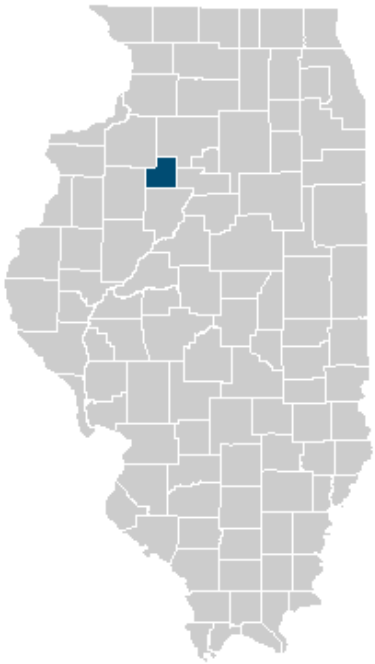
FLOOD INSURANCE STUDY

FEDERAL EMERGENCY MANAGEMENT AGENCY

VOLUME 1 OF 1



STARK COUNTY, ILLINOIS

AND INCORPORATED AREAS

COMMUNITY NAME	COMMUNITY NUMBER
BRADFORD, VILLAGE OF	170745
LA FAYETTE, VILLAGE OF*	170759
STARK COUNTY UNINCORPORATED AREAS	170613
TOULON, CITY OF	170779
WYOMING, CITY OF	170615

*No Special Flood Hazard Areas Identified

FEMA

EFFECTIVE:

April 23, 2025

FLOOD INSURANCE STUDY NUMBER
17175CV000A
Version Number 2.8.3.6

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Published Separately

FLOOD INSURANCE STUDY REPORT
STARK 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 provides information on the existence and severity of flood hazards for the study area. 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 Stark 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
Bradford, Village of	170745	07130005	17175C0066C 17175C0067C	
La Fayette, Village of [1]	170759	07130005	17175C0100C	
Stark County Unincorporated Areas	170613	07130001 07130005	17175C0025C 17175C0050C 17175C0066C 17175C0067C 17175C0075C 17175C0082C 17175C0084C 17175C0100C 17175C0101C 17175C0103C 17175C0108C 17175C0109C 17175C0116C 17175C0117C 17175C0125C 17175C0150C 17175C0175C 17175C0200C 17175C0225C	
Toulon, City of	170779	07130005	17175C0082C 17175C0101C 17175C0103C 17175C0125C	
Wyoming, City of	170615	07130005	17175C0108C 17175C0109C 17175C0116C 17175C0117C	

[1] No Special Flood Hazard Areas Identified

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 Stark County became effective on April 23, 2025. 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 does not design, build, inspect, operate, maintain, or certify levees. FEMA is responsible for accurately identifying flood hazards and communicating those hazards and risks to affected stakeholders. FEMA has identified one or more

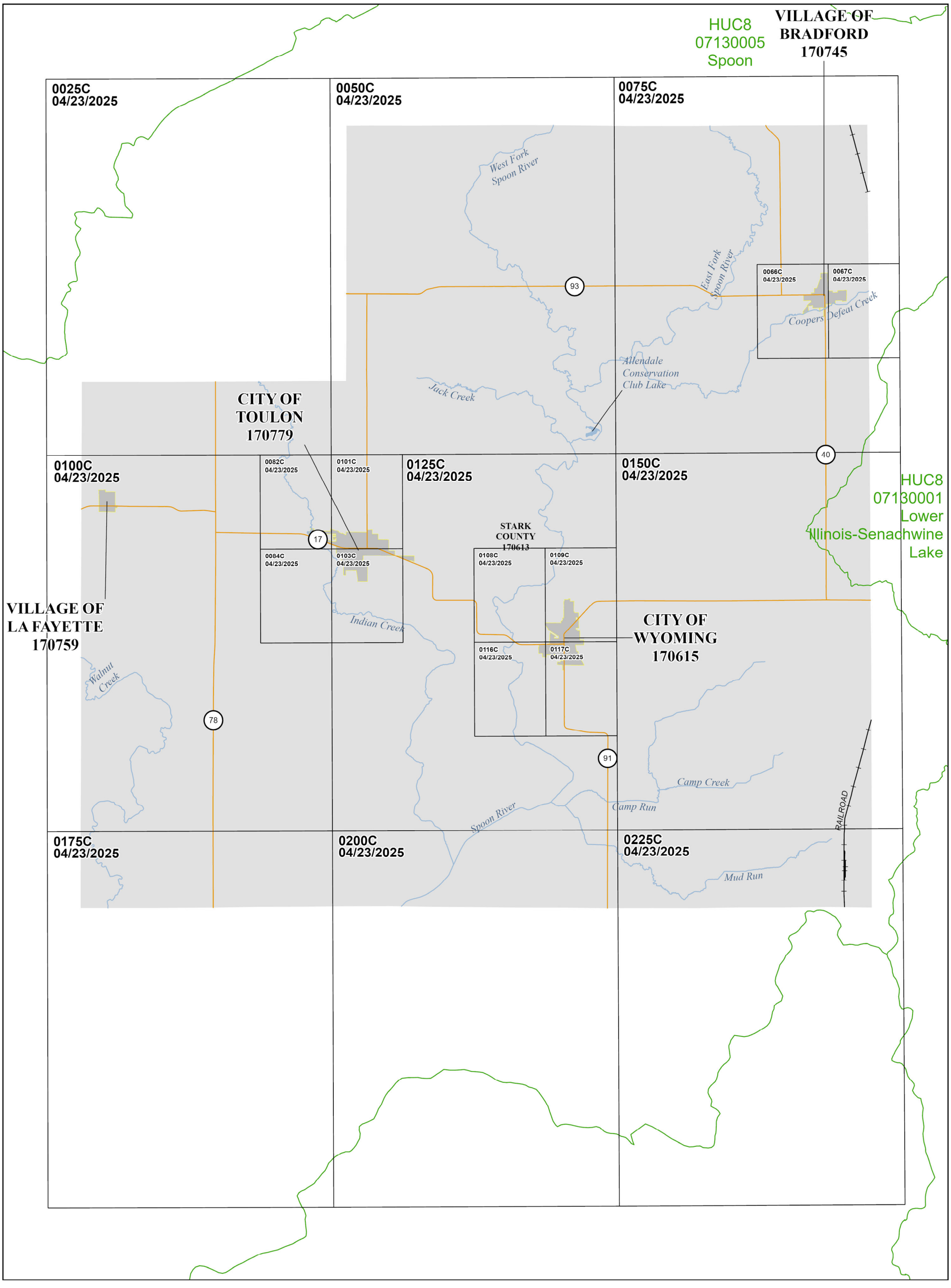
levee systems in this jurisdiction summarized in Table 8 of this FIS Report. For FEMA to accredit the identified levee systems, the levee systems must meet the criteria of the Code of Federal Regulations, Title 44, Section 65.10 (44 CFR 65.10), titled "Mapping of Areas Protected by Levee Systems."

Information on the levee systems in this jurisdiction can be obtained from the USACE National Levee Database (https://levees.sec.usace.army.mil/). For additional information, the user should contact the appropriate jurisdiction floodplain administrator and the levee owner or sponsor.

- 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 Stark 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.

Figure 1: FIRM Index



N

1 inch = 11,436 feet 1:137,232

feet

0 5,000 10,000 20,000 30,000

Map Projection:
NAD 1983 HARN StatePlane Illinois West FIPS 1202 Feet
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

NATIONAL FLOOD INSURANCE PROGRAM

FLOOD INSURANCE RATE MAP INDEX

STARK COUNTY, ILLINOIS, AND INCORPORATED AREAS

PANELS PRINTED:

0025, 0050, 0066, 0067, 0075, 0082, 0084, 0100, 0101, 0103, 0108, 0109, 0116, 0117, 0125, 0150, 0175, 0200, 0225

FEMA

MAP NUMBER
17175CIND0A

EFFECTIVE DATE
April 23, 2025

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.

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 West 1202. 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 Stark 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 Stark County, Illinois, effective April 23, 2025.

NON-ACCREDITED LEVEE SYSTEM: This panel contains a levee system that has not been accredited and is therefore not recognized as reducing the 1-percent-annual-chance flood hazard.

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 Stark 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

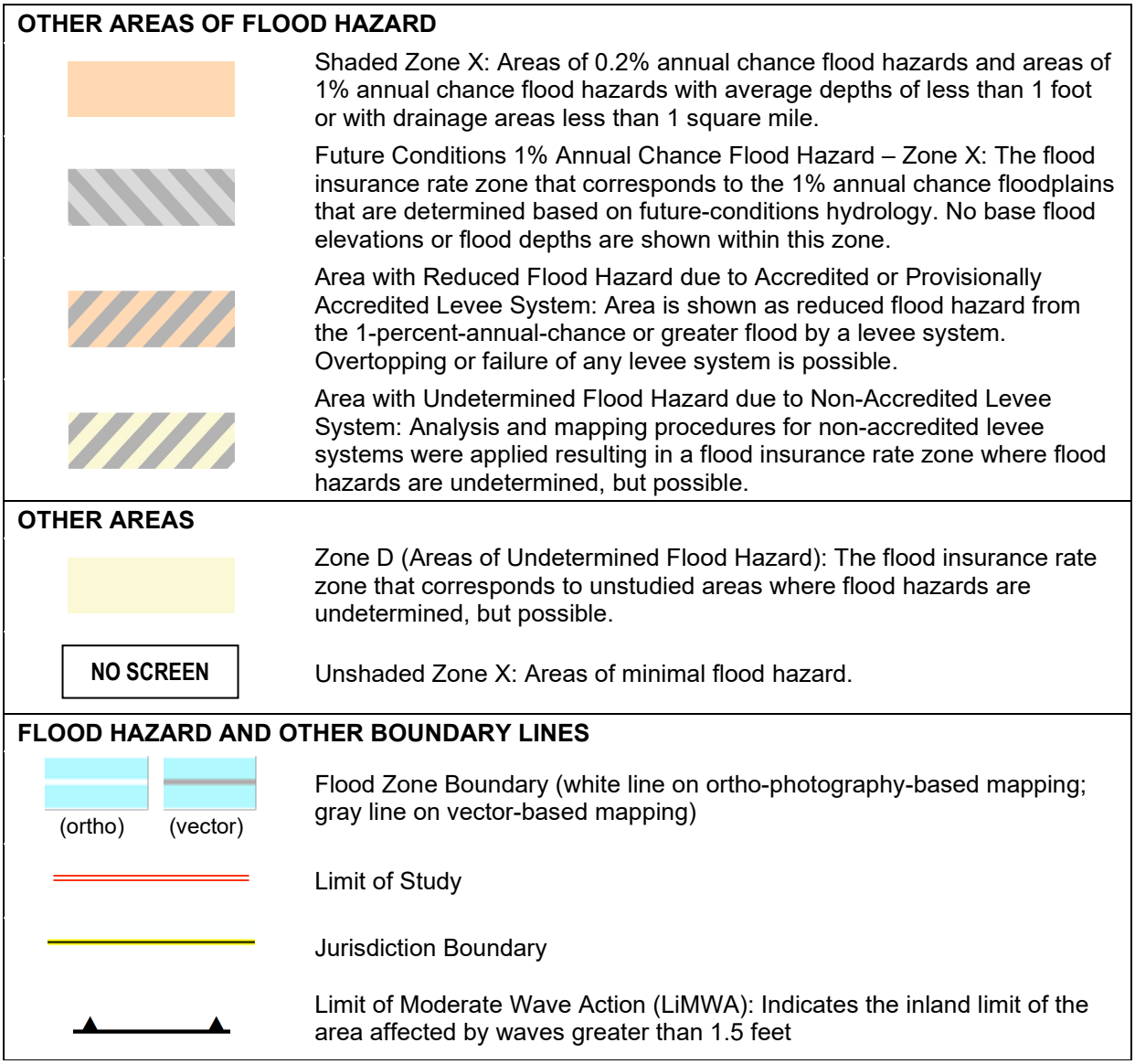


Figure 3: Map Legend for FIRM

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 Stark 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 Stark 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
Camp Creek	Stark County Unincorporated Areas	Confluence with Camp Run	Approximately 18,115 feet upstream of confluence with Camp Run (Just downstream of County Road 1600 E)	07130005	3.4	N	A	2021
Camp Run	Stark County Unincorporated Areas	Confluence with Spoon River	Approximately 43,652 feet upstream of confluence with Spoon River (Approximately 4,150 feet upstream of County Road 1500 E)	07130005	8.3	N	A	2021
Coopers Defeat Creek	Bradford, Village of; Stark County Unincorporated Areas	Confluence with East Fork Spoon River	Approximately 48,078 feet upstream of confluence with East Fork Spoon River (At Stark County and Bureau County Boundary / Just upstream of County Road 1125 E)	07130005	9.1	N	A	2021
Coopers Defeat Creek Tributary A	Stark County Unincorporated Areas	Confluence with Coopers Defeat Creek	Approximately 10,202 feet upstream of confluence with Coopers Defeat Creek (Approximately 4,940 feet upstream of County Road 1600 E)	07130005	1.9	N	A	2021
East Fork Spoon River	Stark County Unincorporated Areas	Confluence with Spoon River	Approximately 71,324 feet upstream of confluence with Spoon River (At Stark County and Bureau County Boundary / Just downstream of County Road 1800 N in Bureau County)	07130005	13.5	N	A	2021
East Fork Spoon River Tributary A	Stark County Unincorporated Areas	Confluence with East Fork Spoon River	Approximately 18,913 feet upstream of confluence with East Fork Spoon River (Approximately 240 feet downstream of County Road 1550 N)	07130005	3.6	N	A	2021

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
East Fork Spoon River Tributary B	Stark County Unincorporated Areas	Confluence with East Fork Spoon River	Approximately 18,401 feet upstream of confluence with East Fork Spoon River (Approximately 3,750 feet upstream of County Highway 16)	07130005	3.5	N	A	2021
East Fork Spoon River Tributary C	Stark County Unincorporated Areas	Confluence with East Fork Spoon River	Approximately 7,716 feet upstream of confluence with East Fork Spoon River (At Stark County and Bureau County Boundary / Approximately 2,950 feet upstream of Illinois Route 40)	07130005	1.5	N	A	2021
East Fork Spoon River Tributary C1	Stark County Unincorporated Areas	Confluence with East Fork Spoon River Tributary C	Approximately 2,570 feet upstream of confluence with East Fork Spoon River Tributary C (At Stark County and Bureau County Boundary / Just downstream of County Road 1800 N in Bureau County)	07130005	0.5	N	A	2021
Fox Creek	Stark County Unincorporated Areas	Confluence with East Fork Spoon River	Approximately 15,942 feet upstream of confluence with East Fork Spoon River (At Stark County and Bureau County Boundary / Just upstream of County Road 1125 E)	07130005	3.0	N	A	2021
Indian Creek	Stark County Unincorporated Areas; Toulon, City of	Confluence with Spoon River	Approximately 99,191 feet upstream of confluence with Spoon River (Approximately 616 feet upstream of Stark County and Henry County Boundary / Approximately 2,586 feet upstream of Saxon Road)	07130005	18.8	N	A	2021

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
Indian Creek Tributary A	Stark County Unincorporated Areas	Confluence with Indian Creek	Approximately 15,994 feet upstream of confluence with Indian Creek (Approximately 1,960 feet upstream of County Road 600 E)	07130005	3.0	N	A	2021
Indian Creek Tributary B	Stark County Unincorporated Areas; Toulon, City of	Confluence with Indian Creek	Approximately 11,898 feet upstream of confluence with Indian Creek (Just downstream of Clinton Street)	07130005	2.3	N	A	2021
Indian Creek Tributary B1	Toulon, City of	Confluence with Indian Creek Tributary B	Approximately 1,878 feet upstream of confluence with Indian Creek Tributary B (Approximately 125 feet upstream of intersection of Thomas Street and Miller Street)	07130005	0.4	N	A	2022
Indian Creek Tributary B2	Toulon, City of	Confluence with Indian Creek Tributary B	Approximately 1,156 feet upstream of confluence with Indian Creek Tributary B (Just downstream of Clinton Street)	07130005	0.2	N	A	2022
Indian Creek Tributary C	Stark County Unincorporated Areas	Confluence with Indian Creek	Approximately 17,599 feet upstream of confluence with Indian Creek (Approximately 7,990 feet upstream of County Road 750 N)	07130005	3.3	N	A	2021
Indian Creek Tributary D	Stark County Unincorporated Areas	Confluence with Indian Creek	Approximately 20,981 feet upstream of confluence with Indian Creek (Approximately 4,940 feet upstream of Illinois Route 78)	07130005	4.0	N	A	2021

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
Indian Creek Tributary E	Stark County Unincorporated Areas	Confluence with Indian Creek	Approximately 8,771 feet upstream of confluence with Indian Creek (At Stark County and Henry County Boundary / Approximately 1,600 feet downstream of Saxon Road in Henry County)	07130005	1.7	N	A	2021
Jack Creek	Stark County Unincorporated Areas	Confluence with Spoon River	Approximately 31,796 feet upstream of confluence with Spoon River (Approximately 4,643 feet upstream of County Road 800 E)	07130005	6.0	N	A	2021
Mud Run	Stark County Unincorporated Areas	Confluence with Camp Run	Approximately 46,952 feet upstream of confluence with Camp Run (Approximately 530 feet upstream of County Road 1700 E)	07130005	8.9	N	A	2021
Prince Run	Stark County Unincorporated Areas	Confluence with Mud Run	Approximately 10,573 feet upstream of confluence with Mud Run (At Stark County and Peoria County Boundary / County Line Road)	07130005	2.0	N	A	2021
Silver Creek	Stark County Unincorporated Areas	Confluence with Fox Creek	Approximately 9,224 feet upstream of confluence with Fox Creek (At Stark County and Bureau County Boundary / Just downstream of County Road 1800 N in Bureau County)	07130005	1.7	N	A	2021

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
Spoon River	Stark County Unincorporated Areas	Approximately 3,135 feet downstream of Stark County and Peoria County Boundary (Approximately 6,310 feet downstream of Maher Road (in Peoria County)	Approximately 733 feet downstream of Stark County and Peoria County Boundary (Approximately 7,000 feet upstream of Maher Road in Peoria County)	07130005	2.5	N	A	1976
Spoon River	Stark County Unincorporated Areas	Approximately 733 feet downstream of Stark County and Peoria County Boundary (Approximately 7,000 feet upstream of Maher Road (in Peoria County)	Approximately 108,050 feet upstream of Stark County and Peoria County Boundary (At the convergence of West Fork Spoon River and East Fork Spoon River / Approximately 5,950 feet upstream of County Highway 11)	07130005	20.6	N	A	2021
Spoon River Tributary H	Stark County Unincorporated Areas	Confluence with Spoon River	Approximately 2,935 feet upstream of confluence with Spoon River (Approximately 959 feet upstream of Stark County and Peoria County Boundary / County Line Road (extended))	07130005	0.6	N	A	2021
Spoon River Tributary I	Stark County Unincorporated Areas	Confluence with Spoon River	Approximately 12,618 feet upstream of confluence with Spoon River (At Stark County and Peoria County Boundary / Approximately 65 feet upstream of County Line Road)	07130005	2.4	N	A	2021

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
Spoon River Tributary J	Stark County Unincorporated Areas; Wyoming, City of	Confluence with Spoon River	Approximately 7,458 feet upstream of confluence with Spoon River (Approximately 1,357 feet upstream of 1st Street)	07130005	1.4	N	A	2021
Spoon River Tributary J1	Stark County Unincorporated Areas; Wyoming, City of	Confluence with Spoon River Tributary J	Approximately 1,788 feet upstream of confluence with Spoon River Tributary J (Approximately 110 feet upstream of Illinois Route 17 / Illinois Route 91)	07130005	0.3	N	A	2021
Walnut Creek	Stark County Unincorporated Areas	At Stark County and Peoria County Boundary / Walnut Creek Road (extended)	Approximately 2,812 feet upstream of Stark County and Knox County Boundary (Approximately 16,880 feet upstream of County Road 100 E)	07130005	13.9	N	A	2021
Walnut Creek Tributary A	Stark County Unincorporated Areas	Confluence with Walnut Creek	Approximately 13,771 feet upstream of confluence with Walnut Creek (Approximately 1,000 feet upstream of Illinois Route 78)	07130005	2.6	N	A	2021
West Fork Spoon River	Stark County Unincorporated Areas	Confluence with Spoon River	Approximately 62,264 feet upstream of confluence with Spoon River (At Stark County and Bureau County Boundary / Approximately 4,670 feet upstream of County Road 1750 N)	07130005	11.8	N	A	2021
West Fork Spoon River Tributary A	Stark County Unincorporated Areas	Confluence with West Fork Spoon River	Approximately 6,764 feet upstream of confluence with West Fork Spoon River (Approximately 60 feet downstream of County Highway 14)	07130005	1.3	N	A	2021

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
West Fork Spoon River Tributary E	Stark County Unincorporated Areas	Approximately 4,552 feet upstream of confluence with West Fork Spoon River (At Stark County and Bureau County Boundary / Approximately 2,678 feet downstream of County Highway 8)	Approximately 6,330 feet upstream of confluence with West Fork Spoon River (Approximately 1,778 feet upstream of Stark County and Bureau County Boundary / Approximately 900 feet downstream of County Highway 8)	07130005	0.3	N	A	2021

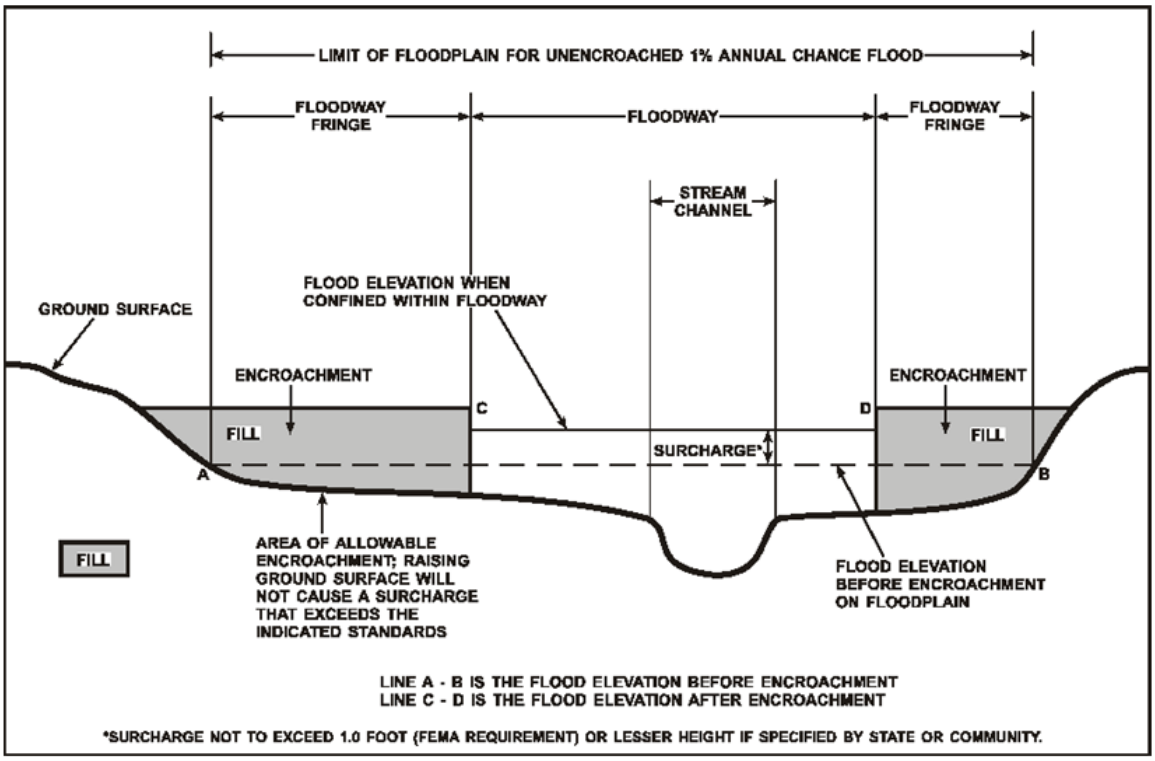
2.2 Floodways

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 the State of Illinois require communities in Stark 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



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 Stark County.

Table 3: Flood Zone Designations by Community

Community	Flood Zone(s)
Bradford, Village of	A, X
La Fayette, Village of	X
Stark County Unincorporated Areas	A, X
Toulon, City of	A, X
Wyoming, City of	A, 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)
Lower Illinois-Senachwine Lake	07130001	Illinois River	Located in the eastern portion of the county, covers approximately 1% of Stark County with 2.5 square miles	1,960
Spoon	07130005	Spoon River	Largest watershed within Stark County, covers approximately 99% of the county with 286 square miles	1,865

4.2 Principal Flood Problems

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

Table 5: Principal Flood Problems

Flooding Source	Description of Flood Problems
Indian Creek	Heavy rain in May 2004 caused Indian Creek to overtop its banks, making multiple roads near Toulon impassable (NOAA 2022). After heavy rainfall in April 2013, the stream gage on Indian Creek near Wyoming reached a record river crest value of 22.89 feet NGVD29 (USGS 2022) or 22.65 feet NAVD88, calculated using a conversion factor of -0.240 feet for Stark County (ISWS 2007). Indian Creek flooded, causing damage to homes and businesses in Stark County (NOAA 2022). Many roads across the county were impassable.
Spoon River	The greatest threat of riverine flooding in Stark County comes from the Spoon River (NCICG 2015). After heavy rainfall in April 2013 the Spoon River flooded, causing damage to homes and businesses in Stark County (NOAA 2022). Many roads across the county were impassable.

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

Table 6: Historic Flooding Elevations

Flooding Source	Location	Historic Peak (Feet NAVD88)	Event Date	Approximate Recurrence Interval (years)	Source of Data
Indian Creek	Just upstream of County Highway 7	22.65	4/18/2013	30	USGS Gage 05568800

4.3 Dams and Other Flood Hazard Reduction Measures

Table 7 contains information about non-levee flood hazard reduction measures within Stark 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

For purposes of the NFIP, FEMA only recognizes levee systems that meet, and continue to meet, minimum design, operation, and maintenance standards that are consistent with comprehensive floodplain management criteria. The Code of Federal Regulations, Title 44, Section 65.10 (44 CFR 65.10) describes the information needed for FEMA to determine if a levee system reduces the flood hazard from the 1-percent-annual-chance

flood. This information must be supplied to FEMA by the community or other party when a flood risk study or restudy is conducted, when FIRMs are revised, or upon FEMA request. FEMA reviews the information for the purpose of establishing the appropriate flood hazard zone.

Levee systems that are determined to reduce the hazard from the 1-percent-annual-chance flood are accredited by FEMA. FEMA can also grant provisional accreditation to a levee system that was previously accredited on an effective FIRM and for which FEMA is awaiting data and/or documentation to demonstrate compliance with 44 CFR 65.10. These levee systems are referred to as Provisionally Accredited Levees, or PALs. Provisional accreditation provides communities and levee owners with a specified timeframe to obtain the necessary data to confirm the levee system's accreditation status. Accredited levee systems and PALs are shown on the FIRM using the symbology shown in Figure 3. If the required information for a PAL is not submitted within the required timeframe, or if information indicates that a levee system no longer meets 44 CFR 65.10, FEMA will consider the levee system as non-accredited and issue an effective FIRM showing the levee-impacted area as a SFHA or Zone D.

FEMA coordinated with the USACE, the local communities, and other organizations to compile a list of levee systems that exist within Stark County.

Table 8, "Levee Systems," lists all accredited levee systems, PALs, and non-accredited levee systems shown on the FIRM for this FIS Report. Other categories of levees may also be included in the table. The Levee ID shown in this table may not match numbers based on other identification systems that were listed in previous FIS Reports. Levee systems identified in the table are displayed on the FIRM with notes to users to indicate their flood hazard mapping status.

Please note that the information presented in

Table 8 is subject to change at any time. For that reason, the latest information regarding the levee systems presented in the table may be obtained by accessing the National Levee Database. For additional information, contact the levee owner/sponsor or the local community shown in Table 30.

Table 8: Levee Systems

Community(ies)	Flooding Source(s)	NLD Levee System ID	NLD Levee System Name	Levee System Status on Effective FIRM	FIRM Panel(s)	Levee Owner(s) / Sponsor(s)
Stark County Unincorporated Areas	Spoon River	5105950073	Don Morrissey Levee	Non-Accredited	17175C0125C 17175C0200C	Privately owned

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. 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.

Stream gage information is provided in Table 11.

Table 9: Summary of Discharges

[Not applicable to this Flood Risk Project]

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
Indian Creek	05568800	USGS	Indian Creek near Wyoming, IL	62.7	3/30/1960	6/25/2021

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.

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					
Camp Creek	Confluence with Camp Run	Approximately 18,115 feet upstream of confluence with Camp Run (Just downstream of County Road 1600 E)	Regression Equations	HEC-RAS 5.0 and up	2/26/2021	A	HEC-RAS v. 5.0.7, 1D Steady Flow; USGS StreamStats 2004, Rural
Camp Run	Confluence with Spoon River	Approximately 43,652 feet upstream of confluence with Spoon River (Approximately 4,150 feet upstream of County Road 1500 E)	Regression Equations	HEC-RAS 5.0 and up	2/26/2021	A	HEC-RAS v. 5.0.7, 1D Steady Flow; USGS StreamStats 2004, Rural
Coopers Defeat Creek	Confluence with East Fork Spoon River	Approximately 48,078 feet upstream of confluence with East Fork Spoon River (At Stark County and Bureau County Boundary / Just upstream of County Road 1125 E)	Regression Equations	HEC-RAS 5.0 and up	2/26/2021	A	HEC-RAS v. 5.0.7, 1D Steady Flow; USGS StreamStats 2004, Rural
Coopers Defeat Creek Tributary A	Confluence with Coopers Defeat Creek	Approximately 10,202 feet upstream of confluence with Coopers Defeat Creek (Approximately 4,940 feet upstream of County Road 1600 E)	Regression Equations	HEC-RAS 5.0 and up	2/26/2021	A	HEC-RAS v. 5.0.7, 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 Spoon River	Confluence with Spoon River	Approximately 71,324 feet upstream of confluence with Spoon River (At Stark County and Bureau County Boundary / Just downstream of County Road 1800 N in Bureau County)	Regression Equations	HEC-RAS 5.0 and up	2/26/2021	A	HEC-RAS v. 5.0.7, 1D Steady Flow; USGS StreamStats 2004, Rural
East Fork Spoon River Tributary A	Confluence with East Fork Spoon River	Approximately 18,913 feet upstream of confluence with East Fork Spoon River (Approximately 240 feet downstream of County Road 1550 N)	Regression Equations	HEC-RAS 5.0 and up	2/26/2021	A	HEC-RAS v. 5.0.7, 1D Steady Flow; USGS StreamStats 2004, Rural. Hydraulic model does not extend to upstream floodplain mapping limits; 1% and 0.2% annual chance floodplain mapping for upstream 240 feet of this stream is based on elevation from last modeled cross section.
East Fork Spoon River Tributary B	Confluence with East Fork Spoon River	Approximately 18,401 feet upstream of confluence with East Fork Spoon River (Approximately 3,750 feet upstream of County Highway 16)	Regression Equations	HEC-RAS 5.0 and up	2/26/2021	A	HEC-RAS v. 5.0.7, 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 Spoon River Tributary C	Confluence with East Fork Spoon River	Approximately 7,716 feet upstream of confluence with East Fork Spoon River (At Stark County and Bureau County Boundary / Approximately 2,950 feet upstream of Illinois Route 40)	Regression Equations	HEC-RAS 5.0 and up	2/26/2021	A	HEC-RAS v. 5.0.7, 1D Steady Flow; USGS StreamStats 2004, Rural
East Fork Spoon River Tributary C1	Confluence with East Fork Spoon River Tributary C	Approximately 2,570 feet upstream of confluence with East Fork Spoon River Tributary C (At Stark County and Bureau County Boundary / Just downstream of County Road 1800 N in Bureau County)	Regression Equations	HEC-RAS 5.0 and up	2/26/2021	A	HEC-RAS v. 5.0.7, 1D Steady Flow; USGS StreamStats 2004, Rural
Fox Creek	Confluence with East Fork Spoon River	Approximately 15,942 feet upstream of confluence with East Fork Spoon River (At Stark County and Bureau County Boundary / Just upstream of County Road 1125 E)	Regression Equations	HEC-RAS 5.0 and up	2/26/2021	A	HEC-RAS v. 5.0.7, 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					
Indian Creek	Confluence with Spoon River	Approximately 99,191 feet upstream of confluence with Spoon River (Approximately 616 feet upstream of Stark County and Henry County Boundary / Approximately 2,586 feet upstream of Saxon Road)	Regression Equations	HEC-RAS 5.0 and up	2/26/2021	A	HEC-RAS v. 5.0.7, 1D Steady Flow; Bulletin 17C weighted with Regression Equations (USGS StreamStats 2004, Rural)
Indian Creek Tributary A	Confluence with Indian Creek	Approximately 15,994 feet upstream of confluence with Indian Creek (Approximately 1,960 feet upstream of County Road 600 E)	Regression Equations	HEC-RAS 5.0 and up	2/26/2021	A	HEC-RAS v. 5.0.7, 1D Steady Flow; USGS StreamStats 2004, Rural
Indian Creek Tributary B	Confluence with Indian Creek	Approximately 11,898 feet upstream of confluence with Indian Creek (Just downstream of Clinton Street)	Regression Equations	HEC-RAS 5.0 and up	2/26/2021	A	HEC-RAS v. 5.0.7, 1D Steady Flow; USGS StreamStats 2004, Rural
Indian Creek Tributary B1	Confluence with Indian Creek Tributary B	Approximately 1,878 feet upstream of confluence with Indian Creek Tributary B (Approximately 125 feet upstream of intersection of Thomas Street and Miller Street)	Regression Equations	HEC-RAS 5.0 and up	1/13/2022	A	HEC-RAS v. 5.0.7, 1D Steady Flow; USGS StreamStats 2004, Urban

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					
Indian Creek Tributary B2	Confluence with Indian Creek Tributary B	Approximately 1,156 feet upstream of confluence with Indian Creek Tributary B (Just downstream of Clinton Street)	Regression Equations	HEC-RAS 5.0 and up	1/13/2022	A	HEC-RAS v. 5.0.7, 1D Steady Flow; USGS StreamStats 2004, Urban
Indian Creek Tributary C	Confluence with Indian Creek	Approximately 17,599 feet upstream of confluence with Indian Creek (Approximately 7,990 feet upstream of County Road 750 N)	Regression Equations	HEC-RAS 5.0 and up	2/26/2021	A	HEC-RAS v. 5.0.7, 1D Steady Flow; USGS StreamStats 2004, Rural
Indian Creek Tributary D	Confluence with Indian Creek	Approximately 20,981 feet upstream of confluence with Indian Creek (Approximately 4,940 feet upstream of Illinois Route 78)	Regression Equations	HEC-RAS 5.0 and up	2/26/2021	A	HEC-RAS v. 5.0.7, 1D Steady Flow; USGS StreamStats 2004, Rural
Indian Creek Tributary E	Confluence with Indian Creek	Approximately 8,771 feet upstream of confluence with Indian Creek (At Stark County and Henry County Boundary / Approximately 1,600 feet downstream of Saxon Road in Henry County)	Regression Equations	HEC-RAS 5.0 and up	2/26/2021	A	HEC-RAS v. 5.0.7, 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					
Jack Creek	Confluence with Spoon River	Approximately 31,796 feet upstream of confluence with Spoon River (Approximately 4,643 feet upstream of County Road 800 E)	Regression Equations	HEC-RAS 5.0 and up	9/14/2021	A	HEC-RAS v. 5.0.7, 1D Steady Flow; USGS StreamStats 2004, Rural
Mud Run	Confluence with Camp Run	Approximately 46,952 feet upstream of confluence with Camp Run (Approximately 530 feet upstream of County Road 1700 E)	Regression Equations	HEC-RAS 5.0 and up	2/26/2021	A	HEC-RAS v. 5.0.7, 1D Steady Flow; USGS StreamStats 2004, Rural
Prince Run	Confluence with Mud Run	Approximately 10,573 feet upstream of confluence with Mud Run (At Stark County and Peoria County Boundary / County Line Road)	Regression Equations	HEC-RAS 5.0 and up	2/26/2021	A	HEC-RAS v. 5.0.7, 1D Steady Flow; USGS StreamStats 2004, Rural
Silver Creek	Confluence with Fox Creek	Approximately 9,224 feet upstream of confluence with Fox Creek (At Stark County and Bureau County Boundary / Just downstream of County Road 1800 N in Bureau County)	Regression Equations	HEC-RAS 5.0 and up	2/26/2021	A	HEC-RAS v. 5.0.7, 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					
Spoon River	Approximately 3,135 feet downstream of Stark County and Peoria County Boundary (Approximately 6,310 feet downstream of Maher Road (in Peoria County)	Approximately 733 feet downstream of Stark County and Peoria County Boundary (Approximately 7,000 feet upstream of Maher Road in Peoria County)	OTHER	Other	5/1/1976	A	Flood flow frequency data were based on statistical analyses of stage-discharge records. Water-surface elevations were computed through use of the USACE HEC-2 step-backwater program. Topographic data for redelineation was a 2012 Digital Terrain Model from ISGS.
Spoon River	Approximately 733 feet downstream of Stark County and Peoria County Boundary (Approximately 7,000 feet upstream of Maher Road (in Peoria County)	Approximately 108,050 feet upstream of Stark County and Peoria County Boundary (At the convergence of West Fork Spoon River and East Fork Spoon River / Approximately 5,950 feet upstream of County Highway 11)	Regression Equations	HEC-RAS 5.0 and up	9/14/2021	A	HEC-RAS v. 5.0.7, 1D Steady Flow; USGS StreamStats 2004, Rural
Spoon River Tributary H	Confluence with Spoon River	Approximately 2,935 feet upstream of confluence with Spoon River (Approximately 959 feet upstream of Stark County and Peoria County Boundary / County Line Road (extended))	Regression Equations	HEC-RAS 5.0 and up	9/14/2021	A	HEC-RAS v. 5.0.7, 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					
Spoon River Tributary I	Confluence with Spoon River	Approximately 12,618 feet upstream of confluence with Spoon River (At Stark County and Peoria County Boundary / Approximately 65 feet upstream of County Line Road)	Regression Equations	HEC-RAS 5.0 and up	9/14/2021	A	HEC-RAS v. 5.0.7, 1D Steady Flow; USGS StreamStats 2004, Rural
Spoon River Tributary J	Confluence with Spoon River	Approximately 7,458 feet upstream of confluence with Spoon River (Approximately 1,357 feet upstream of 1st Street)	Regression Equations	HEC-RAS 5.0 and up	9/14/2021	A	HEC-RAS v. 5.0.7, 1D Steady Flow; USGS StreamStats 2004, Rural
Spoon River Tributary J1	Confluence with Spoon River Tributary J	Approximately 1,788 feet upstream of confluence with Spoon River Tributary J (Approximately 110 feet upstream of Illinois Route 17 / Illinois Route 91)	Regression Equations	HEC-RAS 5.0 and up	9/14/2021	A	HEC-RAS v. 5.0.7, 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					
Walnut Creek	At Stark County and Peoria County Boundary / Walnut Creek Road (extended)	Approximately 2,812 feet upstream of Stark County and Knox County Boundary (Approximately 16,880 feet upstream of County Road 100 E)	Regression Equations	HEC-RAS 5.0 and up	2/26/2021	A	HEC-RAS v. 5.0.7, 1D Steady Flow; USGS StreamStats 2004, Rural; the Walnut Creek 0.2% annual chance event in Stark County is affected by backwater from the Spoon River in Peoria County for approximately 1,150 feet upstream of Stark/Peoria County Boundary
Walnut Creek Tributary A	Confluence with Walnut Creek	Approximately 13,771 feet upstream of confluence with Walnut Creek (Approximately 1,000 feet upstream of Illinois Route 78)	Regression Equations	HEC-RAS 5.0 and up	2/26/2021	A	HEC-RAS v. 5.0.7, 1D Steady Flow; USGS StreamStats 2004, Rural
West Fork Spoon River	Confluence with Spoon River	Approximately 62,264 feet upstream of confluence with Spoon River (At Stark County and Bureau County Boundary / Approximately 4,670 feet upstream of County Road 1750 N)	Regression Equations	HEC-RAS 5.0 and up	9/14/2021	A	HEC-RAS v. 5.0.7, 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					
West Fork Spoon River Tributary A	Confluence with West Fork Spoon River	Approximately 6,764 feet upstream of confluence with West Fork Spoon River (Approximately 60 feet downstream of County Highway 14)	Regression Equations	HEC-RAS 5.0 and up	9/14/2021	A	HEC-RAS v. 5.0.7, 1D Steady Flow; USGS StreamStats 2004, Rural
West Fork Spoon River Tributary E	Approximately 4,552 feet upstream of confluence with West Fork Spoon River (At Stark County and Bureau County Boundary / Approximately 2,678 feet downstream of County Highway 8)	Approximately 6,330 feet upstream of confluence with West Fork Spoon River (Approximately 1,778 feet upstream of Stark County and Bureau County Boundary / Approximately 900 feet downstream of County Highway 8)	Regression Equations	HEC-RAS 5.0 and up	9/14/2021	A	HEC-RAS v. 5.0.7, 1D Steady Flow; USGS StreamStats 2004, Rural

Table 13: Roughness Coefficients

Flooding Source	Channel “n”	Overbank “n”
Camp Creek	0.035	0.035-0.045
Camp Run	0.035	0.035-0.075
Coopers Defeat Creek	0.035	0.035-0.075
Coopers Defeat Creek Tributary A	0.035	0.035-0.045
East Fork Spoon River	0.035	0.035-0.075
East Fork Spoon River Tributary A	0.035	0.035-0.075
East Fork Spoon River Tributary B	0.035	0.035-0.075
East Fork Spoon River Tributary C	0.035	0.035-0.045
East Fork Spoon River Tributary C1	0.035	0.035-0.045
Fox Creek	0.035	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
Indian Creek Tributary B	0.035-0.075	0.035-0.075
Indian Creek Tributary B1	0.045	0.045-0.075
Indian Creek Tributary B2	0.045	0.045-0.075
Indian Creek Tributary C	0.035-0.075	0.035-0.075
Indian Creek Tributary D	0.035-0.075	0.035-0.075
Indian Creek Tributary E	0.045-0.075	0.035-0.075
Jack Creek	0.035	0.035-0.075
Mud Run	0.035-0.075	0.035-0.075
Prince Run	0.045-0.075	0.035-0.075
Silver Creek	0.035	0.035-0.060
Spoon River	0.030-0.040	0.070-0.080
Spoon River	0.035	0.035-0.075
Spoon River Tributary H	0.035	0.035-0.075
Spoon River Tributary I	0.035	0.035-0.045
Spoon River Tributary J	0.035	0.035-0.075
Spoon River Tributary J1	0.035	0.035-0.075
Walnut Creek	0.035-0.075	0.035-0.075
Walnut Creek Tributary A	0.045-0.075	0.045-0.075
West Fork Spoon River	0.035	0.035-0.075
West Fork Spoon River Tributary A	0.035	0.035-0.075
West Fork Spoon River Tributary E	0.035	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 Stark County are provided in Table 19.

Table 19: Countywide Vertical Datum Conversion

[Not applicable for this Flood Risk Project]

Table 20: Stream-Based Vertical Datum Conversion

[Not applicable for 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
2021 TIGER/Line Shapefiles	U.S. Census Bureau	September 2021		Spatial feature and attribute information for political boundaries
Illinois Highway System	Illinois Department of Transportation	2021		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
National Levee Database	U.S. Army Corps of Engineers	July 22, 2022		Spatial and attribute information for levees
Stream Gages	U.S. Geological Survey	November 11, 2022		Spatial feature and attribute information for stream gages, S_Gage, S_HWM
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 4/23/2025

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
Stark County	Camp Creek, Camp Run, Coopers Defeat Creek, Coopers Defeat Creek Tributary A, East Fork Spoon River, East Fork Spoon River Tributary A, East Fork Spoon River Tributary B, East Fork Spoon River Tributary C, East Fork Spoon River Tributary C1, Fox Creek, Indian Creek, Indian Creek Tributary A, Indian Creek Tributary B, Indian Creek Tributary B1, Indian Creek Tributary B2, Indian Creek Tributary C, Indian Creek Tributary D, Indian Creek Tributary E, Jack Creek, Mud Run, Prince Run, Silver Creek, Spoon River, Spoon River Tributary H, Spoon River Tributary I, Spoon River Tributary J, Spoon River Tributary J1, Walnut Creek, Walnut Creek Tributary A, West Fork Spoon River, West Fork Spoon River Tributary A, West Fork Spoon River Tributary E	2012 Digital Terrain Model	CVA of 1.19 ft at 95th Percentile	0.30 meters (per manufacturer's system specifications)	ISGS 2013

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

[Not applicable to this Flood Risk Project]

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 the 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 Stark 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 Stark 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 Stark County FIRMs in countywide format was 4/23/2025.

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)
Bradford, Village of	12/20/1974	12/20/1974	N/A	9/4/1986	4/23/2025
La Fayette, Village of [1, 2]	4/23/2025	N/A	N/A	4/23/2025	N/A
Stark County Unincorporated Areas	4/2/1976	4/2/1976	N/A	12/21/1984	4/23/2025
Toulon, City of	5/31/1974	5/31/1974	6/4/1976	6/18/1987	4/23/2025
Wyoming, City of	3/10/1978	3/10/1978	N/A	4/23/2025	N/A

[1] No Special Flood Hazard Areas Identified

[2] This community did not have a FIRM prior to the first countywide FIRM for Stark 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
Camp Creek	4/23/2025	Illinois State Water Survey	EMC-2019-CA-0009, ISWS19-03	February 2021	Stark County Unincorporated Areas
Camp Run	4/23/2025	Illinois State Water Survey	EMC-2019-CA-0009, ISWS19-03	February 2021	Stark County Unincorporated Areas
Coopers Defeat Creek	4/23/2025	Illinois State Water Survey	EMC-2019-CA-0009, ISWS19-03	February 2021	Bradford, Village of; Stark County Unincorporated Areas
Coopers Defeat Creek Tributary A	4/23/2025	Illinois State Water Survey	EMC-2019-CA-0009, ISWS19-03	February 2021	Stark County Unincorporated Areas
East Fork Spoon River	4/23/2025	Illinois State Water Survey	EMC-2019-CA-0009, ISWS19-03	February 2021	Stark County Unincorporated Areas
East Fork Spoon River Tributary A	4/23/2025	Illinois State Water Survey	EMC-2019-CA-0009, ISWS19-03	February 2021	Stark County Unincorporated Areas
East Fork Spoon River Tributary B	4/23/2025	Illinois State Water Survey	EMC-2019-CA-0009, ISWS19-03	February 2021	Stark County Unincorporated Areas
East Fork Spoon River Tributary C	4/23/2025	Illinois State Water Survey	EMC-2019-CA-0009, ISWS19-03	February 2021	Stark County Unincorporated Areas
East Fork Spoon River Tributary C1	4/23/2025	Illinois State Water Survey	EMC-2019-CA-0009, ISWS19-03	February 2021	Stark County Unincorporated Areas
Fox Creek	4/23/2025	Illinois State Water Survey	EMC-2019-CA-0009, ISWS19-03	February 2021	Stark County Unincorporated Areas
Indian Creek	4/23/2025	Illinois State Water Survey	EMC-2019-CA-0009, ISWS19-03	February 2021	Stark County Unincorporated Areas; Toulon, City of
Indian Creek Tributary A	4/23/2025	Illinois State Water Survey	EMC-2019-CA-0009, ISWS19-03	February 2021	Stark 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
Indian Creek Tributary B	4/23/2025	Illinois State Water Survey	EMC-2019-CA-0009, ISWS19-03	February 2021	Stark County Unincorporated Areas; Toulon, City of
Indian Creek Tributary B1	4/23/2025	Illinois State Water Survey	EMC-2019-CA-0009, ISWS19-03	January 2022	Toulon, City of
Indian Creek Tributary B2	4/23/2025	Illinois State Water Survey	EMC-2019-CA-0009, ISWS19-03	January 2022	Toulon, City of
Indian Creek Tributary C	4/23/2025	Illinois State Water Survey	EMC-2019-CA-0009, ISWS19-03	February 2021	Stark County Unincorporated Areas
Indian Creek Tributary D	4/23/2025	Illinois State Water Survey	EMC-2019-CA-0009, ISWS19-03	February 2021	Stark County Unincorporated Areas
Indian Creek Tributary E	4/23/2025	Illinois State Water Survey	EMC-2019-CA-0009, ISWS19-03	February 2021	Stark County Unincorporated Areas
Jack Creek	4/23/2025	Illinois State Water Survey	EMC-2019-CA-0009, ISWS19-03	September 2021	Stark County Unincorporated Areas
Mud Run	4/23/2025	Illinois State Water Survey	EMC-2019-CA-0009, ISWS19-03	February 2021	Stark County Unincorporated Areas
Prince Run	4/23/2025	Illinois State Water Survey	EMC-2019-CA-0009, ISWS19-03	February 2021	Stark County Unincorporated Areas
Silver Creek	4/23/2025	Illinois State Water Survey	EMC-2019-CA-0009, ISWS19-03	February 2021	Stark County Unincorporated Areas
Spoon River	4/23/2025	U.S. Army Corps of Engineers, Chicago District	IAA-H-19-74 PO17; IAA-H-16-75 PO6; IAA-H-7-76 PO5	May 1976	Stark County Unincorporated Areas
Spoon River	4/23/2025	Illinois State Water Survey	EMC-2019-CA-0009, ISWS19-03	September 2021	Stark County Unincorporated Areas
Spoon River Tributary H	4/23/2025	Illinois State Water Survey	EMC-2019-CA-0009, ISWS19-03	September 2021	Stark 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
Spoon River Tributary I	4/23/2025	Illinois State Water Survey	EMC-2019-CA-0009, ISWS19-03	September 2021	Stark County Unincorporated Areas
Spoon River Tributary J	4/23/2025	Illinois State Water Survey	EMC-2019-CA-0009, ISWS19-03	September 2021	Stark County Unincorporated Areas; Wyoming, City of
Spoon River Tributary J1	4/23/2025	Illinois State Water Survey	EMC-2019-CA-0009, ISWS19-03	September 2021	Stark County Unincorporated Areas; Wyoming, City of
Walnut Creek	4/23/2025	Illinois State Water Survey	EMC-2019-CA-0009, ISWS19-03	February 2021	Stark County Unincorporated Areas
Walnut Creek Tributary A	4/23/2025	Illinois State Water Survey	EMC-2019-CA-0009, ISWS19-03	February 2021	Stark County Unincorporated Areas
West Fork Spoon River	4/23/2025	Illinois State Water Survey	EMC-2019-CA-0009, ISWS19-03	September 2021	Stark County Unincorporated Areas
West Fork Spoon River Tributary A	4/23/2025	Illinois State Water Survey	EMC-2019-CA-0009, ISWS19-03	September 2021	Stark County Unincorporated Areas
West Fork Spoon River Tributary E	4/23/2025	Illinois State Water Survey	EMC-2019-CA-0009, ISWS19-03	September 2021	Stark 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
Bradford, Village of	4/23/2025	7/22/2020	Other	Elmira Township, IDNR-OWR, ISWS, Valley Township, and the community
		9/20/2021	Flood Risk Review	Essex Township, FEMA, IDNR-OWR, ISWS, and the community
		2/28/2023	Final CCO	FEMA, Henry County OEM, IDNR-OWR, ISWS, and the community
		6/22/2023	Other	IDNR-OWR, ISWS, and the community
La Fayette, Village of	4/23/2025	7/22/2020	Other	Elmira Township, IDNR-OWR, ISWS, and Valley Township
		9/20/2021	Flood Risk Review	Essex Township, FEMA, IDNR-OWR, and ISWS
		2/28/2023	Final CCO	FEMA, Henry County OEM, IDNR-OWR, ISWS, and the community
		6/22/2023	Other	IDNR-OWR and ISWS
Stark County Unincorporated Areas	4/23/2025	7/22/2020	Other	Elmira Township, IDNR-OWR, ISWS, Valley Township, and the community
		9/20/2021	Flood Risk Review	Essex Township, FEMA, IDNR-OWR, ISWS, and the community
		2/28/2023	Final CCO	FEMA, Henry County OEM, IDNR-OWR, ISWS, and the community
		6/22/2023	Other	IDNR-OWR and ISWS

Table 29: Community Meetings (continued)

Community	FIS Report Dated	Date of Meeting	Meeting Type	Attended By
Toulon, City of	4/23/2025	7/22/2020	Other	Elmira Township, IDNR-OWR, ISWS, Valley Township, and the community
		9/20/2021	Flood Risk Review	Essex Township, FEMA, IDNR-OWR, ISWS, and the community
		1/13/2022	Flood Risk Review	FEMA, IDNR-OWR, ISWS, and the community
		2/28/2023	Final CCO	FEMA, Henry County OEM, IDNR-OWR, ISWS, and the community
		6/22/2023	Other	IDNR-OWR, ISWS, and the community
Wyoming, City of	4/23/2025	7/22/2020	Other	Elmira Township, IDNR-OWR, ISWS, Valley Township, and the community
		9/20/2021	Flood Risk Review	Essex Township, FEMA, IDNR-OWR, ISWS, and the community
		2/28/2023	Final CCO	FEMA, Henry County OEM, IDNR-OWR, and ISWS
		6/22/2023	Other	IDNR-OWR and ISWS

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 Stark 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
Bradford, Village of	Village Hall, 160 West Main Street	Bradford	IL	61421
La Fayette, Village of [1]	Village Hall, 406 Hodgson Street	La Fayette	IL	61449
Stark County Unincorporated Areas	County Courthouse, 130 West Main Street	Toulon	IL	61483
Toulon, City of	City Hall, 122 North Franklin Street	Toulon	IL	61483
Wyoming, City of	City Hall, 108 East Williams Street	Wyoming	IL	61491

[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/flood-maps/products-tools/know-your-risk/engineers-surveyors-architects
NFIP website	www.fema.gov/flood-insurance
NFHL Dataset	msc.fema.gov
FEMA Region V	536 South Clark Street, 6th Floor 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	Erin C. Conley Illinois Department of Natural Resources One Natural Resources Way Springfield, IL 62702-1271 (217) 782-4428 erin.c.conley@illinois.gov
State GIS Coordinator	Mark Yacucci Illinois State Geological Survey 615 East Peabody Drive Champaign, IL 61820 (217) 265-0747 yacucci@illinois.edu

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
FEMA 1978	Federal Emergency Management Agency	*Flood Hazard Boundary Map, City of Wyoming, Illinois, Stark County*		Washington, DC	March 10, 1978	https://msc.fema.gov
FEMA 1982	Federal Emergency Management Agency	*Flood Insurance Study, Peoria County Unincorporated Areas, Illinois*		Washington, DC	December 1, 1982	https://msc.fema.gov
FEMA 1984	Federal Emergency Management Agency	*Flood Insurance Rate Map, Stark County Unincorporated Areas, Illinois, Stark County*		Washington, DC	December 21, 1984	https://msc.fema.gov
FEMA 1986	Federal Emergency Management Agency	*Flood Insurance Rate Map, Village of Bradford, Illinois, Stark County*		Washington, DC	September 4, 1986	https://msc.fema.gov
FEMA 1987	Federal Emergency Management Agency	*Flood Insurance Rate Map, City of Toulon, Illinois, Stark County*		Washington, DC	June 18, 1987	https://msc.fema.gov
IDOT 2021	Illinois Department of Transportation	*Illinois Highway System*		Springfield, IL	2021	https://idot.illinois.gov
ISGS 2003	Illinois State Geological Survey	*Illinois Public Land Survey System*		Champaign, IL	April 2003	https://clearinghouse.isgs.illinois.edu

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 2013	Illinois State Geological Survey	*2012 Digital Terrain Model (DTM) for Stark County, Illinois*		Champaign, IL	March 28, 2013	https://clearinghouse.isgs.illinois.edu
ISWS 2007	Illinois State Water Survey	*Countywide Vertical Datum Conversion Factors in Illinois*		Champaign, IL	2007	https://www.isws.illinois.edu/maps
ISWS 2022	Illinois State Water Survey	*Hydrologic and Hydraulic Modeling and Floodplain Mapping for Stark County, Illinois*		Champaign, IL	July 2022	
NCICG 2015	North Central Illinois Council of Governments	*Bureau, LaSalle, Marshall, Putnam, and Stark Counties, Natural Hazards Mitigation Plan*		Ottawa, IL	August 2015	https://iemaohs.illinois.gov/recovery/planning.html
NOAA 2022	National Oceanic and Atmospheric Administration	*Storm Events Database*			August 26, 2022	https://www.ncdc.noaa.gov/stormevents/
USACE 2022	U.S. Army Corps of Engineers	*National Levee Database*			July 22, 2022	https://levees.sec.usace.army.mil
USCB 2021	U.S. Census Bureau	*2021 TIGER/Line Shapefiles*		Washington, DC	September 2021	https://www.census.gov
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

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 2020	U.S. Geological Survey	*USGS National Map: Orthoimagery*			October 2020	https://nationalmap.gov
USGS 2022	U.S. Geological Survey	*Stream Gages*		Reston, VA	November 11, 2022	https://waterdata.usgs.gov