Identification\_Information:

Citation:

Citation\_Information: Studley, S.E., and Peters, A.J., 2014, Flood-inundation maps for Indian Creek and Tomahawk Creek, Johnson County, Kansas, 2014: U.S. Geological Survey Scientific Investigations Report 2014–5202, 12 p.

Originator: USGS Kansas Water Science Center

Publication\_Date: 2015

Title: metadata

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: \\IGSAQCEWLT-012\C$\Users\flood\_inundation\edwardsport\report\to\_wim\to\_wim\whitedwIN.shp

Description:

Abstract:

Digital flood-inundation maps for a 6.4-mile upper reach of Indian Creek from College Boulevard to the confluence with Tomahawk Creek, a 3.9-mile reach of Tomahawk Creek from 127th Street to the confluence with Indian Creek, and a 3.7-mile lower reach of Indian Creek from the confluence with Tomahawk Creek to the Kansas/Missouri border at State Line Road in Johnson County, Kansas, were created by the U.S. Geological Survey in cooperation with the city of Overland Park, Kansas. The flood-inundation maps, which can be accessed through the USGS Flood Inundation Mapping Science website at[*http://water.usgs.gov/osw/flood\_inundation/*](http://water.usgs.gov/osw/flood_inundation/), depict estimates of the areal extent and depth of flooding corresponding to selected water levels (stages) at the U.S. Geological Survey streamgages on Indian Creek at Overland Park, Kansas (06893300), Indian Creek at State Line Road, Leawood, Kansas (06893390), and Tomahawk Creek near Overland Park, Kansas (06893350). Near real time stages at this streamgage may be obtained on the Web from the U.S. Geological Survey National Water Information System at [*http://waterdata.usgs.gov/*](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 these sites.

Flood profiles were computed for the stream reaches by means of a one-dimensional step-backwater model. The model was calibrated for each reach by using the most current stage-discharge relations at the Indian Creek at Overland Park, Kansas; Indian Creek at State Line Road, Leawood, Kansas; and Tomahawk Creek at Overland Park, Kansas, streamgages.

The hydraulic models were then used to determine 15 water-surface profiles for Indian Creek at Overland Park, Kansas; 17 water-surface profiles for Indian Creek at State Line Road, Leawood, Kansas; and 15 water-surface profiles for Tomahawk Creek at Overland Park, Kansas, for flood stages at 1-foot intervals referenced to the streamgage datum and ranging from bankfull to approximately the next interval above the 0.2 percent annual exceedance probability flood level. The simulated water-surface profiles were then combined in a geographic information system with a digital elevation model derived from light detection and ranging data (having a 0.429-foot vertical and 0.228-foot horizontal resolution) to delineate the area flooded at each water level.

The availability of these maps, along with Web information regarding current stage from the U.S. Geological Survey streamgage and forecasted high-flow stages from the National Weather Service, will provide emergency management personnel and residents with information that is critical for flood response activities such as evacuations and road closures, as well as for postflood recovery efforts.

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: -74.100322

East\_Bounding\_Coordinate: -74.066216

North\_Bounding\_Coordinate: 40.923740

South\_Bounding\_Coordinate: 40.868051

Keywords:

Theme:

Theme\_Keyword\_Thesaurus: flood mapping

Theme\_Keyword: flood mapping

Theme\_Keyword: flood

Place:

Place\_Keyword: Johnson County, KS

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 Kansas Water Science Center

Contact\_Address:

Address\_Type: mailing and physical address

Address: 4821 Quail Crest PL

City: Lawrence

State\_or\_Province: Kansas

Postal\_Code: 66049

Country: USA

Contact\_Voice\_Telephone: (785) 842-9909

Security\_Information:

Security\_Classification: Unclassified

Native\_Data\_Set\_Environment:

Cross\_Reference:

Citation\_Information:

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

Publication\_Date: 2015

Title: Flood-Inundation Maps for Indian and Tomahawk Cree, Johnson County, Kansas

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 streamgages 06893300, 06893350, 06893390

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 these 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 Kansas Water Science Center

Publication\_Date: 2015

Title: Flood-Inundation Maps for Indian Creek and Tomahawk Creek, Johnson County, Kansas

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: 20150211

Process\_Time: 17385600

Process\_Step:

Process\_Description: Dataset copied.

Source\_Used\_Citation\_Abbreviation:

Process\_Date: 20150211

Process\_Time: 11442600

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: 19

Spatial\_Reference\_Information:

Horizontal\_Coordinate\_System\_Definition:

Planar:

Map\_Projection:

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

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: GRIDCODE

Attribute:

Attribute\_Label: STAGE

Attribute:

Attribute\_Label: ELEV

Attribute:

Attribute\_Label: USGSID

Attribute:

Attribute\_Label: GRIDID

Attribute:

Attribute\_Label: QCFS

Distribution\_Information:

Distributor:

Contact\_Information:

Contact\_Organization\_Primary:

Contact\_Organization: USGS Kansas Water Science Center

Contact\_Voice\_Telephone: 785 842-9909

Contact\_Facsimile\_Telephone: 785 832 3500

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: 2015

Metadata\_Reference\_Information:

Metadata\_Date: 20150211

Metadata\_Contact:

Contact\_Information: Arin Peters

Contact\_Organization\_Primary: USGS Kansas Water Science Center

Contact\_Organization: USGS Kansas Water Science Center

Contact\_Address:

Address\_Type: mailing and physical address

Address: 4821 Quail Crest Place

City: Lawrence

State\_or\_Province: Kansas

Postal\_Code: 66049

Contact\_Voice\_Telephone: 785 842-9909

Contact\_Facsimile\_Telephone: 785 843-3500

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