

A-16 Cultural Resource Theme Report

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23 March 2017



Cultural Resources Theme (1)

❖ Definition

- Features and characteristics of a collection of places of significance history, architecture, engineering and society. Includes National Monuments and icons.

❖ Supplemental Background

- The National Historic Preservation Act of 1966 created the National Register of Historic Places, State/Tribal Historic Preservation Offices and requires states/tribes/Federal agencies to maintain inventories of cultural resources. These agencies nominate resources from their inventories to the National Register, which serves as a national inventory of the most significant cultural resources. The inventories themselves represent the larger universe of known cultural resources within the United States.

❖ Lead Agency

- National Park Service
 - Theme lead (2): Deidre McCarthy, National Park Service

Associated National Geospatial Data Assets (3)

- ❖ National Register of Historic Places, National Park Service
- ❖ National Map-Geographic Names Information System, USGS

- ❖ National Monuments/Icons, DHS
 - Removed from the theme, 2015
 - No dataset steward identified; determined to be proprietary and derivative data potentially redundant with the National Register
- ❖ Area Landmark (Census 2010), Census
 - Removed from the theme, 2015
 - Dataset steward requested removal as an NGDA based on derivative nature of the data

Theme Leadership and Coordination

❖ Executive Champion (4)

- Stephanie Toothman, National Park Service, Associate Director, Cultural Resources, Partnerships and Science

❖ Coordination (5)

- FGDC Cultural Resource Subcommittee, charter updated in 2013
- Subcommittee Chair: Deidre McCarthy, National Park Service
- Subcommittee membership: 20 land holding Federal agencies, 10 State Historic Preservation Offices, 10 Tribal Historic Preservation Offices, representatives of the National Conference of State Historic Preservation Offices, National Alliance of Tribal Historic Preservation Offices and National Alliance of Preservation Commissions
- Charged with the identification, prioritization, implementation, coordination, and oversight of strategies and tasks required to support the national cultural resource geospatial data theme and to coordinate these activities across Federal geospatial programs
 - Provides the framework for developing cultural resource data standards to facilitate data sharing, in addition to fostering coordination efforts among SHPOs/THPOs and other Federal and state users of historic resource data

Community of Interest (6)

❖ Cultural Resource Subcommittee

- Meets quarterly via teleconference; agendas and minutes available; next regular meeting will be 25 April 2017
- Working primarily on the creation of a cultural resource spatial data transfer standard to facilitate data sharing, at the working draft stage
- Webinar to discuss the standard working draft scheduled for 29 March 2017

❖ Geospatial Platform

- Community page on GeoPlatform is underutilized right now because the subcommittee is used to communicating with each other via email and teleconference
- Plans for use of the Community will expand with the creation of the data exchange standard to help users access it, answer questions and discuss possible changes/adaptations as it gets used

National Register of Historic Places Data Set (7)

The screenshot shows a web browser window displaying the National Register of Historic Places data set. The browser's address bar shows the URL: <https://www.nps.gov/maps/full.html?mapId=7ad17cc9-b808-4ff8-a2f9-a99909164466>. The page title is "National Register of Historic Places" and the subtitle is "Public, non-restricted data depicting National Register spatial data processed by the Cultural Resources GIS facility. Data last updated in April, 2014." The page is part of the National Park Service, U.S. Department of the Interior. The main content is a map of the United States and surrounding regions, with the United States highlighted in orange. The map includes labels for "Canada", "United States", "Mexico", "Cuba", "DO", "BZ", "HN", "NI", "CR", "PA", "Caribbean Sea", "Sargasso Sea", "North Atlantic Ocean", "North Pacific Ocean", "Chukchi Sea", "Bering Sea", "Hudson Bay", "Cabo Verde", "Général", "The Gambia", "España", "Italia", "France", "Switzerland", "AT", "HR", "BE", "CZ", "Deutschland", "UK", "Norge", "Danmark", "IE", "PT", "Tونس", "يورانيا", "قوس". A search bar is located in the top right corner with the text "Find a location" and a magnifying glass icon. A scale bar in the bottom left corner indicates "500 mi". The footer of the page includes links for "Home", "Frequently Asked Questions", "Website Policies", and "Contact Us", along with the text "EXPERIENCE YOUR AMERICA™". The Windows taskbar at the bottom shows the system tray with the time "2:39 PM" and date "3/6/2017".

National Register of Historic Places Data Set (7)

The screenshot shows a web browser window with the following elements:

- Browser Tabs:** Includes "Inbox - deidre_mccarthy", "DEPARTMENT OF THE I...", "Cultural Resources Sub...", "GeoPlatform", "NGDA Cultural Resource", and "National Register of Hist...".
- Address Bar:** Shows the URL "https://www.nps.gov/maps/full.html?mapId=7ad17cc9-b808-4ff8-a2f9-a99909164466".
- Page Header:** Features the title "National Register of Historic Places" and the text "Public, non-restricted data depicting National Register spatial data processed by the Cultural Resources GIS facility. Data last updated in April, 2014." The National Park Service logo and "U.S. Department of the Interior" are also present.
- Map Interface:** A map of the Boston area with red shaded regions and numerous orange dots representing historic places. City names like Lincoln, Belmont, Cambridge, and Boston are visible. A search bar on the right contains "Find a location" and "NPS Light".
- Footer:** Contains navigation links for "Home", "Frequently Asked Questions", "Website Policies", and "Contact Us". It also includes the slogan "EXPERIENCE YOUR AMERICA™" and a system tray with icons for Home, Internet Explorer, File Explorer, Google Chrome, Word, PowerPoint, and Adobe Reader. The system clock shows "2:41 PM 3/6/2017".

National Register of Historic Places Data Set (7)

❖ Area of coverage (8)

- Data set includes point and polygon data for cultural resources in every state and US territory currently
- The data set will continue to grow with the inclusion of new resources nominated by states/tribes/Federal agencies , as required by the National Historic Preservation Act

❖ Data currency (8)

- The NPS National Register Program maintains the authoritative inventory; states and tribes maintain their own inventory specific to their jurisdiction
- The National Register database is in the process of migrating to a new platform. Spatial data in the data set is current as of April 2014, containing approximately 90,000 records

❖ Data Quality (8)

- Point data delineates resources under 10 acres and is based on coordinate pairs submitted with nominations. Points are accurate to a state and county level with approximately 80% accuracy to +/- 12 meters (based on USGS quad map accuracy standards)
- Polygon data delineates resources over 10 acres and is generated from “bounding” coordinate pairs submitted with nominations. Polygons are much less accurate than the points for a number of reasons. Agreements are in place with states and FEMA to improve the quality of the spatial data to provide more accurate polygons.

National Register of Historic Places Data Set (7)

❖ Data acquisition (9)

- National Register spatial data is generated when the National Register program provides updates from the authoritative database. When the database comes back online this would be done on a regular 6 month schedule
- Agreements made with FEMA involve the improvement of polygon boundaries based on the legal description of the boundary in individual nominations and take place on an annual basis
- There is no dedicated funding for the creation, maintenance, correction or improvement of the National Register spatial data
- Approximately 20% of 1 FTE staff time is dedicated to the data set steward role

National Register of Historic Places Data Set (7)

❖ Data lifecycle assessment and management (10)

- Define
 - The National Register spatial data is needed to meet regulatory requirements for all Federal agencies complying with the National Historic Preservation Act, National Environmental Policy Act, Archaeological Resources Protection Act, Antiquities Act among others
 - Resources are determined eligible for the National Register at a local/state/tribal level and go through a nomination and assessment process to be included
 - Sensitive resources are identified and locational information are not released to the general public without consultation
 - Submission and creation of the spatial data is standardized
- Inventory
 - Spatial data may exist at local/state/tribal/Federal agencies where nominations originate; policies are being developed to begin accepting this spatial data in an effort to improve the polygon boundary data
- Obtain
 - Spatial data must meet FGDC data set level metadata standards and NPS feature level metadata standards to document the multiple originating agencies and data creation methods used
 - The spatial extent of the data set is currently the United States and all territories; this will remain the target of the data set

National Register of Historic Places Data Set (7)

❖ Data lifecycle assessment and management (10, 11, 12, 13)

- Access
 - Unrestricted National Register data is available from NPS websites as a download or web feature service; through data.gov and through geoplatform.gov, also as a download or web service
 - Restricted data must be requested through the National Register program
- Maintain
 - Regular updating schedules have been established but are not adhered to due to disrupted communication processes between the National Register program and the data set steward, but will return to a normal procedure when the source database is available again
 - There is an established workflow for spatial data creation and inclusion in the data set
 - Data must be processed through basic QA/QC processes, but there is no established policy to correct the source coordinate pairs or update existing geometry in a formal procedure
- Use
 - Information is readily available through the National Register program, data set level metadata and feature level metadata to describe the appropriate use of the data, document the quality and accuracy of each feature in the data set and confirm any constraints on the use of the data
- Archive
 - The data set will continue to grow over time and will never be “complete” or reach an end stage
 - The data set is stored in multiple formats and in multiple places in safeguard over time

National Register of Historic Places Data Set (7)

❖ Data access and archiving (11, 12)

- Unrestricted National Register data is available to the public through multiple web pages that all point to the same authoritative source data and the same authoritative web feature services
- Restricted data must be requested but can be distributed through multiple internet based tools
- A web viewer is available to browse the spatial data from NPS web pages
- Because the data set is an inventory that will continue to grow as additional resources are determined eligible for the National Register, the data set will never reach an end stage or be completed
- The data is archived on NPS enterprise GIS infrastructure, which is maintained, updated using industry standards

❖ Data availability through GeoPlatform (13)

- Unrestricted National Register data is already available through GeoPlatform via download and web services and will continue to be

Geographic Names Information System (GNIS) (7)

The screenshot shows the USGS National Map Viewer website. The main heading is "Geographic Names". Below the heading is a map of the United States with a blue line indicating a specific geographic feature. To the right of the map is a text block explaining the system. The left sidebar contains various navigation options such as "The National Map Viewer", "About the National Map Viewer", and "Contact the National Map Viewer".

Geographic Names

In support of the United States Board on Geographic Names, the USGS maintains the Federal authoritative source of official geographic feature names, known as the Geographic Names Information System (GNIS). GNIS geographic data and the National Map Viewer display selected feature names, including physical and cultural features such as mountains, rivers, lakes, populated places, tunnels, utilities, churches, and cemeteries. The USGS does not capture the variety of streets or roads, and currently does not define the extent of features, however, it does capture attributes to help determine their suitable extent. For more information and data download and analysis at <http://www.nationalmap.gov/gnis/>.

The USGS Feature ID, Official Feature Name, and Official Feature Location are American National Standards Institute standards as specified in ANSI Z39.18 and ANSI Z39.18-2006 (Identifying and Coding the National Physical and Cultural Geographic Features (Mountains and Highways) of the United States, Its Territories, Possessions, and Freely Associated Areas, and the Features of the Land of the Twelve Tribes (Native Lands)).

The National Map Viewer is the geographic dictionary of domestic feature names allowing users to conduct spatial attribute searches for geographic features based on the current official name, alternate or historical names, feature classifications, state, counties, GNIS geographic codes, and other attributes. It also provides access to key Federal Geographic Data Service (FGDS) data, to display query results in tables, spreadsheets, or

The screenshot shows the USGS Geographic Names Information System (GNIS) Query Form. The form is titled "Query Form For The United States And Its Territories". It includes fields for "Feature Name", "Feature ID", "Date", "County", "State", and "Feature Class". There are also buttons for "Send Query" and "Cancel Query". Below the form is a section titled "GNIS (Geographic Names Information System) Application Link Here for Job Action".

Query Form For The United States And Its Territories

Feature Name:

Feature ID:

Date:

County:

State:

Feature Class:

GNIS (Geographic Names Information System) Application Link Here for Job Action

Web Policy Regarding the Maintenance of Administrative Feature Names in The National Map

Effective October 4, 2011:

As a result of recent budget and personnel decisions, the decision has been made to suspend the maintenance of some administrative, i.e. cultural or historical feature names in The National Map and to discontinue the maintenance of all administrative names through the GNIS public interface at this site (<http://www.nationalmap.gov/gnis/>). The features that will continue to be maintained in The National Map will be updated in Q3/11 or a periodic revision cycle through submissions from authoritative sources or based on input from volunteers through The National Map Code.

If you are interested in participating in the National Map Code which "enables users to submit structure (GNIS) using their features, identifying obsolete points, and collecting missing data for the National Map," please visit the following web site: <http://www.nationalmap.gov/code/> to identify the administrative features to be maintained through The National Map Code program. Also "Structure List" located on the left-hand side of the page.

If you have further questions, please visit The National Map home page at <http://www.nationalmap.gov/>.

Click any field title for help in entering query data

Click **Feature Name** for help in entering query data for important information.

Questions are from the **USGS/FGDC/Geographic Names**.

The USGS Feature ID, Official Feature Name, and Official Feature Location are American National Standards Institute standards as specified in ANSI Z39.18 and ANSI Z39.18-2006. The standards is available at the [ANSI Z39.18](http://www.nationalmap.gov/gnis/) link.

U.S. Department of the Interior, U.S. Geological Survey
2201 Ruppel Drive, Reston, VA 20191, USA
and gnis@usgs.gov
FPO: USGS/FGDC/Geographic Names
2011-10-11 10:11:11
USGS/FGDC/Geographic Names

Geographic Names Information System (GNIS) (7)

❖ Area of coverage (8)

- GNIS includes point data for named geographic features in every state and US territory currently
- The data set will continue to grow with the inclusion of new decisions by the U.S. Board on Geographic Names, and the identification of named features missed during data compilation.

❖ Data currency (8)

- The vast majority of geographic the names and locations data for physical/natural features does not change, therefore that data is current. The monthly decisions by the U.S. Board on Geographic Names (BGN) are reflected in GNIS within three days. As per the USGS National Geospatial (NGP) Policy Directive, geographic names for administrative features are no longer actively maintained; exceptions are features compiled by other NGP programs and conflated with GNIS. These features include airports, bridges, tunnels, hospitals, school, police stations, fire stations, ambulance services, correctional facilities, cemeteries, post offices, and federal lands (ie. National Forests, National Parks, etc.).

❖ Data Quality (8)

- Primary Point data represent the approximate center of point and areal named features, and the mouth of linear features on USGS 1:24,000-scale topographic maps. Source Point data for linear features represent the head of the feature. Secondary Point(s) data represent the location of the feature on adjoining topographic maps if applicable. Points are accurate to +/- 5 seconds, although most are more accurate.

Geographic Names Information System (GNIS) (7)

❖ Data acquisition (9)

- GNIS will continue to grow with the inclusion of new monthly decisions by the U.S. Board on Geographic Names, and the identification of named features missed during data compilation.
- Agreements made with Census involve the notification of newly incorporated populated places and the creation of new Census Designated Places for inclusion in GNIS (the reverse is true for notifying Census of newly named unincorporated populated places).
- The names and locations of administrative features collected by other National Geospatial Program themes are conflated with GNIS.
- Funded through the USGS/ Core Science Systems/ National Geospatial Program budgeting process.
- Approximately 5 FTE staff time is dedicated to the GNIS steward role. This includes the collection of polygons for valleys, summits, ridges, and ranges.

Geographic Names Information System (GNIS) (7)

❖ Data lifecycle assessment and management (10)

- Define

- The Geographic Names Information System (GNIS) dataset (also referred to as The National Map Gazetteer) is the official data repository of the U.S. Board on Geographic Names (“the Board”). Because the Board is the primary customer, primary business needs are defined by the requirements of the Board and supporting staff as reflected in governing directives, policies, and procedures which can be found in Principles, Policies, and Procedures for Domestic Geographic Feature Names. Secondary requirements are defined by participating government agencies through coordination, memoranda of agreement, standards bodies, and other mechanisms.
- The database was originally developed as a mainframe, hierarchical file structure in the late 1970s based on a requirements analysis done at the time. Then the database was redesigned as an Oracle Relational Database Management System (RDBMS) in the early 1990s. The requirements were formally reviewed in 1995/96 pursuant to a redesign of the database and development of new applications. The data were modeled using the Oracle Designer RDBMS tool, capturing entity, attribute, and relationship definitions. The database was generated from that model, retaining the table, column, and constraint definitions.
- A project was completed to integrate the GNIS dataset with The National Map vector geodatabases. As part of that effort, the data model was integrated into the Vector Best Practices UML model (GNIS Data Model), capturing essentially the same structure as before with necessary modifications.

Geographic Names Information System (GNIS) (7)

❖ Data lifecycle assessment and management (10)

- Inventory
 - Data come from a wide range of sources including public input and governmental agencies at any level (federal, state, and local). There are different mechanisms for bringing data into the GNIS database, which include: Transaction data entry, Authorized users have access to an online data entry form which receives batch data in various formats, and Email from the public. Validation processes are associated with all of these methods. Data from any source is validated using the Board standards, as reflected in Board policies, the ANSI Standard, data definitions in the UML model, the design of the data maintenance applications, and in standardized batch file formats (GNIS Data Model). Once the data are in the database they represent the federal and national standard. The process also is cyclical.
- Obtain
 - The original data collection went through several stages – Phase I: Late 70s - Collected data from USGS topographic maps, Phase II: Unknown - Collected data from other sources (including NOAA charts and USFS maps), Phase III: Early 80s – A dedicated collection effort over 30 years by states through contract efforts, Phase IV: (Overlapping Phase III) - For a number of years working on partnerships and stewardships with other federal, state and local entities.

Geographic Names Information System (GNIS) (7)

❖ Data lifecycle assessment and management (10, 11, 12, 13)

- Access
 - Data are available for download as pipe delimited text files within a compressed (.zip) format. GNIS ArcGIS Services (REST, SOAP, WMS, WFS): Provides direct access to the Names layers of The National Map, including display and download capabilities. GNIS XML Service: Provides direct query access to GNIS database by appending query parameters to the URL and returns results in XML format for processing by any user or application.
- Maintain
 - The download files are updated quarterly, and the other delivery services access the dynamic database for the most current data.
- Use
 - Information is readily available through the GNIS website, including via an interactive public query form. The data are also available through The National Map viewer of the National Geospatial Program that points to the same authoritative source and the same authoritative delivery services. Metadata and feature level metadata are accessible at both sites.
- Archive
 - The data set will continue to grow over time and will never be “complete” or reach an end stage
 - An established records schedule in conjunction with the National Archives and Records Administration (NARA) for archiving copies of GNIS.

Geographic Names Information System (GNIS) (7)

- ❖ Data availability through GeoPlatform (13)
 - GNIS data is already available through GeoPlatform via download and web services and will continue to be

Questions?

❖ Contact information

- ❖ Deidre McCarthy (Theme lead)
 - Deidre_mccarthy@nps.gov
- ❖ Matt Stutts (National Register of Historic Places data steward)
 - Matthew_stutts@nps.gov
- ❖ Lou Yost (Geographic Names data steward)
 - lyost@usgs.gov