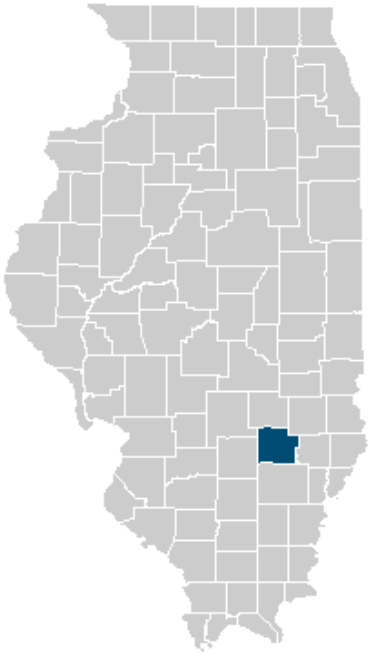
FLOOD INSURANCE STUDY

FEDERAL EMERGENCY MANAGEMENT AGENCY

VOLUME 1 OF 1



CLAY COUNTY, ILLINOIS

AND INCORPORATED AREAS

COMMUNITY NAME	COMMUNITY NUMBER
CLAY CITY, VILLAGE OF	170042
CLAY COUNTY, UNINCORPORATED AREAS	170898
FLORA, CITY OF	170043
IOLA, VILLAGE OF*	171085
LOUSIVILLE, VILLAGE OF	171387
SAILOR SPRINGS, VILLAGE OF	171086
XENIA, VILLAGE OF*	171087

* No Special Flood Hazard Areas Identified

PRELIMINARY

July 21, 2022

FEMA

EFFECTIVE:

TBD

FLOOD INSURANCE STUDY NUMBER
17025CV000A
Version Number 2.6.3.6

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FLOOD INSURANCE STUDY REPORT
CLAY COUNTY, ILLINOIS

SECTION 1.0 – INTRODUCTION

1.1 The National Flood Insurance Program

The National Flood Insurance Program (NFIP) is a voluntary Federal program that enables property owners in participating communities to purchase insurance protection against losses from flooding. This insurance is designed to provide an alternative to disaster assistance to meet the escalating costs of repairing damage to buildings and their contents caused by floods.

For decades, the national response to flood disasters was generally limited to constructing flood-control works such as dams, levees, sea-walls, and the like, and providing disaster relief to flood victims. This approach did not reduce losses nor did it discourage unwise development. In some instances, it may have actually encouraged additional development. To compound the problem, the public generally could not buy flood coverage from insurance companies, and building techniques to reduce flood damage were often overlooked.

In the face of mounting flood losses and escalating costs of disaster relief to the general taxpayers, the U.S. Congress created the NFIP. The intent was to reduce future flood damage through community floodplain management ordinances, and provide protection for property owners against potential losses through an insurance mechanism that requires a premium to be paid for the protection.

The U.S. Congress established the NFIP on August 1, 1968, with the passage of the National Flood Insurance Act of 1968. The NFIP was broadened and modified with the passage of the Flood Disaster Protection Act of 1973 and other legislative measures. It was further modified by the National Flood Insurance Reform Act of 1994 and the Flood Insurance Reform Act of 2004. The NFIP is administered by the Federal Emergency Management Agency (FEMA), which is a component of the Department of Homeland Security (DHS).

Participation in the NFIP is based on an agreement between local communities and the Federal Government. If a community adopts and enforces floodplain management regulations to reduce future flood risks to new construction and substantially improved structures in Special Flood Hazard Areas (SFHAs), the Federal Government will make flood insurance available within the community as a financial protection against flood losses. The community's floodplain management regulations must meet or exceed criteria established in accordance with Title 44 Code of Federal Regulations (CFR) Part 60, *Criteria for Land Management and Use*.

SFHAs are delineated on the community's Flood Insurance Rate Maps (FIRMs). Under the NFIP, buildings that were built before the flood hazard was identified on the community's FIRMs are generally referred to as "Pre-FIRM" buildings. When the NFIP was created, the U.S. Congress recognized that insurance for Pre-FIRM buildings would be prohibitively expensive if the premiums were not subsidized by the Federal Government. Congress also recognized that most of these floodprone buildings were built

by individuals who did not have sufficient knowledge of the flood hazard to make informed decisions. The NFIP requires that full actuarial rates reflecting the complete flood risk be charged on all buildings constructed or substantially improved on or after the effective date of the initial FIRM for the community or after December 31, 1974, whichever is later. These buildings are generally referred to as “Post-FIRM” buildings.

1.2 Purpose of this Flood Insurance Study Report

This Flood Insurance Study (FIS) Report revises and updates information on the existence and severity of flood hazards for the Village of Clay City, but is the first countywide FIS. The studies described in this report developed flood hazard data that will be used to establish actuarial flood insurance rates and to assist communities in efforts to implement sound floodplain management.

In some states or communities, floodplain management criteria or regulations may exist that are more restrictive than the minimum Federal requirements. Contact your State NFIP Coordinator to ensure that any higher State standards are included in the community’s regulations.

1.3 Jurisdictions Included in the Flood Insurance Study Project

This FIS Report covers the entire geographic area of Clay County, Illinois.

The jurisdictions that are included in this project area, along with the Community Identification Number (CID) for each community and the United States Geological Survey (USGS) 8-digit Hydrologic Unit Code (HUC-8) sub-basins affecting each, are shown in Table 1. The FIRM panel numbers that affect each community are listed. If the flood hazard data for the community is not included in this FIS Report, the location of that data is identified.

Jurisdictions that have no identified SFHAs as of the effective date of this study are indicated in the table. Changed conditions in these communities (such as urbanization or annexation) or the availability of new scientific or technical data about flood hazards could make it necessary to determine SFHAs in these jurisdictions in the future.

Table 1: Listing of NFIP Jurisdictions

Community	CID	HUC-8 Sub-Basin(s)	Located on FIRM Panel(s)	If Not Included, Location of Flood Hazard Data
Clay City, Village of	170042	05120114	17025C0278C 17025C0279C 17025C0286C 17025C0290C	
Clay County Unincorporated Areas	170898	05120114 05120115	17025C0025C 17025C0040C 17025C0045C 17025C0075C 17025C0100C [2] 17025C0125C 17025C0130C 17025C0135C 17025C0140C 17025C0144C 17025C0145C 17025C0163C 17025C0165C 17025C0175C 17025C0180C 17025C0185C 17025C0190C 17025C0195C 17025C0225C 17025C0242C 17025C0245C 17025C0250C 17025C0255C 17025C0260C 17025C0261C 17025C0262C 17025C0265C 17025C0270C 17025C0278C 17025C0279C 17025C0280C 17025C0285C 17025C0286C 17025C0290C 17025C0295C 17025C0325C [2] 17025C0350C 17025C0375C 17025C0380C [2] 17025C0385C 17025C0405C	

[2] Panel Not Printed

Table 1: Listing of NFIP Jurisdictions (continued)

Community	CID	HUC-8 Sub-Basin(s)	Located on FIRM Panel(s)	If Not Included, Location of Flood Hazard Data
Flora, City of	170043	05120114	17025C0242C 17025C0261C 17025C0262C 17025C0265C	
Iola, Village of [1]	171085	05120114	17025C0125C 17025C0130C	
Louisville, Village of	171387	05120114	17025C0144C 17025C0163C	
Sailor Springs, Village of	171086	05120114	17025C0190C	
Xenia, Village of [1]	171087	05120115	17025C0225C	

[1] No Special Flood Hazard Areas Identified

[2] Panel Not Printed

1.4 Considerations for using this Flood Insurance Study Report

The NFIP encourages State and local governments to implement sound floodplain management programs. To assist in this endeavor, each FIS Report provides floodplain data, which may include a combination of the following: 10-, 4-, 2-, 1-, and 0.2-percent annual chance flood elevations (the 1-percent-annual-chance flood elevation is also referred to as the Base Flood Elevation (BFE)); delineations of the 1-percent-annual-chance and 0.2-percent-annual-chance floodplains; and 1-percent-annual-chance floodway. This information is presented on the FIRM and/or in many components of the FIS Report, including Flood Profiles, Floodway Data tables, Summary of Non-Coastal Stillwater Elevations tables, and Coastal Transect Parameters tables (not all components may be provided for a specific FIS).

This section presents important considerations for using the information contained in this FIS Report and the FIRM, including changes in format and content. Figures 1, 2, and 3 present information that applies to using the FIRM with the FIS Report.

- Part or all of this FIS Report may be revised and republished at any time. In addition, part of this FIS Report may be revised by a Letter of Map Revision (LOMR), which does not involve republication or redistribution of the FIS Report. Refer to Section 6.5 of this FIS Report for information about the process to revise the FIS Report and/or FIRM.

- It is, therefore, the responsibility of the user to consult with community officials by contacting the community repository to obtain the most current FIS Report components. Communities participating in the NFIP have established repositories of flood hazard data for floodplain management and flood insurance purposes. Community map repository addresses are provided in Table 30, "Map Repositories," within this FIS Report.

- New FIS Reports are frequently developed for multiple communities, such as entire counties. A countywide FIS Report incorporates previous FIS Reports for individual communities and the unincorporated area of the county (if not jurisdictional) into a single document and supersedes those documents for the purposes of the NFIP.

  The initial Countywide FIS Report for Clay County became effective on TBD. Refer to Table 27 for information about subsequent revisions to the FIRMs.

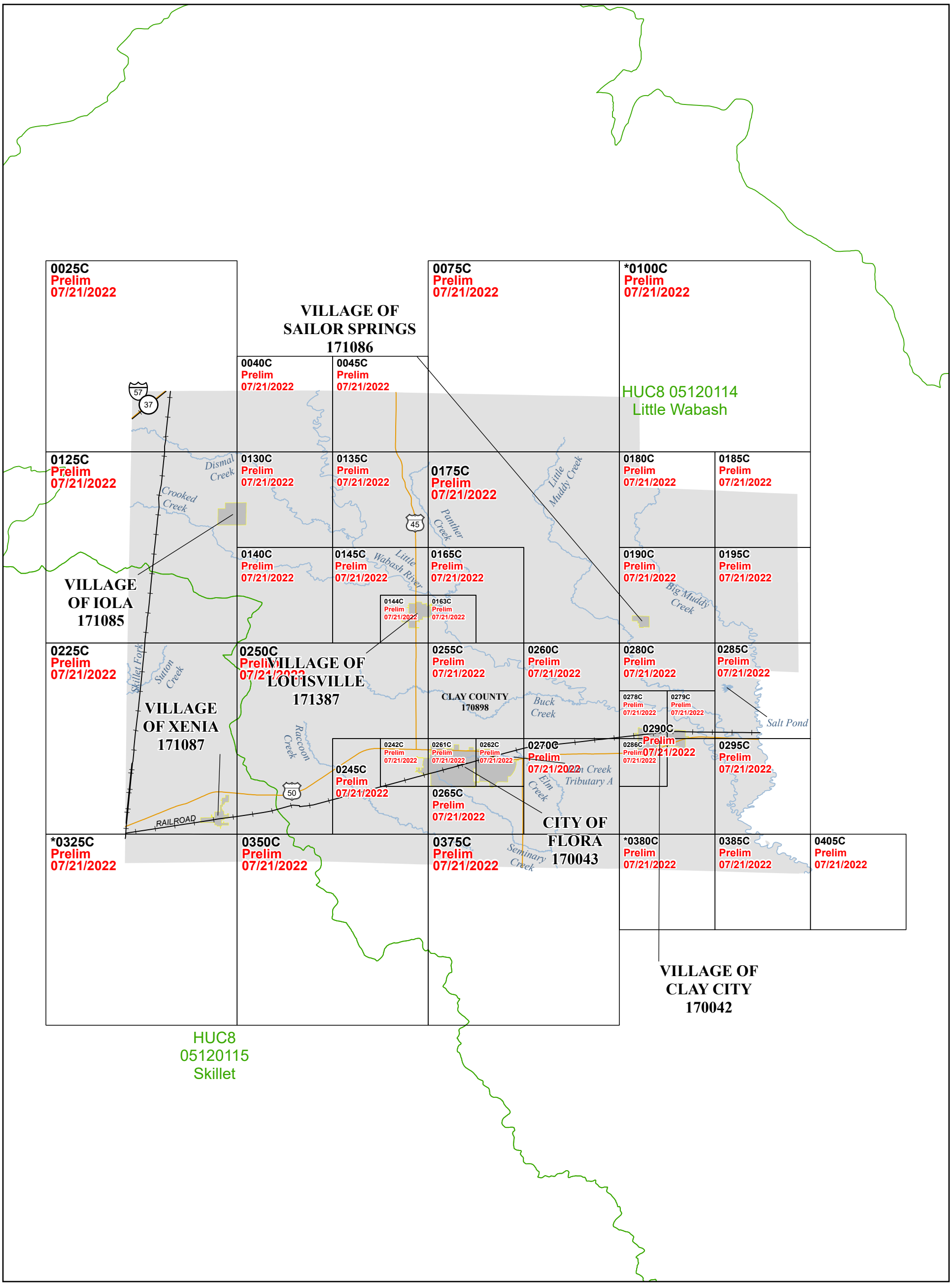
- Selected FIRM panels for the community may contain information (such as floodways and cross sections) that was previously shown separately on the corresponding Flood Boundary and Floodway Map (FBFM) panels. In addition, former flood hazard zone designations have been changed as follows:

Old Zone	New Zone
A1 through A30	AE
V1 through V30	VE
B	X (shaded)
C	X (unshaded)

- The Community Rating System (CRS) is a voluntary incentive program that recognizes and encourages community floodplain management activities that exceed the minimum NFIP requirements. Visit the FEMA Web site at www.fema.gov/flood-insurance/rules-legislation/community-rating-system or contact your appropriate FEMA Regional Office for more information about this program.

- FEMA has developed a *Guide to Flood Maps* (FEMA 258) and online tutorials to assist users in accessing the information contained on the FIRM. These include how to read panels and step-by-step instructions to obtain specific information. To obtain this guide and other assistance in using the FIRM, visit the FEMA Web site at www.fema.gov/flood-maps/tutorials.

The FIRM Index in Figure 1 shows the overall FIRM panel layout within Clay County, and also displays the panel number and effective date for each FIRM panel in the county. Other information shown on the FIRM Index includes community boundaries, flooding sources, watershed boundaries, and USGS HUC-8 codes.



1 inch = 22,598 feet 1:271,177

N

feet
0 10,000 20,000 40,000 60,000

Map Projection:
GCS WGS 1984
Vertical Datum: NAVD88

THE INFORMATION DEPICTED ON THIS MAP AND SUPPORTING DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT

HTTPS://MSC.FEMA.GOV

SEE FLOOD INSURANCE STUDY FOR ADDITIONAL INFORMATION

* PANEL NOT PRINTED - NO SPECIAL FLOOD HAZARD AREAS

NATIONAL FLOOD INSURANCE PROGRAM

FLOOD INSURANCE RATE MAP INDEX

CLAY COUNTY, ILLINOIS And Incorporated Areas

PANELS PRINTED:

0025, 0040, 0045, 0075, 0125, 0130, 0135, 0140, 0144, 0145, 0163, 0165, 0175, 0180, 0185, 0190, 0195, 0225, 0242, 0245, 0250, 0255, 0260, 0261, 0262, 0265, 0270, 0278, 0279, 0280, 0285, 0286, 0290, 0295, 0350, 0375, 0385, 0405

FEMA

MAP NUMBER
17025CIND1C

EFFECTIVE DATE
Prelim Issue Date: 07/21/2022

Each FIRM panel may contain specific notes to the user that provide additional information regarding the flood hazard data shown on that map. However, the FIRM panel does not contain enough space to show all the notes that may be relevant in helping to better understand the information on the panel. Figure 2 contains the full list of these notes.

Figure 2: FIRM Notes to Users

NOTES TO USERS

For information and questions about this Flood Insurance Rate Map (FIRM), available products associated with this FIRM including historic versions of this FIRM, how to order products, or the National Flood Insurance Program in general, please call the FEMA Mapping and Insurance eXchange at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA Flood Map Service Center website at msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website. Users may determine the current map date for each FIRM panel by visiting the FEMA Flood Map Service Center website or by calling the FEMA Mapping and Insurance eXchange.

Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index. These may be ordered directly from the Flood Map Service Center at the number listed above.

For community and countywide map dates, refer to Table 27 in this FIS Report.

To determine if flood insurance is available in the community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

PRELIMINARY FIS REPORT: FEMA maintains information about map features, such as street locations and names, in or near designated flood hazard areas. Requests to revise information in or near designated flood hazard areas may be provided to FEMA during the community review period, at the final Consultation Coordination Officer's meeting, or during the statutory 90-day appeal period. Approved requests for changes will be shown on the final printed FIRM.

The map is for use in administering the NFIP. It may not identify all areas subject to flooding, particularly from local drainage sources of small size. Consult the community map repository to find updated or additional flood hazard information.

BASE FLOOD ELEVATIONS: For more detailed information in areas where Base Flood Elevations (BFEs) and/or floodways have been determined, consult the Flood Profiles and Floodway Data and/or Summary of Non-Coastal Stillwater Elevations tables within this FIS Report. Use the flood elevation data within the FIS Report in conjunction with the FIRM for construction and/or floodplain management.

FLOODWAY INFORMATION: Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the FIS Report for this jurisdiction

FLOOD CONTROL STRUCTURE INFORMATION: Certain areas not in Special Flood Hazard Areas may have reduced flood hazards due to flood control structures. Refer to Section 4.3 "Dams and Other Flood Hazard Reduction Measures" of this FIS Report for information on flood control structures for this jurisdiction.

Figure 2. FIRM Notes to Users

PROJECTION INFORMATION: The projection used in the preparation of the map was State Plane Illinois East 1201. The horizontal datum was the North American Datum of 1983 NAD83 HARN, GRS1980 spheroid. Differences in datum, spheroid, projection or State Plane zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of the FIRM.

ELEVATION DATUM: Flood elevations on the FIRM are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at www.ngs.noaa.gov.

Local vertical monuments may have been used to create the map. To obtain current monument information, please contact the appropriate local community listed in Table 30 of this FIS Report.

BASE MAP INFORMATION: Base map information shown on the FIRM was provided in digital format by the United States Geological Survey (USGS). The basemap shown is the USGS National Map: Orthoimagery. Last refreshed October 2020. For information about base maps, refer to Section 6.2 “Base Map” in this FIS Report.

Corporate limits shown on the map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after the map was published, map users should contact appropriate community officials to verify current corporate limit locations.

NOTES FOR FIRM INDEX

REVISIONS TO INDEX: As new studies are performed and FIRM panels are updated within Clay County, Illinois, corresponding revisions to the FIRM Index will be incorporated within the FIS Report to reflect the effective dates of those panels. Please refer to Table 27 of this FIS Report to determine the most recent FIRM revision date for each community. The most recent FIRM panel effective date will correspond to the most recent index date.

Figure 2. FIRM Notes to Users

SPECIAL NOTES FOR SPECIFIC FIRM PANELS

This Notes to Users section was created specifically for Clay County, Illinois, effective TBD.

FLOOD RISK REPORT: A Flood Risk Report (FRR) may be available for many of the flooding sources and communities referenced in this FIS Report. The FRR is provided to increase public awareness of flood risk by helping communities identify the areas within their jurisdictions that have the greatest risks. Although non-regulatory, the information provided within the FRR can assist communities in assessing and evaluating mitigation opportunities to reduce these risks. It can also be used by communities developing or updating flood risk mitigation plans. These plans allow communities to identify and evaluate opportunities to reduce potential loss of life and property. However, the FRR is not intended to be the final authoritative source of all flood risk data for a project area; rather, it should be used with other data sources to paint a comprehensive picture of flood risk.

Each FIRM panel contains an abbreviated legend for the features shown on the maps. However, the FIRM panel does not contain enough space to show the legend for all map features. Figure 3 shows the full legend of all map features. Note that not all of these features may appear on the FIRM panels in Clay County.

Figure 3: Map Legend for FIRM

SPECIAL FLOOD HAZARD AREAS: The 1% annual chance flood, also known as the base flood or 100-year flood, has a 1% chance of happening or being exceeded each year. Special Flood Hazard Areas are subject to flooding by the 1% annual chance flood. The Base Flood Elevation is the water surface elevation of the 1% annual chance flood. The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights. See note for specific types. If the floodway is too narrow to be shown, a note is shown.

	Special Flood Hazard Areas subject to inundation by the 1% annual chance flood (Zones A, AE, AH, AO, AR, A99, V and VE)
Zone A	The flood insurance rate zone that corresponds to the 1% annual chance floodplains. No base (1% annual chance) flood elevations (BFEs) or depths are shown within this zone.
Zone AE	The flood insurance rate zone that corresponds to the 1% annual chance floodplains. Base flood elevations derived from the hydraulic analyses are shown within this zone.
Zone AH	The flood insurance rate zone that corresponds to the areas of 1% annual chance shallow flooding (usually areas of ponding) where average depths are between 1 and 3 feet. Whole-foot BFEs derived from the hydraulic analyses are shown at selected intervals within this zone.
Zone AO	The flood insurance rate zone that corresponds to the areas of 1% annual chance shallow flooding (usually sheet flow on sloping terrain) where average depths are between 1 and 3 feet. Average whole-foot depths derived from the hydraulic analyses are shown within this zone.
Zone AR	The flood insurance rate zone that corresponds to areas that were formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
Zone A99	The flood insurance rate zone that corresponds to areas of the 1% annual chance floodplain that will be protected by a Federal flood protection system where construction has reached specified statutory milestones. No base flood elevations or flood depths are shown within this zone.
Zone V	The flood insurance rate zone that corresponds to the 1% annual chance coastal floodplains that have additional hazards associated with storm waves. Base flood elevations are not shown within this zone.
Zone VE	Zone VE is the flood insurance rate zone that corresponds to the 1% annual chance coastal floodplains that have additional hazards associated with storm waves. Base flood elevations derived from the coastal analyses are shown within this zone as static whole-foot elevations that apply throughout the zone.
	Regulatory Floodway determined in Zone AE.

Figure 3: Map Legend for FIRM

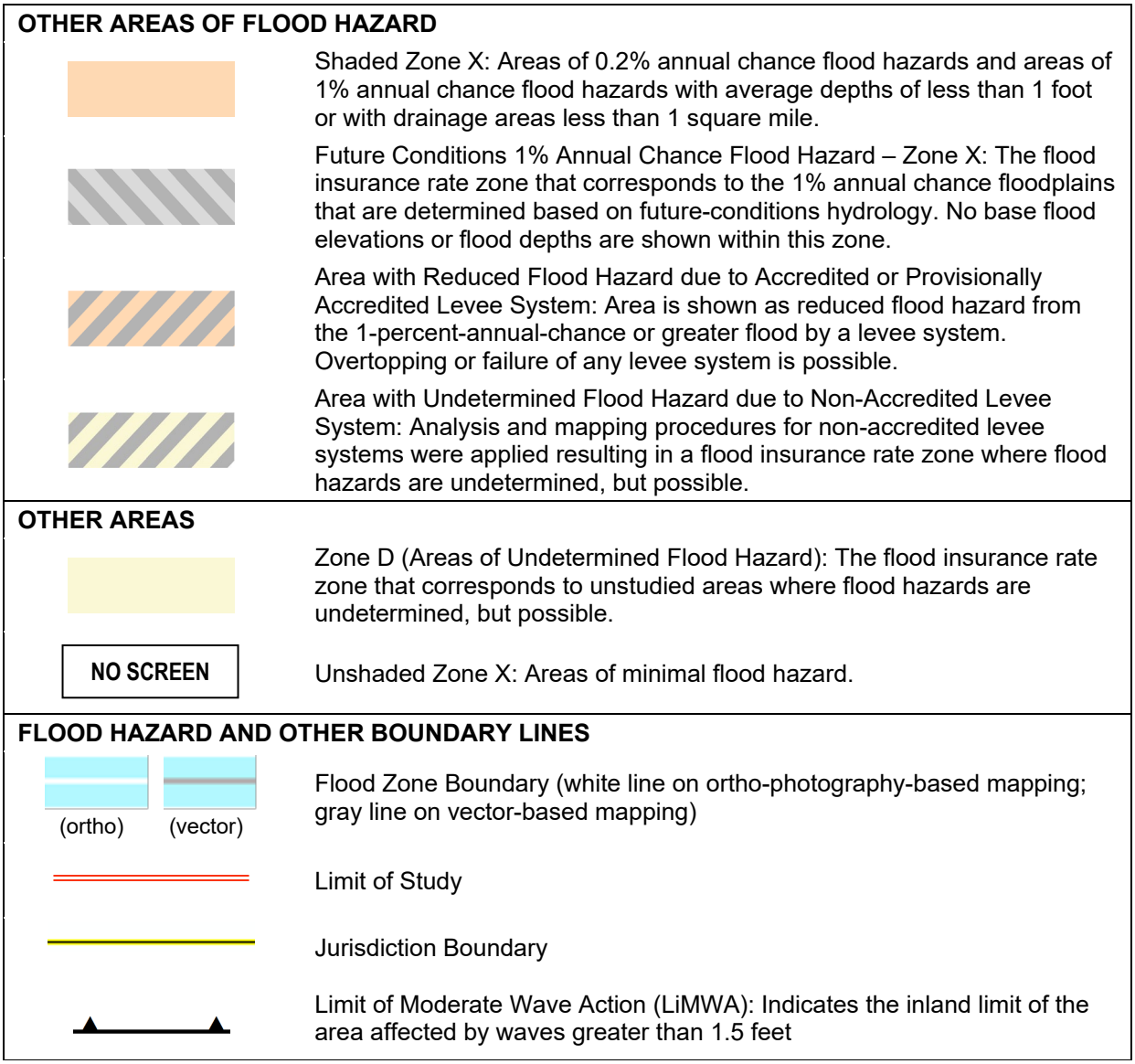


Figure 3: Map Legend for FIRM

GENERAL STRUCTURES	
Aqueduct *Channel* *Culvert* *Storm Sewer*	Channel, Culvert, Aqueduct, or Storm Sewer
Dam *Jetty* *Weir*	Dam, Jetty, Weir
	Levee, Dike, or Floodwall
Bridge	Bridge
REFERENCE MARKERS	
22.0	River mile Markers
CROSS SECTION & TRANSECT INFORMATION	
B 20.2	Lettered Cross Section with Regulatory Water Surface Elevation (BFE)
5280 21.1	Numbered Cross Section with Regulatory Water Surface Elevation (BFE)
17.5	Unlettered Cross Section with Regulatory Water Surface Elevation (BFE)
8	Coastal Transect
	Profile Baseline: Indicates the modeled flow path of a stream and is shown on FIRM panels for all valid studies with profiles or otherwise established base flood elevation.
	Coastal Transect Baseline: Used in the coastal flood hazard model to represent the 0.0-foot elevation contour and the starting point for the transect and the measuring point for the coastal mapping.
513	Base Flood Elevation Line
ZONE AE **(EL 16)**	Static Base Flood Elevation value (shown under zone label)
ZONE AO **(DEPTH 2)**	Zone designation with Depth
ZONE AO **(DEPTH 2)** **(VEL 15 FPS)**	Zone designation with Depth and Velocity

Figure 3: Map Legend for FIRM

BASE MAP FEATURES	
Missouri Creek	River, Stream or Other Hydrographic Feature
234	Interstate Highway
234	U.S. Highway
234	State Highway
234	County Highway
MAPLE LANE	Street, Road, Avenue Name, or Private Drive if shown on Flood Profile
RAILROAD	Railroad
	Horizontal Reference Grid Line
	Horizontal Reference Grid Ticks
+	Secondary Grid Crosshairs
Land Grant	Name of Land Grant
7	Section Number
R. 43 W. T. 22 N.	Range, Township Number
$^{42}76^{000m}$E	Horizontal Reference Grid Coordinates (UTM)
365000 FT	Horizontal Reference Grid Coordinates (State Plane)
80° 16’ 52.5”	Corner Coordinates (Latitude, Longitude)

SECTION 2.0 – FLOODPLAIN MANAGEMENT APPLICATIONS

2.1 Floodplain Boundaries

To provide a national standard without regional discrimination, the 1-percent-annual-chance (100-year) flood has been adopted by FEMA as the base flood for floodplain management purposes. The 0.2-percent-annual-chance (500-year) flood is employed to indicate additional areas of flood hazard in the community.

Each flooding source included in the project scope has been studied and mapped using professional engineering and mapping methodologies that were agreed upon by FEMA and Clay County as appropriate to the risk level. Flood risk is evaluated based on factors such as known flood hazards and projected impact on the built environment. Engineering analyses were performed for each studied flooding source to calculate its 1-percent-annual-chance flood elevations; elevations corresponding to other floods (e.g. 10-, 4-, 2-, 0.2-percent annual chance, etc.) may have also been computed for certain flooding sources. Engineering models and methods are described in detail in Section 5.0 of this FIS Report. The modeled elevations at cross sections were used to delineate the floodplain boundaries on the FIRM; between cross sections, the boundaries were interpolated using elevation data from various sources. More information on specific mapping methods is provided in Section 6.0 of this FIS Report.

Depending on the accuracy of available topographic data (Table 22), study methodologies employed (Section 5.0), and flood risk, certain flooding sources may be mapped to show both the 1-percent and 0.2-percent-annual-chance floodplain boundaries, regulatory water surface elevations (BFEs), and/or a regulatory floodway. Similarly, other flooding sources may be mapped to show only the 1-percent-annual-chance floodplain boundary on the FIRM, without published water surface elevations. In cases where the 1-percent and 0.2-percent-annual-chance floodplain boundaries are close together, only the 1-percent-annual-chance floodplain boundary is shown on the FIRM. Figure 3, “Map Legend for FIRM”, describes the flood zones that are used on the FIRMs to account for the varying levels of flood risk that exist along flooding sources within the project area. Table 2 and Table 3 indicate the flood zone designations for each flooding source and each community within Clay County, respectively.

Table 2, “Flooding Sources Included in this FIS Report,” lists each flooding source, including its study limits, affected communities, mapped zone on the FIRM, and the completion date of its engineering analysis from which the flood elevations on the FIRM and in the FIS Report were derived. Descriptions and dates for the latest hydrologic and hydraulic analyses of the flooding sources are shown in Table 12. Floodplain boundaries for these flooding sources are shown on the FIRM (published separately) using the symbology described in Figure 3. On the map, the 1-percent-annual-chance floodplain corresponds to the SFHAs. The 0.2-percent-annual-chance floodplain shows areas that, although out of the regulatory floodplain, are still subject to flood hazards.

Small areas within the floodplain boundaries may lie above the flood elevations but cannot be shown due to limitations of the map scale and/or lack of detailed topographic data. The procedures to remove these areas from the SFHA are described in Section 6.5 of this FIS Report.

Table 2: Flooding Sources Included in this FIS Report

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Bear Creek	Clay County Unincorporated Areas	Confluence with Raccoon Creek	Approximately 38,359 feet upstream of confluence with Raccoon Creek (Approximately 1,300 feet downstream of Blackbeard Road)	05120114	7.3	N	A	2019
Big Muddy Creek	Clay County Unincorporated Areas	Approximately 57,871 feet upstream of confluence with Little Wabash River (Approximately 14,750 feet downstream of Sapphire Lane)	Approximately 149,955 feet upstream of confluence with Little Wabash River (Approximately 184 feet upstream of Clay County and Jasper County Boundary (Approximately 8,764 feet upstream of County Highway 16 / Ingraham Lane / 1600N))	05120114	17.4	N	A	2020
Brush Creek	Clay County Unincorporated Areas	Approximately 62 feet downstream of Clay County and Wayne County Boundary (Approximately 1,990 feet upstream of County Road 2375N in Wayne County)	Approximately 11,843 feet upstream of Clay County and Wayne County Boundary (Approximately 4,750 feet upstream of Black Oak Road)	05120115	2.3	N	A	2020
Buck Creek	Clay County Unincorporated Areas	Confluence with Little Wabash River	Approximately 83,911 feet upstream of confluence with Little Wabash River (Approximately 5,575 feet upstream of Palm Lane)	05120114	15.9	N	A	2020

Table 2: Flooding Sources Included in this FIS Report (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Buck Creek Tributary A	Clay County Unincorporated Areas	Confluence with Buck Creek	Approximately 5,755 feet upstream of confluence with Buck Creek (Approximately 1,485 feet upstream of Heather Lane)	05120114	1.1	N	A	2020
Cottonwood Creek	Clay County Unincorporated Areas	Confluence with Big Muddy Creek	Approximately 3,929 feet upstream of confluence with Big Muddy Creek (Approximately 2,000 feet upstream of County Highway 16 / Ingraham Lane / County Road 1600 N)	05120114	0.7	N	A	2020
Crooked Creek	Clay County Unincorporated Areas	Confluence with Little Wabash River	Approximately 83,468 feet upstream of confluence with Little Wabash River (At Clay County and Fayette County Boundary (Approximately 7,100 feet upstream of Railroad))	05120114	15.8	N	A	2018
Crooked Creek Tributary B	Clay County Unincorporated Areas	Confluence with Crooked Creek	Approximately 5,375 feet upstream of confluence with Crooked Creek	05120114	1.0	N	A	2018
Dismal Creek	Clay County Unincorporated Areas	Confluence with Little Wabash River	Approximately 84,166 feet upstream of confluence with Little Wabash River (Approximately 306 feet upstream Clay County and Fayette County Boundary (Approximately 11,336 feet upstream of Railroad))	05120114	15.9	N	A	2018
Dismal Creek Tributary A	Clay County Unincorporated Areas	Confluence with Dismal Creek	Approximately 6,487 feet upstream of confluence of Dismal Creek (Just downstream of Railroad)	05120114	1.2	N	A	2018

Table 2: Flooding Sources Included in this FIS Report (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Dismal Creek Tributary B	Clay County Unincorporated Areas	Confluence with Dismal Creek	Approximately 6,623 feet upstream of confluence with Dismal Creek	05120114	1.3	N	A	2018
East Fork Wetweather Creek	Clay County Unincorporated Areas	Confluence with Wet Weather Creek	Approximately 2,763 feet upstream of confluence with Wet Weather Creek (At Clay County and Richland County Boundary / Glenwood Road / 200 E)	05120114	0.5	N	A	2020
Elm Creek	Clay County Unincorporated Areas	Approximately 857 feet upstream of confluence with Elm River (Approximately 2,398 feet downstream of Clay County and Wayne County Boundary)	Approximately 46,286 feet upstream of confluence with Elm River (Just downstream of Railroad)	05120114	8.8	N	A	2019
Elm Creek Tributary A	Clay County Unincorporated Areas	Confluence with Elm Creek	Approximately 6,929 feet upstream of confluence with Elm Creek (Approximately 1,000 feet downstream of U.S. Route 45 / U.S. Route 50)	05120114	1.3	N	A	2019
Elm Creek Tributary A	Clay County Unincorporated Areas; Flora, City of	Approximately 6,929 feet upstream of confluence with Elm Creek (Approximately 1,000 feet downstream of U.S. Route 45 / U.S. Route 50)	Approximately 13,526 feet upstream of confluence with Elm Creek (Approximately 150 feet downstream of Sylvia Avenue)	05120114	1.2	Y	AE	2020

Table 2: Flooding Sources Included in this FIS Report (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Elm Creek Tributary A1	Flora, City of	Confluence with Elm Creek Tributary A	Approximately 1,835 feet upstream of confluence with Elm Creek Tributary A (Just downstream of East North Avenue)	05120114	0.3	Y	AE	2020
Elm Creek Tributary A2	Flora, City of	Confluence with Elm Creek Tributary A	Approximately 3,298 feet upstream of confluence with Elm Creek Tributary A (Approximately 1,250 feet upstream of Stanford Avenue)	05120114	0.6	Y	AE	2020
Flat Branch	Clay County Unincorporated Areas	Confluence with Little Muddy Creek	Approximately 13,939 feet upstream of confluence with Little Muddy Creek (Approximately 4,500 feet upstream of Mine Drive)	05120114	2.6	N	A	2020
Grove Creek	Clay County Unincorporated Areas	Confluence with Little Wabash River	Approximately 9,100 feet upstream of confluence with Little Wabash River (Approximately 2,890 feet downstream of North State Road)	05120114	1.7	N	A	2020
Hurricane Creek	Clay County Unincorporated Areas	Confluence with Big Muddy Creek	Approximately 25,755 feet upstream of confluence with Big Muddy Creek (Approximately 918 feet upstream of Clay County and Richland County Boundary / Glenwood Road / 200 E))	05120114	4.9	N	A	2020

Table 2: Flooding Sources Included in this FIS Report (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Hurricane Creek Tributary A	Clay County Unincorporated Areas	Confluence with Hurricane Creek	Approximately 315 feet upstream of confluence with Hurricane Creek (At Clay County and Richland County Boundary (Just downstream of Glenwood Road / 200 E extended))	05120114	0.05	N	A	2020
Little Muddy Creek	Clay County Unincorporated Areas	Approximately 41,282 feet upstream of confluence with Big Muddy Diversion Ditch (Approximately 4,700 feet upstream of Dieterich Blacktop / 1875E)	Approximately 134,390 feet upstream of confluence with Big Muddy Diversion Ditch (Approximately 650 feet upstream of Judges Lane)	05120114	17.6	N	A	2020
Little Muddy Creek Tributary B	Clay County Unincorporated Areas	Confluence with Little Muddy Creek	Approximately 7,817 feet upstream of confluence with Little Muddy Creek (Approximately 95 feet downstream of Kenley Lane)	05120114	1.5	N	A	2020
Little Muddy Creek Tributary C	Clay County Unincorporated Areas	Confluence with Little Muddy Creek	Approximately 5,492 feet upstream of confluence with Little Muddy Creek (Approximately 1,440 feet upstream of Dieterich Blacktop / County Road 1875 E)	05120114	1.0	N	A	2020

Table 2: Flooding Sources Included in this FIS Report (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Little Wabash River	Clay County Unincorporated Areas	Approximately 615,340 feet upstream of confluence with Wabash River (At Clay County and Wayne County Boundary / County Road 2400N extended)	Approximately 702,469 feet upstream of confluence with Wabash River (Approximately 5,280 feet upstream of Railroad)	05120114	16.5	N	A	2019
Little Wabash River	Clay County Unincorporated Areas	Approximately 702,469 feet upstream of confluence with Wabash River (Approximately 5,280 feet upstream of Railroad)	Approximately 721,795 feet upstream of confluence with Wabash River (Approximately 3,300 feet upstream of Dietrich Blacktop / 1875E)	05120114	3.7	Y	AE	2019
Little Wabash River	Clay County Unincorporated Areas; Louisville, Village of	Approximately 721,795 feet upstream of confluence with Wabash River (Approximately 3,300 feet upstream of Dietrich Blacktop / 1875E)	Approximately 921,392 feet upstream of confluence with Wabash River (Approximately 2,414 feet upstream of Clay County and Effingham County Boundary / E 1st Avenue extended)	05120114	37.8	N	A	2020

Table 2: Flooding Sources Included in this FIS Report (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Little Wabash River Tributary H	Clay County Unincorporated Areas	Confluence with Little Wabash River	Approximately 7,806 feet upstream of confluence with Little Wabash River (Approximately 5,090 feet upstream of Blueflower Lane)	05120114	1.5	N	A	2020
Little Wabash River Tributary J	Clay County Unincorporated Areas	Confluence with Little Wabash River	Approximately 8,654 feet upstream of confluence with Little Wabash River (Approximately 4,220 feet upstream of Golden Rod Road)	05120114	1.6	N	A	2020
Little Wabash River Tributary K	Clay County Unincorporated Areas	Confluence with Little Wabash River	Approximately 11,797 feet upstream of confluence with Little Wabash River (Approximately 370 feet upstream of County Highway 23 / County Road 300 N)	05120114	2.2	N	A	2020
Little Wabash River Tributary K1	Clay County Unincorporated Areas	Confluence with Little Wabash River Tributary K	Approximately 3,561 feet upstream of confluence with Little Wabash River Tributary K (Approximately 1,000 feet downstream of Bunnyville Drive)	05120114	0.7	N	A	2020
Little Wabash River Tributary K2	Clay County Unincorporated Areas	Confluence with Little Wabash River Tributary K	Approximately 2,829 feet upstream of confluence with Little Wabash River Tributary K (Approximately 1,575 feet downstream of County Highway 14 / County Road 2000E)	05120114	0.5	N	A	2020
Little Wabash River Tributary L	Clay County Unincorporated Areas	Confluence with Little Wabash River	Approximately 6,472 feet upstream of confluence with Little Wabash River	05120114	1.2	N	A	2018

Table 2: Flooding Sources Included in this FIS Report (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Lucas Creek	Clay County Unincorporated Areas	Confluence with Little Wabash River	Approximately 35,093 feet upstream of confluence with Little Wabash River (Just downstream of East First Avenue at the Clay County / Effingham County Boundary)	05120114	6.6	N	A	2018
Panther Creek	Clay County Unincorporated Areas	Confluence with Little Wabash River	Approximately 57,894 feet upstream of confluence with Little Wabash River (Approximately 550 feet downstream of County Highway 8 / County Road 1800 N)	05120114	11.0	N	A	2018
Panther Creek Tributary A	Clay County Unincorporated Areas	Confluence with Panther Creek	Approximately 6,985 feet upstream of confluence with Panther Creek (Approximately 950 feet upstream of Robin Lane)	05120114	1.3	N	A	2018
Pickle Creek	Clay County Unincorporated Areas	Confluence with Sutton Creek	Approximately 4,847 feet upstream of confluence of Sutton Creek	05120115	0.9	N	A	2020
Raccoon Creek	Clay County Unincorporated Areas	Approximately 20,175 feet upstream of confluence with Elm River (Approximately 4,431 feet downstream of Clay County and Wayne County Boundary)	Approximately 105,186 feet upstream of confluence with Elm River (Approximately 9,650 feet upstream of Oak Mound Lane)	05120114	19.9	N	A	2019

Table 2: Flooding Sources Included in this FIS Report (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Second Creek	Clay County Unincorporated Areas	Confluence with Little Wabash River	Approximately 28,870 feet upstream of confluence with Little Wabash River (At the Clay County / Effingham County Boundary)	05120114	5.5	N	A	2018
Second Creek Tributary A	Clay County Unincorporated Areas	Confluence with Second Creek	Approximately 1,595 feet upstream of confluence with Second Creek (At the Clay County / Effingham County Boundary)	05120114	0.3	N	A	2018
Seminary Creek	Clay County Unincorporated Areas; Flora, City of	Confluence with Elm Creek	Approximately 35,332 feet upstream of confluence with Elm Creek (Just upstream of Railroad (Abandoned))	05120114	6.7	N	A	2019
Seminary Creek	Clay County Unincorporated Areas; Flora, City of	Approximately 35,332 feet upstream of confluence with Elm Creek (Just upstream of Railroad (Abandoned))	Approximately 42,287 feet upstream of confluence with Elm Creek (Approximately 565 feet upstream of Railroad)	05120114	1.3	Y	AE	2020
Skillet Fork	Clay County Unincorporated Areas	Approximately 255 feet downstream of Clay County and Marion County Boundary (Approximately 6,460 feet upstream of Wilcoxen Road in Marion County)	Approximately 198 feet upstream of Clay County and Marion County Boundary (Approximately 900 feet downstream of County Road 1800N / Neal Road in Marion County)	05120115	2.6	N	A	2020

Table 2: Flooding Sources Included in this FIS Report (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Sugar Creek (Big Muddy)	Clay County Unincorporated Areas	Confluence with Big Muddy Creek	Approximately 16,457 feet upstream of confluence with Big Muddy Creek (Approximately 2,734 feet upstream of Clay County and Richland County Boundary / Glenwood Road / 200 E extended))	05120114	3.1	N	A	2020
Sutton Creek	Clay County Unincorporated Areas	Confluence with Skillet Fork	Approximately 17,232 feet upstream of confluence with Skillet Fork (Approximately 5,375 feet upstream of Lion Lane)	05120115	3.3	N	A	2020
Weather Creek	Clay County Unincorporated Areas	Confluence with Big Muddy Creek	Approximately 33,624 feet upstream of confluence with Big Muddy Creek (Approximately 102 feet upstream of Clay County and Jasper County Boundary (Approximately 6,600 feet upstream of County Highway 16 / Ingraham Lane / 1600N))	05120114	6.4	N	A	2020
West Fork Wetweather Creek	Clay County Unincorporated Areas	Confluence with Wet Weather Creek	Approximately 5,984 feet upstream of confluence with Wet Weather Creek (Approximately 34 feet upstream of Clay County and Jasper County Boundary / County Road 1700 N extended))	05120114	1.1	N	A	2020
Wet Weather Creek	Clay County Unincorporated Areas	Confluence with Big Muddy Creek	Approximately 36,210 feet upstream of confluence with Big Muddy Creek (Approximately 1,225 feet upstream of County Highway 16 / Ingraham Lane / County Road 1600 N)	05120114	6.9	N	A	2020

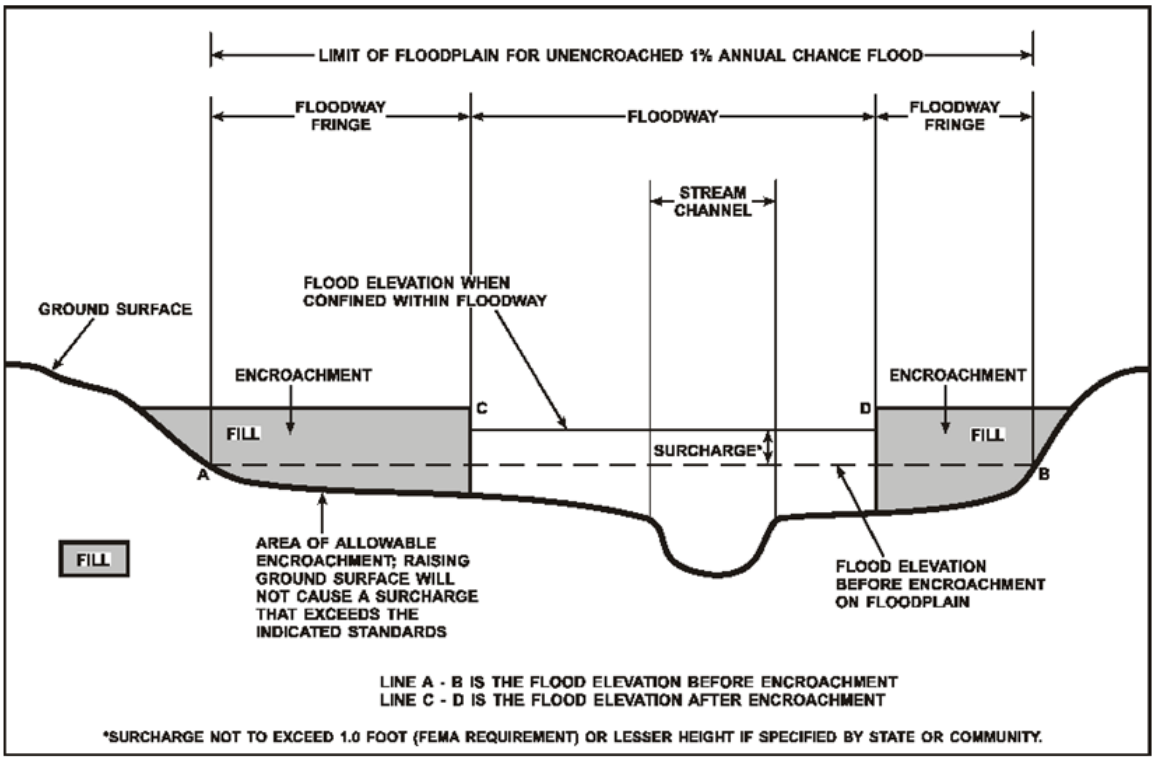
2.2 Floodways

Encroachment on floodplains, such as structures and fill, reduces flood-carrying capacity, increases flood heights and velocities, and increases flood hazards in areas beyond the encroachment itself. One aspect of floodplain management involves balancing the economic gain from floodplain development against the resulting increase in flood hazard.

For purposes of the NFIP, a floodway is used as a tool to assist local communities in balancing floodplain development against increasing flood hazard. With this approach, the area of the 1-percent-annual-chance floodplain on a river is divided into a floodway and a floodway fringe based on hydraulic modeling. The floodway is the channel of a stream, plus any adjacent floodplain areas, that must be kept free of encroachment in order to carry the 1-percent-annual-chance flood. The floodway fringe is the area between the floodway and the 1-percent-annual-chance floodplain boundaries where encroachment is permitted. The floodway must be wide enough so that the floodway fringe could be completely obstructed without increasing the water surface elevation of the 1-percent-annual-chance flood more than 1 foot at any point. Typical relationships between the floodway and the floodway fringe and their significance to floodplain development are shown in Figure 4.

To participate in the NFIP, Federal regulations require communities to limit increases caused by encroachment to 1.0 foot, provided that hazardous velocities are not produced. Regulations for Illinois require communities in Clay County to limit increases caused by encroachment to 0.1 foot, no more than a 10 percent reduction in floodplain volume, and no more than a 10 percent increase in average velocity. The floodways in this project are presented to local agencies as minimum standards that can be adopted directly or that can be used as a basis for additional floodway projects.

Figure 4: Floodway Schematic



Floodway widths presented in this FIS Report and on the FIRM were computed at cross sections. Between cross sections, the floodway boundaries were interpolated. For certain stream segments, floodways were adjusted so that the amount of floodwaters conveyed on each side of the floodplain would be reduced equally. The results of the floodway computations have been tabulated for selected cross sections and are shown in Table 23, “Floodway Data.”

All floodways that were developed for this Flood Risk Project are shown on the FIRM using the symbology described in Figure 3. In cases where the floodway and 1-percent-annual-chance floodplain boundaries are either close together or collinear, only the floodway boundary has been shown on the FIRM. For information about the delineation of floodways on the FIRM, refer to Section 6.3.

2.3 Base Flood Elevations

The hydraulic characteristics of flooding sources were analyzed to provide estimates of the elevations of floods of the selected recurrence intervals. The BFE is the elevation of the 1-percent-annual-chance flood. These BFEs are most commonly rounded to the whole foot, as shown on the FIRM, but in certain circumstances or locations they may be rounded to 0.1 foot. Cross section lines shown on the FIRM may also be labeled with the BFE rounded to 0.1 foot. Whole-foot BFEs derived from engineering analyses that apply to coastal areas, areas of ponding, or other static areas with little elevation change may also be shown at selected intervals on the FIRM.

BFEs are primarily intended for flood insurance rating purposes. Cross sections with BFEs

shown on the FIRM correspond to the cross sections shown in the Floodway Data table and Flood Profiles in this FIS Report. For construction and/or floodplain management purposes, users are cautioned to use the flood elevation data presented in this FIS Report in conjunction with the data shown on the FIRM. For example, the user may use the FIRM to determine the stream station of a location of interest and then use the profile to determine the 1-percent annual chance elevation at that location. Because only selected cross sections may be shown on the FIRM for riverine areas, the profile should be used to obtain the flood elevation between mapped cross sections. Additionally, for riverine areas, whole-foot elevations shown on the FIRM may not exactly reflect the elevations derived from the hydraulic analyses; therefore, elevations obtained from the profile may more accurately reflect the results of the hydraulic analysis.

2.4 Non-Encroachment Zones

This section is not applicable to this Flood Risk Project.

2.5 Coastal Flood Hazard Areas

This section is not applicable to this Flood Risk Project.

2.5.1 Water Elevations and the Effects of Waves

This section is not applicable to this Flood Risk Project.

Figure 5: Wave Runup Transect Schematic

[Not applicable to this Flood Risk Project]

2.5.2 Floodplain Boundaries and BFEs for Coastal Areas

This section is not applicable to this Flood Risk Project.

2.5.3 Coastal High Hazard Areas

This section is not applicable to this Flood Risk Project.

Figure 6: Coastal Transect Schematic

[Not applicable to this Flood Risk Project]

2.5.4 Limit of Moderate Wave Action

This section is not applicable to this Flood Risk Project.

SECTION 3.0 – INSURANCE APPLICATIONS

3.1 National Flood Insurance Program Insurance Zones

For flood insurance applications, the FIRM designates flood insurance rate zones as described in Figure 3, “Map Legend for FIRM.” Flood insurance zone designations are

assigned to flooding sources based on the results of the hydraulic or coastal analyses. Insurance agents use the zones shown on the FIRM and depths and base flood elevations in this FIS Report in conjunction with information on structures and their contents to assign premium rates for flood insurance policies.

The 1-percent-annual-chance floodplain boundary corresponds to the boundary of the areas of special flood hazards (e.g. Zones A, AE, V, VE, etc.), and the 0.2-percent-annual-chance floodplain boundary corresponds to the boundary of areas of additional flood hazards.

Table 3 lists the flood insurance zones in Clay County.

Table 3: Flood Zone Designations by Community

Community	Flood Zone(s)
Clay City, Village of	AE, X
Clay County Unincorporated Areas	A, AE, X
Flora, City of	A, AE, X
Iola, Village of	X
Louisville, Village of	A, X
Sailor Springs, Village of	A, X
Xenia, Village of	X

SECTION 4.0 – AREA STUDIED

4.1 Basin Description

Table 4 contains a description of the characteristics of the HUC-8 sub-basins within which each community falls. The table includes the main flooding sources within each basin, a brief description of the basin, and its drainage area.

Table 4: Basin Characteristics

HUC-8 Sub-Basin Name	HUC-8 Sub-Basin Number	Primary Flooding Source	Description of Affected Area	Drainage Area (square miles)
Little Wabash	05120114	Little Wabash River	Largest watershed within Clay County, covers approximately 88% of the county with 412 square miles	2,120
Skillet	05120115	Skillet Fork	Located in the southwest corner of the county, covers approximately 12% of Clay County with 58 square miles	1,060

4.2 Principal Flood Problems

Table 5 contains a description of the principal flood problems that have been noted for Clay County by flooding source.

Table 5: Principal Flood Problems

Flooding Source	Description of Flood Problems
Little Wabash River	Flooding in the Little Wabash River watershed often results during general heavy rains over the entire basin. The Clay City Flood Insurance Study (FIS) from 1983 states that flood damages in the village are due to overbank flooding of the Little Wabash River. In May 1961, some flooding occurred in Clay City. It amounted mostly to water in the streets, and in the yards around houses in low lying areas. Additionally, a couple of houses had some water on the first floor. In June 2013, several inches of rain fell across Clay County on a single afternoon. Many streets throughout the county were flooded, and multiple water rescues were required to save people from disabled vehicles. Several homes were reported to have been flooded as well.

Table 6 contains information about historic flood elevations in the communities within Clay County.

Table 6: Historic Flooding Elevations

[Not applicable to this Flood Risk Project]

4.3 Dams and Other Flood Hazard Reduction Measures

Table 7 contains information about non-levee flood hazard reduction measures within Clay County such as dams or jetties. Levee systems are addressed in Section 4.4 of this FIS Report.

Table 7: Dams and Other Flood Hazard Reduction Measures

[Not applicable to this Flood Risk Project]

4.4 Levee Systems

This section is not applicable to this Flood Risk Project.

Table 8: Levee Systems

[Not applicable to this Flood Risk Project]

SECTION 5.0 – ENGINEERING METHODS

For the flooding sources in the community, standard hydrologic and hydraulic study methods were used to determine the flood hazard data required for this study. Flood events of a magnitude that are expected to be equaled or exceeded at least once on the average during any 10-, 25-, 50-, 100-, or 500-year period (recurrence interval) have been selected as having special significance for floodplain management and for flood insurance rates. These events, commonly termed the 10-, 25-, 50-, 100-, and 500-year floods, have a 10-, 4-, 2-, 1-, and 0.2-percent-annual-chance, respectively, of being equaled or exceeded during any year.

Although the recurrence interval represents the long-term, average period between floods of a specific magnitude, rare floods could occur at short intervals or even within the same year. The risk of experiencing a rare flood increases when periods greater than 1 year are considered. For example, the risk of having a flood that equals or exceeds the 100-year flood (1-percent chance of annual exceedance) during the term of a 30-year mortgage is approximately 26 percent (about 3 in 10); for any 90-year period, the risk increases to approximately 60 percent (6 in 10). The analyses reported herein reflect flooding potentials based on conditions existing in the community at the time of completion of this study. Maps and flood elevations will be amended periodically to reflect future changes.

In addition to these flood events, the “1-percent-plus”, or “1%+”, annual chance flood elevation has been modeled and included on the flood profile for certain flooding sources in this FIS Report. While not used for regulatory or insurance purposes, this flood event has been calculated to help illustrate the variability range that exists between the regulatory 1-percent-annual-chance flood elevation and a 1-percent-annual-chance elevation that has taken into account an additional amount of uncertainty in the flood discharges (thus, the 1% “plus”). For flooding sources whose discharges were estimated using regression equations, the 1%+ flood elevations are derived by taking the 1-percent-annual-chance flood discharges and increasing the modeled discharges by a percentage equal to the average predictive error for the regression equation. For flooding sources with gage- or rainfall-runoff-based discharge estimates, the upper 84-percent confidence limit of the discharges is used to compute the 1%+ flood elevations.

5.1 Hydrologic Analyses

Hydrologic analyses were carried out to establish the peak elevation-frequency relationships for floods of the selected recurrence intervals for each flooding source studied. Hydrologic analyses are typically performed at the watershed level. Depending on factors such as watershed size and shape, land use and urbanization, and natural or man-made storage, various models or methodologies may be applied. A summary of the hydrologic methods applied to develop the discharges used in the hydraulic analyses for each stream is provided in Table 12. Greater detail (including assumptions, analysis, and results) is available in the archived project documentation.

A summary of the discharges is provided in Table 9. Stream gage information is provided in Table 11.

Table 9: Summary of Discharges

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Elm Creek Tributary A	Approximately 800 feet downstream of U.S. Route 45 / U.S. Route 50	1.3	484	614	713	803	1,134
Elm Creek Tributary A	Just upstream of confluence of Elm Creek Tributary A1	0.9	370	501	607	722	1,019
Elm Creek Tributary A	Just upstream of confluence of Elm Creek Tributary A2	0.6	257	370	464	570	964
Elm Creek Tributary A1	At confluence with Elm Creek Tributary A	0.3	116	131	149	171	287 [1]
Elm Creek Tributary A1	Approximately 500 feet upstream of confluence with Elm Creek Tributary A	0.2	110	118	124	132	288
Elm Creek Tributary A2	At confluence with Elm Creek Tributary A	0.3	107	120	136	153	213
Elm Creek Tributary A2	Approximately 200 feet upstream of East North Avenue	0.3	94 [2]	97 [2]	100 [2]	100 [2]	106 [2]
Elm Creek Tributary A2	Just upstream of Stanford Road	0.2	129	187	235	289	490
Little Wabash River	At Clay City Gage (County Highway 23 / Wilcox Bridge Lane) [3]	1,131	34,978	43,924	50,674	57,450	73,499
Little Wabash River	Just upstream of confluence of Big Muddy Creek	814	25,205	31,386	36,140	40,965	52,730

[1] Decrease in discharge due to storage upstream of Railroad

[2] Decrease in discharge due to overflow diversion

[3] Discharge location is in Richland County

Table 9: Summary of Discharges (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Seminary Creek	Approximately 3,100 feet downstream of County Highway 1 / South State Street	1.6	545	813	996	1,175	1,792
Seminary Creek	Approximately 2,300 feet downstream of County Highway 1 / South State Street	1.4	540	778	940	1,118	1,760
Seminary Creek	Approximately 1,100 feet upstream of County Highway 1 / South State Street	0.8	304	431	495	577	845
Seminary Creek	Approximately 1,500 feet upstream of County Highway 1 / South State Street	0.5	205	284	324	381	498
Seminary Creek	At Railroad	0.4	184	255	298	351	472

[1] Decrease in discharge due to storage upstream of Railroad

[2] Decrease in discharge due to overflow diversion

[3] Discharge location is in Richland County

Figure 7: Frequency Discharge-Drainage Area Curves

[Not applicable to this Flood Risk Project]

Table 10: Summary of Non-Coastal Stillwater Elevations

[Not applicable to this Flood Risk Project]

Table 11: Stream Gage Information used to Determine Discharges

Flooding Source	Gage Identifier	Agency that Maintains Gage	Site Name	Drainage Area (Square Miles)	Period of Record	
					From	To
Little Wabash River	03381500	USGS	LITTLE WABASH RIVER AT CARMI, IL	3,102	10/1/1939	5/8/2017
Little Wabash River	03379500	USGS	LITTLE WABASH RIVER BELOW CLAY CITY, IL	1,131	8/22/1914	9/30/2017
Little Wabash River	03378900	USGS	LITTLE WABASH RIVER AT LOUISVILLE, IL	745	8/9/1965	10/1/1992
Little Wabash River	03378635	USGS	LITTLE WABASH RIVER NEAR EFFINGHAM, IL	240	10/1/1966	5/4/2017

5.2 Hydraulic Analyses

Analyses of the hydraulic characteristics of flooding from the sources studied were carried out to provide estimates of the elevations of floods of the selected recurrence intervals. Base flood elevations on the FIRM represent the elevations shown on the Flood Profiles and in the Floodway Data tables in the FIS Report. Rounded whole-foot elevations may be shown on the FIRM in coastal areas, areas of ponding, and other areas with static base flood elevations. These whole-foot elevations may not exactly reflect the elevations derived from the hydraulic analyses. Flood elevations shown on the FIRM are primarily intended for flood insurance rating purposes. For construction and/or floodplain management purposes, users are cautioned to use the flood elevation data presented in this FIS Report in conjunction with the data shown on the FIRM. The hydraulic analyses for this FIS were based on unobstructed flow. The flood elevations shown on the profiles are thus considered valid only if hydraulic structures remain unobstructed, operate properly, and do not fail.

For streams for which hydraulic analyses were based on cross sections, locations of selected cross sections are shown on the Flood Profiles (Exhibit 1). For stream segments for which a floodway was computed (Section 6.3), selected cross sections are also listed in Table 23, “Floodway Data.”

A summary of the methods used in hydraulic analyses performed for this project is provided in Table 12. Roughness coefficients are provided in Table 13. Roughness coefficients are values representing the frictional resistance water experiences when passing overland or through a channel. They are used in the calculations to determine water surface elevations. Greater detail (including assumptions, analysis, and results) is available in the archived project documentation.

Table 12: Summary of Hydrologic and Hydraulic Analyses

Flooding Source	Study Limits		Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
	Downstream Limit	Upstream Limit					
Bear Creek	Confluence with Raccoon Creek	Approximately 38,359 feet upstream of confluence with Raccoon Creek (Approximately 1,300 feet downstream of Blackbeard Road)	Regression Equations	HEC-RAS 3.1.1 and up	11/20/2019	A	HEC-RAS v. 4.1, 1D Steady Flow; USGS StreamStats 2004, Rural
Big Muddy Creek	Approximately 57,871 feet upstream of confluence with Little Wabash River (Approximately 14,750 feet downstream of Sapphire Lane)	Approximately 149,955 feet upstream of confluence with Little Wabash River (Approximately 184 feet upstream of Clay County and Jasper County Boundary (Approximately 8,764 feet upstream of County Highway 16 / Ingraham Lane / 1600N))	Regression Equations	HEC-RAS 3.1.1 and up	5/4/2020	A	HEC-RAS v. 4.1, 1D Steady Flow; USGS StreamStats 2004, Rural

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits		Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
	Downstream Limit	Upstream Limit					
Brush Creek	Approximately 62 feet downstream of Clay County and Wayne County Boundary (Approximately 1,990 feet upstream of County Road 2375N in Wayne County)	Approximately 11,843 feet upstream of Clay County and Wayne County Boundary (Approximately 4,750 feet upstream of Black Oak Road)	Regression Equations	HEC-RAS 3.1.1 and up	1/6/2020	A	HEC-RAS v. 4.1, 1D Steady Flow; USGS StreamStats 2004, Rural
Buck Creek	Confluence with Little Wabash River	Approximately 83,911 feet upstream of confluence with Little Wabash River (Approximately 5,575 feet upstream of Palm Lane)	Regression Equations	HEC-RAS 3.1.1 and up	5/20/2020	A	HEC-RAS v. 4.1, 1D Steady Flow; USGS StreamStats 2004, Rural
Buck Creek Tributary A	Confluence with Buck Creek	Approximately 5,755 feet upstream of confluence with Buck Creek (Approximately 1,485 feet upstream of Heather Lane)	Regression Equations	HEC-RAS 3.1.1 and up	5/20/2020	A	HEC-RAS v. 4.1, 1D Steady Flow; USGS StreamStats 2004, Rural

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits		Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
	Downstream Limit	Upstream Limit					
Cottonwood Creek	Confluence with Big Muddy Creek	Approximately 3,929 feet upstream of confluence with Big Muddy Creek (Approximately 2,000 feet upstream of County Highway 16 / Ingraham Lane / County Road 1600 N)	Regression Equations	HEC-RAS 3.1.1 and up	5/4/2020	A	HEC-RAS v. 4.1, 1D Steady Flow; USGS StreamStats 2004, Rural
Crooked Creek	Confluence with Little Wabash River	Approximately 83,468 feet upstream of confluence with Little Wabash River (At Clay County and Fayette County Boundary (Approximately 7,100 feet upstream of Railroad))	Regression Equations	HEC-RAS 3.1.1 and up	12/16/2018	A	HEC-RAS v. 4.1, 1D Steady Flow; USGS StreamStats 2004, Rural
Crooked Creek Tributary B	Confluence with Crooked Creek	Approximately 5,375 feet upstream of confluence with Crooked Creek	Regression Equations	HEC-RAS 3.1.1 and up	12/16/2018	A	HEC-RAS v. 4.1, 1D Steady Flow; USGS StreamStats 2004, Rural

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits		Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
	Downstream Limit	Upstream Limit					
Dismal Creek	Confluence with Little Wabash River	Approximately 84,166 feet upstream of confluence with Little Wabash River (Approximately 306 feet upstream Clay County and Fayette County Boundary (Approximately 11,336 feet upstream of Railroad))	Regression Equations	HEC-RAS 3.1.1 and up	12/16/2018	A	HEC-RAS v. 4.1, 1D Steady Flow; USGS StreamStats 2004, Rural
Dismal Creek Tributary A	Confluence with Dismal Creek	Approximately 6,487 feet upstream of confluence of Dismal Creek (Just downstream of Railroad)	Regression Equations	HEC-RAS 3.1.1 and up	12/16/2018	A	HEC-RAS v. 4.1, 1D Steady Flow; USGS StreamStats 2004, Rural
Dismal Creek Tributary B	Confluence with Dismal Creek	Approximately 6,623 feet upstream of confluence with Dismal Creek	Regression Equations	HEC-RAS 3.1.1 and up	12/16/2018	A	HEC-RAS v. 4.1, 1D Steady Flow; USGS StreamStats 2004, Rural

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits		Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
	Downstream Limit	Upstream Limit					
East Fork Wetweather Creek	Confluence with Wet Weather Creek	Approximately 2,763 feet upstream of confluence with Wet Weather Creek (At Clay County and Richland County Boundary / Glenwood Road / 200 E)	Regression Equations	HEC-RAS 3.1.1 and up	5/4/2020	A	HEC-RAS v. 4.1, 1D Steady Flow; USGS StreamStats 2004, Rural
Elm Creek	Approximately 857 feet upstream of confluence with Elm River (Approximately 2,398 feet downstream of Clay County and Wayne County Boundary)	Approximately 46,286 feet upstream of confluence with Elm River (Just downstream of Railroad)	Regression Equations	HEC-RAS 3.1.1 and up	11/20/2019	A	HEC-RAS v. 4.1, 1D Steady Flow; USGS StreamStats 2004, Rural
Elm Creek Tributary A	Confluence with Elm Creek	Approximately 6,929 feet upstream of confluence with Elm Creek (Approximately 1,000 feet downstream of U.S. Route 45 / U.S. Route 50)	Regression Equations	HEC-RAS 3.1.1 and up	11/20/2019	A	HEC-RAS v. 4.1, 1D Steady Flow; USGS StreamStats 2004, Rural

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits		Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
	Downstream Limit	Upstream Limit					
Elm Creek Tributary A	Approximately 6,929 feet upstream of confluence with Elm Creek (Approximately 1,000 feet downstream of U.S. Route 45 / U.S. Route 50)	Approximately 13,526 feet upstream of confluence with Elm Creek (Approximately 150 feet downstream of Sylvia Avenue)	HEC-HMS 3.0 and up (Dec 2005)	HEC-RAS 3.1.1 and up	9/3/2020	AE w/ Floodway	HEC-RAS v. 5.0.7, 1D Steady Flow; HEC-HMS v. 3.5, ISWS Bulletin 70, NRCS Curve Number; Hydraulic model does not extend to upstream floodplain mapping limits; 1% and 0.2% annual chance floodplain mapping for upstream 150 feet of this stream is based on elevation from last modeled cross section
Elm Creek Tributary A1	Confluence with Elm Creek Tributary A	Approximately 1,835 feet upstream of confluence with Elm Creek Tributary A (Just downstream of East North Avenue)	HEC-HMS 3.0 and up (Dec 2005)	HEC-RAS 3.1.1 and up	9/3/2020	AE w/ Floodway	HEC-RAS v. 5.0.7, 1D Steady Flow; HEC-HMS v. 3.5, ISWS Bulletin 70, NRCS Curve Number
Elm Creek Tributary A2	Confluence with Elm Creek Tributary A	Approximately 3,298 feet upstream of confluence with Elm Creek Tributary A (Approximately 1,250 feet upstream of Stanford Avenue)	HEC-HMS 3.0 and up (Dec 2005)	HEC-RAS 3.1.1 and up	9/3/2020	AE w/ Floodway	HEC-RAS v. 5.0.7, 1D Steady Flow; HEC-HMS v. 3.5, ISWS Bulletin 70, NRCS Curve Number; The main channel is 1D modeled, with an overflow area outside the banks modeled in 2D.

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits		Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
	Downstream Limit	Upstream Limit					
Flat Branch	Confluence with Little Muddy Creek	Approximately 13,939 feet upstream of confluence with Little Muddy Creek (Approximately 4,500 feet upstream of Mine Drive)	Regression Equations	HEC-RAS 3.1.1 and up	5/4/2020	A	HEC-RAS v. 4.1, 1D Steady Flow; USGS StreamStats 2004, Rural
Grove Creek	Confluence with Little Wabash River	Approximately 9,100 feet upstream of confluence with Little Wabash River (Approximately 2,890 feet downstream of North State Road)	Regression Equations	HEC-RAS 3.1.1 and up	5/20/2020	A	HEC-RAS v. 4.1, 1D Steady Flow; USGS StreamStats 2004, Rural
Hurricane Creek	Confluence with Big Muddy Creek	Approximately 25,755 feet upstream of confluence with Big Muddy Creek (Approximately 918 feet upstream of Clay County and Richland County Boundary / Glenwood Road / 200 E))	Regression Equations	HEC-RAS 3.1.1 and up	5/4/2020	A	HEC-RAS v. 4.1, 1D Steady Flow; USGS StreamStats 2004, Rural

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits		Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
	Downstream Limit	Upstream Limit					
Hurricane Creek Tributary A	Confluence with Hurricane Creek	Approximately 315 feet upstream of confluence with Hurricane Creek (At Clay County and Richland County Boundary (Just downstream of Glenwood Road / 200 E extended))	Regression Equations	HEC-RAS 3.1.1 and up	5/4/2020	A	HEC-RAS v. 4.1, 1D Steady Flow; USGS StreamStats 2004, Rural
Little Muddy Creek	Approximately 41,282 feet upstream of confluence with Big Muddy Diversion Ditch (Approximately 4,700 feet upstream of Dieterich Blacktop / 1875E)	Approximately 134,390 feet upstream of confluence with Big Muddy Diversion Ditch (Approximately 650 feet upstream of Judges Lane)	Regression Equations	HEC-RAS 3.1.1 and up	5/4/2020	A	HEC-RAS v. 4.1, 1D Steady Flow; USGS StreamStats 2004, Rural
Little Muddy Creek Tributary B	Confluence with Little Muddy Creek	Approximately 7,817 feet upstream of confluence with Little Muddy Creek (Approximately 95 feet downstream of Kenley Lane)	Regression Equations	HEC-RAS 3.1.1 and up	5/4/2020	A	HEC-RAS v. 4.1, 1D Steady Flow; USGS StreamStats 2004, Rural

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits		Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
	Downstream Limit	Upstream Limit					
Little Muddy Creek Tributary C	Confluence with Little Muddy Creek	Approximately 5,492 feet upstream of confluence with Little Muddy Creek (Approximately 1,440 feet upstream of Dieterich Blacktop / County Road 1875 E)	Regression Equations	HEC-RAS 3.1.1 and up	5/4/2020	A	HEC-RAS v. 4.1, 1D Steady Flow; USGS StreamStats 2004, Rural
Little Wabash River	Approximately 615,340 feet upstream of confluence with Wabash River (At Clay County and Wayne County Boundary / County Road 2400N extended)	Approximately 702,469 feet upstream of confluence with Wabash River (Approximately 5,280 feet upstream of Railroad)	PEAKFQ 2.4 (April 1998) and up	HEC-RAS 3.1.1 and up	9/18/2019	A	HEC-RAS v. 4.1, 1D Steady Flow; PEAKFQ v. 7.1, USGS StreamStats 2004, Rural
Little Wabash River	Approximately 702,469 feet upstream of confluence with Wabash River (Approximately 5,280 feet upstream of Railroad)	Approximately 721,795 feet upstream of confluence with Wabash River (Approximately 3,300 feet upstream of Dietrich Blacktop / 1875E)	PEAKFQ 2.4 (April 1998) and up	HEC-RAS 3.1.1 and up	9/18/2019	AE w/ Floodway	HEC-RAS v. 4.1, 1D Steady Flow; PEAKFQ v. 7.1, USGS StreamStats 2004, Rural

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits		Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
	Downstream Limit	Upstream Limit					
Little Wabash River	Approximately 721,795 feet upstream of confluence with Wabash River (Approximately 3,300 feet upstream of Dietrich Blacktop / 1875E)	Approximately 921,392 feet upstream of confluence with Wabash River (Approximately 2,414 feet upstream of Clay County and Effingham County Boundary / E 1st Avenue extended)	PEAKFQ 2.4 (April 1998) and up	HEC-RAS 3.1.1 and up	5/18/2020	A	HEC-RAS v. 4.1, 1D Steady Flow; PEAKFQ v. 7.1, USGS StreamStats 2004, Rural
Little Wabash River Tributary H	Confluence with Little Wabash River	Approximately 7,806 feet upstream of confluence with Little Wabash River (Approximately 5,090 feet upstream of Blueflower Lane)	Regression Equations	HEC-RAS 3.1.1 and up	5/20/2020	A	HEC-RAS v. 4.1, 1D Steady Flow; USGS StreamStats 2004, Rural
Little Wabash River Tributary J	Confluence with Little Wabash River	Approximately 8,654 feet upstream of confluence with Little Wabash River (Approximately 4,220 feet upstream of Golden Rod Road)	Regression Equations	HEC-RAS 3.1.1 and up	5/20/2020	A	HEC-RAS v. 4.1, 1D Steady Flow; USGS StreamStats 2004, Rural

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits		Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
	Downstream Limit	Upstream Limit					
Little Wabash River Tributary K	Confluence with Little Wabash River	Approximately 11,797 feet upstream of confluence with Little Wabash River (Approximately 370 feet upstream of County Highway 23 / County Road 300 N)	Regression Equations	HEC-RAS 3.1.1 and up	5/20/2020	A	HEC-RAS v. 4.1, 1D Steady Flow; USGS StreamStats 2004, Rural
Little Wabash River Tributary K1	Confluence with Little Wabash River Tributary K	Approximately 3,561 feet upstream of confluence with Little Wabash River Tributary K (Approximately 1,000 feet downstream of Bunnyville Drive)	Regression Equations	HEC-RAS 3.1.1 and up	5/20/2020	A	HEC-RAS v. 4.1, 1D Steady Flow; USGS StreamStats 2004, Rural
Little Wabash River Tributary K2	Confluence with Little Wabash River Tributary K	Approximately 2,829 feet upstream of confluence with Little Wabash River Tributary K (Approximately 1,575 feet downstream of County Highway 14 / County Road 2000E)	Regression Equations	HEC-RAS 3.1.1 and up	5/20/2020	A	HEC-RAS v. 4.1, 1D Steady Flow; USGS StreamStats 2004, Rural

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits		Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
	Downstream Limit	Upstream Limit					
Little Wabash River Tributary L	Confluence with Little Wabash River	Approximately 6,472 feet upstream of confluence with Little Wabash River	Regression Equations	HEC-RAS 3.1.1 and up	12/16/2018	A	HEC-RAS v. 4.1, 1D Steady Flow; USGS StreamStats 2004, Rural
Lucas Creek	Confluence with Little Wabash River	Approximately 35,093 feet upstream of confluence with Little Wabash River (Just downstream of East First Avenue at the Clay County / Effingham County Boundary)	Regression Equations	HEC-RAS 3.1.1 and up	12/16/2018	A	HEC-RAS v. 4.1, 1D Steady Flow; USGS StreamStats 2004, Rural
Panther Creek	Confluence with Little Wabash River	Approximately 57,894 feet upstream of confluence with Little Wabash River (Approximately 550 feet downstream of County Highway 8 / County Road 1800 N)	Regression Equations	HEC-RAS 3.1.1 and up	12/16/2018	A	HEC-RAS v. 4.1, 1D Steady Flow; USGS StreamStats 2004, Rural

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits		Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
	Downstream Limit	Upstream Limit					
Panther Creek Tributary A	Confluence with Panther Creek	Approximately 6,985 feet upstream of confluence with Panther Creek (Approximately 950 feet upstream of Robin Lane)	Regression Equations	HEC-RAS 3.1.1 and up	12/16/2018	A	HEC-RAS v. 4.1, 1D Steady Flow; USGS StreamStats 2004, Rural
Pickle Creek	Confluence with Sutton Creek	Approximately 4,847 feet upstream of confluence of Sutton Creek	Regression Equations	HEC-RAS 3.1.1 and up	1/6/2020	A	HEC-RAS v. 4.1, 1D Steady Flow; USGS StreamStats 2004, Rural
Raccoon Creek	Approximately 20,175 feet upstream of confluence with Elm River (Approximately 4,431 feet downstream of Clay County and Wayne County Boundary)	Approximately 105,186 feet upstream of confluence with Elm River (Approximately 9,650 feet upstream of Oak Mound Lane)	Regression Equations	HEC-RAS 3.1.1 and up	11/20/2019	A	HEC-RAS v. 4.1, 1D Steady Flow; USGS StreamStats 2004, Rural
Second Creek	Confluence with Little Wabash River	Approximately 28,870 feet upstream of confluence with Little Wabash River (At the Clay County / Effingham County Boundary)	Regression Equations	HEC-RAS 3.1.1 and up	12/16/2018	A	HEC-RAS v. 4.1, 1D Steady Flow; USGS StreamStats 2004, Rural

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits		Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
	Downstream Limit	Upstream Limit					
Second Creek Tributary A	Confluence with Second Creek	Approximately 1,595 feet upstream of confluence with Second Creek (At the Clay County / Effingham County Boundary)	Regression Equations	HEC-RAS 3.1.1 and up	12/16/2018	A	HEC-RAS v. 4.1, 1D Steady Flow; USGS StreamStats 2004, Rural
Seminary Creek	Confluence with Elm Creek	Approximately 35,332 feet upstream of confluence with Elm Creek (Just upstream of Railroad (Abandoned))	Regression Equations	HEC-RAS 3.1.1 and up	11/20/2019	A	HEC-RAS v. 4.1, 1D Steady Flow; USGS StreamStats 2004, Rural
Seminary Creek	Approximately 35,332 feet upstream of confluence with Elm Creek (Just upstream of Railroad (Abandoned))	Approximately 42,287 feet upstream of confluence with Elm Creek (Approximately 565 feet upstream of Railroad)	HEC-HMS 3.0 and up (Dec 2005)	HEC-RAS 3.1.1 and up	9/3/2020	AE w/ Floodway	HEC-RAS v. 5.0.7, 1D Steady Flow; HEC-HMS v. 3.5, ISWS Bulletin 70, NRCS Curve Number; Hydraulic model does not extend to upstream floodplain mapping limits; 1% and 0.2% annual chance floodplain mapping for upstream 180 feet of this stream is based on elevation from last modeled cross section

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits		Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
	Downstream Limit	Upstream Limit					
Skillet Fork	Approximately 255 feet downstream of Clay County and Marion County Boundary (Approximately 6,460 feet upstream of Wilcoxen Road in Marion County)	Approximately 198 feet upstream of Clay County and Marion County Boundary (Approximately 900 feet downstream of County Road 1800N / Neal Road in Marion County)	Regression Equations	HEC-RAS 3.1.1 and up	1/6/2020	A	HEC-RAS v. 4.1, 1D Steady Flow; USGS StreamStats 2004, Rural
Sugar Creek (Big Muddy)	Confluence with Big Muddy Creek	Approximately 16,457 feet upstream of confluence with Big Muddy Creek (Approximately 2,734 feet upstream of Clay County and Richland County Boundary / Glenwood Road / 200 E extended))	Regression Equations	HEC-RAS 3.1.1 and up	5/4/2020	A	HEC-RAS v. 4.1, 1D Steady Flow; USGS StreamStats 2004, Rural
Sutton Creek	Confluence with Skillet Fork	Approximately 17,232 feet upstream of confluence with Skillet Fork (Approximately 5,375 feet upstream of Lion Lane)	Regression Equations	HEC-RAS 3.1.1 and up	1/6/2020	A	HEC-RAS v. 4.1, 1D Steady Flow; USGS StreamStats 2004, Rural

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits		Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
	Downstream Limit	Upstream Limit					
Weather Creek	Confluence with Big Muddy Creek	Approximately 33,624 feet upstream of confluence with Big Muddy Creek (Approximately 102 feet upstream of Clay County and Jasper County Boundary (Approximately 6,600 feet upstream of County Highway 16 / Ingraham Lane / 1600N))	Regression Equations	HEC-RAS 3.1.1 and up	5/4/2020	A	HEC-RAS v. 4.1, 1D Steady Flow; USGS StreamStats 2004, Rural
West Fork Wetweather Creek	Confluence with Wet Weather Creek	Approximately 5,984 feet upstream of confluence with Wet Weather Creek (Approximately 34 feet upstream of Clay County and Jasper County Boundary / County Road 1700 N extended))	Regression Equations	HEC-RAS 3.1.1 and up	5/4/2020	A	HEC-RAS v. 4.1, 1D Steady Flow; USGS StreamStats 2004, Rural

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits		Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
	Downstream Limit	Upstream Limit					
Wet Weather Creek	Confluence with Big Muddy Creek	Approximately 36,210 feet upstream of confluence with Big Muddy Creek (Approximately 1,225 feet upstream of County Highway 16 / Ingraham Lane / County Road 1600 N)	Regression Equations	HEC-RAS 3.1.1 and up	5/4/2020	A	HEC-RAS v. 4.1, 1D Steady Flow; USGS StreamStats 2004, Rural

Table 13: Roughness Coefficients

Flooding Source	Channel “n”	Overbank “n”
Bear Creek	0.035-0.075	0.035-0.075
Big Muddy Creek	0.035-0.075	0.035-0.075
Brush Creek	0.035-0.075	0.035-0.075
Buck Creek	0.035-0.075	0.035-0.075
Buck Creek Tributary A	0.035-0.075	0.035-0.075
Cottonwood Creek	0.035-0.075	0.035-0.075
Crooked Creek	0.035-0.075	0.035-0.075
Crooked Creek Tributary B	0.035-0.075	0.035-0.075
Dismal Creek	0.035-0.075	0.035-0.075
Dismal Creek Tributary A	0.035-0.075	0.035-0.075
Dismal Creek Tributary B	0.035-0.075	0.035-0.075
East Fork Wetweather Creek	0.035-0.075	0.035-0.075
Elm Creek	0.035-0.075	0.035-0.075
Elm Creek Tributary A	0.035-0.075	0.035-0.075
Elm Creek Tributary A	0.040-0.070	0.040-0.070
Elm Creek Tributary A1	0.040-0.070	0.040-0.070
Elm Creek Tributary A2	0.040-0.070	0.040-0.070
Flat Branch	0.035-0.075	0.035-0.075
Grove Creek	0.035-0.075	0.035-0.075
Hurricane Creek	0.035-0.075	0.035-0.075
Hurricane Creek Tributary A	0.035-0.075	0.035-0.075
Indian Creek	0.035-0.075	0.035-0.075
Indian Creek Tributary A	0.035-0.075	0.035-0.075
Little Muddy Creek	0.035-0.075	0.035-0.075
Little Muddy Creek Tributary B	0.035-0.075	0.035-0.075
Little Muddy Creek Tributary C	0.035-0.075	0.035-0.075
Little Wabash River	0.035-0.046	0.032-0.098
Little Wabash River	0.040-0.046	0.046-0.098
Little Wabash River	0.040-0.120	0.040-0.120
Little Wabash River Tributary H	0.035-0.075	0.035-0.075

Table 13: Roughness Coefficients (continued)

Flooding Source	Channel “n”	Overbank “n”
Little Wabash River Tributary I	0.035-0.075	0.035-0.075
Little Wabash River Tributary J	0.035-0.075	0.035-0.075
Little Wabash River Tributary K	0.035-0.075	0.035-0.075
Little Wabash River Tributary K1	0.035-0.075	0.035-0.075
Little Wabash River Tributary K2	0.035-0.075	0.035-0.075
Little Wabash River Tributary L	0.035-0.075	0.035-0.075
Lucas Creek	0.035-0.075	0.035-0.075
Panther Creek	0.035-0.075	0.035-0.075
Panther Creek Tributary A	0.035-0.075	0.035-0.075
Pickle Creek	0.045-0.075	0.045-0.075
Raccoon Creek	0.035-0.075	0.035-0.075
Second Creek	0.035-0.075	0.035-0.075
Second Creek Tributary A	0.035-0.075	0.035-0.075
Seminary Creek	0.035-0.075	0.035-0.075
Seminary Creek	0.040-0.070	0.040-0.070
Skillet Fork	0.045-0.075	0.045-0.075
Sugar Creek (Big Muddy)	0.035-0.075	0.035-0.075
Sutton Creek	0.035-0.075	0.035-0.075
Weather Creek	0.035-0.075	0.035-0.075
West Fork Wetweather Creek	0.035-0.075	0.035-0.075
Wet Weather Creek	0.035-0.075	0.035-0.075

5.3 Coastal Analyses

This section is not applicable to this Flood Risk Project.

Table 14: Summary of Coastal Analyses

[Not applicable to this Flood Risk Project]

5.3.1 Total Stillwater Elevations

This section is not applicable to this Flood Risk Project.

Figure 8: 1% Annual Chance Total Stillwater Elevations for Coastal Areas

[Not applicable to this Flood Risk Project]

Table 15: Tide Gage Analysis Specifics

[Not applicable to this Flood Risk Project]

5.3.2 Waves

This section is not applicable to this Flood Risk Project.

5.3.3 Coastal Erosion

This section is not applicable to this Flood Risk Project.

5.3.4 Wave Hazard Analyses

This section is not applicable to this Flood Risk Project.

Table 16: Coastal Transect Parameters

[Not applicable to this Flood Risk Project]

Figure 9: Transect Location Map

[Not applicable to this Flood Risk Project]

5.4 Alluvial Fan Analyses

This section is not applicable to this Flood Risk Project.

Table 17: Summary of Alluvial Fan Analyses

[Not applicable to this Flood Risk Project]

Table 18: Results of Alluvial Fan Analyses

[Not applicable to this Flood Risk Project]

SECTION 6.0 – MAPPING METHODS

6.1 Vertical and Horizontal Control

All FIS Reports and FIRMs are referenced to a specific vertical datum. The vertical datum provides a starting point against which flood, ground, and structure elevations can be referenced and compared. Until recently, the standard vertical datum used for newly created or revised FIS Reports and FIRMs was the National Geodetic Vertical Datum of 1929 (NGVD29). With the completion of the North American Vertical Datum of 1988 (NAVD88), many FIS Reports and FIRMs are now prepared using NAVD88 as the referenced vertical datum.

Flood elevations shown in this FIS Report and on the FIRMs are referenced to NAVD88. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding conversion between NGVD29 and NAVD88 or other datum conversion, visit the National Geodetic Survey website at www.ngs.noaa.gov.

Temporary vertical monuments are often established during the preparation of a flood hazard analysis for the purpose of establishing local vertical control. Although these monuments are not shown on the FIRM, they may be found in the archived project documentation associated with the FIS Report and the FIRMs for this community. Interested individuals may contact FEMA to access these data.

To obtain current elevation, description, and/or location information for benchmarks in the area, please visit the NGS website at www.ngs.noaa.gov.

The datum conversion locations and values that were calculated for Clay County are provided in Table 19.

Table 19: Countywide Vertical Datum Conversion

[Not applicable to this Flood Risk Project]

Table 20: Stream-Based Vertical Datum Conversion

[Not applicable to this Flood Risk Project]

6.2 Base Map

The FIRMs and FIS Report for this project have been produced in a digital format. The flood hazard information was converted to a Geographic Information System (GIS) format that meets FEMA's FIRM Database specifications and geographic information standards. This information is provided in a digital format so that it can be incorporated into a local GIS and be accessed more easily by the community. The FIRM Database includes most of the tabular information contained in the FIS Report in such a way that the data can be associated with pertinent spatial features. For example, the information contained in the Floodway Data table and Flood Profiles can be linked to the cross sections that are shown on the FIRMs. Additional information about the FIRM Database and its contents can be found

in FEMA's *Guidelines and Standards for Flood Risk Analysis and Mapping*, www.fema.gov/flood-maps/guidance-partners/guidelines-standards.

Base map information shown on the FIRM was derived from the sources described in Table 21.

Table 21: Base Map Sources

Data Type	Data Provider	Data Date	Data Scale	Data Description
Illinois Highway System	Illinois Department of Transportation	February 28, 2020		Spatial feature and attribute information for transportation features
Illinois Public Land Survey System	Illinois State Geological Survey	April 2003	1:62,500	Spatial feature and attribute information for Public Land Survey System sections; features were refined using the USGS 7.5-Minute Series Topographic Maps
National Hydrography Dataset	U.S. Geological Survey	June 22, 2019	1:24,000	Spatial feature and attribute information for lakes and HUC-8 watershed boundaries
Runways	Federal Aviation Administration	June 17, 2021		Spatial feature and attribute information for airports
TIGER/Line Shapefile, 2020, state, Illinois, Current Place State-based	U.S. Census Bureau	February 2021		Spatial feature and attribute information for political boundaries and transportation features
USGS 7.5-Minute Series Topographic Maps	U.S. Geological Survey	1989	1:24,000	FIRM paneling scheme
USGS National Map: Orthoimagery	U.S. Geological Survey	October 2020		Orthoimagery for FIRM panels effective TBD

6.3 Floodplain and Floodway Delineation

The FIRM shows tints, screens, and symbols to indicate floodplains and floodways as well as the locations of selected cross sections used in the hydraulic analyses and floodway computations.

For riverine flooding sources, the mapped floodplain boundaries shown on the FIRM have been delineated using the flood elevations determined at each cross section; between cross sections, the boundaries were interpolated using the topographic elevation data described in Table 22.

In cases where the 1-percent and 0.2-percent-annual-chance floodplain boundaries are close together, only the 1-percent-annual-chance floodplain boundary has been shown. Small areas within the floodplain boundaries may lie above the flood elevations but cannot be shown due to limitations of the map scale and/or lack of detailed topographic data.

The floodway widths presented in this FIS Report and on the FIRM were computed for certain stream segments on the basis of equal conveyance reduction from each side of the floodplain. Floodway widths were computed at cross sections. Between cross sections, the floodway boundaries were interpolated. Table 2 indicates the flooding sources for which floodways have been determined. The results of the floodway computations for those flooding sources have been tabulated for selected cross sections and are shown in Table 23, “Floodway Data.”

Table 22: Summary of Topographic Elevation Data used in Mapping

Community	Flooding Source	Source for Topographic Elevation Data			
		Description	Vertical Accuracy	Horizontal Accuracy	Citation
Clay County	Bear Creek, Big Muddy Creek, Brush Creek, Buck Creek, Buck Creek Tributary A, Cottonwood Creek, Crooked Creek, Crooked Creek Tributary B, Dismal Creek, Dismal Creek Tributary A, Dismal Creek Tributary B, East Fork Wetweather Creek, Elm Creek, Elm Creek Tributary A, Elm Creek Tributary A1, Elm Creek Tributary A2, Flat Branch, Grove Creek, Hurricane Creek, Hurricane Creek Tributary A, Little Muddy Creek, Little Muddy Creek Tributary B, Little Muddy Creek Tributary C, Little Wabash River, Little Wabash River Tributary H,	2011 Digital Terrain Model	CVA 0.661 ft. at the 95% Confidence level	0.30 meters (per manufacturer's system specifications)	ISGS 2012

Table 22: Summary of Topographic Elevation Data used in Mapping (continued)

Community	Flooding Source	Source for Topographic Elevation Data			
		Description	Vertical Accuracy	Horizontal Accuracy	Citation
Clay County	Little Wabash River Tributary J, Little Wabash River Tributary K, Little Wabash River Tributary K1, Little Wabash River Tributary K2, Little Wabash River Tributary L, Lucas Creek, Panther Creek, Panther Creek Tributary A, Pickle Creek, Raccoon Creek, Second Creek, Second Creek Tributary A, Seminary Creek, Skillet Fork, Sugar Creek (Big Muddy), Sutton Creek, Weather Creek, West Fork Wetweather Creek, Wet Weather Creek	2011 Digital Terrain Model	CVA 0.661 ft. at the 95% Confidence level	0.30 meters (per manufacturer's system specifications)	ISGS 2012

BFEs shown at cross sections on the FIRM represent the 1-percent-annual-chance water surface elevations shown on the Flood Profiles and in the Floodway Data tables in the FIS Report.

Table 23: Floodway Data

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE [1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	7,689	230	418	2.3	458.8	458.8	458.8	0.0
B	9,535	145	467	1.5	464.6	464.6	464.6	0.0
C	10,639	179	425	1.7	465.9	465.9	466.0	0.1
D	11,199	218	272	2.1	467.2	467.2	467.2	0.0
E	11,655	134	237	2.4	468.9	468.9	468.9	0.0
F	12,267	245	554	1.0	470.3	470.3	470.3	0.0

[1] Feet above confluence with Elm Creek

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

CLAY COUNTY, ILLINOIS

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: ELM CREEK TRIBUTARY A

Table 23: Floodway Data (continued)

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE [1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	561	509	1,570	0.1	467.6	467.6	467.7	0.1
B	956	686	1,198	0.1	467.6	467.6	467.7	0.1
C	1,444	707	677	0.2	467.6	467.6	467.7	0.1

[1] Feet above confluence with Elm Creek Tributary A

Table 23: Floodway Data (continued)

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE [1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	508	127	88	1.7	466.7	466.7	466.7	0.0
B	2,129	210	110	1.8	473.6	473.6	473.7	0.1
C	3,088	339	221	1.3	476.5	476.5	476.5	0.0

[1] Feet above confluence with Elm Creek Tributary A

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

CLAY COUNTY, ILLINOIS

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: ELM CREEK TRIBUTARY A2

Table 23: Floodway Data (continued)

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE [1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	705,882	8,576	50,070	0.8	426.1	426.1	426.1	0.0
B	713,868	11,028	49,310	1.1	427.1	427.1	427.2	0.1
C	718,983	11,708	70,454	1.5	429.7	429.7	429.7	0.0

[1] Feet above confluence with Wabash River

Table 23: Floodway Data (continued)

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE [1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	36,641	292	667	1.7	477.1	477.1	477.1	0.0
B	37,304	310	749	1.5	477.8	477.8	477.8	0.0
C	39,971	153	360	1.6	481.4	481.4	481.4	0.0
D	41,583	52	96	3.7	483.6	483.6	483.6	0.0

[1] Feet above confluence with Elm Creek

Table 24: Flood Hazard and Non-Encroachment Data for Selected Streams

[Not applicable to this Flood Risk Project]

6.4 Coastal Flood Hazard Mapping

This section is not applicable to this Flood Risk Project.

Table 25: Summary of Coastal Transect Mapping Considerations

[Not applicable to this Flood Risk Project]

6.5 FIRM Revisions

This FIS Report and the FIRM are based on the most up-to-date information available to FEMA at the time of its publication; however, flood hazard conditions change over time. Communities or private parties may request flood map revisions at any time. Certain types of requests require submission of supporting data. FEMA may also initiate a revision. Revisions may take several forms, including Letters of Map Amendment (LOMAs), Letters of Map Revision Based on Fill (LOMR-Fs), Letters of Map Revision (LOMRs) (referred to collectively as Letters of Map Change (LOMCs)), Physical Map Revisions (PMRs), and FEMA-contracted restudies. These types of revisions are further described below. Some of these types of revisions do not result in the republishing of the FIS Report. To assure that any user is aware of all revisions, it is advisable to contact the community repository of flood-hazard data (shown in Table 30, "Map Repositories").

6.5.1 Letters of Map Amendment

A LOMA is an official revision by letter to an effective NFIP map. A LOMA results from an administrative process that involves the review of scientific or technical data submitted by the owner or lessee of property who believes the property has incorrectly been included in a designated SFHA. A LOMA amends the currently effective FEMA map and establishes that a specific property is not located in a SFHA.

To obtain an application for a LOMA, visit www.fema.gov/flood-maps/change-your-flood-zone and download the form "MT-1 Application Forms and Instructions for Conditional and Final Letters of Map Amendment and Letters of Map Revision Based on Fill". Visit the "Flood Map-Related Fees" section to determine the cost, if any, of applying for a LOMA.

FEMA offers a tutorial on how to apply for a LOMA. The LOMA Tutorial Series can be accessed at www.fema.gov/flood-maps/tutorials.

For more information about how to apply for a LOMA, call the FEMA Mapping and Insurance eXchange; toll free, at 1-877-FEMA MAP (1-877-336-2627).

6.5.2 Letters of Map Revision Based on Fill

A LOMR-F is an official revision by letter to an effective NFIP map. A LOMR-F states FEMA's determination concerning whether a structure or parcel has been elevated on fill above the base flood elevation and is, therefore, excluded from the SFHA.

Information about obtaining an application for a LOMR-F can be obtained in the same manner as that for a LOMA, by visiting www.fema.gov/flood-maps/change-your-flood-zone for the "MT-1 Application Forms and Instructions for Conditional and Final Letters of Map Amendment and Letters of Map Revision Based on Fill" or by calling the FEMA Mapping and Insurance eXchange, toll free, at 1-877-FEMA MAP (1-877-336-2627). Fees for applying for a LOMR-F, if any, are listed in the "Flood Map-Related Fees" section.

A tutorial for LOMR-F is available at www.fema.gov/flood-maps/tutorials.

6.5.3 Letters of Map Revision

A LOMR is an official revision to the currently effective FEMA map. It is used to change flood zones, floodplain and floodway delineations, flood elevations and planimetric features. All requests for LOMRs should be made to FEMA through the chief executive officer of the community, since it is the community that must adopt any changes and revisions to the map. If the request for a LOMR is not submitted through the chief executive officer of the community, evidence must be submitted that the community has been notified of the request.

To obtain an application for a LOMR, visit www.fema.gov/flood-maps/change-your-flood-zone and download the form "MT-2 Application Forms and Instructions for Conditional Letters of Map Revision and Letters of Map Revision". Visit the "Flood Map-Related Fees" section to determine the cost of applying for a LOMR. For more information about how to apply for a LOMR, call the FEMA Mapping and Insurance eXchange; toll free, at 1-877-FEMA MAP (1-877-336-2627) to speak to a Map Specialist.

Previously issued mappable LOMCs (including LOMRs) that have been incorporated into the Clay County FIRM are listed in Table 26.

Table 26: Incorporated Letters of Map Change

[Not applicable to this Flood Risk Project]

6.5.4 Physical Map Revisions

A Physical Map Revisions (PMR) is an official republication of a community's NFIP map to effect changes to base flood elevations, floodplain boundary delineations, regulatory floodways and planimetric features. These changes typically occur as a result of structural works or improvements, annexations resulting in additional flood hazard areas or correction to base flood elevations or SFHAs.

The community's chief executive officer must submit scientific and technical data to FEMA to support the request for a PMR. The data will be analyzed and the map will be revised if warranted. The community is provided with copies of the revised information and is afforded a review period. When the base flood elevations are changed, a 90-day appeal period is provided. A 6-month adoption period for formal approval of the revised map(s) is also provided.

For more information about the PMR process, please visit www.fema.gov and visit the Floods & Maps "Change Your Flood Zone Designation" section.

6.5.5 Contracted Restudies

The NFIP provides for a periodic review and restudy of flood hazards within a given community. FEMA accomplishes this through a national watershed-based mapping needs assessment strategy, known as the Coordinated Needs Management Strategy (CNMS). The CNMS is used by FEMA to assign priorities and allocate funding for new flood hazard analyses used to update the FIS Report and FIRM. The goal of CNMS is to define the validity of the engineering study data within a mapped inventory. The CNMS is used to track the assessment process, document engineering gaps and their resolution, and aid in prioritization for using flood risk as a key factor for areas identified for flood map updates. Visit www.fema.gov to learn more about the CNMS or contact the FEMA Regional Office listed in Section 8 of this FIS Report.

6.5.6 Community Map History

The current FIRM presents flooding information for the entire geographic area of Clay County. Previously, separate FIRMs, Flood Hazard Boundary Maps (FHBMs) and/or Flood Boundary and Floodway Maps (FBFMs) may have been prepared for the incorporated communities and the unincorporated areas in the county that had identified SFHAs. Current and historical data relating to the maps prepared for the project area are presented in Table 27, "Community Map History." A description of each of the column headings and the source of the date is also listed below.

- *Community Name* includes communities falling within the geographic area shown on the FIRM, including those that fall on the boundary line, nonparticipating communities, and communities with maps that have been rescinded. Communities with No Special Flood Hazards are indicated by a footnote. If all maps (FHBM, FBFM, and FIRM) were rescinded for a community, it is not listed in this table unless SFHAs have been identified in this community.

- *Initial Identification Date (First NFIP Map Published)* is the date of the first NFIP map that identified flood hazards in the community. If the FHBM has been converted to a FIRM, the initial FHBM date is shown. If the community has never been mapped, the upcoming effective date or "pending" (for Preliminary FIS Reports) is shown. If the community is listed in Table 27 but not identified on the map, the community is treated as if it were unmapped.

- *Initial FHBM Effective Date* is the effective date of the first FHBM. This date may be the same date as the Initial NFIP Map Date.

- *FHBM Revision Date(s)* is the date(s) that the FHBM was revised, if applicable.

- *Initial FIRM Effective Date* is the date of the first effective FIRM for the community.

- *FIRM Revision Date(s)* is the date(s) the FIRM was revised, if applicable. This is the revised date that is shown on the FIRM panel, if applicable. As countywide studies are completed or revised, each community listed should have its FIRM dates updated accordingly to reflect the date of the countywide study. Once the FIRMs exist in countywide format, as PMRs of FIRM panels within the county are completed, the FIRM Revision Dates in the table for each community affected by the PMR are updated with the date of the PMR, even if the PMR did not revise all the panels within that community.

The initial effective date for the Clay County FIRMs in countywide format was TBD.

Table 27: Community Map History

Community Name	Initial Identification Date	Initial FHBM Effective Date	FHBM Revision Date(s)	Initial FIRM Effective Date	FIRM Revision Date(s)
Clay City, Village of	3/22/1974	3/22/1974	10/17/1975	1/18/1984	TBD
Clay County Unincorporated Areas	5/29/1981	5/29/1981	N/A	TBD	N/A
Flora, City of	3/1/1974	3/1/1974	7/25/1975	8/5/1985	TBD
Iola, Village of [1, 2]	TBD	N/A	N/A	TBD	N/A
Louisville, Village of [2]	TBD	N/A	N/A	TBD	N/A
Sailor Springs, Village of [2]	TBD	N/A	N/A	TBD	N/A
Xenia, Village of [1, 2]	TBD	N/A	N/A	TBD	N/A

[1] No Special Flood Hazard Areas Identified

[2] This community did not have a FIRM prior to the first countywide FIRM for Clay County

SECTION 7.0 – CONTRACTED STUDIES AND COMMUNITY COORDINATION

7.1 Contracted Studies

Table 28 provides a summary of the contracted studies, by flooding source, that are included in this FIS Report.

Table 28: Summary of Contracted Studies Included in this FIS Report

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Bear Creek	Pending	Illinois State Water Survey	EMC-2017-CA-00004-SO1; ISWS17-03	November 2019	Clay County Unincorporated Areas
Big Muddy Creek	Pending	Illinois State Water Survey	EMC-2017-CA-00004-SO1; ISWS17-03	May 2020	Clay County Unincorporated Areas
Brush Creek	Pending	Illinois State Water Survey	EMC-2017-CA-00004-SO1; ISWS17-03	January 2020	Clay County Unincorporated Areas
Buck Creek	Pending	Illinois State Water Survey	EMC-2017-CA-00004-SO1; ISWS17-03	May 2020	Clay County Unincorporated Areas
Buck Creek Tributary A	Pending	Illinois State Water Survey	EMC-2017-CA-00004-SO1; ISWS17-03	May 2020	Clay County Unincorporated Areas
Cottonwood Creek	Pending	Illinois State Water Survey	EMC-2017-CA-00004-SO1; ISWS17-03	May 2020	Clay County Unincorporated Areas
Crooked Creek	Pending	Illinois State Water Survey	EMC-2017-CA-00004-SO1; ISWS17-03	December 2018	Clay County Unincorporated Areas
Crooked Creek Tributary B	Pending	Illinois State Water Survey	EMC-2017-CA-00004-SO1; ISWS17-03	December 2018	Clay County Unincorporated Areas
Dismal Creek	Pending	Illinois State Water Survey	EMC-2017-CA-00004-SO1; ISWS17-03	December 2018	Clay County Unincorporated Areas
Dismal Creek Tributary A	Pending	Illinois State Water Survey	EMC-2017-CA-00004-SO1; ISWS17-03	December 2018	Clay County Unincorporated Areas
Dismal Creek Tributary B	Pending	Illinois State Water Survey	EMC-2017-CA-00004-SO1; ISWS17-03	December 2018	Clay County Unincorporated Areas

Table 28: Summary of Contracted Studies Included in this FIS Report (continued)

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
East Fork Wetweather Creek	Pending	Illinois State Water Survey	EMC-2017-CA-00004-SO1; ISWS17-03	May 2020	Clay County Unincorporated Areas
Elm Creek	Pending	Illinois State Water Survey	EMC-2017-CA-00004-SO1; ISWS17-03	November 2019	Clay County Unincorporated Areas
Elm Creek Tributary A	Pending	Illinois State Water Survey	EMC-2017-CA-00004-SO1; ISWS17-03	November 2019	Clay County Unincorporated Areas
Elm Creek Tributary A	Pending	Illinois State Water Survey	EMC-2017-CA-00004-SO1; ISWS17-03	September 2020	Clay County Unincorporated Areas; Flora, City of
Elm Creek Tributary A1	Pending	Illinois State Water Survey	EMC-2017-CA-00004-SO1; ISWS17-03	September 2020	Flora, City of
Elm Creek Tributary A2	Pending	Illinois State Water Survey	EMC-2017-CA-00004-SO1; ISWS17-03	September 2020	Flora, City of
Flat Branch	Pending	Illinois State Water Survey	EMC-2017-CA-00004-SO1; ISWS17-03	May 2020	Clay County Unincorporated Areas
Grove Creek	Pending	Illinois State Water Survey	EMC-2017-CA-00004-SO1; ISWS17-03	May 2020	Clay County Unincorporated Areas
Hurricane Creek	Pending	Illinois State Water Survey	EMC-2017-CA-00004-SO1; ISWS17-03	May 2020	Clay County Unincorporated Areas
Hurricane Creek Tributary A	Pending	Illinois State Water Survey	EMC-2017-CA-00004-SO1; ISWS17-03	May 2020	Clay County Unincorporated Areas
Little Muddy Creek	Pending	Illinois State Water Survey	EMC-2017-CA-00004-SO1; ISWS17-03	May 2020	Clay County Unincorporated Areas

Table 28: Summary of Contracted Studies Included in this FIS Report (continued)

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Little Muddy Creek Tributary B	Pending	Illinois State Water Survey	EMC-2017-CA-00004-SO1; ISWS17-03	May 2020	Clay County Unincorporated Areas
Little Muddy Creek Tributary C	Pending	Illinois State Water Survey	EMC-2017-CA-00004-SO1; ISWS17-03	May 2020	Clay County Unincorporated Areas
Little Wabash River	Pending	Illinois State Water Survey	EMC-2017-CA-00004-SO1; ISWS17-03	September 2019	Clay County Unincorporated Areas
Little Wabash River	Pending	Illinois State Water Survey	EMC-2017-CA-00004-SO1; ISWS17-03	September 2019	Clay County Unincorporated Areas; Louisville, Village of
Little Wabash River	Pending	Illinois State Water Survey	EMC-2017-CA-00004-SO1; ISWS17-03	May 2020	Clay County Unincorporated Areas
Little Wabash River Tributary H	Pending	Illinois State Water Survey	EMC-2017-CA-00004-SO1; ISWS17-03	May 2020	Clay County Unincorporated Areas
Little Wabash River Tributary J	Pending	Illinois State Water Survey	EMC-2017-CA-00004-SO1; ISWS17-03	May 2020	Clay County Unincorporated Areas
Little Wabash River Tributary K	Pending	Illinois State Water Survey	EMC-2017-CA-00004-SO1; ISWS17-03	May 2020	Clay County Unincorporated Areas
Little Wabash River Tributary K1	Pending	Illinois State Water Survey	EMC-2017-CA-00004-SO1; ISWS17-03	May 2020	Clay County Unincorporated Areas
Little Wabash River Tributary K2	Pending	Illinois State Water Survey	EMC-2017-CA-00004-SO1; ISWS17-03	May 2020	Clay County Unincorporated Areas

Table 28: Summary of Contracted Studies Included in this FIS Report (continued)

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Little Wabash River Tributary L	Pending	Illinois State Water Survey	EMC-2017-CA-00004-SO1; ISWS17-03	December 2018	Clay County Unincorporated Areas
Lucas Creek	Pending	Illinois State Water Survey	EMC-2017-CA-00004-SO1; ISWS17-03	December 2018	Clay County Unincorporated Areas
Panther Creek	Pending	Illinois State Water Survey	EMC-2017-CA-00004-SO1; ISWS17-03	December 2018	Clay County Unincorporated Areas
Panther Creek Tributary A	Pending	Illinois State Water Survey	EMC-2017-CA-00004-SO1; ISWS17-03	December 2018	Clay County Unincorporated Areas
Pickle Creek	Pending	Illinois State Water Survey	EMC-2017-CA-00004-SO1; ISWS17-03	January 2020	Clay County Unincorporated Areas
Raccoon Creek	Pending	Illinois State Water Survey	EMC-2017-CA-00004-SO1; ISWS17-03	November 2019	Clay County Unincorporated Areas
Second Creek	Pending	Illinois State Water Survey	EMC-2017-CA-00004-SO1; ISWS17-03	December 2018	Clay County Unincorporated Areas
Second Creek Tributary A	Pending	Illinois State Water Survey	EMC-2017-CA-00004-SO1; ISWS17-03	December 2018	Clay County Unincorporated Areas
Seminary Creek	Pending	Illinois State Water Survey	EMC-2017-CA-00004-SO1; ISWS17-03	November 2019	Clay County Unincorporated Areas; Flora, City of
Seminary Creek	Pending	Illinois State Water Survey	EMC-2017-CA-00004-SO1; ISWS17-03	September 2020	Clay County Unincorporated Areas; Flora, City of
Skillet Fork	Pending	Illinois State Water Survey	EMC-2017-CA-00004-SO1; ISWS17-03	January 2020	Clay County Unincorporated Areas

Table 28: Summary of Contracted Studies Included in this FIS Report (continued)

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Sugar Creek (Big Muddy)	Pending	Illinois State Water Survey	EMC-2017-CA-00004-SO1; ISWS17-03	May 2020	Clay County Unincorporated Areas
Sutton Creek	Pending	Illinois State Water Survey	EMC-2017-CA-00004-SO1; ISWS17-03	January 2020	Clay County Unincorporated Areas
Weather Creek	Pending	Illinois State Water Survey	EMC-2017-CA-00004-SO1; ISWS17-03	May 2020	Clay County Unincorporated Areas
West Fork Wetweather Creek	Pending	Illinois State Water Survey	EMC-2017-CA-00004-SO1; ISWS17-03	May 2020	Clay County Unincorporated Areas
Wet Weather Creek	Pending	Illinois State Water Survey	EMC-2017-CA-00004-SO1; ISWS17-03	May 2020	Clay County Unincorporated Areas

7.2 Community Meetings

The dates of the community meetings held for this Flood Risk Project and previous Flood Risk Projects are shown in Table 29. These meetings may have previously been referred to by a variety of names (Community Coordination Officer (CCO), Scoping, Discovery, etc.), but all meetings represent opportunities for FEMA, community officials, study contractors, and other invited guests to discuss the planning for and results of the project.

Table 29: Community Meetings

Community	FIS Report Dated	Date of Meeting	Meeting Type	Attended By
Clay City, Village of	Pending	2/18/2020	Flood Risk Review	ISWS, and the community
		TBD	Final CCO	*
		TBD	Other	*
Clay County Unincorporated Areas	Pending	2/18/2020	Flood Risk Review	ISWS, and the community
		TBD	Final CCO	*
		TBD	Other	*
Flora, City of	Pending	2/18/2020	Flood Risk Review	ISWS, and the community
		TBD	Final CCO	*
		TBD	Other	*
Iola, Village of	Pending	2/18/2020	Flood Risk Review	ISWS
		TBD	Final CCO	*
		TBD	Other	*
Louisville, Village of	Pending	2/18/2020	Flood Risk Review	ISWS
		TBD	Final CCO	*
		TBD	Other	*

* To Be Determined

Table 29: Community Meetings (continued)

Community	FIS Report Dated	Date of Meeting	Meeting Type	Attended By
Sailor Springs, Village of	Pending	2/18/2020	Flood Risk Review	ISWS
		TBD	Final CCO	*
		TBD	Other	*
Xenia, Village of	Pending	2/18/2020	Flood Risk Review	ISWS
		TBD	Final CCO	*
		TBD	Other	*

* To Be Determined

SECTION 8.0 – ADDITIONAL INFORMATION

Information concerning the pertinent data used in the preparation of this FIS Report can be obtained by submitting an order with any required payment to the FEMA Engineering Library. For more information on this process, see www.fema.gov.

Table 30 is a list of the locations where FIRMs for Clay County can be viewed. Please note that the maps at these locations are for reference only and are not for distribution. Also, please note that only the maps for the community listed in the table are available at that particular repository. A user may need to visit another repository to view maps from an adjacent community.

Table 30: Map Repositories

Community	Address	City	State	Zip Code
Clay City, Village of	Village Hall, 318 South Walnut Street	Clay City	IL	62824
Clay County Unincorporated Areas	Clay County Courthouse, 111 East Chestnut Street, Room 106	Louisville	IL	62858
Flora, City of	City Hall, 131 East 2nd Street	Flora	IL	62839
Iola, Village of [1]	Village Hall, 311 West Broadway	Iola	IL	62838
Louisville, Village of	Village Hall, 177 South Main Street	Louisville	IL	62858
Sailor Springs, Village of	Village Hall, 107 South Washington Street	Sailor Springs	IL	62824
Xenia, Village of [1]	Village Hall, 601 Church Street	Xenia	IL	62899

[1] No Special Flood Hazard Areas Identified

The National Flood Hazard Layer (NFHL) dataset is a compilation of effective FIRM Databases and LOMCs. Together they create a GIS data layer for a State or Territory. The NFHL is updated as studies become effective and extracts are made available to the public monthly. NFHL data can be viewed or ordered from the website shown in Table 31.

Table 31 contains useful contact information regarding the FIS Report, the FIRM, and other relevant flood hazard and GIS data. In addition, information about the State NFIP Coordinator and GIS Coordinator is shown in this table. At the request of FEMA, each Governor has designated an agency of State or territorial government to coordinate that State's or territory's NFIP activities. These agencies often assist communities in developing and adopting necessary floodplain management measures. State GIS Coordinators are knowledgeable about the availability and location of State and local GIS data in their state.

Table 31: Additional Information

FEMA and the NFIP	
FEMA and FEMA Engineering Library website	www.fema.gov www.fema.gov/engineering-library
NFIP website	www.fema.gov/national-flood-insurance-program
NFHL Dataset	msc.fema.gov
FEMA Region V	536 South Clark Street Chicago, IL 60605 (312) 408-5500
Other Federal Agencies	
USGS website	www.usgs.gov
Hydraulic Engineering Center website	www.hec.usace.army.mil
State Agencies and Organizations	
State NFIP Coordinator	Steve Altman (Acting Coordinator) Illinois Department of Natural Resources One Natural Resources Way Springfield, IL 62702 (217) 524-1028 steve.altman@illinois.gov
State GIS Coordinator	Dan Wilcox Illinois Department of Transportation 2300 South Dirksen Parkway Springfield, IL 62764 (217) 524-0031 dan.wilcox@illinois.gov

SECTION 9.0 – BIBLIOGRAPHY AND REFERENCES

Table 32 includes sources used in the preparation of and cited in this FIS Report as well as additional studies that have been conducted in the study area.

Table 32: Bibliography and References

Citation in this FIS	Publisher/ Issuer	*Publication Title,* "Article," Volume, Number, etc.	Author/ Editor	Place of Publication	Publication Date / Date of Issuance	Link
FAA 2021	Federal Aviation Administration	*Runways*		Silver Spring, MD	June 17, 2021	https://www.faa.gov
FEMA 1981	Federal Emergency Management Agency	*Flood Hazard Boundary Map, Clay County Unincorporated Areas, Illinois*		Washington, DC	May 29, 1981	https://msc.fema.gov
FEMA 1983	Federal Emergency Management Agency	*Flood Insurance Study, Village of Clay City, Illinois, Clay County*		Washington, DC	July 18, 1983	https://msc.fema.gov
FEMA 1984	Federal Emergency Management Agency	*Flood Insurance Rate Map, Village of Clay City, Illinois, Clay County*		Washington, DC	January 18, 1984	https://msc.fema.gov
FEMA 1985	Federal Emergency Management Agency	*Flood Insurance Rate Map, City of Flora, Illinois, Clay County*		Washington, DC	August 5, 1985	https://msc.fema.gov
IDOT 2020	Illinois Department of Transportation	*Illinois Highway System*		Springfield, IL	February 28, 2020	https://idot.illinois.gov

Table 32: Bibliography and References (continued)

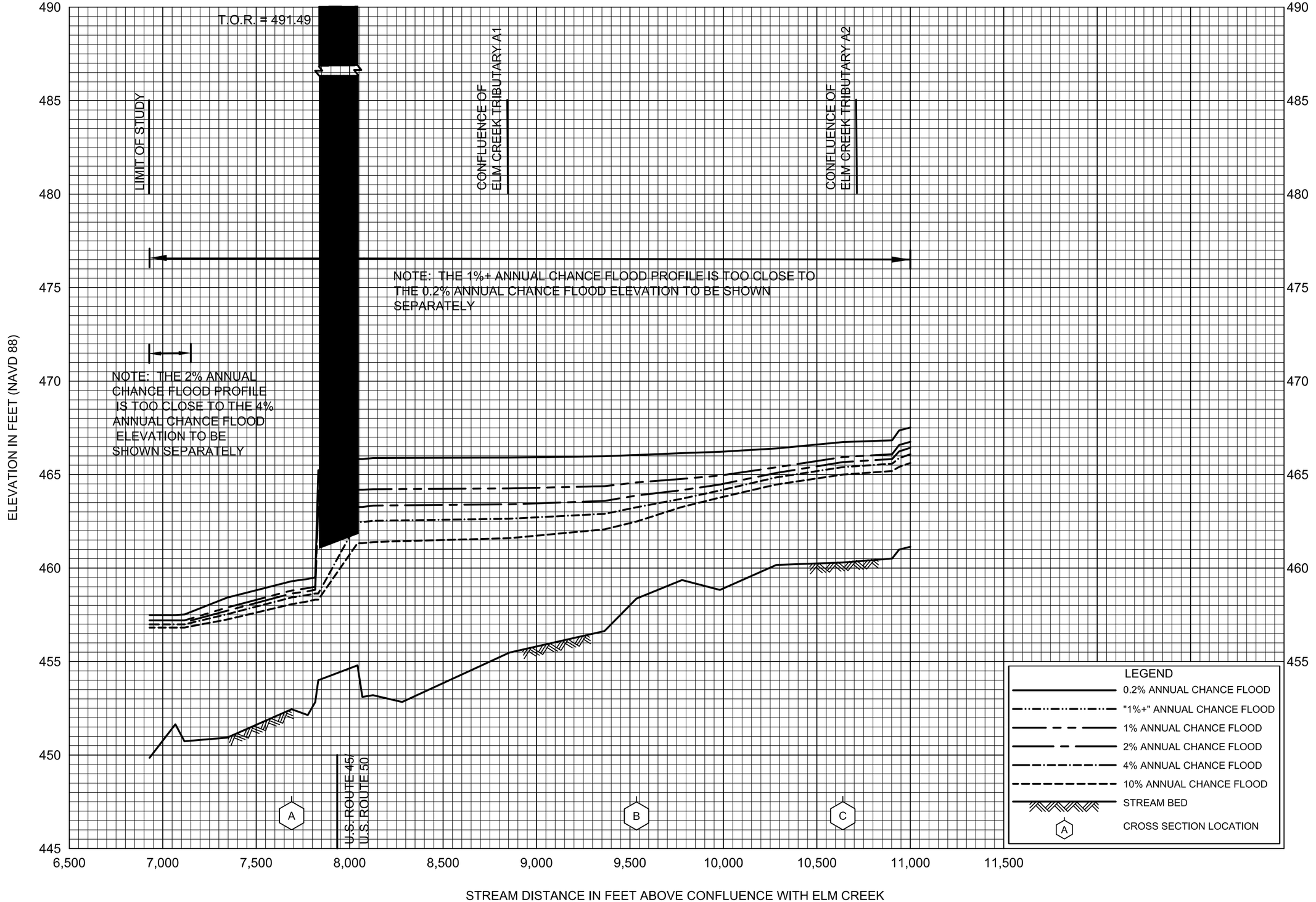
Citation in this FIS	Publisher/ Issuer	*Publication Title,* "Article," Volume, Number, etc.	Author/ Editor	Place of Publication	Publication Date / Date of Issuance	Link
ISGS 2003	Illinois State Geological Survey	*Illinois Public Land Survey System*		Champaign, IL	April 2003	https://clearinghouse.isgs.illinois.edu
ISGS 2012	Illinois State Geological Survey	*2011 Digital Terrain Model (DTM) for Clay County, Illinois*		Champaign, IL	June 25, 2012	https://clearinghouse.isgs.illinois.edu
ISWS 2021a	Illinois State Water Survey	*Hydrologic and Hydraulic Modeling and Floodplain Mapping for Little Wabash River, Coles, Cumberland, Shelby, Effingham, Clay, Richland, Wayne, and Edwards Counties, Illinois*		Champaign, IL	November 2021	

Table 32: Bibliography and References (continued)

Citation in this FIS	Publisher/ Issuer	*Publication Title,* "Article," Volume, Number, etc.	Author/ Editor	Place of Publication	Publication Date / Date of Issuance	Link
ISWS 2021b	Illinois State Water Survey	*Hydrologic and Hydraulic Modeling and Floodplain Mapping for Little Wabash River and Tributaries, Effingham and Clay County, Illinois*		Champaign, IL	November 2021	
ISWS 2021c	Illinois State Water Survey	*Hydrologic and Hydraulic Modeling and Floodplain Mapping for Little Wabash River, Elm Creek Tributary A and Tributaries, and Seminary Creek, Clay County, Illinois*		Champaign, IL	February 2021	
USCB 2020	U.S. Census Bureau	*TIGER/Line Shapefile, 2020, state, Illinois, Current Place State-based*		Washington, DC	February 2021	https://www.census.gov

Table 32: Bibliography and References (continued)

Citation in this FIS	Publisher/ Issuer	*Publication Title,* "Article," Volume, Number, etc.	Author/ Editor	Place of Publication	Publication Date / Date of Issuance	Link
USGS 1989	U.S. Geological Survey	*USGS 7.5-Minute Series Topographic Maps*		Sioux Falls, SD	1989	https://nationalmap.gov
USGS 2019	U.S. Geological Survey	*National Hydrography Dataset*		Reston, VA	June 22, 2019	https://www.usgs.gov
USGS 2020	U.S. Geological Survey	*USGS National Map: Orthoimagery*			October 2020	https://nationalmap.gov
WFIE 2013	WFIE 14 News	*Illinois county experience worst flooding in decades*	Kenny Douglass	Evansville, IN	June 24, 2013	https://www.14news.com



FLOOD PROFILES

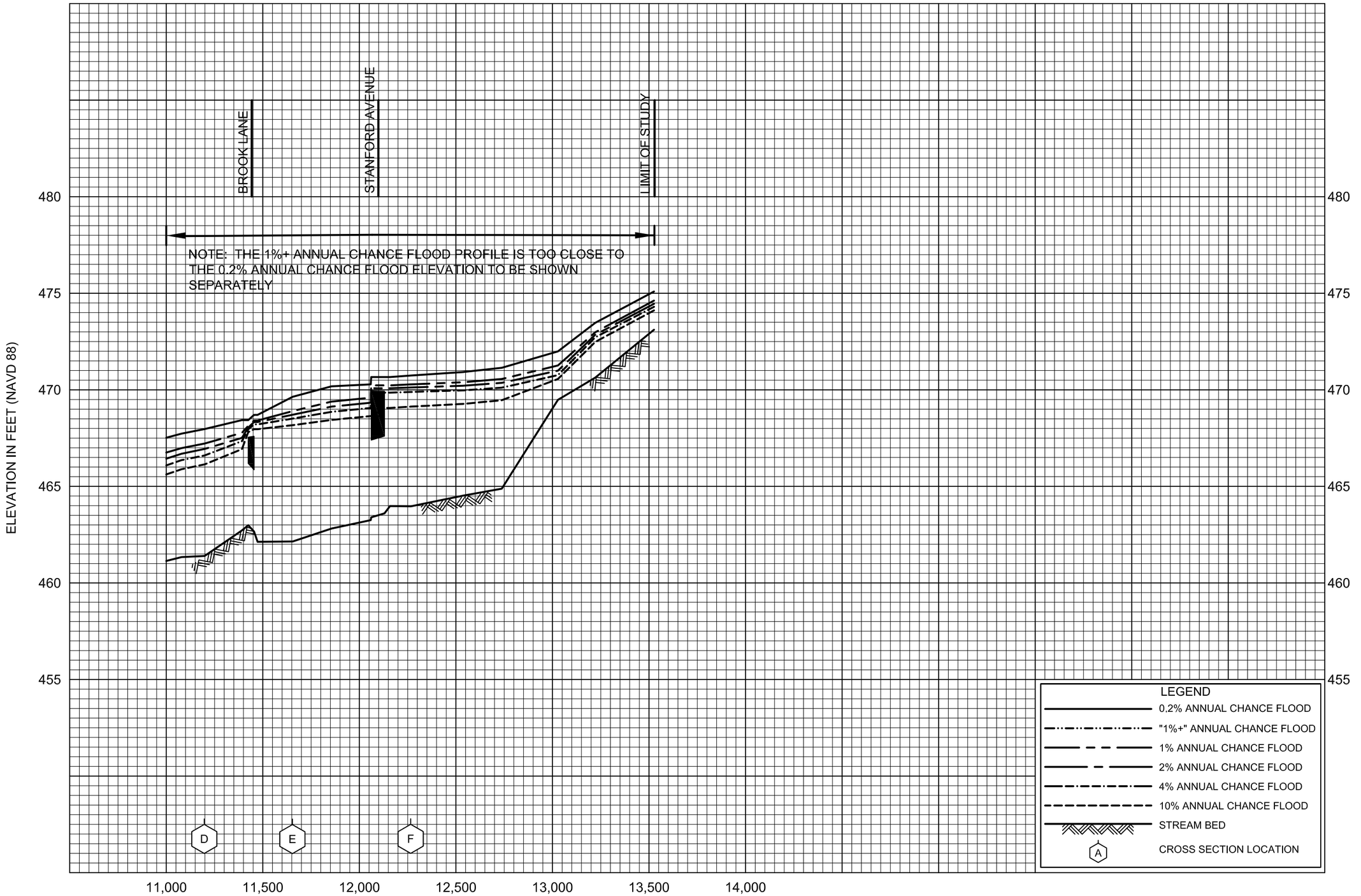
ELM CREEK TRIBUTARY A

FEDERAL EMERGENCY MANAGEMENT AGENCY

CLAY COUNTY, IL

AND INCOPRORATED AREAS

01P



FLOOD PROFILES

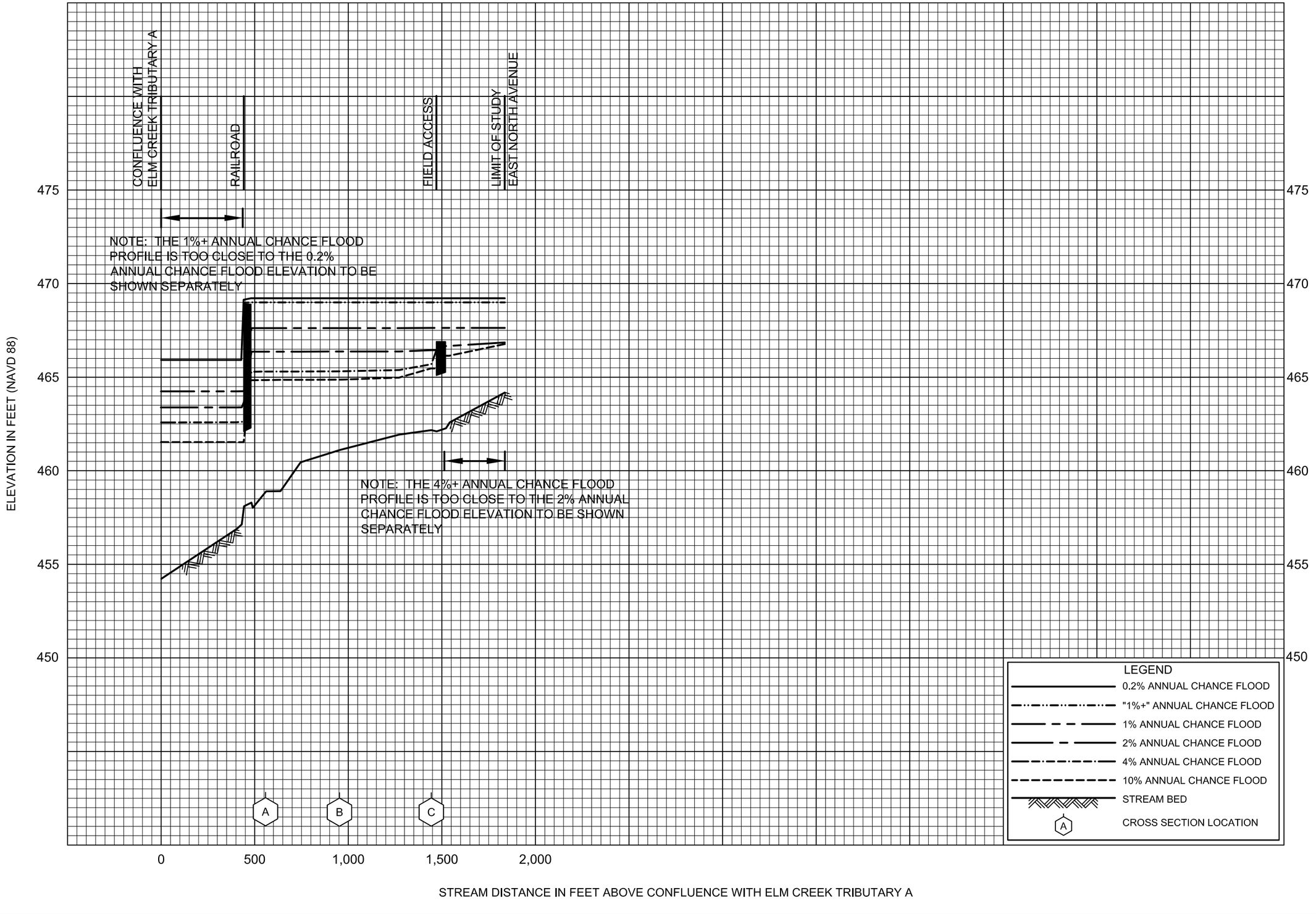
ELM CREEK TRIBUTARY A

FEDERAL EMERGENCY MANAGEMENT AGENCY

CLAY COUNTY, IL

AND INCOPRORATED AREAS

02P



FLOOD PROFILES

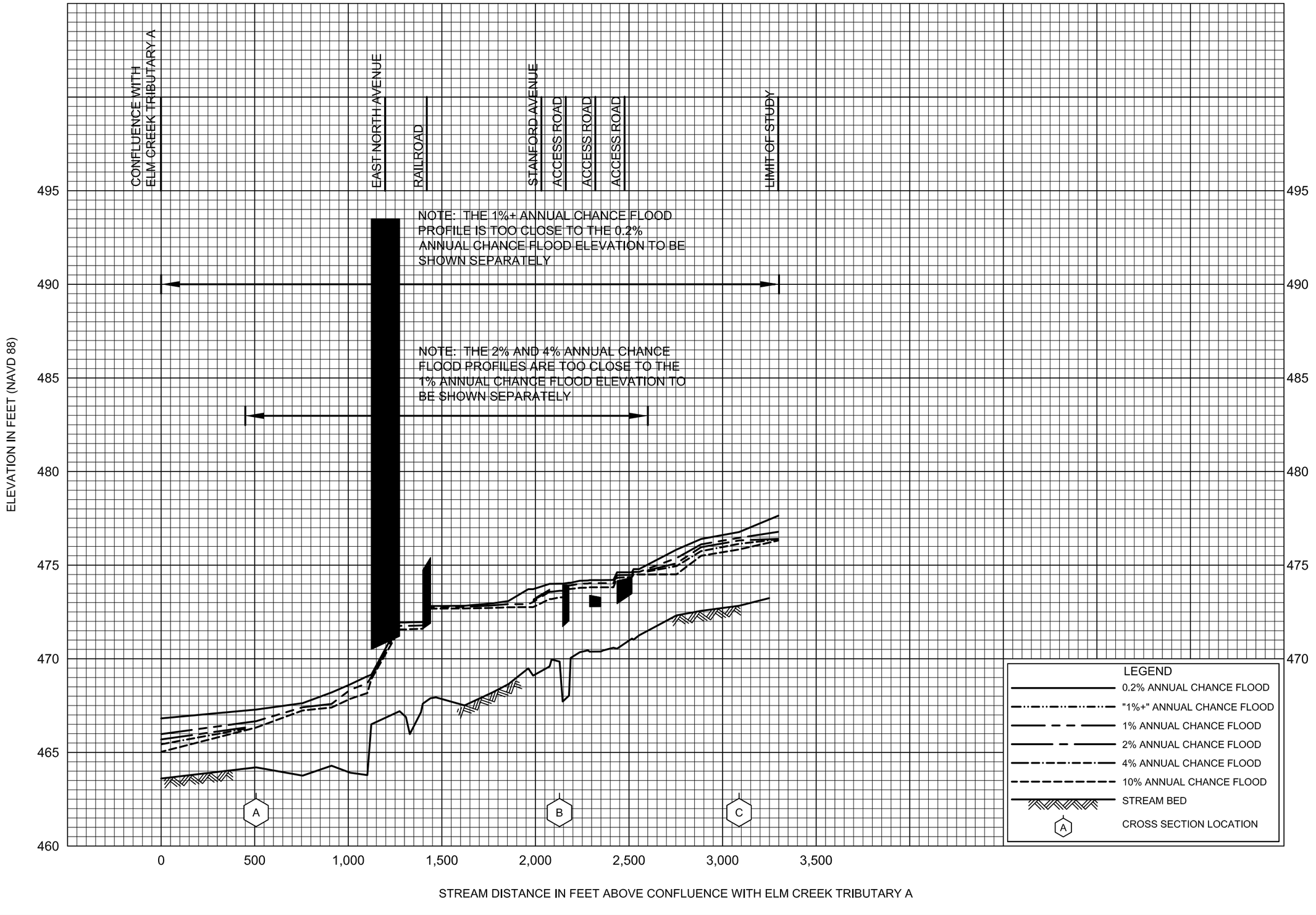
ELM CREEK TRIBUTRY A1

FEDERAL EMERGENCY MANAGEMENT AGENCY

CLAY COUNTY, IL

AND INCOPRORATED AREAS

03P



FLOOD PROFILES

ELM CREEK TRIBUTARY A2

FEDERAL EMERGENCY MANAGEMENT AGENCY

CLAY COUNTY, IL

AND INCOPRORATED AREAS

04P

NOTE: THE 1%+ ANNUAL CHANCE FLOOD PROFILE IS TOO CLOSE TO THE 0.2% ANNUAL CHANCE FLOOD ELEVATION TO BE SHOWN SEPARATELY

LIMIT OF STUDY

LIMIT OF STUDY

DIETERICH BLACKTOP/
1875 E

ELEVATION IN FEET (NAVD 88)

460
450
440
430
420
410
400

LEGEND

- 0.2% ANNUAL CHANCE FLOOD
- "1%+" ANNUAL CHANCE FLOOD
- 1% ANNUAL CHANCE FLOOD
- 2% ANNUAL CHANCE FLOOD
- 4% ANNUAL CHANCE FLOOD
- 10% ANNUAL CHANCE FLOOD
- STREAM BED
- A — CROSS SECTION LOCATION

A B C

702,000 704,000 706,000 708,000 710,000 712,000 714,000 716,000 718,000 720,000 722,000

STREAM DISTANCE IN FEET ABOVE CONFLUENCE WITH WABASH RIVER

FLOOD PROFILES

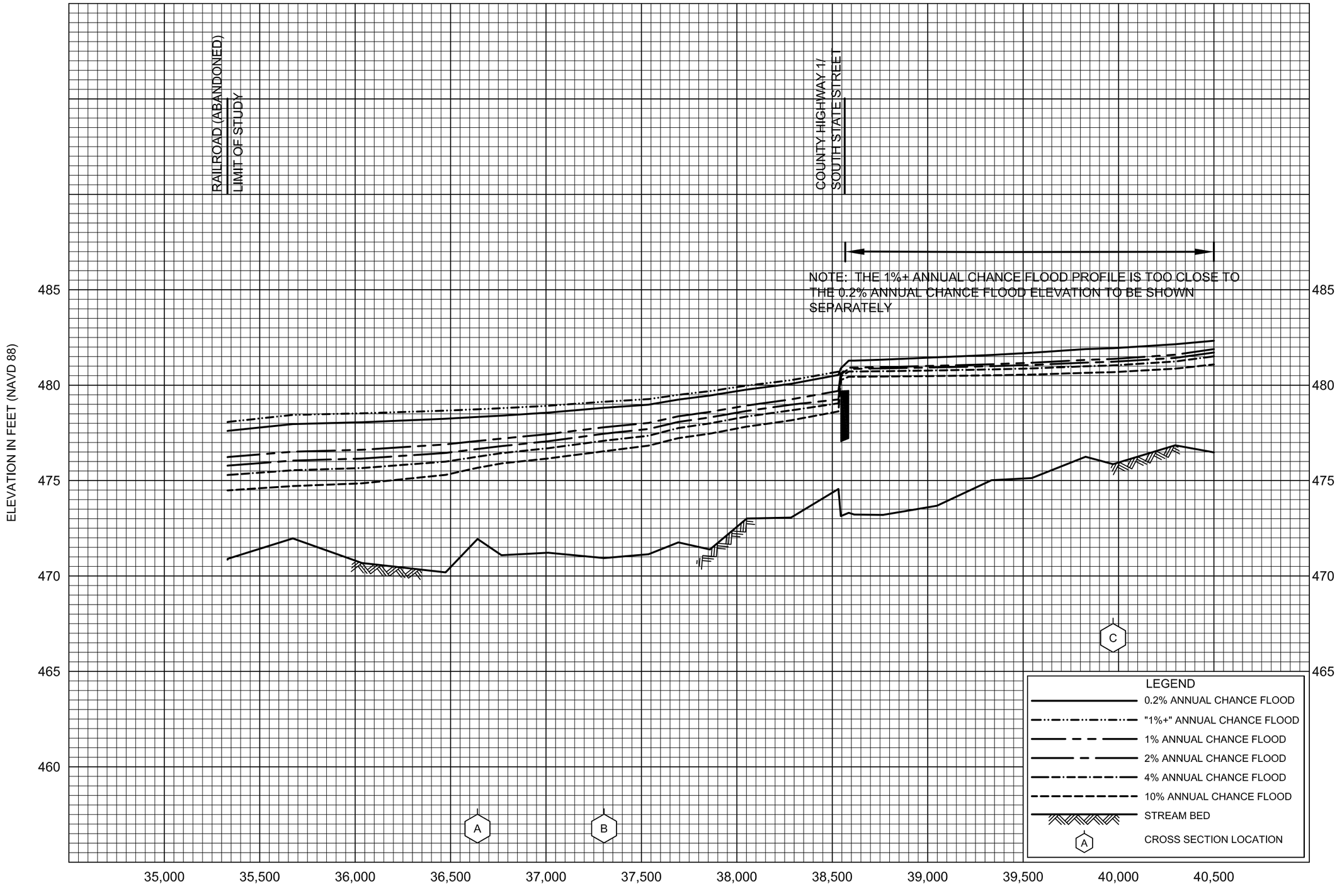
LITTLE WABASH RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

CLAY COUNTY, IL

AND INCORPORATED AREAS

05P



FLOOD PROFILES

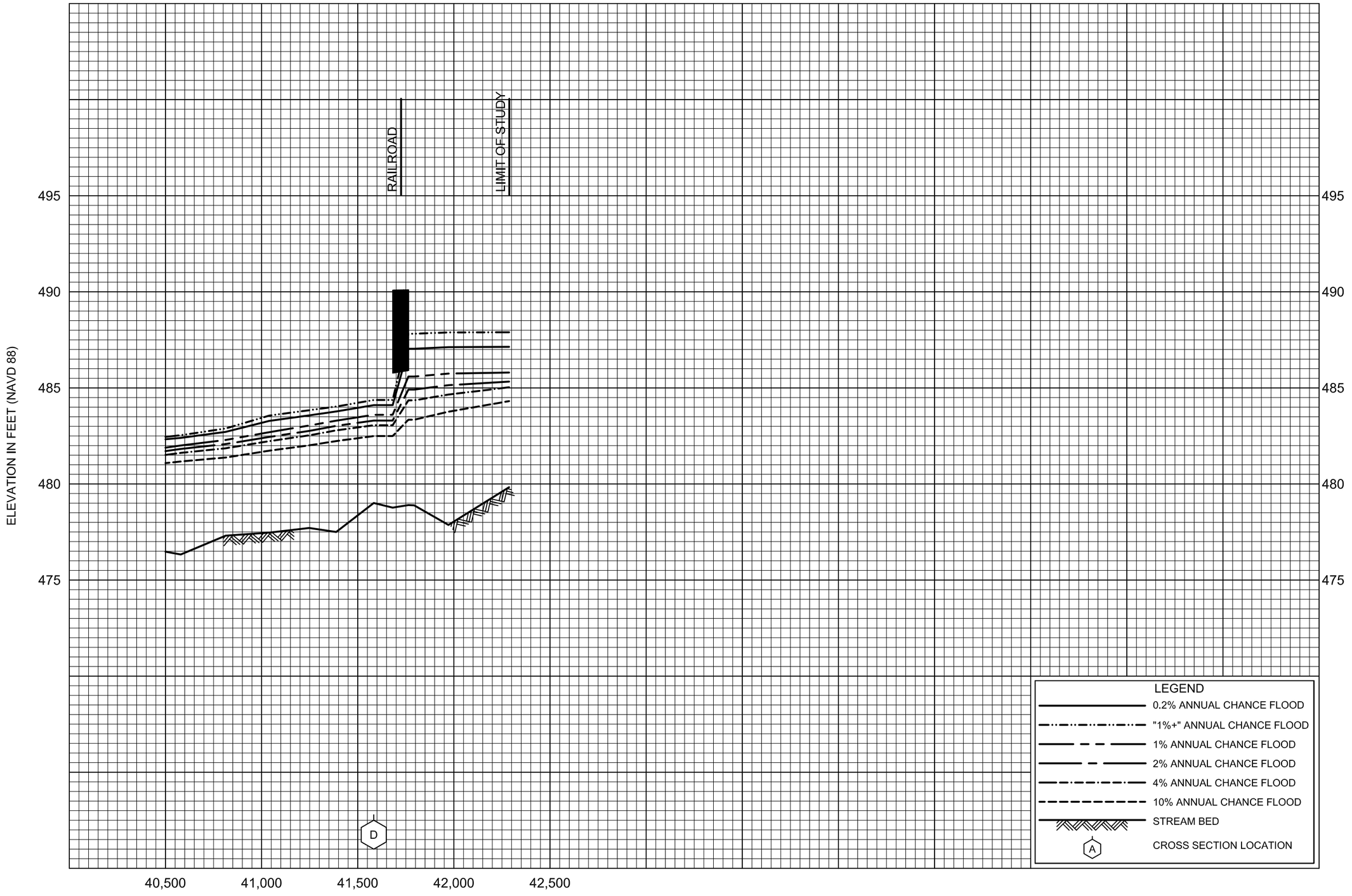
SEMINARY CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

CLAY COUNTY, IL

AND INCOPRORATED AREAS

06P



FLOOD PROFILES

SEMINARY CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

CLAY COUNTY, IL

AND INCOPRORATED AREAS

07P