Identification\_Information:

Citation: Fowler, K.K., Flood-inundation maps for the White River near Edwardsport, Indiana: U.S. Geological Survey Scientific Investigations Report 2014-5219, 11 p.

Citation\_Information:

Originator: USGS Indiana Water Science Center

Publication\_Date: 2014

Title: whitedwIN\_b

Geospatial\_Data\_Presentation\_Form: vector digital data

Series\_Information:

Series\_Name: Scientific Investigations Report

Publication\_Information:

Publication\_Place: Reston, Virginia

Publisher: U.S. Geological Survey

Online\_Linkage: <http://dx.doi.org/10.3133/sir20145219>

Description:

Abstract:

Digital flood-inundation maps for a 3.3-mile reach of the White River near Edwardsport, Indiana, were created by the U.S. Geological Survey (USGS) in cooperation with the Indiana Department of Transportation. The inundation maps, which can be accessed through the USGS Flood Inundation Mapping Science Web site at

http://water.usgs.gov/osw/flood\_inundation/, depict estimates of the areal extent and depth of flooding corresponding to selected water levels (stages) at USGS streamgage 03360730, White River near Edwardsport, Ind. Near-real-time stages at this streamgage may be obtained from the USGS National Water Information System at http://waterdata.usgs.gov/ or the National Weather Service Advanced Hydrologic Prediction Service at http:/water.weather.gov/ahps/, which also forecasts flood hydrographs at this site (site EDWI3).

Flood profiles were computed for the White River near Edwardsport reach by means of a one-dimensional step-backwater model developed by the U.S. Army Corps of Engineers. The hydraulic model was calibrated by using the most current stage-discharge relations at USGS streamgage 03360730, White River near Edwardsport, Ind., and high-water marks from the flood of April 2013. The calibrated hydraulic model was then used to determine 19 water-surface profiles for flood stages at approximately 1-foot intervals referenced to the streamgage datum and ranging from bankfull to the highest stage of the current stage-discharge rating curve. The simulated water-surface profiles were then combined with a geographic information system digital elevation model to delineate the area flooded at each water level.

The availability of these maps, along with Internet information regarding current stage from the USGS streamgage White River near Edwardsport, Ind., and forecasted stream stages from the National Weather Service, provides emergency management personnel and residents with information that is critical for flood response activities such as evacuations and road closures, as well as for post-flood recovery efforts.

Purpose:

The purpose of this report is to describe the development of a series of estimated flood-inundation maps for the White River near Edwardsport, Ind. The maps and other useful flood information are available on the USGS Flood Inundation Mapping Science Web site and the National Weather Service Advanced Hydrologic Prediction Service Web site. Internet users can select estimated inundation maps that correspond to (1) current stages at the USGS streamgage, (2) the NWS forecasted peak stage, or (3) other desired stream stages.

Time\_Period\_of\_Content:

Time\_Period\_Information:

Single\_Date/Time:

Calendar\_Date: 2014

Currentness\_Reference: ground condition

Status:

Progress: Complete

Maintenance\_and\_Update\_Frequency: None planned

Spatial\_Domain:

Bounding\_Coordinates:

West\_Bounding\_Coordinate: -87.238640

East\_Bounding\_Coordinate: -87.215769

North\_Bounding\_Coordinate: 38.800931

South\_Bounding\_Coordinate: 38.780081

Keywords:

Theme:

Theme\_Keyword\_Thesaurus: flood mapping

Theme\_Keyword: flood mapping

Theme\_Keyword: flood

Place:

Place\_Keyword: Edwardsport, IN

Access\_Constraints:

None. This dataset is provided by USGS as a public service. Users of this geospatial database and geologic information derived from there

should acknowledge the U.S. Geological Survey as the source of the data.

Use\_Constraints:

Users must assume responsibility to determine the appropriate use of these data. Users should be aware of the limitations of this dataset if using for critical application.

Point\_of\_Contact:

Contact\_Information:

Contact\_Organization\_Primary:

Contact\_Organization: USGS Indiana Water Science Center

Contact\_Address:

Address\_Type: mailing and physical address

Address: 5957 Lakeside Blvd

City: Indianapolis

State\_or\_Province: Indiana

Postal\_Code: 46278

Country: USA

Contact\_Voice\_Telephone: 317 290-3333

Security\_Information:

Security\_Classification: Unclassified

Native\_Data\_Set\_Environment: Microsoft Windows Vista Version 6.1 (Build 7601) Service Pack 1; ESRI ArcCatalog 9.3.1.3000

Cross\_Reference:

Citation\_Information:

Originator: U.S. Geological Survey, Indiana Water Science Center

Publication\_Date: 2014

Title: Flood-Inundation Maps for the White River near Edwardsport, Indiana

Series\_Information:

Series\_Name: Scientific Investigations Report

Issue\_Identification: SIR

Publication\_Information:

Publication\_Place: Reston, Virginia

Publisher: U.S. Geological Survey

Data\_Quality\_Information:

Attribute\_Accuracy:

Attribute\_Accuracy\_Report:

Attributes for water-surface elevation were input from the HEC-RAS model output data table. Flow input data for the HEC-RAS model were obtained from the most current stage-discharge relation at USGS streamgage White River near Edwardsport, Ind.(station no. 03360730), Ind.

Positional\_Accuracy:

Horizontal\_Positional\_Accuracy:

Horizontal\_Positional\_Accuracy\_Report:

As with any engineering analysis of this type, variation from the estimated flood heights and flood-plain boundaries is possible. Details of the process used to produce these data can be found in project documentation available from the data contact person. Horizontal accuracy was tested by evaluating boundaries to best available topographicdataset.

Vertical\_Positional\_Accuracy:

Vertical\_Positional\_Accuracy\_Report:

As with any engineering analysis of this type, variation from the estimated flood heights and flood-plain boundaries is possible. Details of the process used to produce this data can be found in project documentation available from the data contact person. Horizontal accuracy was tested by evaluating boundaries to best available topographic dataset.

Lineage:

Source\_Information:

Source\_Citation:

Citation\_Information:

Originator: U.S. Geological Survey Indiana Water Science Center

Publication\_Date: 2014

Title: Flood-Inundation Maps for the White River near Edwardsport, Indiana

Series\_Information:

Series\_Name: Scientific Investigations Report

Publication\_Information:

Publication\_Place: Reston, Virginia

Publisher: U.S. Geological Survey

Process\_Step:

Process\_Description: Dataset copied.

Process\_Date: 20140717

Process\_Time: 17385600

Process\_Step:

Process\_Description: Dataset copied.

Source\_Used\_Citation\_Abbreviation: [http://dx.doi.gov/sir/2014/5219](http://dx.doi.gov/sir/2014/xxxx) Process\_Date: 20140721

Process\_Time: 11442600

Process\_Step:

Process\_Description: Metadata imported.

Source\_Used\_Citation\_Abbreviation: [http://dx.doi.gov/sir/2014/5219](http://dx.doi.gov/sir/2014/xxxx)

Process\_Date: 20140924

Process\_Time: 15105300

Spatial\_Data\_Organization\_Information:

Direct\_Spatial\_Reference\_Method: Vector

Point\_and\_Vector\_Object\_Information:

SDTS\_Terms\_Description:

SDTS\_Point\_and\_Vector\_Object\_Type: G-polygon

Point\_and\_Vector\_Object\_Count: 9

Spatial\_Reference\_Information:

Horizontal\_Coordinate\_System\_Definition:

Planar:

Map\_Projection:

Map\_Projection\_Name: Mercator\_Auxiliary\_Sphere

Planar\_Coordinate\_Information:

Planar\_Coordinate\_Encoding\_Method: coordinate pair

Coordinate\_Representation:

Abscissa\_Resolution: 0.000000

Ordinate\_Resolution: 0.000000

Planar\_Distance\_Units: meters

Geodetic\_Model:

Horizontal\_Datum\_Name: D\_WGS\_1984

Ellipsoid\_Name: WGS\_1984

Semi-major\_Axis: 6378137.000000

Denominator\_of\_Flattening\_Ratio: 298.257224

Entity\_and\_Attribute\_Information:

Detailed\_Description:

Entity\_Type:

Entity\_Type\_Label: whitedwIN\_b

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: ID

Attribute:

Attribute\_Label: GRIDCODE

Attribute:

Attribute\_Label: Shape\_Leng

Attribute:

Attribute\_Label: Shape\_Area

Attribute\_Definition: Area of feature in internal units squared.

Attribute\_Definition\_Source: ESRI

Attribute\_Domain\_Values:

Unrepresentable\_Domain: Positive real numbers that are automatically generated.

Attribute:

Attribute\_Label: STAGE

Attribute:

Attribute\_Label: ELEV

Attribute:

Attribute\_Label: USGSID

Attribute:

Attribute\_Label: GRIDID

Distribution\_Information:

Distributor:

Contact\_Information:

Contact\_Organization\_Primary:

Contact\_Organization: USGS Indiana Water Science Center

Contact\_Voice\_Telephone: 317 290-3333

Contact\_Facsimile\_Telephone: 317 290-3313

Resource\_Description: Downloadable Data

Standard\_Order\_Process:

Digital\_Form:

Digital\_Transfer\_Information:

Transfer\_Size: 2.391

Available\_Time\_Period:

Time\_Period\_Information:

Single\_Date/Time:

Calendar\_Date: 2014

Metadata\_Reference\_Information:

Metadata\_Date: 20140924

Metadata\_Contact:

Contact\_Information:

Contact\_Organization\_Primary:

Contact\_Organization: USGS Indiana Water Science Center

Contact\_Person: Kathleen Fowler Contact\_Address:

Address\_Type: mailing and physical address

Address: 5957 Lakeside Blvd

City: Indianapolis

State\_or\_Province: Indiana

Postal\_Code: 46278

Contact\_Voice\_Telephone: 317 290-3333

Contact\_Facsimile\_Telephone: 317 290-3313

Metadata\_Standard\_Name: FGDC Content Standards for Digital Geospatial Metadata

Metadata\_Standard\_Version: FGDC-STD-001-1998

Metadata\_Time\_Convention: local time

Metadata\_Extensions:

Online\_Linkage: http://www.esri.com/metadata/esriprof80.html

Profile\_Name: ESRI Metadata Profile

Metadata\_Extensions:

Online\_Linkage: http://www.esri.com/metadata/esriprof80.html

Profile\_Name: ESRI Metadata Profile