Metadata for GIS Sinkhole Database

Identification Information:
Citation:
Citation_Information:
Originator: *Randall L. Paylor*[1], *Lee Florea*[2], *Michael Caudill*[1], *and James C Currens*[1]
[1]Kentucky Geological Survey, 228 Mining and Minerals Resources Building Lexington, KY 40503
[2]Kentucky Speleological Survey, Inc., 228 Mining and Minerals Resources Building Lexington, KY 40503
Publication Date: 2003
Title: A GIS Sinkhole Coverage for the Karst Areas of Kentucky
Geospatial_Data_Presentation_Form: Vector digital data (Arc View GIS polygons
Publication_Information:
Publication_Place: Lexington, KY
Publisher: Kentucky Geological Survey
Description:
Abstract:

These data represent digital GIS sinkhole coverage for all of Kentucky. The highest elevation, closed, topographic contour of each mapped sinkhole was digitized as a GIS polygon. The second highest elevation contour was also digitized where very large, shallow, karst valleys were so expansive that the area covered by the polygon obscured patterns in sinkhole distribution. These karst valleys are mostly confined to the Western Pennyroyal. The spacing of contour intervals on the topographic maps of the state vary in from 40 foot to 10 foot. No attempt was made to use a constant elevation, standardize the outline to a uniform contour interval, or record the elevation of the digitized contour. Digitization was done onscreen using digital raster graphic files of the 7 ½ minute topographic contours, registered and projected to the Kentucky State Plane coordinate system.

Purpose: To spatially locate and delineate the aerial extent of the upper-most closed contour of topographically mapped depressions resulting from karst process, that is, sinkholes. These data do not indicate the probability of future cover-collapse or bedrock collapse in the designated areas.

Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 1999-2003

Currentness_Reference: As of the date of publication of individual 7.5-minute quadrangle topographic maps for the state of Kentucky ending May of 2003.

Status:
Progress: Complete
Maintenance_and_Update_Frequency: None
Spatial Domain:
Bounding_Coordinates:
West_Bounding_Coordinate: -88 28 15
East_Bounding_Coordinate: -82 33 33
North_Bounding_Coordinate: 39 06 44
South_Bounding_Coordinate: 36 36 27

Keywords:
Theme:
Theme_Keyword: karst
Theme_Keyword: sinkhole
Theme_Keyword: topographic depression
Theme_Keyword: closed contour
Theme_Keyword: GIS polygon

Place Keywords: Kentucky, Frankfort, Lawrenceburg, Georgetown, Winchester, Paris, Versailles, Nicholasville, Somerset, Lexington, Louisville, Hopkinsville, Russelville, Bowling Green, Princeton, Munfordville, Fort Knox
Access Constraints: Only as provided by the Kentucky Geological Survey guidelines and policies on digital data publication.
Use Constraints: Not recommended for predicting future subsidence.
Point_of_Contact:
Contact_Information_Primary:
Contact_Organization: Kentucky Geological Survey
Contact_Person: Randall Paylor
Contact_Position: Water Resources Section
Contact_Address:
Address: 228 Mining and Mineral Resources Building
Address: University of Kentucky
Address: Lexington
Address: KY
Address: 40506-0107
Contact_Voice_Telephone: 859-257-5500 ext 161
Contact_Facsimile_Telephone: 859-257-1147
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Hours_of_Service: 8 a.m. – 5 p.m., M-F
Security_Infromation:
Security_Classification: Unclassified
Native_Data_Set_Environment:
PC based platforms using ESRI ArcGIS 8.1 and ArcView 3.2a.
Cross_Reference:
Citatiion_Information:

Originator: Kentucky Geological Survey and Kentucky Speleological Survey
Publication_Date: Unknown
Title: A GIS Sinkhole Coverage for the Karst Areas of Kentucky
Geospatial_Data_Presentation_Form: vector digital data
Publication_Information:
    Publication_Place: Lexington, KY
    Publisher: Kentucky Geological Survey
Online_Linkage: http://kgsweb.uky.edu/

Spatial_Data_Organization_Information:
    Direct_Spatial_Reference_Method: Vector
    Point_and_Vector_Object_Information:
        SDTS_Terms_Description:
            SDTS_Point_and_Vector_Object_Type:
            Point_and_Vector_Object_Count:

Spatial_Reference_Information:
    Horizontal_Coordinate_System_Definition:
        Geographic:
            Latitude_Resolution: 0.000000
            Longitude_Resolution: 0.000000
            Geographic_Coordinate_Units: Decimal degrees
        Geodetic_Model:
            Horizontal_Datum_Name: North American Datum of 1983
            Ellipsoid_Name: Geodetic Reference System 80
            Semi_major_Axis: 6378206.400000
            Denominator_of_Flattening_Ratio: 294.978698
                Entity_Type:
                    Entity_Type_Label: county
                Attribute:
                    Attribute_Label: FID
                    Attribute_Definition: Internal feature number.
                    Attribute_Definition_Source: ESRI
                    Attribute_Domain_Values:
                        Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
                Attribute:
                    Attribute_Label: Shape
                    Attribute_Definition: Feature geometry
                    Attribute_Definition_Source: ESRI
                    Attribute_Domain_Values:
                        Unrepresentable_Domain: Coordinates defining the features.

Attribute:
Attribute_Label: Perimeter
Attribute_Definition: Length of the feature perimeter.
Attribute_Definition_Source: Ky. Speleological Survey
Attribute_Domain_Values:
Unrepresentable_Domain:
Attribute:
Attribute_Label: Area
Attribute_Definition: Area of the feature.
Attribute_Definition_Source: Ky. Speleological Survey
Attribute_Domain_Values:
Unrepresentable_Domain:

Distribution_Information:
Distributor:
Contact_Information_Primary:
Contact_Organization: Kentucky Geological Survey
Contact_Address:
Address: 228 Mining and Mineral Resources Building
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Address: Lexington
Address: KY
Postal_Code: 40506-0107
Contact_Voice_Telephone: 859-257-5500 ext 161
Contact_Facsimile_Telephone: 859-257-1147
Resource_Description: Downloadable Data
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Transfer_Size:

Metadata_Reference_Information:
Metadata_Date: 20030801
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
*Contact_Organization:*Kentucky Geological Survey
Contact_Person: Randall Paylor
Contact_Address:
Address_Type: mailing and physical address
Address: Kentucky Geological Survey
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Contact_Electronic_Mail_Address: rpaylor@kgs.mm.uky.edu
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Extension:
Online_Linkage: http://www.esri.com/library/whitepapers/pdfs/metadata-and-gis.pdf
Profile_Name: ESRI Metadata Profile