

FLOOD INSURANCE STUDY

FEDERAL EMERGENCY MANAGEMENT AGENCY

VOLUME 2 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:

To Be Determined

FLOOD INSURANCE STUDY NUMBER

39061CV002D

Version Number 2.5.3.5

PRELIMINARY

03/05/2021



FEMA

TABLE OF CONTENTS

Volume 1

	<u>Page</u>
SECTION 1.0 – INTRODUCTION	1
1.1 The National Flood Insurance Program	1
1.2 Purpose of this Flood Insurance Study Report	2
1.3 Jurisdictions Included in the Flood Insurance Study Project	2
1.4 Considerations for using this Flood Insurance Study Report	7
SECTION 2.0 – FLOODPLAIN MANAGEMENT APPLICATIONS	19
2.1 Floodplain Boundaries	19
2.2 Floodways	28
2.3 Base Flood Elevations	29
2.4 Non-Encroachment Zones	29
2.5 Coastal Flood Hazard Areas	29
2.5.1 Water Elevations and the Effects of Waves	30
2.5.2 Floodplain Boundaries and BFEs for Coastal Areas	30
2.5.3 Coastal High Hazard Areas	30
2.5.4 Limit of Moderate Wave Action	30
SECTION 3.0 – INSURANCE APPLICATIONS	30
3.1 National Flood Insurance Program Insurance Zones	30
SECTION 4.0 – AREA STUDIED	32
4.1 Basin Description	32
4.2 Principal Flood Problems	32
4.3 Non-Levee Flood Protection Measures	34
4.4 Levee Systems	35
SECTION 5.0 – ENGINEERING METHODS	37
5.1 Hydrologic Analyses	37
5.2 Hydraulic Analyses	48
5.3 Coastal Analyses	58
5.3.1 Total Stillwater Elevations	58
5.3.2 Waves	58
5.3.3 Coastal Erosion	58
5.3.4 Wave Hazard Analyses	58
5.4 Alluvial Fan Analyses	58
SECTION 6.0 – MAPPING METHODS	59
6.1 Vertical and Horizontal Control	59
6.2 Base Map	59
6.3 Floodplain and Floodway Delineation	61

Volume 2

	<u>Page</u>
6.4 Coastal Flood Hazard Mapping	102
6.5 FIRM Revisions	102
6.5.1 Letters of Map Amendment	102
6.5.2 Letters of Map Revision Based on Fill	102
6.5.3 Letters of Map Revision	103
6.5.4 Physical Map Revisions	103
6.5.5 Contracted Restudies	104
6.5.6 Community Map History	104
SECTION 7.0 – CONTRACTED STUDIES AND COMMUNITY COORDINATION	108
7.1 Contracted Studies	108
7.2 Community Meetings	112
SECTION 8.0 – ADDITIONAL INFORMATION	118
SECTION 9.0 – BIBLIOGRAPHY AND REFERENCES	121

Figures – Volume 1

	<u>Page</u>
Figure 1: FIRM Index	10
Figure 2: FIRM Notes to Users	12
Figure 3: Map Legend for FIRM	15
Figure 4: Floodway Schematic	28
Figure 5: Wave Runup Transect Schematic	30
Figure 6: Coastal Transect Schematic	30
Figure 7: Frequency Discharge-Drainage Area Curves	46
Figure 8: 1-Percent-Annual-Chance Total Stillwater Elevations for Coastal Areas	58
Figure 9: Transect Location Map	58

Tables

Tables – Volume 1

	<u>Page</u>
Table 1: Listing of NFIP Jurisdictions	2
Table 2: Flooding Sources Included in this FIS Report	20
Table 3: Flood Zone Designations by Community	31
Table 4: Basin Characteristics	32
Table 5: Principal Flood Problems	33
Table 6: Historic Flooding Elevations	34
Table 7: Non-Levee Flood Protection Measures	34
Table 8: Levees	36
Table 9: Summary of Discharges	39

Tables – Volume 1 (continued)

Table 10: Summary of Non-Coastal Stillwater Elevations	47
Table 11: Stream Gage Information used to Determine Discharges	48
Table 12: Summary of Hydrologic and Hydraulic Analyses	49
Table 13: Roughness Coefficients	56
Table 14: Summary of Coastal Analyses	58
Table 15: Tide Gage Analysis Specifics	58
Table 16: Coastal Transect Parameters	58
Table 17: Summary of Alluvial Fan Analyses	58
Table 18: Results of Alluvial Fan Analyses	58
Table 19: Countywide Vertical Datum Conversion	59
Table 20: Stream-Based Vertical Datum Conversion	59
Table 21: Base Map Sources	60
Table 22: Summary of Topographic Elevation Data used in Mapping	62
Table 23: Floodway Data (Brookwood Creek – West Fork)	63

Tables – Volume 2

Table 23: Floodway Data (West Fork Mill Creek – Yonote Creek)	95
Table 24: Flood Hazard and Non-Encroachment Data for Selected Streams	102
Table 25: Summary of Coastal Transect Mapping Considerations	102
Table 26: Incorporated Letters of Map Change	103
Table 27: Community Map History	105
Table 28: Summary of Contracted Studies Included in this FIS Report	108
Table 29: Community Meetings	113
Table 30: Map Repositories	118
Table 31: Additional Information	121
Table 32: Bibliography and References	122

Volume 2
Exhibits

Flood Profiles	<u>Panel</u>
Brookwood Creek	001 P
Clough Creek	002-013 P
Congress Run	014-020 P
Dry Fork of the Whitewater River	021-023 P
Duck Creek	024-028 P
East Fork Mill Creek	029 P
Fork of McCullough Run	030 P
Great Miami River	031-037 P
Hazelwood Creek	038 P
Howard Creek	039-040 P
Lake Chetac Creek	041 P
Left Fork Section Road Creek	042-044 P
Little Duck Creek	045-046 P
Little Miami River	047-052 P

Volume 3
Exhibits

Flood Profiles

	<u>Panel</u>
McCullough Run	053-055 P
Mill Creek	056-064 P
Muddy Creek	065-080 P
Newton (Clear) Creek	081 P
North Branch Sycamore Creek	082-083 P
Northland Road Tributary	084 P
O'Bannon Creek	085 P
Ohio River	086-092 P
Pleasant Run	093 P
Polk Run	094 P
Raiders Run	095-098 P
Section Road Creek	099-100 P
Sharon Creek	101-103 P
Sharon Creek Tributary	104-106 P
Springdale Tributary	107-109 P
Sycamore Creek	110-112 P
Tributary A	113 P
Tributary to Pleasant Run	114 P
West Fork	115-117 P
West Fork Lake Tributary	118-119 P
West Fork Mill Creek	120-126 P
West Fork Mill Creek South Tributary	127-128 P
West Fork of Sycamore Creek	129-131 P
Whitewater River	132-134 P
Winton Woods Creek	135-137 P
Wulff Run	138 P
Yonote Creek	139 P

Published Separately

Flood Insurance Rate Map (FIRM)

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 Mill Creek								
A	449	53	379	5.7	536.2	528.5 ²	529.1	0.6
B	792	68	351	6.2	536.2	529.9 ²	530.3	0.4
C	1,035	101	661	3.3	536.2	530.8 ²	531.2	0.4
D	1,420	75	451	4.8	536.2	531.3 ²	531.6	0.3
E	1,647	69	366	5.9	536.2	532.4 ²	532.5	0.1
F	2,534	95	492	4.4	536.2	535.4 ²	535.4	0.0
G	3,221	52	399	6.4	537.2	537.2	537.2	0.0
H	5,127	70	442	4.9	543.0	543.0	543.0	0.0
I	5,333	94	633	3.4	543.4	543.4	543.4	0.0
J	5,597	63	352	6.2	543.6	543.6	543.6	0.0
K	5,972	94	544	4.0	545.0	545.0	545.0	0.0
L	6,531	94	492	4.4	545.9	545.9	545.9	0.0
M	6,780	71	370	5.9	546.1	546.1	546.1	0.0

¹ Distances Measured In Feet Above Confluence with Mill Creek

² Computed Without Consideration of Backwater Effects from Mill Creek

TABLE 23	FEDERAL EMERGENCY MANAGEMENT AGENCY HAMILTON COUNTY, OHIO AND INCORPORATED AREAS	FLOODWAY DATA
		FLOODING SOURCE: WEST FORK 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 ² (Feet)	SECTION AREA (Sq. Feet)	MEAN VELOCITY (Feet/Sec)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
West Fork Mill Creek (continued)									
N	8,480	78		513	4.2	549.3	549.3	549.3	0.0
O	8,728	61	31	583	3.7	549.6	549.6	549.6	0.0
P	8,844	60	27	464	4.7	549.6	549.6	549.6	0.0
Q	9,103	68		517	4.2	550.2	550.2	550.2	0.0
R	11,774	65		447	4.9	553.6	553.6	553.6	0.0
S	13,427	68		426	5.1	556.9	556.9	556.9	0.0
T	13,765	96		438	5.0	557.6	557.6	557.6	0.0
U	14,509	105		498	4.4	559.2	559.2	559.2	0.0
V	14,916	86		335	6.5	559.8	559.8	559.8	0.0
W	19,061	119		574	3.5	566.4	566.4	566.4	0.0
X	19,906	63		393	5.1	567.5	567.5	567.5	0.0
Y	20,381	66		460	4.4	568.3	568.3	568.3	0.0
Z	20,539	54		289	7.0	568.3	568.3	568.3	0.0
AA	20,962	55		286	7.0	570.3	570.3	570.3	0.0
AB	21,278	77		379	5.3	571.3	571.3	571.3	0.0
AC	22,915	82		430	4.7	575.0	575.0	575.0	0.0
AD	23,549	60		263	7.6	575.9	575.9	575.9	0.0
AE	26,083	76		282	5.0	584.8	584.8	584.8	0.0
AF	27,826	73		261	5.4	593.1	593.1	593.1	0.0

¹ Distances Measured In Feet Above Confluence with Mill Creek

² See Explanation in Section 2.2 Floodways

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY
HAMILTON COUNTY, OHIO
AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: WEST FORK 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 ² (Feet)	SECTION AREA (Sq. Feet)	MEAN VELOCITY (Feet/Sec)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
West Fork Mill Creek (continued)									
AG	31,780	42		301	4.6	614.7	614.7	615.7	1.0
AH	32,145	41		158	8.9	621.6	621.6	621.6	0.0
AI	32,825	60		419	3.3	626.0	626.0	626.4	0.4
AJ	33,185	73		442	3.2	626.9	626.9	627.3	0.4
AK	33,635	27		134	10.4	629.9	629.9	629.9	0.0
AL	34,045	37		261	5.4	634.4	634.4	634.9	0.5
AM	35,060	32		265	5.3	637.1	637.1	637.7	0.6
AN	50,060	187		1,610	6.2	708.0	708.0	708.0	0.0
AO	50,454	269		1,495	6.7	715.2	715.2	715.4	0.2
AP	50,995	116		948	10.6	715.4	715.4	715.5	0.1
AQ	51,671	344		1,689	5.9	720.0	720.0	720.4	0.4
AR	53,240	99		1,025	9.8	727.4	727.4	727.9	0.5
AS	54,350	252		2,813	3.6	731.0	731.0	731.5	0.5
AT	55,070	207		2,571	3.9	731.9	731.9	732.4	0.5
AU	55,840	356		3,939	2.5	733.0	733.0	733.5	0.5
AV	56,555	141		1,649	5.9	733.6	733.6	734.1	0.5
AW	57,200	274		1,567	6.2	735.6	735.6	736.1	0.5
AX	58,025	159		967	10.0	739.6	739.6	739.6	0.0
AY	58,522	135		2,204	4.4	747.6	747.6	748.0	0.4

¹ Distances Measured In Feet Above Confluence with Mill Creek

² See Explanation in Section 2.2 Floodways

TABLE 23
**FEDERAL EMERGENCY MANAGEMENT AGENCY
HAMILTON COUNTY, OHIO
AND INCORPORATED AREAS**

FLOODWAY DATA
FLOODING SOURCE: WEST FORK 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 ² (Feet)	SECTION AREA (Sq. Feet)	MEAN VELOCITY (Feet/Sec)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
West Fork Mill Creek (continued)									
AZ	59,027	322		4,529	2.1	748.3	748.3	748.9	0.6
BA	59,737	253		3,087	3.1	748.7	748.7	749.3	0.6
BB	60,440	146		1,714	5.7	748.9	748.9	749.5	0.6
BC	60,992	200		1,546	5.8	750.2	750.2	750.9	0.7
BD	61,640	136	31	1,063	8.5	752.7	752.7	752.8	0.1
BE	62,100	59		639	14.1	756.2	756.2	756.4	0.2
BF	62,510	201		1,662	5.4	764.9	764.9	765.9	1.0
BG	62,759	84		1,025	8.8	765.5	765.5	766.5	1.0
BH	63,139	100		1,341	6.7	767.8	767.8	768.4	0.6
BI	64,205	148	57	1,380	3.9	770.0	770.0	770.0	0.0
BJ	65,208	160		929	5.7	776.6	776.6	777.4	0.8
BK	68,218	129		939	5.3	787.5	787.5	788.1	0.6
BL	69,062	105		829	6.0	790.4	790.4	791.3	0.9
BM	69,590	152		987	5.0	792.0	792.0	792.8	0.8
BN	71,333	105		692	7.1	798.0	798.0	798.5	0.5
BO	72,283	121		1,013	4.9	801.6	801.6	802.2	0.6
BP	73,498	157		1,437	3.1	805.4	805.4	805.8	0.4
BQ	74,026	171		1,541	2.9	805.6	805.6	806.3	0.7
BR	74,765	70		802	3.7	806.2	806.2	807.2	1.0

¹ Distances Measured In Feet Above Confluence with Mill Creek

² See Explanation in Section 2.2 Floodways

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY
HAMILTON COUNTY, OHIO
AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: WEST FORK 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
West Fork Mill Creek (continued)								
BS	75,715 ¹	71	362	8.1	808.0	808.0	809.0	1.0
BT	76,296 ¹	279	1,013	2.9	811.7	811.7	812.6	0.9
BU	77,986 ¹	104	646	3.4	815.1	815.1	816.1	1.0
BV	78,566 ¹	132	843	2.2	817.1	817.1	818.1	1.0
BW	78,883 ¹	94	438	4.3	817.8	817.8	818.1	0.3
BX	79,781 ¹	135	755	2.3	819.7	819.7	820.6	0.9
BY	81,048 ¹	69	495	3.3	824.2	824.2	824.7	0.5
West Fork Mill Creek South Tributary								
A	422 ²	28	135	9.9	587.0	587.0	587.1	0.1
B	950 ²	51	166	8.0	595.4	595.4	595.4	0.0
C	1,003 ²	45	153	8.7	598.9	598.9	598.9	0.0
D	1,426 ²	72	194	6.9	609.4	609.4	609.5	0.1
E	1,531 ²	53	188	7.1	611.4	611.4	611.8	0.4
F	2,006 ²	43	144	9.3	622.5	622.5	622.5	0.0

¹ Distances Measured In Feet Above Confluence with Mill Creek

² Distances Measured In Feet Above Mouth at Confluence with West Fork Mill Creek

TABLE 23	FEDERAL EMERGENCY MANAGEMENT AGENCY HAMILTON COUNTY, OHIO AND INCORPORATED AREAS	FLOODWAY DATA
		FLOODING SOURCE: WEST FORK MILL CREEK – WEST FORK MILL CREEK SOUTH TRIBUTARY

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
West Fork of Sycamore Creek	140 ¹	73	676	10.4	685.3	685.3	685.8	0.5
	1,480 ¹	68	627	11.2	697.1	697.1	697.4	0.3
	2,760 ¹	73	483	9.5	718.9	718.9	719.3	0.4
	4,087 ¹	125	1,714	2.7	743.1	743.1	743.4	0.3
	5,163 ¹	57	422	10.9	748.1	748.1	748.1	0.0
	4,280 ²	4,080	31,609	2.0	489.9	480.9 ³	481.4	0.5
Whitewater River	7,900 ²	782	7,689	8.4	489.9	481.6 ³	482.1	0.5
	11,415 ²	495	6,620	9.8	489.9	484.9 ³	485.4	0.5
	16,570 ²	2,800	25,374	2.5	489.9	488.7 ³	489.5	0.8
	18,580 ²	2,150	11,669	5.5	490.1	490.1	490.6	0.5
	20,790 ²	1,136	12,630	5.1	492.5	492.5	493.1	0.6
	23,650 ²	2,169	18,116	3.6	494.6	494.6	495.4	0.8
	25,590 ²	1,817	18,356	3.5	495.6	495.6	496.5	0.9
	31,130 ²	2,310	17,866	3.6	500.1	500.1	500.9	0.8
	34,750 ²	2,150	22,719	2.8	502.9	502.9	503.2	0.3
	36,360 ²	2,056	12,036	5.4	503.9	503.9	504.0	0.1
	38,740 ²	2,568	24,965	2.6	506.7	506.7	507.6	0.9
	41,120 ²	2,593	20,627	3.1	508.4	508.4	509.2	0.8

¹ Distances Measured In Feet Above approximately 1.6 miles above confluence with Sycamore Creek

² Distances Measured In Feet Above Confluence with Great 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: WEST FORK OF SYCAMORE CREEK – WHITEWATER RIVER

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 ² (Feet)	SECTION AREA (Sq. Feet)	MEAN VELOCITY (Feet/Sec)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Winton Woods Creek									
A	750	89		778	10.7	702.9	702.9	702.9	0.0
B	1,801	99		637	13.0	712.1	712.1	712.1	0.0
C	3,233	110		650	12.8	719.8	719.8	719.8	0.0
D	4,458	111		844	9.8	728.8	728.8	728.9	0.1
E	6,983	298		2,344	3.5	736.9	736.9	737.2	0.3
F	9,262	299		2,308	3.6	740.5	740.5	741.2	0.7
G	10,605	138	46	1,479	5.6	742.7	742.7	743.3	0.6
H	12,115	102		834	6.4	754.3	754.3	754.4	0.1
I	12,750	72	85	862	5.9	757.8	757.8	758.2	0.4
J	13,885	153		1,200	3.8	766.2	766.2	767.1	0.9
K	14,810	120		1,042	4.4	777.6	777.6	778.6	1.0

¹ Distances Measured In Feet Above McKelvey Road (extended)

² See Explanation in Section 2.2 Floodways

TABLE 23	FEDERAL EMERGENCY MANAGEMENT AGENCY HAMILTON COUNTY, OHIO AND INCORPORATED AREAS	FLOODWAY DATA
		FLOODING SOURCE: WINTON WOODS 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
Wulff Run	A	105 ¹	100	1,009	3.8	785.9	785.9	786.1
	B	827 ¹	105	592	6.5	786.4	786.4	786.8
	C	1,721 ¹	30	259	10.0	795.9	795.9	795.9
	D	1,936 ¹	77	948	2.7	803.2	803.2	803.6
	E	2,721 ¹	25	173	15.0	808.7	808.7	808.7
	F	3,721 ¹	68	367	7.1	821.5	821.5	822.5
Yonote Creek	A	327 ²	26	171	8.6	546.4	543.9 ³	543.9
	B	887 ²	63	369	4.0	548.4	548.4	548.4
	C	1,411 ²	286	541	2.7	554.1	554.1	554.1

¹ Distances Measured In Feet Above Delhi Road

² Distances Measured In Feet Above Confluence with Duck Creek

³ 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: WULFF RUN – YONOTE CREEK

Table 24: Flood Hazard and Non-Encroachment Data for Selected Streams
[Not Applicable to this Flood Risk Project]

6.4 Coastal Flood Hazard Mapping

This section is not applicable to this Flood Risk Project.

Table 25: Summary of Coastal Transect Mapping Considerations
[Not Applicable to this Flood Risk Project]

6.5 FIRM Revisions

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

6.5.1 Letters of Map Amendment

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

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

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

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

6.5.2 Letters of Map Revision Based on Fill

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

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

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

6.5.3 Letters of Map Revision

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

To obtain an application for a LOMR, visit www.fema.gov/media-library/assets/documents/1343 and download the form “MT-2 Application Forms and Instructions for Conditional Letters of Map Revision and Letters of Map Revision”. Visit the “Flood Map-Related Fees” section to determine the cost of applying for a LOMR. For more information about how to apply for a LOMR, call the FEMA Map Information eXchange; toll free, at 1-877-FEMA MAP (1-877-336-2627) to speak to a Map Specialist.

Previously issued mappable LOMCs (including LOMRs) that have been incorporated into the Hamilton County FIRM are listed in Table 26. Please note that this table only includes LOMCs that have been issued on the FIRM panels updated by this map revision. For all other areas within this county, users should be aware that revisions to the FIS Report made by prior LOMRs may not be reflected herein and users will need to continue to use the previously issued LOMRs to obtain the most current data.

Table 26: Incorporated Letters of Map Change

Case Number	Effective Date	Flooding Source	FIRM Panel(s)
13-05-0281P	09/20/2013	Duck Creek & Yonote Creek	39061C0241F, 39061C0242F, 39061C0243F, 39061C0244F

6.5.4 Physical Map Revisions

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

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

For more information about the PMR process, please visit www.fema.gov and visit the "Flood Map Revision Processes" section.

6.5.5 Contracted Restudies

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

6.5.6 Community Map History

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

- *Community Name* includes communities falling within the geographic area shown on the FIRM, including those that fall on the boundary line, nonparticipating communities, and communities with maps that have been rescinded. Communities with No Special Flood Hazards are indicated by a footnote. If all maps (FHBM, FBFM, and FIRM) were rescinded for a community, it is not listed in this table unless SFHAs have been identified in this community.
- *Initial Identification Date (First NFIP Map Published)* is the date of the first NFIP map that identified flood hazards in the community. If the FHBM has been converted to a FIRM, the initial FHBM date is shown. If the community has never been mapped, the upcoming effective date or "pending" (for Preliminary FIS Reports) is shown. If the community is listed in Table 27 but not identified on the map, the community is treated as if it were unmapped.
- *Initial FHBM Effective Date* is the effective date of the first FHBM. This date may be the same date as the Initial NFIP Map Date.

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

The initial effective date for the Hamilton County FIRMs in countywide format was 05/17/2004.

Table 27: Community Map History

Community Name	Initial Identification Date	Initial FHBM Effective Date	FHBM Revision Date(s)	Initial FIRM Effective Date	FIRM Revision Date(s)
Addyston, Village of	03/01/1974	03/01/1974	05/21/1976	08/15/1983	02/16/2012 02/17/2010 05/17/2004
Amberley, Village of	09/30/1980	09/30/1980	05/21/1976	09/30/1980	02/17/2010 05/17/2004
Arlington Heights, Village of	02/01/1974	02/01/1974	12/05/1975	12/18/1986	02/17/2010 05/17/2004
Blue Ash, City of	02/21/1975	02/21/1975	N/A	08/01/1980	TBD 02/17/2010 05/17/2004
Cheviot, City of ^{1, 2}	05/17/2004	N/A	N/A	05/17/2004	02/17/2010
Cincinnati, City of	06/28/1974	06/28/1974	07/30/1976	10/15/1982	TBD 02/16/2012 02/17/2010 05/17/2004
Cleves, Village of	07/23/1976	07/23/1976	09/02/1977	02/01/1984	02/16/2012 02/17/2010 05/17/2004

¹ No Special Flood Hazard Areas Identified

² This community did not have a FIRM prior to the first countywide FIRM for Hamilton County

Table 27: Community Map History (continued)

Community Name	Initial Identification Date	Initial FHBM Effective Date	FHBM Revision Date(s)	Initial FIRM Effective Date	FIRM Revision Date(s)
Deer Park, City of ^{1, 2}	05/17/2004	N/A	N/A	05/17/2004	02/17/2010
Elmwood Place, Village of	02/01/1974	02/01/1974	04/23/1976	12/18/1984	02/17/2010 05/17/2004
Evendale, Village of	03/01/1974	03/01/1974	08/27/1976	09/29/1986	02/17/2010 5/17/2004
Fairfax, Village of	01/31/1975	01/31/1975	N/A	11/15/1979	TBD 02/17/2010 5/17/2004
Forest Park, City of ²	05/17/2004	N/A	N/A	05/17/2004	02/17/2010
Glendale, Village of ²	05/17/2004	N/A	N/A	05/17/2004	02/17/2010
Golf Manor, City of ^{1, 2}	05/17/2004	N/A	N/A	05/17/2004	02/17/2010
Greenhills, Village of	01/25/1974	01/25/1974	06/04/1982 05/21/1976	09/01/1993	02/17/2010 05/17/2004
Hamilton County, Unincorporated Areas	04/14/1978	04/14/1978	N/A	06/01/1982	TBD 02/16/2012 02/17/2010 05/17/2004 10/18/1995
Harrison, City of	02/15/1974	02/15/1974	12/24/1976 05/21/1976	04/03/1985	02/17/2010 05/17/2004
Lincoln Heights, Village of ^{1, 2}	05/17/2004	N/A	N/A	05/17/2004	02/17/2010
Lockland, Village of	02/15/1974	02/15/1974	01/13/1978	09/04/1986	02/17/2010 05/17/2004
Loveland, City of	02/01/1974	02/01/1974	05/28/1976	09/01/1978	TBD 02/17/2010 05/17/2004
Madeira, City of	02/07/1975	02/07/1975	N/A	11/15/1979	TBD 02/17/2010 05/17/2004 02/20/1981
Mariemont, Village of ²	05/17/2004	N/A	N/A	05/17/2004	TBD 02/17/2010
Montgomery, City of	06/28/1974	06/28/1974	04/11/1975	06/25/1976	TBD 02/17/2010 05/17/2004 03/02/1993

¹ No Special Flood Hazard Areas Identified

² This community did not have a FIRM prior to the first countywide FIRM for Hamilton County

Table 27: Community Map History (*continued*)

Community Name	Initial Identification Date	Initial FHBM Effective Date	FHBM Revision Date(s)	Initial FIRM Effective Date	FIRM Revision Date(s)
Mount Healthy, City of	06/07/1974	06/07/1974	N/A	12/15/1978	02/17/2010 05/17/2004 03/02/1993
Newtown, Village of	02/01/1974	02/01/1974	11/03/1978 05/28/1976	12/15/1983	TBD 02/17/2010 05/17/2004
North Bend, Village of	03/15/1974	03/15/1974	05/07/1976	10/18/1983	02/16/2012 02/17/2010 05/17/2004
North College Hill, City of	06/07/1974	06/07/1974	07/25/1975	09/29/1986	02/17/2010 05/17/2004
Norwood, City of ^{1, 2}	05/17/2004	N/A	N/A	05/17/2004	02/17/2010
Reading, City of	02/08/1974	02/08/1974	05/18/1979 04/16/1976	12/18/1986	02/17/2010 05/17/2004
Sharonville, City of	04/12/1974	04/12/1974	07/27/1979 05/28/1976	01/02/1987	02/17/2010 05/17/2004
Silverton, City of ^{1, 2}	05/17/2004	N/A	N/A	05/17/2004	02/17/2010
Springdale, City of	08/14/1981	08/14/1981	N/A	12/05/1990	02/17/2010 05/17/2004
St. Bernard, City of	05/10/1974	05/10/1974	04/09/1976	09/19/1984	02/16/2012 02/17/2010 05/17/2004
Terrace Park, Village of	02/08/1974	02/08/1974	08/12/1977 10/08/1976	01/05/1984	TBD 02/17/2010 05/17/2004
The Village of Indian Hill, City of	06/28/1974	06/28/1974	06/04/1976	05/01/1985	TBD 02/17/2010 05/17/2004
Woollawn, Village of	02/01/1974	02/01/1974	12/24/1976 06/04/1976	09/04/1986	02/17/2010 05/17/2004
Wyoming, City of	02/01/1974	02/01/1974	06/04/1976	03/02/1979	02/17/2010 05/17/2004

¹ No Special Flood Hazard Areas Identified

² This community did not have a FIRM prior to the first countywide FIRM for Hamilton County

SECTION 7.0 – CONTRACTED STUDIES AND COMMUNITY COORDINATION

7.1 Contracted Studies

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

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

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Bares Run	TBD	STARR	RM-FOA-FY14-OH-05090202	09/30/2016	Loveland, City of
Berkshire Creek	TBD	COMPASS	HSFE60-15-D-0003	September 2018	Hamilton County, Unincorporated Areas
Brookwood Creek	February 1980	USACE	IAA-H-7-76	December 1978	Amberley, Village of
Clough Creek	12/1/1981	USACE	L&AH-76	March 1979	Cincinnati, City of; Hamilton County, Unincorporated Areas
Congress Run	12/1/1981	USACE	L&AH-76	March 1979	Cincinnati, City of; Hamilton County, Unincorporated Areas; Wyoming, City of
Dry Fork of The Whitewater River	12/1/1981	USACE	L&AH-76	March 1979	Hamilton County, Unincorporated Areas
Dry Run	TBD	COMPASS	HSFE60-15-D-0003	September 2018	Hamilton County, Unincorporated Areas; Newtown, Village of
Duck Creek	2/17/2010	LOMR	07-05-0437P	02/22/2007	Cincinnati, City of; Fairfax, Village of
Duck Creek	TBD	LOMR	13-05-0281P	09/20/2013	Cincinnati, City of
East Fork Mill Creek	2/17/2010	STANTEC	HSFE05-05-D-0026	July 2009	Sharonville, City of
Fork of McCullough Run	12/1/1981	USACE	L&AH-76	March 1979	Hamilton County, Unincorporated Areas; Newtown, Village of

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

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Great Miami River	12/1/1981	USACE	L&AH-76	March 1979	Cleves, Village of; Hamilton County, Unincorporated Areas
Hazelwood Creek	February 1980	USACE	IAA-H-7-76	December 1978	Blue Ash, City of
Howard Creek	12/1/1981	USACE	L&AH-76	March 1979	Hamilton County, Unincorporated Areas
Lake Chetac Creek	TBD	COMPASS	HSFE60-15-D-0003	September 2018	Hamilton County, Unincorporated Areas; Montgomery, City of
Left Fork Section Road Creek	February 1980	USACE	IAA-H-7-76	December 1978	Amberley, Village of
Little Duck Creek	2/17/2010	LOMR	07-05-0437P	02/22/2007	Fairfax, Village of
Little Duck Creek	TBD	COMPASS	HSFE60-15-D-0003	September 2018	Cincinnati, City of; Fairfax, Village of; Hamilton County, Unincorporated Areas; Madeira, City of
Little Miami River	TBD	COMPASS	HSFE60-15-D-0003	September 2018	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
Loveland Creek	TBD	COMPASS	HSFE60-15-D-0003	September 2018	Hamilton County, Unincorporated Areas; Loveland, City of
McCullough Run	12/1/1981	USACE	L&AH-76	March 1979	Hamilton County, Unincorporated Areas; Newtown, Village of

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

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Mill Creek	5/17/2010	USACE	General Reevaluation Report (GRR)	4/20/2000	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
Mill Creek	2/17/2010	STANTEC	HSFE05-05-D-0026	July 2009	Sharonville, City of
Muddy Creek	12/1/1981	USACE	L&AH-76	March 1979	Addyston, Village of; Cincinnati, City of; Hamilton County, Unincorporated Areas
Newton (Clear) Creek	TBD	COMPASS	HSFE60-15-D-0003	September 2018	Hamilton County, Unincorporated Areas
North Branch Sycamore Creek	TBD	COMPASS	HSFE60-15-D-0003	September 2018	Montgomery, City of; The Village of Indian Hill, City of
Northland Road Tributary	12/5/1990	USACE	EMW-87-E-2509	July 1988	Springdale, City of
O'Bannon Creek	TBD	COMPASS	HSFE60-15-D-0003	September 2018	Loveland, City of
Ohio River	2/16/2012	STARR	HSFEHQ-09-D-0370	January 2011	Addyston, Village of; Cincinnati, City of; Hamilton County, Unincorporated Areas; North Bend, Village of
Pleasant Run	2/17/2010	USACE	05-05-3352P	04/26/2006	Hamilton County, Unincorporated Areas
Polk Run	TBD	COMPASS	HSFE60-15-D-0003	September 2018	Hamilton County, Unincorporated Areas; Montgomery, City of

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

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Raiders Run	12/1/1981	USACE	L&AH-76	March 1979	Blue Ash, City of; Hamilton County, Unincorporated Areas
Section Road Creek	February 1980	USACE	IAA-H-7-76	December 1978	Amberley, Village of; Cincinnati, City of
Sharon Creek	2/17/2010	STANTEC	HSFE05-05-D-0026	July 2009	Evendale, Village of; Sharonville, City of
Sharon Creek Tributary	2/17/2010	STANTEC	HSFE05-05-D-0026	July 2009	Evendale, Village of; Sharonville, City of
Springdale Tributary	12/5/1990	USACE	EMW-87-E-2509	July 1988	Sharonville, City of; Springdale, City of
Sycamore Creek	TBD	COMPASS	HSFE60-15-D-0003	September 2018	Hamilton County, Unincorporated Areas; Madeira, City of; The Village of Indian Hill, City of
Tributary A	9/29/1986	USACE	EMW-84-E-1506	May 1985	North College Hill, City of
Tributary To Pleasant Run	2/17/2010	USACE	05-05-3352P	4/26/2006	Hamilton County, Unincorporated Areas
West Fork Creek	4/15/1982	USACE	IAA-H-7-76	March 1979	Cincinnati, City of
West Fork Lake Tributary	9/29/1986	USACE	EMW-84-E-1506	May 1985	City of Cincinnati; Hamilton County, Unincorporated Areas; Mount Healthy, City of; North College Hill, City of
West Fork Mill Creek	10/18/1995	USACE	EMW-9I-E-3529	October 1992	Arlington Heights, Village of; Hamilton County, Unincorporated Areas; Lockland, Village of; Mount Healthy, City of; Woodlawn, Village of; Wyoming, City of
West Fork Mill Creek South Tributary	9/4/1986	USACE	EMW-84-E-1504	June 1985	Woodlawn, Village of

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

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
West Fork of Sycamore Creek	12/1/1981	USACE	L&AH-76	March 1979	Hamilton County, Unincorporated Areas
West Fork of Sycamore Creek	TBD	COMPASS	HSFE60-15-D-0003	September 2018	Hamilton County, Unincorporated Areas; The Village of Indian Hill, City of
Whitewater River	12/1/1981	USACE	L&AH-76	March 1979	Hamilton County, Unincorporated Areas; Harrison, City of
Winton Woods Creek	3/2/1993	USACE	EMW-88-E-2768	3/2/1993	Hamilton County, Unincorporated Areas; Mount Healthy, City of
Wulff Run	12/1/1981	USACE	L&AH-76	March 1979	Hamilton County, Unincorporated Areas
Yonote Creek	TBD	LOMR	13-05-0281P	9/20/2013	Cincinnati, City of; Hamilton County, Unincorporated Areas

7.2 Community Meetings

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

Table 29: Community Meetings

Community	FIS Report Dated	Date of Meeting	Meeting Type	Attended By
Addyston, Village of	02/17/2010	09/30/2008	Final CCO	Representatives of FEMA, Ohio Department of Natural Resources (ODNR), Village of Addyston, and study contractor
Amberley, Village of	02/17/2010	09/30/2008	Final CCO	Representatives of FEMA, Ohio Department of Natural Resources (ODNR), Village of Amberley, and study contractor
Arlington Heights, Village of	02/17/2010	09/30/2008	Final CCO	Representatives of FEMA, Ohio Department of Natural Resources (ODNR), Village of Arlington Heights, and study contractor
Blue Ash, City of	TBD	05/03/2011	Project Discovery	Representatives of FEMA, Ohio Department of Natural Resources (ODNR), City of Blue Ash, and study contractor
		06/26/2018	Flood Risk Review	Representatives of FEMA, Ohio Department of Natural Resources (ODNR), City of Blue Ash, and study contractor
		TBD	Final CCO	TBD
Cheviot, City of	02/17/2010	09/30/2008	Final CCO	Representatives of FEMA, Ohio Department of Natural Resources (ODNR), City of Cheviot, and study contractor
Cincinnati, City of	TBD	05/03/2011	Project Discovery	Representatives of FEMA, Ohio Department of Natural Resources (ODNR), City of Cincinnati, and study contractor
		06/26/2018	Flood Risk Review	Representatives of FEMA, Ohio Department of Natural Resources (ODNR), City of Cincinnati, and study contractor
		TBD	Final CCO	TBD
Cleves, Village of	02/17/2010	09/30/2008	Final CCO	Representatives of FEMA, Ohio Department of Natural Resources (ODNR), Village of Cleves, and study contractor
Deer Park, City of	02/17/2010	09/30/2008	Final CCO	Representatives of FEMA, Ohio Department of Natural Resources (ODNR), City of Deer Park, and study contractor

Table 29: Community Meetings (*continued*)

Community	FIS Report Dated	Date of Meeting	Meeting Type	Attended By
Elmwood Place, Village of	02/17/2010	09/30/2008	Final CCO	Representatives of FEMA, Ohio Department of Natural Resources (ODNR), Village of Elmwood Place, and study contractor
Evendale, Village of	02/17/2010	09/30/2008	Final CCO	Representatives of FEMA, Ohio Department of Natural Resources (ODNR), Village of Evendale, and study contractor
Fairfax, Village of	TBD	05/03/2011	Project Discovery	Representatives of FEMA, Ohio Department of Natural Resources (ODNR), Village of Fairfax, and study contractor
		06/26/2018	Flood Risk Review	Representatives of FEMA, Ohio Department of Natural Resources (ODNR), Village of Fairfax, and study contractor
		TBD	Final CCO	TBD
Forest Park, City of	02/17/2010	09/30/2008	Final CCO	Representatives of FEMA, Ohio Department of Natural Resources (ODNR), City of Forest Park, and study contractor
Glendale, Village of	02/17/2010	09/30/2008	Final CCO	Representatives of FEMA, Ohio Department of Natural Resources (ODNR), Village of Glendale, and study contractor
Golf Manor, City of	02/17/2010	09/30/2008	Final CCO	Representatives of FEMA, Ohio Department of Natural Resources (ODNR), City of Golf Manor, and study contractor
Greenhills, Village of	02/17/2010	09/30/2008	Final CCO	Representatives of FEMA, Ohio Department of Natural Resources (ODNR), Village of Greenhills, and study contractor
Hamilton County Unincorporated Areas	TBD	05/3/2011	Project Discovery	Representatives of FEMA, Ohio Department of Natural Resources (ODNR), Hamilton County, and study contractor
		06/26/2018	Flood Risk Review	Representatives of FEMA, Ohio Department of Natural Resources (ODNR), Hamilton County, and study contractor
		TBD	Final CCO	TBD

Table 29: Community Meetings (*continued*)

Community	FIS Report Dated	Date of Meeting	Meeting Type	Attended By
Harrison, City of	02/17/2010	09/30/2008	Final CCO	Representatives of FEMA, Ohio Department of Natural Resources (ODNR), City of Harrison, and study contractor
Lincoln Heights, Village of	02/17/2010	09/30/2008	Final CCO	Representatives of FEMA, Ohio Department of Natural Resources (ODNR), Village of Lincoln Heights, and study contractor
Lockland, Village of	02/17/2010	09/30/2008	Final CCO	Representatives of FEMA, Ohio Department of Natural Resources (ODNR), Village of Lockland, and study contractor
Loveland, City of	02/17/2010	09/30/2008	Final CCO	Representatives of FEMA, Ohio Department of Natural Resources (ODNR), City of Loveland, and study contractor
Maderia, City of	TBD	05/03/2011	Project Discovery	Representatives of FEMA, Ohio Department of Natural Resources (ODNR), City of Maderia, and study contractor
		06/26/2018	Flood Risk Review	Representatives of FEMA, Ohio Department of Natural Resources (ODNR), City of Maderia, and study contractor
		TBD	Final CCO	TBD
Mariemont, Village of	TBD	05/03/2011	Project Discovery	Representatives of FEMA, Ohio Department of Natural Resources (ODNR), Village of Mariemont, and study contractor
		06/26/2018	Flood Risk Review	Representatives of FEMA, Ohio Department of Natural Resources (ODNR), Village of Mariemont, and study contractor
		TBD	Final CCO	TBD

Table 29: Community Meetings (*continued*)

Community	FIS Report Dated	Date of Meeting	Meeting Type	Attended By
Montgomery, City of	TBD	05/03/2011	Project Discovery	Representatives of FEMA, Ohio Department of Natural Resources (ODNR), City of Montgomery, and study contractor
		06/26/2018	Flood Risk Review	Representatives of FEMA, Ohio Department of Natural Resources (ODNR), City of Montgomery, and study contractor
		TBD	Final CCO	TBD
Mount Healthy, City of	02/17/2010	09/30/2008	Final CCO	Representatives of FEMA, Ohio Department of Natural Resources (ODNR), City of Mount Healthy, and study contractor
Newtown, Village of	TBD	05/03/2011	Project Discovery	Representatives of FEMA, Ohio Department of Natural Resources (ODNR), Village of Newtown, and study contractor
		06/26/2018	Flood Risk Review	Representatives of FEMA, Ohio Department of Natural Resources (ODNR), Village of Newtown, and study contractor
		TBD	Final CCO	TBD
North Bend, Village of	02/17/2010	09/30/2008	Final CCO	Representatives of FEMA, Ohio Department of Natural Resources (ODNR), Village of North Bend, and study contractor
North College Hill, City of	02/17/2010	09/30/2008	Final CCO	Representatives of FEMA, Ohio Department of Natural Resources (ODNR), City of North College Hill, and study contractor
Norwood, City of	02/17/2010	09/30/2008	Final CCO	Representatives of FEMA, Ohio Department of Natural Resources (ODNR), City of Norwood, and study contractor
Reading, City of	02/17/2010	09/30/2008	Final CCO	Representatives of FEMA, Ohio Department of Natural Resources (ODNR), City of Reading, and study contractor
Sharonville, City of	02/17/2010	09/30/2008	Final CCO	Representatives of FEMA, Ohio Department of Natural Resources (ODNR), City of Sharonville, and study contractor

Table 29: Community Meetings (continued)

Community	FIS Report Dated	Date of Meeting	Meeting Type	Attended By
Silverton, City of	02/17/2010	09/30/2008	Final CCO	Representatives of FEMA, Ohio Department of Natural Resources (ODNR), City of Silverton, and study contractor
Springdale, City of	02/17/2010	09/30/2008	Final CCO	Representatives of FEMA, Ohio Department of Natural Resources (ODNR), City of Springdale, and study contractor
St. Bernard, City of	02/17/2010	09/30/2008	Final CCO	Representatives of FEMA, Ohio Department of Natural Resources (ODNR), City of St. Bernard, and study contractor
Terrace Park, Village of	TBD	05/03/2011	Project Discovery	Representatives of FEMA, Ohio Department of Natural Resources (ODNR), Village of Terrace Park, and study contractor
		06/26/2018	Flood Risk Review	Representatives of FEMA, Ohio Department of Natural Resources (ODNR), Village of Terrace Park, and study contractor
		TBD	Final CCO	TBD
The Village of Indian Hill, City of	TBD	05/03/2011	Project Discovery	Representatives of FEMA, Ohio Department of Natural Resources (ODNR), The City of The Village of Indian Hill, and study contractor
		06/26/2018	Flood Risk Review	Representatives of FEMA, Ohio Department of Natural Resources (ODNR), The City of The Village of Indian Hill, and study contractor
		TBD	Final CCO	TBD
Woodlawn, Village of	02/17/2010	09/30/2008	Final CCO	Representatives of FEMA, Ohio Department of Natural Resources (ODNR), Village of Woodlawn, and study contractor
Wyoming, City of	02/17/2010	09/30/2008	Final CCO	Representatives of FEMA, Ohio Department of Natural Resources (ODNR), Village of Wyoming, and study contractor

SECTION 8.0 – ADDITIONAL INFORMATION

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

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

Table 30: Map Repositories

Community	Address	City	State	Zip Code
Addyston, Village of	Municipal Building 235 Main Street	Addyston	OH	45001
Amberley, Village of	Municipal Building 7149 Ridge Road	Cincinnati	OH	45237
Arlington Heights, Village of	Village Hall 601 Elliot Avenue	Arlington Heights	OH	45215
Blue Ash, City of	City Hall 4343 Cooper Road	Blue Ash	OH	45242
Cheviot, City of ¹	City Hall 3814 Harrison Avenue	Cheviot	OH	45211
Cincinnati, City of	City Hall 801 Plum Street	Cincinnati	OH	45202
Cleves, Village of	City Hall 101 North Miami Avenue	Cleves	OH	45002
Deer Park, City of ¹	City Hall 7777 Blue Ash Road	Deer Park	OH	45236
Elmwood Place, Village of	Village Hall 6118 Vine Street	Elmwood Place	OH	45216
Evendale, Village of	Village Hall 10500 Reading Road	Evendale	OH	45241
Fairfax, Village of	Municipal Building 5903 Hawthorne Avenue	Fairfax	OH	45227
Forest Park, City of	City Hall 1201 West Kemper Road	Forest Park	OH	45240
Glendale, Village of	Village Hall 30 Village Square	Glendale	OH	45246
Golf Manor, City of ¹	Village Hall 6450 Wiehe Road	Golf Manor	OH	45237
Greenhills, Village of	Municipal Building 11000 Winton Road	Greenhills	OH	45218

¹ No Special Flood Hazard Areas Identified

Table 30: Map Repositories (continued)

Community	Address	City	State	Zip Code
Hamilton County	Hamilton County Department of Public Works 138 East Court Street Room 800	Cincinnati	OH	45202
Harrison, City of	Community Center 300 George Street	Harrison	OH	45030
Lincoln Heights, Village of ¹	Village Hall 1201 Steffen Avenue	Lincoln Heights	OH	45215
Lockland, Village of	Town Hall 101 North Cooper Avenue	Lockland	OH	45215
Loveland, City of	City Hall 120 West Loveland Avenue	Loveland	OH	45140
Madeira, City of	City Hall 7141 Miami Avenue	Madeira	OH	45243
Mariemont, Village of	Municipal Building 6907 Wooster Pike	Mariemont	OH	45227
Montgomery, City of	City Hall 10101 Montgomery Road	Montgomery	OH	45242
Mount Healthy, City of	City Administration Building 7700 Perry Street	Mt. Healthy	OH	45231
Newtown, Village of	Town Hall 3536 Church Street	Newtown	OH	45244
North Bend, Village of	Municipal Building 21 Taylor Avenue	North Bend	OH	45052
North College Hill, City of	City Hall 1704 West Galbraith Road	Cincinnati	OH	45239
Norwood, City of ¹	City Hall 4645 Montgomery Road	Norwood	OH	45212
Reading, City of	City Hall 1000 Market Street	Reading	OH	45215
Sharonville, City of	City Hall 10900 Reading Road	Sharonville	OH	45241
Silverton, City of ¹	City Hall 6943 Montgomery Road	Silverton	OH	45236
Springdale, City of	City Hall 11700 Springfield Pike	Springdale	OH	45246
St. Bernard, City of	City Hall 110 Washington Avenue	St. Bernard	OH	45217
Terrace Park, Village of	Community Building 428 Elm Avenue	Terrace Park	OH	45174
The Village of Indian Hill, City of	Village Hall 6525 Drake Road	Indian Hill	OH	45243

¹ No Special Flood Hazard Areas Identified

Table 30: Map Repositories (continued)

Community	Address	City	State	Zip Code
Woodlawn, Village of	Village Hall 10141 Woodlawn Boulevard	Woodlawn	OH	45215
Wyoming, City of	City Building 800 Oak Avenue	Cincinnati	OH	45215

¹ No Special Flood Hazard Areas Identified

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

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

Table 31: Additional Information

FEMA and the NFIP	
FEMA and FEMA Engineering Library website	www.fema.gov/national-flood-insurance-program-flood-hazard-mapping/engineering-library
NFIP website	www.fema.gov/national-flood-insurance-program
NFHL Dataset	msc.fema.gov
FEMA Region V	FEMA Region V 536 South Clark Street, 6th Floor Chicago, IL 60605 312-408-5500
Other Federal Agencies	
USGS website	www.usgs.gov
Hydraulic Engineering Center website	www.hec.usace.army.mil
State Agencies and Organizations	
State NFIP Coordinator	Alicia Silverio, CFM, Assistant Program Manager Ohio Department of Natural Resources Division of Soil & Water Resources Floodplain Management Program 2045 Morse Road, Building B-2 Columbus, OH 43229-6693 Phone: (614) 265-1006 alicia.silverio@dnr.state.oh.us
State GIS Coordinator	Jeff Smith Framework Development Manager 77 S High St - 19th Floor Columbus, OH 43215 (614) 466-4747 Jeff.Smith@das.ohio.gov

SECTION 9.0 – BIBLIOGRAPHY AND REFERENCES

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

Table 32: Bibliography and References

Citation in this FIS	Publisher/Issuer	Publication Title, "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
BPR	Bureau of Public Records	Capacity Change for Hydraulic Design for Highway Culverts	*	Washington, D.C.	1965	
CAGIS 1991	Cincinnati Area Geographic Information System	2-foot Contour Topographic Data	CAGIS	Cincinnati, OH	1991	
CAGIS 2001	Cincinnati Area Geographic Information System	2001 2-foot contours	CAGIS	Cincinnati, OH	2001	
CAGIS 2007	Cincinnati Area Geographic Information System	Ortho-Imagery of Hamilton County, Ohio	CAGIS	Cincinnati, OH	03/01/2007	
CAGIS 2012	Cincinnati Area Geographic Information System	Surface Water Features for Hamilton County	CAGIS	Cincinnati, OH	02/16/2012	
CAGIS 2016	Cincinnati Area Geographic Information System	Transportation Features for Hamilton County	CAGIS	Cincinnati, OH	03/16/2016	http://cagismaps.hamilton-co.org/cagisportal
Compass 2018a	Federal Emergency Management Agency	Approximate Study Hydraulics Data Capture Submission for RM-REG-FY's 13,15,17-OH-05090202-Little Miami River Watershed-O-W	COMPASS	Washington, D.C.	07/31/2018	
Compass 2018b	Federal Emergency Management Agency	Steady Detailed Study Hydraulics Data Capture Submission for RM-REG-FY's 13,15,17-OH-05090202-Little Miami River Watershed-O-W	COMPASS	Washington, D.C.	07/31/2018	

*Data not available

Table 32: Bibliography and References (continued)

Citation in this FIS	Publisher/Issuer	Publication Title, "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
Compass 2018c	Federal Emergency Management Agency	Redelineation of Effective Data	COMPASS	Washington, D.C.	07/31/2018	
Compass 2018d	Federal Emergency Management Agency	Unsteady Detailed Study Hydraulics Data Capture Submission for RM-REG-FY's 13,15,17-OH-05090202-Little Miami River Watershed-O-W	COMPASS	Washington, D.C.	07/31/2018	
Compass 2018e	Federal Emergency Management Agency	Hydrologic Analyses for Little Miami Watershed-O-W HUC8 – Study – FY's 13, 15, 17 – REG	COMPASS	Washington, D.C.	07/31/2018	
Denver 1969	Denver Regional Council of Governments	Urban Storm Drainage Criteria Manual, Vols. I and II	*	Denver, CO	1969	
FEMA 1980	Federal Emergency Management Agency	Flood Insurance Study, Village of Amberley, Hamilton County, Ohio	FEMA	Washington, D.C.	02/01/1980	http://hazards.fema.gov
FEMA 1980	Federal Emergency Management Agency	Flood Insurance Study, City of Blue Ash, Hamilton County, Ohio	FEMA	Washington, D.C.	02/01/1980	http://hazards.fema.gov
FEMA 1981	Federal Emergency Management Agency	Flood Insurance Study, Hamilton County, Ohio (Unincorporated Areas)	FEMA	Washington, D.C.	12/01/1981	http://hazards.fema.gov
FEMA 1982	Federal Emergency Management Agency	Flood Insurance Study, City of Cincinnati, Hamilton County, Ohio	FEMA	Washington, D.C.	04/15/1982	http://hazards.fema.gov

*Data not available

Table 32: Bibliography and References (continued)

Citation in this FIS	Publisher/Issuer	Publication Title, "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
FEMA 1983	Federal Emergency Management Agency	Flood Insurance Study, Village of Addyston, Hamilton County, Ohio	FEMA	Washington, D.C.	02/15/1983	http://hazards.fema.gov
FEMA 1983	Federal Emergency Management Agency	Flood Insurance Study, Village of Cleves, Hamilton County, Ohio	FEMA	Washington, D.C.	08/01/1983	http://hazards.fema.gov
FEMA 1983	Federal Emergency Management Agency	Flood Insurance Study, Village of Newton, Hamilton County, Ohio	FEMA	Washington, D.C.	06/15/1983	http://hazards.fema.gov
FEMA 1983	Federal Emergency Management Agency	Flood Insurance Study, Village of North Bend, Hamilton County, Ohio	FEMA	Washington, D.C.	04/18/1983	http://hazards.fema.gov
FEMA 1983	Federal Emergency Management Agency	Flood Insurance Study, Village of Terrace Park, Hamilton County, Ohio	FEMA	Washington, D.C.	07/05/1983	http://hazards.fema.gov
FEMA 1984	Federal Emergency Management Agency	Flood Insurance Study, Village of Elmwood Place, Hamilton County, Ohio	FEMA	Washington, D.C.	06/18/1984	http://hazards.fema.gov
FEMA 1984	Federal Emergency Management Agency	Flood Insurance Study, City of Harrison, Hamilton County, Ohio	FEMA	Washington, D.C.	10/03/1984	http://hazards.fema.gov
FEMA 1984	Federal Emergency Management Agency	Flood Insurance Study, City of St. Bernard, Hamilton County, Ohio	FEMA	Washington, D.C.	03/19/1984	http://hazards.fema.gov
FEMA 1984	Federal Emergency Management Agency	Flood Insurance Study, City of the Village of Indian Hill, Hamilton County, Ohio	FEMA	Washington, D.C.	11/01/1984	http://hazards.fema.gov

Table 32: Bibliography and References (continued)

Citation in this FIS	Publisher/Issuer	<i>Publication Title</i> , "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
FEMA 1986	Federal Emergency Management Agency	Flood Insurance Study, Village of Arlington Heights, Hamilton County, Ohio	FEMA	Washington, D.C.	12/18/1986	http://hazards.fema.gov
FEMA 1986	Federal Emergency Management Agency	Flood Insurance Study, Village of Evendale, Hamilton County, Ohio	FEMA	Washington, D.C.	09/29/1986	http://hazards.fema.gov
FEMA 1986	Federal Emergency Management Agency	Flood Insurance Study, Village of Lockland, Hamilton County, Ohio	FEMA	Washington, D.C.	09/4/1986	http://hazards.fema.gov
FEMA 1986	Federal Emergency Management Agency	Flood Insurance Study, City of North College Hill, Hamilton County, Ohio	FEMA	Washington, D.C.	09/29/1986	http://hazards.fema.gov
FEMA 1986	Federal Emergency Management Agency	Flood Insurance Study, City of Reading, Hamilton County, Ohio	FEMA	Washington, D.C.	12/18/1986	http://hazards.fema.gov
FEMA 1986	Federal Emergency Management Agency	Flood Insurance Study, Village of Woodlawn, Hamilton County, Ohio	FEMA	Washington, D.C.	09/04/1986	http://hazards.fema.gov
FEMA 1987	Federal Emergency Management Agency	Flood Insurance Study, City of Sharonville, Hamilton County, Ohio	FEMA	Washington, D.C.	01/02/1987	http://hazards.fema.gov
FEMA 1990	Federal Emergency Management Agency	Flood Insurance Study, City of Springdale, Hamilton County, Ohio	FEMA	Washington, D.C.	12/05/1990	http://hazards.fema.gov

Table 32: Bibliography and References (continued)

Citation in this FIS	Publisher/Issuer	<i>Publication Title</i> , “Article,” Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
FEMA 1993	Federal Emergency Management Agency	Flood Insurance Study, City of Mount Healthy, Hamilton County, Ohio	FEMA	Washington, D.C.	03/02/1993	http://hazards.fema.gov
FEMA 1993	Federal Emergency Management Agency	Flood Insurance Study, City of Montgomery, Hamilton County, Ohio	FEMA	Washington, D.C.	03/02/1993	http://hazards.fema.gov
FEMA 2004	Federal Emergency Management Agency	Flood Insurance Study, Hamilton County, Ohio	FEMA	Washington, D.C.	05/17/2004	http://hazards.fema.gov
FEMA 2010	Federal Emergency Management Agency	Hamilton County, OH and Incorporated Areas Flood Insurance Study – Ohio River PMR	FEMA	Washington, D.C.	02/17/2010	http://msc.fema.gov
FEMA 2012	Federal Emergency Management Agency	Hamilton County, OH and Incorporated Areas Flood Insurance Study	FEMA	Washington, D.C.	02/16/2012	http://msc.fema.gov
HUD 1978	U.S. Department of Housing and Urban Development, Federal Insurance Administration	Flood Insurance Study, City of Loveland, Hamilton, Warren and Clermont County, Ohio	FEMA	Washington, D.C.	03/01/1978	http://hazards.fema.gov
HUD 1979	U.S. Department of Housing and Urban Development, Federal Insurance Administration	Flood Insurance Study, Village of Fairfax, Hamilton County, Ohio	FEMA	Washington, D.C.	05/01/1979	http://hazards.fema.gov

Table 32: Bibliography and References (continued)

Citation in this FIS	Publisher/Issuer	Publication Title, "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
HUD 1979	U.S. Department of Housing and Urban Development, Federal Insurance Administration	Flood Insurance Study, City of Madeira, Hamilton County, Ohio	FEMA	Washington, D.C.	05/01/1979	http://hazards.fema.gov
International AM	International Aerial Mapping Co.	Topographic Mapping, Altitude 1,500', Scale 1:600, Contour Interval 1 foot	*	San Antonio, TX	1973	
LOMR 2013	Federal Emergency Management Agency	LOMR 13-05-0281P	FEMA	Washington, D.C.	09/20/2013	http://msc.fema.gov
Metro TOPO 1962	Metropolitan Topographic Survey	Topographic Mapping, Scale 1:2,400, Contour Interval 5 feet	*	Cincinnati, OH	1962	
Metro TOPO 1965	Metropolitan Topographic Survey	Topographic Mapping, Scale 1:2,400, Contour Interval 5 feet	*	Cincinnati, OH	1965	
NFHL 2012	Federal Emergency Management Agency (FEMA)	Public Land Survey System (PLSS), Political Boundaries	United States Geological Survey	Washington, D.C.	02/16/2012	
NHD 1999	United States Geological Survey (USGS)	National Hydrography Dataset (NHD) - High Resolution	United States Geological Survey	Washington, D.C.	1999	

*Data not available

Table 32: Bibliography and References (continued)

Citation in this FIS	Publisher/Issuer	<i>Publication Title</i> , "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
ODNR 1959	Ohio Department of Natural Resources, Division of Lands and Soils	Our Ohio Soils	*	Columbus, OH	1959	
ODNR 1959	Ohio Department of Natural Resources, Division of Water	Floods of January- February 1959 in Ohio	*	Columbus, OH	1959	
ODNR 1959	Ohio Department of Natural Resources, Division of Water	Floods in Ohio. Bulletin No.32, Report No. 4, Ohio Water Plan Inventory	*	Washington, D.C.	1959	
ODNR 1967	Ohio Department of Natural Resources, Division of Water	Ohio Water Plan Inventory Report No. 12a, Drainage Areas of Ohio Streams, supplement to Gazetteer of Ohio Streams	*	Columbus, OH	1967	
ODNR 1969	Ohio Department of Natural Resources, Division of Water	Supplement to Bulletin 32	*	Columbus, OH	1969	
OGRIP 2007	Ohio Geographically Referenced Information Program	Ohio Statewide Imagery Program (2006-2008)	OGRIP	Columbus, OH	2007	
OGRIP 2018	Ohio Geographically Referenced Information Program	Ortho-Imagery of Hamilton County, Ohio	OGRIP	Columbus, OH	12/31/2018	http://ogrip.oit.ohio.gov

*Data not available

Table 32: Bibliography and References (continued)

Citation in this FIS	Publisher/Issuer	Publication Title, "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
STARR	Federal Emergency Management Agency	Data Capture Hydraulics Submission for RM-FOA-FY14-OH-05090202- Little Miami River Watershed (14-05-4502S)-W	STARR	Chicago, IL	09/30/2016	
USACE 1962	U.S. Army Corps of Engineers	Statistical Methods in Hydrology	Leo R. Beard	Sacramento, CA	1962	
USACE 1966	U.S. Army Corps of Engineers, Louisville District, in cooperation with the Ohio Department of Natural Resources	Flood Plain Information Study, Little Miami River, Ohio	*	Washington, D.C.	12/01/1966	
USACE 1968	U.S. Army Corps of Engineers, in cooperation with the Ohio Department of Natural Resources	Flood Plain Information, Ohio River. Hamilton County, Ohio	*	Cincinnati, OH	12/01/1968	
USACE 1971	U.S. Army Corps of Engineers	Ohio River Division, Water Resources Development	*	Cincinnati, OH	1971	
USACE 1973	U.S. Army Corps of Engineers	Mill Creek Flood Protection Project Design Memorandum No. 1	*	Washington, D.C.	02/01/1973	
USACE 1973	U.S. Army Corps of Engineers, Hydrologic Engineering Center	HEC-1 Users Manual	*	Davis, CA	1973	

*Data not available

Table 32: Bibliography and References (continued)

Citation in this FIS	Publisher/Issuer	Publication Title, "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
USACE 1976	U.S. Army Corps of Engineers, Louisville District	Eastern Kentucky Regional Frequency Study	*	Louisville, KY	08/01/1976	
USACE 1977	U.S. Army Corps of Engineers, Louisville District	Floodplain Information, Little Miami River, Hamilton, Clermont and Warren Counties, Ohio	*	Louisville, KY	03/01/1977	
USACE 1981	U.S. Army Corps of Engineers, Hydrologic Engineering Center	HEC-1 Flood Hydrograph Package, Generalized Computer Program	*	Davis, CA	09/01/1981	
USACE 1984	U.S. Army Corps of Engineers, Hydrologic Engineering Center	HEC-2 Water Surface Profiles, Generalized Computer Program	*	Davis, CA	04/01/1984	
USACE 1990	U.S. Army Corps of Engineers, Hydrologic Engineering Center	HEC-2, Water-Surface Profiles, User's Manual	*	Davis, CA	09/01/1990	
USACE 2008	U.S. Army Corps of Engineers, Hydrologic Engineering Center	HEC-RAS River Analysis System Version 4.0.0	*	Davis, CA	03/01/2008	https://www.hec.usace.army.mil/software/hec-ras/

*Data not available

Table 32: Bibliography and References (continued)

Citation in this FIS	Publisher/Issuer	Publication Title, "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
USDA 1969	U.S. Department of Agriculture, Soil Conservation Service	Work Plan for Watershed Protection and Flood Prevention, Upper Mill Creek Watershed, Butler and Hamilton Counties, Ohio	*	Washington, D.C.	1969	
USDA 1978	U.S. Department of Agriculture	Aerial Photography of Hamilton County, Ohio. Scale 1:20,000	*	Washington, D.C.	09/01/1978	
USDOC 1967	U.S. Department of Commerce, National Weather Service	Rainfall Frequency Atlas of the United States	*	Washington, D.C.	1967	
USDOC 2006	U.S. Department of Commerce, Bureau of the Census	Census 2000, using American Fact Finder	*	Washington, D.C.	08/17/2006	http://factfinder.census.gov
USDOT 1986	U.S. Department of Transportation, Federal Highway Administration	Bridge Waterways Analysis Model: Research Report	J.O. Shearman, W.H. Kirby, V.R. Schneider, and H.N. Flippo	Washington, D.C.	07/01/1986	
USEPA 1971	U.S. Environmental Protection Agency	Storm Water Management Model. Vol. I - Final Report, 11 024DOC07/7 1	*	Washington, D.C.	1971	

*Data not available

Table 32: Bibliography and References (continued)

Citation in this FIS	Publisher/Issuer	Publication Title, "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
USGS 1970	U.S. Geological Survey	Topographic Maps, Scale 1:2,400, Contour Interval 5 feet	*	Cincinnati, OH	1970	
USGS 1974	U.S. Department of the Interior, Geological Survey	Water Resources Data for Ohio. Part 1, Surface Water Records	*	Washington, D.C.	1974	
USGS 1974	U.S. Geological Survey	7.5-Minute Series Topographic Maps, Scale 1:24,000, Contour Interval 10 feet	*	Cincinnati, OH	1974	
USGS 1974	U.S. Department of the Interior, Geological Survey	7.5- Minute Series Topographic Maps, Scale 1:2,400, Contour Interval 10 feet	*	Cincinnati, OH	1974	
USGS 1974	U.S. Department of the Interior, Geological Survey	7.5-Minute Series (Topographic) Maps, Scale 1:24,000, enlarged to 1:9,600, Contour Interval 10 feet	*	Cincinnati, OH	1974	
USGS 1976	U.S. Department of the Interior, Geological Survey	Floods in Ohio-Magnitude and Frequency. Open-File Report 76-768	*	Washington, D.C.	12/01/1976	
USGS 1981	U.S. Geological Survey	7.5-Minute Series Topographic Maps, Scale 1:24,000, Contour Interval 10 feet	*	Washington, D.C.	1981	

*Data not available

Table 32: Bibliography and References (continued)

Citation in this FIS	Publisher/Issuer	Publication Title, "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
USGS 1983	U.S. Geological Survey	Flood Characteristics of Urban Watersheds in the United States	V.B. Sauer; W.O. Thomas, Jr.; V.A. Stricker; and K.V. Wilson	Washington, D.C.	1983	
USGS 1986	U.S. Geological Survey	Estimating Peak Discharges, Flood Volumes, and Hydrograph Shapes of Small Ungaged Urban Streams in Ohio	James M. Sherwood	Washington, D.C.	3/1/1986	
USGS 1990	U.S. Geological Survey Water Investigations Report 89-4126	Techniques for Estimating Flood Peak Discharges of Rural, Unregulated Streams in Ohio	Koltun, G.F. and John W. Roberts	Washington, D.C.	1990	
USGS 1990	U.S. Geological Survey	Techniques for Estimating Flood-Peak Discharges of Rural, Unregulated Streams in Ohio	G.F. Koltun, and J.W. Roberts	Washington, D.C.	03/01/1990	
WRC 1976	Water Resources Council	Guidelines for Determining Flood Flow Frequency," Bulletin No. 17	*	Washington, D.C.	03/01/1976	

*Data not available







































































































