

FLOOD INSURANCE STUDY

FEDERAL EMERGENCY MANAGEMENT AGENCY

VOLUME 1 OF 3



ROBERTSON COUNTY, TENNESSEE

AND INCORPORATED AREAS

COMMUNITY NAME	COMMUNITY NUMBER
ADAMS, CITY OF	470159
CEDAR HILL, TOWN OF*	470464
COOPERTOWN, TOWN OF	470423
CROSS PLAINS, TOWN OF	470160
GREENBRIER, CITY OF	470161
ORLINDA, TOWN OF	470465
RIDGETOP, CITY OF	470162
ROBERTSON COUNTY, UNINCORPORATED AREAS	470158
SPRINGFIELD, CITY OF	470163

* No Special Flood Hazard Areas Identified



FEMA

REVISED:

FEBRUARY 26, 2021

FLOOD INSURANCE STUDY NUMBER
47147CV001B

Version Number 2.4.3.6

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	5
SECTION 2.0 – FLOODPLAIN MANAGEMENT APPLICATIONS	15
2.1 Floodplain Boundaries	15
2.2 Floodways	23
2.3 Base Flood Elevations	24
2.4 Non-Encroachment Zones	24
2.5 Coastal Flood Hazard Areas	25
2.5.1 Water Elevations and the Effects of Waves	25
2.5.2 Floodplain Boundaries and BFEs for Coastal Areas	25
2.5.3 Coastal High Hazard Areas	25
2.5.4 Limit of Moderate Wave Action	25
SECTION 3.0 – INSURANCE APPLICATIONS	25
3.1 National Flood Insurance Program Insurance Zones	25
SECTION 4.0 – AREA STUDIED	26
4.1 Basin Description	26
4.2 Principal Flood Problems	27
4.3 Non-Levee Flood Protection Measures	28
4.4 Levees	28
SECTION 5.0 – ENGINEERING METHODS	28
5.1 Hydrologic Analyses	29
5.2 Hydraulic Analyses	36
5.3 Coastal Analyses	49
5.3.1 Total Stillwater Elevations	49
5.3.2 Waves	49
5.3.3 Coastal Erosion	49
5.3.4 Wave Hazard Analyses	49
5.4 Alluvial Fan Analyses	49
SECTION 6.0 – MAPPING METHODS	50
6.1 Vertical and Horizontal Control	50
6.2 Base Map	50
6.3 Floodplain and Floodway Delineation	51

TABLE OF CONTENTS

Volume 1 (continued)

Figures

	<u>Page</u>
Figure 1: FIRM Index	7
Figure 2: FIRM Notes to Users	8
Figure 3: Map Legend for FIRM	11
Figure 4: Floodway Schematic	23
Figure 5: Wave Runup Transect Schematic	25
Figure 6: Coastal Transect Schematic	25
Figure 7: Frequency Discharge-Drainage Area Curves	36
Figure 8: 1% Annual Chance Total Stillwater Elevations for Coastal Areas	49
Figure 9: Transect Location Map	49

Tables

	<u>Page</u>
Table 1: Listing of NFIP Jurisdictions	3
Table 2: Flooding Sources Included in this FIS Report	16
Table 3: Flood Zone Designations by Community	26
Table 4: Basin Characteristics	26
Table 5: Principal Flood Problems	27
Table 6: Historic Flooding Elevations	27
Table 7: Non-Levee Flood Protection Measures	28
Table 8: Levees	28
Table 9: Summary of Discharges	30
Table 10: Summary of Non-Coastal Stillwater Elevations	36
Table 11: Stream Gage Information used to Determine Discharges	36
Table 12: Summary of Hydrologic and Hydraulic Analyses	37
Table 13: Roughness Coefficients	47
Table 14: Summary of Coastal Analyses	49
Table 15: Tide Gage Analysis Specifics	49
Table 16: Coastal Transect Parameters	49
Table 17: Summary of Alluvial Fan Analyses	49
Table 18: Results of Alluvial Fan Analyses	49
Table 19: Countywide Vertical Datum Conversion	50
Table 20: Stream-Based Vertical Datum Conversion	50
Table 21: Base Map Sources	51
Table 22: Summary of Topographic Elevation Data used in Mapping	52

TABLE OF CONTENTS

Volume 2

		<u>Page</u>
6.4	Coastal Flood Hazard Mapping	94
6.5	FIRM Revisions	94
6.5.1	Letters of Map Amendment	94
6.5.2	Letters of Map Revision Based on Fill	94
6.5.3	Letters of Map Revision	95
6.5.4	Physical Map Revisions	95
6.5.5	Contracted Restudies	96
6.5.6	Community Map History	96
 SECTION 7.0 – CONTRACTED STUDIES AND COMMUNITY COORDINATION		 97
7.1	Contracted Studies	97
7.2	Community Meetings	102
 SECTION 8.0 – ADDITIONAL INFORMATION		 106
 SECTION 9.0 – BIBLIOGRAPHY AND REFERENCES		 107

Tables

	<u>Page</u>
Table 23: Floodway Data	53
Table 24: Flood Hazard and Non-Encroachment Data for Selected Streams	75
Table 25: Summary of Coastal Transect Mapping Considerations	94
Table 26: Incorporated Letters of Map Change	95
Table 27: Community Map History	97
Table 28: Summary of Contracted Studies Included in this FIS Report	98
Table 29: Community Meetings	103
Table 30: Map Repositories	106
Table 31: Additional Information	107
Table 32: Bibliography and References	108

Volume 3
Exhibit 1

Flood Profiles	<u>Panel</u>
Battle Creek	01-04 P
Beaver Dam Creek	05-06 P
Bednigo Branch	07-08 P
Browns Fork	09 P
Brush Creek	10-13 P
Brush Fork	14 P
Carr Creek	15-20 P
Dickerson Branch	21 P
Frey Branch	22-24 P
Hollis Creek	25-27 P
Hollis Creek Tributary 1	28 P
Hollis Creek Tributary 2	29 P
Hollis Creek Tributary 3	30 P
Hollis Creek Tributary 4	31 P
Honey Run Creek	32 P
Long Branch	33-34 P
Millers Creek	35-38 P
North Fork Sycamore Creek	39-43 P
Pole Bridge Branch	44-45 P
Red River	46-47 P
Redding Branch	48 P
Reeves Branch	49-50 P
Savage Branch	51-53 P
South Fork Sycamore Creek	54-59 P
Sulphur Fork	60-63 P
Sycamore Creek	64-70 P
Sycamore Creek Tributary A	71 P
Unnamed Tributary of Red River	72 P
Unnamed Tributary to Millers Creek	73-74 P
Wartrace Creek	75-78 P
West Fork	79-80 P

Published Separately

Flood Insurance Rate Map (FIRM)