Report by the Federal Interagency Committee
to the
NC Geographic Information Coordinating Council

Federal Land Ownership Dataset
May 29, 2013

Executive Summary

In 2011 the NC Geographic Information Coordinating Council (GICC) tasked the Federal Interagency Committee (FIC) with developing a plan and set of recommendations for updating the federal land ownership dataset for North Carolina.

Background

The current dataset was compiled in the mid-to-late 1990s by CGIA staff from USGS topographic maps of varying small mapping scales. Currently there is no official custodian of the dataset. Although the dataset has been updated occasionally as new information is obtained (2006 is the latest version), no procedures exist for enhancing the precision or regularly updating the dataset.

The FIC established a subcommittee to address the GICC's request. The charge to the subcommittee was to explore issues and develop a plan for creating a federal land ownership dataset for North Carolina that could be distributed in the public domain through NC OneMap. The goal was to integrate existing federal land ownership data into a single NC statewide dataset. The goal was not to create GIS data for federal agencies that own federal lands in North Carolina but do not currently have GIS data, although this would be encouraged.

Federal Land Ownership Subcommittee
Tom Colson, National Park Service, Chair
Mark Endries, US Fish and Wildlife Service
Susan Pulsipher, US Army (contractor)
David Giordano, CGIA Database Administrator
Tom Tribble, CGIA staff to the FIC

Technical Assistance
Jeff Brown, CGIA
John Finnegan, NC Natural Heritage Program

The purpose of a federal lands dataset is to support regional and statewide planning and analysis with reliable, consistent, and complete representations of federal property, and to be practical to maintain and document. A consolidated federal land ownership dataset for North Carolina will be valuable to state, regional and local government agencies for this purpose. The subcommittee recognizes that the dataset will be equally valuable to federal agencies involved in planning and research on a wide range of issues, including highway planning, environmental management and mitigation planning, biodiversity assessment, wildlife management, climate change adaptation and many others.

It is important to note that the federally-owned boundaries in this dataset are not to be utilized as a legal definition for a real property boundary. The dataset is not intended for land management or facility management purposes. Users of these data for purposes other than planning should first consult the county tax administration office or another authoritative source.

Findings and Recommendations

The FIC Federal Land Ownership Subcommittee agreed upon a definition for federal owned land.

> *Real property that is owned, possessed, or otherwise in complete control of an agency of the federal government on a permanent basis. Excluded from this definition are those lands which are managed, have restricted-use easements, or are jointly controlled by an agency of the federal government but for which the federal government does not possess title, deed, or other ownership conveyance. Tribal lands are considered a separate administrative entity and are not considered federal land.*

The subcommittee identified the primary federal agencies that own land in North Carolina and the land areas, amounting to 2.6 million acres. The subcommittee:

- Confirmed that boundary datasets for the major federal land owning agencies are publicly available.
- Confirmed that compliant metadata are available for these major datasets. Metadata are critical for developing a dataset for discovery and access through NC OneMap.
- Identified federal agencies with relatively small land holdings that are not publicly available. Data for these federal land owners will not be included in the updated dataset but may be added when the data are publicly available.
- Prepared a geodatabase schema for integrating and managing the federal land ownership data.
- Collected and combined the best available source datasets in a geodatabase and documented the sources and processes.
- Proposed a process for a data custodian to access the individual agency datasets, create a NC federal lands ownership dataset, and conduct periodic updates.
- Estimated the staff requirements for a data custodian to acquire, consolidate, and prepare the data and metadata for the NC OneMap Geospatial Portal.

Publication

In response to FIC's recommendations, CGIA and the Natural Heritage Program (NHP) in the NC Department of Environment and Natural Resources developed a collaborative work flow to take advantage of NHP's role as state steward for the national Protected Areas Database (PAD) and NHP's inclusion of information from the GAP Analysis program. The PAD includes most of the same federal lands, creating opportunities to streamline data maintenance for NHP, PAD, and the FIC's compilation of federal land. The resulting dataset, "Federal Lands in North Carolina" is ready for inclusion in the NC OneMap Geospatial Portal for discovery, access, and download.

REPORT

The subcommittee addressed the following tasks and questions related to federal land ownership in North Carolina.

- Identify federal agencies that own land in North Carolina.
- Do these agencies maintain a GIS dataset of their property?
- Will these agencies share the data publicly? Are there any restrictions to sharing the data? For example, some attribute information might be restricted but these attributes may not be required for a publicly accessible federal land ownership data set.
- Does metadata exist? What are the processes and sources that need to be documented for the metadata?
- What is the agency's maintenance cycle (frequency of updates)?
- What is the format of existing data sets?
- What is the scale of existing data sets?
- What is the source of the data?
- What attributes should be included in a federal land ownership dataset? What are the common attributes among all the datasets?
- Does a formal schema need to be developed? Is a schema available through the Federal Geographic Data Committee?
- Define the data integration issues and challenges related to varying mapping scales, formats and different update cycles
- Recommend an organization to be the data custodian or area integrator to manage the dataset and incorporate updates?
- What are the estimated staff requirements for the data custodian and participating federal agencies?

Summary of Federal Land Ownership in North Carolina

The subcommittee investigation identified agencies that own land in North Carolina. The Departments of Defense, Interior, Agriculture and Transportation and the Tennessee Valley Authority own the vast majority of federal land in North Carolina.

Several other federal agencies own small land holdings in North Carolina, including the US Post Office and the US Information Agency in the Department of State. However, digital geospatial datasets are either not available for these agencies or proved difficult or impossible to access. Those land holdings are not relevant to the planning purposes intended for a federal land dataset.

Table 1 summarizes the area of federally owned lands for agencies for which this information is available.

Table 1: Federal Lands in North Carolina, by Agency, 2011

AGENCY	ACRES
Department of Defense (DOD)	
United States Navy	2,213
United States Marine Corps	148,277
United States Army	172,292
United States Air Force	51,962
United States Army Corps of Engineers	121,158
Subtotal	**495,902**
Department of the Interior (DOI)	
National Park Service	387,364
United States Fish and Wildlife Service	415,083
Subtotal	**802,447**
Department of Agriculture (DOA)	
United States Forest Service	1,356,797
Department of Transportation (DOT)	
United States Coast Guard	1,165
Tennessee Valley Authority (TVA)	25,701
Total	**2,682,012**

Notes:

- Although the United States Army Corps of Engineers (USCOE) falls administratively within the DOD, DOD geospatial datasets do not include USCOE ownership boundaries.
- Metadata for DOD property indicates that these data encompass "…installations, ranges, and training areas…" and do not include leased sites.
- For the following DOI agencies, no ownership information was identified.
  - United States Geological Survey
  - Bureau of Indian Affairs
  - Bureau of Land Management
  - Bureau of Ocean Energy Management
  - Bureau of Reclamation
  - Bureau of Safety and Environmental Enforcement
  - Office of Surface Mining, Reclamation and Enforcement

Availability of Digital GIS Datasets for Federally Owned Land

A. Department of Defense

Datasets for all active-duty departments are available via the Metadata title "Military Installations, Ranges, and Training Areas (Boundaries)"
http://www.data.gov/geodata/g735939/
Note that USCOE data is not available through this portal.

B. Department of the Interior
   i. National Park Service
      Available via the Metadata title "Current Administrative Boundaries of National Park System Units"
      http://www.nps.gov/gis/data_info/ Fish and Wildlife Service
      Available via the Metadata title "USFWS Cadastral Geodatabase"
      http://www.fws.gov/GIS/data/CadastralDB/index.htm

C. Department of Agriculture
   i. National Forest Service
      Available via the Metadata title "USA Survey and Ownership"
      http://fsgeodata.fs.fed.us/vector/index.html

D. Department of Transportation
   i. United States Coast Guard
      Available via the Metadata title "Federal and Indian Lands"
      http://certmapper.cr.usgs.gov/data/noga95/natl/spatial/doc/usown01g.htm

Federal land ownership data can also be found at the Data.gov website.

- Federal Lands of the United States
  http://www.data.gov/geodata/g602072/
- Federal Land Features of the United States – Parkways & Scenic
  http://www.data.gov/geodata/g602073/
- Military Installations, Ranges & Training Areas - boundary
  http://www.data.gov/geodata/g735939/

Small scale federal land ownership data are available from the National Map website.
http://certmapper.cr.usgs.gov/data/noga95/natl/spatial/doc/usown01g.htm

Notes:

- USCOE property data is maintained within the framework of Real Estate Systems National Center Real Estate Management Information System application, which is a restricted-access data portal. USCOE boundaries are present in U.S. National Atlas Federal and Indian Land Areas (http://nationalatlas.gov/mld/fedlanp.html).
- TVA does not share data via a public portal; however, TVA-owned boundaries are present in U.S. National Atlas Federal and Indian Land Areas.

- All other agencies identified as having GIS data in this report do not make geospatial data available through public portals.

Alternative Sources of Federal Land Ownership Data

The subcommittee identified two alternative sources of federal land ownership data. First, in North Carolina, counties manage and maintain parcel ownership data. Extracting federal lands data from county parcel databases could provide boundaries mapped with more precision, though questions remain about attribution of any properties that are exempt from property taxes. The subcommittee determined that this approach is not currently practical. Acquiring and integrating data from 100 counties is a labor intensive, time consuming task. Although about half of the 100 counties support data download of their parcel datasets, the remainder does not. Another complication is that each county implements a proprietary schema for parcel GIS, making it difficult to determine federal ownership within 100 county datasets. Fortunately, as federal agencies rely more on deed information in property transactions (e.g., the Fish & Wildlife Service), the precision of federal land boundaries increases.

The Statewide Mapping Advisory Committee's Working Group for Seamless Parcels is engaged in an effort to create a seamless, statewide parcel dataset based on county parcel data. Once complete, this dataset may serve as a more accurate source of federal land ownership data. In the meantime, acquiring federal land ownership data directly from federal agencies is a more practical solution.

Second, the North Carolina Natural Heritage Program (NHP) maintains and now publishes a compilation of lands of conservation interest, including federal lands. See "Managed Areas in North Carolina" via the NC OneMap Geospatial Portal (http://data.nconemap.com). An excerpt from the metadata concerning data sources: "Federal agencies: Boundaries of national parks & national seashores from the National Park Service, national wildlife refuges from the US Fish & Wildlife Service, national forests from the US Forest Service, military lands from the US Department of Defense, and other federal lands of conservation interest." NHP is also the North Carolina steward for the national Protected Areas Database (PAD) created and maintained by the USGS GAP Analysis program. Currently, NHP is adopting the schema of PAD and providing more complete NC data to PAD, including federal land. This presents an opportunity for collaboration to achieve consistency, completeness, and currency.

Metadata

All agencies making data available to the public also provide Federal Geographic Data Committee (FGDC) compliant metadata.

Notes:

- National Park Service (NPS) metadata identifies updates to park units with recent boundary changes in the metadata preamble. Each park publishes and hosts its own park boundary via the NPS data portal. However, the service-wide dataset should be

considered the authoritative source of boundary data as its publication is supervised by the office of the Chief Cartographer who considers legal boundary definitions whereas park GIS staff may not be qualified to do so.

- US Fish & Wildlife Service (USFWS) presents the user a clear snapshot of current agency-owned land within the state and includes clear definitions identifying the difference between USFWS-owned versus USFWS-administered units. In addition, USFWS metadata includes definitions of attributes and a "list of legal values."
- US Forest Service (USFS) GIS data includes both National Forest Boundaries and National Forest Service-owned boundaries. Many situations exist within the state of North Carolina in which a National Forest administrative unit will encompass land managed by the Service inclusive within the unit, but which is in fact owned by private, state, or county entities. These units are readily apparent when superimposing Forest Service unit boundaries with county parcel data, as well as Forest Service-owned boundaries. Metadata for both geospatial datasets provided by the Forest Service include the statement "The area encompasses private lands, other governmental agency lands, and may contain National Forest System lands within the proclaimed boundaries of another administrative unit." However, the distinction between ownership and management is clear upon review of the vector data.

Maintenance Cycle

The maintenance cycle or frequency of updates for most agencies is either unclear or irregular. Some agencies may follow a regular schedule. The more typical scenario is the release of an updated dataset when significant changes occur.

Format and Scale

All data sources except for DOD deliver geospatial data in the Esri File Geodatabase format. Web Mapping Services (WMS), through which some agencies are known to publish data, were not investigated as a data source during this investigation due to the inability to manipulate WMS/REST services and technology limitations. Scale of the source data varies. At a minimum, all federal sources meet National Map Accuracy Standards.

Data Source

The source of the federal land ownership boundaries varies. While agency metadata do not necessarily include statements regarding the method of boundary determination, this can be attributed to the very diverse set of circumstances through which a unit acquires property over time. Large areas of federal lands, especially early in the country's history and in the western United States, were acquired by westward expansion, eminent domain or purchase by the federal government. In recent years land has been acquired through donations and purchases. Over the years, boundary determination technology has changed.

To the subcommittee's knowledge, federal agencies do not rely upon state and county tax parcel descriptions for the representation of federal land boundaries within their geospatial data. Most federal boundary geospatial data represent:

- Coordinate pairs translated from "metes and bounds" on legacy plats;
- Data produced by a licensed surveyor; or
- Original text property description at acquisition.

Attributes for a Federal Land Ownership Dataset

Attributes, or land descriptors, are defined by a schema. Note that the schema is intended to provide a long-term structure for organizing and publishing the federal land ownership dataset. Some of the defined fields may not be populated in the first release, but they are included with the expectation that future releases will include values.

Schema – Proposed and Adopted

A XML-based schema is published by the General Services Administration, which includes, in intricate detail, data standards for the reporting of federal property. This schema far exceeds the needs and complexity level required by the State of North Carolina for determination of federal property holdings within the state. Therefore, the subcommittee proposed a custom Geodatabase schema for federally owned land in North Carolina (see Figure 1, pages 11-14).

The schema proposed by the committee includes several attribute fields and list of values that are contained in the Federal Real Property Council 2011 Guidance for Real Property Inventory Reporting (http://www.gsa.gov/portal/content/104918). The purpose of this cross-platform compatibility is to allow for future integration with federal geospatial data systems as well as to allow for federal agency partners within the state of North Carolina to self-populate the geodatabase using nationally recognized standards.

The committee agreed to accept the schema used by the NC Natural Heritage Program in its role as state steward for the national Protected Area Database. The attributes managed by the NC Natural Heritage Program adequately represent the committee's proposed schema for most user purposes. In addition to area, owner (department), and area name, the federal lands subset includes GIS source, source date, and GAP status (from the NC GAP Analysis program). The adopted schema for federally owned land in NC is described in Figures 2 and 3 (pages 15-16).

Data Integration Issues

The subcommittee recognized challenges related to varying mapping scales, formats and different update cycles. Due to varying scales or data sources, in situations where land owned by two different federal agencies are adjacent, boundary lines may not be coincident, resulting in gaps or sliver polygons. This situation may even occur between two different units within a federal agency. The effect is that the area measurements will not be accurate although the

discrepancies will likely be minor. It may be difficult or impossible to resolve these discrepancies as the GIS staff in the federal agencies cannot alter the boundary to make it fit topology or geometry rules. The subcommittee emphasized that the dataset will still be valuable for planning purposes but cannot be used to settle boundary disputes. The federal land ownership metadata will need to include disclaimers describing the possibility of these discrepancies.

Federal agencies do not appear to maintain a regular or cyclic production schedule of real property mapping updates. The data custodian or area integrator will need to periodically seek updated GIS layers from each agency, or rely upon agency partners to communicate updates.

Because each agency utilizes its own schema for the storage of real property geospatial data, it is difficult to automatically ingest and merge GIS data from one or more agencies. Fortunately, one common data attribute across all federal ownership data is the unit (installation, site) name, as well as the source agency. It is recommended that the data custodian perform the final area calculation given the potential for errors in data conversion and that some agencies report area based on total installation size, not enclosed polygon size.

All federal agencies that publish GIS layers of real property do so in Esri-compatible format; therefore data format is not yet an issue. Technology trends suggest that federal agencies will soon move to a "cloud computing" type data distribution systems and the possibility exists that federal real property data may only be available through Representational State Transfer services.

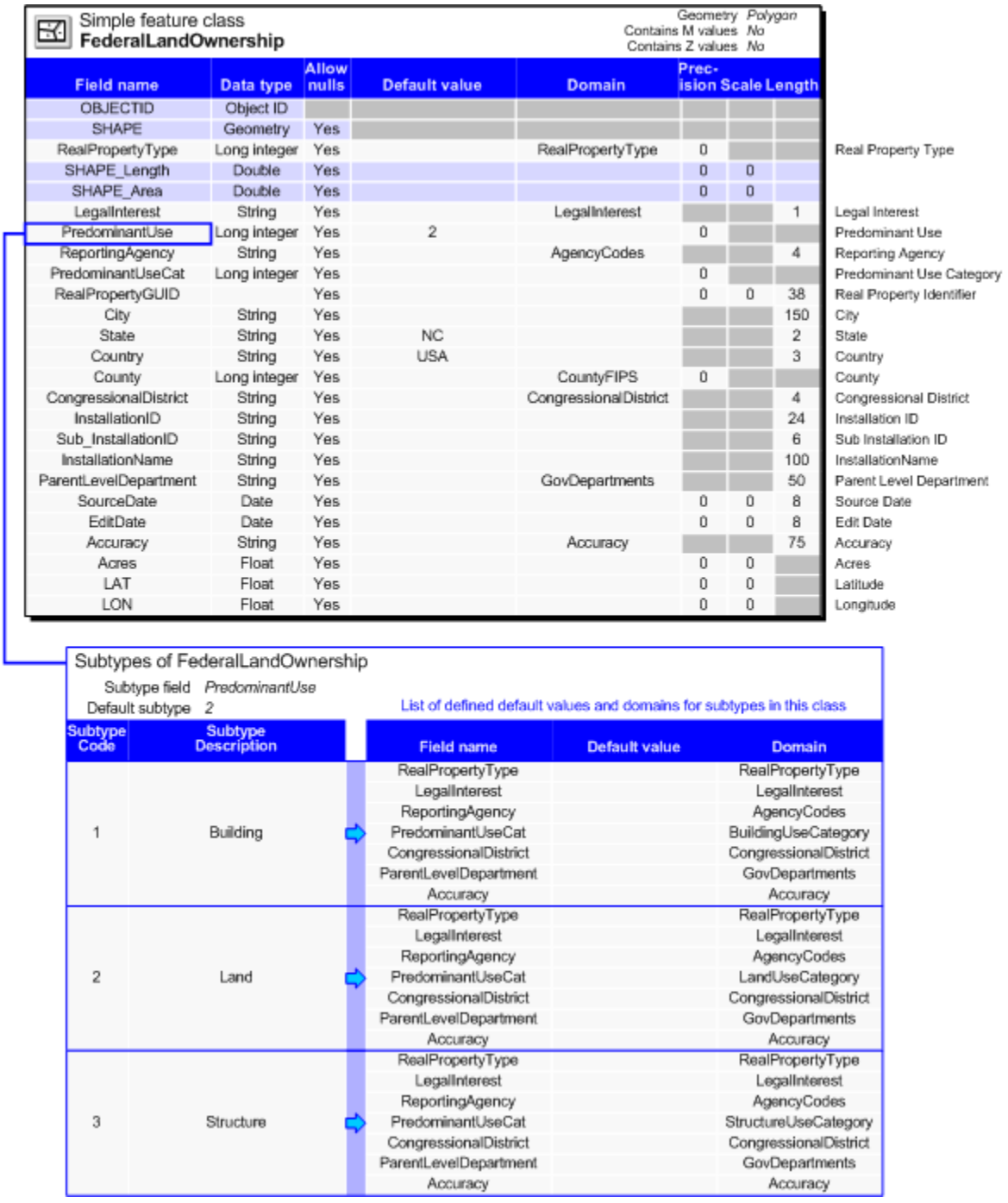
Data Custodian / Area Integrator

The FIC Executive Committee, in collaboration with the subcommittee members, CGIA and staff from the NC Department of Environment and Natural Resource Natural Heritage Program (NHP) assessed candidates to serve as the data custodian. The conclusion is that NHP is the appropriate custodian.

NHP maintains and publishes "Managed Areas" (including the federal lands recommended by the subcommittee) on a quarterly basis, and would be most efficient in creating a "Federal Lands in North Carolina" subset in conjunction with its update cycle. The manager of the "Managed Areas" dataset is willing to serve as custodian of the federal lands data, researching updates to federal land as part of the quarterly update to "Managed Areas," creating the federal subset and editing the metadata accordingly. CGIA collaborated on the metadata record for the initial federal subset. NHP will continue to transfer copies of "Managed Areas," "Significant Natural Heritage Areas," and other NHP datasets to the NC OneMap Database. "Federal Lands in North Carolina" will be derived as a subset of "Managed Areas" where OWNER_TYPE = "Federal" and CATEGORY = "Fee" and included in the package transferred to NC OneMap. Note that "Federal Lands in North Carolina" do not include easements held or managed by federal agencies. Easements are included in "Managed Areas."

CGIA is the lead state coordinating agency for geospatial information and GIS and serves as staff to the GICC. CGIA will continue to manage the NC OneMap Geospatial Portal, a public service providing comprehensive discovery and access to North Carolina's geospatial data resources. The NC OneMap Geospatial Portal enables users to discover data, download data, or stream data through a web service directly into a desktop or web application. The federal land ownership dataset will be distributed in the public domain through NC OneMap.

Figure 1: Proposed Geodatabase Schema for Federal Land Ownership in North Carolina



Simple feature class
FederalLandOwnership

Geometry *Polygon*
Contains M values *No*
Contains Z values *No*

Field name	Data type	Allow nulls	Default value	Domain	Precision	Scale	Length	
OBJECTID	Object ID							
SHAPE	Geometry	Yes						
RealPropertyType	Long integer	Yes		RealPropertyType	0			Real Property Type
SHAPE_Length	Double	Yes			0	0		
SHAPE_Area	Double	Yes			0	0		
LegalInterest	String	Yes		LegalInterest			1	Legal Interest
PredominantUse	Long integer	Yes	2		0			Predominant Use
ReportingAgency	String	Yes		AgencyCodes			4	Reporting Agency
PredominantUseCat	Long integer	Yes			0			Predominant Use Category
RealPropertyGUID		Yes			0	0	38	Real Property Identifier
City	String	Yes					150	City
State	String	Yes	NC				2	State
Country	String	Yes	USA				3	Country
County	Long integer	Yes		CountyFIPS	0			County
CongressionalDistrict	String	Yes		CongressionalDistrict			4	Congressional District
InstallationID	String	Yes					24	Installation ID
Sub_InstallationID	String	Yes					6	Sub Installation ID
InstallationName	String	Yes					100	InstallationName
ParentLevelDepartment	String	Yes		GovDepartments			50	Parent Level Department
SourceDate	Date	Yes			0	0	8	Source Date
EditDate	Date	Yes			0	0	8	Edit Date
Accuracy	String	Yes		Accuracy			75	Accuracy
Acres	Float	Yes			0	0		Acres
LAT	Float	Yes			0	0		Latitude
LON	Float	Yes			0	0		Longitude

Subtypes of FederalLandOwnership

Subtype field *PredominantUse*
Default subtype *2*

List of defined default values and domains for subtypes in this class

Subtype Code	Subtype Description	Field name	Default value	Domain
1	Building	RealPropertyType		RealPropertyType
		LegalInterest		LegalInterest
		ReportingAgency		AgencyCodes
		PredominantUseCat		BuildingUseCategory
		CongressionalDistrict		CongressionalDistrict
		ParentLevelDepartment		GovDepartments
		Accuracy		Accuracy
2	Land	RealPropertyType		RealPropertyType
		LegalInterest		LegalInterest
		ReportingAgency		AgencyCodes
		PredominantUseCat		LandUseCategory
		CongressionalDistrict		CongressionalDistrict
		ParentLevelDepartment		GovDepartments
		Accuracy		Accuracy
3	Structure	RealPropertyType		RealPropertyType
		LegalInterest		LegalInterest
		ReportingAgency		AgencyCodes
		PredominantUseCat		StructureUseCategory
		CongressionalDistrict		CongressionalDistrict
		ParentLevelDepartment		GovDepartments
		Accuracy		Accuracy

Coded value domain
RealPropertyType
Description
Field type *Long integer*
Split policy *Default value*
Merge policy *Default value*

Code	Description
20	Land
35	Building
40	Structure

Coded value domain
LegalInterest
Description
Field type *String*
Split policy *Default value*
Merge policy *Default value*

Code	Description
S	State Government-Owned
F	Foreign Government-Owned
M	Museum Trust
G	Federal-Owned

Coded value domain
Accuracy
Description
Field type *String*
Split policy *Default value*
Merge policy *Default value*

Code	Description
Legacy	Sourced from plat description
Digital	Sourced from agency digital data
Survey	Sourced from agency PLS survey
NC Survey	Sourced from PLS survey recognized by NC

Coded value domain
GovDepartments
Description
Field type *String*
Split policy *Default value*
Merge policy *Default value*

Code	Description
USDA	Department of Agriculture (USDA)
DOC	Department of Commerce (DOC)
DOD	Department of Defense (DOD)
ED	Department of Education (ED)
DOE	Department of Energy (DOE)
HHS	Department of Health and Human Services (HHS)
DHS	Department of Homeland Security (DHS)
HUD	Department of Housing and Urban Development (HUD)
DOJ	Department of Justice (DOJ)
DOL	Department of Labor (DOL)
DOS	Department of State (DOS)
DOI	Department of the Interior (DOI)
TRE	Department of the Treasury
DOT	Department of Transportation (DOT)
VA	Department of Veterans Affairs (VA)

Coded value domain
LandUseCategory

Description
Field type *Long Integer*
Split policy *Default value*
Merge policy *Default value*

Code	Description
1	Agriculture
4	Grazing
7	Forest and Wildlife
8	Parks and Historic Sites
9	Wilderness Areas
10	Office Building Locations
11	Miscellaneous Military Land
12	Airfields
13	Harbors and Ports
14	Post Office
15	Power Development and Distribution
16	Reclamation and Irrigation
18	Flood Control and Navigation
19	Vacant
20	Institutional
30	Housing
40	Storage
50	Industrial
65	Space Exploration
70	Research and Development
72	Communication Systems
73	Navigation and Traffic Aids
81	Training Land
80	All Other

Coded value domain
BuildingUseCategory

Description
Field type *Long Integer*
Split policy *Default value*
Merge policy *Default value*

Code	Description
10	Office
14	Post Office
21	Hospital
22	Prison and Detention Center
23	School
28	Museum
29	Other Institutional Use
30	Family Housing
31	Dormitories/Barracks
41	Wharehouses
50	Industrial
60	Service
72	Communication Systems
73	Navigation and Traffic Aids
74	Laboratories
80	All Other

Coded value domain
StructureUseCategory

Description
Field type *Long Integer*
Split policy *Default value*
Merge policy *Default value*

Code	Description
12	Airfield Pavements
13	Harbors and Ports
15	Power Development and Distribution
16	Reclamation and Irrigation
18	Flood Control and Navigation
28	Museum
40	Storage (other than buildings)
50	Industrial (other than buildings)
60	Service (other than buildings)
65	Space Exploration Structures
66	Parking Structures
70	Research and Development (other than labs)
71	Utility Systems
72	Communication Systems
73	Navigation and Traffic Aids (other than buildings)
75	Recreational (other than buildings)
76	Roads and Bridges
77	Railroads
78	Monuments and Memorials
79	Miscellaneous Military Facilities
82	Weapons Ranges
80	All Other

Coded value domain
CongressionalDistrict

Description
Field type *String*
Split policy *Default value*
Merge policy *Default value*

Code	Description
NC1	1st District
NC2	2nd District
NC3	3rd District
NC4	4th District
NC5	5th District
NC6	6th District
NC7	7th District
NC8	8th District
NC9	9th District
NC10	10th District
NC11	11th District
NC12	12th District
NC13	13th District

Figure 2. Adopted Fields for Federal Land Ownership in North Carolina

Field	Definition	Type	Size	Domain Values	Value Definition
FID	Internal feature number	Long Integer	4	Variable	
Shape	Feature geometry	OLE Object	-	Variable	
MA_ID	Managed Area Identifier	Double	8	Variable	
ACRES	Area of each polygon in acres	Double	8	Variable	
MA_NAME	Managed Area Name	Text	200	Variable	
OWNER	The federal department that owns the property	Text	69	Variable	
OWNER_TYPE	The type of owner in a set of categories	Text	16	Federal	US Government is the land owner (the only valid owner type for this subset of managed areas)
CATEGORY	General category for the protection mechanism associated with the land	Text	8	Fee	Fee simple ownership, i.e., absolute title to the land, free of any other claims against the title (the only valid category for this subset of managed areas)
GIS_SRC	The original source of GIS spatial and attribute information for each record	Text	95	Variable	
SRC_DATE	GIS Source Date: the date (yyyy-mm-dd) the GIS data was obtained; if year, month, or day are unknown, they are left blank	Text	10	Variable	
GAP_STATUS	GAP Status Code: the GAP Status Code is a measure of management intent to conserve biodiversity	Text	89	Code Set (Figure 3)	

Figure 3. Domain for GAP Status in Federal Land Ownership Dataset

GAP_STATUS Value	Definition
1	An area having permanent protection from conversion of natural land cover and a mandated management plan in operation to maintain a natural state within which disturbance events (of natural type, frequency, intensity, and legacy) are allowed to proceed without interference or are mimicked through management.
2	An area having permanent protection from conversion of natural land cover and a mandated management plan in operation to maintain a primarily natural state, but which may receive uses or management practices that degrade the quality of existing natural communities, including suppression of natural disturbance.
3	An area having permanent protection from conversion of natural land cover for the majority of the area, but subject to extractive uses of either a broad, low-intensity type (e.g., logging, OHV recreation) or localized intense type (e.g., mining). It also confers protection to federally listed endangered and threatened species throughout the area.
4	There are no known public or private institutional mandates or legally recognized easements or deed restrictions held by the managing entity to prevent conversion of natural habitat types to anthropogenic habitat types. The area generally allows conversion to unnatural land cover throughout or management intent is unknown.