ESRI® Data & Maps 9.3

ESRI Data & Maps 9.3

An ESRI White Paper

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ESRI Data & Maps 9.3

Overview   ESRI® Data & Maps 9.3 is an annual set of map data that is bundled with ArcGIS® software products. It is preconfigured to work with ESRI's software products and contains many types of map data at many scales of geography from several sources including commercial and government. It is organized on five DVDs. For 9.3, there are new and updated datasets, map documents, and metadata. There have been many changes in all areas of ESRI Data & Maps 9.3. The most significant change is the addition of the StreetMap™ North America dataset, which includes 2003 Tele Atlas® streets for North America as well as current Tele Atlas North America basemap data. This dataset replaces the TIGER 2000-based StreetMap USA dataset and the Canada dataset.

The five *ESRI Data & Maps* discs contain World, Europe, Mexico, United States, StreetMap North America (NA), global digital elevation model, global imagery, global shaded relief, and worldwide elevation and image datasets. The *ESRI Data & Maps and StreetMap North America* DVD contains World, Europe, Mexico, United States, and StreetMap NA datasets in vector format. The other four DVDs include all the elevation and image datasets in raster and vector formats. The entire set of map data can be read directly from the DVDs. Each dataset has a metadata file (.xml) that provides content, quality, and other characteristics. The metadata can be viewed in ArcGIS and used with the ArcIMS® Metadata Server. A stand-alone Hypertext Markup Language (HTML)-based help system is provided on the discs, providing help topics on the contents of ESRI Data & Maps and StreetMap North America.

A brief description of each disc that comprises ESRI Data & Maps 9.3 follows.

- The *ESRI Data & Maps—Data & Maps and StreetMap North America* DVD contains the StreetMap NA datasets and files that include data covering United States and Canada as well as the world, Europe, Mexico, and United States data.

- The *ESRI Data & Maps—Global Imagery and Shaded Relief: North and South America* DVD contains global imagery raster data at 150-meter resolution, global shaded relief derived from the Shuttle Radar Topography Mission (SRTM) and GTOPO30 global digital elevation models, and water bodies from SRTM and GTOPO30 for North and South America.

- The *ESRI Data & Maps—Global Imagery and Shaded Relief: Europe and Africa* DVD contains global imagery raster data at 150-meter resolution, global shaded relief derived from the SRTM and GTOPO30 global digital elevation models, and water bodies from SRTM and GTOPO30 for Europe and Africa.

- The *ESRI Data & Maps—Global Imagery and Shaded Relief: Asia and Australia* DVD contains global imagery raster data at 150-meter resolution, global shaded relief derived from the SRTM and GTOPO30 global digital elevation models, and water bodies from SRTM and GTOPO30 for Asia and Australia.

- The *ESRI Data & Maps—Elevation and Image Data: World* DVD contains the SRTM global digital elevation model, GTOPO30 global digital elevation model, water bodies from SRTM and GTOPO30, SRTM void areas, two index datasets, and other worldwide elevation and image datasets.

In addition, these DVDs contain the ESRI Data & Maps and StreetMap North America HTML-based help system, map documents (.mxd), group layers (.lyr), published map files (.pmf), and background folders. The four elevation and image DVDs also contain a stand-alone Data & Maps Elevation Data HTML-based help system.

The ESRI Data & Maps and StreetMap North America HTML-based help system provides help topics about ESRI Data & Maps, what is new, redistribution rights, and using the StreetMap functionality and StreetMap NA data. Please review the redistribution rights help topic before redistributing any datasets.

What's New   The most significant change for ESRI Data & Maps 9.3 is the addition of the StreetMap North America dataset, which includes 2003 Tele Atlas streets for North America as well as current Tele Atlas North America basemap data. This dataset replaces the TIGER 2000-based StreetMap USA dataset and the Canada dataset. In the United States, the 110th congressional districts set was added, and many datasets were updated to their most current versions. This includes all Tele Atlas census boundary and landmark layers as well as all Geographic Names Information System (GNIS) cultural points. At the world level, a new Census International Programs Center (IPC) Demographics table was added to include many statistics for 2007. In addition, countries have been updated to reflect the current political state of the world and country population values were updated to 2007. For Europe, the AND International Publishers N.V. basemap layers have been updated as well as the socioeconomic and demographic thematic data at the Nomenclature des Unités Territoriales Statistiques (NUTS) 0, 1, 2, and 3 levels. In Mexico, many of the data layers have been updated. A variety of minor corrections and enhancements were also made to many of the other Data & Maps 9.3 datasets.

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Geographies   The geographies—World, Europe, Mexico, United States, and StreetMap NA (that includes United States and Canada)—plus the geographies on the *ESRI Data & Maps— Elevation and Image Data: World* DVD and the three *ESRI Data & Maps—Global Imagery and Shaded Relief* DVDs are provided with map documents, group layers, published map files, and background folders. World, Europe, Mexico, United States, and StreetMap NA geographies also have ArcXML™ files. The group layer contains the geography's datasets, which are symbolized and labeled for display at scales ranging from nationwide to local areas. The map document contains the same group layer prepackaged within an existing map document. The published map file is a published version of the map document provided for ArcReader™ users. The background folder contains additional datasets that support the map documents and group layers. The ArcXML file is provided for ArcIMS Route Server users.

The vector and table datasets are in Smart Data Compression (SDC) 2 format. The nonvector datasets are in ESRI ArcGrid™ format and various image formats such as JPEG 2000. Each dataset has a metadata document providing complete documentation for the dataset as well as one or more associated ArcGIS layer files displaying symbols and classifications for the dataset. Each SDC dataset also includes a projection file (.prj) storing the coordinate system information. Each dataset may also have other supporting files.

ESRI Data & Maps contains many types of map data at many scales of geography and is useful for general-purpose basemaps and for more specific uses. Whether you need to create basemaps, conduct market analysis, or profile your customers, it provides accurate data to meet your needs. The data can make a new user productive and the software useful as soon as it is installed. For each geography included, the significant basemap layers are boundaries, cities, rivers, and roads. This basemap information is available for the world, StreetMap NA, Europe, Mexico, and the United States. In addition, where possible, demographic data is provided for subnational boundaries such as states, counties, or their equivalents. All datasets are in the World Geodetic System of 1984 (WGS84) datum.

World   For the world, there are cities, countries, country demographics, subcountry administrative boundaries, and reference datasets. Many helpful world reference datasets include time zones, universal transverse Mercator (UTM) zones, gazetteers, continents, regions, country and subcountry administrative boundary lines, water features, latitude and longitude grids, a map background, and country memberships in political organizations (table). World datasets of special interest include World Ecoregions from the World Wildlife Fund® Conservation Science Program and World Census IPC Demographics (table) with more than 40 attributes on geography, population, social indicators, economy, energy, and the environment.

Europe   Data for Europe includes 15 basemap layers from AND International Publishers N.V. and four map layers of socioeconomic and demographic data at the NUTS 0, 1, 2, and 3 levels from Michael Bauer Research GmbH and EuroGeographics.

The AND data is a comprehensive set of basemap data for Europe from large-scale source materials that provides high-quality layers for cartographic presentation and basic geographic analysis. This data includes country and province boundaries, water features, cities, urbanized areas, a connected road network, railroads, railroad stations, ferries, and thousands of named places.

The NUTS 0-, 1-, 2-, and 3-level datasets result from socioeconomic and demographic data collected across Europe by Michael Bauer Research with the boundary data provided

by Michael Bauer Research and EuroGeographics. Michael Bauer Research established the data by reviewing relevant regional data and projecting the respective trends. To provide the best possible value to the user regarding comparability, all country results were projected by mathematical methods to the required geographic level, homogeneous base years, categories (e.g., age bands), and currency (Euro). The datasets provide attributes for name, NUTS codes, population size, population by sex, population by age groups, households, average number of persons per household, population density and growth, stock of dwellings, purchasing power, gross domestic product, number employed, and area.

Mexico
For Mexico, data from Sistemas de Información Geográfica, S.A. de C.V. (SIGSA), provides nine datasets covering Mexico with great detail. The datasets include states, cities, municipalities, urban areas, roads, railroads, rivers and streams, water bodies, and contours.

United States
A large amount of data is included for the United States. United States refers to the 50 states and the District of Columbia, with nearly half of the datasets containing Puerto Rico and many featuring U.S. Virgin Islands, commonwealths, territories, and freely associated states. There are 65 datasets for the United States organized into the five categories—census, hydrography, landmarks, transportation, and other—plus the StreetMap NA data (includes datasets for U.S. and Canada) in addition to these five categories.

Census
For the census category, the following datasets are included: U.S. Census tracts, block groups, block centroid populations, urbanized areas, and feature class codes; state and county boundaries, boundary lines, and generalized versions of these boundaries; cities, populated place areas, and points; core-based statistical areas (CBSA); ZIP Codes (five-digit areas, three-digit areas, and five-digit points); 109th and 110th congressional districts; 2000 and 1990 county population estimates; telephone area code boundaries; and *National Atlas of the United States* cities and urbanized areas.

Note that all layers of census geography are derived originally from Census 2000. Counties and core-based statistical areas are derived from 2002 census TIGER/Line® boundaries. All census-derived attributes are from U.S. Census 2000 Summary File 1 (SF1) and/or Census 2000 TIGER/Line documentation.

Hydrography
For the hydrography category, the following datasets are included: drainage systems, lakes, and rivers; rivers, streams, and water bodies from the National Hydrography Dataset; and *National Atlas of the United States* water feature lines and areas.

Landmarks
For the landmarks category, the following datasets are included: major parks and Health Forum American Hospital Association (AHA) Annual Survey Database hospital locations; GNIS cultural and physical points of buildings, cemeteries, churches, golf locales, hospitals, locales, populated places, schools, and summits; Tele Atlas institutions, large-area landmarks, parks, and recreation areas; and *National Atlas of the United States* historic earthquakes and volcanoes.

Transportation
For the transportation category, the following datasets are included: highways, major highways, and major roads; Tele Atlas airports and transportation terminals; *National Atlas of the United States* airports; and National Transportation Atlas interstate highways and railroads.

Other
For the other category, the following datasets are included: NAD 1983 and 1927 state plane zones; *National Atlas of the United States* federal land lines, federal and Indian

land areas, and public land survey; and United States Geological Survey (USGS) Topographic Quadrangle Series indexes (1:24,000, 1:100,000, and 1:250,000).

Boundaries
Boundaries for the United States include state and county boundaries, boundary lines, and generalized versions of these boundaries; CBSA and ZIP Code™ boundaries; and U.S. Census Bureau census tracts, block groups, and urbanized areas. A selection of Census 2000 attributes from SF1 is included with basic demographic information for state and county boundaries and U.S. Census Bureau census tracts and block groups. In addition, 2007 population estimates from ESRI Community™ Data are included for each of these boundary datasets to enable basic evaluation of growth and decline for an area as small as a neighborhood. Attributes from the 1997 Census of Agriculture from the U.S. Department of Agriculture (USDA) are provided for states and counties. For the most detailed assessment of where people live, block centroids and their 2000 populations are included for the more than eight million census blocks.

Basemaps
Basemap information for the United States includes the detailed boundary datasets as well as cities, populated places, and a number of line and point feature sources. A detailed look at the transportation network is provided by the major roads from Tele Atlas that include interstate, federal, and state highways; highways and major highways from Census 2000 TIGER/Line files; and railroads from the National Transportation Atlas. More than three million water features from the National Hydrography Dataset are provided in two national datasets for a detailed and comprehensive water reference. Water bodies that include lakes as small as six acres and rivers as narrow as 100 feet wide are represented as polygons. Rivers and streams are interconnected, including through bodies of water, and in general include streams longer than one mile. In contrast, with each generalized for small-scale maps, there are the drainage systems, lakes, and rivers datasets.

Cultural, Administrative, and Other
Ten datasets incorporating cultural, administrative, and natural geographic content from the *National Atlas of the United States* are included, and many contain data for Puerto Rico and the U.S. Virgin Islands. The cultural datasets include airports, cities and towns, and urbanized areas. The administrative datasets include federal and Indian lands (e.g., Bureau of Indian Affairs, Department of Defense, and Tennessee Valley Authority), linear federally owned land features (e.g., national parkways and wild and scenic rivers), and public land survey (e.g., donated lands, land grants, and private and public surveys of public lands). The natural datasets include linear water features (e.g., aqueducts, canals, intracoastal waterways, and streams), areal water features (e.g., bays, glaciers, lakes, and swamps), historic earthquakes, and volcanoes.

Other data for the United States includes airports, 109th and 110th congressional districts, state plane zones, USGS Topographic Quadrangle Series indexes, parks, and large-area landmarks. Airports include airport boundaries and the layout of the runways of the airports. The congressional districts represent the boundaries for the U.S. congressional districts. State plane zones show approximations of the actual state plane coordinate system zone boundaries for each datum. Topographic Quadrangle Series indexes represent the geographic extents of the 1:24,000, 1:100,000, and 1:250,000 USGS topographic maps. Parks identify large units of public land including all national parks, national forests, most state parks, and a number of local parks. Large-area landmarks include boundaries such as military areas, prisons, and educational institutions.

Point features include U.S. Census block centroid populations, hospitals from the Health Forum AHA Annual Survey Database, landmark locations from Tele Atlas, cultural and physical features from USGS, and population and housing data from U.S. Census 2000 SF1. Tele Atlas institutions, transportation terminals, and recreation areas are named

locations and can be used for reference when making a map of an urban area. The latest cultural and physical features from the USGS Geographic Names Information System are divided into nine datasets because of the number of features involved. The completeness of this data is dependent on the currency of the map the features were drawn from, but often this data can be a source of features that are not found in other locations. U.S. Census 2000 SF1 was used to create cities and populated places.

Each year, ESRI Data & Maps includes the latest data from Tele Atlas North America, Inc. This includes states; counties; core-based statistical areas; populated place areas; ZIP Codes (five-digit, three-digit, and points); census tracts, block groups, and block centroid populations; telephone area codes; institutions; large-area landmarks; parks; recreation areas; airports; major roads; and transportation terminals. Note that the 2008 data will be released in the ESRI Data & Maps Data Update later this year.

StreetMap North America

StreetMap North America includes 2003 Tele Atlas streets for North America as well as current Tele Atlas North America basemap data. There are 27 datasets, of which 25 contain both U.S. and Canada data, and two contain only U.S. data. ESRI Data & Maps 9.3 provides Canada data only as part of StreetMap North America. The datasets include detailed streets, streets with a reduced feature and attribute set for cartographic display, highway exits, street and highway maneuvers, states and provinces, counties and county boundaries, postal areas and points, highways, major roads, interstate highways, railroads, city areas and points, water features, institutions, large area landmarks, parks, recreation areas, retail centers, airports, and transportation terminals.

Twelve of the datasets have multiple feature classes that provide several levels of generalization for displaying the data at different scales. Everything about each dataset's feature class is the same except the level of generalization and its name. For best performance, use the most appropriate generalized level when displaying or printing.

Elevation and Image Data—SRTM, GTOPO30, and Other

ESRI Data & Maps includes approximately 20 GB of elevation and image data organized on four DVDs. The majority of this data, added to ESRI Data & Maps in 2006, is derived from the National Aeronautics and Space Administration (NASA) and National Geospatial-Intelligence Agency (NGA) 3-arc-second (90-meter) SRTM dataset, distributed by USGS Earth Resources Observation and Science (EROS) Data Center. The version of the SRTM data used by ESRI for processing is the version 2 "Finished" data that NGA created by subsampling the SRTM 1-arc-second data. The SRTM data includes a global digital elevation model with all void areas filled, shaded relief derived from the digital elevation model, void areas that reveal where ESRI filled the void areas in the original source SRTM 3-arc-second data, and water bodies. GTOPO30 data was used to complete the global digital elevation model (DEM). Much effort was applied to correct elevation data voids and provide complete coverage of the globe. In addition, many of the raster datasets included in 2005, such as the Global Imagery 150-meter Resolution and World WorldSat Color Shaded Relief, have been carried over to 9.3.

SRTM Global Digital Elevation Model represents an elevation map with all void areas filled by ESRI from the NASA/NGA SRTM datasets between 60 degrees north and 56 degrees south latitude for geographic visualization on regional, national, and subnational scales. The resolution is 3 arc seconds (90 meters), and the pixel values represent the elevation in meters. SRTM Shaded Relief represents a shaded relief map of the world derived from the SRTM global DEM. SRTM Void Areas represents those areas without elevation values within the original source SRTM 3-arc-second data. These void areas are a result of radar shadow, layover, and other effects of terrain as well as technical radar interferometry phase unwrapping issues. Elevation values for these areas in the SRTM global DEM were estimated (i.e., filled in) by ESRI using the Delta Surface Fill

(DSF) method with GTOPO30 data as the fill-in source. SRTM Water Bodies represents the lakes, rivers, and oceans from the SRTM global DEM. Elevation values within lakes and oceans were set to be a constant elevation for each feature. Elevation values within river areas were set to ensure the proper flow direction.

GTOPO30 data completes the areas of the globe (north of 60 degrees north and south of 56 degrees south latitude) not covered by the SRTM coverage area for the global digital elevation model, shaded relief, and water bodies datasets. GTOPO30 data was developed by the USGS EROS Data Center in 1996 from a variety of data sources. For the non-SRTM coverage area of the world, GTOPO30 Global Digital Elevation Model represents gridded 30-arc-second (approximately 1 kilometer) elevation, GTOPO30 Shaded Relief represents a basemap layer displaying shaded relief information, and GTOPO30 Water Bodies represents the lakes, rivers, and oceans. The GTOPO30 Source Index represents the geographic extents of the data sources used to create the GTOPO30 digital elevation model.

As a result of the data storage requirements for the SRTM and GTOPO30 datasets and to best organize them, the datasets are compressed and split into a 12-tile scheme with three columns and four rows. The Global Elevation Index represents the geographic extent of the SRTM and GTOPO30 tiled datasets (see the Global Elevation Tiling Scheme section below for more information). The SRTM global DEM is compressed using lossy JPEG 2000 compression, and the GTOPO30 global DEM is compressed using lossless JPEG 2000 compression. Note that datasets compressed in this way should be used for geographic visualization purposes and not analytic purposes, as the accuracy of the results is reduced.

Global Imagery 150-Meter Resolution is EarthSat® natural-color, Landsat® 7-derived, 150-meter (492 foot) resolution global imagery covering the entire land area of the earth except the high-latitude polar regions and Antarctica. Because of the size of this dataset, it is divided, by continent or partial continent, into eight areas. Although these files do not follow the same tiling scheme as the SRTM-related datasets, they are separated into the same general North and South America, Europe and Africa, and Asia and Australia regions.

The worldwide elevation and image datasets also include Global Digital Elevation Model (ETOPO2), Global Digital Elevation Model (GTOPO30), and World Topography and Bathymetry. These datasets provide basemap layers for displaying elevation for geographic analysis on global, continental, and national scales. Global Digital Elevation Model (ETOPO2) is from the National Geophysical Data Center (NGDC) in 2001. Global Digital Elevation Model (GTOPO30) is from the USGS EROS Data Center. Four wonderful images from the NASA Visible Earth program are World Cloud Free, World at Night, World with Clouds, and World with Ice. Each results from mosaicking hundreds of individual satellite images into a complete image of the earth. ESRI georeferenced these datasets to a real-world coordinate system. World WorldSat Color Shaded Relief provides land and ocean floor relief at a cell size of four square kilometers (at the equator).

StreetMap North America Data, StreetMap Functionality, and Help

StreetMap North America is a dataset in SDC format that provides streets display, routing, and geocoding for the United States and Canada. It contains both 2003 Tele Atlas streets that were prepared for routing within the StreetMap Find Route dialog box and Tele Atlas North America basemap data. The StreetMap North America dataset is provided in the ESRI Data & Maps Media Kit on the *ESRI Data & Maps and StreetMap North America* DVD.

StreetMap North America consists of two parts—the data known as StreetMap NA and the StreetMap functionality (formerly an extension) that is part of the core functionality of ArcGIS. This dataset replaces the TIGER 2000-based StreetMap USA dataset and the Canada dataset. To use the entire StreetMap North America dataset for display in ArcMap™, open the StreetMap North America map document (.mxd), which can be found in the \streetmap_na folder. Using StreetMap NA and ArcGIS StreetMap functionality, users can find addresses, quickly create intelligent maps, and perform simple point-to-point or optimized routing across nationwide (U.S. and Canada) street networks.

The StreetMap functionality in ArcGIS provides U.S. domestic and international routing and address geocoding capabilities when used with datasets created specifically for StreetMap. The StreetMap Find Route dialog box, which can be opened through the StreetMap toolbar, allows you to define stops by geocoding or by clicking points on the map. You can then create routes between these stops using a variety of options and view the driving directions for these routes.

For more information, the ESRI Data & Maps and StreetMap North America HTML-based help system provides help topics on using the StreetMap functionality, the StreetMap NA data, and its redistribution rights. Open the help.htm file located on any DVD to view the help topics. Additional information about the StreetMap NA data and its redistribution rights is available in the metadata documentation for each dataset (.xml).

StreetMap North America Map Document

The StreetMap North America map document is an integrated interactive map display that serves as a general purpose basemap of United States and Canada for performing routing, geocoding, and cartographic display of the StreetMap North America data. The .mxd supports seamless panning and zooming from the full United States and Canada extent down to the detailed streets level. It displays various road categories, such as interstate highways and local roads, as well as other features including state and province boundaries, lakes, landmarks, and airports.

The StreetMap North America table of contents is mainly organized into thematic group layers such as Roads, Water, and Landmarks. Then, within each thematic group, the data layers are organized according to their usable scale range. Typically, there are three or four scale-dependent datasets within each thematic group layer, for example, interstates, highways, and local streets. These layers provide feature density, level of generalization, symbolization, and labeling for each scale range. For convenience, these scale ranges are given names that indicate the level at which they are displayed.

This thematic approach to layer organization allows all the layers of the same type to be contained within a single group layer. The thematic group layers can be easily expanded to show the various datasets arranged by display scale. This permits an entire thematic group to be turned on or off with a single click. The scale-dependent layers within a thematic group can also be individually turned on and off. For example, you can turn off the entire Landmarks group layer or just turn off the Major Cities layer.

Dynamic label placement is used throughout the entire StreetMap North America.mxd. The labeling is scale dependent and based on size or importance. A label flag field has been added to many layers to improve labeling options. The label flag field determines whether a city name or administrative unit name is also present in another dataset. This flag field is used to reduce the duplicate names in map displays containing layers with some duplicate name information. Note that for some layers, label classes have been defined but are not turned on.

The streets data has been presorted to draw the road classes in the correct order for cartographic display. The ArcGIS 9 Layer Drawing Option (LDO) has been implemented for a number of individual layers. These include city points, landmark points, and streets. The data frame-based Advanced Drawing Option (ADO) is not utilized for the StreetMap North America.mxd. If you want to use the ADO to alter the cartographic appearance, you can access this command by right-clicking in the data frame or on the data frame name in the table of contents.

You can zoom to any area of the StreetMap North America map document and convert the compressed street data into other types of feature classes such as shapefiles, personal geodatabases, or file geodatabases.

Using StreetMap North America

StreetMap North America provides a map document, group layer, published map file, and ArcXML file; address locators and routing service; and all the associated StreetMap NA datasets for these files to work within ArcGIS 9.3.

The StreetMap North America dataset provides an ArcMap document (StreetMap North America.mxd) that contains the StreetMap North America group layer for routing and geocoding. If you open the StreetMap North America.mxd file with ArcMap, you'll see the StreetMap North America layers in the table of contents. It contains many different layers (e.g., Major Cities, Major Roads, and State and Province Boundaries) within the major group layers (e.g., City Points, Roads, and Administrative Units). The StreetMap North America layers provide different levels of detail at different scales.

The group layer (StreetMap North America.lyr) contains many layers that have been symbolized and labeled for display at several useful scale ranges. The layers display the appropriate types of features within each scale range. The map document (StreetMap North America.mxd) includes the same group layer prepackaged within an existing map document. The published map file (StreetMap North America.pmf) is a published version of the map document provided for ArcReader users. The ArcXML file (StreetMap North America.axl) is provided for ArcIMS Route Server users.

The StreetMap North America layers are defined with default scales that display the appropriate types of features. When the StreetMap North America.mxd is opened or the StreetMap North America group layer file is added in ArcMap, a map of the United States and Canada is displayed. The map shows the state and province boundaries, interstate highways, major cities, and water bodies. You can click an area or drag a box on the map using the Zoom In tool. ArcMap displays a map of the specified area and draws the default set of features.

Zooming in on the map or changing the view scale changes the map content if it reaches a different level of detail. For example, at the local level, ArcMap will draw the city map with more details including local streets, highways, urban areas, and airports. Default colors, symbols, and label fonts will be applied to the features accordingly.

You can change the settings, add new layers, or remove layers. You can also save the settings into a layer file. The StreetMap North America.lyr file, which you can add to any other map document, is provided on the *ESRI Data & Maps and StreetMap North America* DVD.

Group layers can be turned on or off in the table of contents to increase or decrease the feature content of the map display. Entire thematic group layers or the scale-dependent layers within each group layer can be turned on or off to modify the map display. Labeling can also be turned on or off for each layer.

You can also use ArcCatalog™ to view the StreetMap layers. Choose the StreetMap North America.lyr file from the DVD and click the Preview tab. Use the Zoom In and Zoom Out tools to display different layers of the map.

In addition, the StreetMap North America dataset includes a routing service that you can use with the StreetMap Find Route dialog box to find routes within North America. To use the service, at the top of the Find Route dialog box under the Options tab, browse to the streets.rs file, located in the \streetmap_na\data folder on the *ESRI Data & Maps and StreetMap North America* DVD.

Furthermore, the StreetMap North America dataset provides several address locators you can use right away for geocoding addresses in North America. When you use ArcCatalog or ArcMap for geocoding, you can browse for the StreetMap North America address locators, which are in the \streetmap_na\data folder on the *ESRI Data & Maps and StreetMap North America* DVD. For detailed information about the different locators, please see the StreetMap_NA_Locators.txt file located in the same folder.

Smart Data Compression Format

Smart Data Compression is a highly compressed vector format created by ESRI that is readable directly by ArcGIS Desktop and ArcIMS Route Server. All vector and table datasets in ESRI Data & Maps (including the StreetMap NA datasets) are in SDC 2 format. The SDC 2 format advantages are high compression, fast data retrieval, map and tabular data support, security features, and support for geocoding and routing.

Data Distribution Application

Included on the *ESRI Data & Maps—Data & Maps and StreetMap North America* DVD is the Data Distribution Application (DDA), which is intended primarily for converting the Data & Maps vector data from SDC format to shapefile format. The SDC data can first be viewed in the DDA viewer by opening the provided ArcGIS map document or ArcXML files or by adding the individual SDC files. After panning and zooming to the area of interest, all data layers checked on in the table of contents can be extracted to shapefiles for the current map extent.

The \DDA folder contains two versions of the application: DDA_Arc.exe for users with ArcGIS installed and DDA.exe for users without ArcGIS installed. Please see DDA_Help.htm for instructions on using both versions.

Important: Data extracted from any Data & Maps SDC file will still be governed by the redistribution rights of the source SDC file. Please review the Data & Maps Redistribution rights data table before redistributing any of this data. This table can be found in the ESRI Data and Maps module of the ArcGIS Desktop Help or through the help.htm file located on any DVD.

Metadata

Each dataset is fully documented with metadata. The metadata displays a thumbnail for and furnishes extensive general and technical characteristics of each dataset. The metadata provides identification, originator, publisher, description, temporal/currency, status, spatial extent, keywords, accessibility (includes the redistribution rights), data quality, condition, lineage, editing, spatial data organization, spatial reference, entity and attribute descriptions, distribution, dataset size, and metadata reference information.

The metadata follows two standards—the Content Standard for Digital Geospatial Metadata (CSDGM) from the Federal Geographic Data Committee (FGDC) and the International Organization for Standardization (ISO) 19115 standard, Geographic Information—Metadata. In addition, ArcGIS has the capability to automatically manage and update metadata as the data changes. To make metadata more accessible and useful on a daily basis when browsing, searching, and managing data, ESRI has defined

additional elements to support that process and to document characteristics of datasets that are not addressed by the two standards. These elements are present in the metadata and are defined in the ESRI Profile of the CSDGM.

The metadata is provided as a file for each dataset in Extensible Markup Language (XML). The metadata in XML can be viewed in ArcGIS and can also be used with the ArcIMS Metadata Server.
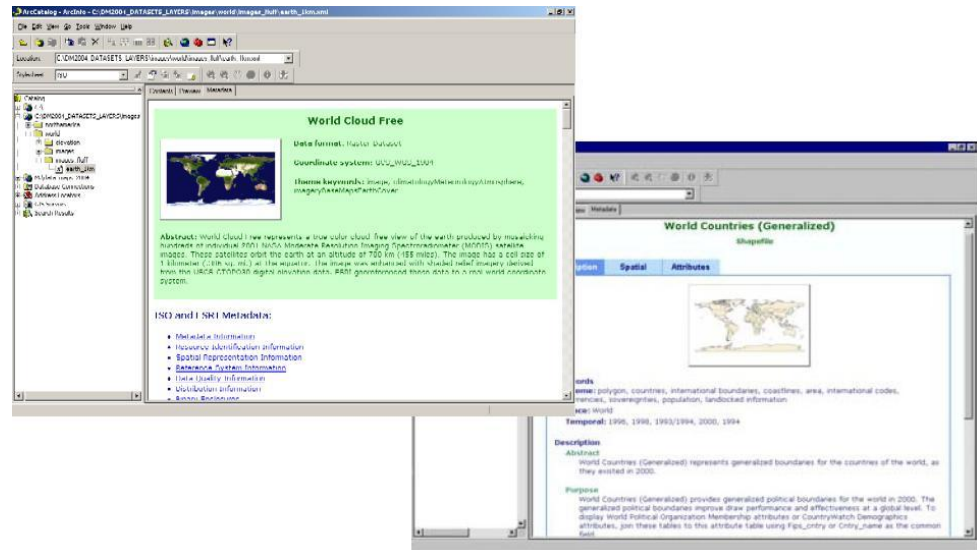
The metadata includes descriptions about the data (e.g., source, content, quality, spatial coordinates, and information about the individual attributes).

Global Elevation Tiling Scheme

Because of the data storage requirements and because there were two sources (SRTM and GTOPO30) used, seven datasets are split and organized into a 12-tile scheme that covers the world with three columns and four rows. There are six tiles per source called North East, North Central, North West, South East, South Central, and South West. The seven datasets are SRTM Global Digital Elevation Model, GTOPO30 Global Digital Elevation Model, SRTM Shaded Relief, GTOPO30 Shaded Relief, SRTM Void Areas, SRTM Water Bodies, and GTOPO30 Water Bodies.

To help visualize this organization, study the illustration below of the Global Elevation Index (elev_index.sdc), which can be found on the *ESRI Data & Maps—Elevation and Image Data: World* DVD in the \srtm_void_filled\data_quality folder. This index dataset stores all the source and file-naming information for each tile.

	West (North and South America)	Central (Europe and Africa)	East (Asia and Australia)
GTOPO30 North			
SRTM North			
SRTM South			
GTOPO30 South			

For more information, see the Data & Maps Elevation Data HTML-based help system (SRTM_ReadMe.htm and SRTM_ReadMe_files folder) found on any one of the three *ESRI Data & Maps—Global Imagery and Shaded Relief* DVDs and the *ESRI Data & Maps—Elevation and Image Data: World* DVD.

ESRI Data & Maps 9.3: Content

Help System

Each disc contains a stand-alone ESRI Data & Maps and StreetMap NA HTML-based help system (help.htm and help folder) that provides help topics about ESRI Data & Maps, what is new, redistribution rights, and using the StreetMap functionality and the StreetMap NA data. Please review the Redistribution rights help topic before redistributing any datasets. The help topics in HTML can be viewed within the HTML-based help system with any HTML browser.

Each of the three *ESRI Data & Maps—Global Imagery and Shaded Relief* DVDs and the *ESRI Data & Maps—Elevation and Image Data: World* DVD contains a stand-alone Data & Maps Elevation Data HTML-based help system (SRTM_ReadMe.htm and SRTM_ReadMe_files folder) that provides information about the approximately 20 GB of elevation and image data.

Map Documents, Group Layers, Published Map Files, and Background Folders

The geographies—Canada (as part of StreetMap North America), Europe, Mexico, United States, and World—plus the geographies on the *ESRI Data & Maps—Elevation and Image Data: World* DVD and the three *ESRI Data & Maps—Global Imagery and Shaded Relief* DVDs are provided with map documents, group layers, published map files, and background folders. World, Europe, Mexico, United States, and StreetMap NA geographies also have ArcXML files provided for ArcIMS Route Server users. The group layer contains the geography's datasets, which are symbolized and labeled for display at scales ranging from nationwide to local areas. The map document contains the same group layer prepackaged within an existing map document. There are three basic types of map documents—basemap, thematic, and image overlay map. The published map file is a published version of the map document provided for ArcReader users. The background folder contains additional datasets that support the functionality of the map documents, group layers, and published map files.

United States Census

109th Congressional
Districts

U.S. 109th Congressional Districts represents the political boundaries for the U.S. 109th congressional districts. The data provides the locations of congressional districts primarily for national planning applications. This Congress began January 2005 and ended January 2007.

110th Congressional
Districts

U.S. 110th Congressional Districts represents the political boundaries for the U.S. 110th congressional districts. The data provides the locations of congressional districts primarily for national planning applications. This Congress began January 2007 and ends January 2009. The membership is current as of May 1, 2008.

Counties

U.S. Counties represents the counties of the United States in the 50 states, the District of Columbia, and Puerto Rico. U.S. Counties provides detailed boundaries that are consistent with the U.S. Census Tracts, U.S. Census Block Groups, and U.S. States datasets and are effective at state, county, and local levels. Census attributes for demographic and housing detail are from the U.S. Census 2000 Summary File 1. The 2007 population count estimate is included from ESRI Community Data. Agriculture attributes are from the 1997 Census of Agriculture (USDA).

County Boundaries

U.S. County Boundaries represents the boundary lines of the counties of the United States. The boundaries are effective for cartographic display at state, county, and local levels.

Counties
(Generalized)

U.S. Counties (Generalized) represents the counties of the United States in the 50 states and the District of Columbia. This dataset is generalized to improve draw performance and to be used effectively at a national level. Census attributes for demographic and housing detail are from the U.S. Census 2000 Summary File 1. The 2007 population count estimate is included from ESRI Community Data. Agriculture attributes are from the 1997 Census of Agriculture.

County Population
Estimates 2000 (table)

U.S. County Population Estimates 2000 (table) represents the county population attributes (2000–2002) from the Population Estimates Branch, U.S. Census Bureau. The program promotes cooperation between states and the United States Census Bureau. These population estimates contain revisions of estimates from previous years and the results of special censuses and test censuses conducted by the Census Bureau. The estimates are for 3,141 counties or county equivalents. For analysis, this data can be displayed with U.S. Counties or U.S. Counties (Generalized) using FIPS as the common field.

County Population
Estimates 1990 (table)

U.S. County Population Estimates 1990 (table) represents the county population attributes (1990–1999) from the Population Estimates Program, Population Division, U.S. Census Bureau, which promotes cooperation between states and the United States Census Bureau. These population estimates contain revisions of estimates from previous years and the results of special censuses and test censuses conducted by the Census Bureau. The estimates are for 3,141 counties or county equivalents. County boundary changes have occurred since the 1990 census in Alaska, Colorado, Maryland, and Virginia. For analysis, this data can be displayed with U.S. Counties or U.S. Counties (Generalized) using FIPS as the common field.

States

U.S. States represents the 50 states, the District of Columbia, and Puerto Rico. U.S. States provides detailed boundaries that are consistent with the U.S. Census Tracts, U.S. Census Block Groups, and U.S. Counties datasets and are effective at state and county

levels. Census attributes for demographic and housing detail are from the U.S. Census 2000 Summary File 1. The 2007 population count estimate is included from ESRI Community Data. Agriculture attributes are from the 1997 Census of Agriculture.

State Boundaries

U.S. State Boundaries represents the boundary lines of the states of the United States. The boundaries are effective for cartographic display at state and county levels.

States (Generalized)

U.S. States (Generalized) represents the 50 states and the District of Columbia. This dataset is generalized to allow effective use at a national level. Census attributes for demographic and housing detail are from the U.S. Census 2000 Summary File 1. The 2007 population count estimate is included from ESRI Community Data. Agriculture attributes are from the 1997 Census of Agriculture.

Census Tracts

U.S. Census Tracts represents the U.S. Census tracts in the 50 states, the District of Columbia, and Puerto Rico. The boundaries are consistent with U.S. Counties, U.S. States, and U.S. Census Block Groups datasets. Census attributes for demographic and housing detail are from the U.S. Census 2000 Summary File 1. The 2007 population count estimate is included from ESRI Community Data.

Tract is defined as a small, relatively permanent statistical subdivision of a county or statistically equivalent entity, delineated for data presentation purposes by a local group of census data users or the geographic staff of a regional census center in accordance with Census Bureau guidelines. Designed to be relatively homogeneous units with respect to population characteristics, economic status, and living conditions at the time they are established, census tracts generally contain between 1,000 and 8,000 people with an optimum size of 4,000 people. Census tract boundaries are delineated with the intention of being stable over many decades, so they generally follow relatively permanent visible features. However, they may follow governmental unit boundaries and other invisible features in some instances; the boundary of a state or county (or statistically equivalent entity) is always a census tract boundary.

Census Block Groups

U.S. Census Block Groups represents the U.S. Census block groups of the United States. The boundaries are consistent with U.S. Counties, U.S. States, and U.S. Census Tracts datasets. Census attributes for demographic and housing detail are from the U.S. Census 2000 Summary File 1. The 2007 population count estimate is included from ESRI Community Data.

A block group is a combination of census blocks that is a subdivision of a census tract. A block group consists of all blocks whose numbers begin with the same digit in a given census tract. The block group is the lowest level of geography for which the U.S. Census Bureau has tabulated sample data in Census 2000.

Census Block Centroid Populations

U.S. Census Block Centroid Populations represents the population of the U.S. Census blocks for the United States. U.S. Census blocks are the smallest geographic entities within a county for which the Census Bureau tabulates population—bounded on all sides by visible features, such as streets, streams, and railroad tracks, and by invisible boundaries such as city, town, and county limits. Census attributes—POP2000, HSE_UNITS, and HOUSEHOLDS—are from the U.S. Census 2000 Summary File 1.

Census and Other Attributes

The U.S. Census and ESRI Community Data attributes described here are present in many U.S. datasets. U.S. Census attributes for demographic and housing detail are from the U.S. Census 2000 Summary File 1. They include a selection of 36 descriptive attributes focusing on total population, race, gender, age, households, families, and housing units. These attributes, or a selection of them, are included in the U.S. Census

Tracts, Block Groups, Block Centroid Populations, Cities, Populated Places, States, and Counties datasets. The 2007 population count estimate is included from ESRI Community Data. This attribute is included in U.S. Counties, States, Core-Based Statistical Areas, Census Tracts and Block Groups, Cities and National Atlas Cities, and ZIP Code Areas and Points.

Census Feature Class Codes (table)

U.S. Census Feature Class Codes (CFCC) (table) represents the United States Census Bureau feature classifications. The census feature class codes (also called FCC) are used in many datasets. This data can be displayed with any dataset containing the CFCC or FCC attribute and using it as the common field.

Cities

U.S. Cities represents locations for cities within the United States with populations of 10,000 or greater (based on Census 2000 figures), all state capitals, and the national capital. Census attributes for demographic and housing detail are from the U.S. Census 2000 Summary File 1. The 2007 population count estimate is included from ESRI Community Data.

National Atlas of the United States

Cities

U.S. National Atlas Cities represents cities and towns in the United States, Puerto Rico, and the U.S. Virgin Islands. U.S. National Atlas Cities provides information about the locations, names, populations, and administrative status of cities and towns.

Urbanized Areas

U.S. National Atlas Urbanized Areas represents urban areas in the United States derived from the urban areas layer of the Digital Chart of the World. U.S. National Atlas Urbanized Areas provides information about the locations, names, and populations of urbanized areas.

Populated Place Areas

U.S. Populated Place Areas represents populated areas that include census-designated places, consolidated cities, and incorporated places within the United States identified by the U.S. Census Bureau. U.S. Populated Place Areas provides areal locations for populated places including attributes—name, FIPS code, census class, area, and selected demographic data from the U.S. Census 2000 Summary File 1.

Populated Place Points

U.S. Populated Place Points represents populated places that include census-designated places, consolidated cities, and incorporated places within the United States identified by the U.S. Census Bureau. U.S. Populated Place Points provides locations for populated places including attributes—name, FIPS code, census class, area, and selected demographic data from the U.S. Census 2000 Summary File 1.

Census Urbanized Areas

U.S. Census Urbanized Areas represents the Census 2000 Urbanized Areas (UA) and Urban Clusters (UC). A UA consists of contiguous, densely settled census block groups and census blocks that meet minimum population density requirements (1,000 ppsm/ 500 ppsm), along with adjacent densely settled census blocks, that together encompass a population of at least 50,000 people. A UC consists of contiguous, densely settled census block groups and census blocks that meet minimum population density requirements, along with adjacent densely settled census blocks, that together encompass a population of at least 2,500 people but fewer than 50,000 people. The dataset covers the 50 states plus the District of Columbia within the United States. U.S. Census Urbanized Areas provides information about the locations, names, population, housing, and urban codes of urbanized areas.

Core-Based Statistical Areas	U.S. Core-Based Statistical Areas represents geographic entities, defined by the United States Office of Management and Budget for use by federal statistical agencies, based on the concept of a core area with a large population nucleus plus adjacent communities having a high degree of economic and social integration with that core.

A CBSA consists of a county containing an incorporated place or census designated place with a population of at least 10,000 along with any adjacent counties that have at least 25 percent of employed residents of the county who work in the CBSA's core or central county. CBSAs are categorized as being either metropolitan or micropolitan. Each metropolitan statistical area must have at least one urbanized area of 50,000 or more inhabitants. Each micropolitan statistical area must have at least one urban cluster of at least 10,000 but less than 50,000 people. U.S. Core-Based Statistical Areas provides the names and types of core-based statistical areas. The 2007 population count estimate is included from ESRI Community Data.

Telephone Area Code Boundaries

U.S. Telephone Area Code Boundaries represents the telephone area codes for the United States. They are also known as Numbering Plan Areas. U.S. Telephone Area Code Boundaries provides information about the locations, current and previous area codes, method used to create the new area codes, and dates the new or previous area codes become effective or expire. The boundaries are current as of November 2006.

ZIP Code Areas (five-digit)

U.S. ZIP Code Areas (Five-Digit) represents five-digit ZIP Code areas used by the U.S. Postal Service to deliver mail more effectively. The first digit of a five-digit ZIP Code divides the United States into 10 large groups of states numbered from 0 in the northeast to 9 in the far west. Within these areas, each state is divided into an average of 10 smaller geographic areas, identified by the second and third digits. These digits, in conjunction with the first digit, represent a U.S. Post Office sectional center facility (SCF) or a mail processing facility area. The fourth and fifth digits identify a post office, station, branch, or local delivery area.

U.S. ZIP Code Areas (Five-Digit) provides area, post office name, and population for each ZIP Code area in the United States. The 2007 population count estimate is included from ESRI Community Data. The 2000 population is summed from the populations of the Census Bureau block polygon centroids that fall within each ZIP Code area. U.S. ZIP Code Areas is from Tele Atlas and based on data derived from U.S. Postal Service data and other sources.

ZIP Code Areas (three-digit)

U.S. ZIP Code Areas (Three-Digit) represents the first three digits of a ZIP Code. The first digit of a five-digit ZIP Code divides the United States into 10 large groups of states numbered from 0 in the northeast to 9 in the far west. Within these areas, each state is divided into an average of 10 smaller geographical areas, identified by the second and third digits. These digits, in conjunction with the first digit, represent a sectional center facility or a mail processing facility area. These areas are serviced by the U.S. Post Office SCF. Note that a single SCF often services multiple three-digit areas.

U.S. ZIP Code Areas (Three-Digit) provides area and population for each three-digit ZIP Code area in the United States. The 2007 population count estimate is included from ESRI Community Data. The 2000 population is summed from the populations of the Census Bureau block polygon centroids that fall within each ZIP Code area. U.S. ZIP Code Areas (Three-Digit) is from Tele Atlas and is based on data derived from U.S. Postal Service data and other sources.

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ZIP Code Points

U.S. ZIP Code Points represents the five-digit ZIP Code areas as points by placing their location using delivery-based centroids; it also shows all ZIP Codes that have no area and are represented as points rather than areas such as post office box ZIP Codes and unique ZIP Codes (single site, building, or organization). U.S. ZIP Code Points provides the post office name, type, and area for each ZIP Code location in the United States. The 2007 population count estimate is included from ESRI Community Data. U.S. ZIP Code Points is from Tele Atlas and is based on data derived from U.S. Postal Service data and other sources.

United States Hydrography

Drainage Systems (Generalized)

U.S. Drainage Systems (Generalized) represents the major drainage systems within the United States. This dataset is generalized to allow effective use at a national level.

Lakes (Generalized)

U.S. Lakes (Generalized) represents the major lakes within the United States. This dataset is generalized to allow effective use at a national level.

Rivers (Generalized)

U.S. Rivers (Generalized) represents the major rivers within the United States. This dataset is generalized to allow effective use at a national level.

Rivers and Streams

U.S. Rivers and Streams represents detailed rivers and streams in the United States. The dataset provides a database of linear water features that interconnects and identifies the stream segments or reaches that comprise the surface water drainage system of the United States. It includes information about the names, types, path levels, and lengths of the rivers and streams. The detailed and comprehensive rivers and streams are from the National Hydrography Dataset by the U.S. Geological Survey in cooperation with the U.S. Environmental Protection Agency.

Water Bodies

U.S. Water Bodies represents the major lakes, reservoirs, large rivers, lagoons, and estuaries in the United States. The dataset provides a database of areal water features that identifies the water bodies or reaches that comprise the surface water drainage system of the United States. It includes information about the names, types, and areas of the water bodies. The detailed and comprehensive water bodies are from the National Hydrography Dataset by the U.S. Geological Survey in cooperation with the U.S. Environmental Protection Agency.

National Atlas of the United States

Water Feature Areas

U.S. National Atlas Water Feature Areas represents the water feature areas (e.g., bays, glaciers, lakes, and swamps) of the United States. It includes information about the names, types, areas, and locations of the water feature areas.

Water Feature Lines

U.S. National Atlas Water Feature Lines represents the linear water features (e.g., aqueducts, canals, intracoastal waterways, and streams) of the United States. It includes information about the names, types, lengths, and locations of the water feature lines.

United States Landmarks

Geographic Names Information System Cultural and Physical Points

U.S. GNIS represents an automated inventory of the proper names and locations of cultural and physical geographic features located throughout the United States. The purpose of the U.S. GNIS cultural and physical points dataset is to promote geographic feature name standardization and to serve as the federal government's repository of information regarding feature name spellings and applications for features in the United States and its commonwealths, territories, and freely associated states. The names listed in the inventory can be published in federal maps, charts, and other documents. The feature locating information has been used in emergency preparedness, marketing, site selection and analysis, genealogical and historical research, and transportation routing applications.

This dataset is not a complete inventory of features, as it only contains those features that are included on the USGS hard-copy topographic maps. For this dataset, each of the cultural and physical feature types has been extracted into individual datasets to keep the number of features at a reasonable level.

Cultural and Physical Features	Points
Buildings	48,906
Cemeteries	124,844
Churches	183,614
Golf Locales	4,008
Hospitals	11,485
Locales	125,154
Populated Places	178,315
Schools	172,929
Summits	70,737

Hospitals

U.S. Hospitals represents the locations and selected attributes for hospitals included in the FY2005 edition of the Health Forum AHA Annual Survey Database. U.S. Hospitals contains only those hospitals that belong to the AHA and responded to the survey. U.S. Hospitals provides the locations and extensive information about hospitals such as description, type, name, address, number of beds, employees, patients, and emergency room visits.

Major Parks

U.S. Major Parks represents national parks and forests as well as state and local parks and forests within the United States. U.S. Major Parks provides thousands of named parks and forests at national, state, and local levels.

Institutions

U.S. Institutions represents point locations within the United States for common institution landmark types including hospitals, educational institutions, religious institutions, government centers, and cemeteries. U.S. Institutions provides the locations, names, and the state and county of hundreds of thousands of institutions.

Large Area Landmarks

U.S. Large Area Landmarks represents common landmark areas within the United States including military areas, prisons, educational institutions, amusement centers, government centers, sport centers, golf courses, and cemeteries. U.S. Large Area Landmarks provides thousands of common landmark areas that are named and makes a good cultural layer at county and local levels.

Parks

U.S. Parks represents parks and forests within the United States at national, state, and especially local levels. Each park or forest is named.

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| Recreation Areas | U.S. Recreation Areas represents point locations within the United States for common recreational landmarks including golf courses, zoos, resorts, museums, and other recreational facilities. Each recreation area is named and shows the state and county it resides in. |

National Atlas of the United States

Historic Earthquakes

U.S. National Atlas Historic Earthquakes represents the locations of significant and historic earthquakes in the United States and adjacent areas of Canada and Mexico that caused deaths, property damage, and geological effects or were otherwise experienced by the resident populations. U.S. National Atlas Historic Earthquakes provides the locations of significant and historic earthquakes for geographic display and analysis at national and regional levels. This dataset is intended for a mixed audience of specialists and nonspecialists alike who have a need for general, nontechnical information about significant earthquakes in and near the United States.

Volcanoes

U.S. National Atlas Volcanoes represents volcanoes thought to be active in the last 10,000 years in and near the United States. The data is a subset of data available from the Global Volcanism Program, Smithsonian Institution. U.S. National Atlas Volcanoes includes information about the location, volcano number, summit elevation, morphology, age, and type of evidence used to determine volcanic activity of the volcanoes.

United States Other

State Plane Zones for NAD 1927 and NAD 1983

U.S. State Plane Zones (NAD 1927 and NAD 1983) represents the state plane coordinate system zones for the 1927 and 1983 North American Datums within the United States. U.S. State Plane Zones (NAD 1927 and NAD 1983) is generalized and depicts approximations of the actual state plane coordinate system zone boundaries for the 1927 and 1983 North American Datums. The dataset is intended for visual reference at small and medium map scales. Please contact state authorities with questions about a zone boundary.

National Atlas of the United States

Federal and Indian Land Areas

U.S. National Atlas Federal and Indian Land Areas represents the federal and Indian-owned land areas (e.g., Bureau of Indian Affairs and Tennessee Valley Authority) of the United States. It includes information about the name, type, agency/bureau, location, and area of the land areas.

Federal Land Lines

U.S. National Atlas Federal Land Lines represents the linear federally owned land features (e.g., national parkways and wild and scenic rivers) of the United States. It includes information about the name, type, and length of the land lines. No data exists for Hawaii.

Public Land Survey

U.S. National Atlas Public Land Survey represents the public land surveys (e.g., donated lands, land grants, and private and public surveys of public lands) of the United States. It includes information about the name, type, township and range, and area of the land survey.

USGS Topographic
Quadrangle Series
Indexes

1:24,000 USGS 1:24,000 Topographic Quadrangle Series Index represents the theoretical geographic extent of USGS 1:24,000 topographic maps (7.5- by 7.5-minute quadrangles) for the conterminous 48 states and the District of Columbia. USGS 1:24,000 Topographic Quadrangle Series Indexes provides quadrangle name, identification number, publication data, and map coverage by state for each quadrangle. Rotated, offset, over edge, and inset quadrangle boundaries are rendered as standard-shaped quadrangles.

1:100,000 USGS 1:100,000 Topographic Quadrangle Series Index represents the theoretical geographic extent of USGS 1:100,000 topographic maps (30- by 60-minute quadrangles) for the conterminous 48 states and the District of Columbia. USGS 1:100,000 Topographic Quadrangle Series Index provides quadrangle name, identification number, publication data, and map coverage by state for each quadrangle. Rotated, offset, over edge, and inset quadrangle boundaries are rendered as standard-shaped quadrangles.

1:250,000 USGS 1:250,000 Topographic Quadrangle Series Index represents the theoretical geographic extent of USGS 1:250,000 topographic maps (1- by 2-degree quadrangles) for the conterminous 48 states and the District of Columbia. USGS 1:250,000 Topographic Quadrangle Series Index provides quadrangle name, identification number, publication data, and map coverage by state for each quadrangle. Rotated, offset, over edge, and inset quadrangle boundaries are rendered as standard-shaped quadrangles.

United States Transportation

Highways U.S. Highways represents the major and minor highways of the United States. These include interstates, U.S. highways, state highways, major roads, and minor roads. This dataset is from the Census 2000 TIGER/Line files. It contains all class 1, 2, and 3 road segments plus any other road segments necessary to provide network connectivity. U.S. Highways provides a subset of highways and roads for national, state, and local display.

Major Highways U.S. Major Highways represents the major highways of the United States. These include interstates, U.S. highways, state highways, and major roads. This dataset is from the Census 2000 TIGER/Line files. It contains all class 1 and 2 road segments plus any other road segments necessary to provide network connectivity. U.S. Major Highways provides a subset of highways and major roads for national, state, and county display.

Major Roads U.S. Major Roads represents interstates, U.S. and state highways, major streets, and other major thoroughfares within the United States. It provides an invaluable reference and a cartographic layer that make it easy to identify areas in other feature layers. U.S. Major Roads overlays accurately on streets and other boundary data.

Airports U.S. Airports represents airport boundaries and airport runways within the United States. All airports have a boundary, and most have at least one runway. U.S. Airports provides the boundaries for thousands of airports and runways. There are many attributes that describe each airport, for example, name, three- or four-character location ID (airport code), owner, elevation, congestion level, large certified air carrier enplanements, foreign enplanements, hub size, and tower type.

Transportation Terminals	U.S. Transportation Terminals represents locations within the United States for transportation terminals: bus stations, train stations, marine terminals, and other significant transportation nodes. Most transportation terminals are named and provide the type as well as the state and county they reside in.

National Atlas of the United States

Airports	U.S. National Atlas Airports represents airports in the United States, Puerto Rico, the U.S. Virgin Islands, and U.S. possessions with airport passenger enplanements of greater than or equal to 100 passengers per year. U.S. National Atlas Airports provides information about the locations, names, location identifiers, and enplanements of airports.

National Transportation Atlas

Interstate Highways	U.S. National Transportation Atlas Interstate Highways represents rural and urban interstate highways. The dataset is part of the National Highway Planning Network published by the Federal Highway Administration as part of the National Transportation Atlas Databases for the United States. It provides a comprehensive database of interstate highways from the nation's principal arterial highway system and the National Highway System. The data is generalized to allow effective use at a national level.
Railroads	U.S. National Transportation Atlas Railroads represents a comprehensive database of the nation's railway system at 1:100,000 scale. The dataset covers the 48 contiguous states plus the District of Columbia. It includes information about the names, owners, types, classes, and lengths of the railroads.

StreetMap North America

U.S. and Canada Airports	U.S. and Canada Airports represents airport boundaries and runways within the United States and Canada, providing the boundaries for thousands of them. This dataset provides six levels of generalization for displaying the data at different scales. Everything about the levels is the same but the level of generalization and its name. For best performance, use the most appropriate generalized level when displaying or printing.
U.S. and Canada Streets Cartographic	U.S. and Canada Streets Cartographic represents detailed streets, interstate highways, and major roads within the United States and Canada. It provides streets with a reduced number of attributes and features that are designed to support cartographic display. This dataset is from the 2003 Tele Atlas Dynamap® Transportation version 5.2 product.
U.S. and Canada City Areas	U.S. and Canada City Areas represents the city limits of cities in the United States and Canada. This dataset provides six levels of generalization for displaying the data at different scales. Everything about the levels is the same but the level of generalization and its name. For best performance, use the most appropriate generalized level when displaying or printing.
U.S. and Canada City Points	U.S. and Canada City Points represents cities of the United States and Canada including national, state, and provincial capitals.

U.S. and Canada Detailed Streets	U.S. and Canada Detailed Streets represents detailed streets, interstate highways, and major roads within the United States and Canada and is the cornerstone of StreetMap North America. This dataset is from the 2003 Tele Atlas Dynamap Transportation version 5.2 product that was prepared for routing within the StreetMap Find Route dialog box. This dataset (in SDC format) provides streets display, routing, and geocoding for the United States and Canada. Address attributes are prestandardized based on ESRI North America Streets standardization rules. The attributes include left/right and to/from addresses; prefix direction, prefix type, name, suffix type, and suffix direction with up to five alternates of these five attributes; and highway shield and number, classification codes, toll, travel speed, direction, street elevation, postal code, city, state/province, and country.
U.S. and Canada Highway Exits	U.S. and Canada Highway Exits represents highway exits in United States and Canada for use with highway and street datasets.
U.S. and Canada Highways	U.S. and Canada Highways represents the major highways of the United States and Canada. These include interstates and intermetropolitan area highways and major roads.
U.S. and Canada Institutions	U.S. and Canada Institutions represents point locations within the United States and Canada for common institution landmark types including hospitals, educational institutions, religious institutions, government centers, and cemeteries. U.S. and Canada Institutions provides the locations for hundreds of thousands of institution landmark features.
U.S. and Canada Interstate Highways	U.S. and Canada Interstate Highways represents the interstate highways of the United States and Canada.
U.S. and Canada Lakes	U.S. and Canada Lakes represents the major lakes within the United States and Canada. This dataset provides five levels of generalization for displaying the data at different scales. Everything about the levels is the same but the level of generalization and its name. For best performance, use the most appropriate generalized level when displaying or printing.
U.S. and Canada Large-Area Landmarks	U.S. and Canada Large Area Landmarks represents common landmark areas within the United States and Canada including military areas, prisons, educational institutions, amusement centers, government centers, sport centers, golf courses, and cemeteries. The dataset can be used as a cultural layer at local and regional levels. This dataset provides six levels of generalization for displaying the data at different scales. Everything about the levels is the same but the level of generalization and its name. For best performance, use the most appropriate generalized level when displaying or printing.
U.S. and Canada Major Cities	U.S. and Canada Major Cities represents major cities of the United States and Canada including national, state, and provincial capitals.
U.S. and Canada Major Roads	U.S. and Canada Major Roads represents the major roads of the United States and Canada. These include interstates as well as intermetropolitan area and intrastate highways and major roads. This dataset provides highways and roads for national, state, and provincial display.
U.S. and Canada Maneuvers	U.S. and Canada Maneuvers represents street and highway maneuvers in the United States and Canada. This dataset is from the 2003 Tele Atlas Dynamap Transportation version 5.2 product and provides maneuvers for use with highway and street datasets.

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U.S. and Canada Parks	U.S. and Canada Parks represents parks and forests within the United States and Canada at national, state/provincial, and local levels. This dataset provides six levels of generalization for displaying the data at different scales. Everything about the levels is the same but the level of generalization and its name. For best performance, use the most appropriate generalized level when displaying or printing.
U.S. and Canada Postal Areas	U.S. and Canada Postal Areas represents the five-digit ZIP Code areas of the United States and the three-character Forward Sortation Areas (FSA) of Canada. This dataset provides six levels of generalization for displaying the data at different scales. Everything about the levels is the same but the level of generalization and its name. For best performance, use the most appropriate generalized level when displaying or printing.
U.S. and Canada Postal Points	U.S. and Canada Postal Points represents the five-digit ZIP Code areas of the United States and the three-character FSAs of Canada as centroids.
U.S. and Canada Railroads	U.S. and Canada Railroads represents the railroads of the United States and Canada. It provides railroads for national, state, and provincial levels. This dataset provides six levels of generalization for displaying the data at different scales. Everything about the levels is the same but the level of generalization and its name. For best performance, use the most appropriate generalized level when displaying or printing.
U.S. and Canada Recreation Areas	U.S. and Canada Recreation Areas represents point locations within the United States and Canada of common recreation landmarks including golf courses, zoos, resorts, and other recreational facilities.
U.S. and Canada Retail Centers	U.S. and Canada Retail Centers represents locations within the United States and Canada for shopping centers and major retail centers.
U.S. and Canada Rivers	U.S. and Canada Rivers represents rivers and other linear water features within the United States and Canada. This dataset provides six levels of generalization for displaying the data at different scales. Everything about the levels is the same but the level of generalization and its name. For best performance, use the most appropriate generalized level when displaying or printing.
U.S. State and Canada Province Boundaries	U.S. State and Canada Province Boundaries represents the boundary lines between the states of the United States and the provinces of Canada. This dataset provides six levels of generalization for displaying the data at different scales. Everything about the levels is the same but the level of generalization and its name. For best performance, use the most appropriate generalized level when displaying or printing.
U.S. States and Canada Provinces	U.S. States and Canada Provinces represents the states of the United States and the provinces of Canada that are effective for cartographic display at state, province, and local levels. This dataset provides six levels of generalization for displaying the data at different scales. Everything about the levels is the same but the level of generalization and its name. For best performance, use the most appropriate generalized level when displaying or printing.
U.S. and Canada Transportation Terminals	U.S. and Canada Transportation Terminals represents locations within the United States and Canada for transportation terminals such as bus terminals, train stations, marine terminals, and other significant transportation nodes.
U.S. Counties	U.S. Counties represents the counties of the United States. U.S. Counties provides boundaries that are consistent with state, tract, and block group datasets. This dataset

provides six levels of generalization for displaying the data at different scales. Everything about the levels is the same but the level of generalization and its name. For best performance, use the most appropriate generalized level when displaying or printing.

U.S. County Boundaries	U.S. County Boundaries represents the boundary lines of the counties of the United States. U.S. County Boundaries provides detailed boundary lines consistent with the county, tract, and state datasets and are effective for cartographic display at regional and state levels.
U.S. and Canada Water Polygons	U.S. and Canada Water Polygons represents the lakes, reservoirs, large rivers, oceans, bays, lagoons, and estuaries in and near the United States and Canada. U.S. and Canada Water Polygons provides the areal water features for geographic display and analysis at national, regional, and local levels. This dataset provides six levels of generalization for displaying the data at different scales. Everything about the levels is the same but the level of generalization and its name. For best performance, use the most appropriate generalized level when displaying or printing.

World

Countries (Generalized)	World Countries (Generalized) represents generalized boundaries for the countries of the world as they existed in January 2008. The generalized political boundaries improve draw performance and effectiveness at a global level. The dataset includes information about the common, official, and local names; FIPS, Global Mapping International (GMI), and ISO codes; United Nations statuses; populations; and areas of the countries. This dataset can be displayed with World Country Memberships of Political Organizations (table) or World Census IPC Demographics (table) using FIPS_CNTRY or CNTRY_NAME as the common attribute.
Country Boundaries (Generalized)	World Country Boundaries (Generalized) represents the generalized boundary lines for the countries of the world. The generalized political boundary lines improve draw performance and effectiveness at a global level.
Countries 2008	World Countries 2008 represents the boundaries for the countries of the world as they existed in January 2008. The dataset includes information about the common, official, and local names; FIPS, GMI, and ISO codes; United Nations statuses; populations; and areas of the countries. This dataset can be displayed with World Country Memberships of Political Organizations (table) or World Census IPC Demographics (table) using FIPS_CNTRY or CNTRY_NAME as the common attribute.
Country Boundaries	World Country Boundaries represents the boundary lines for the countries of the world.
Administrative Units	World Administrative Units represents the boundaries for the first-level administrative units of the world. The dataset includes information about the names, country names, FIPS and GMI codes, types, populations, and areas of the administrative units.
Administrative Unit Boundaries	World Administrative Unit Boundaries represents the boundary lines for the first-level administrative units of the world.
Continents	World Continents represents the boundaries for the continents of the world. The dataset includes information about the names and areas of the continents.
Regions	World Regions represents the boundaries for the regions of the world. There are 25 commonly recognized world regions. The dataset provides an easy means of selecting a small multicountry area for display or study.

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Census IPC Demographics (table)	World Census IPC Demographics (table) represents a vast amount of recent demographic information for the countries recognized by the U.S. State Department. World Census IPC Demographics (table) provides demographic and vital event factors for the countries of the world. To display Census IPC Demographics attributes on a map, join this table to a World Countries attribute table using FIPS_CNTRY or CNTRY_NAME as the common attribute.
Country Memberships of Political Organizations (table)	World Country Memberships of Political Organizations (table) represents the memberships of countries in world political organizations such as the United Nations, the International Monetary Fund, and the Food and Agriculture Organization. The dataset includes information about the names, FIPS codes, capitals, and political organizations of the countries. This data can be displayed with World Countries using FIPS_CNTRY or CNTRY_NAME as the common attribute.
Cities	World Cities represents the locations of major cities of the world. World Cities provides a basemap layer of the cities of the world that includes national capitals, provincial capitals, major population centers, and landmark cities.
Gazetteer	World Gazetteer represents the locations and proper names for map features around the world. World Gazetteer includes attribute and annotation name information from various layers of the Digital Chart of the World. World Gazetteer provides a basemap layer that may be used to find locations by their proper name anywhere around the world. The categories include airports, coastal features, drainage features, land features, ocean features, islands, political features, and populated places.
Drainage Systems	World Drainage Systems represents the major drainage systems of the world. The dataset includes information about the names, basin areas, discharge volumes, sediment loads, and lengths of the drainage systems.
Lakes	World Lakes represents the major lakes and inland seas of the world. The dataset includes information about the names, surface elevations, depths, and areas of the lakes and seas.
Rivers	World Rivers represents the major rivers of the world. The dataset includes information about the names, systems, and lengths of the rivers.
World Wildlife Fund Terrestrial Ecoregions	World Wildlife Fund Terrestrial Ecoregions represents global terrestrial ecoregions. Ecoregions are defined as relatively large areas of land or water in the world containing a characteristic set of natural communities that share a large majority of their species, dynamics, and environmental conditions. This dataset contains all terrestrial ecoregions, which include those of the Global 200. Global 200 ecoregions are a collection of the earth's most outstanding and diverse terrestrial, freshwater, and marine habitats where the earth's biological wealth is most distinctive and rich, where its loss will be most severely felt, and which must be protected to preserve the web of life. World Wildlife Fund Terrestrial Ecoregions includes information about the names, realms, biomes, future conservation statuses, priorities, and Global 200 numbers of the terrestrial ecoregions. For more information, contact http://www.worldwildlife.org.
World Wildlife Fund Marine Ecoregions	World Wildlife Fund Marine Ecoregions represents global marine ecoregions. Ecoregions are defined as relatively large areas of land or water in the world containing a characteristic set of natural communities that share a large majority of their species, dynamics, and environmental conditions. This dataset contains the marine ecoregions of the Global 200. Global 200 ecoregions are a collection of the earth's most outstanding and diverse terrestrial, freshwater, and marine habitats where the earth's biological wealth

is most distinctive and rich, where its loss will be most severely felt, and which must be protected to preserve the web of life.

Time Zones

World Time Zones represents the time zones of the world. The time zones are best displayed with World Countries or World Administrative Units but can be displayed with any feature dataset. World Time Zones commonly provides time zones for the countries and cities of the world. Note that daylight saving time is not shown.

UTM Zones

World UTM Zones represents the universal transverse Mercator zones of the world.

Latitude and Longitude Grids

World Latitude and Longitude Grids represents a 5 by 5-degree latitude-longitude grid covering the world with attributes that allow it to display grids at intervals of 5, 10, 15, 20, and 30 degrees. To display a grid with a 5-degree interval, simply display all the lines. To display a coarser grid (e.g., a 15-degree interval), in the Layer Properties dialog box, set the DEGREE15 attribute value equal to Y. This dataset is used as an overlay for world-level maps.

Named Latitudes and Longitudes

World Named Latitudes and Longitudes represents geographically significant reference latitudes and longitudes for the world such as the equator, tropics, Arctic and Antarctic Circles, prime meridian, and International Date Line.

Map Background

World Map Background represents grid cells of 30 by 30 degrees that cover the world. World Map Background provides a shaded background on which other data can be displayed. For example, quickly display World Map Background as a blue ocean layer behind other land-based layers such as World Countries.

Europe Basemap

List of Countries

Aland Islands*	Italy
Albania	Latvia
Andorra	Liechtenstein
Armenia	Lithuania
Austria	Luxembourg
Azerbaijan	Malta
Belarus	Monaco
Belgium	Netherlands
Bosnia and Herzegovina	Norway
Bulgaria	Poland
Channel Islands	Portugal
Croatia	Republic of Moldova
Cyprus	Romania
Czech Republic	Russian Federation
Denmark	San Marino
Estonia	Serbia and Montenegro
Faeroe Islands	Slovakia
Finland	Slovenia
Former Yugoslav Republic of Macedonia	Spain
France	Svalbard and Jan Mayen Islands
Georgia	Sweden
Germany	Switzerland
Gibraltar*	Turkey
Greece	Ukraine
Hungary	United Kingdom of Great Britain and
Iceland	Northern Ireland

Ireland   Vatican
Isle of Man*

Areas of special sovereignty

Countries   Europe Countries represents the countries of Europe. This dataset provides attributes for
                       name, country code, area, and color mapping.

Level 1 Provinces Europe Level 1 Provinces represents the first level of subnational administrative units for
                       countries in Europe. This dataset provides attributes for name, country name, country
                       code, area, and color mapping.

Level 2 Provinces Europe Level 2 Provinces represents the second level of subnational administrative units
                       for countries in Europe. This dataset provides attributes for name, country name, country
                       code, area, and color mapping.

Level 3 Provinces Europe Level 3 Provinces represents the third level of subnational administrative units for
                       countries in Europe. This dataset provides attributes for name, country name, country
                       code, area, and color mapping.

Cities   Europe Cities represents the cities of Europe including national capitals, major population
                       centers, and landmark cities. This dataset provides attributes for name, type, level, city
                       code, country name, country code, administrative unit name, population class, and capital
                       indicator.

Places   Europe Places represents the populated places in Europe. This dataset provide attributes
                       for name, type, level, populated place code, country name, country code, administrative
                       unit name, population class, conurbation name, and capital indicator.

Urbanized Areas   Europe Urbanized Areas represents the urbanized areas of Europe. This dataset provides
                       attributes for name, country name, country code, type, and area.

Major Roads   Europe Major Roads represents the major roads (European Highway System and national
                       roads; levels 0 and 1, respectively) in Europe. This dataset provides attributes for name,
                       length, type, level, direction, national/local codes, international codes, tunnel, toll,
                       tonnage, country name, and country code.

Roads   Europe Roads represents the roads (European Highway System, national, and secondary
                       roads; levels 0, 1, and 2, respectively) in Europe. Europe Roads contains all AND level 0,
                       1, and 2 roads plus any other roads necessary to provide network connectivity. This
                       dataset provides attributes for name, length, type, level, direction, national/local codes,
                       international codes, tunnel, toll, tonnage, country name, and country code.

Railroads   Europe Railroads represents the railroads in Europe. This dataset provides attributes for
                       name, length, type, level, tunnel, floor, tonnage, country name, and country code.

Railroad Stations Europe Railroad Stations represents the railroad stations as part of the railroad system for
                       Europe. This dataset provides attributes for name, type, level, country name, country
                       code, administrative unit name, and conurbation name.

Major Lakes   Europe Major Lakes contains the major lakes for Europe. This dataset provides attributes
                       for name, type, rank, area, country name, and country code.

Major Rivers   Europe Major Rivers contains the major rivers for Europe. This dataset provides
                       attributes for name, type, rank, area, country name, and country code.

Water Bodies	Europe Water Bodies contains rivers, lakes, and other inland water bodies for Europe. This dataset provides attributes for name, rank, area, country name, and country code.
Ferries	Europe Ferries represents the ferry routes in Europe as part of the transportation system for Europe. This dataset provides attributes for name, length, level, direction, passenger-only, national/local codes, international codes, time, country name, and country code.

Europe Demography

NUTS 0 Demographics	Europe NUTS 0 Demographics represents areas of aggregated socioeconomic and demographic information at the NUTS 0 (country) level for Europe. This dataset provides attributes for name, NUTS code, population size, population by sex, population by age groups, households, average number of persons per household, population density and growth, stock of dwellings, purchasing power, gross domestic product, number employed, and area.
NUTS 1 Demographics	Europe NUTS 1 Demographics represents areas of aggregated socioeconomic and demographic information at the NUTS 1 level for Europe. NUTS 1 units have a population between three million and seven million people. This dataset provides attributes for name, NUTS codes (0 and 1), population size, population by sex, population by age groups, households, average number of persons per household, population density and growth, stock of dwellings, purchasing power, gross domestic product, number employed, and area.
NUTS 2 Demographics	Europe NUTS 2 Demographics represents areas of aggregated socioeconomic and demographic information at the NUTS 2 level for Europe. NUTS 2 units have a population between 800,000 and 3,000,000 people. This dataset provides attributes for name, NUTS codes (0 and 2), population size, population by sex, population by age groups, households, average number of persons per household, population density and growth, stock of dwellings, purchasing power, gross domestic product, number employed, and area.
NUTS 3 Demographics	Europe NUTS 3 Demographics represents areas of aggregated socioeconomic and demographic information at the NUTS 3 level for Europe. NUTS 3 units have a population between 150,000 and 800,000 people. This dataset provides attributes for name, NUTS codes (0 and 3), population size, population by sex, population by age groups, households, average number of persons per household, population density and growth, stock of dwellings, purchasing power, gross domestic product, number employed, and area.

Mexico

States	Mexico States represents the states of Mexico with coastlines, international boundaries, and state boundaries. This dataset provides attributes for name, FIPS code, area in square kilometers, and color mapping.
Municipalities	Mexico Municipalities represents the municipios of Mexico with coastlines, international boundaries, state boundaries, and municipio boundaries. This dataset provides attributes for name, state, unique ID, municipality ID, area, and color mapping.
Cities	Mexico Cities represents the locations of cities in Mexico. This dataset provides attributes for name, alternate name, state, and population.

Urban Areas	Mexico Urban Areas represents the locations of major urban areas in Mexico. This dataset provides attributes for name, state, population, and area.
Roads	Mexico Roads represents the major roads and highways of Mexico. This dataset is used to display roads by their type, administrative class, toll information, and length.
Railroads	Mexico Railroads represents the major railroads of Mexico. This dataset provides attributes for type and length.
Rivers and Streams	Mexico Rivers and Streams represents the major rivers and streams in Mexico. This dataset provides attributes for name, type, status, rank, and length.
Water Bodies	Mexico Water Bodies represents the major lakes, reservoirs, and lagoons in Mexico. This dataset provides attributes for name, type, status, rank, and area.
Contours	Mexico Contours represents the 1,000-meter contour lines in Mexico. The contour values are in meters above sea level.

Elevation Data— Global Shaded Relief

SRTM Shaded Relief	SRTM Shaded Relief (six tiles—North East, North Central, North West, South East, South Central, and South West) represents a shaded relief map (between 60 degrees north and 56 degrees south latitude) of the world derived from the NASA/NGA SRTM datasets distributed by the USGS EROS Data Center. The resolution is 3 arc seconds (90 meters). SRTM Shaded Relief provides a basemap layer displaying shaded relief information for geographic visualization on regional and national scales.
GTOPO30 Shaded Relief	GTOPO30 Shaded Relief (six tiles—North East, North Central, North West, South East, South Central, and South West) represents a basemap layer displaying shaded relief information for the non-SRTM coverage area (north of 60 degrees north and south of 56 degrees south latitude) of the world. This data was derived from the GTOPO30 Digital Elevation Model datasets from the USGS EROS Data Center. The resolution is 30 arc seconds (approximately one kilometer). GTOPO30 Shaded Relief provides a basemap layer displaying shaded relief information in the non-SRTM coverage areas for geographic visualization on regional and national scales.

Image Data—Global Imagery 150-Meter Resolution

Africa (150 m)— EarthSat NaturalVue Global Landsat Mosaic	Africa (150 m)—EarthSat NaturalVue Global Landsat Mosaic represents a 150-meter (492 ft.) resolution, natural-color, Landsat 7-derived, mosaicked image dataset covering the entire land area of Africa. NaturalVue Global Landsat Mosaic was created from NaturalVue 2000®, which was derived from the GeoCover® Ortho 2000 program for NASA.
Asia-East (150 m)— EarthSat NaturalVue Global Landsat Mosaic	Asia-East (150 m)—EarthSat NaturalVue Global Landsat Mosaic represents a 150-meter (492 ft.) resolution, natural-color, Landsat 7-derived, mosaicked image dataset covering the entire land area of eastern Asia except for the high-latitude polar regions. NaturalVue Global Landsat Mosaic was created from NaturalVue 2000, which was derived from the GeoCover Ortho 2000 program for NASA.

Asia-West (150 m)— EarthSat NaturalVue Global Landsat Mosaic	Asia-West (150 m)—EarthSat NaturalVue Global Landsat Mosaic represents a 150-meter (492 ft.) resolution, natural-color, Landsat 7-derived, mosaicked image dataset covering the entire land area of western Asia except for the high-latitude polar regions. NaturalVue Global Landsat Mosaic was created from NaturalVue 2000, which was derived from the GeoCover Ortho 2000 program for NASA.
Australia (150 m)— EarthSat NaturalVue Global Landsat Mosaic	Australia (150 m)—EarthSat NaturalVue Global Landsat Mosaic represents a 150-meter (492 ft.) resolution, natural-color, Landsat 7-derived, mosaicked image dataset covering the entire land area of Australia. NaturalVue Global Landsat Mosaic was created from NaturalVue 2000, which was derived from the GeoCover Ortho 2000 program for NASA.
Europe (150 m)— EarthSat NaturalVue Global Landsat Mosaic	Europe (150 m)—EarthSat NaturalVue Global Landsat Mosaic represents a 150-meter (492 ft.) resolution, natural-color, Landsat 7-derived, mosaicked image dataset covering the entire land area of Europe except for the high-latitude polar regions. NaturalVue Global Landsat Mosaic was created from NaturalVue 2000, which was derived from the GeoCover Ortho 2000 program for NASA.
North America-North (150 m)—EarthSat NaturalVue Global Landsat Mosaic	North America-North (150 m)—EarthSat NaturalVue Global Landsat Mosaic represents a 150-meter (492 ft.) resolution, natural-color, Landsat 7-derived, mosaicked image dataset covering the entire land area of northern North America except for the high-latitude polar regions. NaturalVue Global Landsat Mosaic was created from NaturalVue 2000, which was derived from the GeoCover Ortho 2000 program for NASA.
North America-South (150 m)—EarthSat NaturalVue Global Landsat Mosaic	North America-South (150 m)—EarthSat NaturalVue Global Landsat Mosaic represents a 150-meter (492 ft.) resolution, natural-color, Landsat 7-derived, mosaicked image dataset covering the entire land area of southern North America. NaturalVue Global Landsat Mosaic was created from NaturalVue 2000, which was derived from the GeoCover Ortho 2000 program for NASA.
South America (150 m)—EarthSat NaturalVue Global Landsat Mosaic	South America (150 m)—EarthSat NaturalVue Global Landsat Mosaic represents a 150-meter (492 ft.) resolution, natural-color, Landsat 7-derived, mosaicked image dataset covering the entire land area of South America except for the high-latitude polar regions. NaturalVue Global Landsat Mosaic was created from NaturalVue 2000, which was derived from the GeoCover Ortho 2000 program for NASA.
Elevation Data— Global Digital Elevation Model	
SRTM Global Digital Elevation Model	SRTM Global Digital Elevation Model (six tiles—North East, North Central, North West, South East, South Central, and South West) represents an elevation map (between 60 degrees north and 56 degrees south latitude) of the world from the NASA/NGA SRTM datasets distributed by the USGS EROS Data Center. The resolution is 3 arc seconds (90 meters). SRTM Global Digital Elevation Model provides a basemap layer, with all void areas filled by ESRI using the Delta Surface Fill method with GTOPO30 as the fill-in source, displaying global elevation information for geographic visualization on regional and national scales. The filled void areas are not of the same quality as the surrounding SRTM elevation values. The pixel value represents the elevation in meters.
GTOPO30 Global Digital Elevation Model	GTOPO30 Global Digital Elevation Model (six tiles—North East, North Central, North West, South East, South Central, and South West) represents gridded 30-arc-second (approximately 1 kilometer) elevation for the non-SRTM coverage area (north of 60 degrees north and south of 56 degrees south latitude) of the world. This data was

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developed by the USGS EROS Data Center in 1996 from a variety of data sources. The pixel value represents the elevation in meters. GTOPO30 Global Digital Elevation Model provides a basemap layer displaying global elevation information for geographic visualization on global, regional, and national scales for non-SRTM coverage areas.

Elevation Data— Data Quality

Global Elevation Index

Global Elevation Index represents the geographic extents of the SRTM and GTOPO30 datasets used to create the combined global digital elevation model. This dataset provides attributes for the sources, locations, and names of the ESRI Data & Maps datasets that make up the global digital elevation model.

GTOPO30 Source Index

GTOPO30 Source Index represents the geographic extents of the data sources used to create the GTOPO30 Global Digital Elevation Model.

SRTM Void Areas

SRTM Void Areas (six tiles—North East, North Central, North West, South East, South Central, and South West) represents those areas without elevation values within the original source SRTM 3-arc-second data. The SRTM Void Areas coverage area is between 60 degrees north and 56 degrees south latitude of the world. These void areas are a result of radar shadow, layover, and other effects of terrain as well as technical radar interferometry phase unwrapping issues. These void areas also represent those areas where ESRI calculated an elevation value using the Delta Surface Fill method with GTOPO30 as the fill-in source. SRTM Void Areas provides the location and size of these void areas.

Elevation Data— Water Bodies

SRTM Water Bodies

SRTM Water Bodies (six tiles—North East, North Central, North West, South East, South Central, and South West) represents the lakes, rivers, and ocean areas within the SRTM coverage area (between 60 degrees north and 56 degrees south latitude) of the world. All SRTM elevation values within lakes and ocean areas were set to be a constant elevation for that feature. Elevation values within river areas were set to ensure the proper flow direction. The primary source for these water features was a Landsat 5-based land-cover water layer supplemented with medium-scale maps and charts. SRTM Water Bodies provides the geographic extent of where the original SRTM elevation values were altered to more accurately represent water surface areas within the dataset. This data can also be used for cartographic display. The dataset provides attributes for Feature and Attribute Coding Catalog (FACC) codes and descriptions as well as descriptions of atypical coding situations and code changes.

GTOPO30 Water Bodies

GTOPO30 Water Bodies (six tiles—North East, North Central, North West, South East, South Central, and South West) represents the lakes, rivers, and ocean areas within the non-SRTM coverage area (north of 60 degrees north and south of 56 degrees south latitude) of the world. All GTOPO30 elevation values within ocean areas were set to be a constant elevation for that feature. This dataset provides attributes for FACC codes and descriptions.

Elevation Data— World Elevation

Global Digital Elevation Model (ETOPO2)

Global Digital Elevation Model (ETOPO2) represents gridded (2- by 2-minute) elevation and bathymetry data for the world. This dataset was derived from the NGDC ETOPO2 Global 2-Minute Elevations dataset from September 2001. The VALUE attribute represents the elevation in meters.

Global Digital Elevation Model (GTOPO30)

Global Digital Elevation Model (GTOPO30) represents gridded 30-arc-second (approximately 1 kilometer) elevation for the world. The source datasets were developed by the USGS EROS Data Center in 1996 from a variety of data sources. The VALUE attribute represents the elevation in meters.

World Topography and Bathymetry

World Topography and Bathymetry represents a color hillshaded DEM-based image of all continents and ocean beds of the world. The hillshading effect (illumination from azimuth of 315 degrees, or northwest) provides the appearance of three dimensions (also known as 2.5D).

Image Data—World Images

World Cloud Free

World Cloud Free represents a true-color, cloud-free view of the earth produced by mosaicking hundreds of individual 2001 NASA Moderate Resolution Imaging Spectroradiometer (MODIS) satellite images. These satellites orbit the earth at an altitude of 700 kilometers (435 miles). The image has a cell size of 1 square kilometer (0.386 sq. mi.) at the equator. The image was enhanced with shaded relief imagery derived from the USGS GTOPO30 global DEM data. ESRI georeferenced this dataset to a real-world coordinate system.

World at Night

World at Night represents a nighttime view of the earth produced by mosaicking Defense Meteorological Satellite Program Operational Linescan System satellite images. This system was originally designed to view clouds by moonlight and to map the locations of permanent lights on the earth's surface. These images were derived from nine months of observations superimposed on a darkened land surface. ESRI georeferenced this dataset to a real-world coordinate system.

World with Clouds

World with Clouds represents a true-color view of the earth with cloud cover produced by mosaicking hundreds of individual 2001 NASA MODIS satellite images. The image has a cell size of 1 square kilometer (0.386 sq. mi.) at the equator. The image was enhanced with shaded relief imagery derived from the USGS GTOPO30 global DEM data. The cloud image is a composite of two days of imagery collected in visible light wavelengths and a third day of thermal infrared imagery over the poles. ESRI georeferenced this dataset to a real-world coordinate system.

World with Ice

World with Ice represents a true-color, cloud-free view of the earth specially processed to depict areas of the earth covered with ice by mosaicking hundreds of individual 2001 NASA MODIS satellite images. For polar sea ice areas, MODIS observations were combined with observations of Antarctica made by the National Oceanic and Atmospheric Administration's (NOAA) Advanced Very High Resolution Radiometer. The image has a cell size of 1 square kilometer (0.386 sq. mi.) at the equator. The image was enhanced with shaded relief imagery derived from the USGS GTOPO30 global DEM data. ESRI georeferenced this dataset to a real-world coordinate system.

World WorldSat Color Shaded Relief

World WorldSat Color Shaded Relief represents a cloud-free view of the earth produced by mosaicking hundreds of individual 1996 NOAA weather satellite images. These satellites orbit the earth at an altitude of 800 kilometers (497 miles). The image has a cell size of 4 square kilometers (1.544 sq. mi.) at the equator. On completion of the base satellite mosaic, the land areas were enhanced with shaded relief imagery derived from 1,000-meter digital elevation data, bringing the earth's topography to life. For the ocean areas, WorldSat incorporated ocean floor relief data (bathymetry), providing a view of the undersea topography.

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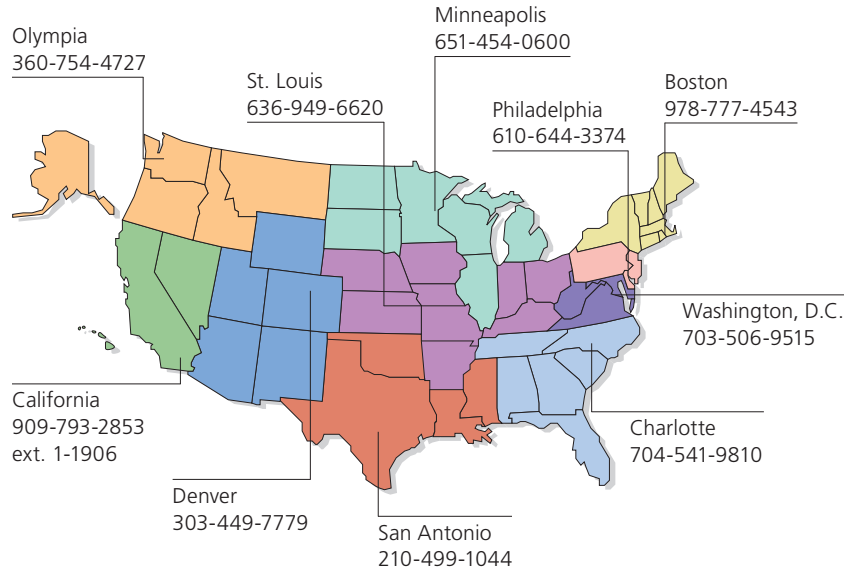
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