

Thickness of Unconsolidated Deposits of Hendricks County, Indiana

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IDENTIFICATION_INFORMATION

Citation:

Citation_Information:

Originator: Glenn Grove, IDNR, Division of Water, Ground Water Section

Publication_Date: 20010702

Title: Thickness of Unconsolidated Deposits of Hendricks County, Indiana (Indiana Department of Natural Resources, Division of Water, 1:24,000, Line Coverage)

Edition: 1.0

Geospatial_Data_Presentation_Form: Map

Publication_Information:

Publication_Place: Indianapolis, Indiana, USA

Publisher: Indiana Department of Natural Resources, Division of Water

Other_Citation_Details: This map was compiled from published maps at 1:24,000 scale (Bedrock Topography of Hendricks County, Indiana and USGS hypsography digital line graph (DLG) for all the quadrangles in Hendricks County): see Data Quality Information section for details about the individual maps that were merged to make the composite map.

Online_Linkage:

Larger_Work_Citation: Ground Water Atlas of Hendricks County, Indiana

Citation_Information:

Originator: Indiana Department of Natural Resources, Division of Water

Publication_Date: 20010702

Title: Thickness of Unconsolidated Deposits of Hendricks County, Indiana (Indiana Department of Natural Resources, Division of Water, 1:24,000, Line Coverage)

Publication_Information:

Publication_Place: Indianapolis, Indiana, USA

Publisher: Indiana Department of Natural Resources, Division of Water

Online_Linkage:

Description:

Abstract: This file is a digital geospatial line coverage of the unconsolidated thickness Hendricks County, Indiana Indiana. The mapping was conducted using USGS hypsography (surface contour) digital line graph coverages and bedrock topography coverage of Hendricks County, Indiana. The two coverages were converted into ArcInfo Triangulated Irregular Networks (TIN), a product of ESRI. These TINs were then converted into 10 meter grids and the latter subtracted from the former to produce the unconsolidated thickness grid. The resulting grid was then filtered using a low pass filter with 25 iterations to produce smoother lines when contoured. Then new grid was contoured in ArcInfo using *latticecontour* with a 25 foot interval. Primary attribute is the thickness of the unconsolidated deposits.

Purpose: Display and/or analyses requiring unconsolidated thickness contours Hendricks County, Indiana Indiana. The coverage is suitable for use in a Geographic Information System.

Supplemental_Information:

Time_Period_of_Content:

Time_Period_Information:

Range_of_Dates/Times:

Beginning_Date: 2001

Ending_Date: 2001

Currentness_Reference: publication date

Status:

Progress: Complete

Maintenance_and_Update_Frequency: None planned.

Spatial_Domain:

Bounding_Coordinates:

West_Bounding_Coordinate: -86.6966

East_Bounding_Coordinate: -86.3237

North_Bounding_Coordinate: 39.9256

South_Bounding_Coordinate: 39.5996

Keywords:

Theme:

Theme_Keyword_Thesaurus: None

Theme_Keyword: geology

Theme_Keyword: unconsolidated thickness

Place:

Place_Keyword_Thesaurus: None

Place_Keyword: Hendricks County, Indiana Indiana, USA

Access_Constraints: This file is available to anyone, but access may be contingent on written request, specific terms relevant to the agency or person making the request, and/or current freedom of information statutes in the State of Indiana.

Use_Constraints: Acknowledgement of the following agency in products derived from these data: Indiana Department of Natural Resources, Division of Water. This map was compiled by staff of the Indiana Department of Natural Resources, Division of Water using data believed to be accurate. However, a degree of error is inherent in all maps. This product is distributed "as-is" without warranties of any kind, either expressed or implied. The maps are intended for use only at the published scale.

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Division of Water

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Point_of_Contact:

Contact_Information:

Contact_Organization_Primary:

Contact_Organization: Indiana Department of Natural Resources, Division of Water

Contact_Person: Glenn Grove

Contact_Position: Engineering Geologist

Contact_Address:

Address_Type: Mailing and physical address

Address: 402 W. Washington Street, Room W264

City: Indianapolis

State_or_Province: Indiana

Postal_Code: 46204

Country: USA

Contact_Voice_Telephone: 317-232-4160

Contact_Facsimile_Telephone: 317-233-4579

Contact_Electronic_Mail_Address: ggrove@dnr.state.in.us

Native_Data_Set_Environment:

ArcInfo version 7.2.1 line coverage format

Approximate size 2 MB

unc_con25_hend.e00

and

ArcView 3.2 shapefile

Approximate size .8 MB

unc_con25_hend.shp

DATA_QUALITY_INFORMATION

Attribute_Accuracy:

Attribute_Accuracy_Report: The digital mapping was conducted by converting the coverages into 10 meter grids. The 10 meter grid reduces the accuracy of the contouring and may possibly produce significant error in areas where one or both maps have a high density of contours. However, the broad 25 foot contour range should mitigate this effect.

Logical_Consistency_Report:

Completeness_Report: The map represents all of Hendricks County.

Positional_Accuracy: The locations of the contours are based on the difference between grids of the bedrock surface topography and USGS hypsography DLG's. Resultant grids were contoured in ArcInfo.

Horizontal_Positional_Accuracy:

Horizontal_Positional_Accuracy_Report: The locations of the contours are based on the difference between grids of the bedrock surface topography and USGS hypsography DLG's. Resultant grids were contoured in ArcInfo. The grid spacing was 10 meters for each grid. There might be an offset of as much as 10 meters for each grid.

Vertical_Positional_Accuracy:

Vertical_Positional_Accuracy_Report: In general the vertical accuracy should be within 25 feet. In areas where the contours are close together in one or both coverages and the vertical accuracy may be reduced significantly.

Lineage:

Source_Information:

Source_Citation:

Citation_Information:

Originator: Indiana Department of Natural Resources, Division of Water

Publication_Date: 20010702

Title: Thickness of Unconsolidated Deposits of Hendricks County, Indiana (Indiana Department of Natural Resources, Division of Water, 1:24,000, Line Coverage)

Edition: 1.0

Geospatial_Data_Presentation_Form: map

Publication_Information:

Publication_Place: Indianapolis, IN

Publisher: Indiana Department of Natural Resources, Division of Water

Other_Citation_Details:

Online_Linkage:

Larger_Work_Citation:

Citation_Information:

Originator:

Publication_Date:

Title:

Publication_Information:

Publication_Place:

Publisher:

Online_Linkage:

Source_Scale_Denominator: 1:24,000

Type_of_Source_Media:

Source_Time_Period_of_Content:

Time_Period_Information:

Range_of_Dates/Times:

Beginning_Date:

Ending_Date:

Source_Currentness_Reference: Publication date

Source_Citation_Abbreviation: IDNR_DOW_Unconsolidated thickness_map_of Hendricks County

Source_Contribution: water well records from the IDNR-DOW well record archives, seismic data, oil and gas records, publications

Process_Step:

Process_Description: Staff of the IDNR-DOW conducted mapping for this project from 1998 through 1999. The mapping was typically at a 7.5 minute quadrangle scale of 1:24,000. Data were selected by careful evaluation of water well records to determine if the records were located and if they contained complete and reasonable information. In other areas, where appropriate, additional data such as seismic shots or oil and gas records were used. The mapping was conducted on a mylar sheet (on file at the IDNR-DOW).

Source_Used_Citation_Abbreviation: IDNR-DOW water well records for domestic wells submitted by water-well drillers from 1956-1999

Process_Date: 1999

Source_Produced_Citation_Abbreviation:

Process_Contact:

Contact_Information:

Contact_Person_Primary:

Contact_Organization: Indiana Department of Natural Resources, Division of Water

Contact_Person: Glenn Grove

Contact_Position: Engineering Geologist

Contact_Address:

Address_Type: Mailing and physical address

Address: 402 W. Washington Street, Room W264

City: Indianapolis

State_or_Province: Indiana

Postal_Code: 46204

Country: USA

Contact_Voice_Telephone: 317-232-4160

Contact_Facsimile_Telephone: 317-233-4579

Contact_Electronic_Mail_Address: ggrove@dnr.state.in.us

Hours_of_Service: 8:15am - 4:15pm

Process_Step:

Process_Description: The mylar was scanned using a wide-bed black-and-white scanner and saved as a raster image. The raster image was vectorized using a tracer program (ArcScan). The vector data were georeferenced to UTM Zone 16, NAD27. The arc coverage was attributed with the appropriate elevation value. (personnel: Sally Letsinger)

Source_Used_Citation_Abbreviation: IDNR-DOW water well records for domestic wells submitted by water-well drillers from 1956-1999

Process_Date: 1999

Source_Produced_Citation_Abbreviation:

Process_Contact:

Contact_Information:

Contact_Person_Primary:

Contact_Organization: Indiana Department of Natural Resources, Division of Water

Contact_Person: Glenn Grove

Contact_Position: Engineering Geologist

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Postal_Code: 46204

Country: USA

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Contact_Facsimile_Telephone: 317-233-4579

Contact_Electronic_Mail_Address: ggrove@dnr.state.in.us

Hours_of_Service: 8:15am - 4:15pm

Process_Step:

Process_Description: After the maps were attributed and georeferenced, each map was digitally edgematched and joined together using ArcInfo.

Source_Used_Citation_Abbreviation

Process_Date: 1999

Source_Produced_Citation_Abbreviation:

Process_Contact:

Contact_Information:

Contact_Person_Primary:

Contact_Organization: Indiana Department of Natural Resources, Division of Water

Contact_Person: Glenn Grove

Contact_Position: Engineering Geologist

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Contact_Facsimile_Telephone: 317-233-4579

Contact_Electronic_Mail_Address: ggrove@dnr.state.in.us

Hours_of_Service: 8:15am - 4:15pm

Process_Step:

Process_Description: The above process steps apply for all work maps.

Source_Used_Citation_Abbreviation

Process_Date: 1999

Source_Produced_Citation_Abbreviation:

Process_Contact:

Contact_Information:

Contact_Person_Primary:

Contact_Organization: Indiana Department of Natural Resources, Division of Water

Contact_Person: Glenn Grove

Contact_Position: Engineering Geologist

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Postal_Code: 46204

Country: USA

Contact_Voice_Telephone: 317-232-4160

Contact_Facsimile_Telephone: 317-233-4579

Contact_Electronic_Mail_Address: ggrove@dnr.state.in.us

Hours_of_Service: 8:15am - 4:15pm

Lineage:

Source_Information:

Source_Citation:

Citation_Information:

Originator: Marv Thompson and Bill Herring, Indiana Department of Natural Resources, Division of Water

Publication_Date: work completed 1999

Title: Unpublished work map, Bridgeport Quadrangle Bedrock-surface Topography. 1:24,000

Edition: 1.0

Geospatial_Data_Presentation_Form: map

Publication_Information:

Publication_Place: Indianapolis, IN

Publisher: State of Indiana, IDNR

Other_Citation_Details: Data plotted by Marv Thompson: 1999

Online_Linkage:

Larger_Work_Citation: Bedrock-surface topography of the West Fork White River basin

Citation_Information:

Originator: Indiana Department of Natural Resources, Division of Water

Publication_Date: 200006

Title: Water Resources in the White and West Fork White River Basins

Publication_Information:

Publication_Place: Indianapolis, IN

Publisher: Indiana Department of Natural Resources, Division of Water

Online_Linkage:

Source_Scale_Denominator: 24,000

Type_of_Source_Media: mylar

Source_Time_Period_of_Content:

Time_Period_Information:

Range_of_Dates/Times:

Beginning_Date: 1959

Ending_Date: 1999

Source_Currentness_Reference: Publication date

Source_Citation_Abbreviation:

IDNR_DOW_WFWR_Bedrock_surface_topography_Bridgeport_Quadrangle_Indiana

Source_Contribution: water well records from the IDNR-DOW well record archives, seismic data, oil and gas records, publications

Lineage:

Source_Information:

Source_Citation:

Citation_Information:

Originator: U.S. Geological Survey

Publication_Date: 20010320

Title: Bridgeport, IN / Hypsography

Edition:

Geospatial_Data_Presentation_Form: DLG-3

Publication_Information:

Publication_Place: Reston VA

Publisher: U.S. Geological Survey

Other_Citation_Details:

Online_Linkage: http://edcftp.cr.usgs.gov/pub/data/DLG/LARGE_SCALE/B/bridgeport_IN/hypsography/

Larger_Work_Citation:

Citation_Information:

Originator:

Publication_Date:

Title:

Publication_Information:

Publication_Place:

Publisher:

Online_Linkage:

Source_Scale_Denominator: 24,000

Type_of_Source_Media:

Source_Time_Period_of_Content:

Time_Period_Information:

Range_of_Dates/Times:

Beginning_Date:

Ending_Date:

Source_Currentness_Reference: Publication date

Source_Citation_Abbreviation: USGS

Source_Contribution:

Lineage:

Source_Information:

Source_Citation:

Citation_Information:

Originator: Marv Thompson, Indiana Department of Natural Resources, Division of Water

Publication_Date: work completed 1999

Title: Unpublished work map, Brownsburg Quadrangle Bedrock-surface Topography. 1:24,000

Edition: 1.0

Geospatial_Data_Presentation_Form: map

Publication_Information:

Publication_Place: Indianapolis, IN

Publisher: Indiana Department of Natural Resources, Division of Water

Other_Citation_Details: Data plotted by Marv Thompson: 1999; the map was retraced by Marv Thompson for scanning.

Online_Linkage:

Larger_Work_Citation: Bedrock-surface topography of the West Fork White River basin

Citation_Information:

Originator: Indiana Department of Natural Resources, Division of Water

Publication_Date: 200006

Title: Water Resources in the White and West Fork White River Basins

Publication_Information:

Publication_Place: Indianapolis, IN

Publisher: Indiana Department of Natural Resources, Division of Water

Online_Linkage:

Source_Scale_Denominator: 24,000

Type_of_Source_Media: mylar

Source_Time_Period_of_Content:

Time_Period_Information:

Range_of_Dates/Times:

Beginning_Date: 1959

Ending_Date: 1999

Source_Currentness_Reference: Publication date

Source_Citation_Abbreviation:

IDNR_DOW_WFWR_Bedrock_surface_topography_Brownsburg_Quadrangle_Indiana

Source_Contribution: water well records from the IDNR-DOW well record archives, seismic data, oil and gas records, publications.

Lineage:

Source_Information:

Source_Citation:

Citation_Information:

Originator: U.S. Geological Survey

Publication_Date: 20010320

Title: Brownsburg, IN / Hypsography

Edition:

Geospatial_Data_Presentation_Form: DLG-3

Publication_Information:

Publication_Place: Reston VA

Publisher: U.S. Geological Survey

Other_Citation_Details:

Online_Linkage: http://edcftp.cr.usgs.gov/pub/data/DLG/LARGE_SCALE/B/brownsburg_IN/hypsography/

Larger_Work_Citation:

Citation_Information:

Originator:

Publication_Date:

Title:

Publication_Information:

Publication_Place:

Publisher:

Online_Linkage:

Source_Scale_Denominator: 24,000

Type_of_Source_Media:
Source_Time_Period_of_Content:
Time_Period_Information:
Range_of_Dates/Times:
Beginning_Date:
Ending_Date:
Source_Currentness_Reference: Publication date
Source_Citation_Abbreviation: USGS
Source_Contribution:

Lineage:

Source_Information:
Source_Citation:
Citation_Information:
Originator: Marv Thompson, Indiana Department of Natural Resources, Division of Water
Publication_Date: work completed 1999
Title: Unpublished work map, Clayton Quadrangle Bedrock-surface Topography. 1:24,000
Edition: 1.0
Geospatial_Data_Presentation_Form: map
Publication_Information:
Publication_Place: Indianapolis, IN
Publisher: Indiana Department of Natural Resources, Division of Water
Other_Citation_Details: Data plotted by Marv Thompson: 1999; Marv Thompson retraced the map for scanning.
Online_Linkage:
Larger_Work_Citation: Bedrock-surface topography of the West Fork White River basin
Citation_Information:
Originator: Indiana Department of Natural Resources, Division of Water
Publication_Date: 200006
Title: Water Resources in the White and West Fork White River Basins
Publication_Information:
Publication_Place: Indianapolis, IN
Publisher: Indiana Department of Natural Resources, Division of Water
Online_Linkage:
Source_Scale_Denominator: 24,000
Type_of_Source_Media: mylar
Source_Time_Period_of_Content:
Time_Period_Information:
Range_of_Dates/Times:
Beginning_Date: 1959
Ending_Date: 1999
Source_Currentness_Reference: Publication date
Source_Citation_Abbreviation:
IDNR_DOW_WFWR_Bedrock_surface_topography_Clayton_Quadrangle_Indiana
Source_Contribution: water well records from the IDNR-DOW well record archives, seismic data, oil and gas records, publications

Lineage:

Source_Information:
Source_Citation:
Citation_Information:
Originator: U.S. Geological Survey
Publication_Date: 20010320
Title: Clayton, IN / Hypsography
Edition:
Geospatial_Data_Presentation_Form: DLG-3
Publication_Information:

Publication_Place: Reston VA
Publisher: U.S. Geological Survey
Other_Citation_Details:
Online_Linkage: http://edcftp.cr.usgs.gov/pub/data/DLG/LARGE_SCALE/C/clayton_IN/hypsography/
Larger_Work_Citation:
Citation_Information:
Originator:
Publication_Date:
Title:
Publication_Information:
Publication_Place:
Publisher:
Online_Linkage:
Source_Scale_Denominator: 24,000
Type_of_Source_Media:
Source_Time_Period_of_Content:
Time_Period_Information:
Range_of_Dates/Times:
Beginning_Date:
Ending_Date:
Source_Currentness_Reference: Publication date
Source_Citation_Abbreviation: USGS
Source_Contribution:

Lineage:

Source_Information:
Source_Citation:
Citation_Information:
Originator: Marv Thompson, Indiana Department of Natural Resources, Division of Water
Publication_Date: work completed 1999
Title: Unpublished work map, Clermont Quadrangle Bedrock-surface Topography. 1:24,000
Edition: 1.0
Geospatial_Data_Presentation_Form: map
Publication_Information:
Publication_Place: Indianapolis, IN
Publisher: Indiana Department of Natural Resources, Division of Water
Other_Citation_Details: Data plotted by Marv Thompson: 1999
Online_Linkage:
Larger_Work_Citation: Bedrock-surface topography of the West Fork White River basin
Citation_Information:
Originator: Indiana Department of Natural Resources, Division of Water
Publication_Date: 200006
Title: Water Resources in the White and West Fork White River Basins
Publication_Information:
Publication_Place: Indianapolis, IN
Publisher: Indiana Department of Natural Resources, Division of Water
Online_Linkage:
Source_Scale_Denominator: 24,000
Type_of_Source_Media: mylar
Source_Time_Period_of_Content:
Time_Period_Information:
Range_of_Dates/Times:
Beginning_Date: 1959
Ending_Date: 1999
Source_Currentness_Reference: Publication date
Source_Citation_Abbreviation:
IDNR_DOW_WFWR_Bedrock_surface_topography_Clermont_Quadrangle_Indiana

Source_Contribution: water well records from the IDNR-DOW well record archives, seismic data, oil and gas records, publications

Lineage:

Source_Information:

Source_Citation:

Citation_Information:

Originator: U.S. Geological Survey

Publication_Date: 20010320

Title: Clermont, IN / Hypsography

Edition:

Geospatial_Data_Presentation_Form: DLG-3

Publication_Information:

Publication_Place: Reston VA

Publisher: U.S. Geological Survey

Other_Citation_Details:

Online_Linkage: http://edcftp.cr.usgs.gov/pub/data/DLG/LARGE_SCALE/C/clermont_IN/

Larger_Work_Citation:

Citation_Information:

Originator:

Publication_Date:

Title:

Publication_Information:

Publication_Place:

Publisher:

Online_Linkage:

Source_Scale_Denominator: 24,000

Type_of_Source_Media:

Source_Time_Period_of_Content:

Time_Period_Information:

Range_of_Dates/Times:

Beginning_Date:

Ending_Date:

Source_Currentness_Reference: Publication date

Source_Citation_Abbreviation: USGS

Source_Contribution:

Lineage:

Source_Information:

Source_Citation:

Citation_Information:

Originator: Marv Thompson, Indiana Department of Natural Resources, Division of Water

Publication_Date: work completed 1999

Title: Unpublished work map, Coatesville Quadrangle Bedrock-surface Topography. 1:24,000

Edition: 1.0

Geospatial_Data_Presentation_Form: map

Publication_Information:

Publication_Place: Indianapolis, IN

Publisher: Indiana Department of Natural Resources, Division of Water

Other_Citation_Details: Data plotted by Marv Thompson: 1999; Marv Thompson retraced the map for scanning.

Online_Linkage:

Larger_Work_Citation: Bedrock-surface topography of the West Fork White River basin

Citation_Information:

Originator: Indiana Department of Natural Resources, Division of Water

Publication_Date: 200006

Title: Water Resources in the White and West Fork White River Basins

Publication_Information:

Publication_Place: Indianapolis, IN
Publisher: Indiana Department of Natural Resources, Division of Water
Online_Linkage:
Source_Scale_Denominator: 24,000
Type_of_Source_Media: mylar
Source_Time_Period_of_Content:
Time_Period_Information:
Range_of_Dates/Times:
Beginning_Date: 1959
Ending_Date: 1999
Source_Currentness_Reference: Publication date
Source_Citation_Abbreviation:
IDNR_DOW_WFWR_Bedrock_surface_topography_Coatesville_Quadrangle_Indiana
Source_Contribution: water well records from the IDNR-DOW well record archives, seismic data, oil and gas records, publications

Lineage:

Source_Information:

Source_Citation:

Citation_Information:

Originator: U.S. Geological Survey

Publication_Date: 19990222

Title: Coatesville, IN / Hypsography

Edition:

Geospatial_Data_Presentation_Form: DLG-3

Publication_Information:

Publication_Place: Reston VA

Publisher: U.S. Geological Survey

Other_Citation_Details:

Online_Linkage: http://edcftp.cr.usgs.gov/pub/data/DLG/LARGE_SCALE/C/coatesville_IN/hypsography/

Larger_Work_Citation:

Citation_Information:

Originator:

Publication_Date:

Title:

Publication_Information:

Publication_Place:

Publisher:

Online_Linkage:

Source_Scale_Denominator: 24,000

Type_of_Source_Media:

Source_Time_Period_of_Content:

Time_Period_Information:

Range_of_Dates/Times:

Beginning_Date:

Ending_Date:

Source_Currentness_Reference: Publication date

Source_Citation_Abbreviation: USGS

Source_Contribution:

Lineage:

Source_Information:

Source_Citation:

Citation_Information:

Originator: Marv Thompson, Indiana Department of Natural Resources, Division of Water

Publication_Date: work completed 1997

Title: Unpublished work map, Danville Quadrangle Bedrock-surface Topography. 1:24,000

Edition: 1.0

Geospatial_Data_Presentation_Form: map

Publication_Information:

Publication_Place: Indianapolis, IN

Publisher: Indiana Department of Natural Resources, Division of Water

Other_Citation_Details: Data plotted by Marv Thompson: 1997; Marv Thompson retraced the map for scanning.

Online_Linkage:

Larger_Work_Citation: Bedrock-surface topography of the West Fork White River basin

Citation_Information:

Originator: Indiana Department of Natural Resources, Division of Water

Publication_Date: 200006

Title: Water Resources in the White and West Fork White River Basins

Publication_Information:

Publication_Place: Indianapolis, IN

Publisher: Indiana Department of Natural Resources, Division of Water

Online_Linkage:

Source_Scale_Denominator: 24,000

Type_of_Source_Media: mylar

Source_Time_Period_of_Content:

Time_Period_Information:

Range_of_Dates/Times:

Beginning_Date: 1959

Ending_Date: 1997

Source_Currentness_Reference: Publication date

Source_Citation_Abbreviation:

IDNR_DOW_WFWR_Bedrock_surface_topography_Danville_Quadrangle_Indiana

Source_Contribution: water well records from the IDNR-DOW well record archives, seismic data, oil and gas records, publications

Lineage:

Source_Information:

Source_Citation:

Citation_Information:

Originator: U.S. Geological Survey

Publication_Date: 20010320

Title: Danville, IN / Hypsography

Edition:

Geospatial_Data_Presentation_Form: DLG-3

Publication_Information:

Publication_Place: Reston VA

Publisher: U.S. Geological Survey

Other_Citation_Details:

Online_Linkage: http://edcftp.cr.usgs.gov/pub/data/DLG/LARGE_SCALE/D/danville_IN/

Larger_Work_Citation:

Citation_Information:

Originator:

Publication_Date:

Title:

Publication_Information:

Publication_Place:

Publisher:

Online_Linkage:

Source_Scale_Denominator: 24,000

Type_of_Source_Media:

Source_Time_Period_of_Content:

Time_Period_Information:

Range_of_Dates/Times:

Beginning_Date:

Ending_Date:
Source_Currentness_Reference: Publication date
Source_Citation_Abbreviation: USGS
Source_Contribution:

Lineage:

Source_Information:

Source_Citation:

Citation_Information:

Originator: Bill Herring and Marv Thompson, Indiana Department of Natural Resources, Division of Water

Publication_Date: work completed 19980401

Title: Unpublished work map, Eminence Quadrangle Bedrock-surface Topography. 1:24,000

Edition: 1.0

Geospatial_Data_Presentation_Form: map

Publication_Information:

Publication_Place: Indianapolis, IN

Publisher: Indiana Department of Natural Resources, Division of Water

Other_Citation_Details: Data plotted by Marv Thompson and Bill Herring: 1998

Online_Linkage:

Larger_Work_Citation: Bedrock-surface topography of the West Fork White River basin

Citation_Information:

Originator: Indiana Department of Natural Resources, Division of Water

Publication_Date: 200006

Title: Water Resources in the White and West Fork White River Basins

Publication_Information:

Publication_Place: Indianapolis, IN

Publisher: Indiana Department of Natural Resources, Division of Water

Online_Linkage:

Source_Scale_Denominator: 24,000

Type_of_Source_Media: mylar

Source_Time_Period_of_Content:

Time_Period_Information:

Range_of_Dates/Times:

Beginning_Date: 1959

Ending_Date: 1998

Source_Currentness_Reference: Publication date

Source_Citation_Abbreviation:

IDNR_DOW_WFWR_Bedrock_surface_topography_Eminence_Quadrangle_Indiana

Source_Contribution: water well records from the IDNR-DOW well record archives, seismic data, oil and gas records, publications

Lineage:

Source_Information:

Source_Citation:

Citation_Information:

Originator: U.S. Geological Survey

Publication_Date: 20010320

Title: Eminence, IN / Hypsography

Edition:

Geospatial_Data_Presentation_Form: DLG-3

Publication_Information:

Publication_Place: Reston VA

Publisher: U.S. Geological Survey

Other_Citation_Details:

Online_Linkage: http://edcftp.cr.usgs.gov/pub/data/DLG/LARGE_SCALE/E/eminece_IN/

Larger_Work_Citation:

Citation_Information:

Originator:

Publication_Date:
Title:
Publication_Information:
Publication_Place:
Publisher:
Online_Linkage:
Source_Scale_Denominator: 24,000
Type_of_Source_Media:
Source_Time_Period_of_Content:
Time_Period_Information:
Range_of_Dates/Times:
Beginning_Date:
Ending_Date:
Source_Currentness_Reference: Publication date
Source_Citation_Abbreviation: USGS
Source_Contribution:

Lineage:

Source_Information:
Source_Citation:
Citation_Information:
Originator: Marv Thompson, Indiana Department of Natural Resources, Division of Water
Publication_Date: work completed 1999
Title: Unpublished work map, Fayette Quadrangle Bedrock-surface Topography. 1:24,000
Edition: 1.0
Geospatial_Data_Presentation_Form: map
Publication_Information:
Publication_Place: Indianapolis, IN
Publisher: Indiana Department of Natural Resources, Division of Water
Other_Citation_Details: Data plotted by Marv Thompson: 1999; Marv Thompson retraced the map for scanning.
Online_Linkage:
Larger_Work_Citation: Bedrock-surface topography of the West Fork White River basin
Citation_Information:
Originator: Indiana Department of Natural Resources, Division of Water
Publication_Date: 200006
Title: Water Resources in the White and West Fork White River Basins
Publication_Information:
Publication_Place: Indianapolis, IN
Publisher: Indiana Department of Natural Resources, Division of Water
Online_Linkage:
Source_Scale_Denominator: 24,000
Type_of_Source_Media: mylar
Source_Time_Period_of_Content:
Time_Period_Information:
Range_of_Dates/Times:
Beginning_Date: 1959
Ending_Date: 1999
Source_Currentness_Reference: Publication date
Source_Citation_Abbreviation: IDNR_DOW_WFWR_Bedrock_surface_topography_Fayette_Quadrangle_Indiana
Source_Contribution: water well records from the IDNR-DOW well record archives, seismic data, oil and gas records, publications

Lineage:

Source_Information:
Source_Citation:
Citation_Information:

Originator: U.S. Geological Survey
Publication_Date: 20010320
Title: Fayette, IN / Hypsography
Edition:
Geospatial_Data_Presentation_Form: DLG-3
Publication_Information:
Publication_Place: Reston VA
Publisher: U.S. Geological Survey
Other_Citation_Details:
Online_Linkage: http://edcftp.cr.usgs.gov/pub/data/DLG/LARGE_SCALE/F/fayette_IN/
Larger_Work_Citation:
Citation_Information:
Originator:
Publication_Date:
Title:
Publication_Information:
Publication_Place:
Publisher:
Online_Linkage:
Source_Scale_Denominator: 24,000
Type_of_Source_Media:
Source_Time_Period_of_Content:
Time_Period_Information:
Range_of_Dates/Times:
Beginning_Date:
Ending_Date:
Source_Currentness_Reference: Publication date
Source_Citation_Abbreviation: USGS
Source_Contribution:

Lineage:

Source_Information:
Source_Citation:
Citation_Information:
Originator: Marv Thompson and Bill Herring, Indiana Department of Natural Resources, Division of Water
Publication_Date: work completed 19980824
Title: Unpublished work map, Hall Quadrangle Bedrock-surface Topography. 1:24,000
Edition: 1.0
Geospatial_Data_Presentation_Form: map
Publication_Information:
Publication_Place: Indianapolis, IN
Publisher: Indiana Department of Natural Resources, Division of Water
Other_Citation_Details: Data plotted by Bill Herring and Marv Thompson: 1998
Online_Linkage:
Larger_Work_Citation: Bedrock-surface topography of the West Fork White River basin
Citation_Information:
Originator: Indiana Department of Natural Resources, Division of Water
Publication_Date: 200006
Title: Water Resources in the White and West Fork White River Basins
Publication_Information:
Publication_Place: Indianapolis, IN
Publisher: Indiana Department of Natural Resources, Division of Water
Online_Linkage:
Source_Scale_Denominator: 24,000
Type_of_Source_Media: mylar
Source_Time_Period_of_Content:
Time_Period_Information:
Range_of_Dates/Times:

Beginning_Date: 1959
Ending_Date: 1998
Source_Currentness_Reference: Publication date
Source_Citation_Abbreviation: IDNR_DOW_WFWR_Bedrock_surface_topography_Hall_Quadrangle_Indiana
Source_Contribution: water well records from the IDNR-DOW well record archives, seismic data, oil and gas records, publications

Lineage:

Source_Information:

Source_Citation:

Citation_Information:

Originator: U.S. Geological Survey

Publication_Date: 20010320

Title: Hall, IN / Hypsography

Edition:

Geospatial_Data_Presentation_Form: DLG-3

Publication_Information:

Publication_Place: Reston VA

Publisher: U.S. Geological Survey

Other_Citation_Details:

Online_Linkage: http://edcftp.cr.usgs.gov/pub/data/DLG/LARGE_SCALE/H/hall_IN/

Larger_Work_Citation:

Citation_Information:

Originator:

Publication_Date:

Title:

Publication_Information:

Publication_Place:

Publisher:

Online_Linkage:

Source_Scale_Denominator: 24,000

Type_of_Source_Media:

Source_Time_Period_of_Content:

Time_Period_Information:

Range_of_Dates/Times:

Beginning_Date:

Ending_Date:

Source_Currentness_Reference: Publication date

Source_Citation_Abbreviation: USGS

Source_Contribution:

Lineage:

Source_Information:

Source_Citation:

Citation_Information:

Originator: Marv Thompson, Indiana Department of Natural Resources, Division of Water

Publication_Date: work completed 1999

Title: Unpublished work map, Lizton Quadrangle Bedrock-surface Topography. 1:24,000

Edition: 1.0

Geospatial_Data_Presentation_Form: map

Publication_Information:

Publication_Place: Indianapolis, IN

Publisher: Indiana Department of Natural Resources, Division of Water

Other_Citation_Details: Data plotted by Marv Thompson: 1999; Marv Thompson retraced the map for scanning.

Online_Linkage:

Larger_Work_Citation: Bedrock-surface topography of the West Fork White River basin

Citation_Information:

Originator: Indiana Department of Natural Resources, Division of Water
Publication_Date: 200006
Title: Water Resources in the White and West Fork White River Basins
Publication_Information:
Publication_Place: Indianapolis, IN
Publisher: Indiana Department of Natural Resources, Division of Water
Online_Linkage:
Source_Scale_Denominator: 24,000
Type_of_Source_Media: mylar
Source_Time_Period_of_Content:
Time_Period_Information:
Range_of_Dates/Times:
Beginning_Date: 1959
Ending_Date: 1999
Source_Currentness_Reference: Publication date
Source_Citation_Abbreviation: IDNR_DOW_WFWR_Bedrock_surface_topography_Lizton_Quadrangle_Indiana
Source_Contribution: water well records from the IDNR-DOW well record archives, seismic data, oil and gas records, publications

Lineage:

Source_Information:

Source_Citation:

Citation_Information:

Originator: U.S. Geological Survey

Publication_Date: 19990222

Title: Lizton, IN / Hypsography

Edition: 1.0

Geospatial_Data_Presentation_Form: DLG-3

Publication_Information:

Publication_Place: Reston VA

Publisher: U.S. Geological Survey

Other_Citation_Details:

Online_Linkage: http://edcftp.cr.usgs.gov/pub/data/DLG/LARGE_SCALE/L/lizton_IN/

Larger_Work_Citation:

Citation_Information:

Originator:

Publication_Date:

Title:

Publication_Information:

Publication_Place:

Publisher:

Online_Linkage:

Source_Scale_Denominator: 24,000

Type_of_Source_Media:

Source_Time_Period_of_Content:

Time_Period_Information:

Range_of_Dates/Times:

Beginning_Date:

Ending_Date:

Source_Currentness_Reference: Publication date

Source_Citation_Abbreviation: USGS

Source_Contribution:

Lineage:

Source_Information:

Source_Citation:

Citation_Information:

Originator: Victoria Ferguson, Indiana Geological Survey

Publication_Date: 1993

Title: Hydrogeological Quadrangle Maps Marion County, Indiana: 1:24,000

Edition: Open File Report 93-5

Geospatial_Data_Presentation_Form: map

Publication_Information:

Publication_Place: Indianapolis, IN

Publisher: Indiana Department of Natural Resources, Division of Water

Other_Citation_Details: Modified from the original by Marv Thompson, 1999

Online_Linkage:

Larger_Work_Citation:

Citation_Information:

Originator: Fleming, Brown, and Ferguson, Indiana Geological Survey

Publication_Date: 1993

Title: Indiana Geological Survey Open File Report 93-5, Explanation of Hydrogeological Quadrangle Maps

Publication_Information:

Publication_Place: Bloomington, Indiana

Publisher: Indiana Geological Survey

Online_Linkage:

Source_Scale_Denominator: 24,000

Type_of_Source_Media: digital file

Source_Time_Period_of_Content:

Time_Period_Information:

Range_of_Dates/Times:

Beginning_Date: 1959

Ending_Date: 1993

Source_Currentness_Reference: Publication date

Source_Citation_Abbreviation: IDNR_DOW_WFWR_Bedrock_surface_topography_Marion_County_Indiana

Source_Contribution: IGS Marion County Bedrock Topography Quadrangles

Process_Step:

Process_Description: The original data for the Marion County bedrock topography came from the Indiana Geological Survey. The files were ArcInfo line coverages at 1:24,000 scale. The maps were hand contoured using water well record data from the IDNR-DOW well record archives. The hand contoured lines were scanned, rasterized, vectorized, and georeferenced. Marv Thompson (IDNR-DOW-Ground Water) conducted widespread editing and modification of the coverages in order to edgematch with the mapping in the adjacent surrounding counties. Therefore, the original coverage was from the IGS, but the resultant map diverges from the original.

Source_Used_Citation_Abbreviation:

Process_Date:

Source_Produced_Citation_Abbreviation:

Process_Contact:

Contact_Information:

Contact_Person_Primary:

Contact_Organization: Indiana Department of Natural Resources, Division of Water

Contact_Person: Glenn Grove

Contact_Position: Engineering Geologist

Contact_Address:

Address_Type: Mailing and physical address

Address: 402 W. Washington Street, Room W264

City: Indianapolis

State_or_Province: Indiana

Postal_Code: 46204

Country: USA

Contact_Voice_Telephone: 317-232-4160

Contact_Facsimile_Telephone: 317-233-4579

Contact_Electronic_Mail_Address: ggrove@dnr.state.in.us

Hours_of_Service: 8:15am - 4:15pm

Lineage:

Source_Information:

Source_Citation:

Citation_Information:

Originator: U.S. Geological Survey

Publication_Date: 20010320

Title: Mooresville East, IN / Hypsography

Edition:

Geospatial_Data_Presentation_Form: DLG-3

Publication_Information:

Publication_Place: Reston VA

Publisher: U.S. Geological Survey

Other_Citation_Details:

Online_Linkage: http://edcftp.cr.usgs.gov/pub/data/DLG/LARGE_SCALE/M/mooresville_east_IN/

Larger_Work_Citation:

Citation_Information:

Originator:

Publication_Date:

Title:

Publication_Information:

Publication_Place:

Publisher:

Online_Linkage:

Source_Scale_Denominator: 24,000

Type_of_Source_Media:

Source_Time_Period_of_Content:

Time_Period_Information:

Range_of_Dates/Times:

Beginning_Date:

Ending_Date:

Source_Currentness_Reference: Publication date

Source_Citation_Abbreviation: USGS

Source_Contribution:

Lineage:

Source_Information:

Source_Citation:

Citation_Information:

Originator: Marv Thompson and Bill Herring, Indiana Department of Natural Resources, Division of Water

Publication_Date: work completed 19990615

Title: Unpublished work map, Mooresville West Quadrangle Bedrock-surface Topography. 1:24,000

Edition: 1.0

Geospatial_Data_Presentation_Form: map

Publication_Information:

Publication_Place: Indianapolis, IN

Publisher: Indiana Department of Natural Resources, Division of Water

Other_Citation_Details: Data plotted by Marv Thompson and Bill Herring: 1999

Online_Linkage:

Larger_Work_Citation: Bedrock-surface topography of the West Fork White River basin

Citation_Information:

Originator: Indiana Department of Natural Resources, Division of Water

Publication_Date: 200006

Title: Water Resources in the White and West Fork White River Basins

Publication_Information:

Publication_Place: Indianapolis, IN

Publisher: Indiana Department of Natural Resources, Division of Water

Online_Linkage:

Source_Scale_Denominator: 24,000

Type_of_Source_Media: mylar

Source_Time_Period_of_Content:

Time_Period_Information:

Range_of_Dates/Times:

Beginning_Date: 1959

Ending_Date: 1999

Source_Currentness_Reference: Publication date

Source_Citation_Abbreviation: IDNR_DOW_WFWR_Bedrock_surface_topography_Mooresville
West_Quadrangle_Indiana

Source_Contribution: water well records from the IDNR-DOW well record archives, seismic data, oil and gas records, publications

Lineage:

Source_Information:

Source_Citation:

Citation_Information:

Originator: U.S. Geological Survey

Publication_Date: 20010320

Title: Mooresville West, IN / Hypsography

Edition:

Geospatial_Data_Presentation_Form: DLG-3

Publication_Information:

Publication_Place: Reston VA

Publisher: U.S. Geological Survey

Other_Citation_Details:

Online_Linkage: http://edcftp.cr.usgs.gov/pub/data/DLG/LARGE_SCALE/M/mooresville_west_IN/

Larger_Work_Citation:

Citation_Information:

Originator:

Publication_Date:

Title:

Publication_Information:

Publication_Place:

Publisher:

Online_Linkage:

Source_Scale_Denominator: 24,000

Type_of_Source_Media:

Source_Time_Period_of_Content:

Time_Period_Information:

Range_of_Dates/Times:

Beginning_Date:

Ending_Date:

Source_Currentness_Reference: Publication date

Source_Citation_Abbreviation: USGS

Source_Contribution:

Lineage:

Source_Information:

Source_Citation:

Citation_Information:

Originator: Marv Thompson, Indiana Department of Natural Resources, Division of Water

Publication_Date: work completed 1999

Title: Unpublished work map, New Ross Quadrangle Bedrock-surface Topography. 1:24,000

Edition: 1.0

Geospatial_Data_Presentation_Form: map

Publication_Information:

Publication_Place: Indianapolis, IN

Publisher: Indiana Department of Natural Resources, Division of Water

Other_Citation_Details: Data plotted by Marv Thompson: 1999; Marv Thompson retraced the map for scanning.

Online_Linkage:
Larger_Work_Citation: Bedrock-surface topography of the West Fork White River basin
Citation_Information:
Originator: Indiana Department of Natural Resources, Division of Water
Publication_Date: 200006
Title: Water Resources in the White and West Fork White River Basins
Publication_Information:
Publication_Place: Indianapolis, IN
Publisher: Indiana Department of Natural Resources, Division of Water
Online_Linkage:
Source_Scale_Denominator: 24,000
Type_of_Source_Media: mylar
Source_Time_Period_of_Content:
Time_Period_Information:
Range_of_Dates/Times:
Beginning_Date: 1959
Ending_Date: 1999
Source_Currentness_Reference: Publication date
Source_Citation_Abbreviation: IDNR_DOW_WFWR_Bedrock_surface_topography_New
Ross_Quadrangle_Indiana
Source_Contribution: water well records from the IDNR-DOW well record archives, seismic data, oil and gas records, publications

Lineage:

Source_Information:
Source_Citation:
Citation_Information:
Originator: U.S. Geological Survey
Publication_Date: 20010320
Title: New Ross, IN / Hypsography
Edition:
Geospatial_Data_Presentation_Form: DLG-3
Publication_Information:
Publication_Place: Reston VA
Publisher: U.S. Geological Survey
Other_Citation_Details:
Online_Linkage:http://edcftp.cr.usgs.gov/pub/data/DLG/LARGE_SCALE/N/new_ross_IN/hypsography/
Larger_Work_Citation:
Citation_Information:
Originator:
Publication_Date:
Title:
Publication_Information:
Publication_Place:
Publisher:
Online_Linkage:
Source_Scale_Denominator: 24,000
Type_of_Source_Media:
Source_Time_Period_of_Content:
Time_Period_Information:
Range_of_Dates/Times:
Beginning_Date:
Ending_Date:
Source_Currentness_Reference: Publication date
Source_Citation_Abbreviation: USGS
Source_Contribution:

Lineage:

Source_Information:

Source_Citation:

Citation_Information:

Originator: Marv Thompson, Indiana Department of Natural Resources, Division of Water

Publication_Date: work completed 1999

Title: Unpublished work map, North Salem Quadrangle Bedrock-surface Topography. 1:24,000

Edition: 1.0

Geospatial_Data_Presentation_Form: map

Publication_Information:

Publication_Place: Indianapolis, IN

Publisher: Indiana Department of Natural Resources, Division of Water

Other_Citation_Details: Data plotted by Marv Thompson: 1999; Marv Thompson retraced the map for scanning.

Online_Linkage:

Larger_Work_Citation: Bedrock-surface topography of the West Fork White River basin

Citation_Information:

Originator: Indiana Department of Natural Resources, Division of Water

Publication_Date: 200006

Title: Water Resources in the White and West Fork White River Basins

Publication_Information:

Publication_Place: Indianapolis, IN

Publisher: Indiana Department of Natural Resources, Division of Water

Online_Linkage:

Source_Scale_Denominator: 24,000

Type_of_Source_Media: mylar

Source_Time_Period_of_Content:

Time_Period_Information:

Range_of_Dates/Times:

Beginning_Date: 1959

Ending_Date: 1999

Source_Currentness_Reference: Publication date

Source_Citation_Abbreviation: IDNR_DOW_WFWR_Bedrock_surface_topography_North

Salem_Quadrangle_Indiana

Source_Contribution: water well records from the IDNR-DOW well record archives, seismic data, oil and gas records, publications

Lineage:

Source_Information:

Source_Citation:

Citation_Information:

Originator: U.S. Geological Survey

Publication_Date: 19990222

Title: North Salem, IN / Hypsography

Edition:

Geospatial_Data_Presentation_Form: DLG-3

Publication_Information:

Publication_Place: Reston VA

Publisher: U.S. Geological Survey

Other_Citation_Details:

Online_Linkage: http://edcftp.cr.usgs.gov/pub/data/DLG/LARGE_SCALE/N/north_salem_IN/hypsography/

Larger_Work_Citation:

Citation_Information:

Originator:

Publication_Date:

Title:

Publication_Information:

Publication_Place:

Publisher:

Online_Linkage:
Source_Scale_Denominator: 24,000
Type_of_Source_Media:
Source_Time_Period_of_Content:
Time_Period_Information:
Range_of_Dates/Times:
Beginning_Date:
Ending_Date:
Source_Currentness_Reference: Publication date
Source_Citation_Abbreviation: USGS
Source_Contribution:

Lineage:

Source_Information:
Source_Citation:
Citation_Information:
Originator: Marv Thompson and Bill Herring, Indiana Department of Natural Resources, Division of Water
Publication_Date: work completed 1999
Title: Unpublished work map, Plainfield Quadrangle Bedrock-surface Topography. 1:24,000
Edition: 1.0
Geospatial_Data_Presentation_Form: map
Publication_Information:
Publication_Place: Indianapolis, IN
Publisher: Indiana Department of Natural Resources, Division of Water
Other_Citation_Details: Data plotted by Marv Thompson: 1999; Marv Thompson retraced the map for scanning.
Online_Linkage:
Larger_Work_Citation: Bedrock-surface topography of the West Fork White River basin
Citation_Information:
Originator: Indiana Department of Natural Resources, Division of Water
Publication_Date: 200006
Title: Water Resources in the White and West Fork White River Basins
Publication_Information:
Publication_Place: Indianapolis, IN
Publisher: Indiana Department of Natural Resources, Division of Water
Online_Linkage:
Source_Scale_Denominator: 24,000
Type_of_Source_Media: mylar
Source_Time_Period_of_Content:
Time_Period_Information:
Range_of_Dates/Times:
Beginning_Date: 1959
Ending_Date: 1999
Source_Currentness_Reference: Publication date
Source_Citation_Abbreviation:
IDNR_DOW_WFWR_Bedrock_surface_topography_Plainfield_Quadrangle_Indiana
Source_Contribution: water well records from the IDNR-DOW well record archives, seismic data, oil and gas records, publications

Lineage:

Source_Information:
Source_Citation:
Citation_Information:
Originator: U.S. Geological Survey
Publication_Date: 20010320
Title: Plainfield, IN / Hypsography
Edition:
Geospatial_Data_Presentation_Form: DLG-3

Publication_Information:

Publication_Place: Reston VA

Publisher: U.S. Geological Survey

Other_Citation_Details:

Online_Linkage: http://edcftp.cr.usgs.gov/pub/data/DLG/LARGE_SCALE/P/plainfield_IN/hypsography/

Larger_Work_Citation:

Citation_Information:

Originator:

Publication_Date:

Title:

Publication_Information:

Publication_Place:

Publisher:

Online_Linkage:

Source_Scale_Denominator: 24,000

Type_of_Source_Media:

Source_Time_Period_of_Content:

Time_Period_Information:

Range_of_Dates/Times:

Beginning_Date:

Ending_Date:

Source_Currentness_Reference: Publication date

Source_Citation_Abbreviation: USGS

Source_Contribution:

Lineage:

Source_Information:

Source_Citation:

Citation_Information:

Originator: Walt Hasenmuller, Indiana Geological Survey

Publication_Date: 199508

Title: Unpublished work map, Putnam County Bedrock-surface Topography. 1:24,000

Edition: 1.0

Geospatial_Data_Presentation_Form: map

Publication_Information:

Publication_Place: Bloomington, IN

Publisher: Indiana Geological Survey

Other_Citation_Details: Modified from the original by Glenn Grove, 1999

Source_Scale_Denominator: 24,000

Type_of_Source_Media: digital file, grid

Source_Time_Period_of_Content:

Time_Period_Information:

Range_of_Dates/Times:

Beginning_Date:

Ending_Date: 1995

Source_Currentness_Reference: Publication date

Source_Citation_Abbreviation: IDNR_DOW_WFWR_Bedrock_surface_topography_Putnam_County_Indiana

Source_Contribution: Surfer, contouring program

Process_Step:

Process_Description: This map was obtained originally from Walt Hasenmuller from the Indiana Geological Survey. Walt generated a digital grid of bedrock-surface elevation values for Putnam County. He used various data sources and methods, and generated the file in the software contouring package called Surfer. Glenn Grove took the 1:24,000 grid file and imported it back into Surfer and kriged the data to obtain 25 foot contour interval. From here, he edited and cleaned the file to edgematch it with adjacent counties, as well as to remove computer-generated artifacts such as islands or jagged contour lines. Some original contouring was also performed by Glenn Grove in areas of shallow bedrock where surface topography was used as a guide to subsurface mapping.

Source_Used_Citation_Abbreviation:

Process_Date:

Source_Produced_Citation_Abbreviation:

Process_Contact:

Contact_Information:

Contact_Person_Primary:

Contact_Organization: Indiana Department of Natural Resources, Division of Water

Contact_Person: Glenn Grove

Contact_Position: Engineering Geologist

Contact_Address:

Address_Type: Mailing and physical address

Address: 402 W. Washington Street, Room W264

City: Indianapolis

State_or_Province: Indiana

Postal_Code: 46204

Country: USA

Contact_Voice_Telephone: 317-232-4160

Contact_Facsimile_Telephone: 317-233-4579

Contact_Electronic_Mail_Address: ggrove@dnr.state.in.us

Hours_of_Service: 8:15am - 4:15pm

Lineage:

Source_Information:

Source_Citation:

Citation_Information:

Originator: Marv Thompson, Indiana Department of Natural Resources, Division of Water

Publication_Date: work completed 1999

Title: Unpublished work map, Zionsville Quadrangle Bedrock-surface Topography. 1:24,000

Edition: 1.0

Geospatial_Data_Presentation_Form: map

Publication_Information:

Publication_Place: Indianapolis, IN

Publisher: Indiana Department of Natural Resources, Division of Water

Other_Citation_Details: Data plotted by Marv Thompson: 1999

Online_Linkage:

Larger_Work_Citation: Bedrock-surface topography of the West Fork White River basin

Citation_Information:

Originator: Indiana Department of Natural Resources, Division of Water

Publication_Date: 200006

Title: Water Resources in the White and West Fork White River Basins

Publication_Information:

Publication_Place: Indianapolis, IN

Publisher: Indiana Department of Natural Resources, Division of Water

Online_Linkage:

Source_Scale_Denominator: 24,000

Type_of_Source_Media: mylar

Source_Time_Period_of_Content:

Time_Period_Information:

Range_of_Dates/Times:

Beginning_Date: 1959

Ending_Date: 1999

Source_Currentness_Reference: Publication date

Source_Citation_Abbreviation:

IDNR_DOW_WFWR_Bedrock_surface_topography_Zionsville_Quadrangle_Indiana

Source_Contribution: water well records from the IDNR-DOW well record archives, seismic data, oil and gas records, publications

Lineage:

Source_Information:

Source_Citation:

Citation_Information:

Originator: U.S. Geological Survey

Publication_Date: 20010320

Title: Zionsville, IN / Hypsography

Edition:

Geospatial_Data_Presentation_Form: DLG-3

Publication_Information:

Publication_Place: Reston VA

Publisher: U.S. Geological Survey

Other_Citation_Details:

Online_Linkage: http://edcftp.cr.usgs.gov/pub/data/DLG/LARGE_SCALE/Z/zionsville_IN/hypsography/

Larger_Work_Citation:

Citation_Information:

Originator:

Publication_Date:

Title:

Publication_Information:

Publication_Place:

Publisher:

Online_Linkage:

Source_Scale_Denominator: 24,000

Type_of_Source_Media:

Source_Time_Period_of_Content:

Time_Period_Information:

Range_of_Dates/Times:

Beginning_Date:

Ending_Date:

Source_Currentness_Reference: Publication date

Source_Citation_Abbreviation: USGS

Source_Contribution:

[Top](#)

SPATIAL_DATA_ORGANIZATION_INFORMATION

Direct_Spatial_Reference_Method: Vector

Point_and_Vector_Object_Information:

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: GT-polygon composed of chains

Point_and_Vector_Object_Count: 1

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SPATIAL_REFERENCE_INFORMATION

Horizontal_Coordinate_System_Definition:

Planar:

Grid_Coordinate_System:

Grid_Coordinate_System_Name: Universal Transverse Mercator

Universal_Transverse_Mercator:

UTM_Zone_Number: 16

Transverse_Mercator:

Scale_Factor_at_Central_Meridian: 0.999600

Longitude_of_Central_Meridian: -87.000000
Latitude_of_Projection_Origin: 0.000000
False_Easting: 500000.000000
False_Northing: 0.000000
Planar_Coordinate_Information:
Planar_Coordinate_Encoding_Method: Coordinate pair
Coordinate_Representation:
Abscissa_Resolution:
Ordinate_Resolution:
Planar_Distance_Units: Meters
Geodetic_Model:
Horizontal_Datum_Name: North American Datum of 1927
Ellipsoid_Name: Clarke 1866
Semi-major_Axis: 6378206.4000000
Denominator_of_Flattening_Ratio: 294.98

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ENTITY_AND_ATTRIBUTE_INFORMATION

Overview_Description:

Entity_and_Attribute_Overview: The arcs in this file represent calculations of unconsolidated thickness, derived by subtracting the surface topography grid from the bedrock-surface topography grid and then contoured in ArcInfo. The file was created for the purpose of characterizing the unconsolidated thickness as a part of the Ground Water Atlas of Hendricks County, Indiana Indiana.

Entity_and_Attribute_Detail_Citation:

Detailed Description:

Entity_Type:

Entity_Type_Label: unc_cont2.aat
Entity_Type_Definition: arc attribute table
Entity_Type_Definition_Source: None

Attribute:

Attribute_Label: Contour
Attribute_Definition: the thickness of the unconsolidated material in feet
Attribute_Definition_Source: IDNR-DOW, Ground Water Section
Attribute_Domain_Values:
Range_Domain:
Range_Domain_Minimum: 0
Range_Domain_Maximum: 275
Attribute_Units_of_Measure: integer
Attribute_Measurement_Resolution: 25 foot contour interval.
Attribute_Value_Accuracy_Information:
Attribute_Value_Accuracy:
Attribute_Value_Accuracy_Explanation:

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DISTRIBUTION_INFORMATION

Distributor:

Contact_Information:

Contact_Organization_Primary:

Contact_Organization: Indiana Department of Natural Resources, Division of Water

Contact_Person: Glenn Grove

Contact_Position: Ground Water Section

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Address_Type: Mailing and physical address

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Hours_of_Service: 8:15am - 4:15pm

Resource_Description:

Distribution_Liability: The Indiana State Department of Natural Resources Division of Water has compiled this data set using data believed to be accurate; however, the Division makes no representation as to the accuracy, completeness, or usefulness of the data or data set. Reference to any specific commercial product, process, or service does not constitute an endorsement, recommendation, or favoring by the Division.

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METADATA_REFERENCE_INFORMATION

Metadata_Date: 20010702
Metadata_Review_Date:
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: Indiana Department of Natural Resources, Division of Water
Contact_Person: Glenn Grove
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Hours_of_Service: 8:15am - 4:15pm

Metadata_Standard_Name: FGDC CSDGM

Metadata_Standard_Version: FGDC-STD-001-1998

Metadata Use Constraints: This metadata file is intended to accompany the subject geospatial data set. This file may be updated, and the most recent version is available by contacting the IDNR, Division of Water.

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