to ESRI software limitations. 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, YYYYMMDD, is for publishing/displaying the date field. 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 |

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| | | 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. |
| STATUS_END_DATE | Pre-designated Status End Date | The date on which the pre-designation status of the area is no longer effective.<br><br>The date will be in the format of MM/DD/YYYY.<br><br>The format for storing the date field in the geodatabase (GDB) will be MM/DD/YYYY due to ESRI software limitations. 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, YYYYMMDD, is for publishing/displaying the date field. 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. |
| GIS_ACRES | Not Applicable | Not on the logical data model.<br><br>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.<br><br>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 from the length of a meter as opposed to the International Standard for converting meters and feet. |
| ADMIN_ST | State Alphabetic Code | 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 |

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| | | 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.<br><br>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)<br>Attribute Domain Assignment: DOM_ADMIN_ST |
| ADM_OFC_CD | Office.BLM Organization Code | BLM administrative office (which is subordinate to the state office) that has jurisdiction and/or management authority over lands within a geographic area.<br><br>This is a six-digit code. In the FBMS Organization Codes, use the six characters after the State designators. (e.g. LLAK**030900**) |
| ADM_UNIT_CD | Administrative Office + Office.BLM Organization Code | The BLM administrative unit/office that is a combination of Administrative State Code and Administrative Office Code that fully identifies the geographic area which has jurisdiction over the lands.<br><br>This is an eight-character code. In the FMBS Organization Codes, use the last eight characters (e.g. LL**AK030900**). The field should be populated with the office code for the lowest level of the organization with jurisdiction.<br>Attribute Domain Assignment: DOM_ADM_UNIT_CD |
| SENSITIVITY | Area of Critical Environmental Concern View Sensitivity Code | A code that designates the sensitivity of the information on the ACEC.<br>Attribute Domain Assignment: DOM_SEN_CODE Default: UNK |
| COMMENTS | Area of Critical Environmental Concern Comments Text | The text that provides additional information about the Area of Critical Environmental Concern. |

### *C. Areas of Critical Environmental Concern Designated Arcs (acec_desig_arc)*

The arc features used to define the designated 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.

**ACEC Designated Arcs Attributes**

| GIS NAME | ALIAS | DATA FORMAT | * Req'd? | ALLOW NULLS? | DEFAULT VALUE | DOMAIN NAME | **FL META | DE-RIVED? | *** SRC |
|---|---|---|---|---|---|---|---|---|---|
| CREATE_DATE | Created Date | Date | M | No | 9/9/9999 | | Yes | Yes | G |
| CREATE_BY | Created By Name | Char(30) | M | No | UNK | | Yes | Yes | G |
| MODIFY_DATE | Modified Date | Date | M | No | 9/9/9999 | | Yes | Yes | G |
| MODIFY_BY | Modified By Name | Char(30) | M | No | UNK | | Yes | Yes | G |
| COORD_SRC_TYPE | Coordinate Source Type Code | Char(5) | M | No | UNK | DOM_COORD_ SOURCE_TYPE | Yes | No | O/I |
| COORD_SRC2 | Coordinate Source Code | Char(25) | O | Yes | | | Yes | No | O/I |
| DEF_FET_TYPE | Defining Feature Type Code | Char(15) | M | No | UNK | DOM_DEF_ FEATURE_TYPE | Yes | No | O/I |
| DEF_FET2 | Defining Feature Code | Char(30) | O | Yes | | | Yes | No | O/I |
| ACCURACY_FT | Accuracy Measurement In Feet | Long Integer(4) | M | No | -1 | | Yes | No | O/I |

*Req"d (Required?): M=Mandatory O=Optional C=Conditional
**FL META – Feature Level Metadata; ***SRC (SOURCE): G(enerated) O/I (Operator Input)

| GIS Name | Logical Attribute Name | Definition |
|---|---|---|
| CREATE_DATE | Not Applicable | Not on the logical data model.<br><br>This is a system Gen 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.<br><br>The format for storing the date field in the geodatabase (GDB) will be MM/DD/YYYY due to ESRI software limitations. 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, YYYYMMDD, is for publishing/displaying the date field. 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. |
| CREATE_BY | Not Applicable | Not on the logical data model.<br><br>This is a system Gen 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. |
| MODIFY_DATE | Not Applicable | Not on the logical data model.<br><br>This is a system Gen 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.<br><br>The format for storing the date field in the geodatabase (GDB) will be MM/DD/YYYY due to ESRI software limitations. 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, YYYYMMDD, is for publishing/displaying the date field. 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. |

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|---|---|---|
| MODIFY_BY | Not Applicable | Not on the logical data model.<br><br>This is a system Gen 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. |
| COORD_SRC_TYPE | Location Source Type Name | The name (code) that identifies the general category for the origin of the location coordinate (Appendix A), representing a compilation of the state adopted source codes.<br><br>The domain contains those values that would most likely be used in the determination of source codes for the data set.<br>Attribute Domain Assignment: DOM_COORD_SOURCE_TYPE Default: UNK |
| COORD_SRC2 | Location Source Description Specific Name | The name (code) that identifies a more specific description of the coordinate source.<br><br>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. |
| DEF_FET_TYPE | Defining Feature Type Name | 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)<br>Attribute Domain Assignment: DOM_DEF_FEATURE_TYPE Default: UNK |
| DEF_FET2 | Defining Feature Description Name | The name (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.<br><br>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_FT | Line Form Accuracy Measure | 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).<br><br>**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.)

| Accuracy Measurement Example Table | |
|---|---|
| **1** | **+/- 1 Feet** |
| **10** | **+/- 10 Feet** |
| **15** | **+/- 15 Feet** |
| **20** | **+/- 20 Feet** |
| **100** | **+/- 100 Feet** |

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

### *D. Areas of Critical Environmental Concern Designated Polygons (acec_desig_poly)*

Once a polygon feature leaves the Pre-Designated phase (transitions from Considered to Designated), that polygon will be removed from the ACEC Pre-designated feature class and be placed in the ACEC Designated feature class. The polygon features for designated Areas of Critical Environmental Concern are defined below. These Areas of Critical Environmental Concern boundary attributes may be duplicated in other data sets but are considered minimum information for unique feature identification and cartographic purposes. Domain values are used when appropriate.

There will be a minimum of 14 attributes associated with the designated ACEC polygon features.

**ACEC Designated Polygons Attributes**

| GIS NAME | ALIAS | DATA FORMAT | * Req'd? | ALLOW NULLS? | DEFAULT VALUE | DOMAIN NAME | **FL META | DE-RIVED? | *** SRC |
|---|---|---|---|---|---|---|---|---|---|
| ACEC_ID | ACEC Unique Identifier | Char(10) | M | No | | | No | No | G |
| LOC_ACEC_ID | Local ACEC Identifier | Char(20) | O | Yes | | | No | No | O/I |
| ACEC_NAME | ACEC Name | Char(60) | M | No | UNK | | No | No | O/I |
| CASEFILE_NO | ACEC Casefile Number | Char(15) | O | Yes | N/A | | No | No | O/I |
| LUP_NAME | Land Use Plan Name | Char(50) | M | No | UNK | | No | No | O/I |
| ACEC_EST_ACR | ACEC Estimated Acres | Double (16.6) | O | Yes | 0 | | No | No | O/I |
| ROD_DATE | ROD Date | Date | M | No | 9/9/9999 | | No | No | O/I |
| GIS_ACRES | GIS Acres | Double (16.6) | M | No | 0 | | No | Yes | O/I |
| ADMIN_ST | Administrative State Code | Char(2) | M | No | | DOM_ADMIN_ST | No | No | O/I |
| ADM_OFC_CD | Administrative Office Code | Char(6) | M | No | 000000 | | No | No | O/I |
| ADM_UNIT_CD | Administrative Unit Code | Char(8) | M | No | | DOM_ADM_UNIT_CD | No | No | O/I |
| SENSITIVITY | View Sensitivity Code | Char(3) | M | No | UNK | DOM_SEN_CODE | No | No | O/I |
| COMMENTS | Comments | Char (250) | O | Yes | | | No | No | O/I |

*Req"d (Required?): M=Mandatory O=Optional C=Conditional
**FL META – Feature Level Metadata; ***SRC (SOURCE): G(enerated) O/I (Operator Input)

| GIS Name | Logical | Definition |
|---|---|---|

| | Attribute Name | |
|---|---|---|
| ACEC_ID | Area of Critical Environmental Concern Identifier | The designed primary key that will uniquely identify a single occurrence of the entity.<br><br>The primary key for ACEC will be 10 digits. The first four will be "ACEC" and the last six digits will be a sequential number. |
| LOCAL_ACEC_ID | Not Applicable | Not on the logical data model.<br><br>The current identifier that was used by a state or field office to identify an ACEC at the state or field office level. |
| ACEC_NAME | Area Critical Environmental Concern Name | The name of the ACEC taken from the Record of Decision and Land Use Plan which officially designated the ACEC. |
| CASEFILE_NO | Case File Number | The number that refers to the serialized case file number of the group of official documents that record the facts, or actions taken, on a specific application, such as an oil and gas lease, exchange, airport lease, easement acquisition, etc. (CMR). This field should be in uppercase (for example, OR035582).<br><br>This is a BLM International Organization for Standardization (ISO) assigned number used for identification of all lands and minerals case files including ACECs. This is the link to the LR2000 database. N/A - Not Applicable is the default code and will be used when no casefile number has been assigned. A value of "UNK" indicates unknown. |
| LUP_NAME | Project Name | The name given to a project that represents the full, official name associated with the project.<br><br>For ACECs, this attribute will be the Land Use Plan Name. |
| ACEC_EST_ACR | Designated ACEC Size Measure | The measure of the area estimated in the designation process for land use planning. This is the designated size (acres) and may be different than the actual area. This does not change.<br><br>Acres are calculated using the following formula: [Acres = Area (in meters)/4046.87]. This may be different than the GIS calculated area of the ACEC polygon. This field value should be the same for each polygon in an ACEC comprised of multiple polygons. The values in this field do not change. Do not use this field to derive GIS acres. |
| ROD_DATE | Land Related Project Decision Date | The date on which the decision is signed by the person who has approval authority for the decisions.<br><br>The ROD signing date of the monitoring or activity plan, if any, for the particular ACEC. The date will be in the format of MM/DD/YYYY. |

| | | |
|---|---|---|
| | | The format for storing the date field in the geodatabase (GDB) will be MM/DD/YYYY due to ESRI software limitations. 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, YYYYMMDD, is for publishing/displaying the date field. 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. |
| GIS_ACRES | Not Applicable | Not on the logical data model.<br><br>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.<br><br>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 from the length of a meter as opposed to the International Standard for converting meters and feet. |
| ADMIN_ST | State Alphabetic Code | 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.<br><br>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)<br>Attribute Domain Assignment: DOM_ADMIN_ST |
| ADM_OFC_CD | Office.BLM | BLM administrative office (which is subordinate to the state office) that has jurisdiction |

| | | |
|---|---|---|
| | Organization Code | and/or management authority over lands within a geographic area.<br><br>This is a six-digit code. In the FBMS Organization Codes, use the six characters after the State designators. (e.g. LLAK**030900**) |
| ADM_UNIT_CD | Administrative Office + Office.BLM Organization Code | The BLM administrative unit/office that is a combination of Administrative State Code and Administrative Office Code that fully identifies the geographic area which has jurisdiction over the lands.<br><br>This is an eight-character code. In the FMBS Organization Codes, use the last eight characters (e.g. LL**AK030900**). The field should be populated with the office code for the lowest level of the organization with jurisdiction.<br>Attribute Domain Assignment: DOM_ADM_UNIT_CD |
| SENSITIVITY | Area of Critical Environmental Concern View Sensitivity Code | A code that designates the sensitivity of the information on the ACEC.<br>Attribute Domain Assignment: DOM_SEN_CODE Default: UNK |
| COMMENTS | Area of Critical Environmental Concern Comments Text | The text that provides additional information about the Area of Critical Environmental Concern. |

### *E. Areas of Critical Environmental Concern Historical Polygons (acec_hist_poly)*

The intent of the historical feature class is to store changes to Designated ACEC polygons only. The historical feature class should remain empty until something has changed in a feature. The business can run an annual archive if they so choose, or as required. The Historical Areas of Critical Environmental Concern polygon features are a result of the ACEC polygons being permanently changed as a result of a business need. The resulting ACEC polygons are no longer active, 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 Areas of Critical Environmental Concern boundary attributes may be duplicated in other data sets but are considered minimum information for unique feature identification and cartographic purposes. Domain values are used when appropriate.

There will be a minimum of 15 attributes associated with the historical ACEC polygon features.

**ACEC Historical Polygons Attributes**

| GIS NAME | ALIAS | DATA FORMAT | *Req'd | ALLOW NULLS? | DEFAULT VALUE | DOMAIN NAME | **FL META | DE-RIVED ? | *** SRC |
|---|---|---|---|---|---|---|---|---|---|
| ACEC_ID | ACEC Unique Identifier | Char(10) | M | No | | | No | No | G |
| LOC_ACEC_ID | Local ACEC Identifier | Char(20) | O | Yes | | | No | No | O/I |
| ACEC_NAME | ACEC Name | Char(60) | M | No | UNK | | No | No | O/I |
| CASEFILE_NO | ACEC Casefile Number | Char(15) | O | Yes | N/A | | No | No | O/I |
| LUP_NAME | Land Use Plan Name | Char(50) | M | No | UNK | | No | No | O/I |
| ACEC_EST_ACR | ACEC Estimated Acres | Double (16.6) | O | Yes | 0 | | No | No | O/I |
| ROD_DATE | ROD Date | Date | M | No | 9/9/9999 | | No | No | O/I |
| GIS_ACRES | GIS Acres | Double (16.6) | M | No | 0 | | No | Yes | O/I |
| ADMIN_ST | Administrative State Code | Char(2) | M | No | | DOM_ADMIN_ST | No | No | O/I |
| ADM_OFC_CD | Administrative Office Code | Char(6) | M | No | 000000 | | No | No | O/I |
| ADM_UNIT_CD | Administrative Unit Code | Char(8) | M | No | | DOM_ADM_UNIT_CD | No | No | O/I |
| SENSITIVITY | View Sensitivity Code | Char(3) | M | No | UNK | DOM_SEN_CODE | No | No | O/I |
| INACTIVE_DT | ACEC Inactive Date | Date | M | No | 9/9/9999 | | No | No | O/I |
| COMMENTS | Comments | Char (250) | O | Yes | | | No | No | O/I |

*Req"d (Required?): M=Mandatory O=Optional C=Conditional
**FL META – Feature Level Metadata; ***SRC (SOURCE): G(enerated) O/I (Operator Input)

| GIS Name | Logical Attribute Name | Definition |
|---|---|---|
| ACEC_ID | Area of Critical Environmental Concern Identifier | The designed primary key that will uniquely identify a single occurrence of the entity.<br><br>The primary key for ACEC will be 10 digits. The first four will be "ACEC" and the last six digits will be a sequential number. |
| LOCAL_ACEC_ID | Not Applicable | Not on the logical data model.<br><br>The current identifier that was used by a state or field office to identify an ACEC at the state or field office level. |
| ACEC_NAME | Area Critical Environmental Concern Name | The name of the ACEC taken from the Record of Decision and Land Use Plan which officially designated the ACEC. |
| CASEFILE_NO | Case File Number | The number that refers to the serialized case file number of the group of official documents that record the facts, or actions taken, on a specific application, such as an oil and gas lease, exchange, airport lease, easement acquisition, etc. (CMR). This field should be in uppercase (for example, OR035582).<br><br>This is a BLM International Organization for Standardization (ISO) assigned number used for identification of all lands and minerals case files including ACECs. This is the link to the LR2000 database. N/A - Not Applicable is the default code and will be used when no casefile number has been assigned. A value of "UNK" indicates unknown. |
| LUP_NAME | Project Name | The name given to a project that represents the full, official name associated with the project.<br><br>For ACECs, this attribute will be the Land Use Plan Name. |
| ACEC_EST_ACR | Designated ACEC Size Measure | The measure of the area estimated in the designation process for land use planning. This is the designated size (acres) and may be different than the actual area. This does not change.<br><br>Acres are calculated using the following formula: [Acres = Area (in meters)/4046.87]. This may be different than the GIS calculated area of the ACEC polygon. This field value should be the same for each polygon in an ACEC comprised of multiple polygons. The values in this field do not change. Do not use this field to derive GIS acres. |

| | | |
|---|---|---|
| ROD_DATE | Land Related Project Decision Date | The date on which the decision is signed by the person who has approval authority for the decisions.<br><br>The ROD signing date of the monitoring or activity plan, if any, for the particular ACEC. The date will be in the format of MM/DD/YYYY.<br><br>The format for storing the date field in the geodatabase (GDB) will be MM/DD/YYYY due to ESRI software limitations. 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, YYYYMMDD, is for publishing/displaying the date field. 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. |
| GIS_ACRES | N/A | Not on the logical data model.<br><br>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.<br><br>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 from the length of a meter as opposed to the International Standard for converting meters and feet. |
| ADMIN_ST | State Alphabetic Code | 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.<br><br>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)<br>Attribute Domain Assignment: DOM_ADMIN_ST |
| ADM_OFC_CD | Office.BLM Organization Code | BLM administrative office (which is subordinate to the state office) that has jurisdiction and/or management authority over lands within a geographic area.<br><br>This is a six-digit code. In the FBMS Organization Codes, use the six characters after the State designators. e.g. LLAK**030900**) |
| ADM_UNIT_CD | Administrative Office + Office.BLM Organization Code | The BLM administrative unit/office that is a combination of Administrative State Code and Administrative Office Code that fully identifies the geographic area which has jurisdiction over the lands.<br><br>This is an eight-character code. In the FMBS Organization Codes, use the last eight characters (e.g. LL**AK030900**). The field should be populated with the office code for the lowest level of the organization with jurisdiction.<br>Attribute Domain Assignment: DOM_ADM_UNIT_CD |
| SENSITIVITY | Area of Critical Environmental Concern View Sensitivity Code | A code that designates the sensitivity of the information on the ACEC.<br>Attribute Domain Assignment: DOM_SEN_CODE Default: UNK |
| INACTIVE_DT | Location Archive Date | The calendar date on which the ACEC is no longer effective because the external boundary of the ACEC changed or it is no longer considered as an ACEC. Business Rules: ACECs with End Dates are a separate feature class from Designated ACECs. The date will be in the format of MM/DD/YYYY.<br><br>The format for storing the date field in the geodatabase (GDB) will be MM/DD/YYYY due to ESRI software limitations. 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, YYYYMMDD, is for publishing/displaying the date field. 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. |
| COMMENTS | Area of Critical Environmental | The text that provides additional information about the Area of Critical Environmental Concern. |

| | | |
|---|---|---|
| | Concern Comments Text | |

### *F. Areas of Critical Environmental Concern Pre-designated Designation Type Table (acec_predesig_desig_type_tbl)*

Designation Type "reflects the legally recognizable/designated reason(s) placed on an area with some degree of ACEC status (designated, nominated, or considered)." This field captures the reason(s) why an area was nominated or considered an ACEC. The values are taken from 43 CFR 1610.7-2. A value of "UNK" will indicate unknown. All pre-designated ACECs must be associated with at least one Designation Type. An ACEC can have more than one designation reason.

| ACEC Pre-designated Designation Type Table | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| GIS NAME | ALIAS | DATA FORMAT | *Req"D | ALLOW NULLS? | DEFAULT VALUE | DOMAIN NAME | **FL META | DE-RIVED? | *** SRC |
| ACEC_ID | ACEC Unique Identifier | Char(10) | M | No | | | No | No | G |
| ORDER_NO | ACEC Designation Reason Order Number | Integer | M | No | 1 | | No | No | O/I |
| ACEC_REASON | ACEC Designation Reason Code | Char(4) | M | No | UNK | DOM_DESIG_CODE | No | No | O/I |
| DESIG_REAS _TEXT | Designation Reason Text | Char(40) | O | Yes | | | No | No | O/I |
| *Req"d (Required?): M=Mandatory O=Optional C=Conditional<br>**FL META – Feature Level Metadata; ***SRC (SOURCE): G(enerated) O/I (Operator Input) | | | | | | | | | |

| GIS Name | Logical Attribute Name | Definition |
|---|---|---|
| ACEC_ID | Area of Critical Environmental Concern Identifier | The designed primary key that will uniquely identify a single occurrence of the entity.<br><br>The primary key for ACEC will be 10 digits. The first four will be "ACEC" and the last six digits will be a sequential number. |
| ORDER_NO | Area of Critical Environmental Concern Designation Reason Order Number | The number that identifies the order of importance of the designation reason. The primary reason is number one. |
| ACEC_REASON | ACEC Designation Reason Code | The code that designates the legally significant reasons placed on a designated, nominated, or considered Area of Critical Environmental Concern, as defined in CFR 1610.7-2.<br>Attribute Domain Assignment: DOM_DESIG_CODE Default: UNK |
| DESIG_REAS_TEXT | Optional Designation Reason Text | The text that provides additional information about the Designation Reason, associated with the Designation Reason Code. (optional) |

## *G. Areas of Critical Environmental Concern Pre-designated Management Constraints Table (acec_predesig_mgmt_const_tbl)*

A constraint "reflects the legally recognizable/designated management constraint(s) placed on an area with some degree of ACEC status (designated, nominated, or considered)." A value of "UNK" is used for unknown.

**ACEC Pre-designated Management Constraints Table**

| GIS NAME | ALIAS | DATA FORMAT | *Req"D | ALLOW NULLS? | DEFAULT VALUE | DOMAIN NAME | ** FL META | DE-RIVED? | *** SRC |
|---|---|---|---|---|---|---|---|---|---|
| ACEC_ID | ACEC Unique Identifier | Char(10) | M | No | | | No | No | Gen |
| MGMT_CON _TYPE | Management Constraint Type | Char(25) | M | No | UNK | DOM_MGMT_ CON_TYPE | No | No | O/I |
| PRIORITY_NO | Priority Number | Char(2) | O | Yes | | | No | No | O/I |
| LIMITATION | Limitation | Char(20) | M | Yes | UNK | DOM_LIMIT | No | No | O/I |
| SPECIFIC_TEXT | Constraint Specific Text | Char(100) | O | Yes | | | No | No | O/I |

*Req"d (Required?): M=Mandatory O=Optional C=Conditional
**FL META – Feature Level Metadata; ***SRC (SOURCE): G(enerated) O/I (Operator Input)

| GIS Name | Logical Attribute Name | Definition |
|---|---|---|
| ACEC_ID | Area of Critical Environmental Concern Identifier | The designed primary key that will uniquely identify a single occurrence of the entity.<br><br>The primary key for ACEC will be 10 digits. The first four will be "ACEC" and the last six digits will be a sequential number. |
| MGMT_CON_TY PE | Management Constraint Category Name | The name for the legally recognizable and designated management constraints, restrictions and goals placed on an area with some degree of the status (designated, nominated, or considered).<br><br>A code will be used to indicate the type of management constraint.<br>Attribute Domain Assignment: DOM_MGMT_CON_TYPE Default: UNK |
| PRIORITY_NO | Management Constraint Area of Critical Environmental Concern Order Number | The number that identifies the order of importance of the management constraint. The primary reason is number one. |
| LIMITATION | Management Limitation Type Name | The name of the type of limitations that can be placed on a management constraint category.<br><br>A code will be used to indicate the type of limitation.<br>Attribute Domain Assignment: DOM_LIMIT Default: UNK |

| | | |
|---|---|---|
| SPECIFIC_TEXT | ACEC Management Constraint Specific Text | The text that describes the specifics about a management constraint category. |

### *H. Areas of Critical Environmental Concern Designation Type Table (acec_desig_type_tbl)*

Designation Type "reflects the legally recognizable/designated reason(s) placed on an area with some degree of ACEC status (designated, nominated, or considered)." This field captures the reason(s) why an area was nominated, considered, or designated an ACEC. The values are taken from 43 CFR 1610.7-2. A value of "UNK" will indicate unknown. All ACECs must be associated with at least one Designation Type. An ACEC can have more than one designation reason.

| ACEC Designation Type Table | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| GIS NAME | ALIAS | DATA FORMAT | *Req"D | ALLOW NULLS? | DEFAULT VALUE | DOMAIN NAME | **FL META | DE-RIVED? | *** SRC |
| ACEC_ID | ACEC Unique Identifier | Char(10) | M | No | | | No | No | G |
| ORDER_NO | ACEC Designation Reason Order Number | Integer | M | No | 1 | | No | No | O/I |
| ACEC_REASON | ACEC Designation Reason Code | Char(4) | M | No | UNK | DOM_DESIG_CODE | No | No | O/I |
| DESIG_REAS _TEXT | Designation Reason Text | Char(40) | O | Yes | | | No | No | O/I |
| *Req"d (Required?): M=Mandatory O=Optional C=Conditional<br>**FL META – Feature Level Metadata; ***SRC (SOURCE): G(enerated) O/I (Operator Input) | | | | | | | | | |

| GIS Name | Logical Attribute Name | Definition |
|---|---|---|
| ACEC_ID | Area of Critical Environmental Concern Identifier | The designed primary key that will uniquely identify a single occurrence of the entity.<br><br>The primary key for ACEC will be 10 digits. The first four will be "ACEC" and the last six digits will be a sequential number. |
| ORDER_NO | Area of Critical Environmental Concern Designation Reason Order Number | The number that identifies the order of importance of the designation reason. The primary reason is number one. |
| ACEC_REASON | ACEC Designation Reason Code | The code that designates the legally significant reasons placed on a designated, nominated, or considered Area of Critical Environmental Concern, as defined in CFR 1610.7-2.<br>Attribute Domain Assignment: DOM_DESIG_CODE Default: UNK |
| DESIG_REAS_TEXT | Optional Designation Reason Text | The text that provides additional information about the Designation Reason, associated with the Designation Reason Code. (optional) |

## *I. Areas of Critical Environmental Concern Management Constraints Table (acec_mgmt_const_tbl)*

A constraint "reflects the legally recognizable/designated management constraint(s) placed on an area with some degree of ACEC status (designated, nominated, or considered)." A value of "UNK" is used for unknown.

| ACEC Management Constraints Table | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| GIS NAME | ALIAS | DATA FORMAT | *Req"D | ALLOW NULLS? | DEFAULT VALUE | DOMAIN NAME | ** FL META | DE-RIVED? | *** SRC |
| ACEC_ID | ACEC Unique Identifier | Char(10) | M | No | | | No | No | Gen |
| MGMT_CON _TYPE | Management Constraint Type | Char(25) | M | No | UNK | DOM_MGMT_ CON_TYPE | No | No | O/I |
| PRIORITY_NO | Priority Number | Char(2) | O | Yes | | | No | No | O/I |
| LIMITATION | Limitation | Char(20) | M | Yes | UNK | DOM_LIMIT | No | No | O/I |
| SPECIFIC_TEXT | Constraint Specific Text | Char(100) | O | Yes | | | No | No | O/I |

*Req"d (Required?): M=Mandatory O=Optional C=Conditional
**FL META – Feature Level Metadata; ***SRC (SOURCE): G(enerated) O/I (Operator Input)

| GIS Name | Logical Attribute Name | Definition |
|---|---|---|
| ACEC_ID | Area of Critical Environmental Concern Identifier | The designed primary key that will uniquely identify a single occurrence of the entity.<br><br>The primary key for ACEC will be 10 digits. The first four will be "ACEC" and the last six digits will be a sequential number. |
| MGMT_CON_TY PE | Area of Critical Environmental Concern Management Constraint Category Name | The name for the legally recognizable and designated management constraints, restrictions and goals placed on an area with some degree of the status (designated, nominated, or considered).<br><br>A code will be used to indicate the type of management constraint.<br>Attribute Domain Assignment: DOM_MGMT_CON_TYPE Default: UNK |
| PRIORITY_NO | Management Constraint Order Number | The number that identifies the order of importance of the management constraint. The primary reason is number one. |
| LIMITATION | Management Limitation Type Name | The name of the type of limitations that can be placed on a management constraint category.<br><br>A code will be used to indicate the type of limitation.<br>Attribute Domain Assignment: DOM_LIMIT Default: UNK |
| SPECIFIC_TEXT | ACEC Management Constraint Specific Text | The text that describes the specifics about a management constraint category. |

# Part III: Appendices

## *Appendix A- Domain Values and Examples*

**Link to Domains specific to ACEC**

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.

### 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**:**

| COORD_SOURCE_TYPE | Description | Definition |
|---|---|---|
| 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 |
| 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. |
| WBD | Watershed Boundary Dataset | A National geospatial database of drainage areas consisting of the 1st through 6th hierarchical hydrologic unit levels. |
| 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 location (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.**

| CORD_SRC_TYPE | CORD_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**

| DEF_FEATURE (Old Version) | DEFINING_FEATURE_TYPE | Definition |
|---|---|---|
| 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.

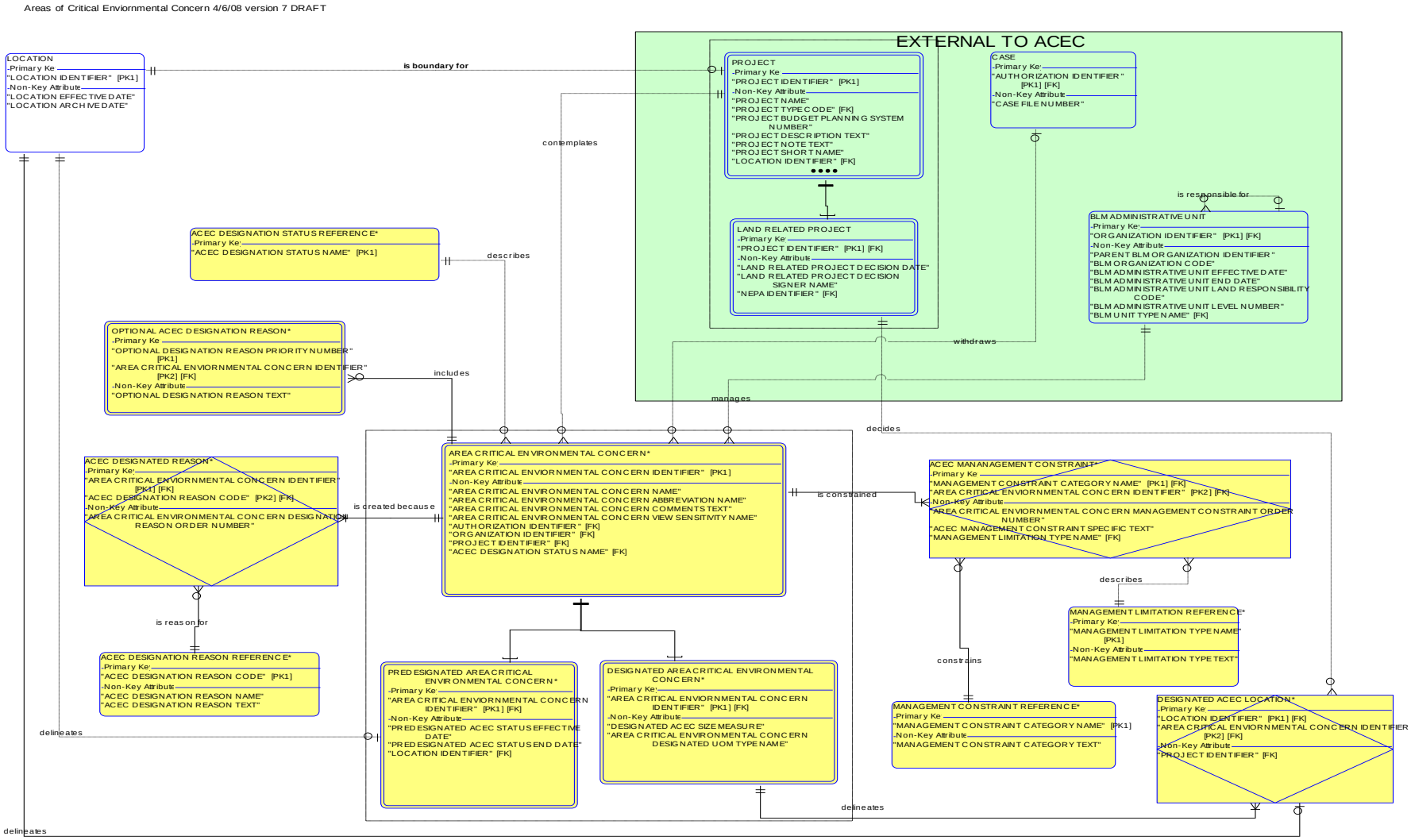
Suggested values appear in the table but the user is free to enter any value they choose. This domain is not intended to be all inclusive but may be used as a starting point for state-level lists of domain values. This is an optional attribute.

**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 |

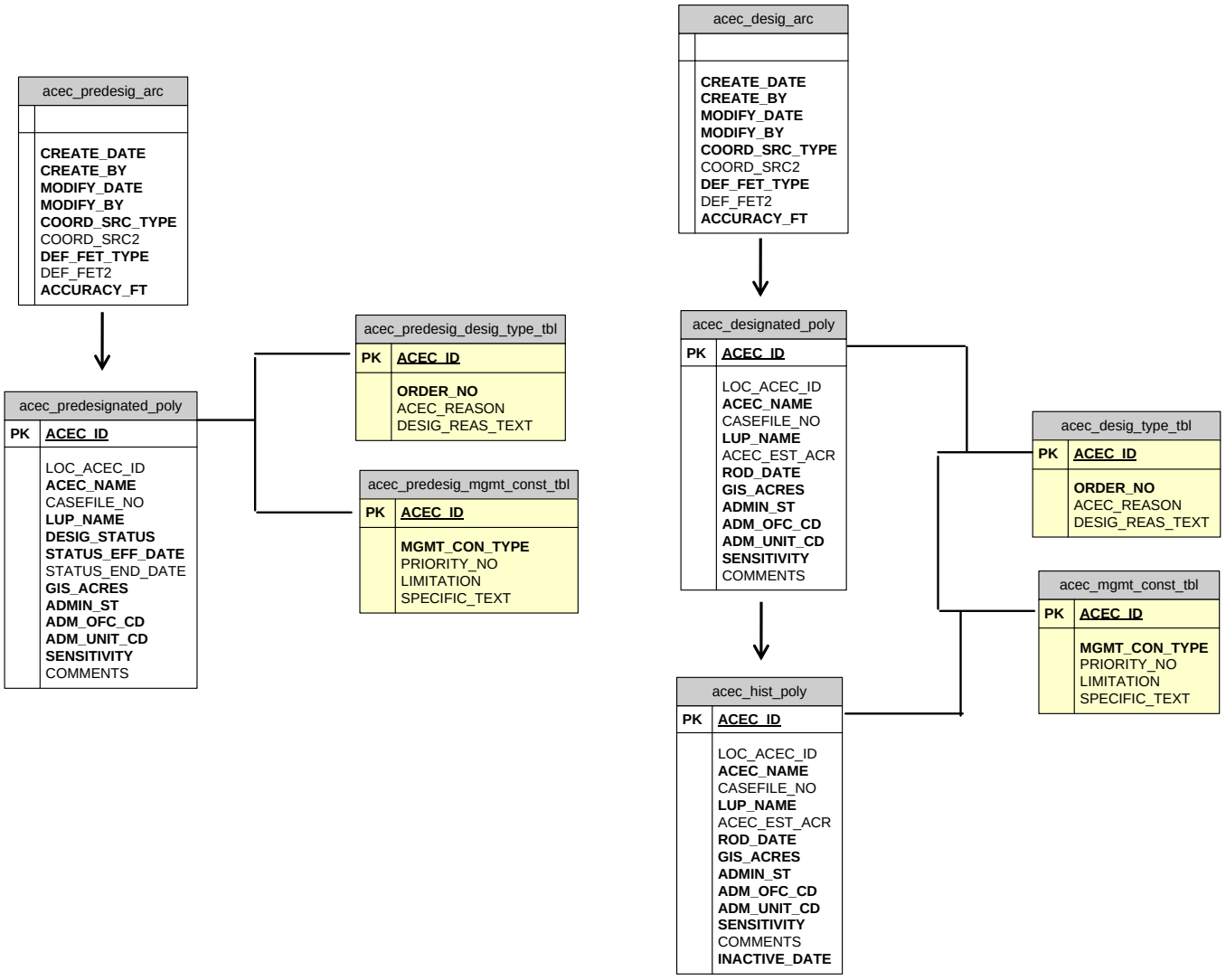
| | | |
|---|---|---|
| CONST_FEAT | offset | offset from a constructed feature |
| CONST_FEAT | mine | mine |
| CONST_FEAT | parking area | parking area |
| CONST_FEAT | railroad centerline | railroad centerline |
| CONST_FEAT | road centerline | road centerline |
| CONST_FEAT | trail non-motorized | 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*




Legend: PK (Primary Key) – uniquely identifies one occurrence (row) of the entity; FK (Foreign Key): is all or part of the PK of another entity it is related to. PK1, PK2 – indicates the PK is made of of more than 1 attribute to make it unique. The Word Identifier indicates that this will be a designed key, its format is not known, but the modeling tool required a format and size. The actual content and size of the identifier will be determined during design

## *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) |
| *Requirement M=Mandatory O=Optional C=Conditional* | Whether data is minimum allowed (Mandatory), not mandatory (Optional), or dependent (Conditional) based on an "IF" "THEN" statement | O |
| *Allow Nulls?* | Whether or not a value of "Null" is allowed in that column | Yes |
| *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 |
| *Feature Level Metadata?* | Whether it is metadata that is maintained at the feature level as opposed to metadata pertaining to the whole dataset | No |
| *Derived?* | Whether the attribute is system-generated, meaning it requires no input by the user to be populated | No |
| *Source* | 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 |