Land Condition - Trend Analysis
Data Dictionary

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DATA ELEMENT INFORMATION
Introduction

The US Army Construction Engineering Research Laboratories (USACERL) developed the Land Condition Trend Analysis (LCTA) program to meet the need for natural resources management and land stewardship on military installations. The LCTA program is a standardized method of natural resources data collection, analysis, and reporting designed to meet multiple goals and objectives. LCTA uses information on topographic features, soil characteristics, climatic variables, vegetation and wildlife resources to characterize an installation's natural resources in a cost- and time-effective manner. The information will (1) assist installation managers with making decisions on best use of land, scheduling of military activities, protection of threatened and endangered species, and long-term environmental planning; (2) provide officials at all levels with standardized natural resources inventory information for installations across the continental US and overseas.

In addition, LCTA is an Information Management System (IMS). LCTA IMS is a series of Army-developed executable programs, data storage schemes, and commercial off-the-shelf (COTS) products. Providing user-friendly automated programs to collect, analyze, interpret, and report natural resources data and land use impacts for decision making is the objective of the LCTA IMS.

Components of the LCTA IMS include:

1) Automated data collection techniques
2) Imagery processing for remotely sensed images and spatial data
3) Multimedia and hypermedia applications
4) Global electronic networking
5) Relational database management system
6) LCTA Program Manager

Automated data collection techniques provide improved data accuracy. Imagery processing is beneficial to data extrapolation. Multimedia and hypermedia applications provide textural and graphics information. Global electronic networking simplifies update distribution, lessons learned, and data standards. The LCTA Program Manager enables land managers to automate data analysis tasks and provide easy integration with other COTS programs currently in use at government installations.

An information system is described by the National Institute of Standards and Technology (NIST) as "A system that consists of people, machines, and methods for organizations to accomplish specified operations on data that represent information. An information system may include data devices; office machines; communications equipment, peripheral equipment; and associated data media and accessories". The LCTA IMS is designed to give installation environmental personnel the equipment, resources, and methods to meet the natural resources management and land stewardship issues on the installation. LCTA IMS utilizes commercially available software to reduce program development costs. Customized software is used where specific needs are not met from other COTS software.
LCTA Relational Database

A relational database model or Relational Data Base Management System (RDBMS), represents data as tables, with records stored as rows (observations), and data elements (variables) are stored as columns of the rows. Tables may also have relationships with other tables. These relationships can have two forms, join relationship and referential integrity constraints. Tables with join relationships have data elements in common, allowing common data to be joined by use of a Structured Query Language (SQL) statement. Tables with referential integrity constraints are defined as parent and child tables. A parent table controls the entry of data into the child table. Specific data must be present in the parent table before it is allowed in the child table. In relational theory the parent table has a primary key and the child table has a foreign key. An example can help to explain this issue. When point data is collected on an LCTA plot information about the location, type of vegetation, and measurement date are recorded. To eliminate the need of repeating this information for every observation of point data for ground vegetation a relationship is defined between the two tables PLOTSURV and GNDCOVER. The plot number and the recording date are defined as the primary key variables. A well designed RDBMS structure will eliminate redundant data and ensure data integrity. This document discusses the LCTA database design.

The LCTA database has 8 distinct components:

1. Plot information data
2. Land use data
3. Vegetation data
4. Wildlife data
5. Climate data
6. Soils data
7. Supplementary information
8. Summary data

Together these components reflect information about the natural resources of the installation collected at LCTA plots. To simplify the understanding of the LCTA database data dictionary the database will be first represented as it's distinct components with little mention of the relationships between tables. Then the database will be brought together to show the overall structure. The following description of the LCTA database consists of the database schema released with version 1.0 of the LCTA Program Manager.

A brief description of the collection methodology will precede each section. This will give the reader a better understanding of the LCTA data. This information has been taken from the US Army Land Condition-Trend Analysis (LCTA) Plot Inventory Field Methods (USACERL Technical Report N-92-03). For more detailed information about the LCTA data collection techniques please refer to this publication. At the end of the database discussion a complete LCTA data dictionary will be presented.

Document Syntax and Terminology

This publication uses the following syntax conventions.

- entity (table) names are in uppercase
- data element names are uppercase and italicized

The following terminology is used throughout this publication:

Entity
An entity, or table, stores data within a relational database management system. Data in an entity is represented by rows of data elements. Entities store similar data separately, for example, ground vegetation data is in GNDCOVER and land use data is in LANDUSE.

**Data Element**
Data elements make up the columns of an entity. Data elements have a name, data type, data length, nullity, and rules. `INSTALID` is the name of the column that stores the installation identification code. It is a character field of length 3 and requires data.

**Nullity**
A column constraint which sets the data requirement rule for a data element. If a data element has a nullity rule of not null data is required.

**Referential Integrity**
Tables with referential integrity constraints can be defined as parent and child tables. A parent table controls the entry of data into the child table. Specific data must be present in the parent table before it is allowed in the child table.

**Join Relationship**
Entities with join relationships have data elements in common, allowing common data to be joined by use of a SQL statement

**Primary Key**
Used in referential integrity constraints. The controlling data element of the parent table.

**Foreign Key**
Used in referential integrity constraints. The data element of the child table controlled by the primary key of the parent table.

**Plot Information**
To ensure the LCTA plots can be relocated, accurate site descriptions and maps must be prepared and photographs taken. Most of the descriptive information and maps are recorded during the initial inventory. The maps and site descriptions provide instructions to allow someone without prior knowledge of the site to relocate the beginning stake and re-survey the plot. The photographs document the condition of the plot over time.

Initial inventory plot information is stored in the plot master table (PLOTMAST). Subsequent monitoring dates for each plot along with other plot information is stored in the plot survey (PLOTSURV) table. These two tables will contain such information as the installation training area number, UTM coordinates, and USGS 7.5-minute quadrangle map name. Only information that should not change over time is stored in the PLOTMAST table while specific information for each measurement date is found in the PLOTSURV table.

To take full advantage of the current database system a plot maps (PLOTMAP) table has been created. This table allows for the storage of plot location maps and photographs in digital form. For information on storing these images and the accepted formats refer to the SQLBase software documentation.

<table>
<thead>
<tr>
<th>Table</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLOTMAST</td>
<td>Master plot table [one per LCTA plot]</td>
</tr>
<tr>
<td>PLOTSURV</td>
<td>Table identifying all inventories on each plot</td>
</tr>
<tr>
<td>PLOTMAP</td>
<td>Map images for each plot</td>
</tr>
</tbody>
</table>
Land Use Data

The Land use data documents recent land uses and maintenance activities, as well as evidence of wind and water erosion that can be observed within the boundaries of the 100 × 6 meter plot. These data are used to relate land use and maintenance activities to changes in vegetation and soil erosion rates.

Conditions observed on areas adjacent to but not within the plot proper are not checked on the land use form. However, if noteworthy, such conditions may be recorded under the notes column of each table.

The tables storing land use data are LANDUSE, MAINTACT, EROSEVID.

<table>
<thead>
<tr>
<th>Table</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>EROSEVID</td>
<td>Observed erosion evidence data</td>
</tr>
<tr>
<td>LANDUSE</td>
<td>Military and non-military land use data</td>
</tr>
<tr>
<td>MAINTACT</td>
<td>Maintenance activity data</td>
</tr>
</tbody>
</table>

Vegetation data

The line transect documents ground cover, canopy cover, and surface disturbance. Data are recorded using a modified point intercept method. Uses if these data include evaluating soil erosion status, military concealment cover, wildlife habitat, and botanical composition, and for ground-truthing remotely sensed imagery.

One hundred points are sampled along the line transect beginning at the 0.5 meter point and continuing at 1 meter intervals along the measuring tape. The 1 meter measuring rod is placed plumb to the ground at each point to determine ground cover, surface disturbance, and vertical distribution of vegetation up to 1 meter. Canopy cover above 1 meter is measured using a telescoping range pole.

Surface Disturbance

If a point has been disturbed, the nature of the disturbance is determined and the appropriate category selected. Categories of disturbance are listed below. A point is considered disturbed if there is physical evidence of disruption of the soil surface or if the vegetation has been obviously crushed at that point. The fact that a site is in poor condition does not constitute evidence of disturbance. In the case of vehicle tracks, the ability to distinguish a general direction of travel is a prerequisite to establishing evidence of disturbance.

<table>
<thead>
<tr>
<th>Code</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>No disturbance</td>
</tr>
<tr>
<td>O</td>
<td>Other disturbance</td>
</tr>
<tr>
<td>P</td>
<td>Pass</td>
</tr>
<tr>
<td>R</td>
<td>Road</td>
</tr>
<tr>
<td>T</td>
<td>Trail</td>
</tr>
</tbody>
</table>

Disturbance data is entered into the GNDCOVER table under the column DISTURB.

Table | Disturbance
------|-------------
GNDCOVER | Ground data from line transect inventory
Initial Inventory and Long-term Monitoring Ground Cover

The next data recorded for each point on the line is ground cover. Only material in contact with the ground at the tip of the measuring rod is recorded, i.e., the point at the center of the rod. Again, this data is entered into the GNDCOVER table under the column VEGID. In many cases the data entered here will not be a plant code but one of the valid ground cover categories. However, to make this table compatible with other tables containing plant codes the column has been named VEGID.

<table>
<thead>
<tr>
<th>Table</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>GNDCOVER</td>
<td>Ground data from line transect inventory</td>
</tr>
</tbody>
</table>

Initial Inventory and Long-term Monitoring Canopy Cover

The vertical distribution and composition of canopy cover is recorded on the line by recording vegetation contacts within each decimeter interval on the 1 meter measuring rod as it is held plumb to the ground. For vegetation above 1 meter, the rod is replaced by a telescoping range pole.

Canopy cover is recorded in decimeter intervals to a height of 2 meters. Above 2 meters, it is recorded in 0.5 meter intervals up to 8.5 meters. Canopy cover contact is recorded only if vegetation appears as though it would be intercepted by the center of the rod or pole. Canopy cover above 8.5 meters also is recorded as present if an imaginary extension of the range pole above 8.5 meters would contact vegetation.

Only one intercept is recorded per interval. If two or more species or categories contact the rod in the same interval, only the one at the highest point within the interval is recorded. If more than one species is present over 8.5 meters, only the topmost species is recorded.

Canopy cover data is stored in the AERCOVER table. Line transect location VEGLOC, height interval VEGHT and cover category VEGID are entered for each observation. Canopy cover above 8.5 meters has a VEGHT of 8.6.

<table>
<thead>
<tr>
<th>Table</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>AERCOVER</td>
<td>Aerial data from line transect inventory</td>
</tr>
</tbody>
</table>

Short-Term Monitoring Line Transect Data

During a short-term monitoring season data are gathered on the line transect using the point-intercept method as in the initial inventory, except in lesser detail. At 1 meter intervals, beginning at the 0.5 meter point, the tip of the 1 meter measuring rod is used to determine the presence and type of disturbance. Ground cover is recorded using the valid codes listed below. Plant species identification is not necessary for short-term monitoring. The presence absence of canopy cover at any height is determined for each point and recorded as shown in the valid aerial cover categories.
Valid Short-Term Monitoring Ground Cover Categories

<table>
<thead>
<tr>
<th>Code</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>Bare ground</td>
</tr>
<tr>
<td>L</td>
<td>Litter</td>
</tr>
<tr>
<td>M</td>
<td>Microphyte</td>
</tr>
<tr>
<td>P</td>
<td>Plant</td>
</tr>
<tr>
<td>R</td>
<td>Rock</td>
</tr>
</tbody>
</table>

Valid Short-Term Monitoring Canopy Cover Categories.

<table>
<thead>
<tr>
<th>Code</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Annual</td>
</tr>
<tr>
<td>AP</td>
<td>Annual/perennial</td>
</tr>
<tr>
<td>N</td>
<td>No aerial cover</td>
</tr>
<tr>
<td>P</td>
<td>Perennial</td>
</tr>
</tbody>
</table>

Because the short-term monitoring data collection method is an abbreviated version of initial inventory, ground disturbance, ground cover, and canopy cover can be stored in the LINEMON table. Since plant species identification is not necessary a defined set of categories exists for both ground cover and canopy cover. Ground disturbance uses the same categories defined for the initial inventory.

**Table Purpose**

<table>
<thead>
<tr>
<th>Table</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>LINEMON</td>
<td>Line transect monitoring data</td>
</tr>
</tbody>
</table>

**Initial Inventory and Long-Term Monitoring Belt Transect Data**

The belt transect is intended to characterize species composition, density, and height distribution of woody and succulent vegetation. The belt transect extends the width of the 100 meter line transect. Although the belt has a standard width of 6 m (3 m to either side of the line transect), the width may be reduced for high density species. Any adjustments in the belt transect width are noted in the BELTSURV table. In addition, the default belt width and the minimum height used for each plot is recorded.

The location of all woody plants above a predetermined minimum height are mapped and the coordinates, species, and height are entered into the BELTTRAN table.

All rooted shrubs and trees are recorded regardless of whether they are live or dead. All cacti, regardless of height, are recorded. Individuals with heights greater than 8.5 meters are in general entered as 8.6 meters.

Some woody plants tend to produce multiple stems from a common root system. Although they may appear to be separate plants, these multi-stemmed plants are recorded as a single individual. For plants that form dense stands by means of root sprouts, adventitious roots, or rhizomes, the entire clump (motte) is regarded as one individual. The beginning and ending line location of the clump are recorded in the BELTTRAN table as CLUMPBEGIN and CLUMPEND. The area of the clump is recorded as CLUMPAREA. The height of the clump is determined by measuring the tallest stem within the clump.

**Table Purpose**

<table>
<thead>
<tr>
<th>Table</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>BELTSURV</td>
<td>Parameters for inventory and monitoring belt transects</td>
</tr>
<tr>
<td>BELTTRAN</td>
<td>Belt transect inventory data</td>
</tr>
</tbody>
</table>
Short-Term Monitoring Belt Transect Data

Rather than recording the location and height of each woody plant as in the initial inventory, short-term monitoring of the belt transect entails only a tally of each species by 1 meter height classes up to 4 meters, and a single class for plants higher than 4 meters. This data is stored in the BELTMON table.

<table>
<thead>
<tr>
<th>Table</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>BELTSURV</td>
<td>Parameters for inventory and monitoring belt transects</td>
</tr>
<tr>
<td>BELTMON</td>
<td>Belt transect monitoring data</td>
</tr>
</tbody>
</table>

Plant Species Information

All vegetation data stored in the database are checked against the main plant species table (PLANTS) in the SPECIES database for valid information. For each valid unique species found in the database corresponding information is placed in the PLNTLIST table by the LCTA Program Manager.

<table>
<thead>
<tr>
<th>Table</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLNTLIST</td>
<td>Master list cataloging each plant code</td>
</tr>
</tbody>
</table>

Floristic Inventory

A primary goal of the LCTA program is to assemble a complete collection of all vascular plants that occur on an installation, and to produce a comprehensive, annotated list of all taxa present, including threatened and endangered species. Three specimens of each taxon are collected. One specimen is accessioned to a public herbarium to serve as a voucher. The remaining two specimens are laminated in plastic with a label and included in a reference collection to be housed at the installation. The laminated specimens can then be taken into the field to aid in species identification by LCTA crew and natural resources personnel. Though the majority of taxa are collected in 1 to 3 years by a plant taxonomist contracted specifically for this task, species not yet included in the collection may be added any time by the field crew leader.

Nomenclature and classification conform to the National List of Scientific Plant Names (USDA Soil Conservation Service, Publication SCS-TP-159, 1982).

Floristic inventory data is stored in the HERBRIUM table. In addition to the many elements in this table site information is recorded in the SITE table and species synonymies are stored in the SYNONYMY table. SITE is a parent of HERBRIUM and is enforced through referential integrity constraints.

Please note that the floristic inventory tables listed here may differ from your current database. The changes were made to incorporate all data better into the database. Contact your LCTA support center for incorporating these changes into your current database.

<table>
<thead>
<tr>
<th>Table</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>HERBRIUM</td>
<td>Floristic inventory data</td>
</tr>
<tr>
<td>SITE</td>
<td>Collection site data</td>
</tr>
</tbody>
</table>
SYNONYMY | Species synonymy data

**Wildlife Inventory**

A variety of wildlife data may be collected on or near LCTA plots. Only song bird and small mammal data are required as a standard. These taxa are useful as bio-indicators and are easy to sample at the scale of the LCTA plot.

Standard wildlife inventories are conducted on a sub-sample of approximately one-third of the core plots, up to a total of about 60. Core wildlife plots are selected in a stratified random fashion from among all the established core plots so as to represent the major soil and land cover types in proportion to their occurrence on the installation. This constitutes the minimum sampling required. More core plots are added as necessary to represent all soil and land cover types with at least one wildlife plot.

Please note that the wildlife tables listed here may differ from your current database. The changes were made to incorporate all wildlife data better into the database. Contact your LCTA support center for incorporating these changes into your current database.

**Birds (Standard)**

Birds are censused at each plot using a modified point-count transect technique. Each plot is censused once in the morning and once in the evening (denoted by AM or PM) by slowly walking the length of the LCTA plot in 6 minutes, recording all birds seen or heard within 100 meters of the plot. Upon reaching the end of the plot, the observer stops for 8 minutes and again records all birds seen or heard within 100 meters. Finally, the observer walks back to the starting point in a period of 6 minutes again recording any birds detected within 100 meters of the plot.

All morning censuses are conducted between 0.5 hour before and 4 hours after sunrise on relatively calm, rainless days. The evening census is conducted during the 4 hours prior to sunset. The time of the survey is entered in the BIRDS table under the **PERIOD** column as AM or PM. The location of the line from which the observations were taken are entered in the **MEASURE_PT** column as a code. Valid locations are stored in the POINT_CODE table, which is a validation table for BIRDS and is enforced through the use of primary and foreign keys. All plot and survey information is entered in the BIRDSURV table.

All birds detected are recorded using standard common names and species codes (available from the LCTA support center). Numbers of each species are recorded for each segment of the survey using the codes for mated status. The **MATED_STATUS** column uses valid codes from the MATED_STATUS_CODE table. This information is used to infer the number of pairs present on the plot. A singing male, male/female pair, or adult accompanied by young indicates one pair present. Presence of additional pairs can be inferred only if additional singing males, male/female pairs, or same sex adults accompanied by young are observed. An individual non-singing male, lone female, or individual of unknown sex or age indicates presence of the species but may not indicate a second pair. Flyovers of birds not using the plot, and other birds observed outside the plot limits are also recorded as above and additionally entering a "Y" in the **FLYOVER** column. All flyover data should be entered as a new observation with a "Y" in the **FLYOVER** column.

The field methods suggest that max pair data be recorded as the maximum number of pairs observed among the three segments of the survey. Max pairs information is not entered into the database because it can be derived from the available data in the table. This would be redundant data.
Valid Mated Status Codes (MATED_STATUS_CODE table)

<table>
<thead>
<tr>
<th>Code</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>*</td>
<td>Singing male</td>
</tr>
<tr>
<td>PR</td>
<td>Adult male/female pair</td>
</tr>
<tr>
<td>M</td>
<td>Nonsinging male</td>
</tr>
<tr>
<td>F</td>
<td>Female only</td>
</tr>
<tr>
<td>U</td>
<td>Unknown sex and age</td>
</tr>
<tr>
<td>Y</td>
<td>Young of the year</td>
</tr>
<tr>
<td>FL</td>
<td>Flock</td>
</tr>
<tr>
<td>C</td>
<td>Combined (all status’s were totaled and entered as one observation)</td>
</tr>
<tr>
<td>NR</td>
<td>Not recorded</td>
</tr>
</tbody>
</table>

Valid Measurement Point Codes (POINT_CODE table)

<table>
<thead>
<tr>
<th>Code</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>LO</td>
<td>Line-out</td>
</tr>
<tr>
<td>LI</td>
<td>Line-in</td>
</tr>
<tr>
<td>EP</td>
<td>End-point</td>
</tr>
<tr>
<td>C</td>
<td>Combined (all points were totaled and entered as one observation)</td>
</tr>
<tr>
<td>U</td>
<td>Unknown</td>
</tr>
<tr>
<td>NR</td>
<td>Not recorded</td>
</tr>
</tbody>
</table>

Table Purpose

<table>
<thead>
<tr>
<th>Table</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIRDS</td>
<td>Bird data from wildlife inventory</td>
</tr>
<tr>
<td>BIRDSURV</td>
<td>Table identifying all inventories for birds on each plot</td>
</tr>
<tr>
<td>MATED_STATUS_CODE</td>
<td>Bird mated status validation table</td>
</tr>
<tr>
<td>POINT_CODE</td>
<td>Bird data collection line location validation table</td>
</tr>
</tbody>
</table>

Small Mammals (Standard)

Small mammals are surveyed by setting two rows of 20 museum special traps and five rat traps parallel to the long axis of each LCTA plot. Trap stations are spaced approximately 7.5 meters apart; trap lines are spaced 30 meters apart. Snap traps are baited with a mixture of rolled oats and peanut butter and run for two nights for a total of 100 trap nights per plot. Traps are set during the late afternoon or evening of the first day, checked early the next morning, reset during the late afternoon or evening of the second day, and checked and collected on the following morning.

The MAMMALS table stores data for the standard 100 trap nights using the date of the first night in the RECDATE column. For each method of observations, listed below, the species (VERTID), sex (SEX), method (METHOD) and number (NUM) are recorded. If any retraps are known this number is entered in the RETRAP column. NUM represents the total number of species, including the number of retraps. The METHODS_CODE and GENDER_CODE tables are validation tables for the METHOD and SEX columns respectively of the MAMMALS table. Referential integrity for these tables is enforced using primary and foreign keys. All plot and survey information is stored in the MAMSURV table.
Valid Gender Codes (GENDER_CODE table)

<table>
<thead>
<tr>
<th>Code</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>Male</td>
</tr>
<tr>
<td>F</td>
<td>Female</td>
</tr>
<tr>
<td>U</td>
<td>Unknown</td>
</tr>
<tr>
<td>C</td>
<td>Combined (all genders were totaled and entered as one observation)</td>
</tr>
<tr>
<td>NR</td>
<td>Not recorded</td>
</tr>
</tbody>
</table>

Valid Method Codes (METHODS_CODE table)

<table>
<thead>
<tr>
<th>Code</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>O</td>
<td>Observed</td>
</tr>
<tr>
<td>S</td>
<td>Signs</td>
</tr>
<tr>
<td>T</td>
<td>Trapped</td>
</tr>
<tr>
<td>C</td>
<td>Combined (all methods were totaled and entered as one observation)</td>
</tr>
<tr>
<td>U</td>
<td>Unknown</td>
</tr>
<tr>
<td>NR</td>
<td>Not recorded</td>
</tr>
</tbody>
</table>

Table Purpose

<table>
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<tr>
<td>MAMMALS</td>
<td>Mammal data from wildlife inventory</td>
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<tr>
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<td>Table identifying all inventories for mammals on METHODS_CODE</td>
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<tr>
<td>METHODS_CODE</td>
<td>Mammal, reptiles and amphibian methods validation table</td>
</tr>
<tr>
<td>GENDER_CODE</td>
<td>Gender code validation table</td>
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</tbody>
</table>

Reptiles and Amphibians (Optional)

Reptiles and amphibians are censused using a pitfall trapping array with optional box traps in association with the LCTA transects. The central bucket of each pitfall array is located approximately 75 meters from the origin of the LCTA line transect, and at a random azimuth within a 180 degree arc opposite the azimuth of the transect. The array must be in the same soil type and landcover category as the LCTA transect. The 100 meter point may be used as the point of origin if necessary to keep the array within the correct soil type and landcover category. The four 5-gallon plastic buckets are buried so the lip is flush with the soil surface. A cover is placed above the bucket, supported by rocks or wood blocks, to provide shade to any trapped animals. Aluminum drift fences 8 to 12 inches high, buried 2 to 3 inches in the ground and held in place by wooden or metal stakes are used to funnel animals into the buckets. The fence should be painted to blend with surroundings to make it less conspicuous and less prone to disturbance. The fence must overlap the lip of the bucket by about 1 inch to force the animals into the bucket and prevent them from moving around the end of the aluminum.

The HERPS table stores data for the standard 100 trap nights using the date of the first night in the RECDATE column. For each method of observations, listed below, the species (VERTID), sex (SEX), method (METHOD) and number (NUM) are recorded. If any retraps are known this number is entered in the RETRAP column. NUM represents the total number of species, including the number of retraps. The METHODS_CODE and GENDER_CODE tables are validation tables for the METHOD and SEX columns respectively of the HERPS table. Referential integrity for these tables is enforced using primary and foreign keys. All plot and survey information is stored in the HERPSURV table.
Species List

All wildlife data stored in the database are checked against the main wildlife species table (VERTS) in the SPECIES database for valid information. For each valid unique species found in the database corresponding information is placed in the VERTLIST table by the LCTA Program Manager. This information includes order, class, family species, genus, sub-species, variety and common name. Refer to the LCTA Program Manager manual for details on running this procedure.

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<tr>
<td>VERTLIST</td>
<td>Master list cataloging each vertebrate code</td>
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Climate Data

Climate data is collected from weather stations on and near LCTA installations. This data is collected as daily values for rain, temperature, and pan evaporation. Information about the weather station is stored in the CLIMATESTATIONS table. To ensure the weather station information data is known CLIMATESTATIONS table is a parent table to CLIMATEDATA.

<table>
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<td>CLIMATESTATIONS</td>
<td>Climate station information</td>
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Soil and Topographic Information

Soil Depth Estimation

Soil depth can have a significant effect on plant productivity and botanical composition. Shallow soils are generally less productive, more susceptible to damage and more difficult to reclaim than deeper soils. An estimate of soil depth is made for each LCTA plot by noting how deep it was possible to drive each of the steel rods into the soil. The average depth is recorded in the SOILDPTH column of the PLOTSURV table.

Soil Samples

A composite soil sample is taken at each plot. Five small samples are taken approximately 1 meter from the line transect at the 0, 25, 50, 75, and 100 meter points. All litter is removed from the surface. With a narrow spade or mattock, a small pit approximately 15 centimeters deep is dug. A vertical slice comprising approximately 0.2 liters of soil is taken from the side of each pit and roots and plant crowns are removed. The samples are combined in a
sealable plastic bag along with a double-faced aluminum tag inscribed with the installation name or abbreviation and plot number. Sealed bags are boxed and shipped to an institution for analysis of selected physical and chemical soil characteristics that affect site erodibility, productivity, and botanical composition. This information is stored in the SOILSMPL table.

Aspect

Aspect, which can influence soil moisture, botanical composition, and vegetation cover, is determined for plots while standing at the 50 meter point and estimating the general direction that water would flow across the site. Using a compass, aspect is estimated to the nearest octant. If the average slope is less than 5 percent, aspect is considered unimportant and a level aspect is recorded. Aspect is stored in the PLOTSURV table in the ASPECT column.

Slope Length and Gradient

Slope length and gradient are measured at the zero, 50, and 100 meter points. Slope length is the straight-line distance runoff travels across each sample point. It is measured from the point of origin of runoff to a point where a barrier or significant reduction in slope causes overland flow to be diverted into a defined channel or causes suspended sediment to be deposited. Slope length is estimated by pacing the distance between point of origin and point of deposition. Slope gradient is measured with a clinometer to the nearest half percent. Slope length (SLPLEN) and gradient (SLOPE) are stored in the SOILLS table for each location (LOC).

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<thead>
<tr>
<th>Table</th>
<th>Purpose</th>
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<tbody>
<tr>
<td>PLOTSURV</td>
<td>Table identifying all inventories on each plot</td>
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<td>SOILLS</td>
<td>Plot slope data (used to calculate LS in the Universal Soil Loss Equation)</td>
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<td>Master soil series table</td>
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<td>SOILSMPL</td>
<td>Soil analysis data</td>
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</table>

Supplementary Information

The tables listed below represent information that do not fall under any of the above categories. The BASALA, ENVCONST, and F_COUNT tables were created to store data that is not part of the standard LCTA data collection. The database has been augmented with the addition of these tables to meet the needs of some installations. The HISTORY table is meant to hold general information about the installation, data collected, or the database. The INSTMAST table is a master listing for installation information and acts as a parent table to many of the other data tables.

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<tr>
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<td>Environmental constraints</td>
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<tr>
<td>F_COUNT</td>
<td>Optional data from inventory or monitoring</td>
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<tr>
<td>HISTORY</td>
<td>General informational data</td>
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<td>INSTMAST</td>
<td>Master table listing LCTA installations</td>
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</table>
**Summary Data**

In database theory any stored data that is calculated from other data within the database is called derived data. In most cases storing derived data is discouraged because it can be obtained from existing data in the database and adds to the size of the database. Derived data is essentially duplicate data.

Because the LCTA databases holds a great deal of data and many of the analyses take some time to run, summary (derived) data is stored in the database. Also, this summary information can be used to group other data in the database for additional information.

### Tables

<table>
<thead>
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<tr>
<td>COMMCLASSPLOTSUM</td>
<td>Plant community classifications for each plot</td>
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<tr>
<td>EROSION</td>
<td>Table for Universal Soil Loss Equation estimations</td>
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<tr>
<td>LANDUSEYEARSUM</td>
<td>Land Use summary data by year</td>
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<tr>
<td>PCSDADJNAMESUM</td>
<td>Plant cover, surface disturbance summary data by plot</td>
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<td>PCTTYEARSUM</td>
<td>Percent of tolerance (Universal Soil Loss Equation) summary data by year</td>
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<td>Tactical concealment summary A</td>
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**Relational Constraints**

In this section relational constraints, in this case referential integrity constraints, will be discussed. Listed in the previous sections are the validation tables used to ensure data integrity of the data tables. Here the actual columns used to link the tables will be presented.

Referential integrity constraints are utilized to ensure data integrity in a database. These constraints are defined between a parent table and a child table by the use of primary and foreign keys. A parent is defined with a data element or set of elements as a primary key. The primary key is a unique value, or set of values, that constrain the entry of data into the dependent child table. For example, PLOTMAST is a parent table to PLOTSURV with PLOTID as the primary key in PLOTMAST and the foreign key in PLOTSURV. If a particular value for PLOTID does not exist in PLOTMAST data for that plot can not be added to the PLOTSURV table.

It is worth mentioning at this time that other rules exist that can be used to ensure data integrity. These rules include column constraints, check constraints, unique and primary key and others. The most important column constraint is the NOT NULL rule. This rule forces a value to be entered for a data element (column) before that observation (row) of data is applied to the database. The NOT NULL is specified in the database schema and applied by the database administrator by using SQL statements. This rule is used throughout the LCTA database, consult the data element listing appendix for elements with the NOT NULL rule. Check constraints test the rows of a table against a logical expression. Not all database servers utilize this rule and therefore is not currently used by the LCTA database. The UNIQUE and PRIMARY KEY rules are important to relational database theory and are somewhat related. The UNIQUE rule ensures no duplicate values will exist for a column. Unless specifically defined a column with the UNIQUE rule applied can have only one NULL value. The PRIMARY RULE is used in referential integrity constraints as discussed above. Only one primary key can exist for a table, but many columns can make up the primary key. Each column or group of columns that make up the primary key must have the UNIQUE and NOT NULL rules applied. The LCTA database uses the primary key and the related foreign key rules extensively, refer to the database schema diagram for their locations.

Defining referential integrity constraints is done by the database administrator using Data Definition Language (DDL). Here parent tables, child tables, and their linking keys will be listed.
In the next table the same information is presented in a different format. Here all child tables are listed and their key elements, primary and foreign keys. For each key element the contributing table is listed. The LCTA database schema can also be consulted to understand the referential integrity constraints.

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</table>

* Denotes that there is no contributing table. This element has been defined as a primary key to be passed to other tables as a foreign key. In other words, the table becomes the initial contributing table for that primary key.

### Legacy Components

Legacy components refer to data elements, entities, or relations that do not conform to database standards. These components persist either due to operational considerations or the likelihood of the loss of data. Following are the components that can be categorized as legacy components.

Where possible relational theory and rules have been used in this design of the LCTA database to ensure data integrity, the most import of these being referential integrity constraints. A few exceptions exist, primarily due to operational considerations. These exceptions include the SOILMAST, PLNTLIST, and VERTLIST tables.

The SOILMAST table stores information for each unique soil series found on LCTA plots. The SOILSER element contains the code used to refer to a soil series and is found in both the PLOTMAST and SOILMAST tables. By using a relational join, SQL query, soil series information for each plot can be obtained from the PLOTMAST and SOILMAST tables. To ensure that only valid soil series codes are entered for each plot in the PLOTMAST table a referential constraint between SOILMAST (parent table) and PLOTMAST (child table) could be defined. However, because other plot information found in the PLOTMAST table is collected in the field and added to the database before the soil series is identified the issue is complicated. In practice the data is usually added to the database and
the user will identify the soil series for each plot and update the database at a later time. This restricts the use of referential integrity constraints for the SOILMAST table.

The PLNTLIST and VERTLIST tables contain unique plant and wildlife information respectively found on LCTA plots. The LCTA program is used to scan all plant and wildlife data tables and insert the species information for those valid data into the appropriate table. The PLNTLIST and VERTLIST tables are populated after the data tables. In some cases a species can not be identified in the field and must be given a temporary code. The temporary code is then changed to a known code once the species is identified. These operational considerations eliminate the possibility of defining the PLNTLIST and VERTLIST tables as parent tables to the data tables.
References


APPENDIX A

Database Schema

The LCTA database schema is presented in IDEF1X format. Terms and notations are presented below.

Identifying relation
A relationship in which the primary key attributes of the parent table become part of the primary key of the child entity. Represented by a solid line between entities with a solid circle at the child entity end.

Nonidentifying relation
A relationship in which the primary key attributes of the parent do not become part of the primary key of the child. Represented by a dashed line between entities with a solid circle at the child entity end.

Independent entity
An entity that does not depend on any other for its identification. Represented by a squared corner rectangle.

Dependent entity
An entity that depends on another for its identity (the primary key of the child contains attributes inherited from the primary key of the parent). Represented by a rounded corner rectangle.

PK (primary key)
An element or group of elements that act as the unique identifier of the entity. Represented by placing [PK] to the right of the element.

FK (foreign key)
A primary key of a parent entity that is contributed to the child entity through a relationship. Represented by placing [FK] to the right of the element.

Entities with red borders may differ slightly from your current database.
Plant and vertebrate information for the United States
Entity (table) information

Entity definitions and structures are presented in this appendix. Syntax is as follows.

TABLE NAME

Description of the data stored in the table

ITAM Database: Identifies either LCTA or SPECIES as the database containing the table

Inventory Type: Identifies the type of inventory that collect the data
Entity Information

LCTA Databases
Center for Ecological Management of Military Lands

AERCOVER
Aerial data from initial inventory and long-term monitoring line transect

ITAM Database: LCTA
Inventory Type: Inventory

BASALA
Tree basal area data

ITAM Database: LCTA
Inventory Type: Inventory/Monitoring

BELTMON
Short-term monitoring belt transect data (woody vegetation)

ITAM Database: LCTA
Inventory Type: Monitoring

BELTSURV
Parameters for inventory and monitoring belt transects

ITAM Database: LCTA
Inventory Type: Inventory/Monitoring

BELTTRAN
Initial inventory and long-term monitoring belt transect data (woody vegetation)

ITAM Database: LCTA
Inventory Type: Inventory

BIRDS
Bird data from wildlife inventory

ITAM Database: LCTA
Inventory Type: Inventory/Monitoring

BIRDSURV
Table identifying all inventories for bird data

ITAM Database: LCTA
Inventory Type: Inventory/Monitoring

CLIMATEDATA
Climate Data

ITAM Database: LCTA
Inventory Type: N/A

as of 6/16/97
Entity Information
LCTA Databases
Center for Ecological Management of Military Lands

CLIMATESTATIONS
  Climate station information
  ITAM Database: LCTA
  Inventory Type: N/A

COMMCLASSPLOTSUM
  Plant community classifications for each plot
  ITAM Database: LCTA
  Inventory Type: Summary Table

ENVCONST
  Environmental constraints
  ITAM Database: LCTA
  Inventory Type: N/A

EROSEVID
  Observed erosion evidence data
  ITAM Database: LCTA
  Inventory Type: Inventory/Monitoring

EROSION
  Table for Universal Soil Loss Equation (USLE) estimations
  ITAM Database: LCTA
  Inventory Type: Summary Table

FOOD_INFO
  Validation table for food type codes
  ITAM Database: SPECIES
  Inventory Type: N/A

F_COUNT
  Optional data for initial from inventory or monitoring (contains user defined attributes)
  ITAM Database: LCTA
  Inventory Type: Inventory/Monitoring

GENDER_CODE
  Wildlife gender code validation table
  ITAM Database: LCTA
  Inventory Type: N/A
Entity Information
LCTA Databases
Center for Ecological Management of Military Lands

GENERAL_HABITAT
Species general habitat information
ITAM Database : SPECIES
Inventory Type : N/A

GNDCOVER
Initial inventory and long-term monitoring ground vegetation data
ITAM Database : LCTA
Inventory Type : Inventory

GROUPING
Dynamic table for LCTA front end routines (user defined attributes)
ITAM Database : LCTA
Inventory Type : N/A

HABITAT_INFO
Validation table for general habitat codes
ITAM Database : SPECIES
Inventory Type : N/A

HERBRIUM
ITAM Database :
Inventory Type :

HERPS
Herp data from wildlife inventory
ITAM Database : LCTA
Inventory Type : Inventory/Monitoring

HERPSURV
Table identifying all inventories for herp on each plot
ITAM Database : LCTA
Inventory Type : Inventory/Monitoring

HISTORY
General informational data
ITAM Database : LCTA
Inventory Type : Inventory/Monitoring
Entity Information
LCTA Databases
Center for Ecological Management of Military Lands

INSTMAST
Master listing of installation information
ITAM Database: LCTA
Inventory Type: N/A

LANDUSE
Military and non-military land use data
ITAM Database: LCTA
Inventory Type: Inventory/Monitoring

LANDUSEYEARSUM
Land use summary data by year
ITAM Database: LCTA
Inventory Type: Summary Table

LINEMON
Short-term monitoring line transect data
ITAM Database: LCTA
Inventory Type: Monitoring

LOC_INFO
Validation table for nest location codes
ITAM Database: SPECIES
Inventory Type: N/A

MAINTACT
Maintenance activity data
ITAM Database: LCTA
Inventory Type: Inventory/Monitoring

MAMMALS
Mammal data from wildlife inventory
ITAM Database: LCTA
Inventory Type: Inventory/Monitoring

MAMSURV
Table identifying all inventories for mammals on each plot
ITAM Database: LCTA
Inventory Type: Inventory/Monitoring
Entity Information
LCTA Databases
Center for Ecological Management of Military Lands

MATED_STATUS_CODE
Bird mated status validation table
ITAM Database : LCTA
Inventory Type : N/A

METHODS_CODE
Mammal and herp trapping methods validation table
ITAM Database : LCTA
Inventory Type : N/A

NEOTROPIC
ITAM Database :
Inventory Type :

NEOTROPICAL
Species neotropical migrant information
ITAM Database : SPECIES
Inventory Type : N/A

NEOTROPIC_INFO
Validation table for neotropical migrant codes
ITAM Database : SPECIES
Inventory Type : N/A

NEST_LOCATION
Species nest location information
ITAM Database : SPECIES
Inventory Type : N/A

PCSDPLOTSUM
Plant Cover, Surface Disturbance (PCSD) summary data by plot
ITAM Database : LCTA
Inventory Type : Summary Table

PCSDYEARSUM
Plant Cover, Surface Disturbance (PCSD) summary data by year
ITAM Database : LCTA
Inventory Type : Summary Table
Entity Information
LCTA Databases
Center for Ecological Management of Military Lands

PCTTYEARSUM

Percent of soil loss tolerance summary data by year
ITAM Database: LCTA
Inventory Type: Summary Table

PLANTS

Soil Conservation Service (SCS) species listing
ITAM Database: SPECIES
Inventory Type: N/A

PLNTLIST

Installation master vegetation list
ITAM Database: LCTA
Inventory Type: Inventory/Monitoring

PLOTMAPS

Map and photo images for each plot
ITAM Database: LCTA
Inventory Type: Inventory/Monitoring

PLOTMAST

Master plot table [one per LCTA plot]
ITAM Database: LCTA
Inventory Type: Inventory

PLOTSURV

Table identifying all inventories on each plot
ITAM Database: LCTA
Inventory Type: Inventory/Monitoring

POINT_CODE

Bird data collection line location validation table
ITAM Database: LCTA
Inventory Type: N/A

SEASON_INFO

Validation table for season codes
ITAM Database: SPECIES
Inventory Type: N/A
Entity Information
LCTA Databases
Center for Ecological Management of Military Lands

SFST
Species season, food type, substrate, and technique information
ITAM Database: SPECIES
Inventory Type: N/A

SITE
Specimen collection site information
ITAM Database:
Inventory Type:

SOILLS
Plot slope data
ITAM Database: LCTA
Inventory Type: Inventory

SOILMAST
Installation master soil series table
ITAM Database: LCTA
Inventory Type: N/A

SOILSMPL
Soil sample data from USDA National Soils Lab
ITAM Database: LCTA
Inventory Type: Inventory

SPP_INFO
Species information
ITAM Database: SPECIES
Inventory Type: N/A

SUBSTRATE_INFO
Validation table for substrate code
ITAM Database: SPECIES
Inventory Type: N/A

SYNONYMNY
USDA NRCS PLANTS database accepted synonymy information
ITAM Database:
Inventory Type:
TACTCONA
Tactical Concealment summary A
ITAM Database : LCTA
Inventory Type : Summary Table

TECHNIQUE_INFO
Validation table for feeding technique code
ITAM Database : SPECIES
Inventory Type : N/A

TSTYPE
Tree/Shrub type information
ITAM Database : SPECIES
Inventory Type : N/A

VERTLIST
Installation master vertebrate list
ITAM Database : LCTA
Inventory Type : Inventory/Monitoring

VERTS
LCTA generated codes from the Fish and Wildlife Service’s (FWS) “Checklist of Vertebrates of the U.S, the U.S. Territories, and Canada”
ITAM Database : SPECIES
Inventory Type : Inventory/Monitoring
APPENDIX C

Data element information

Data element definitions are presented in this appendix. Syntax is as follows.

DATA ELEMENT NAME

  element definition

  SQL Data Type: designates the type of data  SQL Type Qualifiers: length of text data

  Default Nullity: if not null data is required

  Derived Data: if T (true) this data was calculated from other data in the database

  Valid Entries: gives valid data information

  Missing/Invalid: if applicable lists the data entered to denote missing or invalid data

  Used By: a list of tables that contain the data element
<table>
<thead>
<tr>
<th>Data Element/Entity Reference</th>
<th>LCTA Databases</th>
<th>Center for Ecological Management of Military Lands</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AC00</strong></td>
<td></td>
<td>Percent of plots with no aerial concealment</td>
</tr>
<tr>
<td>SQL Data Type</td>
<td>FLOAT</td>
<td>SQL Type Qualifiers:</td>
</tr>
<tr>
<td>Default Nullity</td>
<td>NULL</td>
<td>Derived Data: T</td>
</tr>
<tr>
<td>Valid Entries</td>
<td>Real number</td>
<td>Missing/Invalid: N/A</td>
</tr>
<tr>
<td>Used By</td>
<td>PCSDYEARSUM</td>
<td></td>
</tr>
<tr>
<td><strong>AC100</strong></td>
<td></td>
<td>Percent of plots with 100% aerial concealment</td>
</tr>
<tr>
<td>SQL Data Type</td>
<td>FLOAT</td>
<td>SQL Type Qualifiers:</td>
</tr>
<tr>
<td>Default Nullity</td>
<td>NULL</td>
<td>Derived Data: T</td>
</tr>
<tr>
<td>Valid Entries</td>
<td>Real number</td>
<td>Missing/Invalid: N/A</td>
</tr>
<tr>
<td>Used By</td>
<td>PCSDYEARSUM</td>
<td></td>
</tr>
<tr>
<td><strong>AC20</strong></td>
<td></td>
<td>Percent of plots with 20% aerial concealment</td>
</tr>
<tr>
<td>SQL Data Type</td>
<td>FLOAT</td>
<td>SQL Type Qualifiers:</td>
</tr>
<tr>
<td>Default Nullity</td>
<td>NULL</td>
<td>Derived Data: T</td>
</tr>
<tr>
<td>Valid Entries</td>
<td>Real number</td>
<td>Missing/Invalid: N/A</td>
</tr>
<tr>
<td>Used By</td>
<td>PCSDYEARSUM</td>
<td></td>
</tr>
<tr>
<td><strong>AC40</strong></td>
<td></td>
<td>Percent of plots with 40% aerial concealment</td>
</tr>
<tr>
<td>SQL Data Type</td>
<td>FLOAT</td>
<td>SQL Type Qualifiers:</td>
</tr>
<tr>
<td>Default Nullity</td>
<td>NULL</td>
<td>Derived Data: T</td>
</tr>
<tr>
<td>Valid Entries</td>
<td>Real number</td>
<td>Missing/Invalid: N/A</td>
</tr>
<tr>
<td>Used By</td>
<td>PCSDYEARSUM</td>
<td></td>
</tr>
<tr>
<td><strong>AC4M</strong></td>
<td></td>
<td>Number of points with cover above 4 m</td>
</tr>
</tbody>
</table>

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Data Element/Entity Reference
LCTA Databases
Center for Ecological Management of Military Lands

AC60
Percent of plots with 60% aerial concealment

SQL Data Type: INTEGER
SQL Type Qualifiers:
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: PCSDPLOTSUM

AC80
Percent of plots with 80% aerial concealment

SQL Data Type: FLOAT
SQL Type Qualifiers:
Default Nullity: NULL
Derived Data: T
Valid Entries: Real number
Missing/Invalid: N/A
Used By: PCSDYEARSUM

ACCBURN
Number of plots with accidental burn

SQL Data Type: INTEGER
SQL Type Qualifiers:
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: LANDUSEYEARSUM

ACMEAN
Mean aerial concealment percent

SQL Data Type: FLOAT
SQL Type Qualifiers:
Default Nullity: NULL
Data Element/Entity Reference
LCTA Databases
Center for Ecological Management of Military Lands

ACOBS
Number of aerial concealment plots

SQL Data Type: INTEGER
SQL Type Qualifiers:
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: PCSDPLOTSUM

ACSTDEV
Standard deviation of mean aerial concealment percent

SQL Data Type: FLOAT
SQL Type Qualifiers:
Default Nullity: NULL
Derived Data: T
Valid Entries: Real number
Missing/Invalid: N/A
Used By: PCSDYEARSUM

AERCOV
Short-term monitoring aerial cover code

SQL Data Type: CHAR
SQL Type Qualifiers: 2
Default Nullity: NOT NULL
Derived Data: F
Valid Entries: (A)nnual,(P)erennial,(AP)annaul&perennial,(N)one
Missing/Invalid: N/A
Used By: LINEMON

ALPHA_CODE
Alpha Code

SQL Data Type: CHAR
SQL Type Qualifiers: 8
Default Nullity: NULL
Derived Data: F
Valid Entries: Valid alpha code
Data Element/Entity Reference
LCTA Databases
Center for Ecological Management of Military Lands

Missing/Invalid: N/A
Used By: SPP_INFO

ANALYEAR

Analysis year

SQL Data Type: INTEGER
Default Nullity: NOT NULL
Derived Data: F
Valid Entries: 4 digit year

Missing/Invalid: N/A
Used By: COMMCLASSPLOTSUM
Used By: EROSION
Used By: LANDUSEYEARSUM
Used By: PCSDPLOTSUM
Used By: PCSDYEARSUM
Used By: PCTTYEARSUM
Used By: TACTCONA

AOU_NUM

AOU number

SQL Data Type: CHAR
Default Nullity: NULL
Derived Data: F
Valid Entries: Valid AOU number

Missing/Invalid: N/A
Used By: SPP_INFO

AREA

Surface area of a vegetation clump

SQL Data Type: FLOAT
Default Nullity: NULL
Derived Data: F
Valid Entries: Real number

Missing/Invalid: N/A
Used By: BELTTRAN

ASPECT

Plot aspect

SQL Data Type: CHAR
Default Nullity: NULL
Derived Data: F
Data Element/Entity Reference
LCTA Databases
Center for Ecological Management of Military Lands

Valid Entries: N,NE,E,SE,S,SW,W,NW,L
Missing/Invalid: N/A
Used By: PLOTSURV

ASSOCTS
Associates.

SQL Data Type: CHAR
SQL Type Qualifiers: 175
Default Nullity: NULL
Derived Data: F
Valid Entries: Valid taxon names up to length of 175
Missing/Invalid:
Used By: SITE

ATDB
Aerial top hits dwarfshrub broadleaf

SQL Data Type: INTEGER
SQL Type Qualifiers:
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: COMMCLASSPLOTSUM

ATDC
Aerial top hits dwarfshrub conifer

SQL Data Type: INTEGER
SQL Type Qualifiers:
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: COMMCLASSPLOTSUM

ATFA
Aerial top hits forb annual

SQL Data Type: INTEGER
SQL Type Qualifiers:
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A

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Data Element/Entity Reference
LCTA Databases
Center for Ecological Management of Military Lands

Used By: COMMCLASSPLOTSUM

ATFP
Aerial top hits forb perennial

SQL Data Type: INTEGER
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: COMMCLASSPLOTSUM

ATGA
Aerial top hits grass annual

SQL Data Type: INTEGER
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: COMMCLASSPLOTSUM

ATGP
Aerial top hits grass perennial

SQL Data Type: INTEGER
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: COMMCLASSPLOTSUM

ATH
Aerial top hits halfshrub

SQL Data Type: INTEGER
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: COMMCLASSPLOTSUM
Data Element/Entity Reference
LCTA Databases
Center for Ecological Management of Military Lands

ATSB
Aerial top hits shrub conifer

SQL Data Type: INTEGER
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: COMMCLASSPLOTSUM

ATSC
Aerial top hits shrub conifer

SQL Data Type: INTEGER
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: COMMCLASSPLOTSUM

ATTB
Aerial top hits tree broadleaf

SQL Data Type: INTEGER
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: COMMCLASSPLOTSUM

ATTC
Aerial top hits tree conifer

SQL Data Type: INTEGER
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: COMMCLASSPLOTSUM

AUTHORS
Author of the Species

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Data Element/Entity Reference
LCTA Databases
Center for Ecological Management of Military Lands

SQL Data Type: CHAR  SQL Type Qualifiers: 35
Default Nullity: NULL
Derived Data: F
Valid Entries: Text
Missing/Invalid: N/A
Used By: VERTLIST
Used By: VERTS

AVEMINHT
Average minimum drip height

SQL Data Type: FLOAT  SQL Type Qualifiers:
Default Nullity: NULL
Derived Data: T
Valid Entries: Real number
Missing/Invalid: N/A
Used By: EROSION

AZIMUTH
Plot azimuth

SQL Data Type: REAL  SQL Type Qualifiers:
Default Nullity: NULL
Derived Data: F
Valid Entries: Real number
Missing/Invalid: N/A
Used By: HERPSURV
Used By: PLOTMAST

BA
Basal Area

SQL Data Type: FLOAT  SQL Type Qualifiers:
Default Nullity: NULL
Derived Data: F
Valid Entries: Real number
Missing/Invalid: N/A
Used By: BASALA

BAITS
Baits used for small mammal trapping

SQL Data Type: CHAR  SQL Type Qualifiers: 25
Data Element/Entity Reference
LCTA Databases
Center for Ecological Management of Military Lands

- **Default Nullity**: NULL
- **Derived Data**: F
- **Valid Entries**: Valid baits used for trapping
- **Missing/Invalid**: N/A
- **Used By**: MAMSURV

**BARCLAY**

Ration 15 Bar-Clay

- **SQL Data Type**: FLOAT
- **SQL Type Qualifiers**: 
- **Default Nullity**: NULL
- **Derived Data**: F
- **Valid Entries**: Real number
- **Missing/Invalid**: N/A
- **Used By**: SOILSMPL

**BARWATER**

15 Bar water on air dry soil, weight percent

- **SQL Data Type**: FLOAT
- **SQL Type Qualifiers**: 
- **Default Nullity**: NULL
- **Derived Data**: F
- **Valid Entries**: Real number
- **Missing/Invalid**: N/A
- **Used By**: SOILSMPL

**BAUTHOR**

Author of binomial portion of accepted name.

- **SQL Data Type**: VARCHAR
- **SQL Type Qualifiers**: 100
- **Default Nullity**: NULL
- **Derived Data**: F
- **Valid Entries**: Character string
- **Missing/Invalid**: N/A
- **Used By**: HERBRIUM

**BELTHT**

Belt transect belt minimum height

- **SQL Data Type**: FLOAT
- **SQL Type Qualifiers**: 
- **Default Nullity**: NOT NULL
- **Derived Data**: F
Data Element/Entity Reference
LCTA Databases
Center for Ecological Management of Military Lands

Valid Entries: Real number
Missing/Invalid: N/A
Used By: BELTSURV

BELTWIDTH

Belt transect belt width

SQL Data Type: FLOAT
SQL Type Qualifiers: 
Default Nullity: NOT NULL
Derived Data: F
Valid Entries: Real number
Missing/Invalid: N/A
Used By: BELTSURV

BIRDSNOTE

Plot note for bird survey

SQL Data Type: VARCHAR
SQL Type Qualifiers: 100
Default Nullity: NULL
Derived Data: F
Valid Entries: Text
Missing/Invalid: N/A
Used By: BIRDSURV

BIV

Number of Bivouac disturbed sites

SQL Data Type: INTEGER
SQL Type Qualifiers: 
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: LANDUSEYEARSUM

C

Cover value (C) used in USLE

SQL Data Type: FLOAT
SQL Type Qualifiers: 
Default Nullity: NULL
Derived Data: T
Valid Entries: Real number
Missing/Invalid: N/A

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Data Element/Entity Reference
LCTA Databases
Center for Ecological Management of Military Lands

Used By: EROSION

C1

C1 subfactor of C (USLE factor)

SQL Data Type: FLOAT
SQL Type Qualifiers:
Default Nullity: NULL
Derived Data: T
Valid Entries: Real number
Missing/Invalid: N/A
Used By: EROSION

C2

C2 subfactor of C (USLE factor)

SQL Data Type: FLOAT
SQL Type Qualifiers:
Default Nullity: NULL
Derived Data: T
Valid Entries: Real number
Missing/Invalid: N/A
Used By: EROSION

CALCKMEAN

Mean Calculated natural erodibility (K) value (USLE factor)

SQL Data Type: FLOAT
SQL Type Qualifiers:
Default Nullity: NULL
Derived Data: T
Valid Entries: Real number
Missing/Invalid: N/A
Used By: SOILMAST

CALCKSTDEV

Standard deviation of calculated natural erodibility (K) value (USLE factor)

SQL Data Type: FLOAT
SQL Type Qualifiers:
Default Nullity: NULL
Derived Data: T
Valid Entries: Real number
Missing/Invalid: -1
Used By: SOILMAST
CARBLT2MM

Carbonate, < 2mm fraction

SQL Data Type: FLOAT
SQL Type Qualifiers: 
Default Nullity: NULL
Derived Data: F
Valid Entries: Real number
Missing/Invalid: N/A
Used By: SOILSMPL

CASENO

Case Number

SQL Data Type: INTEGER
SQL Type Qualifiers: 
Default Nullity: NULL
 Derived Data: F
Valid Entries: Integer
Missing/Invalid: N/A
Used By: ENVCONST

CAT1TO2

Short-term belt height category 1 to 2 meters

SQL Data Type: INTEGER
SQL Type Qualifiers: 
Default Nullity: NOT NULL
Derived Data: F
Valid Entries: Integer
Missing/Invalid: N/A
Used By: BELTMON

CAT2TO3

Short-term belt height category 2 to 3 meters

SQL Data Type: INTEGER
SQL Type Qualifiers: 
Default Nullity: NOT NULL
Derived Data: F
Valid Entries: Integer
Missing/Invalid: N/A
Used By: BELTMON

CAT3TO4

Short-term belt height category 3 to 4 meters
Data Element/Entity Reference
LCTA Databases
Center for Ecological Management of Military Lands

SQL Data Type: INTEGER  SQL Type Qualifiers:
Default Nullity: NOT NULL
Derived Data: F
Valid Entries: Integer
Missing/Invalid: N/A
Used By: BELTMON

CATEGORY_DEF

Definition of generalized subdivision code.

SQL Data Type: VARCHAR  SQL Type Qualifiers: 25
Default Nullity: NOT NULL
Derived Data: F
Valid Entries: Character string
Missing/Invalid:
Used By: HERBRIUM

CATGT4

Short-term belt height category greater than 4 meters

SQL Data Type: INTEGER  SQL Type Qualifiers:
Default Nullity: NOT NULL
Derived Data: F
Valid Entries: Integer
Missing/Invalid: N/A
Used By: BELTMON

CATMINTO1

Short-term belt height category minimum to 1 meter

SQL Data Type: INTEGER  SQL Type Qualifiers:
Default Nullity: NOT NULL
Derived Data: F
Valid Entries: Integer
Missing/Invalid: N/A
Used By: BELTMON

CCANN

Number of locations with only annual cover

SQL Data Type: INTEGER  SQL Type Qualifiers:
Default Nullity: NULL
Data Element/Entity Reference
LCTA Databases
Center for Ecological Management of Military Lands

Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: PCSDPLOTSUM

CCANNMEAN
Mean number of locations with only annual cover

SQL Data Type: FLOAT
Default Nullity: NULL
Derived Data: T
Valid Entries: Real number
Missing/Invalid: N/A
Used By: PCSDYEARSUM

CCANNPER
Number of locations with annual and perennial cover

SQL Data Type: INTEGER
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: PCSDYEARSUM

CCANNSTDEV
Standard deviation of number of locations with only annual cover

SQL Data Type: FLOAT
Default Nullity: NULL
Derived Data: T
Valid Entries: Real number
Missing/Invalid: -1
Used By: PCSDYEARSUM

CCAPMEAN
Mean number of locations with annual and perennial cover

SQL Data Type: FLOAT
Default Nullity: NULL
Derived Data: T
Valid Entries: Real number

as of 6/16/97
Data Element/Entity Reference
LCTA Databases
Center for Ecological Management of Military Lands

Missing/Invalid: N/A
Used By: PCSDYEARSUM

CCAPSTDEV
Standard deviation of number of locations with annual and perennial cover

SQL Data Type: FLOAT
Default Nullity: NULL
Derived Data: T
Valid Entries: Real number
Missing/Invalid: N/A
Used By: PCSDYEARSUM

CCNONE
Number of locations with no cover

SQL Data Type: INTEGER
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: PCSDPLOTSUM

CCNONEMEAN
Mean number of locations with no cover

SQL Data Type: FLOAT
Default Nullity: NULL
Derived Data: T
Valid Entries: Real number
Missing/Invalid: N/A
Used By: PCSDYEARSUM

CCNONESTDEV
Standard deviation of number of locations with no cover

SQL Data Type: FLOAT
Default Nullity: NULL
Derived Data: T
Valid Entries: Real number
Missing/Invalid: -1
Used By: PCSDYEARSUM
Data Element/Entity Reference
LCTA Databases
Center for Ecological Management of Military Lands

CCOBS

Number of total locations measured

SQL Data Type: INTEGER
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: PCSDPLOTSUM

CCPER

Number of locations with only perennial cover

SQL Data Type: INTEGER
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: PCSDPLOTSUM

CCPERMEAN

Mean number of locations with only perennial cover

SQL Data Type: FLOAT
Default Nullity: NULL
Derived Data: T
Valid Entries: Real number
Missing/Invalid: N/A
Used By: PCSDYEARSUM

CCPERSTDEV

Standard deviation of number of locations with only perennial cover

SQL Data Type: FLOAT
Default Nullity: NULL
Derived Data: T
Valid Entries: Real number
Missing/Invalid: -1
Used By: PCSDYEARSUM

CHEMICAL

Number of plots with evidence of chemical use
**Data Element/Entity Reference**  
**LCTA Databases**  
**Center for Ecological Management of Military Lands**

**Data Elements**

**CLASS**

*Vertebrate species class*

- **SQL Data Type**: CHAR
- **SQL Type Qualifiers**: 15
- **Default Nullity**: NULL
- **Derived Data**: F
- **Valid Entries**: Species database Class
- **Missing/Invalid**: N/A
- **Used By**: VERTLIST, VERTS

**CLMPBEGIN**

*Beginning location of vegetation clump*

- **SQL Data Type**: FLOAT
- **SQL Type Qualifiers**:  
- **Default Nullity**: NULL
- **Derived Data**: F
- **Valid Entries**: Real number (0.0-100.0)
- **Missing/Invalid**: N/A
- **Used By**: BELTTRAN

**CLMPEND**

*End location of vegetation clump*

- **SQL Data Type**: FLOAT
- **SQL Type Qualifiers**:  
- **Default Nullity**: NULL
- **Derived Data**: F
- **Valid Entries**: Real number (0.0-100.0)
- **Missing/Invalid**: N/A
- **Used By**: BELTTRAN

**CLOUD_COVER**

*Percent of cloud cover*

- **SQL Data Type**: INTEGER
- **SQL Type Qualifiers**:  

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Default Nullity: NULL
Derived Data: F
Valid Entries: Valid percentage (0-100)
Missing/Invalid: N/A
Used By: BIRDSURV
Used By: HERPSURV
Used By: MAMSURV

CO3CLAY
CO3 Clay

SQL Data Type: FLOAT
SQL Type Qualifiers:
Default Nullity: NULL
Derived Data: F
Valid Entries: Real number
Missing/Invalid: N/A
Used By: SOILSMPL

COLLECTOR
Collector(s)

SQL Data Type: VARCHAR
SQL Type Qualifiers: 70
Default Nullity: NULL
Derived Data: F
Valid Entries: Text
Missing/Invalid: N/A
Used By: BIRDSURV
Used By: HERPSURV
Used By: MAMSURV
Used By: SITE

COLL_LTR
Collection letter of specimen.

SQL Data Type: CHAR
SQL Type Qualifiers: 8
Default Nullity: NULL
Derived Data: F
Valid Entries: Character string
Missing/Invalid:
Used By: HERBRIUM

COLL_NUM
Collection number of specimen.
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**COL_DATE**

*Date of collection.*

- **SQL Data Type:** DATE
- **SQL Type Qualifiers:**
- **Default Nullity:** NOT NULL
- **Derived Data:** F
- **Valid Entries:** Valid date after 1/1/1985
- **Missing/Invalid:** 1/1/11
- **Used By:** HERBRIUM
- **Used By:** SITE

**COMMON**

*Species common name*

- **SQL Data Type:** CHAR
- **SQL Type Qualifiers:** 40
- **Default Nullity:** NULL
- **Derived Data:** F
- **Valid Entries:** Species database animal common name
- **Missing/Invalid:** N/A
- **Used By:** VERTLIST
- **Used By:** VERTS

**COMMUNITY**

*Community specimen in which specimen was found.*

- **SQL Data Type:** CHAR
- **SQL Type Qualifiers:** 75
- **Default Nullity:** NULL
- **Derived Data:** F
- **Valid Entries:** Character string
- **Missing/Invalid:**
- **Used By:** SITE

**COUNTY**

*Name of county.*

- **SQL Data Type:** VARCHAR
- **SQL Type Qualifiers:** 45
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Default Nullity: NULL
Derived Data: F
Valid Entries: Valid State county
Missing/Invalid: N/A
Used By: SITE

COURFRAG

Course fragments (> 2mm), weight % of whole soil

SQL Data Type: FLOAT
Default Nullity: NULL
Derived Data: F
Valid Entries: Real number
Missing/Invalid: N/A
Used By: SOILSMPL

CROP

Number of plots with crop use

SQL Data Type: INTEGER
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: LANDUSEYEARSUM

CSAND

Soil analysis of course sand

SQL Data Type: FLOAT
Default Nullity: NULL
Derived Data: F
Valid Entries: Real number
Missing/Invalid: N/A
Used By: SOILSMPL

CSILT

Soil analysis of course silt

SQL Data Type: FLOAT
Default Nullity: NULL
Derived Data: F
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Valid Entries: Real number
Missing/Invalid: N/A
Used By: SOILSMPL

DEBDAM
Number of plots with debris dams

SQL Data Type: INTEGER
SQL Type Qualifiers:
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: LANDUSEYEARSUM

DECLIN
Plot declination

SQL Data Type: FLOAT
SQL Type Qualifiers:
Default Nullity: NULL
Derived Data: F
Valid Entries: Real number
Missing/Invalid: N/A
Used By: PLOTMAST

DEMO
Number of plots with demolition

SQL Data Type: INTEGER
SQL Type Qualifiers:
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: LANDUSEYEARSUM

DETERMIN
Determiner of final identification.

SQL Data Type: CHAR
SQL Type Qualifiers: 20
Default Nullity: NULL
Derived Data: F
Valid Entries: Character string
Missing/Invalid: N/A
Data Element/Entity Reference
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Used By: HERBRIUM

DISTURB

Ground disturbance code

SQL Data Type: CHAR
SQL Type Qualifiers: 2
Default Nullity: NOT NULL
Derived Data: F
Valid Entries: (N)one, (P)ass, (T)rail, (R)oad, (O)ther
Missing/Invalid: N/A
Used By: GNDCOVER, LINEMON

DMCE

Universal Trasverse Mercator coordinate, easting

SQL Data Type: INTEGER
Default Nullity: NULL
Derived Data: F
Valid Entries: Valid UTM - Easting
Missing/Invalid: N/A
Used By: CLIMATESTATIONS, PLOTMAST, SITE

DMCN

Universal Trasverse Mercator coordinate, northing

SQL Data Type: INTEGER
Default Nullity: NULL
Derived Data: F
Valid Entries: Valid UTM - Northing
Missing/Invalid: N/A
Used By: CLIMATESTATIONS, PLOTMAST, SITE

DRIFTING

Number of plots with observed drifting wind erosion

SQL Data Type: INTEGER
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer

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**Missing/Invalid:** N/A
**Used By:** LANDUSEYEARSUM

**DUR1_DEF**

*Definition of taxon code - first field.*

- **SQL Data Type:** VARCHAR
- **SQL Type Qualifiers:** 25
- **Default Nullity:** NOT NULL
- **Derived Data:** F
- **Valid Entries:** Valid taxon duration definition
- **Used By:** HERBRIUM

**DUR2_DEF**

*Definition of taxon code - second field.*

- **SQL Data Type:** VARCHAR
- **SQL Type Qualifiers:** 25
- **Default Nullity:** NOT NULL
- **Derived Data:** F
- **Valid Entries:** Valid taxon duration definition
- **Used By:** HERBRIUM

**DUR3_DEF**

*Definition of taxon code - third field.*

- **SQL Data Type:** VARCHAR
- **SQL Type Qualifiers:** 25
- **Default Nullity:** NOT NULL
- **Derived Data:** F
- **Valid Entries:** Valid taxon duration definition
- **Used By:** HERBRIUM

**ECON_IMP**

*Vascular plants used anywhere in the for food, spices, medicine, drugs, forage, or fiber. From Terrell et al. (1986). Revised infrequently.*

- **SQL Data Type:** CHAR
- **SQL Type Qualifiers:** 1
- **Default Nullity:** NULL
- **Derived Data:** F
- **Valid Entries:** Y or null
- **Used By:** HERBRIUM
Data Element/Entity Reference
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EFFCOVER

*Effective cover in USLE calculation*

- SQL Data Type: FLOAT
- SQL Type Qualifiers:
- Default Nullity: NULL
- Derived Data: T
- Valid Entries: Real number
- Missing/Invalid: N/A
- Used By: EROSION

ELEVTN

*Elevation of site where specimen was collect (meters).*

- SQL Data Type: INTEGER
- SQL Type Qualifiers:
- Default Nullity: NULL
- Derived Data: F
- Valid Entries: integer
- Missing/Invalid:
- Used By: SITE

EXCA

*Number of plots with excavation*

- SQL Data Type: INTEGER
- SQL Type Qualifiers:
- Default Nullity: NULL
- Derived Data: T
- Valid Entries: Integer
- Missing/Invalid: N/A
- Used By: LANDUSEYEARSUM

EXCPTNSP

*Exception species to belt width*

- SQL Data Type: CHAR
- SQL Type Qualifiers: 8
- Default Nullity: NOT NULL
- Derived Data: F
- Valid Entries: Species database plant code
- Missing/Invalid: N/A
- Used By: BELTSURV

FAMILY

*Species family*
### Data Element/Entity Reference

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<thead>
<tr>
<th>Data Element/Entity Reference</th>
<th>SQL Data Type</th>
<th>SQL Type Qualifiers</th>
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<td><strong>Valid Entries</strong></td>
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<td><strong>Used By</strong></td>
<td>HERBRIUM</td>
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<td><strong>Used By</strong></td>
<td>PLANTS</td>
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<td><strong>Used By</strong></td>
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<tr>
<td><strong>Used By</strong></td>
<td>VERTLIST</td>
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<tr>
<td><strong>Used By</strong></td>
<td>VERTS</td>
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**FEDSTAT_DEF**

*Federal status code definition*

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<tr>
<td>VARCHAR</td>
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<td>Valid Federal T&amp;E definition</td>
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**FLD_DESC**

*Field description of collected specimen.*

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<tr>
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<td>Text</td>
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<td>Text</td>
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<td>HERBRIUM</td>
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**FLYOVERS**

*Bird species flyover data*

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<td>char</td>
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<tr>
<td>Default Nullity</td>
<td>NULL</td>
</tr>
<tr>
<td>Derived Data</td>
<td>F</td>
</tr>
<tr>
<td>Valid Entries</td>
<td>(Y)es, (N)o</td>
</tr>
<tr>
<td>Missing/Invalid</td>
<td>N/A</td>
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<td>Used By</td>
<td>BIRDS</td>
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</table>

**FOOD_DEF**

*Food type code definition*

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**FOOD_NOTE**

Food type note

- **SQL Data Type**: VARCHAR
- **SQL Type Qualifiers**: 100
- **Default Nullity**: NULL
- **Derived Data**: F
- **Valid Entries**: Alphanumeric
- **Missing/Invalid**: N/A
- **Used By**: FOOD_INFO

**FOOD_TYPE**

Food type code

- **SQL Data Type**: char
- **SQL Type Qualifiers**: 4
- **Default Nullity**: NOT NULL
- **Derived Data**: F
- **Valid Entries**: Valid food type code as defined in food type domain table
- **Missing/Invalid**: N/A
- **Used By**: FOOD_INFO, SFST

**FOOT**

Number of plots with foot traffic

- **SQL Data Type**: INTEGER
- **SQL Type Qualifiers**: 
- **Default Nullity**: NULL
- **Derived Data**: T
- **Valid Entries**: Integer
- **Missing/Invalid**: N/A
- **Used By**: LANDUSEYEARSUM

**FOREST**

Number of plots with forestry activity

- **SQL Data Type**: INTEGER
- **SQL Type Qualifiers**: 

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Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: LANDUSEYEARSUM

FORM

Plant life form 1

SQL Data Type: CHAR
SQL Type Qualifiers: 8
Default Nullity: NULL
Derived Data: F
Valid Entries: Text
Missing/Invalid: N/A
Used By: LANDUSEYEARSUM

FORM1

Plant life form 1

SQL Data Type: CHAR
SQL Type Qualifiers: 1
Default Nullity: NULL
Derived Data: F
Valid Entries: (G)assist,(F)orb,(T)ree,(H)alf,(S)hrub,(T)ree,(W)oody
Missing/Invalid: N/A
Used By: PLNTLIST

FORM2

Plant life form 2

SQL Data Type: CHAR
SQL Type Qualifiers: 1
Default Nullity: NULL
Derived Data: F
Valid Entries: (V)ine,(S)hrub
Missing/Invalid: N/A
Used By: PLNTLIST

FORM3

Plant life form 3

SQL Data Type: CHAR
SQL Type Qualifiers: 8
Default Nullity: NULL
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FORM4

*Plant life form 4*

**SQL Data Type:** CHAR  
**SQL Type Qualifiers:** 8  
**Default Nullity:** NULL  
**Derived Data:** F  
**Valid Entries:** Text  
**Missing/Invalid:** N/A  
**Used By:** PLANTS

FORM5

*Plant Life form 5*

**SQL Data Type:** CHAR  
**SQL Type Qualifiers:** 8  
**Default Nullity:** NULL  
**Derived Data:** F  
**Valid Entries:** Text  
**Missing/Invalid:** N/A  
**Used By:** PLANTS

FORM6

*Plant life form 6*

**SQL Data Type:** CHAR  
**SQL Type Qualifiers:** 8  
**Default Nullity:** NULL  
**Derived Data:** F  
**Valid Entries:** Text  
**Missing/Invalid:** N/A  
**Used By:** PLANTS

FSAND

*Soil Analysis of find sand*

**SQL Data Type:** FLOAT  
**SQL Type Qualifiers:**  
**Default Nullity:** NULL  
**Derived Data:** F  
**Valid Entries:** Real number
FSILT

Soil Analysis of fine silt

SQL Data Type: FLOAT
Default Nullity: NULL
Derived Data: F
Valid Entries: Real number
Missing/Invalid: N/A
Used By: SOILSMPL

GCBARE

Number of bare ground points

SQL Data Type: INTEGER
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: PCSDPLOTSUM

GCBAREMEAN

Mean number of bare ground points

SQL Data Type: FLOAT
Default Nullity: NULL
Derived Data: T
Valid Entries: Real number
Missing/Invalid: N/A
Used By: PCSDYEARSUM

GCBARESTDEV

Standard deviation of number of bare ground points

SQL Data Type: FLOAT
Default Nullity: NULL
Derived Data: T
Valid Entries: Real number
Missing/Invalid: -1
Used By: PCSDYEARSUM
Data Element/Entity Reference  
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**GCLITMEAN**  
*Mean number of points with litter*  

**SQL Data Type:** FLOAT  
**SQL Type Qualifiers:**  
**Default Nullity:** NULL  
**Derived Data:** T  
**Valid Entries:** Real number  
**Missing/Invalid:** N/A  
**Used By:** PCSDYEARSUM  

**GCLITSTDEV**  
*Standard Deviation of points with litter*  

**SQL Data Type:** FLOAT  
**SQL Type Qualifiers:**  
**Default Nullity:** NULL  
**Derived Data:** T  
**Valid Entries:** Real number  
**Missing/Invalid:** -1  
**Used By:** PCSDYEARSUM  

**GCLITTER**  
*Standard deviation of number of points with litter*  

**SQL Data Type:** INTEGER  
**SQL Type Qualifiers:**  
**Default Nullity:** NULL  
**Derived Data:** T  
**Valid Entries:** Integer  
**Missing/Invalid:** N/A  
**Used By:** PCSDPLOTSUM  

**GCMICRO**  
*Number of points with microphytes*  

**SQL Data Type:** INTEGER  
**SQL Type Qualifiers:**  
**Default Nullity:** NULL  
**Derived Data:** T  
**Valid Entries:** Integer  
**Missing/Invalid:** N/A  
**Used By:** PCSDPLOTSUM  

**GMICROMEAN**  
*Mean number of points with microphytes*  

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**GCMICROSTDEV**

*Standard deviation of number of points with microphytes*

- **SQL Data Type**: FLOAT
- **SQL Type Qualifiers**: 
- **Default Nullity**: NULL
- **Derived Data**: \( T \)
- **Valid Entries**: Real number
- **Missing/Invalid**: N/A
- **Used By**: PCSDYEARSUM

**GCOBS**

*Total number of ground cover points*

- **SQL Data Type**: INTEGER
- **SQL Type Qualifiers**: 
- **Default Nullity**: NULL
- **Derived Data**: \( T \)
- **Valid Entries**: Integer
- **Missing/Invalid**: N/A
- **Used By**: PCSDPLOTSUM

**GCPLANT**

*Number of points with plants*

- **SQL Data Type**: INTEGER
- **SQL Type Qualifiers**: 
- **Default Nullity**: NULL
- **Derived Data**: \( T \)
- **Valid Entries**: Integer
- **Missing/Invalid**: N/A
- **Used By**: PCSDPLOTSUM

**GCPLANTMEAN**

*Mean number of points with plants*

- **SQL Data Type**: FLOAT
- **SQL Type Qualifiers**: 
- **Default Nullity**: NULL
Data Element/Entity Reference
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Derived Data: T
Valid Entries: Real number
Missing/Invalid: N/A
Used By: PCSDYEARSUM

**GCPLANTSTDEV**

*Standard deviation of number of points with plants*

SQL Data Type: FLOAT
Default Nullity: NULL
Derived Data: T
Valid Entries: Real number
Missing/Invalid: -1
Used By: PCSDYEARSUM

**GCROCK**

*Number of points with rocks*

SQL Data Type: INTEGER
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: PCSDPLOTSUM

**GCROCKMEAN**

*Mean number of points with rocks*

SQL Data Type: FLOAT
Default Nullity: NULL
Derived Data: T
Valid Entries: Real number
Missing/Invalid: N/A
Used By: PCSDYEARSUM

**GCROCKSTDEV**

*Standard deviation of number of points with rocks*

SQL Data Type: FLOAT
Default Nullity: NULL
Derived Data: T
Valid Entries: Real number
Data Element/Entity Reference
LCTA Databases
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- **GDONE**
  - Number of points with no ground cover
  - **SQL Data Type:** INTEGER
  - **Default Nullity:** NULL
  - **Derived Data:** T
  - **Valid Entries:** Integer
  - **Missing/Invalid:** N/A
  - **Used By:** PCSDYEARSUM

- **GDNONEMEAN**
  - Mean number of points with no ground cover
  - **SQL Data Type:** FLOAT
  - **Default Nullity:** NULL
  - **Derived Data:** T
  - **Valid Entries:** Real number
  - **Missing/Invalid:** N/A
  - **Used By:** PCSDYEARSUM

- **GDNONESTDEV**
  - Standard deviation of number of points with no ground cover
  - **SQL Data Type:** FLOAT
  - **Default Nullity:** NULL
  - **Derived Data:** T
  - **Valid Entries:** Real number
  - **Missing/Invalid:** -1
  - **Used By:** PCSDYEARSUM

- **GDOBS**
  - Number of ground disturbance points
  - **SQL Data Type:** INTEGER
  - **Default Nullity:** NULL
  - **Derived Data:** T
  - **Valid Entries:** Integer
  - **Missing/Invalid:** N/A
  - **Used By:** PCSDPLOTSUM

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GDOTHER

Number of points with other disturbance

SQL Data Type: INTEGER
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: PCSDPLOTSUM

GDOTHMEAN

Mean number of points with other disturbance

SQL Data Type: FLOAT
Default Nullity: NULL
Derived Data: T
Valid Entries: Real number
Missing/Invalid: N/A
Used By: PCSDYEARSUM

GDOTHSTDEV

Standard deviation of number of points with other disturbance

SQL Data Type: FLOAT
Default Nullity: NULL
Derived Data: T
Valid Entries: Real number
Missing/Invalid: -1
Used By: PCSDYEARSUM

GDPASS

Number of points with vehicle pass disturbance

SQL Data Type: INTEGER
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: PCSDPLOTSUM

GDPASSMEAN

Mean number of points with vehicle pass disturbance
Data Element/Entity Reference
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SQL Data Type: FLOAT  SQL Type Qualifiers:
Default Nullity: NULL
Derived Data: T
Valid Entries: Real number
Missing/Invalid: N/A
Used By: PCSDYEARSUM

GDPASSSTDEV
Standard deviation of number of points with pass disturbance

SQL Data Type: FLOAT  SQL Type Qualifiers:
Default Nullity: NULL
Derived Data: T
Valid Entries: Real number
Missing/Invalid: -1
Used By: PCSDYEARSUM

GDROAD
Number of points with road disturbance

SQL Data Type: INTEGER  SQL Type Qualifiers:
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: PCSDPLOTSUM

GDROADMEAN
Mean number of points with road disturbance

SQL Data Type: FLOAT  SQL Type Qualifiers:
Default Nullity: NULL
Derived Data: T
Valid Entries: Real number
Missing/Invalid: N/A
Used By: PCSDYEARSUM

GDROADSTDEV
Standard deviation of number of points with road disturbance

SQL Data Type: FLOAT  SQL Type Qualifiers:
Default Nullity: NULL

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Derived Data: T
Valid Entries: Real number
Missing/Invalid: -1
Used By: PCSDYEARSUM

GDTRAIL

Number of points with foot trail disturbance

SQL Data Type: INTEGER
Default Nullity: NULL
 Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: PCSDPLOTSUM

GDTRAILMEAN

Mean number of points with foot trail disturbance

SQL Data Type: FLOAT
Default Nullity: NULL
 Derived Data: T
Valid Entries: Real number
Missing/Invalid: N/A
Used By: PCSDYEARSUM

GDTRAILSTDEV

Standard deviation of number of points with foot trail disturbance

SQL Data Type: FLOAT
Default Nullity: NULL
 Derived Data: T
Valid Entries: Real number
Missing/Invalid: -1
Used By: PCSDYEARSUM

GENMAP

General plot location map

SQL Data Type: LONG_VARCHAR
Default Nullity: NULL
 Derived Data: F
Valid Entries: Bitmap or TIFF format
Data Element/Entity Reference
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Center for Ecological Management of Military Lands

Missing/Invalid: N/A
Used By: PLOTMAPS

GENUS
Species genus

SQL Data Type: CHAR
SQL Type Qualifiers: 20

Default Nullity: NULL

Derived Data: F

Valid Entries: Species database Genus

Missing/Invalid: N/A
Used By: HERBRIUM
Used By: PLANTS
Used By: PLNTLIST
Used By: VERTLIST
Used By: VERTS

GEN_HABITAT
General habitat code

SQL Data Type: char
SQL Type Qualifiers: 4

Default Nullity: NOT NULL

Derived Data: F

Valid Entries: Valid general habitat code as defined in the habitat domain table

Missing/Invalid: N/A
Used By: GENERAL_HABITAT
Used By: HABITAT_INFO

GNDCOV
Monitoring ground cover code

SQL Data Type: CHAR
SQL Type Qualifiers: 2

Default Nullity: NOT NULL

Derived Data: F

Valid Entries: (P)lant,(L)itter,(B)are,(R)ock

Missing/Invalid: N/A
Used By: LINEMON

GRAZING
Number of plots with grazing

SQL Data Type: INTEGER
SQL Type Qualifiers: 

Default Nullity: NULL

Derived Data: T
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LCTA Databases
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Valid Entries: Integer
Missing/Invalid: N/A
Used By: LANDUSEYEARSUM

GRWHABT1_DEF
Gross growth form or habit definition - first field.

SQL Data Type: VARCHAR
Default Nullity: NOT NULL
Derived Data: F
Valid Entries: Valid growth/habit definition
Missing/Invalid: 
Used By: HERBRIUM

GRWHABT2_DEF
Gross growth form or habit definition - second field.

SQL Data Type: VARCHAR
Default Nullity: NOT NULL
Derived Data: F
Valid Entries: Valid growth/habit definition
Missing/Invalid: 
Used By: HERBRIUM

GRWHABT3_DEF
Gross growth form or habit definition - third field.

SQL Data Type: VARCHAR
Default Nullity: NOT NULL
Derived Data: F
Valid Entries: Valid growth/habit definition
Missing/Invalid: 
Used By: HERBRIUM

GULLY
Number of plots with observed gully erosion

SQL Data Type: INTEGER
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A

as of 6/16/97
Data Element/Entity Reference
LCTA Databases
Center for Ecological Management of Military Lands

Used By: LANDUSEYEARSUM

HABDIVIS
Habitat divisor in USLE calculations

SQL Data Type: FLOAT
Default Nullity: NULL
Derived Data: T
Valid Entries: Real number
Missing/Invalid: N/A
Used By: EROSION

HABITAT_DEF
Gross habitat definition.

SQL Data Type: VARCHAR
SQL Type Qualifiers: 25
Default Nullity: NOT NULL
Derived Data: F
Valid Entries: Valid habitat definition
Missing/Invalid: 
Used By: HABITAT_INFO
Used By: HERBRIUM

HABITAT_NOTE
General habitat note

SQL Data Type: VARCHAR
SQL Type Qualifiers: 100
Default Nullity: NULL
Derived Data: F
Valid Entries: Alphanumeric
Missing/Invalid: N/A
Used By: HABITAT_INFO

HAY
Number of plots with hay use

SQL Data Type: INTEGER
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: LANDUSEYEARSUM

as of 6/16/97
Data Element/Entity Reference
LCTA Databases
Center for Ecological Management of Military Lands

HERPNOTE
Plot note for herp survey

SQL Data Type: VARCHAR
Default Nullity: NULL
Derived Data: F
Valid Entries: Text
Missing/Invalid: N/A
Used By: HERPSURV

HT1TO2
Number of hits in height category 1 to 2 m

SQL Data Type: INTEGER
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: TACTCONA

HT2TO3
Number of hits in height category 2 to 3 m

SQL Data Type: INTEGER
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: TACTCONA

HT3TO4
Number of hits in height category 3 to 4 m

SQL Data Type: INTEGER
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: TACTCONA

HTGT4
Number of hits in height category greater than 4 m
Data Element/Entity Reference
LCTA Databases
Center for Ecological Management of Military Lands

**LCTA Databases**

**HTMINTO1**

*Number of hits in height category minimum to 1 m*

**HYBRID**

*Hybrid vegetation code*

**IMPACT**

*Impact on training*

**INLOC**

*Installation location*
Data Element/Entity Reference
LCTA Databases
Center for Ecological Management of Military Lands

Derived Data: \( F \)

Valid Entries: State and country

Missing/Invalid: N/A

Used By: INSTMAST

INNAME

Installation name

SQL Data Type: CHAR  SQL Type Qualifiers: 30

Default Nullity: NOT NULL

Derived Data: \( F \)

Valid Entries: Correct installation name

Missing/Invalid: N/A

Used By: INSTMAST

INSIZE

Installation size

SQL Data Type: FLOAT  SQL Type Qualifiers:

Default Nullity: NULL

Derived Data: \( F \)

Valid Entries: installation size in acres

Missing/Invalid: N/A

Used By: INSTMAST

INSTALID

Installation code

SQL Data Type: CHAR  SQL Type Qualifiers: 3

Default Nullity: NOT NULL

Derived Data: \( F \)

Valid Entries: Three letter installation code

Missing/Invalid: N/A

Used By: AERCOVER

Used By: BASALA

Used By: BELTMON

Used By: BELTSURV

Used By: BELTTRAN

Used By: BIRDS

Used By: BIRDSURV

Used By: COMMCLASSPLOTSUM

Used By: ENVCONST

Used By: EROSEVID

Used By: EROSION

Used By: F_COUNT

Used By: GNDCOVER

Used By: GROUPING
Data Element/Entity Reference
LCTA Databases
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Used By: HERBRUIM
Used By: HERPS
Used By: HERPSURV
Used By: HISTORY
Used By: INSTMAST
Used By: LANDUSE
Used By: LANDUSEYEARSUM
Used By: LINEMON
Used By: MAINTACT
Used By: MAMMALS
Used By: MAMSURV
Used By: PCSDPLOTSUM
Used By: PCSDYEARSUM
Used By: PCTTYEARSUM
Used By: PLOTMAPS
Used By: PLOTMAST
Used By: PLOTSURV
Used By: SITE
Used By: SOILS
Used By: SOILSMPL
Used By: TACTCONA

INSTNOTE
Installation note

SQL Data Type: VARCHAR  SQL Type Qualifiers: 254
Default Nullity: NULL
Derived Data: F
Valid Entries: Text or numbers
Missing/Invalid: N/A
Used By: HISTORY

INVTYPE
Inventory type

SQL Data Type: CHAR  SQL Type Qualifiers: 2
Default Nullity: NOT NULL
Derived Data: F
Valid Entries: (I)nventory,(M)onitoring,(L)ong term monitoring
Missing/Invalid: N/A
Used By: PLOTSURV

KCAL
Calculated erodibility (K) value (USLE factor)

SQL Data Type: FLOAT  SQL Type Qualifiers:
Default Nullity: NULL
Derived Data: T
Valid Entries: SCS K value (calculated)
Data Element/Entity Reference
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Missing/Invalid: -1
Used By: EROSION

KCALEROSINDEX

Erosion index using calculated erodibility value (K)

SQL Data Type: FLOAT
Default Nullity: NULL
Derived Data: T
Valid Entries: Real number
Missing/Invalid: -1
Used By: EROSION

KPUB

SCS Published erodibility (K) value (USLE factor)

SQL Data Type: FLOAT
Default Nullity: NULL
Derived Data: F
Valid Entries: SCS K value
Missing/Invalid: N/A
Used By: EROSION

KPUBEROSINDEX

Erosion index using published erodibility (K) (USLE factor)

SQL Data Type: FLOAT
Default Nullity: NULL
Derived Data: T
Valid Entries: Real number
Missing/Invalid: N/A
Used By: EROSION

LABK

Erodibility (K) value calculated with sample data (USLE factor)

SQL Data Type: FLOAT
Default Nullity: NULL
Derived Data: F
Valid Entries: SCS K value
Missing/Invalid: N/A
Used By: SOILSMPL
Data Element/Entity Reference
LCTA Databases
Center for Ecological Management of Military Lands

LANDUSE

*Plot land use code*

- **SQL Data Type**: CHAR
- **SQL Type Qualifiers**: 16
- **Default Nullity**: NOT NULL
- **Derived Data**: F
- **Valid Entries**: Valid military or non-military use
- **Missing/Invalid**: N/A
- **Used By**: LANDUSE

LEALLOBS

*Number of plots with land use showing erosion evidence*

- **SQL Data Type**: INTEGER
- **SQL Type Qualifiers**: 
- **Default Nullity**: NULL
- **Derived Data**: T
- **Valid Entries**: Integer
- **Missing/Invalid**: N/A
- **Used By**: LANDUSEYEARSUM

LEALLVIS

*Number of plots with land use other than NONE showing erosion evidence*

- **SQL Data Type**: INTEGER
- **SQL Type Qualifiers**: 
- **Default Nullity**: NULL
- **Derived Data**: T
- **Valid Entries**: Integer
- **Missing/Invalid**: N/A
- **Used By**: LANDUSEYEARSUM

LEWAOBS

*Number of plots with land use showing water erosion evidence*

- **SQL Data Type**: INTEGER
- **SQL Type Qualifiers**: 
- **Default Nullity**: NULL
- **Derived Data**: T
- **Valid Entries**: Integer
- **Missing/Invalid**: N/A
- **Used By**: LANDUSEYEARSUM

LEWAVIS

*Number of plots with land use other than NONE showing water erosion evidence*
### Data Element/Entity Reference

**LCTA Databases**

**Center for Ecological Management of Military Lands**

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**LEWIOBS**

*Number of plots with land use showing wind erosion evidence*

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**LEWIVIS**

*Number of plots with land use other than NONE showing wind erosion evidence*

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**LIFE**

*Plant life pattern*

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**LIFEFORM**

*Plant life form category*

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Default Nullity: NULL  
Derived Data: F  
Valid Entries: (A)nnual,(P)erennial  
Missing/Invalid: N/A  
Used By: TACTCONA

LOC

Line transect location of herp trap

SQL Data Type: INTEGER  
Default Nullity: NULL  
Derived Data: F  
Valid Entries: 0 to 100  
Missing/Invalid: N/A  
Used By: HERPSURV

LOCATION

Written description of location.

SQL Data Type: VARCHAR  
Default Nullity: NOT NULL  
Derived Data: F  
Valid Entries: Character string  
Missing/Invalid: NA  
Used By: SITE

LOCMAP

Specific location map

SQL Data Type: LONG_VARCHAR  
Default Nullity: NULL  
Derived Data: F  
Valid Entries: Bitmap or TIFF format  
Missing/Invalid: N/A  
Used By: PLOTMAPS

LOC_DEF

Nest location code definition

SQL Data Type: VARCHAR  
Default Nullity: NOT NULL  
Derived Data: F
### LOC_NOTE

*Nest location note*

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### LS0

*Topographic factor (LS) at transect location 0 m (USLE factor)*

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### LS1

*Topographic factor (LS) at transect location 50 m (USLE factor)*

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### LS2

*Topographic factor (LS) at transect location 100 m (USLE factor)*

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Data Element/Entity Reference
LCTA Databases
Center for Ecological Management of Military Lands

Used By: EROSION

LSM
Mean topographic factor (LS) of 3 transects (USLE factor)

SQL Data Type: FLOAT
Default Nullity: NULL
Derived Data: T
Valid Entries: Valid LS value
Missing/Invalid: N/A
Used By: EROSION

MAINNOTE
Plot maintenance note

SQL Data Type: VARCHAR
Default Nullity: NULL
Derived Data: F
Valid Entries: Text, numbers
Missing/Invalid: N/A
Used By: MAINTACT

MAINTAIN
Plot maintenance code

SQL Data Type: CHAR
Default Nullity: NOT NULL
Derived Data: F
Valid Entries: Valid maintenance activity
Missing/Invalid: N/A
Used By: MAINTACT

MAMNOTE
Plot note for mammal survey

SQL Data Type: VARCHAR
Default Nullity: NULL
Derived Data: F
Valid Entries: Text
Missing/Invalid: N/A
Used By: MAMSURV

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**MANONE**  
*Number of plots with no maintenance activity*  

- **SQL Data Type:** INTEGER  
- **Default Nullity:** NULL  
- **Derived Data:** T  
- **Valid Entries:** Integer  
- **Missing/Invalid:** N/A  
- **Used By:** LANDUSEYEARSUM

**MAOBS**  
*Number of plots with maintenance recorded*  

- **SQL Data Type:** INTEGER  
- **Default Nullity:** NULL  
- **Derived Data:** T  
- **Valid Entries:** Integer  
- **Missing/Invalid:** N/A  
- **Used By:** LANDUSEYEARSUM

**MAOTHER**  
*Number of plots with "other" maintenance*  

- **SQL Data Type:** INTEGER  
- **Default Nullity:** NULL  
- **Derived Data:** T  
- **Valid Entries:** Integer  
- **Missing/Invalid:** N/A  
- **Used By:** LANDUSEYEARSUM

**MATED_STATUS**  
*Bird species mated status code*  

- **SQL Data Type:** CHAR  
- **SQL Type Qualifiers:** 2  
- **Default Nullity:** NOT NULL  
- **Derived Data:** F  
- **Valid Entries:** (*)Singing male,(PR)Adult male/female pair,(M)Nonsinging male,(F)Female only  
- **Missing/Invalid:** N/A  
- **Used By:** BIRDS  
- **Used By:** MATED_STATUS_CODE

**MCCCODE**

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Most common community (MCC) classification code

**SQL Data Type**: CHAR **SQL Type Qualifiers**: 8
**Default Nullity**: NULL
**Derived Data**: T
**Valid Entries**: Valid Most Common Classification code
**Missing/Invalid**: N/A
**Used By**: COMMCLASSPLOTSUM

**MCCTYPE**

Most common community (MCC) classification type

**SQL Data Type**: CHAR **SQL Type Qualifiers**: 4
**Default Nullity**: NULL
**Derived Data**: T
**Valid Entries**: Valid Most Common Classification type
**Missing/Invalid**: N/A
**Used By**: COMMCLASSPLOTSUM

**MEALLOBS**

Number of plots with maintenance activities showing erosion evidence

**SQL Data Type**: INTEGER **SQL Type Qualifiers**: 
**Default Nullity**: NULL
**Derived Data**: T
**Valid Entries**: Integer
**Missing/Invalid**: N/A
**Used By**: LANDUSEYEARSUM

**MEALLVIS**

Number of plots with maintenance activities other than NONE showing erosion evidence

**SQL Data Type**: INTEGER **SQL Type Qualifiers**: 
**Default Nullity**: NULL
**Derived Data**: T
**Valid Entries**: Integer
**Missing/Invalid**: N/A
**Used By**: LANDUSEYEARSUM

**MEASURE_PT**

Line location of bird survey data location

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SQL Data Type: CHAR  SQL Type Qualifiers: 2
Default Nullity: NOT NULL
Derived Data: F
Missing/Invalid: N/A
Used By: BIRDS
Used By: POINT_CODE

METHOD
Vertebrate collection method

SQL Data Type: CHAR  SQL Type Qualifiers: 3
Default Nullity: NOT NULL
Derived Data: F
Valid Entries: (O)bserved,(S)ighting,(T)rapped
Missing/Invalid: N/A
Used By: HERPS
Used By: MAMMALS
Used By: METHODS_CODE

METHOD_DEF
Vertebrate collection method code definition

SQL Data Type: CHAR  SQL Type Qualifiers: 35
Default Nullity: NOT NULL
Derived Data: F
Valid Entries: Observed,Sighting,Trapped
Missing/Invalid: N/A
Used By: METHODS_CODE

METHOD_NOTE
Vertebrate collection notes

SQL Data Type: VARCHAR  SQL Type Qualifiers: 100
Default Nullity: NULL
Derived Data: F
Valid Entries: Text
Missing/Invalid: N/A
Used By: METHODS_CODE

MEWAOBS
Number of plots with maintenance activities showing water erosion evidence

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SQL Data Type: INTEGER
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: LANDUSEYEARSUM

MEWAVIS

Number of plots with maintenance activities other than NONE showing water erosion evidence

SQL Data Type: INTEGER
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: LANDUSEYEARSUM

MEWIOBS

Number of plots with maintenance activities showing wind erosion evidence

SQL Data Type: INTEGER
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: LANDUSEYEARSUM

MEWIVIS

Number of plots with maintenance activities other than NONE showing wind erosion evidence

SQL Data Type: INTEGER
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: LANDUSEYEARSUM

MICROSITE

Description of microsite.

SQL Data Type: VARCHAR
Default Nullity: NULL

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<td><strong>Default Nullity:</strong></td>
<td>NULL</td>
</tr>
<tr>
<td><strong>Derived Data:</strong></td>
<td>T</td>
</tr>
<tr>
<td><strong>Valid Entries:</strong></td>
<td>Integer</td>
</tr>
</tbody>
</table>

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Missing/Invalid: N/A
Used By: LANDUSEYEARSUM

MOTHER

Number of plots with "other" military activity

SQL Data Type: INTEGER
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: LANDUSEYEARSUM

MOW

Number of plots with mowing

SQL Data Type: INTEGER
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: LANDUSEYEARSUM

MSAND

Soil analysis of medium sand

SQL Data Type: FLOAT
Default Nullity: NULL
Derived Data: F
Valid Entries: Real number
Missing/Invalid: N/A
Used By: SOILSMP

MSTATUS_DEF

Bird species mated status code

SQL Data Type: CHAR
Default Nullity: NOT NULL
Derived Data: F
Missing/Invalid: N/A
Used By: MATED_STATUS_CODE
Data Element/Entity Reference
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MSTATUS_NOTE
  Mated status code note

  SQL Data Type: VARCHAR    SQL Type Qualifiers: 100
  Default Nullity: NULL
  Derived Data: F
  Valid Entries: Alphanumeric
  Missing/Invalid: N/A
  Used By: MATED_STATUS_CODE

NEOTROP
  Neotropic designation code

  SQL Data Type: char    SQL Type Qualifiers: 4
  Default Nullity: NOT NULL
  Derived Data: F
  Valid Entries: Valid neotropical code as defined in neotropical domain table
  Missing/Invalid: N/A
  Used By: NEOTROPICAL
  Used By: NEOTROPIC_INFO

NEOTROP_DEF
  Neotropic code definition

  SQL Data Type: VARCHAR    SQL Type Qualifiers: 35
  Default Nullity: NOT NULL
  Derived Data: F
  Valid Entries: Alphanumeric
  Missing/Invalid: N/A
  Used By: NEOTROPIC_INFO

NEOTROP_NOTE
  Neotronic note

  SQL Data Type: VARCHAR    SQL Type Qualifiers: 100
  Default Nullity: NULL
  Derived Data: F
  Valid Entries: Alphanumeric
  Missing/Invalid: N/A
  Used By: NEOTROPIC_INFO

NEST_LOC
Data Element/Entity Reference  
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Nest location code

SQL Data Type: *char*  
SQL Type Qualifiers: 4  
Default Nullity: *NOT NULL*  
Derived Data: F  
Valid Entries: Valid nest location code as defined in the nest location domain table  
Missing/Invalid: N/A  
Used By: LOC_INFO, NEST_LOCATION

NMNONE

Number of plots with no nonmilitary activity

SQL Data Type: *INTEGER*  
SQL Type Qualifiers:  
Default Nullity: NULL  
Derived Data: T  
Valid Entries: Integer  
Missing/Invalid: N/A  
Used By: LANDUSEYEARSUM

NMOBS

Number of plots with nonmilitary activity recorded

SQL Data Type: *INTEGER*  
SQL Type Qualifiers:  
Default Nullity: NULL  
Derived Data: T  
Valid Entries: Integer  
Missing/Invalid: N/A  
Used By: LANDUSEYEARSUM

NMOTHER

Number of plots with nonmilitary “other” activity

SQL Data Type: *INTEGER*  
SQL Type Qualifiers:  
Default Nullity: NULL  
Derived Data: T  
Valid Entries: Integer  
Missing/Invalid: N/A  
Used By: LANDUSEYEARSUM

NOTES

Notes for specimen - changes, reidentification, etc.
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**SQL Data Type**: VARCHAR
**Default Nullity**: NULL
**Derived Data**: F
**Valid Entries**: Text
**Missing/Invalid**: N/A
**Used By**: HERBRIUM

**NUM**

*Number of bird, mammal, or herp species sited/trapped*

**SQL Data Type**: INTEGER
**Default Nullity**: NOT NULL
**Derived Data**: F
**Valid Entries**: Integer
**Missing/Invalid**: N/A
**Used By**: BIRDS
**Used By**: HERPS
**Used By**: MAMMALS

**OBS**

*Total number of observation per group*

**SQL Data Type**: INTEGER
**Default Nullity**: NULL
**Derived Data**: T
**Valid Entries**: Integer
**Missing/Invalid**: N/A
**Used By**: PCTTYEARSUM

**OPT_REAL**

*Optional belt variable, usually DBH*

**SQL Data Type**: FLOAT
**Default Nullity**: NULL
**Derived Data**: F
**Valid Entries**: Real numbers
**Missing/Invalid**: N/A
**Used By**: BELTTRAN

**OPT_TEXT**

*Optional line variable*

**SQL Data Type**: CHAR
**SQL Type Qualifiers**: 8
### Data Element/Entity Reference

**LCTA Databases**

**Center for Ecological Management of Military Lands**

- **Default Nullity**: `NULL`
- **Derived Data**: `F`
- **Valid Entries**: Text, numbers
- **Missing/Invalid**: N/A
- **Used By**:
  - `GNDCOVER`
  - `LINEMON`

#### OPT_TEXT1

- **Optional variable 1**

  - **SQL Data Type**: `CHAR`
  - **SQL Type Qualifiers**: 8
  - **Default Nullity**: `NULL`
  - **Derived Data**: `F`
  - **Valid Entries**: Text, numbers
  - **Missing/Invalid**: N/A
  - **Used By**: `F_COUNT`

#### OPT_TEXT2

- **Optional variable 2**

  - **SQL Data Type**: `CHAR`
  - **SQL Type Qualifiers**: 8
  - **Default Nullity**: `NULL`
  - **Derived Data**: `F`
  - **Valid Entries**: Text, numbers
  - **Missing/Invalid**: N/A
  - **Used By**: `F_COUNT`

#### OPT_TEXT3

- **Optional variable 3**

  - **SQL Data Type**: `CHAR`
  - **SQL Type Qualifiers**: 8
  - **Default Nullity**: `NULL`
  - **Derived Data**: `F`
  - **Valid Entries**: Text, numbers
  - **Missing/Invalid**: N/A
  - **Used By**: `F_COUNT`

#### OPT_TEXT4

- **Optional variable 4**

  - **SQL Data Type**: `CHAR`
  - **SQL Type Qualifiers**: 8
  - **Default Nullity**: `NULL`
<table>
<thead>
<tr>
<th>Data Element/Entity Reference</th>
<th>Derived Data:</th>
<th>Valid Entries:</th>
<th>Missing/Invalid:</th>
<th>Used By:</th>
</tr>
</thead>
<tbody>
<tr>
<td>LCTA Databases</td>
<td>F</td>
<td>Text, numbers</td>
<td>N/A</td>
<td>F_COUNT</td>
</tr>
<tr>
<td>Center for Ecological Management of Military Lands</td>
<td></td>
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<td></td>
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</tbody>
</table>

**OPT_TEXT5**

*Optional variable 5*

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<tbody>
<tr>
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<td>NULL</td>
<td>Derived Data:</td>
<td>F</td>
</tr>
<tr>
<td>Valid Entries:</td>
<td>Text, numbers</td>
<td>Missing/Invalid:</td>
<td>N/A</td>
</tr>
<tr>
<td>Used By:</td>
<td>F_COUNT</td>
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<td></td>
</tr>
</tbody>
</table>

**ORDERS**

*Order of the Species*

<table>
<thead>
<tr>
<th>SQL Data Type:</th>
<th>CHAR</th>
<th>SQL Type Qualifiers:</th>
<th>20</th>
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</thead>
<tbody>
<tr>
<td>Default Nullity:</td>
<td>NULL</td>
<td>Derived Data:</td>
<td>F</td>
</tr>
<tr>
<td>Valid Entries:</td>
<td>Species database Order</td>
<td>Missing/Invalid:</td>
<td>N/A</td>
</tr>
<tr>
<td>Used By:</td>
<td>VERTLIST</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Used By:</td>
<td>VERTS</td>
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<td></td>
</tr>
</tbody>
</table>

**ORGCARB**

*Walkley-Black organic carbon*

<table>
<thead>
<tr>
<th>SQL Data Type:</th>
<th>FLOAT</th>
<th>SQL Type Qualifiers:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Default Nullity:</td>
<td>NULL</td>
<td>Derived Data:</td>
</tr>
<tr>
<td>Valid Entries:</td>
<td>Real number</td>
<td>Missing/Invalid:</td>
</tr>
<tr>
<td>Used By:</td>
<td>SOILSMPL</td>
<td></td>
</tr>
</tbody>
</table>

**ORGMATT**

*Soil analysis of organic matter*

<table>
<thead>
<tr>
<th>SQL Data Type:</th>
<th>FLOAT</th>
<th>SQL Type Qualifiers:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Default Nullity:</td>
<td>NULL</td>
<td>Derived Data:</td>
</tr>
</tbody>
</table>
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Valid Entries: Real number
Missing/Invalid: N/A
Used By: SOILSMPL

ORIGIN

Plant origin (native:introduced)

SQL Data Type: CHAR
Default Nullity: NULL
Derived Data: F
Valid Entries: (I)ntroduced, (N)ative
Missing/Invalid: N/A
Used By: PLANTS
Used By: PLNTLIST

ORIGIN_DEF

Origin code definition.

SQL Data Type: VARCHAR
Default Nullity: NOT NULL
Derived Data: F
Valid Entries: Valid origin definition
Missing/Invalid:
Used By: HERBRIUM

OTHER_ID

Taxon symbols used by other entities such as BONAP, TNC, and State Natural Heritage Programs; refers to accepted name.

SQL Data Type: CHAR
Default Nullity: NULL
Derived Data: F
Valid Entries: alpanumeric
Missing/Invalid:
Used By: SYNONYMY

PADB

Presence:Absence (PA) dwarfshrub broadleaf

SQL Data Type: INTEGER
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Data Element/Entity Reference
LCTA Databases
Center for Ecological Management of Military Lands

- **PADC**
  - Presence:Absence (PA) dwarfshrub conifer
  - SQL Data Type: INTEGER
  - Default Nullity: NULL
  - Derived Data: T
  - Valid Entries: Integer
  - Used By: COMMCLASSPLOTSUM

- **PAERCOV**
  - Percent aerial cover
  - SQL Data Type: INTEGER
  - Default Nullity: NULL
  - Derived Data: T
  - Valid Entries: Integer
  - Used By: EROSION

- **PAFA**
  - Presence:Absence (PA) forb annual
  - SQL Data Type: INTEGER
  - Default Nullity: NULL
  - Derived Data: T
  - Valid Entries: Integer
  - Used By: COMMCLASSPLOTSUM

- **PAFP**
  - Presence:Absence (PA) forb perennial
  - SQL Data Type: INTEGER
  - Default Nullity: NULL
  - Derived Data: T
  - Valid Entries: Integer
  - Used By: COMMCLASSPLOTSUM

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PAGA
Presence: Absence (PA) grass annual

SQL Data Type: INTEGER
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: COMMCLASSPLOTSUM

PAGP
Presence: Absence (PA) grass perennial

SQL Data Type: INTEGER
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: COMMCLASSPLOTSUM

PAH
Presence: Absence (PA) halfshrub

SQL Data Type: INTEGER
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: COMMCLASSPLOTSUM

PASB
Presence: Absence (PA) shrub broadleaf

SQL Data Type: INTEGER
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: COMMCLASSPLOTSUM

PASC
Presence: Absence (PA) shrub conifer
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**SQL Data Type:** INTEGER  
**SQL Type Qualifiers:**
- Default Nullity: NULL
- Derived Data: T
- Derived Entries: Integer
- Missing/Invalid: N/A
- Used By: COMMCLASSPLOTSUM

**PATB**
*Presence:Absence (PA) tree broadleaf*

**SQL Data Type:** INTEGER  
**SQL Type Qualifiers:**
- Default Nullity: NULL
- Derived Data: T
- Derived Entries: Integer
- Missing/Invalid: N/A
- Used By: COMMCLASSPLOTSUM

**PATC**
*Presence:Absence (PA) tree conifer*

**SQL Data Type:** INTEGER  
**SQL Type Qualifiers:**
- Default Nullity: NULL
- Derived Data: T
- Derived Entries: Integer
- Missing/Invalid: N/A
- Used By: COMMCLASSPLOTSUM

**PCCCODE**
*Plant community classification code*

**SQL Data Type:** CHAR  
**SQL Type Qualifiers:** 8
- Default Nullity: NULL
- Derived Data: T
- Derived Entries: Valid classification code
- Missing/Invalid: N/A
- Used By: COMMCLASSPLOTSUM

**PCCTYPE**
*Plant community classification type*

**SQL Data Type:** CHAR  
**SQL Type Qualifiers:** 4
- Default Nullity: NULL

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## Data Element/Entity Reference

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**Center for Ecological Management of Military Lands**

**Derived Data:** T

**Valid Entries:** (A)nnual, (P)erennial, (B)roadleaf, (C)oniferous, (M)ixed

**Missing/Invalid:** N/A

**Used By:** COMMCLASSPLOTSUM

### Derived Data

#### PCTTKCAL

**USLE percent of** T using Kcal

**SQL Data Type:** FLOAT

**Default Nullity:** NULL

**Derived Data:** T

**Valid Entries:** Real number

**Missing/Invalid:** N/A

**Used By:** EROSION

#### PCTTKPUB

**USLE percent of** T using Kpub

**SQL Data Type:** FLOAT

**Default Nullity:** NULL

**Derived Data:** T

**Valid Entries:** Real number

**Missing/Invalid:** N/A

**Used By:** EROSION

### PERIOD

*Period of measurements (AM or PM)*

**SQL Data Type:** CHAR

**Default Nullity:** NULL

**Derived Data:** F

**Valid Entries:** AM, PM

**Missing/Invalid:** N/A

**Used By:** BIRDS

**Used By:** BIRDSURV

### PERM_CLASS

*Soil permeability class*

**SQL Data Type:** INTEGER

**Default Nullity:** NULL

**Derived Data:** F
Data Element/Entity Reference
LCTA Databases
Center for Ecological Management of Military Lands

Valid Entries: Integer
Missing/Invalid: N/A
Used By: SOILSMPL

PGNDCOV
Percent ground cover

SQL Data Type: INTEGER
SQL Type Qualifiers: NULL
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: EROSION

PH1TO1
pH, 1:1 Soil-water suspension

SQL Data Type: FLOAT
SQL Type Qualifiers: NULL
Default Nullity: NULL
Derived Data: F
Valid Entries: Real number
Missing/Invalid: N/A
Used By: SOILSMPL

PH1TO2
pH, 1:2 Soil-CACL2 Suspension

SQL Data Type: FLOAT
SQL Type Qualifiers: NULL
Default Nullity: NULL
Derived Data: F
Valid Entries: Real number
Missing/Invalid: N/A
Used By: SOILSMPL

PHOTOS
Plot photos

SQL Data Type: LONG_VARCH
SQL Type Qualifiers: NULL
Default Nullity: NULL
Derived Data: F
Valid Entries: Bitmap or TIFF format
Missing/Invalid: N/A

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Used By: PLOTMAPS

PLANT

Number of plots with planting

SQL Data Type: INTEGER  
SQL Type Qualifiers:

Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: LANDUSEYEARSUM

PLANTHT

Belt transect plant height

SQL Data Type: FLOAT  
SQL Type Qualifiers:

Default Nullity: NOT NULL
Derived Data: F
Valid Entries: Real number
Missing/Invalid: -1
Used By: BELTTRAN

PLDATE

Initial plot allocation date

SQL Data Type: DATE  
SQL Type Qualifiers:

Default Nullity: NOT NULL
Derived Data: F
Valid Entries: Valid date
Missing/Invalid: N/A
Used By: PLOTMAST

PLOTID

Plot identification number

SQL Data Type: INTEGER  
SQL Type Qualifiers:

Default Nullity: NOT NULL
Derived Data: F
Valid Entries: Integer
Missing/Invalid: N/A
Used By: AERCOVER
Used By: BASALA
Used By: BELTMON

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Used By: BELTSURV
Used By: BELTTRAN
Used By: BIRDS
Used By: BIRDSURV
Used By: COMMCLASSPLOTSUM
Used By: EROSEVID
Used By: EROSION
Used By: F_COUNT
Used By: GNDCOVER
Used By: GROUPING
Used By: HERPS
Used By: HERPSURV
Used By: LANDUSE
Used By: LINEMON
Used By: MAINTACT
Used By: MAMMALS
Used By: MAMSURV
Used By: PCSDPLOTSUM
Used By: PLOTMAPS
Used By: PLOTMAST
Used By: PLOTSURV
Used By: SOILLS
Used By: SOILSMPPL
Used By: TACTCONA

PLOTNOTE

Plot comments

SQL Data Type: LONG VARCHAR
Default Nullity: NULL
Derived Data: F
Valid Entries: Text, number
Missing/Invalid: N/A
Used By: PLOTSURV

PLOTYPE

Plots core:special use flag

SQL Data Type: CHAR
Default Nullity: NULL
Derived Data: F
Valid Entries: (C)ore, (S)pecial use
Missing/Invalid: N/A
Used By: BIRDSURV
Used By: HERPSURV
Used By: MAMSURV
Used By: PCSDPLOTSUM
Used By: PLOTSURV

POINT_DEF

Line location code of bird survey data definition

SQL Data Type: CHAR
SQL Type Qualifiers: 35

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Default Nullity: NOT NULL
Derived Data: F
Valid Entries: Line-out, Line-in, End-point, Combined, Unknown, Not recorded
Missing/Invalid: N/A
Used By: POINT_CODE

POINT NOTE

Note on measure_pt code

SQL Data Type: VARCHAR  SQL Type Qualifiers: 100
Default Nullity: NULL
Derived Data: F
Valid Entries: Text
Missing/Invalid: N/A
Used By: POINT_CODE

PREBURN

Number of plots with prescribed burn

SQL Data Type: INTEGER  SQL Type Qualifiers:
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: LANDUSEYEARSUM

PRECIP

Precipitation in inches

SQL Data Type: float  SQL Type Qualifiers:
Default Nullity: NULL
Derived Data: F
Valid Entries: Float
Missing/Invalid: N/A
Used By: MAMSURV

PUBLK

SCS published erodibility value (K) for soil series (USLE factor)

SQL Data Type: FLOAT  SQL Type Qualifiers:
Default Nullity: NULL
Derived Data: F
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Valid Entries: SCS K value
Missing/Invalid: N/A
Used By: SOILMAST

QAUTHOR
Author of quadrinomial portion of excepted name.

SQL Data Type: VARCHAR
Default Nullity: NULL
Derived Data: F
Valid Entries: Character string
Missing/Invalid:
Used By: HERBRIUM

RAIN
Weekly rain fall

SQL Data Type: FLOAT
Default Nullity: NOT NULL
Derived Data: F
Valid Entries: Real number
Missing/Invalid: N/A
Used By: CLIMATEDATA

REALISM
Loss of training realism

SQL Data Type: LONG_VARCHAR
Default Nullity: NULL
Derived Data: F
Valid Entries: Text, number
Missing/Invalid: N/A
Used By: ENVCONST

RECDATE
Plot survey date

SQL Data Type: DATE
Default Nullity: NOT NULL
Derived Data: F
Valid Entries: Valid date
Missing/Invalid: N/A
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Used By: AERCOVER
Used By: BASALA
Used By: BELTMON
Used By: BELTSURV
Used By: BELTTRAN
Used By: BIRDS
Used By: BIRDSURV
Used By: CLIMATEDATA
Used By: ENVCONST
Used By: EROSEVID
Used By: F_COUNT
Used By: GNDCOVER
Used By: HERPS
Used By: HERPSURV
Used By: HISTORY
Used By: LANDUSE
Used By: LINEMON
Used By: MAINTACT
Used By: MAMMALS
Used By: MAMSURV
Used By: PLANTS
Used By: PLOTSURV
Used By: SOILLS

RECODER

Plot recorder

SQL Data Type: CHAR
SQL Type Qualifiers: 35
Default Nullity: NULL
Derived Data: F
Valid Entries: Text
Missing/Invalid: N/A
Used By: HISTORY
Used By: PLOTSURV

REPVERN

A vernacular name representative of those in botanical literature of North America.

SQL Data Type: VARCHAR
SQL Type Qualifiers: 60
Default Nullity: NULL
Derived Data: F
Valid Entries: Character string
Missing/Invalid:
Used By: HERBRIUM

RESEARCH

Research needs

SQL Data Type: LONG VARCHAR
SQL Type Qualifiers:
Default Nullity: NULL
Derived Data: F
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Valid Entries: Text, number
Missing/Invalid: N/A
Used By: ENVCONST

RERAINT
Environmental constraint/restraint

SQL Data Type: LONG_VARCHAR
SQL Type Qualifiers:
Default Nullity: NULL
Derived Data: F
Valid Entries: Text, number
Missing/Invalid: N/A
Used By: ENVCONST

RETRAP
Number of retrapped mammals or herps

SQL Data Type: INTEGER
SQL Type Qualifiers:
Default Nullity: NULL
Derived Data: F
Valid Entries: Integer
Missing/Invalid: N/A
Used By: HERPS
Used By: MAMMALS

RVAL
Rainfall erosivity (R) value for recorder

SQL Data Type: FLOAT
SQL Type Qualifiers:
Default Nullity: NULL
Derived Data: F
Valid Entries: SCS R value
Missing/Invalid: N/A
Used By: EROSION
Used By: PLOTMAST

SBAUTHOR
Author of binomial portion of accepted name or synonym.

SQL Data Type: VARCHAR
SQL Type Qualifiers: 100
Default Nullity: NULL
Derived Data: F
Valid Entries: Character string
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Center for Ecological Management of Military Lands

Missing/Invalid: SYNONMY

SCOURING

Number of plots with observed scouring erosion

SQL Data Type: INTEGER
SQL Type Qualifiers:
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: LANDUSEYEARSUM

SEASON

Season code

SQL Data Type: char
SQL Type Qualifiers: 4
Default Nullity: NOT NULL
Derived Data: F
Valid Entries: Valid season code as defined in the season domain table
Missing/Invalid: N/A
Used By: SEASON_INFO
Used By: SFST

SEASON_DEF

Season code definition

SQL Data Type: VARCHAR
SQL Type Qualifiers: 35
Default Nullity: NOT NULL
Derived Data: F
Valid Entries: Alphanumeric
Missing/Invalid: N/A
Used By: SEASON_INFO

SEASON_NOTE

Season note

SQL Data Type: VARCHAR
SQL Type Qualifiers: 100
Default Nullity: NULL
Derived Data: F
Valid Entries: Alphanumeric
Missing/Invalid: N/A
Used By: SEASON_INFO

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SEED

Number of plots with seeding

SQL Data Type: INTEGER
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: LANDUSEYEARSUM

SEX

Wildlife gender code

SQL Data Type: CHAR
SQL Type Qualifiers: 1
Default Nullity: NOT NULL
Derived Data: F
Valid Entries: (M)ale, (F)emale, (U)nknown, (C)ombined,(NR)not recorded
Missing/Invalid: N/A
Used By: GENDER_CODE
Used By: HERPS
Used By: MAMMALS

SEX_DEF

Gender code definition

SQL Data Type: CHAR
SQL Type Qualifiers: 35
Default Nullity: NOT NULL
Derived Data: F
Valid Entries: Male, Female, Unknown, Combined, Not recorded
Missing/Invalid: N/A
Used By: GENDER_CODE

SEX_NOTE

Note on gender code

SQL Data Type: VARCHAR
SQL Type Qualifiers: 100
Default Nullity: NULL
Derived Data: F
Valid Entries: Text
Missing/Invalid: N/A
Used By: GENDER_CODE
SGENUS


SQL Data Type: CHAR
SQL Type Qualifiers: 20
Default Nullity: NOT NULL
Derived Data: F
Valid Entries: Valid genus name
Missing/Invalid: N/A
Used By: SYNONYMY

SHEET

Number of plots with observed sheet erosion

SQL Data Type: INTEGER
SQL Type Qualifiers: 
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: LANDUSEYEARSUM

SIDE

Plant belt side location

SQL Data Type: CHAR
SQL Type Qualifiers: 1
Default Nullity: NULL
Derived Data: F
Valid Entries: (L)eft, (R)ight
Missing/Invalid: N/A
Used By: BELTSURV
Used By: BELTTRAN

SIDEDIST

Plant belt side distance

SQL Data Type: FLOAT
SQL Type Qualifiers: 
Default Nullity: NULL
Derived Data: F
Valid Entries: Real number
Missing/Invalid: N/A
Used By: BELTTRAN
Site identifier

**SQL Data Type:** CHAR  
**SQL Type Qualifiers:** 10  
**Default Nullity:** NOT NULL  
**Derived Data:** F  
**Valid Entries:** Alpha-numeric  
**Missing/Invalid:** N/A  
**Used By:** HERBRUIUM, SITE

**SITE_NOTES**

*Site notes*

**SQL Data Type:** VARCHAR  
**SQL Type Qualifiers:** 254  
**Default Nullity:**  
**Derived Data:** F  
**Valid Entries:**  
**Missing/Invalid:**  
**Used By:** SITE

**SLOPE**

*Plot slope*

**SQL Data Type:** FLOAT  
**SQL Type Qualifiers:**  
**Default Nullity:** NULL  
**Derived Data:** F  
**Valid Entries:** Real number  
**Missing/Invalid:** N/A  
**Used By:** SOILLS

**SLPLEN**

*Plot slope length*

**SQL Data Type:** FLOAT  
**SQL Type Qualifiers:**  
**Default Nullity:** NULL  
**Derived Data:** F  
**Valid Entries:** Integer  
**Missing/Invalid:** N/A  
**Used By:** SOILLS

**SOILCAT**

*Soil category number for running GRASS output*
Data Element/Entity Reference
LCTA Databases
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SOILDPHT
Average plot soil depth

SOILNAME
Plot soil series name

SOILNOTE
Misc. soil notes

SOILSER
Plot soil series code
### Data Element/Entity Reference
LCTA Databases
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#### SPEC
*Species name*

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
<th>SQL Data Type</th>
<th>SQL Type Qualifiers</th>
</tr>
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<tbody>
<tr>
<td>Derived Data</td>
<td>$F$</td>
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<tr>
<td>Valid Entries</td>
<td>SCS soil series</td>
<td>CHAR</td>
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<tr>
<td>Missing/Invalid</td>
<td>N/A</td>
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<tr>
<td>Used By</td>
<td>PLOTMAST, SOILMAST</td>
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#### SPECIES
*Herbrium table species information (extended)*

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<thead>
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<tbody>
<tr>
<td>Derived Data</td>
<td>$F$</td>
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</tr>
<tr>
<td>Valid Entries</td>
<td>Valid species information</td>
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<td>35</td>
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<tr>
<td>Used By</td>
<td>HERBRIUM</td>
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</table>

#### SQAUTHOR
*Author of quadrinomial portion of synonym name.*

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<th>Description</th>
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<th>SQL Type Qualifiers</th>
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<tr>
<td>Derived Data</td>
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</tr>
<tr>
<td>Valid Entries</td>
<td>Character string</td>
<td>CHAR</td>
<td>100</td>
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<tr>
<td>Missing/Invalid</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Used By</td>
<td>SYNONYMY</td>
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#### SSPECIES
*Specific epithet portion of the synonym scientific name.*

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<th>SQL Data Type</th>
<th>SQL Type Qualifiers</th>
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<td>VARCHAR</td>
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---

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Derived Data: F
Valid Entries: Valid species name
Missing/Invalid: 
Used By: SYNONYMY

SSUBSP
Subspecific epithet portion of the synonym scientific name.

SQL Data Type: VARCHAR
Default Nullity: NULL
Derived Data: F
Valid Entries: Valid subspecies name
Missing/Invalid: 
Used By: SYNONYMY

STATESTAT_DEF
State status code definition

SQL Data Type: VARCHAR
Default Nullity: NULL
Derived Data: F
Valid Entries: Vale State T&E code definition
Missing/Invalid: N/A
Used By: HERBRIUM

STATION
Climate station ID

SQL Data Type: INTEGER
Default Nullity: NOT NULL
Derived Data: F
Valid Entries: Integer
Missing/Invalid: N/A
Used By: CLIMATEDATA
Used By: CLIMATESTATIONS

STATIONNAME
Climate station name

SQL Data Type: VARCHAR
Default Nullity: NOT NULL
Derived Data: F
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Valid Entries: Valid climate station name
Missing/Invalid: N/A
Used By: CLIMATESTATIONS

STATUS
Observed erosion status code

SQL Data Type: CHAR
SQL Type Qualifiers: 16
Default Nullity: NOT NULL
Derived Data: F
Valid Entries: Valid erosion status code
Missing/Invalid: N/A
Used By: EROSEVID

STAUTHOR
Author of trinomial portion of synonym name.

SQL Data Type: VARCHAR
SQL Type Qualifiers: 100
Default Nullity: NULL
Derived Data: F
Valid Entries: Character string
Missing/Invalid:
Used By: SYNONYMY

STFORMA
Lowest taxonomic rank in PLANTS for the synonym. Data maintained only for those taxa pertinent to the Endangered Species Act.

SQL Data Type: VARCHAR
SQL Type Qualifiers: 30
Default Nullity: NULL
Derived Data: F
Valid Entries: Character string
Missing/Invalid:
Used By: SYNONYMY

STRUCT_CODE
Soil structure code used to calculate K-value

SQL Data Type: INTEGER
Default Nullity: NULL
Derived Data: F
Valid Entries: Integer
Missing/Invalid: N/A
Data Element/Entity Reference
LCTA Databases
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Used By: SOILSMPL

**SUBFAM**

Vertebrate subfamily

**SQL Data Type**: CHAR  **SQL Type Qualifiers**: 15  
**Default Nullity**: NULL  
**Derived Data**: F  
**Valid Entries**: Species database Subfamily  
**Missing/Invalid**: N/A  
**Used By**: VERTLIST  
**Used By**: VERTS

**SUBORDER**

Vertebrate suborder

**SQL Data Type**: CHAR  **SQL Type Qualifiers**: 15  
**Default Nullity**: NULL  
**Derived Data**: F  
**Valid Entries**: Species database Suborder  
**Missing/Invalid**: N/A  
**Used By**: VERTLIST  
**Used By**: VERTS

**SUBSPEC**

Plant subspecies

**SQL Data Type**: CHAR  **SQL Type Qualifiers**: 20  
**Default Nullity**: NULL  
**Derived Data**: F  
**Valid Entries**: Species database Subspecies  
**Missing/Invalid**: N/A  
**Used By**: HERBRIUM  
**Used By**: PLANTS  
**Used By**: PLNTLIST

**SUBSTRATE**

Feeding substrate code

**SQL Data Type**: char  **SQL Type Qualifiers**: 4  
**Default Nullity**: NOT NULL  
**Derived Data**: F  
**Valid Entries**: Valid feeding substrate as defined in the substrate domain table
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SUBSTRATE_DEF
Feeding substrate code definition

SQL Data Type: VARCHAR
Default Nullity: NOT NULL
Derived Data: F
Valid Entries: Alphanumeric
Missing/Invalid: N/A
Used By: SUBSTRATE_INFO

SUBSTRATE NOTE
Feeding substrate note

SQL Data Type: VARCHAR
Default Nullity: NULL
Derived Data: F
Valid Entries: Alphanumeric
Missing/Invalid: N/A
Used By: SUBSTRATE_INFO

SUBSTRATE
Substrate.

SQL Data Type: VARCHAR
Default Nullity: NULL
Derived Data: F
Valid Entries: Character string
Missing/Invalid: 
Used By: SITE

SURVEYOR
Plot surveyor

SQL Data Type: CHAR
Default Nullity: NULL
Derived Data: F
Valid Entries: Text
Missing/Invalid: N/A
Used By: PLOTSURV
Data Element/Entity Reference
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SVARIETY

Variety epithet portion of the synonym scientific name.

SQL Data Type: VARCHAR  SQL Type Qualifiers: 30
Default Nullity: NULL
Derived Data: F
Valid Entries: Valid variety name
Missing/Invalid: SYNONYMY

SXGENUS

Indicates that the synonymy taxon is a hybrid at the generic level.

SQL Data Type: CHAR  SQL Type Qualifiers: 1
Default Nullity: NULL
Derived Data: F
Valid Entries: X or null
Missing/Invalid: SYNONYMY

SXSPECIES

Indicates that the synonymy taxon is a hybrid at the specific epithet level.

SQL Data Type: CHAR  SQL Type Qualifiers: 1
Default Nullity: NULL
Derived Data: F
Valid Entries: X or null
Missing/Invalid: SYNONYMY

SYNON

Plant synonym

SQL Data Type: CHAR  SQL Type Qualifiers: 8
Default Nullity: NULL
Derived Data: F
Valid Entries: Species database Synonym
Missing/Invalid: N/A
Used By: PLANTS
Used By: PLNTLIST

SYN_SYM

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Unique, system-generated plant symbol for synonym scientific name following the Garrison-Skovlin-Poulton system.

SQL Data Type: CHAR  
SQL Type Qualifiers: 8  
Default Nullity: NOT NULL  
Derived Data: F  
Valid Entries: Alpha numeric  
Missing/Invalid:  
Used By: SYNONYM

T

Soil series soil loss tolerance (T) value

SQL Data Type: FLOAT  
SQL Type Qualifiers:  
Default Nullity: NULL  
Derived Data: F  
Valid Entries: SCS T value  
Missing/Invalid: N/A  
Used By: EROSION  
Used By: SOILMAST

T00TO50

Percent of plots with soil loss tolerance (T) values from 0 to 50

SQL Data Type: INTEGER  
SQL Type Qualifiers:  
Default Nullity: NULL  
Derived Data: T  
Valid Entries: Integer  
Missing/Invalid: N/A  
Used By: PCTTYEARSUM

T100TO150

Percent of plots with soil loss tolerance (T) values from 100 to 150

SQL Data Type: INTEGER  
SQL Type Qualifiers:  
Default Nullity: NULL  
Derived Data: T  
Valid Entries: Integer  
Missing/Invalid: N/A  
Used By: PCTTYEARSUM

T150TO200

Percent of plots with soil loss tolerance (T) values from 150 to 200

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### T50TO100

Percent of plots with soil loss tolerance (T) values from 50 to 100

**SQL Data Type**: INTEGER  
**SQL Type Qualifiers**:  
**Default Nullity**: NULL  
**Derived Data**: T  
**Valid Entries**: Integer  
**Missing/Invalid**: N/A  
**Used By**: PCTTYEARSUM

### TAUTHOR

Author of trinomial portion of accepted name.

**SQL Data Type**: VARCHAR  
**SQL Type Qualifiers**: 100  
**Default Nullity**: NULL  
**Derived Data**: F  
**Valid Entries**: Character string  
**Missing/Invalid**:  
**Used By**: HERBRIUM

### TCDB

Total count dwarfshrub broadleaf

**SQL Data Type**: INTEGER  
**SQL Type Qualifiers**:  
**Default Nullity**: NULL  
**Derived Data**: T  
**Valid Entries**: Integer  
**Missing/Invalid**: N/A  
**Used By**: COMMCLASSPLOTSUM

### TCDC

Total count dwarfshrub conifer

**SQL Data Type**: INTEGER  
**SQL Type Qualifiers**:  
**Default Nullity**: NULL

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Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: COMMCLASSPLOTSUM

TCFA
Total count forb annual

SQL Data Type: INTEGER  SQL Type Qualifiers: 
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: COMMCLASSPLOTSUM

TCFP
Total count forb perennial

SQL Data Type: INTEGER  SQL Type Qualifiers: 
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: COMMCLASSPLOTSUM

TCGA
Total count grass annual

SQL Data Type: INTEGER  SQL Type Qualifiers: 
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: COMMCLASSPLOTSUM

TCGP
Total count grass perennial

SQL Data Type: INTEGER  SQL Type Qualifiers: 
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Data Element/Entity Reference
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Missing/Invalid: N/A
Used By: COMMCLASSPLOTSUM

TCH

Total count halfshrub

SQL Data Type: INTEGER  SQL Type Qualifiers:
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: COMMCLASSPLOTSUM

TCSB

Total count shrub broadleaf

SQL Data Type: INTEGER  SQL Type Qualifiers:
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: COMMCLASSPLOTSUM

TCSC

Total count shrub conifer

SQL Data Type: INTEGER  SQL Type Qualifiers:
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: COMMCLASSPLOTSUM

TCTB

Total count tree broadleaf

SQL Data Type: INTEGER  SQL Type Qualifiers:
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: COMMCLASSPLOTSUM
### Data Element/Entity Reference
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#### TCTC
- **Total count tree conifer**
  - SQL Data Type: `INTEGER`
  - Default Nullity: `NULL`
  - Derived Data: `T`
  - Valid Entries: `Integer`
  - Missing/Invalid: `N/A`
  - Used By: `COMMCLASSPLOTSUM`

#### TECHNIQUE
- **Feeding technique code**
  - SQL Data Type: `char`
  - Default Nullity: `NOT NULL`
  - Derived Data: `F`
  - Valid Entries: *Valid feeding technique as defined in the technique domain table*
  - Missing/Invalid: `N/A`
  - Used By: `SFST`, `TECHNIQUE_INFO`

#### TECHNIQUE_DEF
- **Feeding technique code definition**
  - SQL Data Type: `VARCHAR`
  - Default Nullity: `NOT NULL`
  - Derived Data: `F`
  - Valid Entries: `Alphanumeric`
  - Missing/Invalid: `N/A`
  - Used By: `TECHNIQUE_INFO`

#### TECHNIQUE_NOTE
- **Feeding technique note**
  - SQL Data Type: `VARCHAR`
  - Default Nullity: `NULL`
  - Derived Data: `F`
  - Valid Entries: `Alphanumeric`
  - Missing/Invalid: `N/A`
  - Used By: `TECHNIQUE_INFO`

#### TEMP

---

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Temperature  

**SQL Data Type**: INTEGER  
**SQL Type Qualifiers**:  
Default Nullity: NULL  
Derived Data: F  
Valid Entries: Integer  
Missing/Invalid: N/A  
Used By: BIRDSURV  

**TEMPAVE**  
Average weekly temperature  

**SQL Data Type**: FLOAT  
**SQL Type Qualifiers**:  
Default Nullity: NULL  
Derived Data: F  
Valid Entries: Real number  
Missing/Invalid: N/A  
Used By: CLIMATEDATA  

**TEMPMAX**  
Maximum temperature  

**SQL Data Type**: INTEGER  
**SQL Type Qualifiers**:  
Default Nullity: NULL  
Derived Data: F  
Valid Entries: Integer  
Missing/Invalid: N/A  
Used By: HERPSURV  
Used By: MAMSURV  

**TEMPMIN**  
Minimum temperature  

**SQL Data Type**: INTEGER  
**SQL Type Qualifiers**:  
Default Nullity: NULL  
Derived Data: F  
Valid Entries: Integer  
Missing/Invalid: N/A  
Used By: HERPSURV  
Used By: MAMSURV  

**TGT200**  
Percent of plots with soil loss tolerance (T) values greater than 200  

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**TILL**

Number of plots with tillage

SQL Data Type: INTEGER
SQL Type Qualifiers:
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: PCTTYEARSUM

**TOPOGRAPHY**

Topography of site.

SQL Data Type: VARCHAR
SQL Type Qualifiers: 65
Default Nullity: NULL
Derived Data: F
Valid Entries: Character string
Missing/Invalid:
Used By: SITE

**TOTCLAY**

Percent total clay

SQL Data Type: FLOAT
SQL Type Qualifiers:
Default Nullity: NULL
Derived Data: F
Valid Entries: Real number
Missing/Invalid: N/A
Used By: SOILSMPL

**TOTSAND**

Percent total sand

SQL Data Type: FLOAT
SQL Type Qualifiers:
Default Nullity: NULL
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Derived Data: F
Valid Entries: Real number
Missing/Invalid: N/A
Used By: SOILSMPL

TOTSILT
Percent total silt

SQL Data Type: FLOAT
Default Nullity: NULL
Derived Data: F
Valid Entries: Real number
Missing/Invalid: N/A
Used By: SOILSMPL

TRACK
Percent of plots with evidence of tracked vehicles

SQL Data Type: INTEGER
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: LANDUSEYEARSUM

TRAIN
Plot training area

SQL Data Type: CHAR
Default Nullity: NULL
Derived Data: F
Valid Entries: Text, numbers
Missing/Invalid: N/A
Used By: PLOTSURV

TRANLOC
Transect location

SQL Data Type: INTEGER
Default Nullity: NULL
Derived Data: F
Valid Entries: Real (0.0-100.0)
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**TRAPNIGHTS**

*Number of trap nights (number of traps * number of nights)*

- **SQL Data Type:** INTEGER
- **SQL Type Qualifiers:**
- **Default Nullity:** NULL
- **Derived Data:** F
- **Valid Entries:** Integer
- **Missing/Invalid:** N/A
- **Used By:** BASALA, SOILLS

**TRAPS**

*Types of traps used for small mammal survey*

- **SQL Data Type:** CHAR
- **SQL Type Qualifiers:** 25
- **Default Nullity:** NULL
- **Derived Data:** F
- **Valid Entries:** Text
- **Missing/Invalid:** N/A
- **Used By:** MAMSURV

**TSTYPE**

*Broadleaf:coniferous type*

- **SQL Data Type:** CHAR
- **SQL Type Qualifiers:** 1
- **Default Nullity:** NULL
- **Derived Data:** F
- **Valid Entries:** (B)roadleaf, (C)oniferous
- **Missing/Invalid:** N/A
- **Used By:** PLNTLIST, TSTYPE

**UNIT**

*Units affected*

- **SQL Data Type:** LONG VARCHAR
- **SQL Type Qualifiers:**
- **Default Nullity:** NULL
- **Derived Data:** F
- **Valid Entries:** Text, number
- **Missing/Invalid:** N/A
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Used By: ENVCONST

UPDATENO

Update version of information

SQL Data Type: INTEGER
Default Nullity: NULL
Derived Data: F
Valid Entries: Integer
Missing/Invalid: N/A
Used By: ENVCONST

USENOTE

Land use note

SQL Data Type: VARCHAR
Default Nullity: NULL
Derived Data: F
Valid Entries: Text, numbers
Missing/Invalid: N/A
Used By: LANDUSE

USGS

USGS quadrangle name

SQL Data Type: CHAR
Default Nullity: NULL
Derived Data: F
Valid Entries: USGS quad name
Missing/Invalid: N/A
Used By: PLOTMAST

USLE0KCAL

USLE (at location 0 using calculated K)

SQL Data Type: FLOAT
Default Nullity: NULL
Derived Data: T
Valid Entries: Real number
Missing/Invalid: -1
Used By: EROSION
USLE0KPUB

USLE (at transect location 0 using pub K)

SQL Data Type: FLOAT
Default Nullity: NULL
Derived Data: T
Valid Entries: Real number
Missing/Invalid: N/A
Used By: EROSION

USLE1KCAL

USLE (at location 50 using calculated K)

SQL Data Type: FLOAT
Default Nullity: NULL
Derived Data: T
Valid Entries: Real number
Missing/Invalid: -1
Used By: EROSION

USLE1KPUB

USLE (at transect location 50 using pub K)

SQL Data Type: FLOAT
Default Nullity: NULL
Derived Data: T
Valid Entries: Real number
Missing/Invalid: N/A
Used By: EROSION

USLE2KCAL

USLE (at location 100 using calculated K)

SQL Data Type: FLOAT
Default Nullity: NULL
Derived Data: T
Valid Entries: Real number
Missing/Invalid: -1
Used By: EROSION

USLE2KPUB

USLE (at transect location 100 using pub K)
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**VARIETY**

Plant Variety

SQL Data Type: **CHAR**
SQL Type Qualifiers: 20
Default Nullity: **NULL**
Derived Data: **F**
Valid Entries: Species database variety
Missing/Invalid: N/A
Used By: HERBRIUM
Used By: PLANTS
Used By: PLNTLIST

**VCSAND**

Soil analysis of very coarse sand

SQL Data Type: **FLOAT**
SQL Type Qualifiers:
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VEGCOND

Plant condition

SQL Data Type: CHAR
Default Nullity: NULL
Derived Data: F
Valid Entries: (L)ive,(D)ead,(S)nag
Missing/Invalid: N/A
Used By: BELTMON
Used By: BELTSURV
Used By: BELTTRAN
Used By: GNDCOVER
Used By: TACTCONA

VEGDIST1

Plant distribution district 1

SQL Data Type: CHAR
Default Nullity: NULL
Derived Data: F
Valid Entries: Text
Missing/Invalid: N/A
Used By: PLANTS

VEGDIST2

Plant distribution - district 2

SQL Data Type: CHAR
Default Nullity: NULL
Derived Data: F
Valid Entries: Text
Missing/Invalid: N/A
Used By: PLANTS

VEGDIST3

Plant distribution - district 3

SQL Data Type: CHAR
Default Nullity: NULL
Derived Data: F
Valid Entries: Text
Missing/Invalid: N/A
Used By: PLANTS

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Default Nullity: NULL
Derived Data: F
Valid Entries: Text
Missing/Invalid: N/A
Used By: PLANTS

VEGDIST4
Plant distribution - district 4

SQL Data Type: CHAR
Default Nullity: NULL
Derived Data: F
Valid Entries: Text
Missing/Invalid: N/A
Used By: PLANTS

VEGDIST5
Plant distribution - district 5

SQL Data Type: CHAR
Default Nullity: NULL
Derived Data: F
Valid Entries: Text
Missing/Invalid: N/A
Used By: PLANTS

VEGDIST6
Plant distribution - district 6

SQL Data Type: CHAR
Default Nullity: NULL
Derived Data: F
Valid Entries: Text
Missing/Invalid: N/A
Used By: PLANTS

VEGDIST7
Plant distribution - district 7

SQL Data Type: CHAR
Default Nullity: NULL
Derived Data: F

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<table>
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<tr>
<th>Data Element/Entity Reference</th>
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<td>VEGDST10</td>
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<td>VEGDST11</td>
<td>Text</td>
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<td>PLANTS</td>
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</table>

**VEGDIST8**  
*Plant distribution - district 8*

- **SQL Data Type**: CHAR
- **SQL Type Qualifiers**: 8
- **Default Nullity**: NULL
- **Derived Data**: F
- **Valid Entries**: Text
- **Missing/Invalid**: N/A
- **Used By**: PLANTS

**VEGDIST9**  
*Plant distribution - district 9*

- **SQL Data Type**: CHAR
- **SQL Type Qualifiers**: 8
- **Default Nullity**: NULL
- **Derived Data**: F
- **Valid Entries**: Text
- **Missing/Invalid**: N/A
- **Used By**: PLANTS

**VEGDST10**  
*Plant distribution - district 10*

- **SQL Data Type**: CHAR
- **SQL Type Qualifiers**: 8
- **Default Nullity**: NULL
- **Derived Data**: F
- **Valid Entries**: Text
- **Missing/Invalid**: N/A
- **Used By**: PLANTS

**VEGDST11**  
*Plant distribution - district 11*

- **SQL Data Type**: CHAR
- **SQL Type Qualifiers**: 8
- **Default Nullity**: NULL
- **Derived Data**: F
- **Valid Entries**: Text
- **Missing/Invalid**: N/A

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<table>
<thead>
<tr>
<th>Data Element/Entity Reference</th>
<th>LCTA Databases</th>
<th>Center for Ecological Management of Military Lands</th>
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<tbody>
<tr>
<td><strong>Used By:</strong> PLANTS</td>
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</tbody>
</table>

### VEGDST12

*Plant distribution - district 12*

- **SQL Data Type:** CHAR
- **SQL Type Qualifiers:** 8
- **Default Nullity:** NULL
- **Derived Data:** F
- **Valid Entries:** Text
- **Missing/Invalid:** N/A
- **Used By:** PLANTS

### VEGDST13

*Plant distribution - district 13*

- **SQL Data Type:** CHAR
- **SQL Type Qualifiers:** 8
- **Default Nullity:** NULL
- **Derived Data:** F
- **Valid Entries:** Text
- **Missing/Invalid:** N/A
- **Used By:** PLANTS

### VEGDST14

*Plant distribution - district 14*

- **SQL Data Type:** CHAR
- **SQL Type Qualifiers:** 8
- **Default Nullity:** NULL
- **Derived Data:** F
- **Valid Entries:** Text
- **Missing/Invalid:** N/A
- **Used By:** PLANTS

### VEGDST15

*Plant distribution - district 15*

- **SQL Data Type:** CHAR
- **SQL Type Qualifiers:** 8
- **Default Nullity:** NULL
- **Derived Data:** F
- **Valid Entries:** Text
- **Missing/Invalid:** N/A
- **Used By:** PLANTS
Data Element/Entity Reference
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VEGDST16

Plant distribution - district 16

SQL Data Type: CHAR
Default Nullity: NULL
Derived Data: F
Valid Entries: Text
Missing/Invalid: N/A
Used By: PLANTS

VEGDST17

Plant distribution - district 17

SQL Data Type: CHAR
Default Nullity: NULL
Derived Data: F
Valid Entries: Text
Missing/Invalid: N/A
Used By: PLANTS

VEGDST18

Plant distribution - district 18

SQL Data Type: CHAR
Default Nullity: NULL
Derived Data: F
Valid Entries: Text
Missing/Invalid: N/A
Used By: PLANTS

VEGDST19

Plant distribution - district 19

SQL Data Type: CHAR
Default Nullity: NULL
Derived Data: F
Valid Entries: Text
Missing/Invalid: N/A
Used By: PLANTS

VEGDST20

Plant distribution - district 20

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VEGHT

Aerial plant height name

SQL Data Type: FLOAT
SQL Type Qualifiers:
Default Nullity: NOT NULL
Derived Data: F
Valid Entries: Real number
Missing/Invalid: N/A
Used By: AERCOVER

VEGID

Plant species code

SQL Data Type: CHAR
SQL Type Qualifiers: 8
Default Nullity: NULL
Derived Data: F
Valid Entries: Species database plant code
Missing/Invalid: N/A
Used By: AERCOVER, BELTMON, BELTTRAN, GNDCOVER, HERBRIUM, PLANTS, PLNTLIST, TACTCONA, SYNONYMY, TSTYPE

VEGLOC

Transect location along line

SQL Data Type: FLOAT
SQL Type Qualifiers:
Default Nullity: NOT NULL
Derived Data: F
Valid Entries: Real number (0.0-100.0)
Missing/Invalid: -1
Used By: AERCOVER, BELTTRAN
Data Element/Entity Reference
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Center for Ecological Management of Military Lands

Used By:  
- F_COUNT
- GNDCOVER
- LINEMON

VEGSTAT
Veg status

SQL Data Type:  CHAR  
Default Nullity:  NULL  
Derived Data:  F  
Valid Entries:  Text  
Missing/Invalid:  N/A  
Used By:  PLANTS

VEGTYPE
General plot vegetation type

SQL Data Type:  CHAR  
Default Nullity:  NULL  
Derived Data:  F  
Valid Entries:  Text  
Missing/Invalid:  N/A  
Used By:  PLOTSURV

VERTID
Vertebrate species code

SQL Data Type:  CHAR  
Default Nullity:  NULL  
Derived Data:  F  
Valid Entries:  Species database animal code  
Missing/Invalid:  N/A  
Used By:  BIRDS  
Used By:  GENERAL_HABITAT  
Used By:  HERPS  
Used By:  MAMMALS  
Used By:  NEOTROPICAL  
Used By:  NEST_LOCATION  
Used By:  SFST  
Used By:  SPP_INFO  
Used By:  VERTLIST  
Used By:  VERTS

VERTNOTE
Note about the listing
Data Element/Entity Reference
LCTA Databases
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**VFSAND**

Soil analysis of very fine sand

**SQL Data Type**: FLOAT  
**SQL Type Qualifiers**: 
**Default Nullity**: NULL  
**Derived Data**: F  
**Valid Entries**: Real number  
**Missing/Invalid**: N/A  
**Used By**: SOILSMPL

**WANONE**

Number of plots with no water erosion

**SQL Data Type**: INTEGER  
**SQL Type Qualifiers**: 
**Default Nullity**: NULL  
**Derived Data**: T  
**Valid Entries**: Integer  
**Missing/Invalid**: N/A  
**Used By**: LANDUSEYEARSUM

**WAOBS**

Number of plots with water erosion recorded

**SQL Data Type**: INTEGER  
**SQL Type Qualifiers**: 

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- **Default Nullity:** NULL
- **Derived Data:** T
- **Valid Entries:** Integer
- **Missing/Invalid:** N/A
- **Used By:** LANDUSEYEARSUM

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#### WAPEDPLNT

*Number of plots with water pedestal plant erosion*

- **SQL Data Type:** INTEGER
- **SQL Type Qualifiers:**
- **Default Nullity:** NULL
- **Derived Data:** T
- **Valid Entries:** Integer
- **Missing/Invalid:** N/A
- **Used By:** LANDUSEYEARSUM

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#### WHEEL

*Number of plots with wheel traffic*

- **SQL Data Type:** INTEGER
- **SQL Type Qualifiers:**
- **Default Nullity:** NULL
- **Derived Data:** T
- **Valid Entries:** Integer
- **Missing/Invalid:** N/A
- **Used By:** LANDUSEYEARSUM

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#### WIND

*Wind speed*

- **SQL Data Type:** INTEGER
- **SQL Type Qualifiers:**
- **Default Nullity:** NULL
- **Derived Data:** F
- **Valid Entries:** Integer
- **Missing/Invalid:** N/A
- **Used By:** BIRDSURV, HERPSURV

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#### WINONE

*Number of plots with no wind erosion*

- **SQL Data Type:** INTEGER
- **SQL Type Qualifiers:**
- **Default Nullity:** NULL
Data Element/Entity Reference
LCTA Databases
Center for Ecological Management of Military Lands

Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: LANDUSEYEARSUM

WIOBS
Number of plots with wind erosion recorded

SQL Data Type: INTEGER
SQL Type Qualifiers:
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: LANDUSEYEARSUM

WIPEDPLNT
Number of plots with wind pedestal plant erosion

SQL Data Type: INTEGER
SQL Type Qualifiers:
Default Nullity: NULL
Derived Data: T
Valid Entries: Integer
Missing/Invalid: N/A
Used By: LANDUSEYEARSUM

WT20TO75M
20-75 mm weight percentage of soil < 75 mm

SQL Data Type: REAL
SQL Type Qualifiers:
Default Nullity: NULL
Derived Data: F
Valid Entries: Real number
Missing/Invalid: N/A
Used By: SOILSMPL

WT2TO5MM
2-5 mm weight percentage of soil < 75 mm

SQL Data Type: FLOAT
SQL Type Qualifiers:
Default Nullity: NULL
Derived Data: F
Valid Entries: Real number

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WT5TO20MM
5-20 mm weight percentage of soil < 75 mm

- **SQL Data Type**: FLOAT
- **SQL Type Qualifiers**: 
- **Default Nullity**: NULL
- **Derived Data**: F
- **Valid Entries**: Real number
- **Missing/Invalid**: N/A
- **Used By**: SOILSMPL

XSPECIES
Indicates that the accepted taxon is a hybrid at the specific epithet level.

- **SQL Data Type**: CHAR
- **SQL Type Qualifiers**: 1
- **Default Nullity**: NULL
- **Derived Data**: F
- **Valid Entries**: X or null
- **Missing/Invalid**: 
- **Used By**: HERBRIUM

YR
Sample year

- **SQL Data Type**: INTEGER
- **SQL Type Qualifiers**: 
- **Default Nullity**: NULL
- **Derived Data**: F
- **Valid Entries**: Year (yyyy)
- **Missing/Invalid**: N/A
- **Used By**: SOILSMPL

ZONE
Universal Transverse Mercator zone

- **SQL Data Type**: INTEGER
- **SQL Type Qualifiers**: 
- **Default Nullity**: NULL
- **Derived Data**: F
- **Valid Entries**: Valid UTM zone
- **Missing/Invalid**: N/A
- **Used By**: PLOTMAST