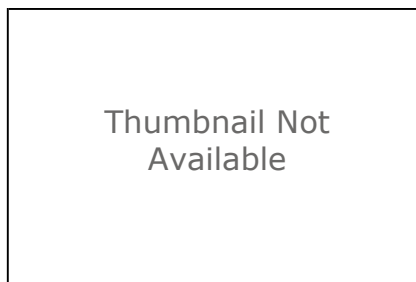


Potentiometric Surface Contours of the Bedrock Aquifers of Putnam County, Indiana

Shapefile



Tags

Potentiometric surface, static water level, groundwater, water wells, water tables, bedrock, Indiana Department of Natural Resources (IDNR), Division of Water (DOW), Putnam County, Indiana, USA, Revised 2016.

Summary

Display and/or analyses requiring spatial distribution of potentiometric surface elevations in Putnam County, Indiana.

Description

This file is a digital geospatial polyline coverage of the bedrock potentiometric surface elevations mapped for Putnam County in Indiana.

Credits

It is requested that the Indiana Department of Natural Resources, Division of Water be cited in any products generated from this data.

Use limitations

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 reasonably 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. The information on these media is proprietary to the State of Indiana, Indiana Department of Natural Resources, Division of Water. Any copying, adaptation, or distribution of these data without the express written consent of IDNR-DOW is discouraged. It is not recommended that these data be used for purposes other than general estimate of static water level elevations. Site specific conditions may vary considerably from mapped estimates.

Extent

West	-87.014754	East	-86.645134
North	39.866492	South	39.469949

Scale Range

Maximum (zoomed in) 1:50,000

Minimum (zoomed out) 1:5,000,000

ArcGIS Metadata ►

Topics and Keywords ►

[THEMES OR CATEGORIES OF THE RESOURCE](#) geoscientificInformation

* [CONTENT TYPE](#) Downloadable Data

[EXPORT TO FGDC CSDGM XML FORMAT AS RESOURCE DESCRIPTION](#) No

[PLACE KEYWORDS](#) Putnam County, Indiana, USA

[THEME KEYWORDS](#) Bedrock

[THEME KEYWORDS](#) potentiometric surface

[THEME KEYWORDS](#) static water level

[THEME KEYWORDS](#) groundwater

[THEME KEYWORDS](#) water wells

[THEME KEYWORDS](#) Indiana Department of Natural Resources (IDNR)

[THEME KEYWORDS](#) Division of Water (DOW)

[THEME KEYWORDS](#) Revised 2016

[Hide Topics and Keywords](#) ▲

Citation ►

[TITLE](#) Potentiometric Surface Contours of the Bedrock Aquifers of Putnam County, Indiana

[PUBLICATION DATE](#) 2015-12-30 00:00:00

[CREATION DATE](#) 2015-09-01 00:00:00

[EDITION](#) 1 (revised 9/2016)

[EDITION DATE](#) 2016-09-28

[PRESENTATION FORMATS](#) digital map

[FGDC GEOSPATIAL PRESENTATION FORMAT](#) vector digital data

[SERIES](#)

[NAME](#) Bedrock Potentiometric Surface Map

[ISSUE](#) PSM 57-B

[OTHER CITATION DETAILS](#)

This map was compiled from multiple unpublished work maps based on USGS quadrangles at 1:24,000 scale: BELLMORE, BRAZIL EAST, CATARACT, CENTER POINT, CLINTON FALLS, CLOVERDALE, COATESVILLE, EMINENCE, GREENCASTLE, MANSFIELD, NORTH SALEM, POLAND, QUINCY, REELSVILLE, ROACHDALE, and RUSSELLVILLE.

[Hide Citation](#) ▲

Citation Contacts ►

RESPONSIBLE PARTY

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 CONTACT'S POSITION Resource Assessment Section
 CONTACT'S ROLE originator

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ONLINE RESOURCE

LOCATION //www.in.gov/dnr/water/7256.htm
 FUNCTION PERFORMED information

HOURS OF SERVICE

8:15am - 4:15pm M-F except Government Holidays

[Hide Contact information ▲](#)

[Hide Citation Contacts ▲](#)

Resource Details ►

DATASET LANGUAGES English (UNITED STATES)
 DATASET CHARACTER SET utf8 - 8 bit UCS Transfer Format

STATUS completed
 SPATIAL REPRESENTATION TYPE vector

* PROCESSING ENVIRONMENT Microsoft Windows 7 Version 6.1 (Build 7601) Service Pack 1; Esri ArcGIS 10.3.1.4959

CREDITS

It is requested that the Indiana Department of Natural Resources, Division of Water be cited in any products generated from this data.

ARCGIS ITEM PROPERTIES

* NAME BED_PSM_PUTNAM_CO_IN_revised_2016
 * SIZE 3.614
 * LOCATION file:///\\iotisip01pa\dnrgis\$\\!Potentiometric\Putnam\1_Web_Products\Web revised_2016\zipfiles\BED_PSM_PUTNAM_CO_IN_revised_2016.shp
 * ACCESS PROTOCOL Local Area Network

[Hide Resource Details ▲](#)

Extents ►

EXTENT

DESCRIPTION

publication date

TEMPORAL EXTENT

DATE AND TIME 2015-12-30 00:00:00

EXTENT

GEOGRAPHIC EXTENT

BOUNDING RECTANGLE

EXTENT TYPE Extent used for searching

* WEST LONGITUDE -87.014754

* EAST LONGITUDE -86.645134

* NORTH LATITUDE 39.866492

* SOUTH LATITUDE 39.469949

* EXTENT CONTAINS THE RESOURCE Yes

EXTENT IN THE ITEM'S COORDINATE SYSTEM

* WEST LONGITUDE 498738.175400

* EAST LONGITUDE 530350.471200

* SOUTH LATITUDE 4368988.806700

* NORTH LATITUDE 4412939.311100

* EXTENT CONTAINS THE RESOURCE Yes

*Hide Extents ▲***Resource Points of Contact ►**

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FUNCTION PERFORMED download

HOURS OF SERVICE

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[Hide Contact information ▲](#)

[Hide Resource Points of Contact ▲](#)

Resource Maintenance ►

RESOURCE MAINTENANCE

UPDATE FREQUENCY not planned

[Hide Resource Maintenance ▲](#)

Resource Constraints ►

LEGAL CONSTRAINTS

LIMITATIONS OF USE

The Indiana Department of Natural Resources, Division of Water has compiled this data set using data believed to be reasonably accurate. However, the Division makes no representation as to the accuracy, completeness, or usefulness of the data or data set. A degree of error is inherent in all maps. This map is intended for use only at the published scale. Reference to any specific commercial product, process, or service does not constitute an endorsement, recommendation, or favoring by the Division. Copyright 2015, Indiana Department of Natural Resources, Division of Water All Rights Reserved Any copying, adaptation, or distribution of these data without the express written consent of the Indiana Department of Natural Resources, Division of Water is discouraged.

OTHER 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.

CONSTRAINTS

LIMITATIONS OF USE

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 reasonably 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. The information on these media is proprietary to the State of Indiana, Indiana Department of Natural Resources, Division of Water. Any copying, adaptation, or distribution of these data without the express written consent of IDNR-DOW is discouraged. It is not recommended that these data be used for purposes other than general estimate of static water level elevations. Site specific conditions may vary considerably from mapped estimates.

[Hide Resource Constraints ▲](#)

Spatial Reference ►

ARCGIS COORDINATE SYSTEM

* TYPE Projected

* GEOGRAPHIC COORDINATE REFERENCE GCS_North_American_1983

* PROJECTION NAD_1983_UTM_Zone_16N

* COORDINATE REFERENCE DETAILS

PROJECTED COORDINATE SYSTEM

WELL-KNOWN IDENTIFIER 26916

X ORIGIN -5120900
 Y ORIGIN -9998100
 XY SCALE 450445547.3910538
 Z ORIGIN -100000
 Z SCALE 10000
 M ORIGIN -100000
 M SCALE 10000
 XY TOLERANCE 0.001
 Z TOLERANCE 0.001
 M TOLERANCE 0.001
 HIGH PRECISION true
 LATEST WELL-KNOWN IDENTIFIER 26916
 WELL-KNOWN TEXT PROJCS["NAD_1983_UTM_Zone_16N",GEOGCS
 ["GCS_North_American_1983",DATUM["D_North_American_1983",SPHEROID
 ["GRS_1980",6378137.0,298.257222101]],PRIMEM["Greenwich",0.0],UNIT
 ["Degree",0.0174532925199433]],PROJECTION["Transverse_Mercator"],PARAMETER
 ["False_Easting",500000.0],PARAMETER["False_Northing",0.0],PARAMETER
 ["Central_Meridian",-87.0],PARAMETER["Scale_Factor",0.9996],PARAMETER
 ["Latitude_Of_Origin",0.0],UNIT["Meter",1.0],AUTHORITY["EPSG",26916]]

REFERENCE SYSTEM IDENTIFIER

* VALUE 26916
 * CODESPACE EPSG
 * VERSION 8.6.2

[Hide Spatial Reference ▲](#)

Spatial Data Properties ►

VECTOR ►

* LEVEL OF TOPOLOGY FOR THIS DATASET geometry only

GEOMETRIC OBJECTS

FEATURE CLASS NAME BED_PSM_PUTNAM_CO_IN_revised_2016

* OBJECT TYPE composite
 * OBJECT COUNT 527

[Hide Vector ▲](#)

ARCGIS FEATURE CLASS PROPERTIES ►

FEATURE CLASS NAME BED_PSM_PUTNAM_CO_IN_revised_2016

* FEATURE TYPE Simple
 * GEOMETRY TYPE Polyline
 * HAS TOPOLOGY FALSE
 * FEATURE COUNT 527
 * SPATIAL INDEX TRUE
 * LINEAR REFERENCING FALSE

[Hide ArcGIS Feature Class Properties ▲](#)

[Hide Spatial Data Properties ▲](#)

Data Quality ►

SCOPE OF QUALITY INFORMATION ►

RESOURCE LEVEL dataset

Hide Scope of quality information ▲

DATA QUALITY REPORT - COMPLETENESS OMISSION ►

MEASURE DESCRIPTION

In conducting the mapping, the author(s) evaluated hundreds of water well records, especially those having relatively complete information on well location, static water level, well depth, ground elevation, and lithology. There are areas in the county with sparse information because of lack of well records or incomplete records.

Hide Data quality report - Completeness omission ▲

DATA QUALITY REPORT - QUANTITATIVE ATTRIBUTE ACCURACY ►

MEASURE DESCRIPTION

The mapping was conducted after a thorough documentation of well locations and water well record details.

Hide Data quality report - Quantitative attribute accuracy ▲

DATA QUALITY REPORT - ABSOLUTE EXTERNAL POSITIONAL ACCURACY ►

MEASURE DESCRIPTION

The locations of many wells were field checked and the locations posted on 7.5 minute topographic maps. Visual confirmation of wells was not always possible. Many locations were based only on the street address, driving directions, or other location information provided on the well record.

Hide Data quality report - Absolute external positional accuracy ▲

Hide Data Quality ▲

Lineage ►

PROCESS STEP ►

DESCRIPTION

Data were selected by careful evaluation of water well records to determine if the wells were field located and if they contained complete and reasonable information.

PROCESS CONTACT

ORGANIZATION'S NAME Indiana Department of Natural Resources Division of Water

INDIVIDUAL'S NAME Ginger C. Korinek

CONTACT'S POSITION Resource Assessment Section

CONTACT'S ROLE processor

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ONLINE RESOURCE

LOCATION www.in.gov/dnr/water/7256.htm
FUNCTION PERFORMED download

[Hide Contact information ▲](#)

[Hide Process step ▲](#)

PROCESS STEP ►

DESCRIPTION

After selection of water well records was complete, specific well data and other maps and reports were considered in the mapping process. For example, ground elevation, static water level, well depth, aquifer top and bottom elevation and lithology were obtained from well records. Other maps and reports included regional potentiometric surface elevations, hydrogeologic settings, groundwater availability, bedrock topography, and surface topography.

PROCESS CONTACT

ORGANIZATION'S NAME Indiana Department of Natural Resources Division of Water
INDIVIDUAL'S NAME Ginger C. Korinek
CONTACT'S POSITION Resource Assessment Section
CONTACT'S ROLE owner

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LOCATION www.in.gov/dnr/water/7256.htm
FUNCTION PERFORMED download

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SOURCE DATA ►

RELATIONSHIP TO THE PROCESS STEP used

SOURCE CITATION ►

ALTERNATE TITLES IDNR-DOW water well records for domestic and other supply wells submitted by water well drillers from 1959-2013

[Hide Source citation ▲](#)[Hide Source data ▲](#)[Hide Process step ▲](#)

PROCESS STEP ►

DESCRIPTION

Lines of equal potentiometric surface elevation were generated based on static elevation from selected data. Lines were generated and reviewed prior to publication.

PROCESS CONTACT

ORGANIZATION'S NAME Indiana Department of Natural Resources Division of Water

INDIVIDUAL'S NAME Ginger C. Korinek

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CONTACT'S ROLE point of contact

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ONLINE RESOURCE

LOCATION www.in.gov/dnr/water/7256.htm

FUNCTION PERFORMED download

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SOURCE DATA ►

DESCRIPTION

Water well records from the IDNR-DOW well record database; USGS topography maps; various consultant geotechnical reports

RESOLUTION OF THE SOURCE DATA
SCALE DENOMINATOR 48000

[Hide Source data ▲](#)

[Hide Lineage ▲](#)

Distribution ►

DISTRIBUTOR ►

CONTACT INFORMATION

ORGANIZATION'S NAME Indiana Department of Natural Resources Division of Water
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CONTACT'S POSITION Resource Assessment Section
CONTACT'S ROLE originator

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ONLINE RESOURCE

LOCATION www.in.gov/dnr/water/7256.htm
FUNCTION PERFORMED download

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AVAILABLE FORMAT

NAME VPF
FILE DECOMPRESSION TECHNIQUE no compression applied

[Hide Distributor ▲](#)

DISTRIBUTION FORMAT

* NAME Shapefile

TRANSFER OPTIONS

* TRANSFER SIZE 3.614

ONLINE SOURCE

LOCATION <http://www.in.gov/dnr/water/7256.htm>
DESCRIPTION Data and Maps

[Hide Distribution ▲](#)

Fields ►

DETAILS FOR OBJECT BED_PSM_PUTNAM_CO_IN_revised_2016 ►

* TYPE Feature Class

* ROW COUNT 527

FIELD FID ►

* ALIAS FID

* DATA TYPE OID

* WIDTH 4

* PRECISION 0

* SCALE 0

* FIELD DESCRIPTION
Internal feature number.

* DESCRIPTION SOURCE
Esri

* DESCRIPTION OF VALUES
Sequential unique whole numbers that are automatically generated.

Hide Field FID ▲

FIELD Shape ►

* ALIAS Shape

* DATA TYPE Geometry

* WIDTH 0

* PRECISION 0

* SCALE 0

* FIELD DESCRIPTION
Feature geometry.

* DESCRIPTION SOURCE
ESRI

* DESCRIPTION OF VALUES
Coordinates defining the features.

Hide Field Shape ▲

FIELD Static_E ►

* ALIAS Static_E

* DATA TYPE SmallInteger

* WIDTH 5

* PRECISION 5

* SCALE 0

* FIELD DESCRIPTION
Potentiometric surface contours are developed here based on the static water levels from the bedrock aquifer systems with 10-foot contours and 50-foot index contours.

* DESCRIPTION SOURCE
Author

[Hide Field Static_E ▲](#)[Hide Details for object BED_PSM_PUTNAM_CO_IN_revised_2016 ▲](#)[Hide Fields ▲](#)

Metadata Details ►

METADATA LANGUAGE English (UNITED STATES)
 METADATA CHARACTER SET utf8 - 8 bit UCS Transfer Format

SCOPE OF THE DATA DESCRIBED BY THE METADATA dataset
 SCOPE NAME *dataset

* LAST UPDATE 2016-11-01

ARCGIS METADATA PROPERTIES

METADATA FORMAT ArcGIS 1.0
 METADATA STYLE FGDC CSDGM Metadata
 STANDARD OR PROFILE USED TO EDIT METADATA FGDC

CREATED IN ARCGIS FOR THE ITEM 2016-08-15 11:33:40
 LAST MODIFIED IN ARCGIS FOR THE ITEM 2016-11-01 08:47:22

AUTOMATIC UPDATES

HAVE BEEN PERFORMED Yes
 LAST UPDATE 2016-11-01 08:47:22

ITEM LOCATION HISTORY

ITEM COPIED OR MOVED 2016-09-06 15:02:58
 FROM M:\!Potentiometric\Putnam\Revised _2016\BED_PSM_PUTNAM_CO_IN_revised_2016
 To \\jotisip01pa\dnrgis\$\!Potentiometric\Putnam\1_Web_Products\WEb
 Rvised\zipfiles\BED_PSM_PUTNAM_CO_IN_revised_2016

[Hide Metadata Details ▲](#)

Metadata Contacts ►

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 INDIVIDUAL'S NAME Ginger C. Korinek
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 CONTACT'S ROLE originator

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ONLINE RESOURCE
LOCATION //www.in.gov/dnr/water/7256.htm
FUNCTION PERFORMED information

HOURS OF SERVICE
8:15am - 4:15pm M-F except Government Holidays

[Hide Contact information ▲](#)

[Hide Metadata Contacts ▲](#)

Metadata Maintenance ►

MAINTENANCE
UPDATE FREQUENCY as needed

OTHER MAINTENANCE REQUIREMENTS
Revised by Glenn Grove (9/2016).

MAINTENANCE CONTACT
ORGANIZATION'S NAME IDNR Division of Water, Resource Assessment Section
INDIVIDUAL'S NAME Glenn E. Grove,
CONTACT'S ROLE custodian

[Hide Metadata Maintenance ▲](#)

Metadata Constraints ►

LEGAL CONSTRAINTS
ACCESS CONSTRAINTS other restrictions

OTHER CONSTRAINTS
Access constraints: This metadata file is intended to accompany the subject geospatial set. This file may be updated, and the most recent version is available by contacting the IDNR Division of Water.

[Hide Metadata Constraints ▲](#)

FGDC Metadata (read-only) ▼