



Latest FGDC NGDA Theme Vote Action: August 7, 2020

Note: This document has been superseded by a newer version.

[OMB Circular A-16](#), *Coordination of Geographic Information and Related Spatial Data Activities, 2002 Revised*, included an Appendix E: National Geospatial Data Infrastructure (NSDI) Data Themes. [OMB Circular A-16 Supplemental Guidance](#), November 2010, provides guidance for implementing a structure of National Geospatial Data Assets (NGDAs) that updates the data themes list in Appendix E. The [Geospatial Data Act of 2018](#) directs the FGDC to designate National Geospatial Data Asset data themes. The list of NGDA Themes, definitions, and lead agencies, as approved by the FGDC, are listed below. A revision history of FGDC approved changes is included on the last page.

NGDA Theme	NGDA Theme Description	Theme Lead Agency(ies)
Address	The Address Theme consists of the data elements, attributes, and metadata that specify a fixed geographic location by reference to a thoroughfare or landmark, or specify a point of postal delivery, or both. The address theme does not include information about occupants or addressees nor does it include the attribute information about any features that may be specified by an address point. The address theme may include linkages to these feature attributes and other location reference methods.	Department of Commerce, U.S. Census Bureau AND Dept. of Transportation
Biodiversity and Ecosystems	Pertain to, or describes the dynamic processes, interactions, distributions, and relationships between and among organisms and their environments.	Dept. of the Interior, U.S. Geological Survey
*Cadastre	Past, current, and future rights and interests in real property including the spatial information necessary to describe geographic extents. Rights and interests are benefits or enjoyment in real property that can be conveyed, transferred, or otherwise allocated to another for economic remuneration. Rights and interests are recorded in land record documents. The spatial information necessary to describe geographic extents includes surveys and legal description frameworks such as the Public Land Survey System, as well as parcel-by-parcel surveys and descriptions. Does not include Federal government or military facilities.	Dept. of the Interior, Bureau of Land Management
Climate and Weather	Meteorological conditions, including temperature, precipitation, and wind that characteristically prevail in a particular region over a long period of time. Weather is the state of the atmosphere at a given time and place, with respect to variables such as temperature, moisture, wind velocity, and barometric pressure.	Dept. of Commerce, National Oceanic and Atmospheric Administration
Cultural Resources	Features and characteristics of a collection of places of significance in history, architecture, engineering, or society. Includes National Monuments and Icons.	Dept. of the Interior, National Park Service
*Elevation	The measured vertical position of the earth surface and other landscape or bathymetric features relative to a reference datum typically related to sea level. These points normally describe bare earth positions but may also describe the top surface of buildings and other objects, vegetation structure, or submerged objects. Elevation data can be stored as a three-dimensional array or as a continuous surface such as a raster, triangulated irregular network, or contours. Elevation data may also be represented in other derivative forms such as slope, aspect, ridge and drainage lines, and shaded relief.	Dept. of the Interior, U.S. Geological Survey , AND Dept. of Commerce, National Oceanic and Atmospheric Administration
*Geodetic Control	Survey control points or other related data sets which are accurately tied to the National Spatial Reference System (the official, common federal system for establishing coordinates for geospatial data that are consistent nationwide). Geodetic control examples include: passive geodetic control marks, active geodetic observing systems, data from Global Navigation Satellite Systems (e.g., GPS), gravity measurements, and models of the earth's gravity field (geoid).	Dept. of Commerce, National Oceanic and Atmospheric Administration



NGDA Theme	NGDA Theme Description	Theme Lead Agency(ies)
Geology	Geographically-referenced data pertaining to the origin, history, composition, structure, features, and processes of the solid Earth, both onshore and offshore. Includes geologic, geophysical, and geochemical maps, stratigraphy, paleontology, geochronology, mineral and energy resources, and natural hazards such as earthquakes, volcanic eruptions, coastal erosion, and landslides. Does not include soils.	Dept. of the Interior, U.S. Geological Survey AND Bureau of Ocean Energy Management
*Governmental Units, and Administrative and Statistical Boundaries	Boundaries that delineate geographic areas for uses such as governance and the general provision of services (e.g., States, American Indian reservations, counties, cities, towns, etc.), administration and/or for a specific purpose (e.g., Congressional Districts, school districts, fire districts, Alaska Native Regional Corporations, etc.), and/or provision of statistical data (census tracts, census blocks, metropolitan and micropolitan statistical areas, etc.). Boundaries for these various types of geographic areas are either defined through a documented legal description or through criteria and guidelines. Other boundaries may include international limits, those of federal land ownership, the extent of administrative regions for various federal agencies, as well as the jurisdictional offshore limits of U.S. sovereignty. Boundaries associated solely with natural resources and/or cultural entities are excluded from this theme and are included in the appropriate subject themes.	Department of Commerce, U.S. Census Bureau
*Imagery	Georeferenced images of the Earth's surface, which have been collected via aerial photography or satellite data. Orthoimagery is prepared through a geometric correction process known as orthorectification to remove image displacements due to relief and sensor characteristics, allowing their use as base maps for digital mapping and analyses in a GIS. Specific imagery data sets created through image interpretation and classification, such as a land cover image, can be found under themes specific to the subject matter. Includes imagery such as Landsat, National Agriculture Imagery Program (NAIP), Digital Orthophoto Quarter Quadrangles (DOQQs).	Dept. of Agriculture, Farm Service Agency AND Dept. of the Interior, U.S. Geological Survey
International Boundaries	International boundaries delineate the geographic extent of sovereignty of foreign areas as understood by the United States. These boundaries between sovereign states, political entities, and other special geographic areas have distinct foreign policy implications for the United States, as determined by the Department of State. The representation of these boundaries must, when possible, follow the legal instruments that create them and must mirror United States Government foreign policy relative to recognition, dispute status, and depiction. International boundary data includes both textual information to describe, and GIS digital cartographic data to depict, foreign land and maritime international boundaries, other lines of separation, limits, zones, enclaves/exclaves and special areas between sovereign states and dependencies. The international boundaries between the United States and Mexico and the United States and Canada are excluded from this theme. Boundaries associated with internal administrative divisions of a foreign sovereign state do not fall within this theme.	Dept. of State
Land Use-Land Cover	LU/LC is a term referring collectively to natural and man-made surface features that cover the land (Land Cover) and to the primary ways in which land cover is used by humans (Land Use). Examples of Land Cover may be grass, asphalt, trees, bare ground, water, etc. Examples of Land Use may be urban, agricultural, ranges, and forest areas.	Dept. of Agriculture, U.S. Forest Service AND Dept. of the Interior, U.S. Geological Survey
Real Property	The spatial representation (location) of real property entities, typically consisting of one or more of the following: unimproved land, a building, a structure, site improvements and the underlying land. Complex real property entities (that is "facilities") are used for a broad spectrum of functions or missions. This theme focuses on spatial representation of real property assets only and does not seek to describe special purpose functions of real property such as those found in the Cultural Resources, Transportation, or Utilities themes.	General Services Administration General Services Administration

NGDA Theme	NGDA Theme Description	Theme Lead Agency(ies)
Soils	Depicts the geography and attributes of the many kinds of soils found in the landscape at both large and small map scales. A Living dynamic resource providing a natural medium for plant growth and habitat for living organisms, soil recycles nutrients and wastes, stores carbon, and purifies water supplies. Soil has distinct layers (called 'horizons') that, in contrast to underlying geologic material, are altered by the interactions of climate, landscape features, and living organisms over time. For more information on Soils, see http://soils.usda.gov/	Dept. of Agriculture, Natural Resources Conservation Service
*Transportation	Means and aids for conveying persons and/or goods. The transportation system includes both physical and non-physical components related to all modes of travel that allow the movement of goods and people between locations.	Dept. of Transportation
Utilities	Means, aids, and usage of facilities for producing, conveying, distributing, processing or disposing of public and private commodities including power, energy, communications, natural gas, and water. Includes sub themes for Energy, Drinking water and Water treatment, and Communications.	Offshore Utilities: Dept. of the Interior, Bureau of Safety and Environmental Enforcement AND Terrestrial Utilities ¹ : To be determined
*Water – Inland	Interior hydrologic features and characteristics, including classification, measurements, location, and extent. Includes aquifers, watersheds, wetlands, navigation, water quality, water quantity, and groundwater information.	Dept. of the Interior, U.S. Geological Survey AND U.S. Fish and Wildlife Service
*Water – Oceans and Coasts	Features and characteristics of salt water bodies (i.e. tides, tidal waves, coastal information, reefs) and features and characteristics that represent the intersection of the land with the water surface (i.e. shorelines), the lines from which the territorial sea and other maritime zones are measured (i.e. baseline maritime) and lands covered by water at any stage of the tide (i.e. Outer Continental Shelf), as distinguished from tidelands, which are attached to the mainland or an island and cover and uncover with the tide.	Dept. of Commerce, National Oceanic and Atmospheric Administration

*Indicates Framework theme

¹ BSEE proposed to lead the Offshore portion of the Utilities Theme as it aligns to their mission. A Theme Co-Lead for Terrestrial Utilities has not been identified.

Revision history	FGDC Approval Date
National Geospatial Data Asset (NGDA) Data Themes list with theme descriptions and theme leads agencies as endorsed by the FGDC Steering Committee with concurrence from OMB	August 19, 2002
Revised the original list of 34 Themes to 16 Themes	August 19, 2011
"Governmental Units" Theme name changed to "Governmental Units, and Administrative and Statistical Boundaries" Theme	February 1, 2013
Framework indication added	June 29, 2015
"Biota" Theme name changed to "Biodiversity and Ecosystems" Theme	June 16, 2016
Address Theme added as 17 th Theme	August 8, 2016
Address Theme definition approved	March 30, 2017
International Boundaries Theme added as 18 th Theme	August 7, 2020