Indiana Statewide GIS Resources

GIS Day at Purdue University 2014
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Indiana Statewide GIS Resources

- The IndianaMap
- The Indiana Spatial Data Portal
- NSF OpenTopography – Indiana
- National Hydrography Dataset (NHD)
- Indiana Geographic Information Council
- Indiana Geographic Information Office
Indiana Wind Speed and Power Map

Map showing elevation contours and wind speed and power at 50 and 100 meters above the ground

Legend

- Elevation Contours
- Wind Speed 50m
- Wind Speed 100m
- Wind Power 50m
- Wind Power 100m

Layers

- ElevationContours_24k_USGS
- Wind_Speed_50m
- Wind_Speed_100m
- Wind_Power_50m
- Wind_Power_100m
Thematic Map Gallery

IndianaMap is the public source for Indiana map data. The Thematic Map Gallery helps people find commonly used maps for a better understanding of Indiana issues and trends.

House Districts (119th Gen. Assembly)
Shows the legislative district boundaries for the House of Representatives, 119th General Assembly of Indiana.
The boundaries were redistricted and adopted in 2021 (current until 2021) and were provided by personnel of the Indiana Election.
District Number: Select

Senate Districts (119th Gen. Assembly)
Shows the legislative district boundaries for the Senate, 119th General Assembly of Indiana.
The boundaries were redistricted and adopted in 2011 (current until 2021), and were provided by personnel of the Indiana Election.
District Number: Select

Congressional Districts (113th Congress)
Shows the legislative district boundaries in Indiana for the 113th U.S. Congress.
The boundaries were redistricted and adopted in 2011 (current until 2021), and were provided by personnel of the Indiana Election.
District Number: Select

National Hydrography Data (NHD) (1:2400)
Provides access to the local-resolution version of the National Hydrography Dataset (NHD) for Indiana, showing the currently available data as of September 5, 2014. The map contains rivers, streams, and lakes mapped at a scale of 1:2400 along with the 2009 HUC06 watershed boundary layer for reference. The NHD dataset is maintained by the USGS.

Wind Speed and Elevation Contours
Provides access to wind resource of Indiana and finding suitable sites for wind energy projects. Conventional test techniques of wind resource assessment can be time consuming, however, and often depend heavily on local meteorological expertise as well as the availability of reliable and representative wind measurements.

Oil and Gas Wells
Provides access to petroleum well data created from data in the Indiana Geological Survey (IGS) Petroleum Well Database, which is a component of the IGS Petroleum Database Management System (PDMS). The petroleum field dataset was created by comparing digital lines from Indiana Geological Survey Miscellaneous Maps (IMAPS) with well data provided by the IGS Petroleum Database Management System (PDMS) and others.
Layer Gallery

Browse IndianaMap layers to explore and learn more about them. Preview each layer, view its metadata, or download the layer to use in your desktop GIS software. View the layer map service, or choose to add the layer to your Map View. Once you have explored those layers of interest use the Add Content tool on IndianaMap to quickly add, remove, and manage each layer.
http://gis.iu.edu/

INDIANA SPATIAL DATA PORTAL
Select a USGS quadrangle name from the list or click on the map to zoom to a quadrangle. Next, click inside a dashed outline to view a list of available datasets to download.

There are 22 available datasets:
- Topographic Maps
- 2013 IndianaMap Data
- 2012 National Agriculture Imagery Program (summer)
- 2011 IndianaMap Data
- 2010 National Agriculture Imagery Program (summer)
- 2008 National Agriculture Imagery Program (summer)
- 2008 Tippecanoe County Aerial Photos (spring)
- 2007 National Agriculture Imagery Program (summer)
- 2006 National Agriculture Imagery Program (summer)
- 2006 IndianaMap Reflight Natural Color (spring)
- 2006 IndianaMap Reflight Color Infrared (spring)
- 2006 IndianaMap Color Infrared Photos (spring)
- 2005 National Agriculture Imagery Program (summer)
- 2005 IndianaMap Natural Color Orthos (spring)
- 2005 IndianaMap Color Infrared Photos (spring)
- 2005 IndianaMap Surface Model (spring)
- 2004 National Agriculture Imagery Program (summer)
- 2003 National Agriculture Imagery Program (summer)
- 1999 National Elevation Dataset
- 1998-1999 USGS Digital Ortho Quarterquad (spring)
- Indiana Sanborn Historic Maps
There are 22 available datasets

- Topographic Maps
description

- 2013 IndianaMap Data
description

  - RGBI Orthophotography

  - ECW

    - in2013_29951885_12.zip ECW 5.17 MB 1-foot resolution na in_stpl_w feet
    - in2013_29951887_03.zip ECW 4.21 MB 3-inch resolution na in_stpl_w feet
    - in2013_29951888_03.zip ECW 6.34 MB 3-inch resolution na in_stpl_w feet
    - in2013_29951890_03.zip ECW 4.89 MB 3-inch resolution na in_stpl_w feet
    - in2013_29951890_12.zip ECW 5.01 MB 1-foot resolution na in_stpl_w feet
    - in2013_29951891_03.zip ECW 3.9 MB 3-inch resolution na in_stpl_w feet
    - in2013_29961887_03.zip ECW 4.46 MB 3-inch resolution na in_stpl_w feet
    - in2013_29961888_03.zip ECW 5.14 MB 3-inch resolution na in_stpl_w feet
    - in2013_29961890_03.zip ECW 4.53 MB 3-inch resolution na in_stpl_w feet
    - in2013_29961891_03.zip ECW 4.97 MB 3-inch resolution na in_stpl_w feet
    - in2013_29971887_03.zip ECW 5.63 MB 3-inch resolution na in_stpl_w feet
    - in2013_29971888_03.zip ECW 5.58 MB 3-inch resolution na in_stpl_w feet
    - in2013_29971890_03.zip ECW 5.62 MB 3-inch resolution na in_stpl_w feet
    - in2013_29981887_03.zip ECW 4.88 MB 3-inch resolution na in_stpl_w feet
    - in2013_29981888_03.zip ECW 5.05 MB 3-inch resolution na in_stpl_w feet
    - in2013_29981890_03.zip ECW 6.21 MB 3-inch resolution na in_stpl_w feet
    - in2013_30001885_12.zip ECW 5.38 MB 1-foot resolution na in_stpl_w feet
    - in2013_30001887_03.zip ECW 6.43 MB 3-inch resolution na in_stpl_w feet
    - in2013_30001890_12.zip ECW 5.62 MB 1-foot resolution na in_stpl_w feet
NSF OPENTOPOGRAPHY – INDIANA

http://www.opentopography.org
2011 - 2013 Indiana Statewide LiDAR

Overview: Indiana's Statewide LiDAR data is produced at 1.5-meter average posi spacing for all 92 Indiana Counties covering more than 36,420 square miles. New LiDAR data was captured except where previously captured LiDAR data exists, or the participating County bought-up to a higher resolution of 1.0-meter average post spacing LiDAR data. Existing LiDAR data exists for: Porter, Steuben, Noble, DeKalb, Allen, Madison, Delaware, Hendricks, Marion, Hancock, Morgan, Johnson, Shelby, Monroe, and portions of Vermillion, Parke, Vigo, Clay, Sullivan, Knox, Gibson, and Posey. These existing LiDAR datasets were seamlessly integrated into this new statewide dataset. From this seamless LiDAR product a statewide 5-foot post spacing hydro-fattened DEM product was created and is also available. See the FGDC Metadata provided for more details.

This statewide project is divided into three geographic areas captured over a 3-year period (2011-2013):


LiDAR (.las) Processing
LiDAR (.las) Processing

1a. Select area of data to download or process:

Horizontal Coordinates: WGS84 (EPSG: 4326) - Vertical Coordinates: North American Vertical Datum 1988 (NAVD88)

Data Selection Coordinates: Manually enter selection coordinates in the horizontal coordinate system listed above.

\[ X_{\text{min}} = -88.319 \quad Y_{\text{min}} = 39.85 \quad X_{\text{max}} = -88.309 \quad Y_{\text{max}} = 39.855 \]

The selection area contains approximately 595,000 points.

1b. Choose Return Classification: Ground, Unclassified, All

1c. Choose an Output Coordinate System: NAD83 Indiana East (US) [EPSG: 2965], NAD83 Indiana West (US) [EPSG: 2966], NAD83 Indiana Zone 18N (Water) [EPSG: 32616]

2. Point Cloud Data Download:
   - Point cloud data in LAS format
   - Point cloud data in LAZ format
   - Point cloud data in ASCII format
LiDAR (.las) Processing

2. Point Cloud Data Download:
   - Point cloud data in LAS format
   - Point cloud data in LAZ format
   - Point cloud data in ASCII format

3a. DEM Generation (Local Gridding):
   - Gridding Method:
     - Calculate Zmin grid
     - Calculate Zmax grid
     - Calculate Zmean grid
     - Calculate Zrow grid
     - Calculate point count grid
   - Grid Resolution (Default = 6 ft): 6
   - Radius value (Default = 6 ft): 6
   - Grid Format: All formats
   - Null Filling: 7

3b. DEM Generation (TIN):
   - Gridding Method:
     - Calculate TIN
   - Grid Resolution (Default = 6 ft): 6
   - Max triangle size (Default 50 units): 50
   - Grid Format: ASCII Grid, Arc ASCII Grid, GeoTiff, IMG, All formats

4. Derivative Products:
   - Generate hillshade and slope grids in grid format: GeoTiff

5. Visualization:
   - Generate hillshade images and Google Earth files from DEMs
   - Altitude of the light (in degrees): 45
   - Azimuth of the light (in degrees): 315
   - Generate additional color-relief and colored hillshades

Job Description:
These options allow users to describe and keep track of their jobs. Information entered below is recorded along with other job parameters in your personal LiDAR Job archive accessed via myOpenTopo (available only to registered OpenTopography users).

Job title: My Indiana Project
Job description: (up to 500 characters)
LiDAR (.las) Processing
NATIONAL HYDROGRAPHY DATASET
Project to Improve Indiana’s NHD

Goal: Correct & Upgrade NHD to Local Resolution

- Use 2005 and newer Orthophotography and LiDAR to correct the existence and the locations of physical features

Existing High-Res NHD in RED

Improved NHD using 2005 Orthophotography in BLUE
Example of improved alignment

Existing High Res NHD in **RED**

Improved NHD **YELLOW**
Creating Local Resolution NHD

Phase 1 Pilot, Upper Eel Subbasin

• 24K NHD: 2,177 Flowlines; 2,571 Waterbodies

• Local Resolution: 47,821 Flowlines; 3,350 Waterbodies
http://www.in.gov/gis/

THE INDIANA GEOGRAPHIC INFORMATION OFFICE
GIS in Indiana

- Indiana Geographic Information Council
- Online Maps
- The IndianaMap
- Stats Indiana
- IndianaView

GIS at the National Level

- Circular No. A-16, National Coordination of Geographic Information
- Activities
- National States Geographic Information Council
- The Fifty States Initiative
- Federal Geographic Data Committee
- The National Map

GIS Discussion Topics

- GIS and Indiana’s Access To Public Records Act (APRA)
- Proceedings Of The Conference On Law And Information Policy For
- Spatial Databases
- "Ten Ways to Support GIS Without Selling Data" by Bruce Joffe
- "Is Cost Recovery Worthwhile?" by Jeff P. Johnson and Harlan J.
- Onsrud

Geospatial Data Sharing - Guidance

Source

- The National States Geographic Information Council (NSGIC)

This Isn't Private Information

NGA surveillance of our email. Military and civilian use of drones. Applications
State Composite Address Locator

LOCATION: https://gis.in.gov/arcgis/services

To Access the locator from the geocoding toolbar:

1. Geocoding toolbar > GeoCoder > Manage Address Locators
2. Address Locator Manager > Add > GIS Servers (From Drop down) > Add ArcGIS Server

3. Pop-up > Use GIS services > add server URL (https://gis.in.gov/arcgis/services)

4. Click on server connection > Select Indiana_Composite_Locator from list
Address Geocoding with State Composite Service

Geocoding is the process of transforming a description—such as a pair of coordinates, an address, or a name of a place—to a location on the earth's surface. The state's composite service comes from a collaboration between county governments and the state. The data originates at the county and the state regularly harvests county data for integration into a single dataset.

PowerPoint Presentation
State Composite Address Locator
What We Do

IGIC coordinates geographic information resources in Indiana – we take the lead in getting people and organizations working with each other toward common goals.

IGIC provides education, policy guidance, and technology resources to hundreds of individuals and organizations throughout Indiana.

Mission

Coordination of Indiana GIS through dissemination of data and data products, education and outreach, adoption of standards, building partnerships and the IndianaMap.

Activities

- Leading major data and research initiatives like the IndianaMap
- Coordinating the annual Indiana GIS conference
- Directing activities for data sharing and standards development
- Providing outreach through seminars, workshops and publications
- Managing local and statewide programs like the 2005 Orthophotography Project
- Providing access to data, information and tools
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