FLOOD INSURANCE STUDY

FEDERAL EMERGENCY MANAGEMENT AGENCY

VOLUME 1 OF 3

HAMILTON COUNTY, OHIO

AND INCORPORATED AREAS

COMMUNITY NAME	NUMBER	COMMUNITY NAME	NUMBER
ADDYSTON, VILLAGE OF	390205	LOVELAND, CITY OF	390068
AMBERLEY, VILLAGE OF	390206	MADEIRA, CITY OF	390225
ARLINGTON HEIGHTS, VILLAGE OF	390207	MARIEMONT, VILLAGE OF	390226
BLUE ASH, CITY OF	390208	MONTGOMERY, CITY OF	390228
CHEVIOT, CITY OF*	390209	MOUNT HEALTHY, CITY OF	390229
CINCINNATI, CITY OF	390210	NEWTOWN, VILLAGE OF	390230
CLEVES, VILLAGE OF	390211	NORTH BEND, VILLAGE OF	390231
DEER PARK, CITY OF*	390212	NORTH COLLEGE HILL, CITY OF	390232
ELMWOOD PLACE, VILLAGE OF	390213	NORWOOD, CITY OF*	390233
EVENDALE, VILLAGE OF	390214	READING, CITY OF	390234
FAIRFAX, VILLAGE OF	390215	SHARONVILLE, CITY OF	390236
FOREST PARK, CITY OF	390216	SILVERTON, CITY OF*	390237
GLENDALE, VILLAGE OF	390217	SPRINGDALE, CITY OF	390877
GOLF MANOR, CITY OF*	390218	ST. BERNARD, CITY OF	390235
GREENHILLS, VILLAGE OF	390219	TERRACE PARK, VILLAGE OF	390633
HAMILTON COUNTY, UNINCORPORATED AREAS	390204	THE VILLAGE OF INDIAN HILL, CITY OF	390221
HARRISON, CITY OF	390220	WOODLAWN, VILLAGE OF	390239
LINCOLN HEIGHTS, VILLAGE OF*	390222	WYOMING, CITY OF	390240
LOCKLAND, VILLAGE OF	390223		

*No Special Flood Hazard Areas Identified

REVISED:

JUNE 7, 2023

FLOOD INSURANCE STUDY NUMBER

39061CV001D

Version Number 2.5.3.5

FEMA

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Flood Insurance Rate Map (FIRM)

FLOOD INSURANCE STUDY REPORT
HAMILTON COUNTY, OHIO

SECTION 1.0 – INTRODUCTION

1.1 The National Flood Insurance Program

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

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

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

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

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

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

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

1.2 Purpose of this Flood Insurance Study Report

This Flood Insurance Study (FIS) Report revises and updates information on the existence and severity of flood hazards for the 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 Hamilton County, Ohio.

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.

The location of flood hazard data for participating communities in multiple jurisdictions is also indicated in the table.

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
Addyston, Village of	390205	05090203	39061C0188F, 39061C0189F, 39061C0302F	
Amberley, Village of	390206	05090203	39061C0229E, 39061C0231E, 39061C0233E	

Table 1: Listing of NFIP Jurisdictions (*continued*)

Community	CID	HUC-8 Sub-Basin(s)	Located on FIRM Panel(s)	If Not Included, Location of Flood Hazard Data
Arlington Heights, Village of[1]	390207	05090203	39061C0227E, 39061C0229E	
Blue Ash, City of	390208	05090202, 05090203	39061C0094E, 39061C0113F, 39061C0231E, 39061C0232E[2], 39061C0234E[2], 39061C0251F, 39061C0253F	
Cheviot, City of[1]	390209	05080002, 05090203	39061C0194E, 39061C0211E[2], 39061C0213E[2]	
Cincinnati, City of	390210	05090201, 05090202, 05090203	39061C0189F, 39061C0204E, 39061C0208E, 39061C0209E, 39061C0211E[2], 39061C0212E, 39061C0213E[2], 39061C0214E[2], 39061C0216F, 39061C0217F, 39061C0218F, 39061C0219E[2], 39061C0226E, 39061C0228E, 39061C0229E, 39061C0233E, 39061C0234E[2], 39061C0236E, 39061C0237E[2], 39061C0238E[2], 39061C0239E[2], 39061C0241F, 39061C0242F, 39061C0243F, 39061C0244F, 39061C0263F, 39061C0302F, 39061C0306F, 39061C0307F, 39061C0309F, 39061C0326E, 39061C0327E[2], 39061C0328F, 39061C0329F, 39061C0331F, 39061C0332F, 39061C0333F, 39061C0334F, 39061C0355G, 39061C0356G, 39061C0357F, 39061C0358G, 39061C0359E[2], 39061C0366F, 39061C0376F, 39061C0378F	
Cleves, Village of	390211	05080002, 05090203	39061C0167E, 39061C0169F, 39061C0186E, 39061C0188F	
Deer Park, City of[1]	390212	05090202, 05090203	39061C0233E, 39061C0234E[2]	

[1] No Special Flood Hazard Areas Identified

[2] Panel Not Printed

Table 1: Listing of NFIP Jurisdictions (*continued*)

Community	CID	HUC-8 Sub-Basin(s)	Located on FIRM Panel(s)	If Not Included, Location of Flood Hazard Data
Elmwood Place, Village of[1]	390213	05090203	39061C0228E, 39061C0236E	
Evendale, Village of	390214	05090202, 05090203	39061C0089E, 39061C0093E, 39061C0094E, 39061C0227E, 39061C0231E, 39061C0232E[2]	
Fairfax, Village of	390215	05090202	39061C0244F	
Fairfield, City of[3]	390038	05080002	N/A	Butler County FIS Report 2018 (39017C)
Forest Park, City of	390216	05080002, 05090203	39061C0065E, 39061C0066E, 39061C0067E[2], 39061C0068E, 39061C0069E, 39061C0086E, 39061C0088E	
Glendale, Village of	390217	05090203	39061C0088E, 39061C0089E	
Golf Manor, City of[1]	390218	05090203	39061C0229E, 39061C0237E[2]	
Greenhills, Village of[1]	390219	05090203	39061C0068E, 39061C0069E	
Hamilton County, Unincorporated Areas	390204	05080002, 05080003, 05090201, 05090202, 05090203	39061C0015E, 39061C0019E, 39061C0020E, 39061C0036E, 39061C0037E, 39061C0038E, 39061C0039E, 39061C0041E, 39061C0042E, 39061C0043E, 39061C0044E, 39061C0065E, 39061C0066E, 39061C0067E[2], 39061C0068E, 39061C0069E, 39061C0088E, 39061C0092E, 39061C0111E, 39061C0112F, 39061C0113F, 39061C0114F, 39061C0116E[2], 39061C0117F, 39061C0118F, 39061C0119F, 39061C0152E, 39061C0154E[2], 39061C0156E, 39061C0157E, 39061C0158E, 39061C0159E, 39061C0162E, 39061C0164E, 39061C0166E, 39061C0167E, 39061C0168E, 39061C0169F, 39061C0176E, 39061C0177E,	

[1] No Special Flood Hazard Areas Identified

[2] Panel Not Printed

[3] Area Not Included

Table 1: Listing of NFIP Jurisdictions (*continued*)

Community	CID	HUC-8 Sub-Basin(s)	Located on FIRM Panel(s)	If Not Included, Location of Flood Hazard Data
Hamilton County Unincorporated Areas	390204	05080002, 05080003, 05090201, 05090202, 05090203	39061C0178E, 39061C0179E, 39061C0185E, 39061C0186E, 39061C0187E[2],39061C0188F, 39061C0189F, 39061C0191E, 39061C0192E, 39061C0193E, 39061C0194E, 39061C0201E, 39061C0202E, 39061C0203E, 39061C0204E, 39061C0206E, 39061C0207E, 39061C0208E, 39061C0209E, 39061C0211E[2], 39061C0212E, 39061C0213E[2], 39061C0226E, 39061C0228E, 39061C0229E, 39061C0231E, 39061C0232E[2], 39061C0233E, 39061C0234E[2], 39061C0237E[2], 39061C0241F, 39061C0242F, 39061C0244F, 39061C0251F, 39061C0252F, 39061C0253F, 39061C0256F, 39061C0258F, 39061C0259F, 39061C0263F, 39061C0264F, 39061C0266F, 39061C0268F, 39061C0277F, 39061C0281F, 39061C0282F, 39061C0302F, 39061C0306F, 39061C0307F, 39061C0309F, 39061C0326E, 39061C0327E[2], 39061C0328F, 39061C0329F, 39061C0356G, 39061C0357F, 39061C0358G, 39061C0359E[2], 39061C0366F, 39061C0367F, 39061C0376F, 39061C0377F, 39061C0378F, 39061C0379F, 39061C0385E[2], 39061C0390F	
Harrison, City of	390220	05080003	39061C0015E, 39061C0019E, 39061C0020E, 39061C0152E, 39061C0156E, 39061C0157E	
Lincoln Heights, Village of[1]	390222	05090203	39061C0089E, 39061C0227E	

[1] No Special Flood Hazard Areas Identified

[2] Panel Not Printed

Table 1: Listing of NFIP Jurisdictions (*continued*)

Community	CID	HUC-8 Sub-Basin(s)	Located on FIRM Panel(s)	If Not Included, Location of Flood Hazard Data
Lockland, Village of	390223	05090203	39061C0227E, 39061C0229E	
Loveland, City of	390068	05090202	39061C0116E[2], 39061C0117F, 39061C0118F, 39061C0119F, 39061C0136E[2], 39061C0138F	
Madeira, City of	390225	05090202	39061C0234E[2], 39061C0242F, 39061C0253F, 39061C0261F	
Mariemont, Village of	390226	05090202	39061C0244F, 39061C0263F	
Milford, City of[3]	390227	05090202	N/A	Clermont County FIS Report, 2006 (39025C)
Montgomery, City of	390228	05090202, 05090203	39061C0113F, 39061C0114F, 39061C0118F, 39061C0251F, 39061C0252F	
Mount Healthy, City of	390229	05090203	39061C0206E	
Newtown, Village of	390230	05090202	39061C0263F, 39061C0264F, 39061C0376F, 39061C0377F	
North Bend, Village of	390231	05080002, 05090203	39061C0169F, 39061C0186E, 39061C0188F	
North College Hill, City of	390232	05090203	39061C0202E, 39061C0204E, 39061C0206E, 39061C0208E	
Norwood, City of[1]	390233	05090202, 05090203	39061C0236E, 39061C0237E[2], 39061C0238E[2], 39061C0239E[2], 39061C0241F	
Reading, City of	390234	05090203	39061C0227E, 39061C0229E, 39061C0231E, 39061C0233E	
Sharonville, City of	390236	05090202, 05090203	39061C0087E, 39061C0089E, 39061C0091E, 39061C0092E, 39061C0093E, 39061C0094E, 39061C0111E, 39061C0113F	
Silverton, City of[1]	390237	05090202, 05090203	39061C0233E, 39061C0234E[2], 39061C0241F, 39061C0242F	

[1] No Special Flood Hazard Areas Identified

[2] Panel Not Printed

[3] Area Not Included

Table 1: Listing of NFIP Jurisdictions (*continued*)

Community	CID	HUC-8 Sub-Basin(s)	Located on FIRM Panel(s)	If Not Included, Location of Flood Hazard Data
Springdale, City of	390877	05080002, 05090203	39061C0067E[2], 39061C0086E, 39061C0087E, 39061C0088E, 39061C0089E	
St. Bernard, City of	390235	05090203	39061C0217F, 39061C0236E	
Terrace Park, Village of	390633	05090202	39061C0262E[2], 39061C0264F, 39061C0266F, 39061C0268F	
The Village of Indian Hill, City of	390221	05090202	39061C0114F, 39061C0242F, 39061C0244F, 39061C0251F, 39061C0252F, 39061C0253F, 39061C0254F, 39061C0256F, 39061C0258F, 39061C0261F, 39061C0262E[2], 39061C0263F, 39061C0264F, 39061C0266F	
Woodlawn, Village of	390239	05090203	39061C0088E, 39061C0089E, 39061C0226E, 39061C0227E	
Wyoming, City of	390240	05090203	39061C0207E, 39061C0209E, 39061C0226E, 39061C0227E, 39061C0228E, 39061C0229E	

[2] Panel Not Printed

1.4 Considerations for using this Flood Insurance Study Report

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

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

- Part or all of this FIS Report may be revised and republished at any time. In addition, part of this FIS Report may be revised by a Letter of Map Revision (LOMR), which does not involve republication or redistribution of the FIS Report.

Refer to Section 6.5 of this FIS Report for information about the process to revise the FIS Report and/or FIRM.

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

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

- The initial Countywide FIS Report for Hamilton County became effective on May 17, 2004. Refer to Table 27 for information about subsequent revisions to the FIRMs.

- The 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/national-flood-insurance-program-community-rating-system or contact your appropriate FEMA Regional Office for more information about this program.

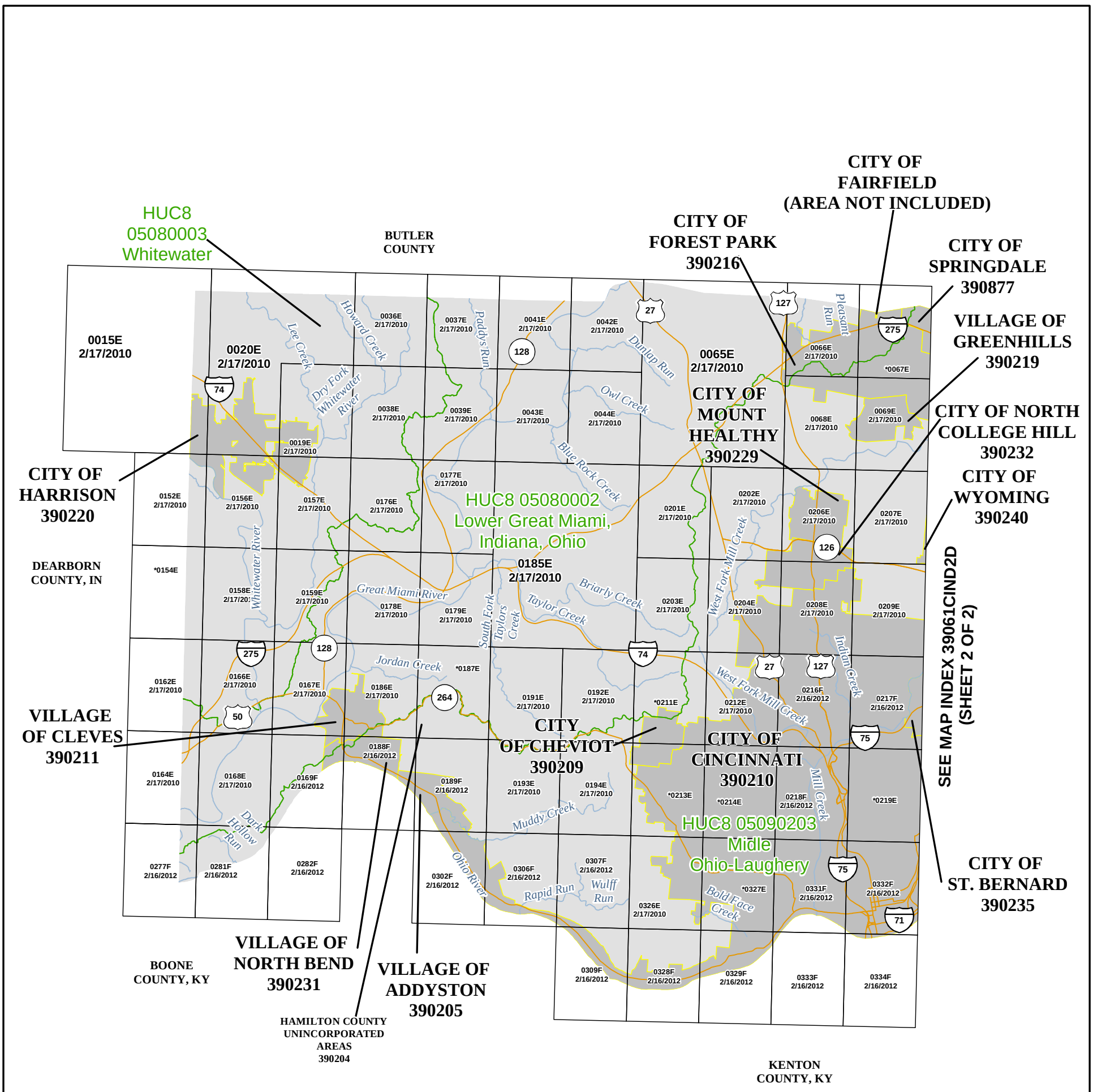
- Previous FIS Reports and FIRMs may have included levees that were accredited as reducing the risk associated with the 1-percent-annual-chance flood based on the information available and the mapping standards of the NFIP at that time. For FEMA to continue to accredit the identified levees, the levees 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."

  Since the status of levees is subject to change at any time, the user should contact the appropriate agency for the latest information regarding levees presented in Table 8 of this FIS Report. For levees owned or operated by the U.S. Army Corps of Engineers (USACE), information may be obtained from the USACE National Levee Database (nld.usace.army.mil). For all other levees, the user is encouraged to contact the appropriate local community.

- 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/online-tutorials.

The FIRM Index in Figure 1 shows the overall FIRM panel layout within Hamilton 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 (Page 1 of 2)



ATTENTION: The corporate limits shown on this FIRM Index are based on the best information available at the time of publication. As such, they may be more current than those shown on FIRM panels issued before June 7, 2023.

1 inch = 13,333.33 feet 1:160,000

0 6,250 12,500 25,000 feet

Map Projection:
NAD 1983 StatePlane Ohio South FIPS 3402 Feet
North American Datum of 1983

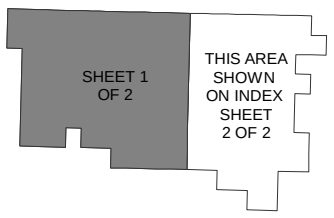
THE INFORMATION DEPICTED ON THIS MAP AND SUPPORTING DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT
HTTPS://MSC.FEMA.GOV

SEE FLOOD INSURANCE STUDY FOR ADDITIONAL INFORMATION

* PANEL NOT PRINTED - NO SPECIAL FLOOD HAZARD AREAS

COUNTY LOCATOR

HAMILTON COUNTY, OH
INDEX LOCATOR DIAGRAM



NATIONAL FLOOD INSURANCE PROGRAM

FLOOD INSURANCE RATE MAP INDEX
(SHEET 1 OF 2)

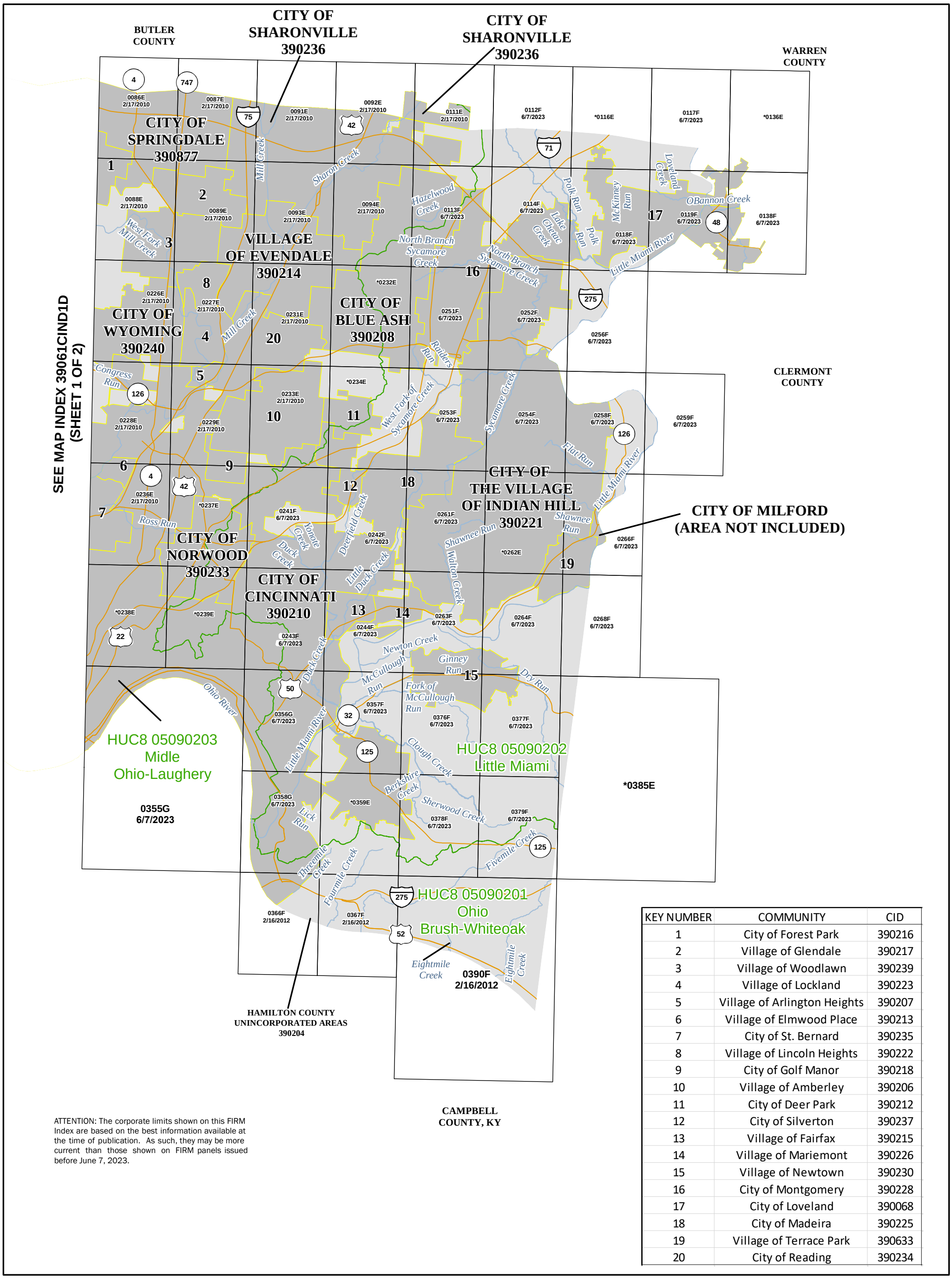
HAMILTON COUNTY, OHIO and Incorporated Areas

PANELS PRINTED:
0015, 0019, 0020, 0036, 0037, 0038, 0039, 0041, 0042, 0043, 0044, 0065, 0066, 0068, 0069, 0152, 0156, 0157, 0158, 0159, 0162, 0164, 0166, 0167, 0168, 0169, 0176, 0177, 0178, 0179, 0185, 0186, 0188, 0189, 0191, 0192, 0193, 0194, 0201, 0202, 0203, 0204, 0206, 0207, 0208, 0209, 0212, 0216, 0217, 0218, 0277, 0281, 0282, 0302, 0306, 0307, 0309, 0326, 0328, 0329, 0331, 0332, 0333, 0334

FEMA

MAP NUMBER
39061CIND1D

MAP REVISED
JUNE 7, 2023



KEY NUMBER	COMMUNITY	CID
1	City of Forest Park	390216
2	Village of Glendale	390217
3	Village of Woodlawn	390239
4	Village of Lockland	390223
5	Village of Arlington Heights	390207
6	Village of Elmwood Place	390213
7	City of St. Bernard	390235
8	Village of Lincoln Heights	390222
9	City of Golf Manor	390218
10	Village of Amberley	390206
11	City of Deer Park	390212
12	City of Silverton	390237
13	Village of Fairfax	390215
14	Village of Mariemont	390226
15	Village of Newtown	390230
16	City of Montgomery	390228
17	City of Loveland	390068
18	City of Madeira	390225
19	Village of Terrace Park	390633
20	City of Reading	390234

ATTENTION: The corporate limits shown on this FIRM Index are based on the best information available at the time of publication. As such, they may be more current than those shown on FIRM panels issued before June 7, 2023.

1 inch = 10,000 feet 1:120,000

0 5,000 10,000 20,000 feet

Map Projection:
NAD 1983 StatePlane Ohio South FIPS 3402 Feet
North American Datum of 1983

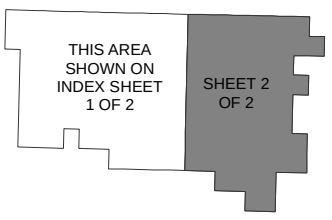
THE INFORMATION DEPICTED ON THIS MAP AND SUPPORTING DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT
HTTPS://MSC.FEMA.GOV

SEE FLOOD INSURANCE STUDY FOR ADDITIONAL INFORMATION

* PANEL NOT PRINTED - NO SPECIAL FLOOD HAZARD AREAS

COUNTY LOCATOR

HAMILTON COUNTY, OH
INDEX LOCATOR DIAGRAM



NATIONAL FLOOD INSURANCE PROGRAM

FLOOD INSURANCE RATE MAP INDEX (SHEET 2 OF 2)

HAMILTON COUNTY, OHIO and Incorporated Areas

PANELS PRINTED:
0086, 0087, 0088, 0089, 0091, 0092, 0093, 0094, 0111, 0112, 0113, 0114, 0117, 0118, 0119, 0138, 0226, 0227, 0228, 0229, 0231, 0233, 0236, 0241, 0242, 0243, 0244, 0251, 0252, 0253, 0254, 0256, 0258, 0259, 0261, 0263, 0264, 0266, 0268, 0355, 0356, 0357, 0358, 0366, 0367, 0376, 0377, 0378, 0379, 0390

FEMA

MAP NUMBER
39061CIND2D

MAP REVISED
JUNE 7, 2023

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 map, 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 Map Information 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 Map Information 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 be protected by flood control structures. Refer to Section 4.3 “Non-Levee Flood Protection Measures” of this FIS Report for information on flood control structures for this jurisdiction.

Figure 2: FIRM Notes to Users *(continued)*

PROJECTION INFORMATION: The projection used in the preparation of the map was Ohio State Plane South FIPS 3402 Feet. The horizontal datum was the North American Datum of 1983 NAD83, 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), US Census Bureau, FEMA, State of Ohio and Cincinnati Area Geographic Information System (CAGIS). Orthophotography was obtained from the Ohio Statewide Imagery Program (OSIP III), dated 2018. For information about base maps, refer to Section 6.2 “Base Map” in this FIS Report.

The map reflects more detailed and up-to-date stream channel configurations than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables may reflect stream channel distances that differ from what is shown on the map.

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 Hamilton County, OHIO, 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.

ATTENTION: The corporate limits shown on this FIRM Index are based on the best information available at the time of publication. As such, they may be more current than those shown on FIRM panels issued before June 7, 2023.

Figure 2: FIRM Notes to Users *(continued)*

SPECIAL NOTES FOR SPECIFIC FIRM PANELS

This Notes to Users section was created specifically for Hamilton County, Ohio, effective June 7, 2023.

ACCREDITED LEVEE: Check with your local community to obtain more information, such as the estimated level of protection provided (which may exceed the 1-percent-annual-chance level) and Emergency Action Plan, on the levee system(s) shown as providing protection for areas on this panel. To mitigate flood risk in residual risk areas, property owners and residents are encouraged to consider flood insurance and floodproofing or other protective measures. For more information on flood insurance, interested parties should visit www.fema.gov/national-flood-insurance-program**.**

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 Hamilton 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.

Figure 3: Map Legends for FIRM *(continued)*

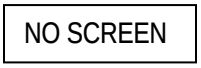
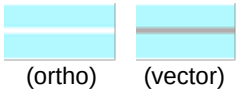
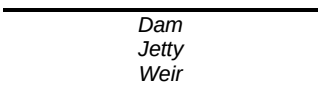
	Regulatory Floodway determined in Zone AE.
OTHER AREAS OF FLOOD HAZARD	
	Shaded Zone X: Areas of 0.2% annual chance flood hazards and areas of 1% annual chance flood hazards with average depths of less than 1 foot or with drainage areas less than 1 square mile.
	Future Conditions 1% Annual Chance Flood Hazard – Zone X: The flood insurance rate zone that corresponds to the 1% annual chance floodplains that are determined based on future-conditions hydrology. No base flood elevations or flood depths are shown within this zone.
	Area with Reduced Flood Risk due to Levee: Areas where an accredited levee, dike, or other flood control structure has reduced the flood risk from the 1% annual chance flood. See Notes to Users for important information.
	Area with Flood Risk due to Levee: Areas where a non-accredited levee, dike, or other flood control structure is shown as providing protection to less than the 1% annual chance flood.
OTHER AREAS	
	Zone D (Areas of Undetermined Flood Hazard): The flood insurance rate zone that corresponds to unstudied areas where flood hazards are undetermined, but possible.
	Unshaded Zone X: Areas of minimal flood hazard.
FLOOD HAZARD AND OTHER BOUNDARY LINES	
	Flood Zone Boundary (white line on ortho-photography-based mapping; gray line on vector-based mapping)
	Limit of Study
	Jurisdiction Boundary
	Limit of Moderate Wave Action (LiMWA): Indicates the inland limit of the area affected by waves greater than 1.5 feet
GENERAL STRUCTURES	
	Channel, Culvert, Aqueduct, or Storm Sewer
	Dam, Jetty, Weir

Figure 3: Map Legends for FIRM *(continued)*

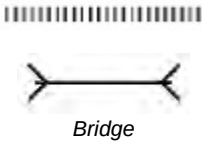
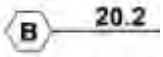
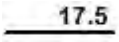
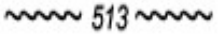
 *Bridge*	Levee, Dike, or Floodwall Bridge
REFERENCE MARKERS	
	River mile Markers
CROSS SECTION & TRANSECT INFORMATION	
	Lettered Cross Section with Regulatory Water Surface Elevation (BFE)
	Numbered Cross Section with Regulatory Water Surface Elevation (BFE)
	Unlettered Cross Section with Regulatory Water Surface Elevation (BFE)
	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.
	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
BASE MAP FEATURES	
 *Missouri Creek*	River, Stream or Other Hydrographic Feature
	Interstate Highway
	U.S. Highway
	State Highway

Figure 3: Map Legends for FIRM *(continued)*

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 Hamilton 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- 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- 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 Hamilton 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
Bares Run	Loveland, City of	Approximately 25 feet downstream from the crossing of E Loveland Avenue	Approximately 2,905 feet upstream from the crossing of E Loveland Ave	05090202	0.6	N	A	09/30/2016
Berkshire Creek	Hamilton County, Unincorporated Areas	Confluence with Clough Creek	Approximately 110 feet upstream from Stanley Road	05090202	1.5	N	A	September 2018
Brookwood Creek	Amberley, Village of	Approximately 450 feet downstream of Fair Oaks Drive	Fair Oaks Drive	05090203	0.2	Y	AE	December 1978
Clough Creek	Cincinnati, City of; Hamilton County, Unincorporated Areas	Confluence with Little Miami River	Approximately 645 feet upstream from State Road	05090202	5.1	Y	AE	March 1979
Congress Run	Cincinnati, City of; Hamilton County, Unincorporated Areas; Wyoming, City of	Confluence with Mill Creek	Approximately 580 feet upstream of North Hill Lane	05090203	2.8	Y	AE	March 1979
Dry Fork of The Whitewater River	Hamilton County, Unincorporated Areas	Confluence with Whitewater River	Approximately 160 feet upstream of Marion Road	05080003	12.0	Y	AE	March 1979
Dry Run	Hamilton County, Unincorporated Areas; Newtown, Village of	Approximately 650 feet downstream from Railroad	Approximately 95 feet upstream from Whiting Way	05090202	1.5	N	A	September 2018
Duck Creek	Cincinnati, City of; Fairfax, Village of	Confluence with Little Miami River	Approximately 1,200 feet upstream of Red Bank Road	05090202	3.2	Y	AE	02/22/2007
Duck Creek	Cincinnati, City of	Approximately 1,200 feet upstream of Red Bank Road	Approximately 957 feet upstream from Ridge Ave	05090202	2.4	Y	AE	09/20/2013

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 Mill Creek	Sharonville, City of	Confluence with Mill Creek	Crescentville Road	05090203	0.8	Y	AE	July 2009
Fork of McCullough Run	Hamilton County, Unincorporated Areas; Newtown, Village of	Confluence with McCullough Run	Ragland Road	05090202	0.7	Y	AE	March 1979
Great Miami River	Cleves, Village of; Hamilton County, Unincorporated Areas	Confluence with Ohio River	Approximately 0.9 miles upstream of State Route 126	05080002	26.0	Y	AE	March 1979
Hazelwood Creek	Blue Ash, City of	Kenwood Road	Cornell Road	05090203	0.9	Y	AE	December 1978
Howard Creek	Hamilton County, Unincorporated Areas	Confluence with Whitewater River	Oxford Road	05080003	1.1	Y	AE	March 1979
Lake Chetac Creek	Hamilton County, Unincorporated Areas; Montgomery, City of	Confluence with Polk Run	Corporate limits of City of Montgomery	05090202	0.8	Y	AE	September 2018
Lake Chetac Creek	Hamilton County, Unincorporated Areas; Montgomery, City of	Corporate limits of City of Montgomery	Fields Ertel Road and Hamilton/Warren County Boundary	05090202	2.2	N	A	September 2018
Left Fork Section Road Creek	Amberley, Village of	Confluence with Section Road Creek	Aracoma Forest Drive	05090203	0.7	Y	AE	December 1978
Little Duck Creek	Fairfax, Village of	Confluence with Duck Creek	Approximately 500 feet downstream from Red Bank Road	05090202	0.2	Y	AE	02/22/2007
Little Duck Creek	Cincinnati, City of; Fairfax, Village of	Approximately 500 feet downstream from Red Bank Road	Approximately 100 feet upstream of Murray Road	05090202	1.4	Y	AE	September 2018
Little Duck Creek	Cincinnati, City of; Hamilton County, Unincorporated Areas; Madeira, City of	Approximately 100 feet upstream of Murray Road	Approximately 780 feet upstream from Dawson Road	05090202	3.4	N	A	September 2018

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

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Little Miami River	Cincinnati, City of; Hamilton County, Unincorporated Areas; Loveland, City of; Mariemont, Village of; Newtown, Village of; Terrace Park, Village of; The Village of Indian Hill, City of	Confluence with Ohio River	Northern Hamilton/Warren County Boundary	05090202	26.1	Y	AE	September 2018
Loveland Creek	Hamilton County, Unincorporated Areas; Loveland, City of	Confluence with Little Miami River	Approximately 1800 feet upstream of Rich Road	05090202	1.3	N	A/AE	September 2018
McCullough Run	Hamilton County, Unincorporated Areas; Newtown, Village of	Confluence with Little Miami River	Turpin Lane	05090202	1.9	Y	AE	March 1979
Mill Creek	Arlington Heights, Village of; Cincinnati, City of; Elmwood Place, Village of; Evendale, Village of; Hamilton County, Unincorporated Areas; Lockland, Village of; Reading, City of; Sharonville, City of; St. Bernard, City of	Barrier Dam	E Sharon Rd	05090203	16.4	Y	AE	04/20/2000
Mill Creek	Sharonville, City of	E Sharon Rd	Just upstream of Crescentville Road	05090203	2.1	Y	AE	July 2009
Muddy Creek	Addyston, Village of; Cincinnati, City of; Hamilton County, Unincorporated Areas	Confluence with Ohio River	0.2 miles upstream of Sidney Road	05090203	6.6	Y	AE	March 1979

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
Newton (Clear) Creek	Hamilton County, Unincorporated Areas	Confluence with Little Miami River	Railroad	05090202	1.4	Y	AE	September 2018
North Branch Sycamore Creek	Montgomery, City of	Approximately 1,880 feet upstream of Carriage Trail	I-71 Highway	05090202	2.1	Y	AE	September 2018
North Branch Sycamore Creek	The Village of Indian Hill, City of; Montgomery, City of	Confluence with Sycamore Creek	Approximately 1,880 feet upstream of Carriage Trail	05090202	3.8	N	A	September 2018
Northland Road Tributary	Springdale, City of	Confluence with Springdale Tributary	Approximately 320 feet upstream of Springfield Pike/ State Route 4	05090203	1.2	N	AE	July 1988
O'Bannon Creek	Loveland, City of	Confluence with Little Miami River	Eastern corporate limit of City of Loveland	05090202	0.9	Y	AE	September 2018
Ohio River	Addyston, Village of; Cincinnati, City of; Hamilton County, Unincorporated Areas; North Bend, Village of	Approximately 0.35 miles downstream of the confluence of Great Miami River	Approximately 1.15 miles upstream of the confluence of Eight Mile Creek	05090201, 05090203	43.5	Y	AE	January 2011
Pleasant Run	Hamilton County, Unincorporated Areas	100 feet downstream of John Gray Road	Approximately 0.5 miles upstream of confluence of Pleasant Run Tributary	05080002	0.6	Y	AE	04/26/2006
Polk Run	Hamilton County, Unincorporated Areas; Montgomery, City of	Approximately 3,850 feet upstream from Loveland Madeira Road	Approximately 380 feet upstream from East Kemper Road	05090202	0.9	Y	AE	September 2018
Polk Run	Hamilton County, Unincorporated Areas; Montgomery, City of	Approximately 380 feet upstream from East Kemper Road	Fields Ertel Road	05090202	2.6	N	A	September 2018
Polk Run	Hamilton County, Unincorporated Areas	Confluence with Little Miami River	Approximately 3,850 feet upstream from Loveland Madeira Road	05090202	1	N	A/AE	September 2018

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

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Raiders Run	Blue Ash, City of; Hamilton County, Unincorporated Areas	Confluence with West Fork of Sycamore Creek	South of Ronald Reagan Cross CO EB Highway	05090202	1.4	Y	AE	March 1979
Section Road Creek	Amberley, Village of; Cincinnati, City of	Approximately 0.2 mile downstream of Elbrook Avenue	Approximately 0.3 mile upstream of West Beechlands Drive	05090203	1.5	Y	AE	December 1978
Sharon Creek	Evendale, Village of; Sharonville, City of	Confluence with Mill Creek	Approximately 440 feet upstream of Park Road	05090203	2.2	Y	AE	July 2009
Sharon Creek Tributary	Evendale, Village of; Sharonville, City of	Confluence with Sharon Creek	0.5 mile upstream of Main Street	05090203	1.0	Y	AE	July 2009
Springdale Tributary	Sharonville, City of; Springdale, City of	Chesterdale Road	Approximately 50 feet upstream of Cloverdale Avenue	05090203	3.1	N	AE	July 1988
Sycamore Creek	Hamilton County, Unincorporated Areas; The Village of Indian Hill, City of	Confluence with Little Miami River	Approximately 4,580 feet upstream of Keller Road	05090202	2.8	N	A/AE	September 2018
Sycamore Creek	Madeira, City of; The Village of Indian Hill, City of	Approximately 4,580 feet upstream of Keller Road	Approximately 700 feet upstream from Camargo Road	05090202	1.2	Y	AE	September 2018
Tributary A	North College Hill, City of	Mouth at West Fork Lake Tributary	Approximately 820 feet upstream of Northbridge Avenue	05090203	0.3	Y	AE	May 1985
Tributary To Pleasant Run	Hamilton County, Unincorporated Areas	Confluence with Pleasant Run	Approximately 0.6 mile upstream of confluence with Pleasant Run	05080002	0.6	Y	AE	04/26/2006
West Fork Creek	Cincinnati, City of	Confluence with Mill Creek	Confluence of McFarland Creek	05090203	2.6	Y	AE	March 1979

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 Lake Tributary	City of Cincinnati; Hamilton County, Unincorporated Areas; Mount Healthy, City of; North College Hill, City of	200 feet downstream of Desoto Drive	Approximately 340 feet upstream of Emerson Avenue	05090203	1.7	Y	AE	May 1985
West Fork Mill Creek	Arlington Heights, Village of; Hamilton County, Unincorporated Areas; Lockland, Village of; Mount Healthy, City of; Woodlawn, Village of; Wyoming, City of	Confluence with Mill Creek	Just upstream of Blue Rock Road	05090203	12.1	Y	AE	October 1992
West Fork Mill Creek South Tributary	Woodlawn, Village of	Confluence with West Fork Mill Creek	Just upstream of footbridge	05090203	0.4	Y	AE	June 1985
West Fork of Sycamore Creek	Hamilton County, Unincorporated Areas; The Village of Indian Hill, City of	Confluence with Sycamore Creek	Approximately 1.6 miles above confluence with Sycamore Creek	05090202	1.6	N	A	September 2018
West Fork of Sycamore Creek	Hamilton County, Unincorporated Areas	Approximately 1.6 miles above confluence with Sycamore Creek	North of East Galbraith Road	05090202	1.0	Y	AE	March 1979
Whitewater River	Hamilton County, Unincorporated Areas; Harrison, City of	Confluence with Great Miami River	Approximately 1.7 miles upstream of Jamison Road	05080003	10.6	Y	AE	March 1979
Winton Woods Creek	Hamilton County, Unincorporated Areas; Mount Healthy, City of	Approximately 1.6 miles downstream of Bridgecreek Lane	Approximately 200 feet upstream of Desoto Drive	05090203	2.9	Y	AE	03/02/1993

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
Wulff Run	Hamilton County, Unincorporated Areas	Approximately 0.3 mile downstream of Delhi Road	Anderson Ferry Road	05090203	0.8	Y	AE	March 1979
Yonote Creek	Cincinnati, City of; Hamilton County, Unincorporated Areas	Confluence with Duck Creek	South of I-71 NB Expressway	05090202	0.3	Y	AE	09/20/2013
Zone A Stream (Little Miami Tributary)	Hamilton County, Unincorporated Areas	Approximately 500 feet upstream of Round Bottom Road	Approximately 0.75 mile upstream of Round Bottom Road	05090202	0.6	N	A	March 1979
Zone A Streams (Lower Great Miami, Indiana, Ohio Tributaries)	Various	Varies	Varies	05080002	Varies	N	A	March 1979
Zone A Streams (Middle Ohio - Laughery Tributaries)	Various	Varies	Varies	05090203	Varies	N	A	June 1985
Zone A Streams (Ohio Brush-Whiteoak Tributaries)	Various	Varies	Varies	05090201	Varies	N	A	March 1979
Zone A Streams (Whitewater Tributaries)	Various	Varies	Varies	05080003	Varies	N	A	March 1979

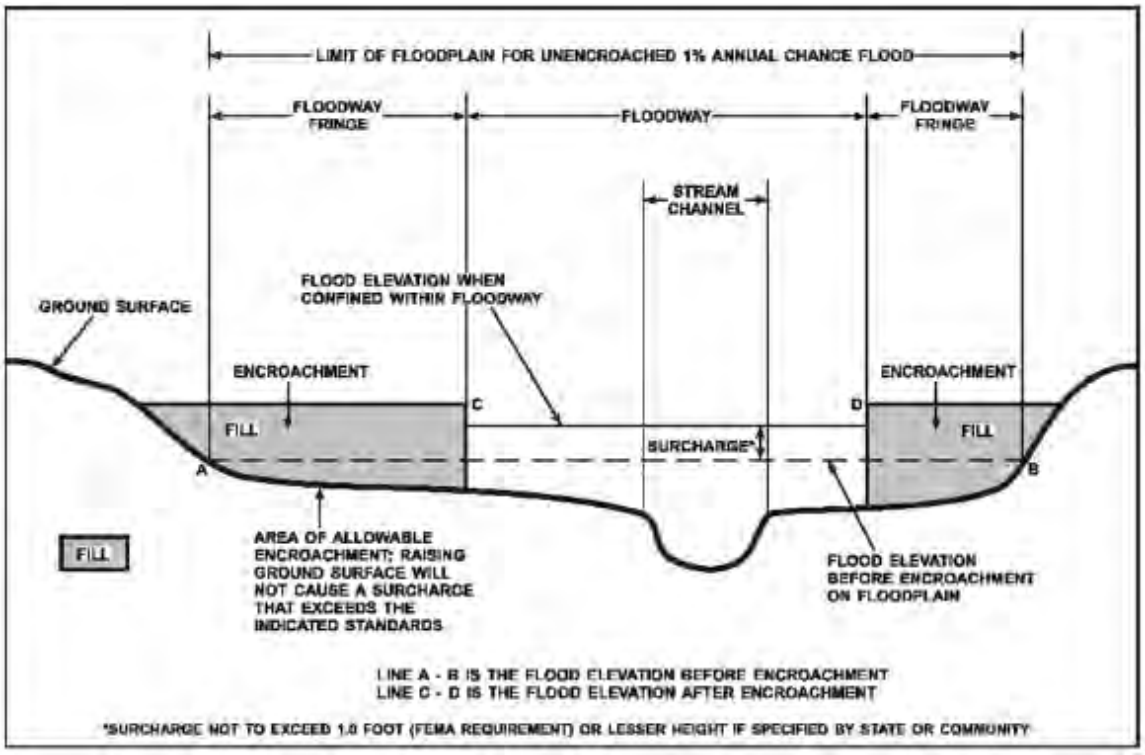
2.2 Floodways

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. The floodways in this project are presented to local agencies as minimum standards that can be adopted directly or that can be used as a basis for additional floodway projects.

Figure 4: Floodway Schematic



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

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

2.3 Base Flood Elevations

The hydraulic characteristics of flooding sources were analyzed to provide estimates of the elevations of floods of the selected recurrence intervals. The Base Flood Elevation (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.

The State of Ohio participates within the minimum NFIP standards.

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 Hamilton County.

Table 3: Flood Zone Designations by Community

Community	Flood Zone(s)
Addyston, Village of	AE, X
Amberley, Village of	AE, AO, X
Arlington Heights, Village of	AE, X
Blue Ash, City of	A, AE, X
Cheviot, City of*	X
Cincinnati, City of	A, AE, X
Cleves, Village of	AE, X
Deer Park, City of*	X
Elmwood Place, Village of	A, AE, X
Evendale, Village of	A, AE, X
Fairfax, Village of	AE, X
Forest Park, City of	A, AE, X
Glendale, Village of	A, X
Golf Manor, City of*	X
Greenhills, Village of	A, X
Hamilton County, Unincorporated Areas	A, AE, X
Harrison, City of	A, AE, X
Lincoln Heights, Village of*	X
Lockland, Village of	A, AE, X
Loveland, City of	A, AE, X
Madeira, City of	A, AE, X
Mariemont, Village of	AE, X
Montgomery, City of	A, AE, X
Mount Healthy, City of	A, AE, X
Newtown, Village of	A, AE, X
North Bend, Village of	AE, X
North College Hill, City of	A, AE, X
Norwood, City of*	X
Reading, City of	A, AE, X
Sharonville, City of	A, AE, X

*No Special Flood Hazard Areas Identified

Table 3: Flood Zone Designations by Community *(continued)*

Community	Flood Zone(s)
Silverton, City of*	X
Springdale, City of	A, AE, X
St. Bernard, City of	A, AE, X
Terrace Park, Village of	AE, X
The Village of Indian Hill, City of	A, AE, X
Woodlawn, Village of	A, AE, X
Wyoming, City of	A, AE, X

*No Special Flood Hazard Areas Identified

SECTION 4.0 – AREA STUDIED

4.1 Basin Description

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

Table 4: Basin Characteristics

HUC-8 Sub-Basin Name	HUC-8 Sub-Basin Number	Primary Flooding Source	Description of Affected Area	Drainage Area (Square Miles)
Little Miami	05090202	Little Miami River	East Hamilton County	1,758
Lower Great Miami, Indiana, Ohio	05080002	Great Miami River	West Hamilton County	1,381
Middle Ohio-Laughery	05090203	Mill Creek - Ohio River	Central Hamilton County	1,410
Ohio Brush-Whiteoak	05090201	Ohio River	Southeast Hamilton County	2,100
Whitewater	05080003	Whitewater River	Northwest Hamilton County	1,474

4.2 Principal Flood Problems

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

Table 5: Principal Flood Problems

Flooding Source	Description of Flood Problems
Duck Creek & Little Duck Creek	The low-lying areas of the Village of Fairfax are subject to periodic flooding caused by the overflow of Duck Creek and Little Duck Creek. The principal problem from Duck Creek occurs from the Red Bank Road bridge to the upstream end of the study area. The right overbank is low lying, and flow during a higher magnitude flood will cover the area. A building supported by piers extends across the creek in this reach, giving the effect of 170-foot bridge which allows no weir flow. Upstream overbank flow for higher level floods will leave the stream and cross the above-mentioned low-lying area before reentering the stream. This area is primarily paved parking surrounding scattered buildings. A higher concentration of culverts and bridges on Little Duck Creek (five in 0.33 mile) causes backwater and low stream velocities. This results in ponding conditions above the railroad culverts and the Columbia Parkway culvert during all frequency floods of this study. The Red Bank Road and the railroad culverts, due to their relatively low capacities and high embankments, cause exceptionally high surcharges with a resulting high tailwater elevation at the Columbia Parkway culvert. The ponds thus formed above the railroad and Columbia Parkway serve as retention basins for the downstream reaches of the stream and reduce the peak discharges through the downstream bridges. The low-lying area between these culverts has several commercial buildings and a paved parking area on the left bank. The lower area above the Columbia Parkway culvert is also along the left bank but contains primarily residential dwellings. The Little Duck Creek flows above the ponding area causing overflow flooding in the upper reaches of the stream, which are also primarily residential. Debris buildup in the Little Duck Creek structures also causes overbank flow in the upper reaches. In general, obstructions intensify the flooding situation by causing overbank flows with possible damage to or destruction of bridges, flooding in unpredictable areas, and by increasing velocities of flow immediately downstream.
Mill Creek	Flooding has been a chronic problem on Mill Creek for some time with the March 1913 event as the flood of record. However, the most damaging flood occurred in January 1959. There have been numerous other headwater floods of lesser magnitudes such as those that occurred in May 1996, April 1998, and July 2001. A detailed economic analysis showed that for existing conditions, significant damages would occur from a flood with a 50-percent annual chance of occurrence. For the 1-percent-annual-chance flood, there are approximately 560 structures located in the floodplain with total residual damages of over $480 million with the existing USACE flood control project in place. Total average annual damages for the study area under existing conditions are over $32 million with about 92% occurring above Glendale-Milford Road in the Evendale and Sharonville areas. Table 5 presents total damages and number of structures flooded for a range of frequency floods. Damages shown in Table 5 are assumed to begin when floodwaters initially come in contact with the structures within the floodplain. These damages are based upon an economic analysis update for Mill Creek dated June 1997.

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

Table 6: Historic Flooding Elevations

[Not Applicable to this Flood Risk Project]

4.3 Non-Levee Flood Protection Measures

Table 7 contains information about non-levee flood protection measures within Hamilton County such as dams, jetties, and or dikes. Levees are addressed in Section 4.4 of this FIS Report.

Table 7: Non-Levee Flood Protection Measures

Flooding Source	Structure Name	Type of Measure	Location	Description of Measure
Great Miami River Watershed	Miami Conservancy District (MCD) Dams	Dams	Along Great Miami River and its various tributaries	The Germantown, Englewood, Huffman, Lockington, and Taylorsville Dams, constructed from 1919 to 1922, aid in the reduction of flood peaks on the Great Miami River basin in conjunction with scattered levees and channel improvements.
Little Miami River	Caesar Creek Reservoir	Reservoir	Located approx. 30 miles northeast of Cincinnati	The reservoir controls a drainage area of 237 square miles of the total of 1,145 square miles at the City of Loveland
Ohio River	Barrier Dam	Dam	Near confluence with Ohio River along the Mill Creek	In order to provide protection against Ohio River backwater flooding, a barrier dam across Mill Creek near the mouth, 1,420 feet of levee and concrete wall between the western abutment of the dam and pump house, 5,660 feet of concrete wall to form the eastern closure of the dam, and 6 pumps were constructed starting in January 1941 and completed in March 1948.
Ohio River		Dike	Four Seasons Marina	Earthen embankment to control flooding from Ohio River and Little Miami River
West Fork Mill Creek	Winton Park Dam	Dam	1.5 miles upstream of Rockhampton Circle	The dam controls the flow that would occur as a result of the 10-, 2-, 1-, or 0.2-percent-annual-chance storms.
Whitewater River	Brookville Reservoir	Reservoir	Located in Brookville Township, Franklin County, Indiana, just north of Brookville, in the southeastern part of the state.	The earthen dam was constructed in 1974 by the United States Army Corps of Engineers with a height of 181 feet and 2,800 feet long at its crest. It impounds the East Fork of the Whitewater River for flood control and storm water management.

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 levees that exist within Hamilton County. Table 8, "Levee Systems," lists all accredited levees, PALs, and de-accredited levees 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. Levees identified as PALs in the table are labeled on the FIRM to indicate their provisional 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	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)
Cincinnati, City of	Duck Creek	3905520001	Duck Creek, OH - Phase II Levee System	Accredited	39061C0243F	City of Cincinnati
Cincinnati, City of	Duck Creek	3905520002	Duck Creek, OH - Phase IIa Levee System	Non-Accredited	39061C0243F	City of Cincinnati
Cincinnati, City of	Duck Creek	3905520004	Duck Creek, OH - Phase IV B Section 1 Alignment A Levee System	Accredited	39061C0241F	City of Cincinnati
Cincinnati, City of	Duck Creek	3905520005	Duck Creek, OH - Phase IV B Section 1 Alignment B Levee System	Accredited	39061C0241F	City of Cincinnati
Fairfax, Village of	Duck Creek	3905520003	Duck Creek, OH - Phase III Levee System	Accredited	39061C0244F	City of Cincinnati
Cincinnati, City of; Hamilton County, Unincorporated Areas	Duck Creek & Yonote Creek	3905520006	Duck Creek, OH - Phase IV B Section 2 & Phase IV C Levee System	Accredited	39061C0241F	City of Cincinnati
Cincinnati, City of	Little Miami River & Ohio River	1505000015	Lunken Airport Levee System	Non-Accredited	39061C0356G, 39061C0357F, 39061C0358G	City of Cincinnati
Cincinnati, City of	Ohio River	3905000003	Cincinnati Levee System	Accredited	39061C0331F, 39061C0332F	City of Cincinnati
Cincinnati, City of	Ohio River	1505001104	Hamilton Unincorporated Levee	Non-Accredited	39061C0306F	City of Cincinnati

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 one year are considered. For example, the risk of having a flood that equals or exceeds the 100-year flood (1-percent chance of annual exceedance) during the term of a 30-year mortgage is approximately 26 percent (about 3 in 10); for any 90-year period, the risk increases to approximately 60 percent (6 in 10). The analyses reported herein reflect flooding potentials based on conditions existing in the community at the time of completion of this study. Maps and flood elevations will be amended periodically to reflect future changes.

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

The engineering analyses described here incorporate the results of previously issued Letters of Map Change (LOMCs) listed in Table 26, “Incorporated Letters of Map Change”, which include Letters of Map Revision (LOMRs). For more information about LOMRs, refer to Section 6.5, “FIRM Revisions.”

5.1 Hydrologic Analyses

Hydrologic analyses were carried out to establish the peak elevation-frequency relationships for floods of the selected recurrence intervals for each flooding source studied. Hydrologic analyses are typically performed at the watershed level. Depending on factors such as watershed size and shape, land use and urbanization, and natural or man-made storage, various models or methodologies may be applied. A summary of the

hydrologic methods applied to develop the discharges used in the hydraulic analyses for each stream is provided in Table 12. Greater detail (including assumptions, analysis, and results) is available in the archived project documentation.

A summary of the discharges is provided in Table 9. A summary of stillwater elevations developed for non-coastal flooding sources is provided in Table 10. Stream gage information is provided in Table 11.

Table 9: Summary of Discharges

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Brookwood Creek	At the CONRAIL crossing located just downstream of the downstream corporate limits	0.3	890	*	1,370	1,680	2,700
Clough Creek	At mouth	8.0	4,774	*	7,847	9,781	13,500
Clough Creek	At Turpinhills Drive	7.4	4,600	*	7,000	8,800	12,000
Clough Creek	Below Hunley Road	6.3	4,441	*	6,313	8,595	11,700
Clough Creek	Below Berkshire Lane Tributary	5.4	3,700	*	5,900	7,100	10,700
Clough Creek	Above Berkshire Lane Tributary	2.0	2,775	*	4,044	4,463	5,950
Clough Creek	At State Road- Clough Pike Intersection	1.8	2,210	*	3,420	4,200	5,000
Clough Creek	At State Road-Wolfangle Road intersection	0.9	1,580	*	2,440	3,000	4,700
Congress Run	At mouth	3.8	3,333	*	5,118	7,072	10,000
Congress Run	Above tributary at Caldwell Drive	1.9	2,439	*	3,779	4,205	5,825
Congress Run	Above Cincinnati corporate limit	1.4	2,078	*	3,215	3,617	5,000
Congress Run	At extension of View Place Drive	0.7	1,450	*	2,250	2,750	4,380
Dry Fork of the Whitewater River	At mouth	81.7	13,800	*	21,800	25,500	36,000
Dry Fork of the Whitewater River	Below confluence of Lee Creek	76.8	13,200	*	21,000	25,000	35,000
Dry Fork of the Whitewater River	Above confluence of Lee Creek	65.8	12,200	*	19,700	23,000	32,500
Dry Fork of the Whitewater River	Below confluence of Howard Creek	59.8	11,700	*	18,800	22,000	31,000

*Data not available

Table 9: Summary of Discharges *(continued)*

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Dry Fork of the Whitewater River	Above confluence of Howard Creek	52.1	11,000	*	17,400	20,700	29,500
Duck Creek	At Conrail CSX	15.0	7,090	*	9,410	10,120	10,510
Duck Creek	Below confluence of Little Duck Creek	14.2	6,000	*	9,300	11,200	16,500
Duck Creek	Just upstream of Norfolk Railroad	10.1	5,030	*	6,780	7,330	7,750
Duck Creek	Above confluence of Little Duck Creek	9.7	5,300	*	7,000	7,630	7,950
Duck Creek	At railroad	9.1	4,850	*	6,860	8,650	12,150
Duck Creek	At Erie Avenue	8.6	3,450	*	4,100	4,700	4,750
Duck Creek	At railroad	6.6	3,500	*	4,200	4,500	4,850
Duck Creek	At Madison Road	6.3	3,000	*	3,300	3,400	3,600
Duck Creek	Just upstream of railroad	6.3	4,000	*	4,500	4,600	5,000
Duck Creek	At Kennedy Avenue Extension	3.8	3,900	*	4,000	4,300	4,500
East Fork Mill Creek	At mouth	9.4	1,100	*	1,850	2,210	3,110
Fork of McCullough Run	At mouth	2.1	2,400	*	3,700	4,550	7,000
Fork of McCullough Run	Below Ragland Road	1.9	2,300	*	3,550	4,300	6700
Great Miami River	At mouth	5,371	115,130	*	161,137	179,444	225,000
Great Miami River	Above confluence of Whitewater River	3,881	82,314	*	116,273	128,900	163,000

*Data not available

Table 9: Summary of Discharges *(continued)*

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Great Miami River	At Hamilton	3,630	814,000	*	114,600	128,400	162,000
Hazelwood Creek	Kenwood Road	0.8	1,550	*	2,400	2,900	4,650
Howard Creek	At mouth	7.6	4,400	*	7,000	8,400	12,500
Lake Chetac Creek	At Montgomery City Limits	2.4	990	1,275	1,515	1,770	2,395
Lake Chetac Creek	At confluence with Polk Run	2.4	905	1,160	1,375	1,590	2,105
Left Fork Section Road Creek	At mouth	0.4	1,030	*	1,600	1,950	3,100
Little Duck Creek[1]	At confluence with Duck Creek	4.1	1,305	1,540	1,750	1,980	2,535
Little Duck Creek[1]	Approximately 275 feet downstream of Red Bank Road	4.1	1,305	1,545	1,755	1,985	2,545
Little Duck Creek	Approximately 90 feet downstream of Murray Road	3.5	1,400	1,820	2,170	2,540	3,450
Little Miami River	Approximately 1,140 feet downstream of OH-32 Beechmont Avenue	1,759	48,320	62,025	73,155	84,620	114,925
Little Miami River	Approximately 1,120 feet downstream of OH-32 Beechmont Avenue	1,755	49,520	62,840	73,750	85,270	115,625
Little Miami River	At confluence with Duck Creek	1,743	49,540	62,820	73,720	85,235	115,545
Little Miami River	At confluence with East Fork Little Miami River	1,707	51,635	64,470	74,780	86,465	116,590
Little Miami River	Approximately 675 feet upstream from the Hamilton/Clermont County Boundary	1,199	32,885	42,210	49,795	58,755	82,180
Little Miami River	At confluence with Sycamore Creek	1,186	33,045	41,900	49,645	58,405	81,780
Little Miami River	At confluence with Polk Run	1,162	31,745	40,070	47,335	55,610	78,025

*Data not available

[1] Discharges reduced by ponding above the railroad bridge and the Columbia Parkway bridge

Table 9: Summary of Discharges *(continued)*

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Little Miami River	At confluence of O'Bannon Creek	1,148	31,350	39,575	46,770	54,900	77,935
McCullough Run	At mouth	4.2	3,300	*	5,200	6,300	9,600
McCullough Run	Above Fork of McCullough Run	1.7	2,200	*	3,400	4,200	6,450
Mill Creek	At mouth	160	12,810	*	18,060	20,160	25,660
Mill Creek	Above Lower West Fork	139	10,570	*	14,830	16,940	21,840
Mill Creek	At Mitchell Avenue	123	8,700	*	11,620	12,970	16,230
Mill Creek	At Carthage Gage	115	7,310	*	9,780	10,940	13,740
Mill Creek	Above West Fork	74.3	4,820	*	6,440	7,300	9,390
Mill Creek	Above Cooper Creek	63.3	3,580	*	4,490	4,880	5,770
Mill Creek	Above Glendale Road	50.4	2,960	*	3,340	3,630	4,320
Mill Creek	At Sharon Road	48	2,830	*	4,000	4,620	6,230
Mill Creek	At Kemper Road	43.9	2,790	*	4,190	4,950	7,010
Mill Creek	Above East Fork	32.8	2,280	*	3,390	3,990	5,520
Muddy Creek	At mouth	16.2	7,123	*	11,732	13,480	19,100
Muddy Creek	Above confluence of West Fork	13.3	5,772	*	9,780	11,216	16,100
Muddy Creek	Below Warsaw Road	10.2	5,679	*	8,840	10,109	14,000
Muddy Creek	At Devils Backbone Road	8.9	4,800	*	7,400	9,000	13,300
Muddy Creek	Below Ebenezer Road	7.9	4,500	*	7,100	8,600	12,800
Muddy Creek	At Muddy Creek Road at Sidney Road	5.3	3,700	*	5,750	7,000	10,500
Muddy Creek	At Hillside Avenue	1.9	5,700	*	9,000	10,300	15,200
Newton (Clear) Creek	At mouth	1.1	1,750	*	2,700	3,350	5,200
Newton (Clear) Creek	Below Norfolk & Western Railroad	0.5	1,210	*	1,880	2,300	3,650
North Branch Sycamore Creek	Approximately 1,820 feet upstream of Carriage Trail	4.6	1,250	1,605	1,900	2,230	3,040

*Data not available

Table 9: Summary of Discharges *(continued)*

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
North Branch Sycamore Creek	At confluence with Sycamore Creek	4.6	1,125	1,460	1,740	2,030	2,685
North Branch Sycamore Creek	Approximately 345 feet downstream of Interstate 71	2.3	655	830	975	1,125	1,495
Northland Road Tributary	At West Kemper Road	0.7	510	*	660	800	*
Northland Road Tributary	At Northland Road	0.3	*	*	*	300	*
O'Bannon Creek	At confluence with Little Miami River	59.7	7,615	9,890	11,590	13,530	17,880
O'Bannon Creek	Approximately 1,065 feet upstream of Warren Clermont County Boundary	55.9	7,485	9,720	11,605	13,610	18,460
Ohio River	At Cincinnati (mile 470.5)	76,580	532,000	*	663,000	718,000	844,200
Ohio River	Approximately one mile downstream of the confluence of the Little Miami River (mile 464.5)	72,890	524,600	*	626,600	677,900	800,700
Ohio River	Approximately 0.4 mile upstream of the confluence of Eight Mile Creek (mile 456.0)	71,100	520,000	*	604,000	653,000	775,000
Pleasant Run	*	*	*	*	*	*	*
Polk Run	Approximately 1,720 feet upstream of East Kemper Road	6.7	1,475	1,975	2,405	2,835	3,870
Polk Run	At confluence with Little Miami River	6.7	1,450	1,950	2,275	2,650	3,600
Polk Run	At confluence with Lake Chetac Creek	5.8	1,220	1,700	2,070	2,470	3,375
Polk Run	Approximately 615 feet downstream of Fields Ertel Road	1.7	570	760	925	1,095	1,525

*Data not available

Table 9: Summary of Discharges *(continued)*

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Raiders Run	At Montgomery Road	1.9	1,500	*	1,820	1,876	1,900
Raiders Run	Above Pepperell Lane	1.7	1,250	*	1,530	1,660	1,800
Raiders Run	At Interstate Route 71	1.5	2,050	*	3,150	3,850	5,500
Raiders Run	At Donjoy Drive	0.8	1,370	*	2,400	2,550	3,800
Raiders Run	At Bellview Avenue	0.7	1,676	*	2,628	2,899	4,050
Section Road Creek	At the Conrail crossing located just downstream of the downstream corporate limits	2.5	2,930	*	4,591	5,182	7,400
Section Road Creek	At the private drive located approximately 2,400 feet upstream of Left Fork Section Road Creek	2	2,384	*	4,383	4,976	7,000
Section Road Creek	Just downstream of Ridge Road	1.5	1,995	*	3,503	3,896	5,900
Sharon Creek	At mouth	10.5	3,500	*	5,050	6,000	8,350
Sharon Creek	Above confluence of Sharon Creek Tributary	6.7	3,250	*	4,800	5,750	8,250
Sharon Creek	At Reading Road	5.8	3,180	*	4,730	5,650	8,200
Sharon Creek Tributary	At mouth	3.6	1,700	*	2,110	2,590	4,050
Sharon Creek Tributary	Above Main Street	3.1	1,700	*	2,110	2,590	4,050
Sharon Creek Tributary	Above Thornview Drive	0.6	1,380	*	2,100	2,590	4,050
Springdale Tributary	At Chesterfield Road	4.5	1,700	*	2,400	2,640	*
Springdale Tributary	At Interstate Route 275	3.4	1,500	*	2,130	2,340	*
Springdale Tributary	At Princeton Road	3.4	1,470	*	2,100	2,310	*

*Data not available

Table 9: Summary of Discharges *(continued)*

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Springdale Tributary	At Neuss Avenue	2.4	1,210	*	1,700	1,880	*
Springdale Tributary	At Springfield Road	1.4	840	*	1,180	1,290	*
Springdale Tributary	At Cloverdale Avenue	0.6	470	*	620	760	*
Sycamore Creek	At confluence with North Branch Sycamore Creek	20.6	6,295	8,020	9,450	10,950	14,510
Sycamore Creek	At confluence with Little Miami River	20.6	4,540	5,440	6,370	7,505	9,795
Sycamore Creek	Approximately 60 feet upstream of Camargo Road	1.9	670	840	980	1,130	1,485
Sycamore Creek	Approximately 880 feet upstream of Camargo Road	0.4	285	355	420	480	635
West Fork	At mouth	9.4	4,340	*	6,586	7,910	11,940
West Fork	Above Interstate Highway 74	8.9	4,800	*	7,600	9,200	13,600
West Fork	Above Runnymede Avenue	6.8	4,300	*	6,500	7,800	11,800
West Fork Lake Tributary	Just downstream of Clovemook Avenue	2.6	*	*	*	4,580	*
West Fork Mill Creek	At mouth	36.4	1,725	*	2,050	2,175	2,450
West Fork Mill Creek	At Riddle Road	32.2	1,600	*	1,900	2,010	2,270
West Fork Mill Creek	Just downstream of West Fork Lake	29.9	1,400	*	1,400	1,400	1,400
West Fork Mill Creek	Just downstream of Hamilton Avenue	11.2	5,300	*	8,400	10,000	14,800

*Data not available

Table 9: Summary of Discharges *(continued)*

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
West Fork Mill Creek South Tributary	At mouth	0.4	700	*	1,080	1,330	2,070
West Fork of Sycamore Creek	At Indian Hill Village corporate limit	4.2	3,411	*	5,409	7,024	9,800
West Fork of Sycamore Creek	Above Raiders Run	1.8	2,222	*	3,612	4,595	6,600
West Fork of Sycamore Creek	Below Galbraith Road	0.5	720	*	1,350	1,650	2,900
West Fork of Sycamore Creek	Below Hosbrook Avenue	0.4	1,130	*	1,750	2,110	3,400
Whitewater River	At mouth	1,474	43,739	*	56,451	64,747	87,807
Whitewater River	Above Dry Fork	1,385	43,621	*	56,298	64,571	87,563
Whitewater River	At Harrison Special Study site (near Dearborn County Line)	1,368	42,500	*	55,000	62,000	83,600
Winton Woods Creek	At McKelvey Road	7.3	4,830	*	7,311	8,313	11,000
Winton Woods Creek	Below Daly Road	2.7	2,660	*	4,200	5,100	8,800
Winton Woods Creek	Just downstream of Clovemook Avenue	2.6	*	*	*	4,580	*
Wulff Run	At Delhi Pike near Hillbrook Drive	1.5	1,971	*	3,154	3,862	5,500
Wulff Run	At Delhi Pike near Viscount Drive	1.3	1,900	*	2,900	3,600	5,000
Wulff Run	At Morrvue Drive	0.7	1,400	*	2,150	2,600	4,150
Yonote Creek	At. U.S. Highway 71	1.6	830	*	1,360	1,470	1,720

*Data not available

Figure 7: Frequency Discharge-Drainage Area Curves

[Not Applicable to this Flood Risk Project]

Table 10: Summary of Non-Coastal Stillwater Elevations

Flooding Source	Location	Elevations (feet NAVD88)				
		10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Duck Creek (Old Channel)	An area of ponding along Duck Creek bounded by Red Bank Road to the North and South	*	*	*	503.4	*

*Data not available

Table 11: Stream Gage Information Used to Determine Discharges

Flooding Source	Gage Identifier	Agency that Maintains Gage	Site Name	Drainage Area (Square Miles)	Period of Record	
					From	To
Little Miami River	03245500	USGS	Little Miami River at Milford, Clermont County, Ohio	1,203	03/04/1977	12/27/2015

5.2 Hydraulic Analyses

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

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

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

Table 12: Summary of Hydrologic and Hydraulic Analyses

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
Bares Run	Approximately 25 feet downstream from the crossing of East Loveland Avenue	Approximately 2,905 feet upstream from the crossing of E Loveland Ave	Regression Equations	HEC-RAS 4.1	09/30/2016	A	
Berkshire Creek	Confluence with Clough Creek	Approximately 110 feet upstream from Stanley Road	HEC-HMS 4.2	HEC-RAS 5.0.1	September 2018	A	
Brookwood Creek	Approximately 450 feet downstream of Fair Oaks Drive	Fair Oaks Drive	Regression Equations	HEC-2	December 1978	AE w/ Floodway	
Clough Creek	Confluence with Little Miami River	Approximately 645 feet upstream from State Road	OTHER	HEC-2	March 1979	AE w/ Floodway	Redelineation of effective stream on September 2018
Congress Run	Confluence with Mill Creek	Approximately 580 feet upstream of North Hill Lane	Regression Equations	HEC-2	March 1979	AE w/ Floodway	
Dry Fork of The Whitewater River	Confluence with Whitewater River	Approximately 160 feet upstream of Marion Road	OTHER	HEC-2	March 1979	AE w/ Floodway	
Dry Run	Approximately 650 feet downstream from Railroad	Approximately 95 feet upstream from Whiting Way	HEC-HMS 4.2	HEC-RAS 5.0.1	September 2018	A	
Duck Creek	Confluence with Little Miami River	Approximately 1,200 feet upstream of Red Bank Road	Regression Equations	HEC-RAS 3.1.1 and up	02/22/2007	AE w/ Floodway	Redelineation of effective stream on September 2018

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

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
Duck Creek	Approximately 1,200 feet upstream of Red Bank Road	Approximately 957 feet upstream from Ridge Ave	Regression Equations	HEC-RAS 3.1.1 and up	09/20/2013	AE w/ Floodway	LOMR 13-05-0281P
East Fork Mill Creek	Confluence with Mill Creek	Crescentville Road	Regression Equations	HEC-2	July 2009	AE w/ Floodway	
Fork of McCullough Run	Confluence with McCullough Run	Ragland Road	OTHER	HEC-2	March 1979	AE w/ Floodway	Redelineation of effective stream on September 2018
Great Miami River	Confluence with Ohio River	Approximately 0.9 miles upstream of State Route 126	OTHER	HEC-2	March 1979	AE w/ Floodway	
Hazelwood Creek	Kenwood Road	Cornell Road	Regression Equations	HEC-2	December 1978	AE w/ Floodway	
Howard Creek	Confluence with Whitewater River	Oxford Road	OTHER	HEC-2	March 1979	AE w/ Floodway	
Lake Chetac Creek	Confluence with Polk Run	Corporate limits of City of Montgomery	HEC-HMS 4.2	HEC-RAS 5.0.1	September 2018	AE w/ Floodway	
Lake Chetac Creek	Corporate limits of City of Montgomery	Fields Ertel Road and Hamilton/Warren County Boundary	HEC-HMS 4.2	HEC-RAS 5.0.1	September 2018	A	
Left Fork Section Road Creek	Confluence with Section Road Creek	Aracoma Forest Drive	Regression Equations	HEC-2	December 1978	AE w/ Floodway	
Little Duck Creek	Confluence with Duck Creek	Approximately 500 feet downstream from Red Bank Road	Regression Equations	HEC-RAS 3.1.1 and up	02/22/2007	AE w/ Floodway	Redelineation of effective stream on September 2018
Little Duck Creek	Approximately 500 feet downstream from Red Bank Road	Approximately 100 feet upstream of Murray Road	HEC-HMS 4.2	HEC-RAS 5.0.1	September 2018	AE w/ Floodway	

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

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
Little Duck Creek	Approximately 100 feet upstream of Murray Road	Approximately 780 feet upstream from Dawson Road	HEC-HMS 4.2	HEC-RAS 5.0.1	September 2018	A	
Little Miami River	Confluence with Ohio River	Northern Hamilton/Warren County Boundary	HEC-HMS 4.2	HEC-RAS 5.0.1	September 2018	AE w/ Floodway	
Loveland Creek	Confluence with Little Miami River	Approximately 1800 feet upstream of Rich Road	HEC-HMS 4.2	HEC-RAS 5.0.1	September 2018	A/AE	
McCullough Run	Confluence with Little Miami River	Turpin Lane	OTHER	HEC-2	March 1979	AE w/ Floodway	Redelineation of effective stream on September 2018
Mill Creek	Barrier Dam	E Sharon Rd	Regression Equations	HEC-2	04/20/2000	AE w/ Floodway	
Mill Creek	E Sharon Rd	Just upstream of Crescentville Road	Regression Equations	HEC-2	July 2009	AE w/ Floodway	
Muddy Creek	Confluence with Ohio River	0.2 miles upstream of Sidney Road	OTHER	HEC-2	March 1979	AE w/ Floodway	
Newton (Clear) Creek	Confluence with Little Miami River	Railroad	OTHER	HEC-2	September 2018	AE w/ Floodway	Superseded by Little Miami River flood study
North Branch Sycamore Creek	Confluence with Sycamore Creek	Approximately 1,880 feet upstream of Carriage Trail	HEC-HMS 4.2	HEC-RAS 5.0.1	September 2018	A	
North Branch Sycamore Creek	Approximately 1,880 feet upstream of Carriage Trail	I-71 Highway	HEC-HMS 4.2	HEC-RAS 5.0.1	September 2018	AE w/ Floodway	
Northland Road Tributary	Confluence with Springdale Tributary	Approximately 320 feet upstream of Springfield Pike/ State Route 4	Regression Equations	HEC-2	July 1988	AE	

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

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
O'Bannon Creek	Confluence with Little Miami River	Eastern corporate limit of City of Loveland	HEC-HMS 4.2	HEC-RAS 5.0.1	September 2018	AE w/ Floodway	
Ohio River	Approximately 0.35 miles downstream of the confluence of Great Miami River	Approximately 1.15 miles upstream of the confluence of Eight Mile Creek	Natural Discharge Frequency Curves	HEC-RAS 4.0	January 2011	AE w/ Floodway	USACE – Statistical Methods in Hydrology
Pleasant Run	100 feet downstream of John Gray Road	Approximately 0.5 miles upstream of confluence of Pleasant Run Tributary	Regression Equations	HEC-2	04/26/2006	AE w/ Floodway	
Polk Run	Confluence with Little Miami River	Approximately 3,850 feet upstream from Loveland Madeira Road	HEC-HMS 4.2	HEC-RAS 5.0.1	September 2018	A/AE	
Polk Run	Approximately 3,850 feet upstream from Loveland Madeira Road	Approximately 380 feet upstream from East Kemper Road	HEC-HMS 4.2	HEC-RAS 5.0.1	September 2018	AE w/ Floodway	
Polk Run	Approximately 380 feet upstream from East Kemper Road	Fields Ertel Road	HEC-HMS 4.2	HEC-RAS 5.0.1	September 2018	A	
Raiders Run	Confluence with West Fork of Sycamore Creek	South of Ronald Reagan Cross CO EB Highway	OTHER	HEC-2	March 1979	AE w/ Floodway	Redelineation of effective stream on September 2018
Section Road Creek	Approximately 0.2 miles downstream of Elbrook Avenue	Approximately 0.3 miles upstream of West Beechlands Drive	Regression Equations	HEC-2	December 1978	AE w/ Floodway	
Sharon Creek	Confluence with Mill Creek	Approximately 440 feet upstream of Park Road	Regression Equations	HEC-2	July 2009	AE w/ Floodway	
Sharon Creek Tributary	Confluence with Sharon Creek	0.5 miles upstream of Main Street	Regression Equations	HEC-2	July 2009	AE w/ Floodway	

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

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
Springdale Tributary	Chesterdale Road	Approximately 50 feet upstream of Cloverdale Avenue	Regression Equations	HEC-2	July 1988	AE	
Sycamore Creek	Confluence with Little Miami River	Approximately 4,580 feet upstream of Keller Road	HEC-HMS 4.2	HEC-RAS 5.0.1	September 2018	A/AE	
Sycamore Creek	Approximately 4,580 feet upstream of Keller Road	Approximately 700 feet upstream from Camargo Road	HEC-HMS 4.2	HEC-RAS 5.0.1	September 2018	AE w/ Floodway	
Tributary A	Mouth at West Fork Lake Tributary	Approximately 820 feet upstream of Northbridge Avenue	Regression Equations	HEC-2	May 1985	AE w/ Floodway	
Tributary To Pleasant Run	Confluence with Pleasant Run	Approximately 0.6 mile upstream of confluence with Pleasant Run	Regression Equations	HEC-2	04/26/2006	AE w/ Floodway	
West Fork Creek	Confluence with Mill Creek	Confluence of McFarland Creek	Regression Equations	HEC-2	March 1979	AE w/ Floodway	
West Fork Lake Tributary	200 feet downstream of Desoto Drive	Approximately 340 feet upstream of Emerson Avenue	Regression Equations	HEC-2	May 1985	AE w/ Floodway	
West Fork Mill Creek	Confluence with Mill Creek	Just upstream of Blue Rock Road	HEC-1	HEC-2	October 1992	AE w/ Floodway	
West Fork Mill Creek South Tributary	Confluence with West Fork Mill Creek	Just upstream of footbridge	HEC-1	HEC-2	June 1985	AE w/ Floodway	
West Fork of Sycamore Creek	Confluence with Sycamore Creek	approximately 1.6 miles above confluence with Sycamore Creek	HEC-HMS 4.2	HEC-RAS 5.0.1	September 2018	A	

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

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
West Fork of Sycamore Creek	Approximately 1.6 miles above confluence with Sycamore Creek	North of East Galbraith Road	OTHER	HEC-2	March 1979	AE w/ Floodway	Redelineation of effective stream on September 2018
Whitewater River	Confluence with Great Miami River	Approximately 1.7 miles upstream of Jamison Road	OTHER	HEC-2	March 1979	AE w/ Floodway	
Winton Woods Creek	Approximately 1.6 miles downstream of Bridgecreek Lane	Approximately 200 feet upstream of Desoto Drive	Regression Equations	HEC-2	03/02/1993	AE w/ Floodway	
Wulff Run	Approximately 0.3 mile downstream of Delhi Road	Anderson Ferry Road	OTHER	HEC-2	March 1979	AE w/ Floodway	
Yonote Creek	Confluence with Duck Creek	South of I-71 NB Expressway	Regression Equations	HEC-RAS 3.1.1 and up	09/20/2013	AE w/ Floodway	LOMR 13-05-0281P
Zone A Stream (Little Miami Tributary)	Approximately 500 feet upstream of Round Bottom Road	Approximately 0.75 mile upstream of Round Bottom Road	HEC-1	HEC-2	March 1979	A	

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

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
Zone A Streams (Lower Great Miami, Indiana, Ohio Tributaries)	Varies	Varies	HEC-1	HEC-2	March 1979	A	
Zone A Streams (Middle Ohio - Laughery Tributaries)	Varies	Varies	HEC-1	HEC-2	June 1985	A	
Zone A Streams (Ohio Brush-Whiteoak Tributaries)	Varies	Varies	HEC-1	HEC-2	March 1979	A	
Zone A Streams (Whitewater Tributaries)	Varies	Varies	HEC-1	HEC-2	March 1979	A	

Table 13: Roughness Coefficients

Flooding Source	Channel “n”	Overbank “n”
Berkshire Creek	0.045	0.070 - 0.090
Brookwood Creek	0.040	0.080 - 0.090
Clough Creek	0.050 - 0.070	0.065 - 0.120
Congress Run	0.040 - 0.047	0.070 - 0.100
Dry Fork of the Whitewater River	0.035 - 0.055	0.020 - 0.100
Dry Run	0.045	0.070 - 0.090
Duck Creek	0.015 - 0.075	0.012 - 0.120
East Fork Mill Creek	0.035 - 0.035	0.060 - 1.000
Fork of McCullough Run	0.020 - 0.045	0.060 - 0.100
Great Miami River	0.030 - 0.060	0.050 - 0.100
Hazelwood Creek	0.025 - 0.045	0.070 - 0.120
Howard Creek	0.020 - 0.035	0.040 - 0.070
Lake Chetac Creek	0.045 - 0.080	0.040 - 0.140
Left Fork Section Road Creek	0.020 - 0.045	0.060 - 0.100
Little Duck Creek	0.015 - 0.055	0.025 - 0.130
Little Miami River	0.035 - 0.055	0.020 - 0.140
Loveland Creek	0.045 - 0.055	0.070 - 0.120
McCullough Run	0.040	0.060 - 0.070
Mill Creek	0.030 - 0.050	0.060 - 2.000
Muddy Creek	0.020 - 0.035	0.050 - 0.070
Newton (Clear) Creek	0.050	0.070 - 0.100
North Branch Sycamore Creek	0.030 - 0.045	0.025 - 0.150
Northland Road Tributary	*	*
O’Bannon Creek	0.040 - 0.070	0.040 - 0.140
Ohio River	0.025 - 0.030	0.100 - 0.110
Pleasant Run	*	*
Polk Run	0.030 - 0.060	0.030 - 0.150
Raiders Run	0.040	0.070 - 0.100
Section Road Creek	0.020 - 0.045	0.070 - 0.100
Sharon Creek	0.040	0.065-0.075
Sharon Creek Tributary	0.045	0.060
Springdale Tributary	*	*
Sycamore Creek	0.030 - 0.045	0.025 - 0.130
Tributary A	*	*
Tributary to Pleasant Run	*	*
West Fork Lake Tributary	0.015 - 0.080	0.055 - 0.080
West Fork Mill Creek	0.035 - 0.047	0.075
West Fork Mill Creek (below the dam)	0.045	0.090 - 0.120

*Data not available

Table 13: Roughness Coefficients *(continued)*

Flooding Source	Channel "n"	Overbank "n"
West Fork Mill Creek (downstream of Pippin Road)	0.020 - 0.040	0.080 - 0.110
West Fork Mill Creek (upstream of Pippin Road)	0.015 - 0.075	0.045 - 0.120
West Fork Mill Creek South Tributary	0.045	0.075
West Fork of Sycamore Creek	0.020 - 0.055	0.070 - 0.120
Whitewater River	0.030 - 0.055	0.020 - 0.100
Winton Woods Creek	0.040	0.070 - 0.100
Wulff Run	0.020 - 0.035	0.050 - 0.070
Yonote Creek	0.015 - 0.065	0.060

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-Percent-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 value that was calculated for Hamilton County is provided in Table 19.

Table 19: Countywide Vertical Datum Conversion

Quadrangle Name	Quadrangle Corner	Latitude	Longitude	Conversion from NGVD29 to NAVD88 (feet)
*	*	*	*	*
Average Conversion from NGVD29 to NAVD88 = -0.593 feet				

* Data Not Available

Table 20: Stream-Based Vertical Datum Conversion

[Not applicable to this Flood Risk Project]

6.2 Base Map

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

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

Table 21: Base Map Sources

Data Type	Data Provider	Data Date	Data Scale	Data Description
National Hydrography Dataset (NHD) - High Resolution	United States Geological Survey (USGS)	1999	N/A	Spatial and attribute information for STARR II revised Hydrology analysis - Subbasins feature areas (NHD 1999)
Ortho-Imagery of Hamilton County, Ohio	Ohio Geographically Information Referenced Program (OGRIP)	2018	N/A	Ortho-Imagery for Little Miami River PMR (OGRIP 2018)
Ortho-Imagery of Hamilton County, Ohio	Cincinnati Area Geographic Information System (CAGIS)	2007	N/A	Ortho-Imagery of Hamilton County, Ohio, outside Little Miami PMR (CAGIS 2007)

Table 21: Base Map Sources *(continued)*

Data Type	Data Provider	Data Date	Data Scale	Data Description
Public Land Survey System (PLSS), Political Boundaries	Federal Emergency Management Agency (FEMA)	2012	N/A	Spatial and attribute information for public land survey system and political boundaries as part of the effective FIS (NFHL 2012)
Surface Water Features for Hamilton County	Cincinnati Area Geographic Information System (CAGIS)	2012	N/A	Spatial and attribute information for water feature lines (CAGIS 2012)
Transportation Features for Hamilton County	Cincinnati Area Geographic Information System (CAGIS)	2016	N/A	Spatial and attribute information for transportation and water features (CAGIS 2016)

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- 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
Hamilton County and various Incorporated Areas	All within HUC 05090202 and the Ohio River	Light Detection and Ranging data (LiDAR)	RMSE of 0.5-foot - 95% confidence level	The aerial LiDAR acquisition for the State of Ohio was flown to support the creation of digital orthophotography with a 0.5-foot and 1-foot pixel resolution	OGRIP 2007
Hamilton County and various Incorporated Areas	All within HUC 05080002, 05080003, 05090201, 05090203, excluding Ohio River	2001 2-foot contours	Not provided	Not provided	CAGIS 2001

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

Table 23: Floodway Data

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (Feet)	SECTION AREA (Sq. Feet)	MEAN VELOCITY (Feet/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Brookwood Creek								
A	1,775 [1]	53	407	4.1	606.1	606.1	606.6	0.5
B	2,365 [1]	45	136	9.0	611.9	611.9	612.0	0.1
Clough Creek								
A	1,300 [2]	86	682	14.3	500.8	472.6 [3]	473.1	0.5
B	2,095 [2]	134	1,087	9.0	500.8	483.3 [3]	483.8	0.5
C	2,781 [2]	81	701	13.9	500.8	493.5 [3]	493.6	0.1
D	3,470 [2]	157	2,289	4.3	506.1	506.1	506.1	0.0
E	4,665 [2]	125	1,355	7.2	508.2	508.2	508.3	0.1
F	5,665 [2]	207	968	10.1	513.0	513.0	513.2	0.2
G	6,876 [2]	146	1,520	6.4	523.6	523.6	524.2	0.6
H	7,982 [2]	240	1,969	5.0	528.1	528.1	528.6	0.5
I	8,940 [2]	150	1,276	6.9	532.1	532.1	532.4	0.3
J	10,091 [2]	231	1,715	5.1	543.1	543.1	543.8	0.7
K	11,219 [2]	126	791	11.1	551.4	551.4	551.5	0.1
L	12,711 [2]	156	1,461	6.0	565.7	565.7	566.7	1.0
M	14,023 [2]	200	935	9.2	572.8	572.8	573.0	0.2
N	14,975 [2]	159	1,630	5.3	581.5	581.5	581.8	0.3
O	16,217 [2]	80	1,202	7.1	591.5	591.5	592.2	0.7
P	17,298 [2]	74	729	9.7	602.0	602.0	602.0	0.0

[1] Distances measured in feet above Village of Amberley corporate limits

[2] Distances measured in feet above confluence with Little Miami River

[3] Computed without consideration of backwater effects from the Ohio River

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

HAMILTON COUNTY, OHIO

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: BROOKWOOD CREEK – CLOUGH CREEK

Table 23 Floodway Data *(continued)*

LOCATION		FLOODWAY				1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (Feet)	WIDTH REDUCED FROM PRIOR STUDY[3] (Feet)	SECTION AREA (Sq. Feet)	MEAN VELOCITY (Feet/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Clough Creek (Continued)									
Q	17,904 [1]	147		1,455	4.9	617.0	617.0	617.1	0.1
R	18,905 [1]	65		430	10.4	628.7	628.7	628.7	0.0
S	19,975 [1]	43		349	12.8	657.2	657.2	657.2	0.0
T	20,523 [1]	52		461	9.7	666.6	666.6	666.8	0.2
U	21,725 [1]	50	43	448	9.4	684.7	684.7	685.0	0.3
V	22,690 [1]	111		2,435	1.7	728.5	728.5	729.3	0.8
W	23,715 [1]	72		467	9.0	737.7	737.7	737.9	0.2
X	24,737 [1]	186		966	4.3	752.2	752.2	752.3	0.1
Y	25,272 [1]	90	73	687	6.1	756.9	756.9	756.9	0.0
Z	26,223 [1]	110		644	4.7	768.4	768.4	768.8	0.4
Congress Run									
A	1,180 [2]	111		1,014	7.0	524.7	524.7	525.3	0.6
B	2,110 [2]	112		840	5.0	528.0	528.0	528.7	0.7
C	3,050 [2]	66		509	8.3	534.9	534.9	535.5	0.6
D	3,460 [2]	95		808	5.2	542.3	542.3	543.0	0.7
E	4,535 [2]	261		750	5.6	550.7	550.7	551.4	0.7
F	5,828 [2]	50		397	10.6	587.3	587.3	587.3	0.0
G	6603 [2]	38		716	5.9	622.0	622.0	622.7	0.7

[1] Distances measured in feet above confluence with Little Miami River

[2] Distances measured in feet above confluence with Mill Creek

[3] See explanation in Section 2.2 Floodways

TABLE

FEDERAL EMERGENCY MANAGEMENT AGENCY

HAMILTON COUNTY, OHIO

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: CLOUGH CREEK – CONGRESS RUN

Table 23 Floodway Data *(continued)*

LOCATION		FLOODWAY				1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (Feet)	WIDTH REDUCED FROM PRIOR STUDY[4] (Feet)	SECTION AREA (Sq. Feet)	MEAN VELOCITY (Feet/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Congress Run (Continued)									
H	7,675 [1]	46		265	13.6	634.5	634.5	634.5	0.0
I	9,735 [1]	48		222	12.4	709.8	709.8	709.8	0.0
J	11,050 [1]	54		233	11.8	758.3	758.3	758.3	0.0
K	12,370 [1]	72		255	10.8	795.4	795.4	795.4	0.0
L	13,625 [1]	45		219	12.5	823.8	823.8	823.8	0.0
M	14,445 [1]	80	81	2,001	1.4	850.7	850.7	850.8	0.1
Dry Fork of the Whitewater River									
A	8,131 [2]	855		6,293	4.1	498.5	498.5	498.8	0.3
B	9,610 [2]	197		2,632	9.7	499.0	499.0	499.7	0.7
C	11,405 [2]	833		5,579	4.6	502.3	502.3	503.3	1.0
D	13,622 [2]	760		4,386	5.8	504.8	504.8	505.8	1.0
E	15,734 [2]	358		2,523	10.1	509.8	509.8	510.0	0.2
F	17,213 [2]	413		3,559	7.2	513.0	513.0	513.3	0.3
G	19,219 [2]	447		4,116	6.2	515.9	515.9	516.4	0.5
H	19,958 [2]	554		4,993	5.1	518.5	518.5	519.1	0.6
I	22,704 [2]	133		1,724	14.8	521.3	521.3	521.8	0.5
J	24,182 [2]	336		3,890	6.4	527.1	527.1	527.5	0.4
K	25,819 [2]	377		4,090	6.1	528.7	528.7	529.5	0.8

[1] Distances measured in feet above confluence with Mill Creek

[2] Distances measured in feet above confluence with Whitewater River

[3] Distances measured in feet above confluence with Whitewater River

[4] See explanation in Section 2.2 Floodways

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

HAMILTON COUNTY, OHIO

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: CONGRESS RUN – DRY FORK OF THE WHITEWATER RIVER

Table 23 Floodway Data *(continued)*

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (Feet)	SECTION AREA (Sq. Feet)	MEAN VELOCITY (Feet/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Dry Fork of the Whitewater River (continued)								
L	26,928	640	8,751	2.9	532.3	532.3	533.2	0.9
M	27,826	852	10,311	2.4	533.1	533.1	534.0	0.9
N	29,726	289	4,231	5.9	533.5	533.5	534.4	0.9
O	30,413	325	3,326	7.5	534.8	534.8	535.8	1.0
P	33,264	580	5,279	4.7	538.4	538.4	539.3	0.9
Q	35,693	747	7,132	3.2	543.6	543.6	544.4	0.8
R	37,277	489	4,215	5.5	544.4	544.4	545.1	0.7
S	39,758	926	8,121	2.8	547.9	547.9	548.5	0.6
T	41,395	1,036	7,030	3.1	549.4	549.4	550.0	0.6
U	42,504	1,399	7,887	2.8	552.5	552.5	553.2	0.7
V	44,616	547	5,051	4.4	555.1	555.1	555.7	0.6
W	48,312	1,050	6,975	3.0	558.5	558.5	559.3	0.8
X	49,262	152	2,183	9.5	562.4	562.4	562.6	0.2
Y	51,058	1,169	8,781	2.4	564.9	564.9	565.7	0.8
Z	51,533	590	6,079	3.4	566.1	566.1	566.9	0.8
AA	53,962	753	6,261	3.3	567.3	567.3	568.2	0.9
AB	55,757	414	2,664	7.8	570.7	570.7	571.3	0.6
AC	58,661	624	2,716	7.6	576.4	576.4	576.7	0.3

[1] Distances measured in feet above confluence with Whitewater River

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY
HAMILTON COUNTY, OHIO
AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: DRY FORK OF THE WHITEWATER RIVER

Table 23 Floodway Data *(continued)*

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (Feet)	SECTION AREA (Sq. Feet)	MEAN VELOCITY (Feet/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Dry Fork of the Whitewater River (continued)								
AD	59,822 [1]	247	3,049	6.8	579.4	579.4	580.1	0.7
AE	61,301 [1]	194	1,832	11.3	581.9	581.9	582.5	0.6
AF	62,040 [1]	882	7,235	2.9	586.7	586.7	587.5	0.8
AG	64,522 [1]	503	2,885	7.2	587.9	587.9	588.4	0.5
AH	65,894 [1]	780	4,757	4.4	592.3	592.3	592.9	0.6
Duck Creek								
A	1,820 [2]	528 [4]	1,986	7.4	500.8	474.1 [3]	474.6	0.5
B	4,670 [2]	380	4,259	3.4	500.8	477.8 [3]	478.6	0.8
C	6,065 [2]	256	2,248	6.5	500.8	488.4 [3]	488.8	0.4
D	7,005 [2]	260	2,240	6.5	501.3	490.0 [4]	490.8	0.8
E	8,285 [2]	194	1,436	10.2	501.4	493.0 [4]	493.8	0.8
F	9,495 [2]	180	1,150	12.7	501.7	498.2 [4]	499.1	0.9
G	11,403 [2]	314	4,407	2.5	509.4	509.4	510.3	0.9
H	15,877 [2]	109	1,284	3.7	523.5	523.5	523.5	0.0
I	16,347 [2]	120	951	4.9	523.9	523.9	524.0	0.1
J	17,161 [2]	83	615	7.6	524.2	524.2	524.2	0.0
K	18,038 [2]	66	515	9.1	524.9	524.9	525.0	0.1

[1] Distances measured in feet above confluence with Whitewater River

[2] Distances measured in feet above confluence with Little Miami River

[3] Computed without consideration of backwater effects from the Ohio River

[4] Computed without consideration of effects from Little Miami River

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY
HAMILTON COUNTY, OHIO
AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: DRY FORK OF THE WHITEWATER RIVER – DUCK CREEK

Table 23 Floodway Data *(continued)*

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (Feet)	SECTION AREA (Sq. Feet)	MEAN VELOCITY (Feet/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Duck Creek (Continued)								
L	19,727 [1]	52	441	10.2	526.4	526.4	526.4	0.0
M	20,752 [1]	132	1,132	4.0	533.7	533.7	533.7	0.0
N	23,782 [1]	43	291	15.5	536.5	536.5	536.5	0.0
O	25,104 [1]	77	840	5.5	545.2	545.2	545.4	0.2
P	26,590 [1]	71	552	7.8	547.1	547.1	547.5	0.4
East Fork Mill Creek								
A	2,200 [2]	269	1,685	1.3	584.1	584.1	584.6	0.5
B	3,600 [2]	167	1,134	2.0	585.3	585.3	585.8	0.5
C	4,000 [2]	86	623	3.6	585.8	585.8	586.3	0.5
D	5,000 [2]	78	569	3.9	586.0	586.0	586.5	0.5
Fork of McCullough Run								
A	2,715 [3]	350	1,307	3.5	501.6	501.6	502.1	0.5
B	3,277 [3]	294	850	5.4	504.2	504.2	504.6	0.4
C	3,707 [3]	166	606	7.1	506.9	506.9	507.8	0.9

[1] Distances measured in feet above confluence with Little Miami River

[2] Distances measured in feet above confluence with Mill Creek

[3] Distances measured in feet above confluence with McCullough Run

Table 23 Floodway Data *(continued)*

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (Feet)	SECTION AREA (Sq. Feet)	MEAN VELOCITY (Feet/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Great Miami River								
A	5,000	7,236 / 0 [2]	109,493	1.6	489.9	471.7 [3]	472.7	1.0
B	11,560	5,008/2505 [2]	77,005	2.3	489.9	472.3 [3]	473.3	1.0
C	23,900	6,631	56,059	3.2	489.9	473.9 [3]	474.7	0.8
D	26,833	3,882	35,705	5.0	489.9	474.9 [3]	475.6	0.7
E	30,400	2,656	40,406	4.4	489.9	478.6 [3]	479.1	0.5
F	33,900	2,318	34,408	5.2	489.9	479.8 [3]	480.4	0.6
G	38,300	1,527	22,076	5.8	489.9	482.3 [3]	483.0	0.7
H	40,905	1,473	22,808	5.7	489.9	484.3 [3]	485.2	0.9
I	44,925	991	19,604	6.6	489.9	487.0 [3]	488.0	1.0
J	46,872	1,010	17,714	7.3	489.9	488.7 [3]	489.6	0.9
K	51,480	1,671	20,804	6.2	495.5	495.5	496.4	0.9
L	56,595	926	21,228	6.1	499.2	499.2	500.1	0.9
M	61,980	1,805	33,396	3.9	503.4	503.4	504.4	1.0
N	66,670	757	16,907	7.6	505.4	505.4	506.3	0.9
O	72,620	1,390	30,146	4.3	509.5	509.5	510.4	0.9
P	75,650	1,206	23,353	5.5	510.5	510.5	511.4	0.9
Q	80,036	664	17,395	7.4	515.0	515.0	516.0	1.0
R	82,893	2,027	36,910	3.5	517.1	517.1	518.1	1.0

[1] Distances measured in feet above confluence with Ohio River

[2] Total width/width within county

[3] Computed without consideration of backwater effects from the Ohio River

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY
HAMILTON COUNTY, OHIO
AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: GREAT MIAMI RIVER

Table 23 Floodway Data *(continued)*

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (Feet)	SECTION AREA (Sq. Feet)	MEAN VELOCITY (Feet/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Great Miami River (continued))								
S	86,320	2,146	38,034	3.4	518.0	518.0	519.0	1.0
T	88,655	2,428	42,354	3.0	518.7	518.7	519.7	1.0
U	91,545	2,539	52,025	2.5	519.4	519.4	520.4	1.0
V	95,005	2,118	31,577	4.1	520.1	520.1	520.9	0.8
W	99,890	2,644	41,179	3.1	522.4	522.4	523.3	0.9
X	101,100	1,816	24,810	5.2	522.6	522.6	523.5	0.9
Y	106,110	1,299	18,185	7.1	526.3	526.3	527.0	0.7
Z	112,700	1,125	22,754	5.6	531.6	531.6	532.2	0.6
AA	114,220	575	14,220	9.0	532.9	532.9	533.3	0.4
AB	117,330	970	18,280	7.0	537.0	537.0	537.7	0.7
AC	121,245	1,199	27,483	4.7	540.5	540.5	541.4	0.9
AD	124,890	859	19,169	6.7	544.4	544.4	545.4	1.0
AE	132,670	5,413	61,199	2.1	548.1	548.1	549.0	0.9
AF	139,575	3,096/1,380 [2]	35,087	3.7	550.3	550.3	551.2	0.9
AG	143,830	1,101/414 [2]	29,064	4.4	554.3	554.3	555.1	0.8

[1] Distances measured in feet above confluence with Ohio River

[2] Total width/width within county

Table 23 Floodway Data *(continued)*

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (Feet)	SECTION AREA (Sq. Feet)	MEAN VELOCITY (Feet/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Hazelwood Creek								
A	490 [1]	95	725	4.0	821.1	821.1	821.4	0.3
B	1,450 [1]	145	974	3.0	822.9	822.9	823.3	0.4
C	2,480 [1]	112	677	4.3	827.7	827.7	828.0	0.3
D	3,998 [1]	151	865	3.4	835.3	835.3	835.6	0.3
E	4,933 [1]	125	755	3.8	840.9	840.9	841.5	0.6
Howard Creek								
A	1,705 [2]	768	4,277	2.0	562.8	559.3 [4]	560.0	0.7
B	2,605 [2]	174	1,183	7.1	563.5	559.5 [4]	560.3	0.8
C	4,145 [2]	464	2,166	3.9	563.5	563.5	564.1	0.6
Lake Chetac Creek								
A	119 [3]	30	230	7.7	682.0	680.7 [5]	681.1	0.4
B	640 [3]	25	201	8.8	688.3	688.3	689.2	0.9
C	1,125 [3]	31	216	8.2	693.3	693.3	694.3	1.0
D	1,551 [3]	36	292	6.1	697.4	697.4	698.4	1.0
E	2,422 [3]	24	168	10.6	709.4	709.4	710.2	0.8
F	2,643 [3]	56	508	3.5	718.0	718.0	718.0	0.0
G	3,133 [3]	38	293	6.0	720.1	720.1	720.8	0.7
H	3,935 [3]	66	735	2.4	722.8	722.8	723.8	1.0

[1] Distances measured in feet above Kenwood Road

[2] Distances measured in feet above confluence with Dry Fork of the Whitewater River

[3] Distances measured in feet above confluence with Polk Run

[4] Computed without consideration of backwater effects from Dry Fork of Whitewater River

[5] Computed without consideration of backwater effects from Polk Run

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY
HAMILTON COUNTY, OHIO
AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: HAZELWOOD CREEK – HOWARD CREEK – LAKE CHETAC CREEK

Table 23 Floodway Data *(continued)*

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (Feet)	SECTION AREA (Sq. Feet)	MEAN VELOCITY (Feet/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Left Fork Section Road Creek								
A	100 [1]	175 [5]	1,310	1.5	591.3	589.2 [3]	589.2	0.0
B	1,385 [1]	119	317	6.2	613.5	613.5	613.6	0.1
C	1,930 [1]	91	562	3.5	621.3	621.3	621.7	0.4
D	2,727 [1]	90	372	5.2	633.6	633.6	634.1	0.5
Little Duck Creek								
A	475 [2]	100	152	11.5	509.4	504.4 [4]	504.4	0.0
B	528 [2]	69	647	2.7	509.4	506.6 [4]	506.6	0.0
C	1,563 [2]	219	2,949	0.9	524.0	524.0	524.1	0.1
D	1,788 [2]	115	1,528	1.7	524.0	524.0	524.1	0.1
E	2,424 [2]	22	340	7.5	525.1	525.1	525.6	0.5
F	2,847 [2]	105	1,651	1.5	533.3	533.3	533.8	0.5
G	3,910 [2]	37	694	3.7	533.4	533.4	534.1	0.7
H	4,603 [2]	160	1,957	1.3	533.8	533.8	534.7	0.9
I	5,467 [2]	185	1,636	1.6	533.9	533.9	534.8	0.9
J	6,403 [2]	172	1,031	2.5	534.7	534.7	535.5	0.8
K	6,969 [2]	71	551	4.6	535.2	535.2	535.9	0.7
L	7,209 [2]	115	700	3.6	538.0	538.0	538.8	0.8

[1] Distances measured in feet above confluence with Section Road Creek

[2] Distances measured in feet above confluence with Duck Creek

[3] Computed without consideration of backwater effects from Section Road Creek

[4] Computed without consideration of backwater effects from Duck Creek

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY
HAMILTON COUNTY, OHIO
AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: LEFT FORK SECTION ROAD CREEK – LITTLE DUCK CREEK

Table 23 Floodway Data *(continued)*

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (Feet)	SECTION AREA (Sq. Feet)	MEAN VELOCITY (Feet/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Little Duck Creek (continued)								
M	7,752 [1]	360	1,671	1.5	538.3	538.3	539.3	1.0
N	7,901 [1]	271	1,258	2.0	538.4	538.4	539.4	1.0
O	8,049 [1]	201	887	2.9	538.6	538.6	539.5	0.9
P	8,231 [1]	93	557	4.6	538.8	538.8	539.7	0.9
Q	8,407 [1]	33	322	7.9	539.2	539.2	540.0	0.8
Little Miami River								
A	5,617 [2]	5,011	37,061	1.9	500.8	483.4 [3]	484.2	0.8
B	9,243 [2]	661	13,420	5.1	500.8	484.8 [3]	485.2	0.4
C	15,904 [2]	1,997	26,657	2.6	500.8	486.6 [3]	487.1	0.5
D	18,966 [2]	3,731	49,404	1.4	500.8	487.6 [3]	488.4	0.8
E	25,190 [2]	5,335	59,290	1.2	500.8	488.0 [3]	488.9	0.9
F	34,233 [2]	4,231	30,512	2.4	500.8	488.6 [3]	489.4	0.8
G	36,422 [2]	3,399	26,477	3.0	500.8	491.6 [3]	492.2	0.6
H	39,180 [2]	3,324	25,978	3.1	500.8	492.5 [3]	493.1	0.6
I	42,449 [2]	1,650	18,957	4.2	500.8	494.3 [3]	494.8	0.5
J	43,673 [2]	1,973	21,386	3.8	500.8	496.0 [3]	497.0	1.0
K	46,266 [2]	2,071	21,713	3.7	500.8	497.6 [3]	498.4	0.8

[1] Distances measured in feet above confluence with Duck Creek

[2] Distances measured in feet above confluence with Ohio River

[3] Computed without consideration of backwater effects from the Ohio River

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY
HAMILTON COUNTY, OHIO
AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: LITTLE DUCK CREEK – LITTLE MIAMI RIVER

Table 23 Floodway Data *(continued)*

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (Feet)	SECTION AREA (Sq. Feet)	MEAN VELOCITY (Feet/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Little Miami River (continued)								
L	50,191	842	11,618	6.9	500.8	500.5[3]	501.4	0.9
M	51,893	491	8,936	9.0	502.0	502.0	502.5	0.5
N	57,851	1,368	13,018	6.3	505.7	505.7	506.7	1.0
O	61,118	786	9,432	5.8	510.0	510.0	510.5	0.5
P	64,107	210 [2] / 113	4,874	11.3	512.5	512.5	512.5	0.0
Q	66,344	279 [2] / 158	5,945	9.3	515.8	515.8	516.3	0.5
R[4]	72,286	667 [2] / 0	7,157	7.7	522.2	522.2	522.8	0.6
S	77,263	587 [2] / 190	6,879	8.0	529.1	529.1	529.3	0.2
T	79,980	748 [2] / 591	7,134	7.7	532.7	532.7	532.8	0.1
U	80,545	601 [2] / 544	6,046	9.1	533.8	533.8	534.3	0.5
V	82,596	906 [2] / 188	11,304	4.9	537.5	537.5	538.4	0.9
W	87,928	780 [2] / 662	6,336	8.7	541.6	541.6	541.7	0.1
X	90,971	600 [2] / 181	8,183	6.8	547.8	547.8	548.0	0.2
Y	91,853	1,035 [2] / 329	11,470	4.8	549.7	549.7	550.3	0.6
Z	94,761	662 [2] / 172	7,423	7.5	552.0	552.0	552.6	0.6
AA	97,241	229 [2] / 116	5,777	9.6	554.7	554.7	555.4	0.7
AB	100,464	338 [2] / 230	5,920	9.4	558.7	558.7	559.6	0.9

[1] Distances measured in feet above confluence with Ohio River

[2] Total width/width within County

[3] Computed without consideration of backwater effects from the Ohio River

[4] Located in City of Milford (Area Not Included) data included for informational purposes

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY
HAMILTON COUNTY, OHIO
AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: LITTLE MIAMI RIVER

Table 23 Floodway Data *(continued)*

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (Feet)	SECTION AREA (Sq. Feet)	MEAN VELOCITY (Feet/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Little Miami River (continued)								
AC	102,252	361 [2] / 201	7,885	6.6	562.0	562.0	562.8	0.8
AD	103,522	351 [2] / 142	6,353	8.4	562.8	562.8	563.6	0.8
AE	108,152	494 [2] / 211	9,068	5.9	566.7	566.7	567.4	0.7
AF	111,533	446 [2] / 297	7,929	6.7	570.0	570.0	570.7	0.7
AG	112,102	302 [2] / 64	8,096	6.6	571.1	571.1	571.9	0.8
AH	113,227	784 [2] / 104	10,231	5.2	572.0	572.0	572.7	0.7
AI	114,652	508 [2] / 320	9,286	5.7	573.0	573.0	573.7	0.7
AJ	115,178	357 [2] / 241	8,487	6.3	573.6	573.6	574.5	0.9
AK	117,114	620 [2] / 439	10,783	4.9	574.9	574.9	575.6	0.7
AL	120,365	505 [2] / 116	7,897	6.7	577.0	577.0	577.7	0.7
AM	123,634	446 [2] / 130	8,451	6.3	579.7	579.7	580.6	0.9
AN	127,349	530 [2] / 527	7,329	7.2	581.9	581.9	582.7	0.8
AO	127,876	649	7,984	6.6	584.0	584.0	585.0	1.0
AP	128,180	541	9,049	5.9	584.6	584.6	585.5	0.9
AQ	128,625	385	7,457	5.8	585.4	585.4	586.0	0.6
AR	130,565	616 [2] / 123	11,076	4.2	586.4	586.4	587.2	0.8
AS	132,685	692 [2] / 197	8,930	5.2	588.0	588.0	589.0	1.0
AT	135,962	521 [2] / 87	10,361	4.6	591.3	591.3	592.2	0.9

[1] Distances measured in feet above confluence with Ohio River

[2] Total width/width within county

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

HAMILTON COUNTY, OHIO

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: LITTLE MIAMI RIVER

Table 23 Floodway Data *(continued)*

LOCATION		FLOODWAY				1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (Feet)	WIDTH REDUCED FROM PRIOR STUDY[6] (Feet)	SECTION AREA (Sq. Feet)	MEAN VELOCITY (Feet/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
McCullough Run									
A	4,306 [1]	400 [5]		3,008	2.1	500.8	483.5 [3]	483.9	0.4
B	5,083 [1]	420 [5]		3,118	2.0	500.8	488.7 [3]	489.4	0.7
C	7,406 [1]	113		458	8.2	500.8	491.6 [3]	491.6	0.0
D	8,576 [1]	225		1,384	3.0	500.8	495.4 [3]	496.3	0.9
Mill Creek									
A	580 [2]	186		4,075	4.9	478.9	478.9 [4]	478.9	0.0
B	3,473 [2]	212		4,524	4.5	481.0	481.0 [4]	481.0	0.0
C	7,798 [2]	186		3,599	5.6	482.7	482.7 [4]	482.7	0.0
D	8,009 [2]	200		3,582	5.6	482.8	482.8 [4]	482.8	0.0
E	9,459 [2]	154		3,135	6.4	483.2	483.2 [4]	483.2	0.0
F	12,549 [2]	243		4,945	4.1	484.0	484.0 [4]	484.0	0.0
G	17,109 [2]	304		4,778	4.2	484.9	484.9 [4]	484.9	0.0
H	17,756 [2]	269		4,833	3.5	485.1	485.1 [4]	485.1	0.0
I	19,673 [2]	253		3,580	4.7	485.4	485.4 [4]	485.5	0.1
J	20,893	206		2,752	6.2	485.8	485.8	485.9	0.1
K	21,403	245	50	3,995	4.2	486.3	486.3	486.4	0.1
L	24,530	232		3,530	4.5	487.5	487.5	487.6	0.1
M	27,600	120		2,004	7.9	488.2	488.2	488.3	0.1

[1] Distances measured in feet above confluence with Little Miami River

[2] Distances measured in feet above Barrier Dam

[3] Computed without consideration of backwater effects from Little Miami River

[4] Computed considering flood elevations controlled by Barrier Dam

[5] Computed without consideration of Little Miami River floodway

[6] See explanation in Section 2.2 Floodways

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

HAMILTON COUNTY, OHIO

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: MCCULLOUGH RUN – MILL CREEK

Table 23 Floodway Data *(continued)*

LOCATION		FLOODWAY				1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (Feet)	WIDTH REDUCED FROM PRIOR STUDY[3] (Feet)	SECTION AREA (Sq. Feet)	MEAN VELOCITY (Feet/SEC)	REGULATORY	WITHOUT FLOODWAY[2]	WITH FLOODWAY	INCREASE
Mill Creek (continued)									
N	27,925	132		1,861	8.5	488.2	488.2	488.3	0.1
O	29,855	133	30	1,673	7.8	489.2	489.2	489.3	0.1
P	29,885	132	36	1,657	7.9	489.3	489.3	489.4	0.1
Q	29,975	140		1,631	8.0	489.4	489.4	489.5	0.1
R	32,250	150		1,621	8.1	490.0	490.0	490.1	0.1
S	32,400	150		1,663	7.8	490.4	490.4	490.4	0.0
T	34,550	110		1,254	10.4	490.8	490.8	490.8	0.0
U	34,850	116	28	1,130	11.5	491.2	491.2	491.3	0.1
V	36,065	110		1,062	12.2	492.8	492.8	492.8	0.0
W	36,295	100	33	1,107	11.7	493.3	493.3	493.3	0.0
X	36,825	137		1,052	12.3	493.7	493.7	493.7	0.0
Y	37,277	181		1,636	7.9	495.5	495.5	495.5	0.0
Z	40,235	123	30	1,110	11.7	498.1	498.1	498.1	0.0
AA	40,285	103	50	1,189	10.9	499.0	499.0	499.0	0.0
AB	41,518	166		1,345	8.1	508.1	508.1	508.2	0.1
AC	43,728	146		2,339	4.7	513.6	513.6	514.3	0.7
AD	43,798	137		2,306	4.7	514.0	514.0	514.8	0.8
AE	44,828	127		2,654	4.1	515.6	515.6	516.5	0.9
AF	46,068	210		2,700	4.1	517.3	517.3	518.1	0.8

[1] Distances measured in feet above Barrier Dam

[2] Computed considering flood elevations controlled by Barrier Dam

[3] See explanation in Section 2.2 Floodways

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

HAMILTON COUNTY, OHIO

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: MILL CREEK

Table 23 Floodway Data *(continued)*

LOCATION		FLOODWAY				1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (Feet)	WIDTH REDUCED FROM PRIOR STUDY[3] (Feet)	SECTION AREA (Sq. Feet)	MEAN VELOCITY (Feet/SEC)	REGULATORY	WITHOUT FLOODWAY[2]	WITH FLOODWAY	INCREASE
Mill Creek (continued)									
AG	46,578	165		2,655	4.1	518.1	518.1	518.9	0.8
AH	50,536	134		2,014	5.4	521.6	521.6	522.4	0.8
AI	50,623	177		2,627	4.2	522.0	522.0	522.9	0.9
AJ	51,638	191	36	3,025	3.6	523.4	523.4	524.0	0.6
AK	51,791	210		2,734	4.0	523.4	523.4	524.0	0.6
AL	52,893	157	727	963	11.4	528.0	528.0	528.2	0.2
AM	53,864	107		1,479	7.4	528.4	528.4	528.6	0.2
AN	54,376	141		1,716	6.4	530.0	530.0	530.2	0.2
AO	55,046	142		1,909	5.7	531.2	531.2	531.5	0.3
AP	59,940	93		1,372	5.3	536.1	536.1	536.3	0.2
AQ	60,771	79		1,194	6.1	537.2	537.2	537.6	0.4
AR	62,833	81		1,220	6.0	542.4	542.4	543.4	1.0
AS	62,867	81		1,224	6.0	542.5	542.5	543.4	0.9
AT	64,620	95		1,274	5.7	546.7	546.7	547.4	0.7
AU	64,680	96		1,284	5.7	546.9	546.9	547.6	0.7
AV	65,464	157		1,361	5.4	548.6	548.6	549.4	0.8
AW	65,984	66		1,144	6.4	549.5	549.5	550.4	0.9
AX	66,222	77		1,291	5.7	550.1	550.1	551.0	0.9
AY	68,988	109		1,650	4.4	552.9	552.9	553.9	1.0

[1] Distances measured in feet above Barrier Dam

[2] Computed considering flood elevations controlled by Barrier Dam

[3] See explanation in Section 2.2 Floodways

Table 23 Floodway Data *(continued)*

LOCATION		FLOODWAY				1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (Feet)	WIDTH REDUCED FROM PRIOR STUDY[3] (Feet)	SECTION AREA (Sq. Feet)	MEAN VELOCITY (Feet/SEC)	REGULATORY	WITHOUT FLOODWAY[2]	WITH FLOODWAY	INCREASE
Mill Creek (continued)									
AZ	69,026	109		1,652	4.4	552.9	552.9 [2]	553.9	1.0
BA	71,416	143	56	1,908	3.8	555.9	555.9 [2]	556.8	0.9
BB	71,471	192		1,975	3.7	556.2	556.2 [2]	557.1	0.9
BC	71,711	153		1,924	3.8	556.7	556.7 [2]	557.6	0.9
BD	72,696	112		1,456	4.4	557.8	557.8 [2]	558.6	0.8
BE	73,021	214		2,281	2.8	558.5	558.5 [2]	559.1	0.6
BF	76,651	153		956	5.1	562.1	562.1 [2]	563.0	0.9
BG	77,114	249		2,102	2.3	563.1	563.1 [2]	563.8	0.7
BH	80,111	141		1,489	3.3	567.5	567.5 [2]	568.3	0.8
BI	80,292	100		1,165	4.2	567.6	567.6 [2]	568.4	0.8
BJ	81,557	119		1,456	2.5	570.7	570.7 [2]	571.6	0.9
BK	81,663	106		1,297	2.8	570.9	570.9 [2]	571.7	0.8
BL	81,759	110		1,264	2.9	571.7	571.7 [2]	572.5	0.8
BM	83,091	163		1,794	2.5	572.7	572.7 [2]	573.7	1.0
BN	83,816	517		3,987	1.1	573.1	573.1 [2]	574.0	0.9
BO	85,271	143		1,796	2.6	574.5	574.5	575.3	0.8
BP	85,459	132		1,464	3.2	574.8	574.8	575.7	0.9
BQ	86,555	133		1,556	3.0	576.4	576.4	577.2	0.8
BR	86,631	450		1,885	2.5	576.7	576.7	577.0	0.3

[1] Distances measured in feet above Barrier Dam

[2] Computed considering flood elevations controlled by Barrier Dam

[3] See explanation in Section 2.2 Floodways

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

HAMILTON COUNTY, OHIO

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: MILL CREEK

Table 23 Floodway Data *(continued)*

LOCATION		FLOODWAY				1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (Feet)	WIDTH REDUCED FROM PRIOR STUDY[4] (Feet)	SECTION AREA (Sq. Feet)	MEAN VELOCITY (Feet/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Mill Creek (continued)									
BS	88,862 [1]	135		1,554	3.1	578.7	578.7	579.2	0.5
BT	88,996 [1]	244		1,809	2.7	579.2	579.2	579.6	0.4
BU	92,196 [1]	126		1,577	3.1	581.1	581.1	581.6	0.5
BV	92,316 [1]	211		1,776	2.8	581.4	581.4	581.9	0.5
BW	93,397 [1]	130		1,643	3.0	582.4	582.4	582.9	0.5
BX	93,991 [1]	466		4,066	1.2	583.5	583.5	584.0	0.5
BY	97,491 [1]	432		2,649	1.0	584.9	584.9	585.4	0.5
Muddy Creek									
A	596 [2]	165		2,451	5.5	492.4	467.1 [3]	467.9	0.8
B	2,336 [2]	535		8,052	1.7	492.4	469.1 [3]	469.6	0.5
C	3,549 [2]	521		3,994	2.8	492.4	471.5 [3]	472.1	0.6
D	4,474 [2]	400		3,204	3.5	492.4	471.8 [3]	472.4	0.6
E	5,564 [2]	427		2,359	4.8	492.4	472.5 [3]	473.1	0.6
F	10,500 [2]	171		1,623	9.1	492.4	483.1 [3]	483.3	0.2
G	11,620 [2]	180		850	12.1	492.4	489.9 [3]	489.9	0.0
H	13,145 [2]	96	45	934	11.0	504.0	504.0	504.0	0.0
I	13,704 [2]	83	43	746	13.8	510.5	510.5	510.5	0.0

[1] Distances measured in feet above Barrier Dam

[2] Distances measured in feet above confluence with Ohio River

[3] Computed without consideration of backwater effects from the Ohio River

[4] See explanation in Section 2.2 Floodways

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

HAMILTON COUNTY, OHIO

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: MILL CREEK – MUDDY CREEK

Table 23 Floodway Data *(continued)*

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (Feet)	SECTION AREA (Sq. Feet)	MEAN VELOCITY (Feet/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Muddy Creek (continued)								
J	16,850 [1]	70	601	16.8	542.4	542.4	542.4	0.0
K	18,630 [1]	79	628	16.1	572.1	572.1	572.1	0.0
L	19,840 [1]	71	603	16.8	595.4	595.4	595.4	0.0
M	21,130 [1]	77	621	16.3	612.8	612.8	612.8	0.0
N	22,200 [1]	58	567	17.8	631.1	631.1	631.1	0.0
O	24,115 [1]	80	604	14.9	680.4	680.4	680.4	0.0
P	24,800 [1]	73	656	13.7	687.7	687.7	688.2	0.5
Q	27,080 [1]	93	600	14.3	722.3	722.3	722.3	0.0
R	28,490 [1]	55	551	15.6	735.2	735.2	735.4	0.2
S	29,330 [1]	65	568	15.1	747.6	747.6	747.6	0.0
T	30,700 [1]	91	1,097	7.8	761.4	761.4	762.1	0.7
U	31,255 [1]	120	2,164	3.2	762.3	762.3	762.3	0.0
V	33,023 [1]	50	443	15.8	771.5	771.5	771.5	0.0
W	33,850 [1]	30	405	17.3	781.5	781.5	781.5	0.0
Newton (Clear) Creek								
A[5]	1,780 [2]	*	*	*	500.8	*	*	*
B	5,270 [2]	175 [4]	1,224	1.9	500.8	484.3[3]	485.3	1.0

[1] Distances measured in feet above confluence with Ohio River
[2] Distances measured in feet above confluence with Little Miami River
[3] Computed without consideration of backwater effects from the Ohio River
[4] Computed without consideration of Little Miami River floodway
[5] Cross section is fully contained within the Little Miami River floodway

Table 23 Floodway Data *(continued)*

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (Feet)	SECTION AREA (Sq. Feet)	MEAN VELOCITY (Feet/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
North Branch Sycamore Creek								
A	23,504	38	235	7.9	698.2	698.2	698.5	0.3
B	24,314	33	253	7.4	704.8	704.8	705.6	0.8
C	25,267	37	232	8.0	709.5	709.5	710.2	0.7
D	26,411	38	259	7.2	717.0	717.0	717.7	0.7
E	26,780	46	305	4.9	720.2	720.2	720.6	0.4
F	27,109	24	164	9.1	720.5	720.5	721.0	0.5
G	27,499	32	173	8.6	724.0	724.0	724.0	0.0
H	27,710	24	119	12.6	725.8	725.8	725.8	0.0
I	28,178	40	190	7.9	729.5	729.5	730.2	0.7
J	28,441	29	132	11.3	733.0	733.0	733.1	0.1
K	28,992	28	204	7.3	738.3	738.3	738.7	0.4
L	29,548	30	169	8.8	741.5	741.5	741.9	0.4
M	29,757	43	383	3.9	744.5	744.5	744.8	0.3
N	31,619	45	209	5.4	754.1	754.1	754.5	0.4
O	33,159	32	137	8.2	765.9	765.9	766.9	1.0
P	33,327	47	139	8.1	768.7	768.7	769.3	0.6
Q	33,583	32	183	6.1	771.4	771.4	771.8	0.4
R	34,222	60	413	2.7	778.0	778.0	779.0	1.0

[1] Distances measured in feet above confluence with Sycamore Creek

Table 23 Floodway Data *(continued)*

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (Feet)	SECTION AREA (Sq. Feet)	MEAN VELOCITY (Feet/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
O'Bannon Creek								
A	481 [1]	434	5,260	2.6	586.1	581.8 [4]	582.7	0.9
B	855 [1]	182	2,745	4.9	586.1	582.6 [4]	583.4	0.8
C	1,228 [1]	353	3,811	3.6	586.1	583.1 [4]	584.0	0.9
D	1,524 [1]	145	2,436	5.6	586.1	584.1 [4]	584.9	0.8
E	2,534 [1]	231	2,538	5.4	586.1	586.1	586.6	0.5
F	3,525 [1]	137	1,613	8.4	588.4	588.4	589.0	0.6
G	4,523 [1]	127	1,591	8.6	591.7	591.7	592.6	0.9
Ohio River								
A	490.75 [2]	1,762 / 233 [3]	121,533	5.9	489.8	489.8	490.8	1.0
B	490.25 [2]	1,370 / 153 [3]	104,252	6.9	489.9	489.9	490.9	1.0
C	489.50 [2]	2,140 / 656 [3]	124,572	5.8	490.3	490.3	491.3	1.0
D	489.00 [2]	1,995 / 411 [3]	126,192	5.7	490.5	490.5	491.5	1.0
E	488.50 [2]	1,683 / 226 [3]	113,032	6.4	490.6	490.6	491.6	1.0
F	488.00 [2]	1,399 / 99 [3]	105,946	6.8	490.7	490.7	491.6	0.9
G	487.50 [2]	1,326 / 134 [3]	98,996	7.3	490.7	490.7	491.7	1.0
H	486.00 [2]	1,936 / 337 [3]	124,136	5.8	491.6	491.6	492.6	1.0
I	485.25 [2]	2,085 / 212 [3]	129,283	5.6	491.8	491.8	492.8	1.0
J	483.75 [2]	2,277 / 490 [3]	122,275	5.9	492.3	492.3	493.2	0.9
K	483.25 [2]	1,942 / 189 [3]	125,681	5.7	492.4	492.4	493.4	1.0

[1] Distances measured in feet above confluence with Little Miami River

[2] Miles below headwaters at Pittsburgh

[3] Total width/width within county

[4] Computed without consideration of backwater effects from Little Miami River

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY
HAMILTON COUNTY, OHIO
AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: O'BANNON CREEK – OHIO RIVER

Table 23 Floodway Data *(continued)*

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (Feet)[2]	SECTION AREA (Sq. Feet)	MEAN VELOCITY (Feet/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Ohio River (continued)								
L	482.50	1,470 / 242	109,046	6.6	492.6	492.6	493.6	1.0
M	482.00	1,941 / 325	112,846	6.4	492.8	492.8	493.8	1.0
N	481.25	1,558 / 265	107,506	6.7	493.0	493.0	494.0	1.0
O	480.75	1,628 / 500	105,839	6.8	493.2	493.2	494.2	1.0
P	480.25	1,740 / 278	119,559	6.0	493.5	493.5	494.5	1.0
Q	479.50	1,635 / 131	114,112	6.3	493.7	493.7	494.7	1.0
R	477.50	1,730 / 460	112,902	6.4	494.3	494.3	495.3	1.0
S	477.00	1,671 / 586	111,524	6.4	494.5	494.5	495.4	0.9
T	476.50	1,557 / 464	107,724	6.7	494.6	494.6	495.6	1.0
U	476.00	1,900 / 332	125,775	5.7	495.0	495.0	496.0	1.0
V	475.00	1,471 / 354	102,984	7.0	495.1	495.1	496.1	1.0
W	474.50	1,625 / 490	111,379	6.5	495.4	495.4	496.4	1.0
X	474.00	1,546 / 250	109,421	6.6	495.6	495.6	496.6	1.0
Y	473.50	1,383 / 234	89,554	8.0	495.6	495.6	496.6	1.0
Z	473.00	1,324 / 298	99,781	7.2	496.0	496.0	497.0	1.0
AA	472.75	1,368 / 193	106,064	6.8	496.2	496.2	497.2	1.0
AB	472.25	1,220 / 217	88,391	8.1	496.2	496.2	497.2	1.0
AC	472.00	1,265 / 345	87,096	8.2	496.3	496.3	497.3	1.0

[1] Miles below headwaters at Pittsburgh

[2] Total width/width within county

Table 23 Floodway Data *(continued)*

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (Feet)[2]	SECTION AREA (Sq. Feet)	MEAN VELOCITY (Feet/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Ohio River (continued)								
AD	471.75	1,089 / 207	81,444	8.8	496.3	496.3	497.3	1.0
AE	471.50	1,168 / 182	82,908	8.7	496.5	496.5	497.5	1.0
AF	471.00	1,531 / 249	104,776	6.9	497.4	497.4	498.4	1.0
AG	470.50	1,406 / 225	103,307	7.0	497.5	497.5	498.5	1.0
AH	470.00	1,640 / 245	95,870	7.1	497.8	497.8	498.8	1.0
AI	469.50	1,626 / 224	93,336	7.3	497.9	497.9	499.0	1.0
AJ	469.00	1,506 / 284	97,824	6.9	498.3	498.3	499.3	1.0
AK	468.00	1,588 / 226	97,145	7.0	498.7	498.7	499.7	1.0
AL	467.00	2,400 / 353	122,037	5.6	499.3	499.3	500.3	1.0
AM	466.00	2,365 / 973	120,837	5.6	499.7	499.7	500.7	1.0
AN	465.25	1,850 / 669 [3]	113,150	6.0	500.0	500.0	501.0	1.0
AO	465.00	1,537 / 417	106,983	6.3	500.1	500.1	501.1	1.0
AP	464.50	2,232 / 1,159 [3]	131,625	5.2	500.3	500.3	501.3	1.0
AQ	464.00	1,970 / 920 [4]	136,898	4.8	500.6	500.6	501.6	1.0
AR	463.25	2,220 / 1,120 [4]	127,626	5.1	500.8	500.8	501.8	1.0
AS	463.00	1,486 / 467 [3]	109,971	5.9	500.8	500.8	501.8	1.0
AT	462.75	1,348 / 426 [3]	101,406	6.4	500.9	500.9	501.9	1.0
AU	462.00	1,798 / 750	118,785	5.5	501.3	501.3	502.3	1.0
AV	461.00	2,938 / 599	152,481	4.3	501.8	501.8	502.8	1.0

[1] Miles below headwaters at Pittsburgh

[2] Total width/width within county

[3] Width updated to match county boundary

[4] Floodway width updated to county boundary & 2012 FIS extent within county

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

HAMILTON COUNTY, OHIO

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: OHIO RIVER

Table 23 Floodway Data *(continued)*

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (Feet)	SECTION AREA (Sq. Feet)	MEAN VELOCITY (Feet/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Ohio River (continued)								
AW	460.5 [1]	3,380 / 1,448 [3]	157,562	4.1	501.9	501.9	502.9	1.0
AX	460.0 [1]	3,429 / 1,680 [3]	157,030	4.2	502.0	502.0	503.0	1.0
AY	459.5 [1]	3,023 / 1,150 [3]	144,353	4.5	502.1	502.1	503.1	1.0
AZ	459.0 [1]	2,770 / 539 [3]	143,238	4.6	502.2	502.2	503.2	1.0
BA	458.0 [1]	3,368 / 418 [3]	137,930	4.7	502.3	502.3	503.3	1.0
BB	457.0 [1]	2,100 / 327 [3]	144,392	4.5	502.6	502.6	503.6	1.0
BC	456.0 [1]	3,122 / 569 [3]	162,286	4.0	502.8	502.8	503.8	1.0
Pleasant Run								
A	84 [2]	36	173	9.9	664.1	664.1	664.4	0.3
B	785 [2]	40	233	7.3	672.8	672.8	673.1	0.3
C	1,758 [2]	113	171	8.5	685.3	685.3	685.3	0.0
D	2,628 [2]	20	92	9.1	697.0	697.0	697.5	0.5
E	3,274 [2]	23	105	8.0	705.8	705.8	706.6	0.8

[1] Miles below headwaters at Pittsburgh

[2] Distances measured in feet above John Gray Road

[3] Total width/width within county

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

HAMILTON COUNTY, OHIO

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: OHIO RIVER – PLEASANT RUN

Table 23 Floodway Data *(continued)*

LOCATION		FLOODWAY				1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (Feet)	WIDTH REDUCED FROM PRIOR STUDY[3] (Feet)	SECTION AREA (Sq. Feet)	MEAN VELOCITY (Feet/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Polk Run									
A	5,161 [1]	78		477	5.9	592.4	592.4	593.4	1.0
B	6,258 [1]	103		333	7.4	610.6	610.6	610.6	0.0
C	7,003 [1]	47		376	6.6	622.8	622.8	623.7	0.9
D	7,674 [1]	63		376	6.6	636.0	636.0	636.9	0.9
E	8,396 [1]	56		359	6.9	652.7	652.7	652.7	0.0
F	8,966 [1]	77		431	5.7	661.4	661.4	661.5	0.1
G	9,430 [1]	39		195	12.6	670.9	670.9	670.9	0.0
H	9,783 [1]	90		675	3.7	681.7	681.7	681.7	0.0
Raiders Run									
A	240 [2]	54		593	3.2	708.1	708.1	708.1	0.0
B	2,185 [2]	49		162	10.3	731.0	731.0	731.0	0.0
C	3,768 [2]	183	31	3,917	1.0	778.9	778.9	779.4	0.5
D	4,323 [2]	190		3,310	0.8	779.3	779.3	779.8	0.5
E	4,735 [2]	99		1,048	2.4	779.3	779.3	779.8	0.5
F	5,085 [2]	76		616	4.1	779.4	779.4	779.9	0.5
G	6,155 [2]	115		698	4.2	792.3	792.3	792.8	0.5
H	6,760 [2]	60		269	10.8	798.5	798.5	798.5	0.0

[1] Distances measured in feet above confluence with Little Miami River

[2] Distances measured in feet above confluence with West Fork Sycamore Creek

[3] See explanation in Section 2.2 Floodways

Table 23 Floodway Data *(continued)*

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (Feet)	SECTION AREA (Sq. Feet)	MEAN VELOCITY (Feet/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Section Road Creek								
A	725 [1]	190	3,261	1.6	589.4	589.4	589.9	0.5
B	1,579 [1]	226	3,716	1.4	591.3	591.3	591.6	0.3
C	2,366 [1]	180	1,687	2.9	592.0	592.0	592.0	0.0
D	3,792 [1]	280	2,265	2.2	601.7	601.7	601.8	0.1
E	5,217 [1]	200	310	6.1	623.4	623.4	623.8	0.4
F	6,896 [1]	198	1,342	2.9	635.1	635.1	635.5	0.4
Sharon Creek								
A	306 [2]	133	955	6.3	569.9	569.9	570.9	1.0
B	1,573 [2]	159	1,051	5.7	573.6	573.6	574.4	0.8
C	2,883 [2]	141	1,179	5.1	576.7	576.7	577.7	1.0
D	3,432 [2]	75	681	8.5	577.9	577.9	578.4	0.5
E	4,736 [2]	140	735	7.8	582.1	582.1	582.5	0.4
F	5,000 [2]	135	838	6.9	584.0	584.0	584.5	0.5
G	7,065 [2]	72	550	10.3	591.6	591.6	591.6	0.0
H	7,297 [2]	195	1,263	4.5	595.9	595.9	596.1	0.2
I	8,670 [2]	195	1,256	4.5	597.4	597.4	597.7	0.3
J	10,037 [2]	75	473	12.0	600.0	600.0	600.4	0.4
K	10,169 [2]	350	1,700	3.3	608.6	608.6	608.8	0.2

[1] Distances measured in feet above corporate limits

[2] Distances measured in feet above confluence with Mill Creek

Table 23 Floodway Data *(continued)*

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (Feet)	SECTION AREA (Sq. Feet)	MEAN VELOCITY (Feet/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Sharon Creek (continued)								
L	11,194 [1]	106	1,115	5.1	622.4	622.4	622.8	0.4
M	11,563 [1]	77	739	7.6	622.4	622.4	622.7	0.3
Sharon Creek Tributary								
A	1,373 [2]	85	366	7.1	582.2	582.2	582.5	0.3
B	1,996 [2]	65	300	8.6	586.5	586.5	586.6	0.1
C	2,270 [2]	50	321	8.1	588.9	588.9	589.4	0.5
D	2,724 [2]	60	400	6.5	592.8	592.8	593.2	0.4
E	3,131 [2]	70	391	6.6	594.3	594.3	594.7	0.4
F	3,226 [2]	60	427	6.1	595.2	595.2	595.7	0.5
G	4,303 [2]	40	210	12.4	602.7	602.7	603.2	0.5
H	5,016 [2]	40	211	12.3	621.2	621.2	621.2	0.0
I	5,333 [2]	41	204	12.7	627.6	627.6	628.1	0.5
Sycamore Creek								
A	11,519 [3]	43	135	8.3	701.7	701.7	701.7	0.0
B	11,936 [3]	31	292	3.3	711.3	711.3	712.3	1.0
C	12,653 [3]	21	166	5.8	716.9	716.9	717.4	0.5
D	13,676 [3]	202	457	1.8	726.3	726.3	726.5	0.2
E	13,905 [3]	40	325	2.5	728.0	728.0	729.0	1.0

[1] Distances measured in feet above confluence with Mill Creek

[2] Distances measured in feet above confluence with Sharon Creek

[3] Distances measured in feet above confluence with Little Miami River

Table 23 Floodway Data *(continued)*

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (Feet)	SECTION AREA (Sq. Feet)	MEAN VELOCITY (Feet/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Sycamore Creek (continued)								
F	14,725 [1]	67	275	2.9	733.9	733.9	734.2	0.3
G	14,835 [1]	51	226	3.6	735.6	735.6	736	0.4
H	15,316 [1]	103	446	1.8	738.4	738.4	739	0.6
I	15,878 [1]	187	497	1.6	739.3	739.3	740.1	0.8
J	16,330 [1]	37	148	4.4	742.7	742.7	743.4	0.7
K	16,805 [1]	22	75	6.4	745.3	745.3	745.8	0.5
L	16,992 [1]	70	405	1.2	751.4	751.4	752.2	0.8
M	17,630 [1]	47	68	7.0	755.9	755.9	755.9	0.0
Tributary A								
A	206 [2]	46	278	7.0	786.6	786.6	787.6	1.0
B	444 [2]	38	232	8.3	788.1	788.1	789.0	0.9
C	686 [2]	63	272	7.1	790.8	790.8	791.8	1.0
D	1,119 [2]	51	303	6.4	796.4	796.4	797.2	0.8
E	1,410 [2]	43	254	7.6	798.2	798.2	799.0	0.8
F	1,705 [2]	29	191	10.2	801.0	801.0	801.9	0.9

[1] Distances measured in feet above Keller Road

[2] Distances measured in feet above mouth at confluence with West Fork Lake Tributary

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY
HAMILTON COUNTY, OHIO
AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: SYCAMORE CREEK – TRIBUTARY A

Table 23 Floodway Data *(continued)*

LOCATION		FLOODWAY				1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (Feet)	WIDTH REDUCED FROM PRIOR STUDY[4] (Feet)	SECTION AREA (Sq. Feet)	MEAN VELOCITY (Feet/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Tributary to Pleasant Run									
A	659 [1]	30		87	10.0	680.0	680.0	680.2	0.2
B	1,237 [1]	19		95	9.1	689.8	689.8	690.3	0.5
C	2,111 [1]	28		122	7.0	699.4	699.4	700.0	0.6
D	2,641 [1]	19		101	8.5	704.2	704.2	704.8	0.6
E	3,120 [1]	74		335	2.6	706.6	706.6	707.0	0.4
West Fork									
A	600 [2]	60		544	14.5	485.0	477.9 [3]	478.4	0.5
B	1,351 [2]	85		769	10.3	485.0	482.4 [3]	482.8	0.4
C	2,061 [2]	198		1,729	4.6	485.7	485.7	485.7	0.0
D	3,043 [2]	68		654	12.1	486.6	486.6	487.1	0.5
E	4,160 [2]	198	57	1,790	4.4	492.2	492.2	492.4	0.2
F	5,945 [2]	82		1,345	5.8	500.6	500.6	501.1	0.5
G	7,125 [2]	545		4,623	1.7	507.5	507.5	508.0	0.5
H	8,148 [2]	131		1,861	4.2	507.6	507.6	508.1	0.5
I	9,288 [2]	99		886	8.8	510.6	510.6	510.6	0.0
J	10,466 [2]	86		673	11.6	516.9	516.9	516.9	0.0
K	12,539 [2]	52		488	16.0	546.2	546.2	546.5	0.3
L	13,419 [2]	80		1,025	7.6	558.2	558.2	558.7	0.5

[1] Distances measured in feet above confluence with Pleasant Run

[2] Distances measured in feet above confluence with Mill Creek

[3] Computed without consideration of backwater effects from Mill Creek

[4] See explanation in Section 2.2 Floodways

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

HAMILTON COUNTY, OHIO

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: TRIBUTARY TO PLEASANT RUN – WEST FORK

Table 23 Floodway Data *(continued)*

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (Feet)	SECTION AREA (Sq. Feet)	MEAN VELOCITY (Feet/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
West Fork Lake Tributary								
L	19,932	146	1,009	4.5	781.0	781.0	782.0	1.0
M	20,117	64	724	6.3	781.4	781.4	782.3	0.9
N	20,323	110	1,130	4.1	782.1	782.1	783.1	1.0
O	20,539	107	1,063	4.3	782.4	782.4	783.4	1.0
P	20,676	180	1,327	3.5	782.8	782.8	783.7	0.9
Q	20,951	218	2,023	2.3	783.1	783.1	784.0	0.9
R	21,162	129	1,180	3.9	783.2	783.2	784.1	0.9
S	21,574	257	2,225	2.1	783.5	783.5	784.5	1.0
T	21,928	168	1,165	3.9	783.6	783.6	784.5	0.9
U	22,303	158	969	4.7	784.3	784.3	785.3	1.0
V	22,646	32	173	5.0	785.6	785.6	786.4	0.8
W	22,746	28	130	6.7	785.9	785.9	786.7	0.8
X	23,338	91	603	1.5	794.0	794.0	794.0	0.0
Y	23,654	74	370	2.4	794.0	794.0	794.0	0.0
Z	24,399	74	295	3.0	798.8	798.8	798.8	0.0
AA	24,552	47	220	4.0	801.4	801.4	801.4	0.0
AB	25,080	42	189	5.9	802.5	802.5	803.1	0.6
AC	25,291	24	158	7.0	804.6	804.6	805.1	0.5
AD	27,667	33	244	4.5	830.5	830.5	831.2	0.7

[1] Distances measured in feet above confluence with Mill Creek

Table 23 Floodway Data *(continued)*

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (Feet)	SECTION AREA (Sq. Feet)	MEAN VELOCITY (Feet/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
West Fork Lake Tributary (continued)								
AE	28,406	71	327	8.8	835.3	835.3	835.6	0.3
AF	28,829	72	867	3.3	844.8	844.8	845.6	0.8
AG	29,040	71	793	3.6	844.9	844.9	845.7	0.8

[1] Distances measured in feet above confluence with Mill Creek