USDA Service Center Agencies
Geospatial Data Management Team
Data Management Plan For

Geographic Names Information System

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I. Purpose and Scope (business case)

A. Purpose

The Geographic Names Information System (GNIS), developed by the USGS in cooperation with the U.S. Board on Geographic Names (BGN), contains information for almost 2 million physical and cultural geographic features in the United states and its territories. The Federally recognized name of each feature described in the database is identified, and references are made to a feature's location by State, county, and geographic coordinates. The GNIS is our Nation's official repository of **domestic** geographic names information.

Data extracts from all **State** and **Territory** files are available for download via web browser. Four topical extracts of the data base are also available: the **U.S. Populated Places File** lists information about all communities throughout the United States that are described in the data base, the **U.S. Concise File** lists information about major physical and cultural features throughout the United States that are described in the data base, the **Historical Features File** lists information about features which are no longer in existence, and the **Antarctica File** contains entries throughout the continent of Antarctica as approved for use by the United States Government.

At: http://www.carolinamapdistributors.com/products/topo/generaltopo.htm - America
Almost 2 million natural and manmade features are identified in the USGS topographic map series. These geographic names form a primary reference system essential for the communication of cartographic information. Beyond map labeling, geographic names are part of the Nation's living heritage. The origins and meanings of geographic names, derived from many languages, show national, personal, and social ingredients of life, past and present.

The standardization of geographic names in the United States began late in the 19th century. The surge in mapping and scientific activities after the Civil War left the accuracy and spelling of a large number of names in doubt. This posed a serious problem to mapmakers and scientists who require nonconflicting nomenclature. The U.S. Board on Geographic Names was established in 1890 as the central authority to deal with naming conflicts. This interagency body, chaired by the U.S. Department of the Interior, helps standardize the spelling and application of geographic names on maps and documents published by the U.S. Government.

B. Scope

50 States plus the Federal District known as District of Columbia

Commonwealths
Puerto Rico (Caribbean)
Northern Marianas Islands (Pacific) (former Trust Territory of the United Nations elected by plebiscite to join the U.S.)
Territories (there are various types)
Guam (Pacific - physically part of the Marianas Islands but politically separate)
American Samoa (Pacific)
U.S. Virgin Islands (Caribbean) (uses U.S. to distinguish from neighboring British Virgin Islands)
Miscellaneous Insular or Outlying Areas - these do not have a permanent population, and are periodically inhabited by military personnel or scientists, otherwise uninhabited
Baker Island (Pacific)
Howland Island (Pacific)
Jarvis Island (Pacific)
Palmyra Atoll (an atoll is a coral reef) (Pacific)
Johnston Island (Pacific)
Kingman Reef (Pacific)
Midway Islands (Pacific)
Wake Island (Pacific)
Navassa Island (Caribbean)
Freely Associated States - State here is used in the international sense as an independent country; a new category of “independent country” except the U.S. is responsible for their defense.
Federated States of Micronesia (Pacific) former United Nations Trust Territory by plebiscite elected to become "independent"
Republic of the Marshall Islands (Pacific) former United Nations Trust Territory by plebiscite elected to become "independent"
Republic of Palau (Pacific) former portion of a United Nations Trust Territory by plebiscite elected to become "independent"
Note: Corn Islands and Swan Islands were formerly U.S. but were recently ceded to Nicaragua and Honduras respectively. Also, Serrana Bank and Roncador Bank were ceded by the U.S. to Colombia. All of these are in the Caribbean.

II. Acquisition

A. Data Source

1. Producer Information

a. Name

The Geographic Names Information System (GNIS) is produced by the United States Geological Survey (USGS) in cooperation with the U.S. Board on Geographic Names.

b. Location of Headquarters

US Geological Survey
523 National Center
Reston, VA 20192 USA

c. Internet Address

www.usgs.gov

2. Publisher Information

a. Name

The GNIS is published by the USGS

b. Location of Headquarters

Branch of Geographic Names
US Geological Survey
523 National Center
Reston, VA 20192 USA

c. Internet Address

The internet address of the USGS is www.usgs.gov
The internet address for GNIS is http://geonames.usgs.gov/

3. Acquisition Information

a. Delivery Media

One may download, at no cost, GNIS data from the Web site at
http://geonames.usgs.gov/domestic/download_data.htm

The GNIS on CD-Rom is no longer available. A windows version of GNIS is available as part of the LandView® 6 product distributed by the U.S. Census Bureau. LandView® 6 product availability is listed on the page:
http://www.census.gov/geo/landview/

b. Download URL

http://geonames.usgs.gov/domestic/download_data.htm

c. Projected Data Availability Schedule

At: http://erg.usgs.gov/isb/pubs/factsheets/fs12795.html

The Geographic Names Information System (GNIS) database is currently organized by individual State and Territory files. Data for each State or territory are compiled in two phases.

The first phase, which is complete for States and areas under U.S. jurisdiction, entailed the collection of most feature names printed on the 1:24,000-scale topographic maps published by the USGS and the U.S. Forest Service, as well as on the charts of the Office of Coast Survey.

The second phase is a long-term project accomplished on a State-by-State basis to gather additional names information from State and local materials and from a wide variety of historical documents. This project captures names from State, locally, and privately published current and historical maps, charts, and texts. The status of States and territories for phase II is available at http://geonames.usgs.gov/statusmap.html
The status at the time of writing is listed below:

In progress: Minnesota, Kentucky

Not Started: Alaska,, New York,
American Samoa, Guam, Micronesia, Puerto Rico, Virgin Islands

For all other states, the second phase of extensive compilation is completed.

B. Standards Information

1. Geospatial Data Standard

a. Standard Name and Steward Information

None. Data is tabular. Coordinates are listed as degrees, minutes, and seconds of longitude and latitude.

b. Standard Version

None. Data is tabular.

c. Standard URL

None. Data is tabular.

2. Metadata Standard

a. Standard Name and Steward Information

Content Standards for Digital Geospatial Metadata version 19940608

The metadata contact is:

US Geological Survey
508 National Center
Reston, VA 22092 USA

b. Description of Metadata Captured

The metadata is available online at
http://www.datafinder.org/metadata/place_names_usgs.htm
The sections of metadata include:

Identification Information
Data Quality Information
Spatial Data Organization Information
Spatial Reference Information
Entity and Attribute Information
Distribution Information
Metadata Reference Information

c. Metadata Accuracy and Completeness Assessment

The metadata is complete. Additional information is available in the

C. Acquired Data Structure

1. Geospatial Data Format

a. Format (raster, vector, etc.)

The GNIS data is acquired as an ASCII, tabular file. The files have been compressed with the WinZip utility.

b. Format Name

ASCII

c. Data Extent

The extent is the United States and its territories. See scope above.

d. Horizontal and Vertical Resolution

Horizontal resolution is one decimal second.

Vertical resolution is one foot.

e. Absolute Horizontal and Vertical Accuracy

Accuracy of these digital data is based upon the use of source graphics that are compiled to meet National Map Accuracy Standards. Comparison to the graphic source is used as control to assess digital positional accuracy.

f. Nominal Scale

1:24,000

g. Horizontal and Vertical Datum

NAD83, GRS80.

The vertical datum is mean sea level.

h. Projection

None (geographic)

i. Coordinate Units

Degrees, minutes, and decimal seconds

j. Average Data Set Size

The average record is 200 bytes. There is a very wide range of records per state and territory, from approximately 1 Kb to 2.2 Mb in size.

The total zip of the downloaded pipe delimited files is 56 Mb

k. Symbology

None

2. Attribute Data Format

a. Format Name

The format is delimited ASCII.

There are four types of downloads:

- Individual states
- AllStates – all 60 individual state files in one .zip
- National file in two parts
- Six topical Gazetteers

NRCS uses the National file.

FAQ 11: ***Why are there two downloadable files for each State and topical gazetteer, and what is the difference?***
The files with the name fully spelt are report files designed for downloading and printing a report. The geographical coordinates in this file are in degrees, minutes, and seconds. The file containing the abbreviation and the term "deci" is a data file designed for use in a GIS environment. The geographical coordinates in this file are in decimal degrees to a precision of five places.

These are standard gazetteer files and contain no variant names, historical notes, etc. More importantly, only the primary geographic coordinates, States, counties, and topographic maps names are provided. This means that if a feature is in more than one State, only the State where the mouth of linear features and centroid of areal features (at a scale of 1:24,000) are located will be included. The same is true if a feature is in more than one county, and on more than one map, only the county and map where the center or mouth is located will appear in the standard gazetteer data.

b. Database Size

The GNIS database contains approximately 2 million records, averaging 200 bytes in length.

3. Data Model

a. Geospatial Data Structure

None

b. Attribute Data Structure

See below.

c. Database Table Definition – The national file

ID	Name	Type	Len	Allow Nulls	Description
1	Feature_ID	Int			Feature ID Number (FID)
2	Feature_Name	Text	103		Feature Name
3	Class	Text	21		Feature Type
4	Primary_ST_alpha	Text	2		State Alpha Code
5	Primary_ST_num	Text	2		State Number Code (FIPS)
6	Primary_County	Text	32		County Name
7	Primary_County_num	Text	3		County Number Code (FIPS)
8	Primary_lat_DMS	Text	7		Primary Latitude (DMS)
9	Primary_lon_DMS	Text	8		Primary Longitude (DMS)
10	Primary_lat_dec	Double	8,5		Primary Latitude (decimal degrees)

11	Priamry_lon_dec	Double	8,5		Primary Longitude (decimal degrees)
12	Source_ST_alpha	Text	2		Source State Alpha Code
13	Source_lat_DMS	Text	7	X	Source Latitude (DMS)
14	Source_lon_DMS	Text	8	X	Source Longitude (DMS
15	Source_lat_dec	Double	8,5	X	Source Latitude (decimal degrees
16	Source_lon_dec	Double	8,5	X	Source Longitude (decimal degrees
17	Elevation_Meters	Int			Elevation
18	Map_Name	Text	32		Cell Name

d. Data Relationship Definition

Because there is only a single table, there are no data relationships to define.

e. Data Dictionary

Name

The Federally recognized name of the physical or cultural feature.

Class **see http://geonames.usgs.gov/features.html**

One of the following types of features:

airport - manmade facility maintained for the use of aircraft (airfield, airstrip, landing field, landing strip).

arch - natural arch-like opening in a rock mass (bridge, natural bridge, sea arch).

area - any one of several areally extensive natural features not included in other categories (badlands, barren, delta, fan, garden).

arroyo - watercourse or channel through which water may occasionally flow (coulee, draw, gully, wash).

bar - natural accumulation of sand, gravel, or alluvium forming an underwater or exposed embankment (ledge, reef, sandbar, shoal, spit).

basin - natural depression or relatively low area enclosed by higher land (amphitheater, cirque, pit, sink).

bay - indentation of a coastline or shoreline enclosing a part of a body of water; a body of water partly surrounded by land (arm, bight, cove, estuary, gulf, inlet, sound).

beach - the sloping shore along a body of water that is washed by waves or tides and is usually covered by sand or gravel (coast, shore, strand).

bench - area of relatively level land on the flank of an elevation such as a hill, ridge, or mountain where the slope of the land rises on one side and descends on the opposite side (level).

bend - curve in the course of a stream and (or) the land within the curve; a curve in a linear body of water (bottom, loop, meander).

bridge - manmade structure carrying a trail, road, or other transportation system across a body of water or depression (causeway, overpass, trestle).

building - a manmade structure with walls and a roof for protection of people and (or) materials, but not including church, hospital, or school.

canal - manmade waterway used by watercraft or for drainage, irrigation, mining, or water power (ditch, lateral).

cape - projection of land extending into a body of water (lea, neck, peninsula, point).

cave - natural underground passageway or chamber, or a hollowed out cavity in the side of a cliff (cavern, grotto).

cemetery - a place or area for burying the dead (burial, burying ground, grave, memorial garden).

channel - linear deep part of a body of water through which the main volume of water flows and is frequently used as a route for watercraft (passage, reach, strait, thoroughfare, thoroughfare).
church - building used for religious worship (chapel, mosque, synagogue, tabernacle, temple).
civil - a political division formed for administrative purposes (borough, county, municipal, parish, town, township).
cliff - very steep or vertical slope (bluff, crag, head, headland, nose, palisades, precipice, promontory, rim, rimrock).
crater - circular-shaped depression at the summit of a volcanic cone or one on the surface of the land caused by the impact of a meteorite; a manmade depression caused by an explosion (caldera, lua).
crossing - a place where two or more routes of transportation form a junction or intersection (overpass, underpass).
dam - water barrier or embankment built across the course of a stream or into a body of water to control and (or) impound the flow of water (breakwater, dike, jetty).
falls - perpendicular or very steep fall of water in the course of a stream (cascade, cataract, waterfall).
flat - relative level area within a region of greater relief (clearing, glade, playa).
forest - bounded area of woods, forest, or grassland under the administration of a political agency (see woods) (national forest, national grasslands, State forest).
gap - low point or opening between hills or mountains or in a ridge or mountain range (col, notch, pass, saddle, water gap, wind gap).
geyser - eruptive spring from which hot water and (or) steam and in some cases mud are periodically thrown.
glacier - body or stream of ice moving outward and downslope from an area of accumulation; an area of relatively permanent snow or ice on the top or side of a mountain or mountainous area (icefield, ice patch, snow patch).
gut - relatively small coastal waterway connecting larger bodies of water or other waterways (creek, inlet, slough).
harbor - sheltered area of water where ships or other watercraft can anchor or dock (hono, port, roads, roadstead).
hospital - building where the sick or injured may receive medical or surgical attention (infirmary).
island - area of dry or relatively dry land surrounded by water or low wetland (archipelago, atoll, cay, hammock, hummock, isla, isle, key, moku, rock).
isthmus - narrow section of land in a body of water connecting two larger land areas.
lake - natural body of inland water (backwater, lac, lagoon, laguna, pond, pool, resaca, waterhole).
lava - formations resulting from the consolidation of molten rock on the surface of the Earth (kepula, lava flow).
levee - natural or manmade embankment flanking a stream (bank, berm).
locale - place at which there is or was human activity; it does not include populated places, mines, and dams (battlefield, crossroad, camp, farm, ghost town, landing, railroad siding, ranch, ruins, site, station, windmill).
mine - place or area from which commercial minerals are or were removed from the Earth; not including oilfield (pit, quarry, shaft).
oilfield - area where petroleum is or was removed from the Earth.
other - category for miscellaneous named manmade entities that cannot readily be placed in the other feature classes listed here.
park - place or area set aside for recreation or preservation of a cultural or natural resource and under some form of government administration; not including National or State forests or Reserves (national historical landmark, national park, State park, wilderness area).

pillar - vertical, standing, often spire-shaped, natural rock formation (chimney, monument, pinnacle, pohaku, rock tower).
plain - a region of general uniform slope, comparatively level and of considerable extent (grassland, highland, kula, plateau, upland).
ppl - (populated place) place or area with clustered or scattered buildings and a permanent human population (city, settlement, town, village).
range - chain of hills or mountains; a somewhat linear, complex mountainous or hilly area (cordillera, sierra).
rapids - fast-flowing section of a stream, often shallow and with exposed rock or boulders (riffle, ripple).
reserve - a tract of land set aside for a specific use (does not include forests, civil divisions, parks).
reservoir - artificially impounded body of water (lake, tank).
ridge - elevation with a narrow, elongated crest which can be part of a hill or mountain (crest, cuesta, escarpment, hogback, lae, rim, spur).
school - building or group of buildings used as an institution for study, teaching, and learning (academy, college, high school, university).
sea - large body of salt water (gulf, ocean).
slope - a gently inclined part of the Earth's surface (grade, pitch).
spring - place where underground water flows naturally to the surface of the Earth (seep).
stream - linear body of water flowing on the Earth's surface (anabranch, awawa, bayou, branch, brook, creek, distributary, fork, kill, pup, rio, river, run, slough).
summit - prominent elevation rising above the surrounding level of the Earth's surface; does not include pillars, ridges, or ranges (ahu, berg, bald, butte, cerro, colina, cone, cumbre, dome, head, hill, horn, knob, knoll, mauna, mesa, mesita, mound, mount, mountain, peak, puu, rock, sugarloaf, table, volcano).
swamp - poorly drained wetland, fresh or saltwater, wooded or grassy, possibly covered with open water (bog, cienega, marais, marsh, pocosin).
trail - route for passage from one point to another; does not include roads or highways (jeep trail, path, ski trail).
tower - a manmade structure, higher than its diameter, generally used for observation, storage, or electronic transmission.
tunnel - linear underground passageway open at both ends.
valley - linear depression in the Earth's surface that generally slopes from one end to the other (barranca, canyon, chasm, cove, draw, glen, gorge, gulch, gulf, hollow, ravine).
well - manmade shaft or hole in the Earth's surface used to obtain fluid or gaseous materials.
woods - small area covered with a dense growth of trees; does not include an area of trees under the administration of a political agency (see forest).

CountyName
County name

State/County FIPS Code
Combination of the 2 character state FIPS code and 3 character county FIPS code. Includes leading zeros. For example, 08069 is Larimer County, Colorado.

Geographic Coordinates
Coordinates locate the approximate center of an areal feature or the mouth of a linear feature. Coordinate units are degrees, minutes, and seconds, ranging from 180W to 180E longitude, and 90S to 90N latitude.

Source Coordinates of Linear Features
Geographic coordinates that locate the source or heading of linear features

Elevation
Elevation of the feature in meters above mean sea level, listed when available.

Map Name

The name of the USGS 1:24,000 topographic map on which the feature is located is listed.

D. Policies

1. Restrictions

a. Use Constraints

None. Some of the data provided were derived from sources outside of the U.S. Geological Survey. All data and information contained in any of the data files are provided without guarantee as to their completeness or correctness. Any conclusions drawn from these data and information are the sole responsibility of the user.

b. Access Constraints

None.

c. Certification Issues

None.

2. Maintenance

a. Temporal Information

Database is re-published monthly with additional data.

b. Average Update Cycle

The GNIS database is updated continuously, and the information is instantly available at the Web site. The downloadable files are updated once every six to 12 months, or as needed if a considerable amount of work has been done. The date of the last update is next to the file name on the download page.

E. Acquisition Cost

1. Cooperative Agreement

a. Description of Agreement

None

b. Status of Agreement

N/A

2. Cost to Acquire Data

None

III. Integration

A. Value Added Process

1. Benefit to the Service Center

The GNIS ASCII, tabular data is converted to a vector map. Without this, the GNIS data cannot be displayed or analyzed with other geospatial data. If a Service Center wanted to use the GNIS data, it would have to perform the conversion.

2. Process Model

a. Flow Diagram

None-Description follows.

b. Process Description

- Download the GNIS NationalFile_split_1 and NationalFile_split_2 (pipe symbol delimited) files and unzip.
- Due to the large number of records in these files, it's easiest to work in SQL Server rather than MS Access. In SQL Server use the Import and Export Wizard to import the first national file using "flat file source" as the data source. Use all defaults and modify field names and types later. Import the second national file to the same table which by default will append the records.
- Delete all records that have either a 0,0 coordinate or a NULL coordinate.
- Delete all fields marked **delete** below because they are often blank are also not useful
- Modify field names and types to definitions in table below.

ID	Old Name	New Name	Type	Len
1	Feature_ID	GNISID	int	
2	Feature_Name	NAME	varchar	103
3	Class	CLASS	varchar	21
4	Primary_ST_alpha	STATE	char	2
5	Primary_ST_num	FIPSST	char	2
6	Primary_County	COUNTYNAME	varchar	32
7	Primary_County_num	FIPSCO	char	3
8	Primary_lat_DMS	**delete**		
9	Primary_lon_DMS	**delete**		
10	Primary_lat_dec	LATITUDE	decimal	8,5
11	Priamry_lon_dec	LONGITUDE	decimal	8,5
12	Source_ST_alpha	**delete**		
13	Source_lat_DMS	**delete**		
14	Source_lon_DMS	**delete**		
15	Source_lat_dec	**delete**		
16	Source_lon_dec	**delete**		
17	Elevation_Meters	ELEVATION	int	
18	Map_Name	TOPOMAP	varchar	32

- Make a FIPSGNIS field that is a combination of the GNIS state and county FIPS
  1. modify table and add a field named FIPSGNIS that is char with length of 5
  2. update value to [FIPSST]+[FIPSCO]

  "UPDATE GNIS SET GNIS.FIPSGNIS = [FIPSST]+[FIPSCO]"
- Create a SQL Server table of Populated Places by performing a create table query where class = 'Populated Place'.
- Create SQL Server table of Non-Populated Places by performing a create table query where class != 'Populated Place'.
- Use ArcMap to make two shape files, one for Populated Places and one for Non-Populated Places:
  1. Pick Tools/Add XY Data/Pick the SQL Server table/Define the XY field (lon lat) and the coordinate system.

2. Click OK
3. Right click the layer event layer and pick Data/Export data/give a shape file name.

- Use software like the ArcMap Intersect command, an ArcMap script or the program AddFipsField to append a geospatially calculated county FIPS code to each point. The FIPSGNIS has points outside the county incorrectly assigned to the county. ArcMap Intersect, an intersect script or AddFipsField does a geographic assignment. Use the TIGER county map where the county boundary extends out in the water to the international boundary.
- Load to SDE for the GNIS data service.
  1. Use a grid index of: .5 for GNISPOP and .2 for GNISNONP
  2. The projection of -G 4269 NAD83 Lon/Lat
- Use the DBMS to create an index on the FIPS_C field because there are so many rows then use the update_DBMS_Statistics command
- Generate shape files for cataloging by using DataServicesDriver.
  1. Normally the button 'All states using current product' is used to generate the shape files.
  2. Run CatalogFP_Maker for each product and generate the catalog shape files for each product.
  3. Create the Status Maps (link from "Status Maps" page) for each product.
  4. Run MakePreviews for each product to generate the preview images for step 2 of the gateway ordering process. There is no metadata for GNIS so that button is not used.
  5. Make a news file and notify gateway Fort Collins team to load the catalogs, status maps and news.

- For Place Search, load the two .dbf files into SQL Server PlacesMBR database. Change the “CLASS” field name to “TYPE” in the PlacesMBR database ONLY. Leave it called “CLASS” in SDE. Change the GNISID fields back to int in the PlacesMBR database as well. Delete ELEVATION and TOPOMAP fields. The result will look like this:

Column Name	Data Type	Allow Nulls
GNISID	int	Unchecked
NAME	varchar(103)	Unchecked
TYPE	varchar(50)	Unchecked
STATE	char(2)	Unchecked
LATITUDE	decimal(8, 5)	Unchecked
LONGITUDE	Decimal(8, 5)	Unchecked
FIPSGNIS	char(5)	Unchecked
FIPS_C	char(5)	Unchecked
		Unchecked

3. Technical Issues

a. Tiling

Original data is tiled by state or territory. This is changed to a continuous database when it is loaded into SDE.

b. Compression

None.

c. Scale

The GNIS locations are taken from 1:24,000 scale maps. Therefore, the data should not be used at a scale larger than this.

d. Tonal Matching

Not applicable.

e. Edge-matching

Not applicable. Information is point data. When a point is located exactly on a county boundary, it will be located at the identical coordinates on the adjacent county.

4. Quality Control

a. Procedures

A random sample of 10% of the entries in the system were visually verified against the compilation source data (large-scale USGS topographic maps) to ensure an accuracy rate of at least 95%. Locative references (geographic coordinates, topographic map, and county) are cross-checked for logical consistency.

b. Acceptance Criteria

See above.

5. Data Steward

a. Name and Organization

Currently, the data steward for the integrated GNIS data is:

Natural Resources Conservation Service
National Cartography and Geospatial Center
P. O. 6567
501 Felix St., Bldg. 23
Fort Worth, TX 76115-3405

If the integration procedure can be automated, the steward would optimally remain:

Roger L. Payne
US Geological Survey
523 National Center
Reston, VA 20192 USA

rpayne@usgs.gov On Behalf Of gnis_manager@usgs.gov
703.648.4544

b. Responsibilities

The USGS National Mapping Program maintains the system. Each regional mapping center of the USGS, as well as the U.S. Forest Service and National Ocean Service, compiles and electronically transmits names data to the GNIS staff for review and entry into the system. The U.S. Board on Geographic Names transmits information directly to the system concerning new names and the resolution of geographic names

that are in conflict on Federal sources. A series of checks and balances ensures integrity and security so that all users can retrieve and use data with confidence.

If the responsibility of the GNIS data set becomes that of USDA, we will be responsible for updating the USDA version of the data on a periodic basis. This includes re-integrating the data.

B. Integrated Data Structure

1. Geospatial Data Format

a. Format (raster, vector, etc.)

Vector

b. Format Name

ESRI SDE format.

c. Data Extent

US and its territories

d. Horizontal and Vertical Resolution

Same as source data.

e. Absolute Horizontal and Vertical Accuracy

Same as source data.

f. Nominal Scale

Same as source data.

g. Horizontal and Vertical Datum

Same as source data.

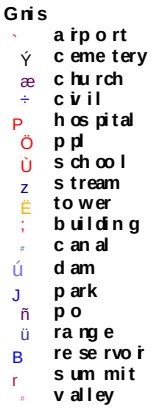
h. Projection

Geographic

i. Coordinate Units

Degrees

j. Symbology



2. Attribute Data Format

a. Format Name

ESRI SDE

b. Database Size

The data per county ranges from approximately 100 to 1000 records

3. Data Model

a. Geospatial Data Structure

ESRI SDE

b. Attribute Data Structure

See below.

c. Database Table Definition

Same as source with the two additional attributes.

ID	Name	Type	Len	Allow Nulls	Description
20	FIPSGNIS	LongInt	5		GNIS five digit state and county fips [FIPSST]+[FIPSCO]
21	FIPS_C	Text	5		Five digit state and county fips from GIS point in polygon process against county map.

d. Data Relationship Definition

There is a single table. The GNISPOP layer is a subset of all populated places from the GNIS theme.

e. Data Dictionary
Same as source.

C. Resource Requirements

1. Hardware and Software

To acquire the GNIS data, it requires a machine with approximately 2 GB of disk.

2. Staffing

It requires one staff member for approximately ½ day to acquire the entire GNIS database from the USGS ftp site.

D. Integration Cost

1. Hardware and Software

To reformat, reproject, and sub-sample the data, the USDA requires:
ArcGIS on UNIX or NT platform
5 GB disk

2. Staffing

The procedure is currently not 100% automated. If it were automated, this procedure would require personnel only to check the results of the procedure. To generate maps for the US and territories with no automation, it would require approximately 2 staff members, familiar with ESRI software, for 2 days.

IV. Delivery

A. Specifications

1. Directory Structure

a. Folder Theme Data is Stored In

F:\geodata

2. File Naming Convention

http://www.itc.nrcs.usda.gov/scdm/docs/SPG-GeospatialDataSetFileNamingStandard.pdf

a. List of Theme Files and The File Naming Convention

Poly Files	
map shp	shp file
map dbf	dbf file
map shx	shx file
map sbn	sbn file
map sbx	sbx file

B. User Information

1. Accuracy Assessment

a. Alignment with Other Theme Geospatial Data

The GNIS locations will be aligned well with other themes captured at the source scale for the populated places. It should be noted by the data user that the largest scale maps available were used during Phase I compilation and the majority of the names were compiled from the 1:24,000-scale, 7.5-minute USGS topographic maps. For areas where no published or advanced 1:24,000-scale maps existed, the 1:62,500-scale maps were used; where there was no coverage by either series of maps, the 1:250,000-scale maps were used. Therefore, the positional accuracy of the GNIS data will vary, depending on the maps available at the location of each feature.

b. Content

Because the place names are determined by the U.S. Board on Geographic Names, they are the most standard names available in the U.S.

2. Appropriate Uses of the Geospatial Data

a. Display Scale

The original data source scale or smaller, usually 1:24,000.

b. Plot Scale

The original data source scale or smaller, usually 1:24,000.

c. Area Calculations

Not applicable. GNIS data is point data.

d. Decision Making
The GNIS feature locations are the approximate centroids of area features, and the start location of linear features. The coordinates should not be used only for approximate calculations.

C. Maintenance and Updating

1. Recommendations and Guidelines

a. Frequency of Updates

In order of preference:

- Extract the data from the USGS clearinghouse node at the time of request for the data. Perform the data integration in an automated fashion. Therefore, no updates are required as USDA would not be the data stewards.
- To coincide with USGS updates, if notification is a possibility
- At a regular interval of 3 months, 6 months or 12 months, depending on budget

b. Location for the Theme Data to be Maintained

In order of preference:

- At the USGS, with USGS as the data steward

- At the USDA data warehouse, potentially in Fort Worth

c. Maintenance and Updating Procedures Overview

Follow the integration procedure listed above for each update if it is not done at the time of request of the data.