

ArcGIS 10 and REST Services Technology

Presented by:

Becky Meyer

reameyer@indiana.edu

Indiana Geological Survey

IMCC Benchmarking Workshop on Mine Mapping

February 15 - 16, 2012



IndianaMap

IndianaMap Demo

IndianaMap

<http://maps.indiana.edu>

The screenshot shows the IndianaMap web application running in a Firefox browser. The browser's address bar displays the URL <http://maps.indiana.edu/>. The application interface includes a navigation bar with the text "INDIANAMAP", buttons for "Layers" and "Maps", a search input field labeled "Search...", and a "Detail" button. The main map area displays a shaded relief map of Indiana with a network of red lines representing major roads. Several interstate highways are marked with their respective shields, including I-90, I-94, I-80, I-69, I-65, I-489, I-74, I-465, I-70, I-65, I-74, I-275, I-265, I-84, and I-164. To the left of the map is a vertical zoom slider and a small inset map of Indiana with directional arrows. Below the inset map is a scale bar indicating 0, 20, and 40 miles. On the right side of the interface, a panel titled "Shaded Relief - Basemaps" is visible, containing a "Close" button and some icons. The overall layout is clean and functional, typical of a web-based mapping application.

IndianaMap

The screenshot displays the IndianaMap web application in a Firefox browser window. The browser's address bar shows the URL `http://maps.indiana.edu/index.html`. The application interface includes a navigation bar with the "INDIANAMAP" logo, "Layers" and "Maps" tabs, a search field, and a "Detail" button. The main map area shows a satellite-style view of Indiana with a network of red lines representing major highways and grey lines for county boundaries. Highway shields for routes 90, 65, 34, 80, 69, 469, 465, 74, 485, 70, 275, 65, 74, 265, 54, 164, and 164 are visible. To the left of the map is a vertical scale bar and a small map of Indiana with navigation arrows. A scale bar at the bottom left indicates 0, 20, and 40 miles. On the right side, a sidebar contains a "Close" button and a section titled "Best Available Imagery Hybrid" with a small thumbnail image. The "IndianaMap" logo is partially visible in the bottom right corner.

IndianaMap

The screenshot displays the IndianaMap web application interface within a Firefox browser window. The browser's address bar shows the URL <http://maps.indiana.edu/index.html>. The application header includes the "INDIANA MAP" logo, a "Layers" button, a "Maps" button, a search field, and a "Detail" button. The main interface is divided into three vertical panels:

- Left Panel (Layers):** A vertical list of map layers with expandable arrows. The layers listed are Basemaps, Demographics, Environment, Geology, Government, Hydrology, Imagery, Infrastructure, and Reference. A vertical scale bar is visible on the far left, and a small map of Indiana is shown below the layers list.
- Center Panel (Map):** A map of the state of Indiana showing county boundaries and major interstate highways (I-90, I-84, I-65, I-74, I-69, I-465, I-70, I-275, I-164, I-64, I-265) highlighted in red. The map uses a "Best Available Imagery Hybrid" style.
- Right Panel (Detail):** A panel titled "Best Available Imagery Hybrid" with a "Close" button at the top right. It contains a blank white space for detailed information.

At the bottom right of the map area, the "Indiana" logo and "AP" are visible.

IndianaMap

The screenshot displays the IndianaMap web application interface. At the top, a Firefox browser window shows the URL <http://maps.indiana.edu/index.html>. The application header includes the "INDIANAMAP" logo, "Layers" and "Maps" tabs, a search bar, and a "Detail" button.

The main interface is divided into three panels:

- Left Panel (Layers):** A list of geology layers with expand/collapse arrows. The layers are:
 - Coal Mines Abandoned Features - Geology
 - Coal Mines Abandoned Highwalls - Geology
 - Coal Mines Abandoned Lands - Geology
 - Coal Mines Entries - Geology
 - Coal Mines Surface - Geology** (selected)
 - Coal Mines Underground - Geology** (selected)
 - Coal Thickness Danville - Geology
 - Coal Thickness Danville Availability - Geology
 - Coal Thickness Hymera - Geology
 - Coal Thickness Springfield - Geology
 - Coal Thickness Springfield Availability - Geology
- Center Panel (Map):** A map of Indiana showing county boundaries, major highways (Interstates 65, 70, 74, 80, 90, 465, 469, 69, 74, 265, 275, 164, 64), and geology data. The selected layers are visible as orange and blue areas on the map.
- Right Panel (Layers):** A list of active layers with checkboxes:
 - Coal Mines Surface - Geology
 - Coal Mines Underground - Geology
 - Best Available Imagery Hybrid

Navigation and zoom controls are located on the left side of the map panel, and a scale bar is at the bottom left. The "INDIANAMAP" logo is visible in the bottom right corner of the map area.

IndianaMap

The screenshot shows the IndianaMap web application interface. The browser window title is "http://maps.indiana.edu/index.html". The page includes a search bar, a "Layers" button, and a "Detail" button. The map displays a satellite view of a region in Indiana, with several areas highlighted in orange and blue. A scale bar and navigation controls are visible in the bottom left corner. The "Detail" panel on the right provides the following information:

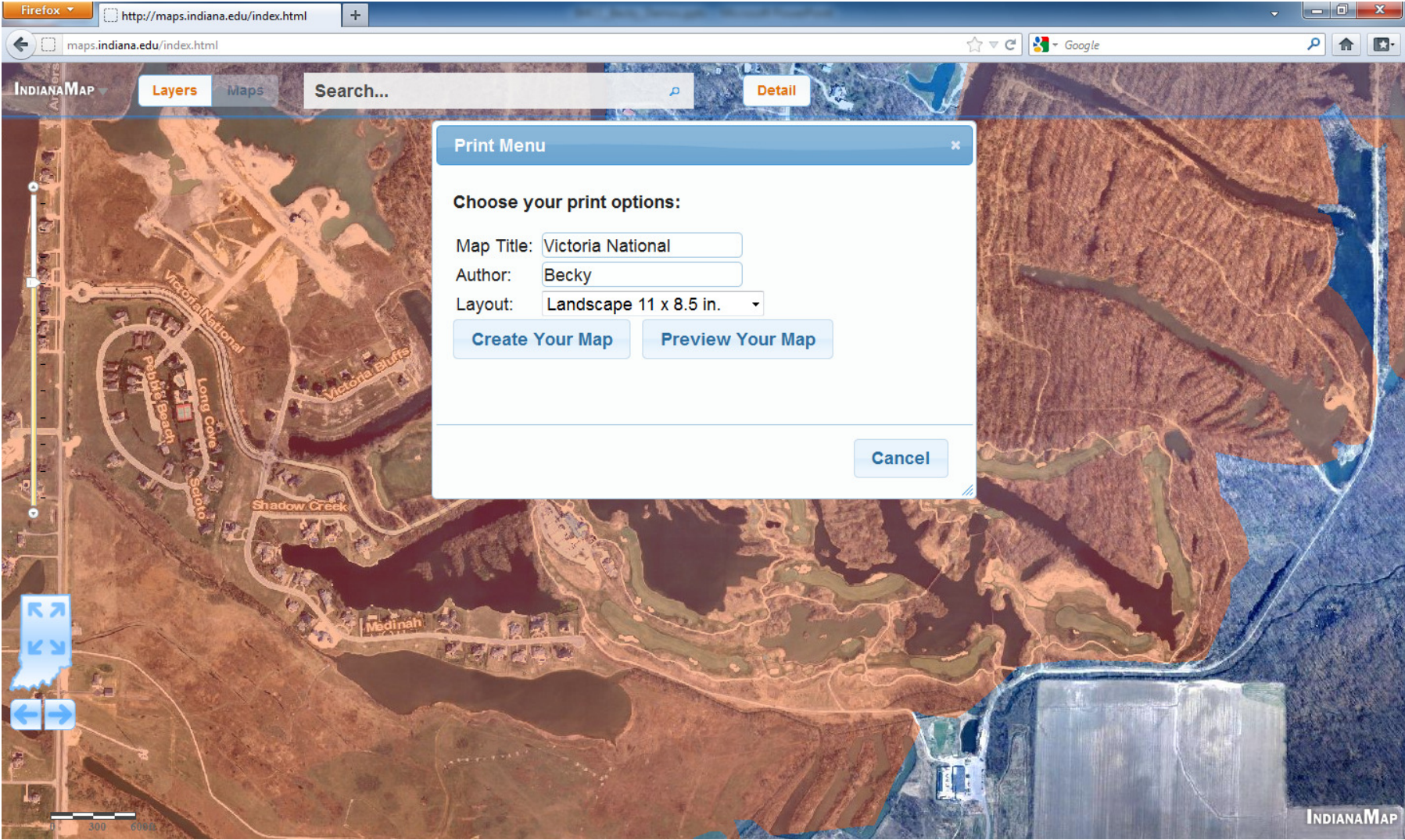
Property	Value
IGS Mine ID (CMIS)	800043
Date Mine Opened	1900
Date Mine Closed	1921
IGS Mine Map ID (CMIS)	342981
Mine Map Source Confidence	Primary
Mine Type Code (Adit, Underground)	U
Digital Mine Map Image Available?	Y
Shape	Polygon

IndianaMap

The screenshot shows a web browser window displaying the IndianaMap application. The browser's address bar shows the URL `http://maps.indiana.edu/index.html`. The application interface includes a search bar with the text "Victoria National", a "Layers" button, and a "Detail" button. The map itself is a topographic view of a region with various residential areas and water bodies. A metadata panel is open on the right side of the screen, displaying the following information:

Property	Value
IGS Mine ID (CMIS)	201303
Date Mine Opened	1964
Date Mine Closed	1968
IGS Mine Map ID (CMIS)	999988
Mine Map Source Confidence	Secondary
Mine Reflects Another Mine?	N
Shape	Polygon

IndianaMap



IndianaMap

Firefox | http://maps.indiana.edu/index.html | _ags_d5ae883034f34d6498de53b75d5... | bl-geoy-crinoiads.iu.edu:6080/arcgis/rest/directories/arcgisoutput/Utilities/ExportWebMap_GPServer/_ags_d5ae883034f34d6498de53b75d5412f4.pdf | Google

Victoria National

Date: 2/3/2012

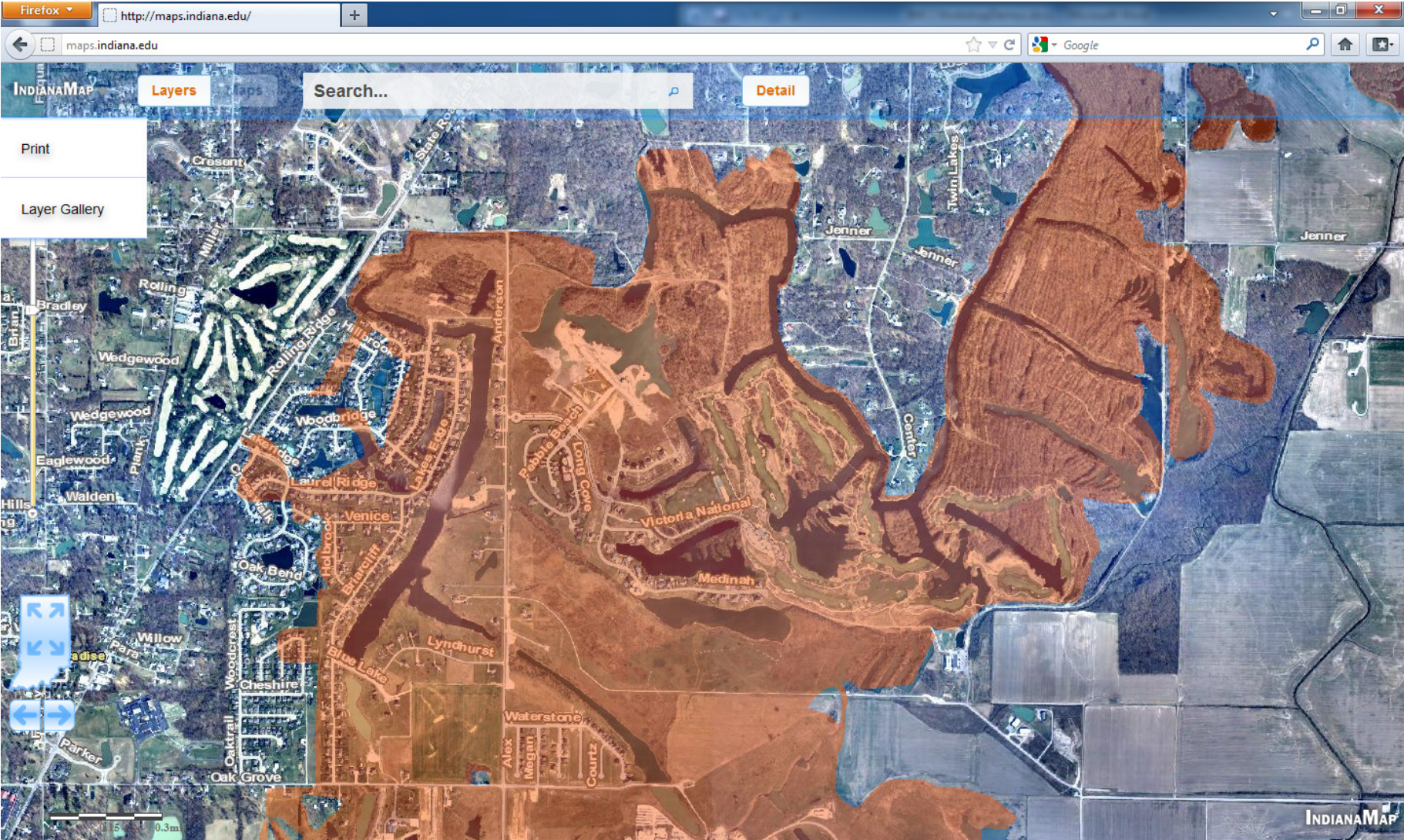


Author: Becky

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IndianaMap
Created with

IndianaMap



IndianaMap

The screenshot shows a Firefox browser window with the URL `http://maps.indiana.edu/index.html` and a tab titled "Layer Gallery, Indiana Map". The address bar shows `maps.indiana.edu/layers.html`. The website header includes the "INDIANA MAP" logo, a "Viewer" dropdown, a search bar for layers, and a "Selected Layers" dropdown. The main content area features a large "Layer Gallery" heading and a sub-heading "Layers found on the IndianaMap". Below this is a paragraph explaining the gallery's purpose and a blue button labeled "Learn more about the IndianaMap »".

Layer Gallery


Layers found on the IndianaMap

Browse IndianaMap layers. Find a preview map for each layer. View metadata. Download the layer, view the map service, or choose add layer, then select viewer to interact with your selections.

[Learn more about the IndianaMap »](#)

Demographics

15 LAYERS




- Census
- Ethnicity
- Population

[View details »](#)

Environment

66 LAYERS




- Agribusiness
- Agriculture
- Crops
- Ecology
- Land Cover
- Managed Lands
- Monitoring
- Remediation
- Soils
- Storage
- Tanks
- Waste
- Wind

[View details »](#)

Geology

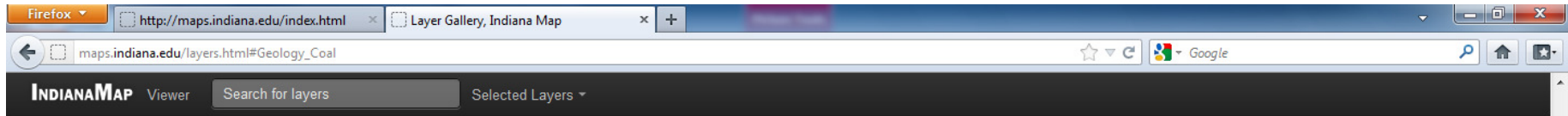
49 LAYERS



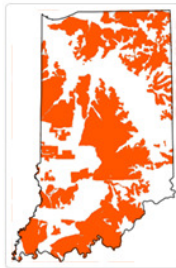
- Bedrock
- Coal
 - Data
 - Depth
 - Elevation
 - Mines
 - Thickness
- Glacial
- Industrial
- Minerals
- Petroleum
- Physiography
- Seismic
- Silurian
- Surficial

[View details »](#)

IndianaMap



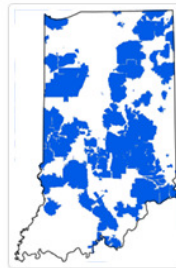
Mines Surface



- Preview Map
- Metadata
- Download Zip File
- Map Service
- Add layer

Surface Coal Mines, 2010 - Shows the locations and extents of surface coal mines through 2009.

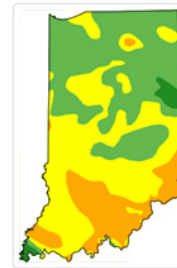
Mines Underground



- Preview Map
- Metadata
- Download Zip File
- Map Service
- Add layer

Underground Coal Mines, 2010 - Shows the locations and extents of underground coal mines

Thickness Danville

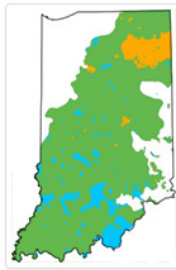


- Preview Map
- Metadata
- Download Zip File
- Map Service
- Add layer

Thickness of the Danville Coal, 1995 - Shows contours that define ranges of thicknesses (in feet) of the Danville Coal Member

[Back to Top](#)

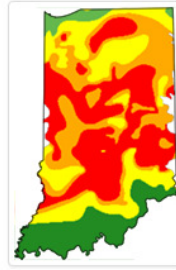
Thickness Danville Availability



- Preview Map
- Metadata
- Download Zip File
- Map Service
- Add layer

Thickness of the Danville Coal, 2000 - Shows thickness (in feet) of the Danville Coal Member in Indiana

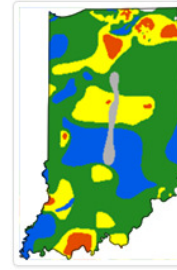
Thickness Hymera



- Preview Map
- Metadata
- Download Zip File
- Map Service
- Add layer

Thickness of the Hymera Coal, 1995 - Shows contours that define ranges of thicknesses (in feet) of the Hymera Coal Member

Thickness Springfield



- Preview Map
- Metadata
- Download Zip File
- Map Service
- Add layer

Thickness of the Springfield Coal, 1995 - Shows contours that define ranges of thicknesses (in feet) of the Springfield Coal Member

IndianaMap

Firefox | http://maps.indiana.edu/ | Layer Gallery, Indiana Map | Coal Mines Underground | Coal Mines Underground | +

maps.indiana.edu/Geology/Coal_Mines_Underground.html | ☆ | Google | 🔍 | 🏠 | 🗺️

Underground Coal Mines (2010)

Underground Coal Mines, 2010 - Shows the locations and extents of underground coal mines

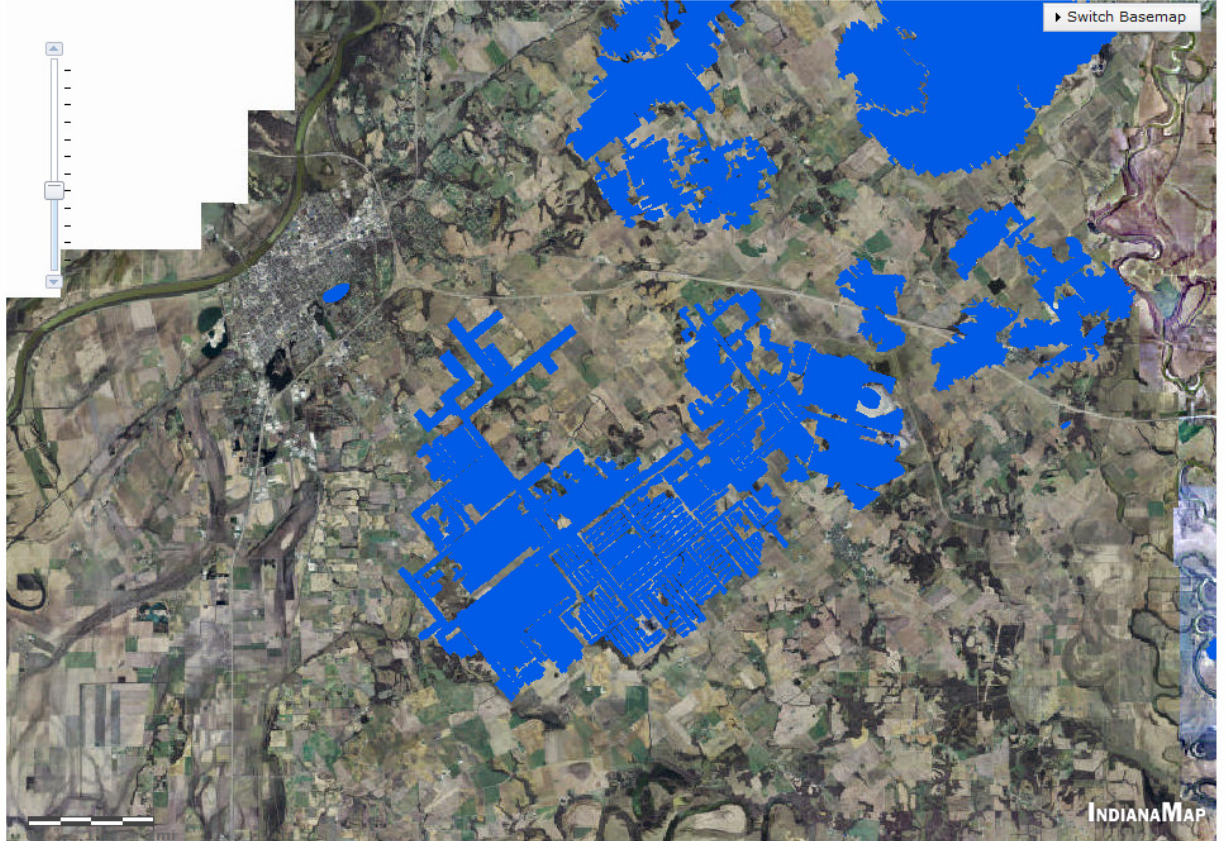
Metadata | Legend | Browse | Layers

Short description:
Underground Coal Mines, 2010 (1:24,000) - Shows the locations and extents of underground coal mines. Includes locations for all documented underground mines that operated in Indiana since the late 1800s. Mines can be differentiated based on mine type, mine number, source information, and dates of mining. Original source information includes company mine maps, field maps and notes of IGS geologists, IGS publications, and Indiana State Mine Inspector Reports.

Tags:
IndianaMap, IGS, Indiana, coal, mine, underground, deep mine, subsidence, reclamation, economy, geoscientificInformation

Credits:
Indiana Department of Natural Resources
FGDC Metadata:
[Coal_Mines_Underground.html](#)

Download:Download a zip file that contains an ESRI Shape File and associated metadata:
[Coal_Mines_Underground.zip](#)



Switch Basemap

INDIANAMAP

IndianaMap

The screenshot shows the IndianaMap web application interface. The browser window title is "Layer Gallery, Indiana Map" and the URL is "maps.indiana.edu/layers.html#Environment_Ecology_Trees_Big". The page header includes the "INDIANAMAP" logo and a "Viewer" tab for "Environment Ecology Trees Big". A "Selected Layers" dropdown menu is open, listing "Watersheds HUC08", "Coal Mines Underground", "Coal Mines Surface", "Ecology Trees Big", and "Clear Selections". Below the menu, two map preview thumbnails are visible. The left thumbnail shows a map of Indiana with colored regions, and the right thumbnail shows a map of Indiana with black dots representing champion trees. Each thumbnail has a set of controls: "Preview Map", "Metadata", "Download Zip File", "Map Service", and "Add layer". A "Layer Added" button is visible below the right thumbnail. Below the thumbnails, there are two text blocks: "Ecoregions, Levels III and IV, 1996 - Shows areas where ecosystems (types, quality, and quantity of environmental resources) are generally similar" and "Big Tree Champions, 2005 - shows locations of champion trees in Indiana. Each native tree is the largest individual of its species found in Indiana". A "Back to Top" link is located on the right side of the page.

INDIANAMAP Viewer Environment Ecology Trees Big Selected Layers ▾

- Watersheds HUC08
- Coal Mines Underground
- Coal Mines Surface
- Ecology Trees Big
- Clear Selections

Preview Map Metadata Download Zip File Map Service Add layer

Preview Map Metadata Download Zip File Map Service Layer Added

Ecoregions, Levels III and IV, 1996 - Shows areas where ecosystems (types, quality, and quantity of environmental resources) are generally similar

Big Tree Champions, 2005 - shows locations of champion trees in Indiana. Each native tree is the largest individual of its species found in Indiana

[Back to Top](#)

Land Cover

Land Cover 1992

Preview Map Metadata Download Zip File Map Service Add layer

Land Cover, 1992 (30-meter Grid) - Shows categories of land use, a subset of the National

Land Cover 2001

Preview Map Metadata Download Zip File Map Service Add layer

Land Cover, 2001 (30-meter Grid) - Shows fifteen categories of land use for Indiana, a subset of

Land Cover 2006

Preview Map Metadata Download Zip File Map Service Add layer

Land Cover, 2006 (30-meter Grid) - Shows fifteen categories of land use for Indiana, a subset of

IndianaMap

Firefox

http://maps.indiana.edu/index.html

maps.indiana.edu/index.html

INDIANAMAP

Layers Maps Search... Detail

0 20 40mi

- Ecology Trees Big - Environment
- Coal Mines Surface - Geology
- Coal Mines Underground - Geology
- Watersheds HUC08 - Hydrology
- Shaded Relief - Basemaps

iKnow AP

IndianaMap

End Demo