

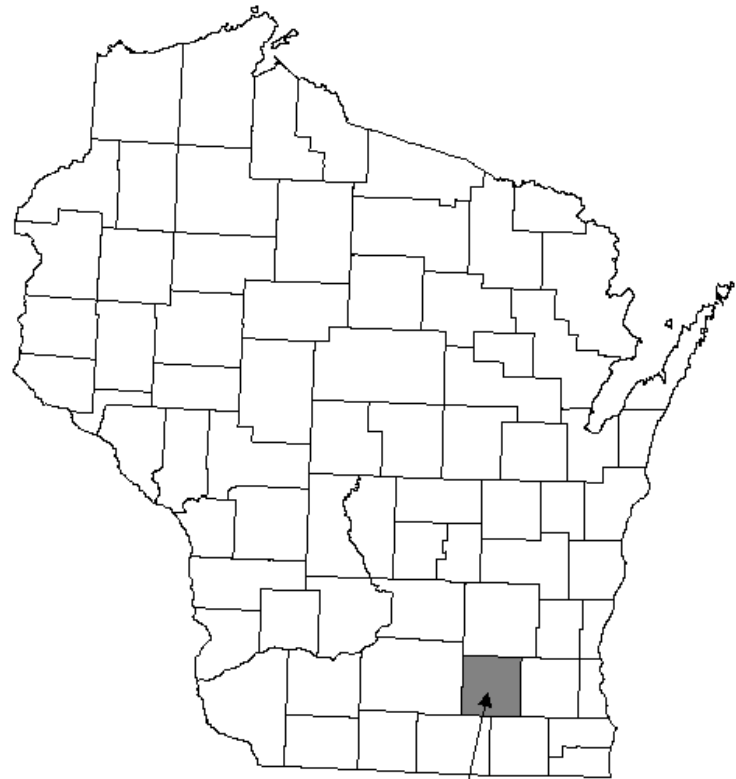
FLOOD INSURANCE STUDY

VOLUME 1 OF 2



JEFFERSON COUNTY, WISCONSIN, AND INCORPORATED AREAS

Community Name	Community Number
Cambridge, Village of	550080
Fort Atkinson, City of	555554
Jefferson, City of	555561
Jefferson County, Unincorporated Areas	550191
Johnson Creek, Village of	550194
Lac LaBelle, Village of	550565
Lake Mills, City of	550195
Palmyra, Village of	550196
Sullivan, Village of	550197
Waterloo, City of	550198
Watertown, City of	550107
Whitewater, City of	550200



Jefferson County

PRELIMINARY



Federal Emergency Management Agency

FLOOD INSURANCE STUDY NUMBER
55055CV001B

NOTICE TO
FLOOD INSURANCE STUDY USERS

Communities participating in the National Flood Insurance Program have established repositories of flood hazard data for floodplain management and flood insurance purposes. This Flood Insurance Study (FIS) may not contain all data available within the repository. It is advisable to contact the community repository for any additional data.

The Federal Emergency Management Agency (FEMA) may revise and republish part or all of this Preliminary FIS report at any time. In addition, FEMA may revise part of this FIS report by the Letter of Map Revision (LOMR) process, which does not involve republication or redistribution of the FIS report. Therefore, users should consult community officials and check the Community Map Repository to obtain the most current FIS components.

Initial Countywide FIS Effective Date: June 2, 2009

Revised Countywide FIS Date: TBD

TABLE OF CONTENTS – VOLUME 1

	<u>Page</u>
1.0 <u>INTRODUCTION</u>	1
1.1 Purpose of Study	1
1.2 Authority and Acknowledgments	1
1.3 Coordination	3
2.0 <u>AREA STUDIED</u>	4
2.1 Scope of Study	4
2.2 Community Description	6
2.3 Principal Flood Problems	7
2.4 Flood Protection Measures	12
3.0 <u>ENGINEERING METHODS</u>	12
3.1 Hydrologic Analyses	12
3.2 Hydraulic Analyses	20
3.3 Vertical Datum	24
4.0 <u>FLOODPLAIN MANAGEMENT APPLICATIONS</u>	25
4.1 Floodplain Boundaries	25
4.2 Floodways	26
5.0 <u>INSURANCE APPLICATIONS</u>	56
6.0 <u>FLOOD INSURANCE RATE MAP</u>	56
7.0 <u>OTHER STUDIES</u>	57
8.0 <u>LOCATION OF DATA</u>	57
9.0 <u>BIBLIOGRAPHY AND REFERENCES</u>	60

TABLE OF CONTENTS – VOLUME 1 (continued)

<u>FIGURES</u>	<u>Page</u>
Figure 1 – Flood Scenes from June 21, 2008 in the City of Jefferson.....	9
Figure 2 – Flood Scenes from June 2008 in the City of Jefferson.....	10
Figure 3 – Flood Scenes from June 2008 in the City of Waterloo.....	11
Figure 4 – Floodway Schematic.....	27

<u>TABLES</u>	
Table 1 – Initial and Final CCO Meetings.....	4
Table 2 – Flooding Sources Studied by Detailed Methods for this FIS.....	4
Table 3 – Letters of Map Change.....	6
Table 4 – Summary of Discharges.....	14
Table 5 – Summary of Stillwater Elevations.....	20
Table 6 – Summary of Roughness Coefficients.....	24
Table 7 – Floodway Data Table.....	28
Table 8 – Community Map History.....	58

TABLE OF CONTENTS – VOLUME 2

<u>EXHIBITS</u>	
Exhibit 1 - Flood Profiles	
Allen Creek	Panels 01P-03P
Ashippun River	Panels 04P-05P
Bark River	Panels 06P-19P
Battle Creek	Panel 20P
Carriage Hill Drive Tributary	Panels 21P-22P
Carriage Hill Drive Tributary – Diversion Structure	Panel 23P
Carriage Hill Drive Tributary – Overland Flowpath	Panel 24P
Crawfish River	Panels 25P-32P
Galloway Creek	Panels 33P-34P
Johnson Creek	Panels 35P-36P
Koshkonong Creek	Panels 37P-42P
Maunasha River	Panels 43P-45P
Oconomowoc River	Panels 46P-49P
Rock Creek	Panels 50P-55P
Rock River	Panels 56P-104P
Scuppernong River	Panels 105P-108P
South Branch	Panels 109P-110P
South Branch Tributary	Panel 111P
Spring Creek	Panels 112P-113P
Tributary to Galloway Creek	Panels 114P-115P
Tributary to Whitewater Creek	Panels 116P-118P
Unnamed Tributary to Johnson Creek	Panels 119P-120P
Unnamed Tributary to Koshkonong Creek	Panel 121P

TABLE OF CONTENTS – VOLUME 2 (continued)

EXHIBITS (continued)

Whitewater Creek	Panels 122P-127P
Exhibit 2 - Flood Insurance Rate Map Index	
Flood Insurance Rate Map	

FLOOD INSURANCE STUDY
JEFFERSON COUNTY, WISCONSIN AND INCORPORATED AREAS

1.0 INTRODUCTION

1.1 Purpose of Study

This countywide Flood Insurance Study (FIS) revises and updates information on the existence and severity of flood hazards in the geographic area of Jefferson County, Wisconsin, including: the Cities of Fort Atkinson, Jefferson, Lake Mills, Waterloo, Watertown and Whitewater; the Villages of Cambridge, Johnson Creek, Lac La Belle, Palmyra and Sullivan, and the unincorporated areas of Jefferson County (hereinafter referred to collectively as Jefferson County). Please note that the City of Watertown is geographically located in Dodge and Jefferson Counties; the City of Whitewater is geographically located in Jefferson and Walworth Counties, Village of Cambridge is geographically located in Dane and Jefferson Counties; and the Village of Lac La Belle is geographically located in Jefferson and Waukesha counties; only the portion of these cities within Jefferson County are shown in this FIS.

This FIS aids in the administration of the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973. This FIS has developed flood risk data for various areas of the county that will be used to establish actuarial flood insurance rates. This information will also be used by Jefferson County to update existing floodplain regulations as part of the Regular Phase of the National Flood Insurance Program (NFIP), and will also be used by local and regional planners to further promote sound land use and floodplain development. Minimum floodplain management requirements for participation in the NFIP are set forth in the Code of Federal Regulations at 44 CFR, 60.3.

In some States or communities, floodplain management criteria or regulations may exist that are more restrictive or comprehensive than the minimum Federal requirements. In such cases, the more restrictive criteria take precedence and the State or other jurisdictional agency will be able to explain them.

1.2 Authority and Acknowledgments

The sources of authority for this FIS are the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973.

This FIS was prepared to include the unincorporated areas of, and incorporated communities within, Jefferson County in a countywide format. Information on the authority and acknowledgments for each jurisdiction included in this countywide FIS, as compiled from their previously printed FIS reports, is shown below.

Fort Atkinson, City of:	The hydrologic and hydraulic analyses for this study were obtained from the State of Wisconsin Department of Natural Resources (WDNR) (Reference 1).
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Jefferson, City of:	The hydrologic and hydraulic analyses for this study were obtained from WDNR (Reference 2).
Johnson Creek, Village of:	The hydrologic and hydraulic analyses for this study were performed by Donohue & Associates, Inc., for the Federal Emergency Management Agency (FEMA), under Contract No. EMW-C-0287. This study, completed in April 1981, include all significant flooding sources affecting the Village of Johnson Creek (Reference 3).
Palmyra, Village of:	The hydrologic and hydraulic analyses for this study were performed by the U.S. Geological Survey (USGS) for FEMA, under Inter-agency Agreement No. EMW-85-E-1823, Project Order No. 14. This study was completed in July 1987. (Reference 4)
Watertown, City of:	The hydrologic and hydraulic analyses for this study were prepared by the USGS for the Federal Insurance Administration (FIA) under Inter-Agency Agreement No. IAA-H-9-77, Project Order No. 25; that work was completed in February 1979, and revised by the USGS, Madison, Wisconsin; this work was completed October 27, 1993 (Reference 5).
Jefferson County: Unincorporated Areas	The hydrologic and hydraulic for this study were prepared by the USGS for FEMA under Inter-Agency Agreement Nos. IAA-H-3-73 and IAA-H-20-74, Project Nos. 1 and 10, respectively. The study was completed in June 1974 and covered all significant flooding sources affecting the unincorporated areas of Jefferson County (Reference 6).

For the original countywide FIS in 2009, redelineation of SFHAs was performed by Camp Dresser & McKee Federal Programs (CDM), under contract HSFE05-05-D-0027. This work was completed on July 28, 2006. On selected FIRM panels, planimetric base map information was provided in digital format. Information was provided by Jefferson County, as well as the WDNR. Additional information may have been derived from other sources. Users of this FIRM should be aware that minor adjustments may have been made to specific base map features.

This countywide FIS includes new hydrologic and hydraulic analyses for Allen Creek, Ashippun River, Bark River, Battle Creek, Carriage Hill Drive Tributary, Carriage Hill Drive Tributary – Diversion Structure, Carriage Hill Drive Tributary – Overland Flowpath, Crawfish River, Galloway Creek, Johnson Creek, Koshkonong Creek, Maunsha River, Oconomowoc River, Rock Creek, Rock River, Scuppernong River, South Branch, South Branch Tributary, Spring Creek, Tributary to Galloway Creek, Tributary to Whitewater Creek, Unnamed Tributary

to Johnson Creek, Unnamed Tributary to Koshkonong Creek and Whitewater Creek. The analyses for this study were performed by Wisconsin DNR for FEMA under Mapping Activity Statement Contract No. WI-10-01. This study was completed in September 2012.

The coordinate system used for the production of this FIRM is Universal Transverse Mercator (UTM), North American Datum of 1983 (NAD 83), GRS 80 spheroid. Differences in the datum and spheroid used in the production of FIRMs for adjacent counties may result in slight positional differences in map features at the county boundaries. These differences do not affect the accuracy of information shown on the FIRM.

1.3 Coordination

The initial Consultation Coordination Officer (CCO) meetings for this countywide FIS were held on February 1, 2011 and two on February 7, 2011, and attended by representatives of FEMA, WDNR and community officials. These meetings are held to explain the nature and purpose of a FIS and to identify the streams to be studied by detailed methods. A final CCO meeting was held on ##### with representatives from FEMA, the communities and WDNR to review the results of the study. All problems raised at that meeting have been addressed in this study.

For the 2009 countywide FIS, a pre-scoping report was prepared by Michael Baker Jr. dated March 2005 (Reference 7). This report described work performed by WDNR to assemble the necessary information to perform the redelineation of the special flood hazard areas based on improved topographic information. An initial coordination meeting was held, and was attended by CDM, WDNR, FEMA and members of the community. The results of that study were reviewed at the final CCO meeting held on April 25, 2007. These meetings were attended by members of CDM, the State of Wisconsin, FEMA, and the communities.

The dates of the initial and final CCO meetings held for previous FIS's for the incorporated communities within Walworth County are shown in Table 1, "Initial and Final CCO Meetings."

Table 1 – Initial and Final CCO Meetings

<u>Community</u>	<u>Initial CCO Date</u>	<u>Final CCO Date</u>
Fort Atkinson, City of	*	*
Jefferson, City of	*	*
Johnson Creek, Village of	November 29, 1978	October 20, 1981
Palmyra, Village of	*	June 15, 1989
Watertown, City of	December 21, 1976 *	April 29, 1980 November 2, 1994
Jefferson County, Unincorporated Areas	*	October 19, 1976

*Information not available

2.0 AREA STUDIED

2.1 Scope of Study

This FIS covers the geographic area of Jefferson County, Wisconsin. The areas studied by detailed methods were selected with priority given to all known flood hazard areas and areas of projected development and proposed construction.

The following flooding sources listed in Table 2 were studied by detailed methods for this countywide FIS:

Table 2 – Flooding Sources Studied by Detailed Methods for this FIS

<u>Flooding Source</u>	<u>Limits of Detailed Study</u>
Allen Creek	From its confluence with the Rock River to approximately 2,500 feet upstream of Star School Road.
Ashippun River	From its mouth at the Rock River to the Jefferson County boundary.
Bark River	From its mouth to the Jefferson County boundary.
Battle Creek	From its mouth at the Oconomowoc River to County Highway B.
Blue Spring Lake	Along the shore.

Table 2 – Flooding Sources Studied by Detailed Methods for this FIS (continued)

<u>Flooding Source</u>	<u>Limits of Detailed Study</u>
Carriage Hill Drive Tributary	From its mouth at the Rock River to the Jefferson County Boundary
Carriage Hill Drive Tributary - Diversion Structure	From its confluence with Carriage Hill Drive Tributary to its divergence with Carriage Hill Drive Tributary.
Carriage Hill Drive Tributary - Overland Flowpath	From its confluence with Carriage Hill Drive Tributary to the Jefferson County Boundary.
Crawfish River	From its mouth at the Rock River to the Jefferson County Boundary.
Galloway Creek	From its mouth to the confluence with Tributary to Galloway Creek.
Johnson Creek	From its mouth at the Rock River to approximately 300 feet downstream of State Highway 26.
Koshkonong Creek	Its entire length within Jefferson County.
Lake Ripley	Along the shore.
Mauneshia River	Its entire length within Jefferson County.
Oconomowoc River	From its mouth at the Rock River to the Jefferson County Boundary.
Rock Creek	From its mouth at the Crawfish River up through Rock Lake.
Rock River	Its entire length within Jefferson County.
Scuppernong River	From approximately 1 mile downstream of County Highway E to the Jefferson County boundary.
South Branch	Its entire length.
South Branch Tributary	Its entire length.
Spring Creek	From approximately 4,200 feet downstream of County Highway H to Blue Spring Lake.
Tributary to Galloway Creek	From its mouth at Galloway Creek to the Jefferson County boundary.

Table 2 – Flooding Sources Studied by Detailed Methods for this FIS (continued)

<u>Flooding Source</u>	<u>Limits of Detailed Study</u>
Tributary to Whitewater Creek	From its mouth at Whitewater Creek to the Jefferson County boundary.
Unnamed Tributary to Johnson Creek	From approximately 4,950 feet downstream of County Highway B to Interstate Highway 94
Unnamed Tributary to Koshkonong Creek	From its mouth at Koshkonong Creek to Lake Ripley.
Whitewater Creek	From its mouth at the Bark River to the Jefferson County boundary.

All flooding sources in Jefferson County that were previously studied by detailed methods are being revised for this countywide FIS.

All or portions of numerous flooding sources in the county were studied by approximate methods. Approximate analyses were used to study those areas having a low development potential or minimal flood hazards. The scope and methods of study were proposed to, and agreed upon by, FEMA and WDNR.

This countywide FIS also incorporates the determination of letters issued by FEMA resulting in map changes (Letters of Map Change, or LOMCs) as shown in Table 3. All Letters of Map Revision (LOMRs) and Letters of Map Amendment (LOMAs) incorporated in this study are summarized in the Summary of Map Actions (SOMA) associated with this FIS update. Copies of the SOMA may be obtained from the Community Map Repository.

Table 3 – Letters of Map Change

<u>Community Identifier</u>	<u>Flooding Source</u>	<u>Case Number</u>	<u>Date Issued</u>	<u>Type</u>
Jefferson County Unincorporated Areas	Golden Lake Flood Study	10-05-0806P	09-03-2010	LOMR

2.2 Community Description

Jefferson County is located in southeast Wisconsin, east of the City of Madison. It lies entirely within the Mississippi River drainage basin, in the Upper and Lower Rock River watersheds. It is bordered to the north by Dodge County, to the east by Waukesha County, to the south by Rock and Walworth Counties and to west by Dane County. The Rock River enters Jefferson County from the northeast, flows south, loops to the northeast and turns south by southwest, again, at the City of Watertown. It meanders southwards and is joined by south-flowing

Crawfish River near the City of Jefferson, and Bark River and Deer Creek near the City of Fort Atkinson. It then turns west and widens into Lake Koshkonong in the southwestern corner of the county, the natural water elevation raised by Indianford Dam in adjacent Rock County. The streams in northeastern Jefferson County flow in parallel patterns to the Rock River, while the streams in the rest of the county flow in dendritic patterns to the Rock River. Marshes and wooded areas dot the landscape. Jefferson County is located in the Eastern Ridges and Lowlands geographical province, and in the Southeast Glacial Plains ecological landscape of Wisconsin, where topographic features are very low. The 2010 census reported a population in Jefferson County of 83,686 (Reference 8).

Johnson Creek drains approximately 40 square miles of predominately agricultural land. Above Johnson Creek, the Rock River has a tributary area of approximately 1,010 square miles. Below Johnson Creek, the Rock River drains much of south-central Wisconsin and north-central Illinois before discharging to the Mississippi River (Reference 9).

The climate of the area is classified as continental with cold, snowy winters and warm humid summers. Temperatures vary widely, both seasonally and daily. The average annual temperature is about 47°F, but extremes have ranged from 100°F to -33°F. The average length of the growing season is 160 days. Precipitation averages 30 inches annually with snowfall averaging 40 inches (Reference 10).

The area is characterized by undulating topography. Glacial ice from the last stage of continental glaciation (the Wisconsin age) lowered, smoothed, and straightened bedrock ridges and deposited unconsolidated glacial till (ground moraine) and sand and gravel outwash. Typical of recently glaciated areas, drainage is poorly developed and marshes are common.

Soils in the area are varied and range from level and nearly level, poorly drained, silty soils underlain by stratified lacustrine deposits and sand and gravel outwash deposits in depressions on old lake basins to nearly level to steep, well drained to somewhat poorly drained, silty and loamy soils underlain by sandy loam glacial till on till uplands and ground moraines (Reference 11).

The county has a rolling landscape, with hills and wetlands surrounding many lakes. The land area of the county is 564 square miles.

Transportation facilities crossing the flood plains include portions of Interstate 94, U.S. Highways 12, 16, and 18, and State Highways 19, 26, 59, 89, 106, and 135. Rail lines within the flood plains include the Chicago, Milwaukee, St. Paul & Pacific Railroad, and the Chicago & North Western railroad. The principal industries within the county are agriculture and general manufacturing.

2.3 Principal Flood Problems

Principal flood problems occur along the Rock River floodplains near Lake Koshkonong, where people have built homes and cottages. During medium and

high floods on the Rock River, water backs up into the lower reaches of Whitewater Creek, the Crawfish River, the Bark River, the Oconomowoc River, and Koshkonong Creek, flooding the wetlands and croplands.

During the period of June 7-9, 2008, heavy rains resulted in flash flooding across much of Jefferson County. Water depths on road surfaces reached 3 feet or more and there were gravel washouts. The rain on June 12th ultimately led to record-setting crests on the Rock and Crawfish Rivers, and many farm fields remained flooded into early July. The cities of Watertown, Jefferson, and Fort Atkinson were hard hit by high river levels. The breakdown on residential home damage losses were: 100 with minor damage, 400 with major damage, and 10 destroyed (total of about \$36 million). Business losses totaled about \$21.4 million. Crops losses were estimated at \$35 million. Public sector damage was about \$44.811 million. There were several roads and bridges that sustained damage.

The flood of May 1973, which has a recurrence interval of approximately 5 years, forced several families to leave their homes. The previous high record floods on the Rock River near Fort Atkinson were in March 1929, and April 1959.

Johnson Creek and Spring Creek are most susceptible to flooding in the spring because of a combination of rapid snowmelt, spring rain and frozen ground.

Flooding problems within the Village of Palmyra are due primarily to the overflow of the Scuppernong River, South Branch, and South Branch Tributary as they leave Spring Lake.



Figure 1. Flood Scenes from June 21, 2008 in the City of Jefferson

The first photo shows the confluence of the Crawfish and Rock Rivers. The second photo shows the intersection of U.S. Highway 18 and the Crawfish River.



Figure 2. Flood Scenes from June 2008 in the City of Jefferson

The first photo shows Riverfront Park on 6/16/08. The second photo shows the submerged Jefferson Dam of the Rock River on 6/21/08, with only the walkway deck visible.



Figure 3. Flood Scenes from June 2008 in the City of Waterloo

The first photo was taken downstream of State Highway 19 in the downtown area. The second photo shows water flowing over State Highway 19 near the railroad crossing west of town.

2.4 Flood Protection Measures

Flow of the Scuppernong River system and the elevation of Spring Lake are regulated by three sets of gates which have the capacity to discharge the 1-percent annual chance flood. However, there are no formalized flood protection plans for regulating the gates at the dam in the event of a 1-percent annual chance flood.

There are two concrete dams on the Rock River within the City of Watertown, neither of which is significant for flood protection. Stages upstream from the dams are higher than they would be if the dams did not exist.

A ring dike is located on the Rock River at the Storm Water Treatment Plant, approximately 3,000 feet upstream of the City of Watertown's corporate limits. The criteria used to evaluate protection against the 1-percent annual chance flood are 1) adequate design, including freeboard, 2) structural stability, and 3) proper operation and maintenance. FEMA specifies that all levees must have a minimum of 3 foot freeboard against 1-percent annual chance flood flooding to be considered a safe flood protection structure. This levee does not meet FEMA's freeboard requirement. Levees that do not protect against the 1-percent annual chance flood are not considered in the hydraulic analysis of the 1-percent annual chance flood. This levee may not protect the community from rare events such as the 1-percent annual chance flood.

3.0 ENGINEERING METHODS

For the flooding sources studied in detail in the county, standard hydrologic and hydraulic study methods were used to determine the flood hazard data required for this FIS. Flood events of a magnitude which are expected to be equaled or exceeded once on the average during any 10-, 4-, 2-, 1-, or 0.2-percent annual chance flood event (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 chance, respectively, of being equaled or exceeded during any year. Although the recurrence interval represents the long term average period between floods of a specific magnitude, rare floods could occur at short intervals or even within the same year. The risk of experiencing a rare flood increases when periods greater than 1 year are considered. For example, the risk of having a flood which equals or exceeds the 1-percent annual chance flood (1-percent chance of annual exceedence) in any 50-year period is approximately 40 percent (4 in 10), and, 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 county at the time of completion of this FIS. Maps and flood elevations will be amended periodically to reflect future changes.

3.1 Hydrologic Analyses

Hydrologic analyses were carried out to establish the peak discharge-frequency relationships for the flooding sources studied in detail affecting the county.

The methods used to determine peak discharge-frequency relationships for the flooding sources newly studied in detail or restudied as part of this countywide FIS are described below.

New hydrologic analyses was performed by the Wisconsin Department of Natural Resources (WDNR) in 2012 for the Allen Creek watershed, Ashippun River, Bark River watershed (Bark River, Blue Spring Lake, Galloway Creek, Tributary to Galloway Creek, Scuppernong River, South Branch, South Branch Tributary, Spring Creek, Tributary to Whitewater Creek and Whitewater Creek), Carriage Hill Drive Tributary, Johnson Creek, the Koshkonong Creek watershed (Koshkonong Creek, Unnamed Tributary to Koshkonong Creek and Lake Ripley), Maunasha River, Oconomowoc River watershed (Oconomowoc River and Battle Creek) and Rock Creek. Discharges were computed using the Hydrologic Engineering Center's *Hydrologic Modeling System (HEC-HMS)* computer software, version 3.5.0 (Reference 62). For each subbasin, runoff Curve Numbers (CNs) were estimated using SSURGO soils data and the WISCLAND landuse data (1992). Times of concentration were estimated using the TR-55 flowpath segment method. The rainfall distribution used was developed by the WDNR and is based on large storms in the State of Wisconsin from 1975 to 2003. This curve was developed for use as a design distribution in combination with solving for a critical storm duration. Flood storage was taken into account through permanent water bodies and areas covered by the regulated Wisconsin Wetland Inventory where significant flood attenuation may occur. It is assumed that no major construction or filling will occur in these areas that would reduce the amount of available storage volume.

Some reaches in these studies were considered non-contributing due to the volume of depressions being able to contain a 0.2 percent rainfall event without contributing any runoff.

Where available, surveyed high water marks (HWMs) from the June 2008 event were used to calibrate the HEC-HMS models. Precipitation data was recorded and entered into the models for the events of June, 2008 at National Climatic Data Center (NCDC) precipitation gages. An Inverse Distance weighting method was chosen for the precipitation method (Met Model "June 2008"). This method computes the precipitation hyetograph for each subbasin using nearby gages and weights them according to the distance to each gage. CNs were adjusted for the 2008 run until the appropriate discharges were found to match the surveyed HWMs coded into the hydraulic models. The design discharges were then determined by running the design WI distribution storms over the basin model with adjusted CNs.

There is one USGS stream gage on the Bark River at the Rome Dam that recorded the flood of June, 2008. There are also multiple rainfall gages surrounding the watershed that recorded this same event. Observed rainfall and streamflow data were entered into the Bark River watershed model for the month of June. The basin model was then calibrated to match the observed hydrographs by adjusting CNs and SCS lag times. The model was also adjusted to match known flooding heights on Whitewater Creek. Using the calibrated basin model, theoretical design storms were ran at various durations.

A new hydrologic analysis was performed by the WDNR in 2010 for the main stem of the Rock River within Wisconsin. This study was also used to determine the Crawfish River discharges within Jefferson County. Discharges were computed using the Hydrologic Engineering Center's *Hydrologic Modeling System (HEC-HMS)* computer software, version 3.1.0 (Reference 63). For each subbasin, runoff CNs were estimated using SSURGO soils data and the WISCLAND landuse data (1992). Times of concentration were estimated using the TR-55 flowpath segment method. The rainfall distribution used was developed by the WDNR and is based on large storms in the State of Wisconsin. Flood storage was taken into account at Lake Koshkonong, Sinissippi Lake, and the Horicon Marsh. It is assumed that no major construction or filling will occur in these areas that would reduce the amount of available storage volume. There are five USGS stream gages along the Rock River within the project area that recorded the record-breaking flood of June, 2008. Observed rainfall and streamflow data were entered into the model for the month of June. The basin model was then calibrated to match the observed hydrographs by adjusting CNs and SCS lag times. The USGS had updated the Log Pearson Type III (LPIII) statistical analyses at the gages to reflect the 2008 event. Using the calibrated basin model, theoretical design storms were ran at various durations. The duration storm that most closely matches the revised LPIII values at the gages was chosen to represent the 10-, 2-, 1-, and 0.2-percent annual chance peak discharges.

The flows to South Branch and South Branch Tributary were calculated by optimizing the flow in the HEC-RAS hydraulic model. Based on the dam operation and the channel geometry, the model determines how much of the total flow contributes to each of these streams individually.

A summary of the drainage area-peak discharge relationships for all the streams studied by detailed methods is shown in Table 4, "Summary of Discharges."

Table 4 – Summary of Discharges

<u>Flooding Source and Location</u>	<u>Drainage Area (square miles)</u>	<u>Peak Discharges (cubic feet per second)</u>				
		<u>10- Percent Annual Chance</u>	<u>4- Percent Annual Chance</u>	<u>2- Percent Annual Chance</u>	<u>1- Percent Annual Chance</u>	<u>0.2- Percent Annual Chance</u>
ALLEN CREEK						
At private drive approximately 1/2 mile upstream of Poeppel Road	7.3	346	465	591	692	953
At confluence with tributary 300 feet upstream of private drive	6.7	300	403	508	586	775
At confluence with tributary 1/3 mile downstream of Star School Road	4.7	193	263	343	407	586

Table 4 – Summary of Discharges (continued)

<u>Flooding Source and Location</u>	<u>Drainage Area (square miles)</u>	<u>Peak Discharges (cubic feet per second)</u>				
		<u>10- Percent Annual Chance</u>	<u>4- Percent Annual Chance</u>	<u>2- Percent Annual Chance</u>	<u>1- Percent Annual Chance</u>	<u>0.2- Percent Annual Chance</u>
ASHIPPUN RIVER						
At Waukesha / Jefferson County boundary	37.0	450	650	810	940	1,370
BARK RIVER						
2.25 miles upstream of Rock River Road	315.7	1,364	2,146	2,761	3,317	5,015
At confluence with Whitewater Creek	307.3	1,439	2,214	2,810	3,397	5,168
3.1 miles downstream of County Highway D	239.6	1,182	1,820	2,313	2,792	4,224
At confluence with Scuppernong River	230.6	1,300	1,989	2,624	3,179	4,752
Just upstream of Green Isle Drive	139.9	719	1,098	1,373	1,622	2,415
At confluence with Duck Creek	131.3	717	1,079	1,334	1,560	2,340
At USGS gage 05426250	99.7	582	865	1,067	1,243	1,801
At Rome Dam	92.0	583	850	1,033	1,199	1,742
1/4 mile downstream of Jefferson County boundary	69.5	611	827	982	1,131	1,712
At confluence with Scuppernong Creek	64.5	640	831	1,012	1,242	2,005
BATTLE CREEK						
Downstream of County Highway B	8.7	420	620	730	880	1,180
CARRIAGE HILL DRIVE TRIBUTARY						
At confluence with Carriage Hill Drive Tributary - Diversion Structure	4.6	183	255	298	351	543
At entrance to 60" by 60" concrete box culvert near the Clyman Branch Railroad	4.4	90	140	164	191	229
Downstream of divergence with Carriage Hill Drive Tributary - Diversion Structure	3.4	16	29	35	37	37

Table 4 – Summary of Discharges (continued)

<u>Flooding Source and Location</u>	<u>Drainage Area (square miles)</u>	<u>Peak Discharges (cubic feet per second)</u>				
		<u>10-Percent Annual Chance</u>	<u>4-Percent Annual Chance</u>	<u>2-Percent Annual Chance</u>	<u>1-Percent Annual Chance</u>	<u>0.2-Percent Annual Chance</u>
CARRIAGE HILL DRIVE						
TRIBUTARY (continued)						
Upstream of divergence with Carriage Hill Drive Tributary - Diversion Structure	3.4	109	144	168	197	329
At railroad spur	3.1	96	127	148	175	294
At confluence with Carriage Hill Drive Tributary - Overland Flowpath	3.1	124	179	227	308	460
Downstream of divergence with Carriage Hill Drive Tributary - Overland Flowpath	2.7	81	120	134	134	134
CARRIAGE HILL DRIVE						
TRIBUTARY - DIVERSION						
STRUCTURE						
At divergence with Carriage Hill Drive Tributary	*	93	115	134	160	314
CARRIAGE HILL DRIVE						
TRIBUTARY - OVERLAND						
FLOWPATH						
Approximately 50 feet upstream of its confluence with Carriage Hill Drive Tributary	*	43	59	93	182	336
At divergence with Carriage Hill Drive Tributary	*	0	0	20	84	189
CRAWFISH RIVER						
At mouth	790.6	3,590	4,770	5,680	6,540	9,030
At confluence with Beaver Dam River	695.8	3,330	4,490	5,400	6,190	8,850
GALLOWAY CREEK						
At confluence with Tributary to Galloway Creek	15.5	331	515	702	875	1,226

Table 4 – Summary of Discharges (continued)

<u>Flooding Source and Location</u>	<u>Drainage Area (square miles)</u>	<u>Peak Discharges (cubic feet per second)</u>				
		<u>10-Percent Annual Chance</u>	<u>4-Percent Annual Chance</u>	<u>2-Percent Annual Chance</u>	<u>1-Percent Annual Chance</u>	<u>0.2-Percent Annual Chance</u>
JOHNSON CREEK						
At confluence approximately 800 feet downstream of State Highway 26	45.6	460	720	910	1,070	1,600
At State Highway 26	40.3	390	620	810	980	1,500
KOSHKONONG CREEK						
Halfway between Rockdale Road and STH 106	166.6	1,480	2,180	2,738	3,286	4,916
At W. Adams Street	144.3	1,432	2,057	2,578	3,114	4,833
2,200 feet upstream of US 18	132.0	1,240	1,855	2,351	2,873	4,495
1/2 mile upstream of Britzke Road	118.2	1,162	1,742	2,206	2,695	4,242
1 mile downstream of Mud Creek	104.0	1,034	1,560	1,968	2,421	3,828
MAUNESHA RIVER						
At confluence approximately 340 feet downstream of Henricks Street	91.3	1,240	1,820	2,320	2,780	3,990
At Waterloo Spur railroad	87.4	1,120	1,650	2,100	2,500	3,760
At confluence approximately 4,300 feet upstream of Dane / Jefferson County boundary	84.9	1,050	1,540	1,970	2,370	3,720
OCONOMOWOC RIVER						
At confluence approximately 3,800 feet downstream of County Highway F	108.8	780	1,060	1,270	1,490	2,020
At confluence with Battle Creek	104.9	820	1,120	1,350	1,550	2,070
At confluence approximately 4,500 feet upstream of Morgan Road	94.3	400	550	650	740	960
ROCK CREEK						
At Hoopers Dam	20.2	299	432	543	695	1,125
At confluence approximately 600 feet upstream of County Highway V	18.9	333	512	680	899	1,408
Upstream of Stony Road	18.1	275	421	560	744	1,168
Upstream of Lake Street	14.5	58	93	125	167	258

Table 4 – Summary of Discharges (continued)

<u>Flooding Source and Location</u>	<u>Drainage Area (square miles)</u>	<u>Peak Discharges (cubic feet per second)</u>				
		<u>10-Percent Annual Chance</u>	<u>4-Percent Annual Chance</u>	<u>2-Percent Annual Chance</u>	<u>1-Percent Annual Chance</u>	<u>0.2-Percent Annual Chance</u>
ROCK CREEK (continued)						
Approximately 300 feet downstream of State Highway 89	14.0	29	43	56	73	111
At outlet of Rock Lake	13.7	38	47	55	61	79
At Glacial Drumlin Bike Path	7.1	69	119	164	206	348
ROCK RIVER						
At the confluence with the Bark River	2,258.3	9,020	*	13,890	15,830	21,500
Upstream of the confluence with the Bark River	1,897.9	7,550	*	11,380	12,910	17,240
At the confluence with the Crawfish River	1,858.1	7,460	*	11,290	12,820	17,150
Upstream of the confluence with the Crawfish River	1,067.5	4,130	*	5,870	6,580	8,630
At USGS gage 05425500	971.6	3,920	*	5,660	6,370	8,440
At the confluence with the Oconomowoc River	919.3	3,840	*	5,590	6,300	8,360
Upstream of the confluence with Oconomowoc River	790.7	3,660	*	5,400	6,110	8,170
SCUPPERNONG RIVER						
At downstream confluence with South Branch	25.8	288	457	594	718	1,123
At upstream divergence with South Branch	25.8	203	366	494	608	741
Just upstream of divergence with South Branch	25.8	288	457	594	718	1,123
At Carlin Dam	23.4	270	431	561	681	1,079
0.1 mile downstream of County Highway Z	21.6	251	399	522	649	1,039
SOUTH BRANCH						
At upstream divergence with Scuppernong River	25.8	85	91	100	110	382
At upstream divergence with South Branch Tributary	25.8	83	88	96	105	265
At confluence with South Branch Tributary	25.8	85	91	100	110	382

Table 4 – Summary of Discharges (continued)

<u>Flooding Source and Location</u>	<u>Drainage Area (square miles)</u>	<u>Peak Discharges (cubic feet per second)</u>				
		<u>10- Percent Annual Chance</u>	<u>4- Percent Annual Chance</u>	<u>2- Percent Annual Chance</u>	<u>1- Percent Annual Chance</u>	<u>0.2- Percent Annual Chance</u>
SOUTH BRANCH						
TRIBUTARY						
At upstream divergence with South Branch	25.8	2	3	4	5	117
SPRING CREEK						
At Blue Spring Lake Dam	2.0	23	46	63	69	92
TRIBUTARY TO GALLOWAY CREEK						
1/2 mile downstream of Old Highway 12	2.5	100	149	204	247	401
TRIBUTARY TO WHITEWATER CREEK						
2/3 mile upstream of mouth	4.7	239	358	491	581	834
0.4 mile upstream of Highway 59	3.2	177	261	354	426	636
0.1 mile upstream of N. Universal Boulevard	0.8	39	60	83	101	153
UNNAMED TRIBUTARY TO JOHNSON CREEK						
At Interstate Highway 94	6.0	140	220	300	360	550
UNNAMED TRIBUTARY TO KOSHKONONG CREEK						
At Lake Ripley Dam	7.3	48	75	94	116	177
WHITEWATER CREEK						
At confluence with Galloway Creek	63.2	894	1,445	1,916	2,328	3,201
At confluence with Tributary to Whitewater Creek	42.7	790	1,328	1,677	2,048	2,614
At Old Stone Mill Dam	36.1	714	1,170	1,480	1,778	2,330

*Information Not Available

The stillwater elevations have been determined for the 10-, 2-, 1-, and 0.2-percent annual chance floods for the flooding sources studied by detailed methods and are summarized in Table 5, "Summary of Stillwater Elevations."

Table 5 – Summary of Stillwater Elevations

<u>Flooding Source and Location</u>	<u>Elevation (feet NAVD88)</u>				
	<u>10-</u>	<u>4-</u>	<u>2-</u>	<u>1-</u>	<u>0.2-</u>
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
	<u>Annual</u>	<u>Annual</u>	<u>Annual</u>	<u>Annual</u>	<u>Annual</u>
	<u>Chance</u>	<u>Chance</u>	<u>Chance</u>	<u>Chance</u>	<u>Chance</u>
BLUE SPRING LAKE	812.3	812.4	812.4	812.5	812.8
LAKE RIPLEY	837.1	837.4	837.6	837.8	838.7
GOLDEN LAKE	*	*	*	855.7	*

*Data not available

3.2 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. Users should be aware that flood elevations shown on the FIRM represent rounded whole-foot elevations and may not exactly reflect the elevations shown on the Flood Profiles or in the Floodway Data tables in this FIS report. For construction and/or floodplain management purposes, users are encouraged to use the flood elevation data presented in this FIS in conjunction with the data shown on the FIRM.

For this revision, new hydraulic models for Bark River, Whitewater Creek, Tributary to Whitewater Creek (east of the City of Whitewater), Galloway Creek, Tributary to Galloway Creek, Allen Creek (in the City of Fort Atkinson), Spring Creek (downstream from Blue Spring Lake), Scuppernong River, the South Branch and South Branch Tributary to the Scuppernong River at the dam in Palmyra, Koshkonong Creek, and an unnamed tributary to Koshkonong Creek (outlet to Lake Ripley) were developed by MSA Professional Services using HEC-RAS version 4.1.0 (Reference 64). Cross sections were extracted from 5-foot DEM data produced by the Wisconsin DNR and supplemented with field surveyed channel data. All bridges and culverts were field surveyed to obtain elevation data and structural geometry. Some cross sectional and culvert data for the unnamed tributary to Koshkonong Creek was supplied by the Jefferson County Surveyor. Cross sectional data extraction was performed with ArcGIS 10.0 and the ACOE GeoRAS 10 extension. Manning’s “n” values were determined by field observation and interpretation of land cover from year 2010 statewide NAIP orthophotos.

Starting water-surface elevations for the Bark River were set to the matching recurrence-interval elevations of the Rock River at the confluence. Manning’s “n” values and bridge loss coefficients were adjusted along the river to more closely match high water mark data from 2008 floods as provided by the Jefferson County Surveyor. Channel surveys account for recently-removed dams near Green Isle Drive (Hebron Dam) and Cushman Road (Cushman Dam). The Rome Dam that controls the elevation of the Rome Millpond has a broad-crested concrete primary spillway with flashboards; however, the flashboards are used only for seasonal water level control and were assumed to remain in place during a flood. There is a millrace and unused powerhouse at the millpond. The

auxiliary spillway is a grass-lined overflow section in the berm separating the millrace from the main channel. The powerhouse at the time of this writing contains no machinery and the spillway is boarded up. During flooding in 2008 boards were pulled to allow flow through the powerhouse, but as accessibility during flooding is questionable, the capacity of the powerhouse to pass flow is not accounted for in the analysis. The Rome Millpond was included in the hydraulic analysis for the Bark River and contains a floodway; therefore the millpond is not listed in the “Summary of Stillwater Elevations” table.

Starting water surface elevation for all profiles on Whitewater Creek was set to the 10-year flood elevation at the confluence with the Bark River.

Starting water surface elevation for all profiles on Allen Creek and Koshkonong Creek were set to the 10-year flood elevation at their respective confluences with the Rock River.

Starting water-surface elevation for all profiles on the unnamed tributary to Koshkonong Creek were set to the 10-percent annual chance flood elevation at the confluence with Koshkonong Creek. At the upstream end of the study reach lies Lake Ripley. The outlet to the lake goes over a small rock-lined mound before entering the channel. This is a small non-operable structure with no solid configuration and thus is treated as a simple cross-section in the hydraulic analysis. No floodway has been established in Lake Ripley; refer to the “Summary of Stillwater Elevations” for recurrence interval flood stages on the lake.

Starting water-surface elevation for all profiles on the Scuppernong River were established from normal-depth computations, using a stream slope estimated from the terrain data provided by WDNR. Lower Spring Lake in the Village of Palmyra is on the Scuppernong River and is controlled by two dam structures: one, the Highway 59 dam located on the main stem of the river and consisting of three large lift gates; and two, the Mill Road Dam located on the South Branch near the intersection of Mill Road and State Highway 59 and consisting of a millrace, four small flashboard gates, and a small side waste gate. Based on interviews with the dam operator, normal base flow goes from the lake and over the Mill Road Dam into the South Branch. In moderate flow conditions, the flashboards are pulled from the Mill Road Dam. If high flows occur, the large gates on the Highway 59 dam are successively raised to maintain stable lake levels. In general during moderate to high flood conditions, flow remains split between the South Branch and the Scuppernong River from Highway 59 downstream to just past County Highway E. In very high flood conditions, flow goes over the side waste gate on the Mill Road Dam and into the South Branch Tributary and rejoins the South Branch upstream of Highway E. Also, due to limited capacity of the Highway E culvert on the main stem of the Scuppernong River, some flow leaves the river channel and utilizes the higher-capacity bridge structure on the South Branch. Flow splits due to these several structures and conditions are accounted for in the hydraulic model. Upper Spring Lake east of Lower Spring Lake is controlled by the Carlin Dam, a labyrinth weir dam structure. The dam has a low flow gate that is used for drawdown but is assumed non-operating during flood conditions. Lower Spring Lake and Upper Spring Lake are included in the hydraulic analysis for Scuppernong River and contain a

floodway; therefore neither of these lakes is listed in the “Summary of Stillwater Elevations” table.

Starting water-surface elevation for all profiles on the Spring Creek were established from normal-depth computations, using a stream slope estimated from the terrain data provided by WDNR. At the upstream end of the study reach lies Blue Spring Lake. The lake level is controlled by the Blue Spring Lake Dam, a broad-crested concrete weir overflow structure with flashboards. The Inspection, Operations, and Maintenance manual (IOM) on file with the WDNR specifies lake levels at which boards are to be pulled and this sequence has been inserted into the hydraulic analysis. No floodway has been established in Blue Spring Lake; refer to the “Summary of Stillwater Elevations” for recurrence interval flood stages on the lake.

Starting water surface elevation for all profiles on the tributary to Whitewater Creek and on Galloway Creek were set to the 10-year flood elevation at the confluence with Whitewater Creek. The hydraulic model for the tributary to Galloway Creek is an extension of the Galloway Creek model in the same HEC-RAS model, so its starting water surface elevation is equal to the matching frequency water surface of Galloway Creek at the confluence.

For this revision, detailed analyses were conducted by CDM Smith in 2012 for the Ashippun River, Battle Creek, Carriage Hill Drive Tributary (including the Overland Flowpath and Diversion Structure), Crawfish River, Johnson Creek, Maunsha River, Oconomowoc River, Rock Creek, and the Unnamed Tributary to Johnson Creek. For these analyses, surveys were conducted on channel cross-sections and at all significant structures following WDNR requirements. HEC-GeoRAS v.10 was used to convert the stream centerline and additional cross-section data created in ArcGIS v.10 for use in HEC-RAS v. 4.1.0. (Reference 64). HEC-GeoRAS utilized the 5-foot Digital Elevation Model (DEM) for Jefferson County provided by WDNR to develop the overbank portions of the model cross-sections.

After the initial hydraulic calculations were completed, warnings presented by the HEC-RAS model were reviewed. The results were assessed for validity, accuracy, and appropriate engineering practices. Some of the areas of concern included: critical WSEL calculations, WSEL differences between adjacent cross-sections, and correct usage of ineffective flow areas. After the initial areas of concern were addressed, the HEC-RAS models were recalculated. All remaining warnings generated by HEC-RAS were reviewed and judged acceptable for the final models.

A similar methodology was used in the hydraulic computations for the approximate study reaches. The 5-foot DEM was used to develop the model cross-sections. Road crossing locations were selected by reviewing aerial photographs. The structures were modeled as bridges / culverts where Wisconsin Department of Transportation (WDOT) bridge plans were available. Otherwise, the structures were modeled as inline structures; engineering judgment was used to determine the hydraulic opening.

The standard starting boundary condition for tributaries in this study is the 10-percent annual chance water surface elevation on the parent stream at the confluence. This applied to the Ashippun River, Battle Creek, Carriage Hill Drive Tributary, Johnson Creek, Rock Creek, and the Unnamed Tributary to the Ashippun River. The Unnamed Tributary to Johnson Creek and the Unnamed Tributary to Stony Brook used normal depth as the starting boundary condition. The Maunasha River ties in with a new approximate study downstream of State Highway 19 in Dodge County. The hydrographs for the Crawfish River, Oconomowoc River, and Stony Brook showed that the times to peak were coincident with the parent stream. Therefore, known water surface elevations from the parent stream were used as the starting boundary condition for all profiles.

For this revision, the main stem of the Rock River was restudied in its entirety within Jefferson County. Cross sections were developed using the county's 2-foot contour accuracy terrain data from 2006. Field surveys were performed in the fall of 2009 through spring of 2010, and were incorporated into the model to represent all significant bridge and dam structures, and to get enough intermediate channel surveys to represent the river bottom. Water-surface elevations were computed using the USACE HEC-RAS v4.0 computer program (Reference 65). For the downstream boundary condition at the Wisconsin / Illinois State boundary, starting water surface elevations were taken from the Winnebago County, IL FIS dated September 6, 2006. The first modeled cross section is located approximately 120 feet downstream of Shirland Avenue and corresponds with the location of cross section BS of the Winnebago County DFIRM (panel 17201C0131D). Manning's "n" values in the overbanks were assigned based on the 2005 through 2008 NAIP orthophotos. Existing models and FIS reports were used where available to assign the N values in the channel.

Numerous high water marks were collected for the June, 2008 flood event. A June, 2008 run was performed in HEC-RAS in order to calibrate the model. In this run, discharges were taken from the June, 2008 HEC-HMS results, and high water marks were entered into the model. The channel Manning's "n" values were adjusted until the simulated water surface elevations matched the observed high water marks. The design simulation was then run based on the calibrated Manning's "n" values.

Roughness factors (Manning's "n") used in the hydraulic computations were chosen by engineering judgment and were based on field observations of the streams and floodplain areas. Roughness factors for all streams studied by detailed methods are shown in Table 6, "Summary of Roughness Coefficients."

Table 6 – Summary of Roughness Coefficients

<u>Stream</u>	<u>Channel “n”</u>	<u>Overbank “n”</u>
Allen Creek	0.045	0.060-0.100
Ashippun River	0.035-0.045	0.040-0.100
Battle Creek	0.040-0.050	0.045-0.100
Bark River	0.028-0.033	0.050-0.080
Carriage Hill Drive Tributary	0.040-0.055	0.040-0.150
Carriage Hill Drive Tributary – Diversion Structure	0.040-0.045	0.045-0.070
Carriage Hill Drive Tributary – Overland Flowpath	0.040-0.050	0.045-0.120
Crawfish River	0.035-0.040	0.035-0.120
Galloway Creek	0.035-0.045	0.060-0.080
Johnson Creek	0.040-0.055	0.040-0.150
Koshkonong Creek	0.035-0.045	0.050-0.100
Maunasha River	0.035-0.055	0.040-0.150
Oconomowoc River	0.030-0.060	0.030-0.150
Rock Creek	0.030-0.055	0.035-0.150
Rock River	0.025-0.044	0.040-0.100
Scuppernong River	0.014-0.045	0.040-0.100
South Branch	0.014-0.040	0.050-0.100
South Branch Tributary	0.014-0.040	0.050-0.100
Spring Creek	0.025-0.045	0.035-0.100
Tributary to Galloway Creek	0.035-0.045	0.050-0.080
Tributary to Whitewater Creek	0.035	0.060-0.100
Unnamed Tributary to Johnson Creek	0.035-0.045	0.040-0.120
Unnamed Tributary to Koshkonong Creek	0.025-0.045	0.040-0.100
Whitewater Creek	0.028-0.045	0.050-0.070

Locations of selected cross sections used in the hydraulic analyses are shown on the Flood Profiles (Exhibit 1). For stream segments for which a floodway was computed (Section 4.2), selected cross section locations are also shown on the FIRM.

The hydraulic analyses for this study were based on unobstructed flow. The flood elevations shown on the Flood Profiles (Exhibit 1) are thus considered valid only if hydraulic structures remain unobstructed, operate properly, and do not fail.

3.3 Vertical Datum

All FISs 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 in use for newly created or revised FISs and FIRMs was the National Geodetic Vertical Datum of 1929 (NGVD 29). With the finalization of the North American Vertical Datum of 1988 (NAVD 88), many FIS reports and FIRMs are being prepared using NAVD 88 as the referenced vertical datum.

All flood elevations shown in this FIS report and on the FIRM are referenced to NAVD 88. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding conversion between the NGVD 29 and NAVD 88, visit the National Geodetic Survey website at www.ngs.noaa.gov, or contact the National Geodetic Survey at the following address:

Vertical Network Branch, N/CG13
National Geodetic Survey, NOAA
Silver Spring Metro Center 3
1315 East-West Highway
Silver Spring, Maryland 20910
(301) 713-3191

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 Technical Support Data Notebook (TSDN) associated with the FIS report and FIRM for the community. Interested individual may contact FEMA to access these data.

For this revision, the vertical datum shift in Jefferson County was calculated to be -0.2 feet (NGVD 29 - 0.2 = NAVD 88). All elevation values were edited to reflect these changes. Structure and ground elevations in the community must therefore be referenced to NAVD 88.

4.0 FLOODPLAIN MANAGEMENT APPLICATIONS

The NFIP encourages State and local governments to adopt sound floodplain management programs. To assist in this endeavor, each FIS provides 1-percent annual chance floodplain data, which may include a combination of the following: 10-, 4-, 2-, 1-, and 0.2-percent annual chance flood elevations; delineations of the 1- and 0.2-percent annual chance floodplains; and 1-percent annual chance floodway. This information is presented on the FIRM and in many components of the FIS, including Flood Profiles, Floodway Data tables, and Summary of Stillwater Elevation tables. Users should reference the data presented in the FIS as well as additional information that may be available at the local community map repository before making flood elevation and/or floodplain boundary determinations.

4.1 Floodplain Boundaries

To provide a national standard without regional discrimination, the 1-percent annual chance flood has been adopted by FEMA as the base flood for floodplain management purposes. The 0.2-percent annual chance flood is employed to indicate additional areas of flood risk in the county. For the streams studied in detail, the 1- and 0.2-percent annual chance floodplain boundaries have been delineated using the flood elevations determined at each cross section. Between cross sections, the boundaries were interpolated. In cases where the 1- and the 0.2-percent annual

chance flood boundaries are close together, only the 1-percent annual chance flood boundary has been shown.

For the flooding sources previously studied by approximate methods and not restudied, the boundaries of the 1-percent annual chance floodplains were delineated using topographic maps taken from the previously printed FIS reports, FBFMs, FHBMs, and/or FIRMs for all of the incorporated and unincorporated jurisdictions within Jefferson County.

For this countywide study, the 1- and 0.2-percent annual chance floodplain boundaries have been delineated using digital topographic data provided by Jefferson County. This data includes 2005 orthophotography and contours at two foot intervals; referenced to the Wisconsin State Plane coordinate system, NAD83 horizontal datum, and NAVD 88 vertical datum.

The 1- and 0.2-percent annual chance floodplain boundaries are shown on the FIRM (Exhibit 2). On this map, the 1-percent annual chance floodplain boundary corresponds to the boundary of the areas of special flood hazards (Zones A and AE), and the 0.2-percent annual chance floodplain boundary corresponds to the boundary of areas of moderate flood hazards. 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.

For the streams newly studied by approximate methods, only the 1-percent annual chance floodplain boundary is shown on the FIRM (Exhibit 2).

4.2 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 this aspect of floodplain management. Under this concept, the area of the 1-percent annual chance floodplain is divided into a floodway and a floodway fringe. The floodway is the channel of a stream, plus any adjacent floodplain areas, that must be kept free of encroachment so that the 1-percent annual chance flood can be carried without substantial increases in flood heights. Minimum Federal standards limit such increases to 1.0 foot, provided that hazardous velocities are not produced. However, Wisconsin has established a more strict policy and does not allow any increase in the regional flood height for flood fringe developments (Reference 24). The floodways in this FIS are presented to local agencies as a minimum standard that can be adopted directly or that can be used as a basis for additional floodway studies.

Floodway widths were computed at selected cross sections. Between cross sections, the floodway boundaries were interpolated. The results of the floodway computations for selected cross sections are tabulated in Table 7, "Floodway Data

Table." The computed floodways are shown on the FIRM (Exhibit 2). In cases where the floodway and 1-percent annual chance floodplain boundaries are either close together or collinear, only the floodway boundary is shown.

The area between the floodway and 1-percent annual chance floodplain boundaries is termed the floodway fringe. The floodway fringe encompasses the portion of the floodplain that could be completely obstructed without increasing the water-surface elevation of the 1-percent annual chance flood by more than 0.00 foot at any point. Typical relationships between the floodway and the floodway fringe and their significance to floodplain development are shown in Figure 4.

Encroachment into areas subject to inundation by floodwaters having hazardous velocities aggravates the risk of flood damage, and heightens potential flood hazards by further increasing velocities. A listing of stream velocities at selected cross sections is provided in Table 7, "Floodway Data Table." In order to reduce the risk of property damage in areas where the stream velocities are high, the community may wish to restrict development in areas outside the floodway.

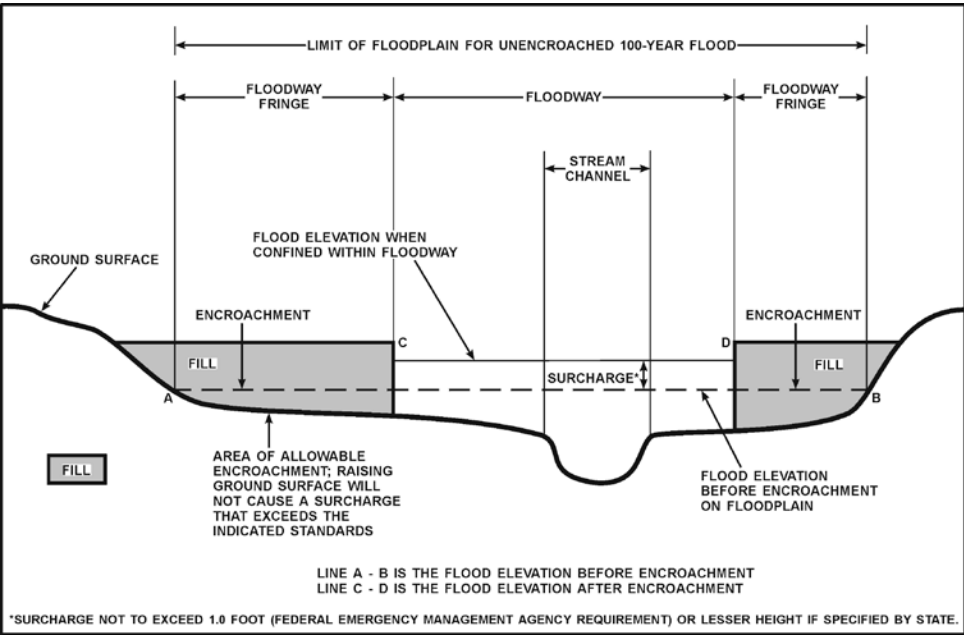


Figure 4 – Floodway Schematic

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
ALLEN CREEK								
A	1,950	332	1,113	0.6	785.2	781.9 ²	781.9 ²	0.0
B	2,497	185	343	2.0	785.2	782.1 ²	782.1 ²	0.0
C	3,415	204	385	2.6	785.2	784.8 ²	784.8 ²	0.0
D	3,758	132	274	2.5	786.0	786.0	786.0	0.0
E	4,110	129	2,770	0.8	791.9	791.9	791.9	0.0
F	4,719	522	2,998	0.4	791.9	791.9	791.9	0.0
G	5,629	899	3,116	0.3	791.9	791.9	791.9	0.0
H	6,332	1,030	2,465	0.3	792.0	792.0	792.0	0.0
I	7,104	444	954	0.9	792.1	792.1	792.1	0.0
J	7,689	162	1,285	2.9	794.7	794.7	794.7	0.0
K	8,351	95	156	3.8	798.7	798.7	798.7	0.0
L	8,484	147	259	2.3	800.0	800.0	800.0	0.0
M	8,616	257	768	0.8	806.7	806.7	806.7	0.0
N	9,063	405	1,871	0.3	806.7	806.7	806.7	0.0
O	9,733	283	990	0.6	806.7	806.7	806.7	0.0
P	10,456	138	285	2.1	809.0	809.0	809.0	0.0
Q	10,810	360	586	1.0	809.5	809.5	809.5	0.0
R	11,815	553	1,883	0.3	809.7	809.7	809.7	0.0
S	12,851	1,030	2,761	0.2	809.7	809.7	809.7	0.0
T	13,610	600	713	1.1	809.7	809.7	809.7	0.0
U	14,319	512	1,089	1.3	811.1	811.1	811.1	0.0
V	14,778	243	284	1.4	812.5	812.5	812.5	0.0
W	15,555	231	371	1.1	814.0	814.0	814.0	0.0
X	16,782	214	345	1.2	815.2	815.2	815.2	0.0

¹ Feet above confluence with Rock River

² Elevations without considering backwater effect from Rock River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY
JEFFERSON COUNTY, WI
 AND INCORPORATED AREAS

FLOODWAY DATA

ALLEN CREEK

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
ASHIPPUN RIVER								
A	2,115	298	974	1.0	845.3	843.5 ²	843.5 ²	0.0
B	3,222	145	481	2.0	845.3	843.6 ²	843.6 ²	0.0
C	3,590	131	438	2.2	845.3	844.2 ²	844.2 ²	0.0
D	4,635	123	457	2.1	845.3	844.7 ²	844.7 ²	0.0
E	4,830	252	1,163	0.8	845.9	845.9	845.9	0.0
F	6,084	393	1,144	0.8	846.2	846.2	846.2	0.0
G	7,429	378	895	1.1	846.4	846.4	846.4	0.0
H	10,228	321	724	1.3	847.5	847.5	847.5	0.0
BARK RIVER								
A	3,399	6,201	47,708	0.1	786.7	786.7	786.7	0.0
B	12,465	2,797	23,729	0.1	786.8	786.8	786.8	0.0
C	20,694	4,063	23,801	0.1	786.8	786.8	786.8	0.0
D	27,546	2,019	17,110	0.2	786.8	786.8	786.8	0.0
E	30,100	2,456	14,212	0.3	787.0	787.0	787.0	0.0
F	41,706	996	8,344	0.5	787.1	787.1	787.1	0.0
G	52,321	3,138	27,239	0.1	787.2	787.2	787.2	0.0
H	64,705	3,776	28,713	0.1	787.2	787.2	787.2	0.0
I	66,223	3,466	20,286	0.4	787.4	787.4	787.4	0.0
J	75,417	4,213	18,591	0.1	787.4	787.4	787.4	0.0
K	81,984	581	2,392	1.1	787.5	787.5	787.5	0.0
L	83,282	392	1,347	1.2	788.3	788.3	788.3	0.0
M	85,423	311	1,340	1.2	788.7	788.7	788.7	0.0
N	87,806	493	1,754	1.6	789.2	789.2	789.2	0.0
O	88,482	114	680	2.8	790.1	790.1	790.1	0.0
P	88,590	51	159	10.2	790.7	790.7	790.7	0.0

¹ Feet above confluence with Rock River

² Elevations without considering backwater effect from Rock River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY
JEFFERSON COUNTY, WI
 AND INCORPORATED AREAS

FLOODWAY DATA

ASHIPPUN RIVER - BARK RIVER

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
BARK RIVER (continued)								
Q	89,597	523	1,258	1.2	793.6	793.6	793.6	0.0
R	90,782	62	409	5.5	794.2	794.2	794.2	0.0
S	91,196	141	661	4.0	795.0	795.0	795.0	0.0
T	92,037	230	561	2.8	797.4	797.4	797.4	0.0
U	92,839	168	386	4.0	798.6	798.6	798.6	0.0
V	93,750	237	964	2.0	799.9	799.9	799.9	0.0
W	95,246	473	2,191	1.1	800.8	800.8	800.8	0.0
X	96,849	693	2,117	0.7	801.0	801.0	801.0	0.0
Y	100,836	1,507	4,455	0.5	801.4	801.4	801.4	0.0
Z	104,338	843	2,270	1.1	802.2	802.2	802.2	0.0
AA	107,256	920	2,280	0.8	803.2	803.2	803.2	0.0
AB	109,378	386	1,139	1.7	804.2	804.2	804.2	0.0
AC	111,462	716	1,533	1.0	805.3	805.3	805.3	0.0
AD	113,214	518	837	1.5	806.0	806.0	806.0	0.0
AE	113,988	163	270	4.6	806.9	806.9	806.9	0.0
AF	114,750	110	200	6.2	810.0	810.0	810.0	0.0
AG	116,503	298	433	2.8	815.4	815.4	815.4	0.0
AH	117,595	499	972	1.2	816.3	816.3	816.3	0.0
AI	119,498	180	864	2.3	818.0	818.0	818.0	0.0
AJ	121,012	615	1,692	0.8	819.3	819.3	819.3	0.0
AK	122,918	901	2,450	0.6	819.5	819.5	819.5	0.0
AL	123,566	161	1,327	2.9	819.5	819.5	819.5	0.0
AM	125,090	259	721	1.7	820.8	820.8	820.8	0.0
AN	126,140	633	1,860	0.8	821.2	821.2	821.2	0.0
AO	127,472	629	1,251	1.0	821.5	821.5	821.5	0.0

¹ Feet above confluence with Rock River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY
JEFFERSON COUNTY, WI
AND INCORPORATED AREAS

FLOODWAY DATA

BARK RIVER

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
BARK RIVER (continued)								
AP	130,075	157	498	2.4	823.5	823.5	823.5	0.0
AQ	131,849	232	678	1.8	823.9	823.9	823.9	0.0
AR	132,479	258	644	1.9	824.7	824.7	824.7	0.0
AS	134,067	133	366	3.3	825.6	825.6	825.6	0.0
AT	134,791	476	1,226	1.0	826.7	826.7	826.7	0.0
AU	136,782	888	1,505	0.8	827.0	827.0	827.0	0.0
AV	138,319	150	340	3.5	827.8	827.8	827.8	0.0
AW	139,334	626	1,107	1.1	828.5	828.5	828.5	0.0
AX	140,366	149	520	2.3	828.8	828.8	828.8	0.0
AY	140,697	138	537	2.6	828.9	828.9	828.9	0.0
AZ	141,215	135	329	3.6	829.2	829.2	829.2	0.0
BA	141,798	139	529	2.4	830.0	830.0	830.0	0.0
BB	142,444	141	250	4.8	830.7	830.7	830.7	0.0
BC	142,797	283	678	1.8	831.6	831.7	831.7	0.0
BD	143,418	563	2,635	0.5	838.7	838.7	838.7	0.0
BE	145,646	679	3,957	0.3	838.8	838.8	838.8	0.0
BF	146,635	1,082	5,936	0.2	838.8	838.8	838.8	0.0
BG	147,692	611	3,649	0.5	838.9	838.9	838.9	0.0
BH	152,329	3,007	16,916	0.1	838.9	838.9	838.9	0.0
BI	160,139	659	3,008	0.7	839.6	839.6	839.6	0.0
BJ	163,357	1,127	2,105	0.5	840.0	840.0	840.0	0.0
BK	164,820	449	859	1.3	840.4	840.4	840.4	0.0
BL	165,548	340	709	1.6	840.7	840.7	840.7	0.0
BM	166,746	219	593	1.9	842.8	842.8	842.8	0.0
BN	167,404	352	744	1.5	843.1	843.1	843.1	0.0
BO	168,444	653	2,610	0.5	843.3	843.3	843.3	0.0

¹ Feet above confluence with Rock River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY
JEFFERSON COUNTY, WI
 AND INCORPORATED AREAS

FLOODWAY DATA

BARK RIVER

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
BARK RIVER (continued)								
BP	171,703 ¹	351	13,571	1.5	843.7	843.7	843.7	0.0
BQ	175,183 ¹	3,213	10,497	0.1	844.0	844.0	844.0	0.0
BR	179,950 ¹	6,168 / 289 ³	21,241	0.1	844.0	844.0	844.0	0.0
BATTLE CREEK								
A	4,793 ²	856	1,303	0.7	845.8	845.1 ⁴	845.1 ⁴	0.0
B	5,856 ²	346	369	2.4	845.8	845.6 ⁴	845.6 ⁴	0.0
C	5,978 ²	283	409	2.2	845.9	845.9	845.9	0.0
CARRIAGE HILL DRIVE TRIBUTARY								
A	204 ¹	300	470	0.8	798.0	798.0	798.0	0.0
B	906 ¹	33	91	2.1	798.3	798.3	798.3	0.0
C	1,093 ¹	33	103	1.9	801.1	801.1	801.1	0.0
D	1,230 ¹	11	49	3.9	801.1	801.1	801.1	0.0
E	1,952 ¹	10	49	3.9	806.8	806.8	806.8	0.0
F	3,883 ¹	35	86	2.2	815.8	815.8	815.8	0.0
G	4,248 ¹	8.00	21	1.8	816.1	816.1	816.1	0.0
H	4,482 ¹	25	61	3.2	816.4	816.4	816.4	0.0
I	4,918 ¹	12	35	5.0	818.3	818.3	818.3	0.0
J	4,956 ¹	19	66	2.6	820.1	820.1	820.1	0.0
K	5,226 ¹	12	42	4.2	820.5	820.5	820.5	0.0
L	5,265 ¹	15	74	2.4	821.9	821.9	821.9	0.0
M	6,165 ¹	151	152	1.2	822.3	822.3	822.3	0.0
N	6,531 ¹	84	191	0.9	824.1	824.1	824.1	0.0
O	6,667 ¹	20	103	1.7	825.8	825.8	825.8	0.0

¹ Feet above confluence with Rock River

³ Width / Width Within Jefferson County Limits

² Feet above confluence with Oconomowoc River

⁴ Elevations without considering backwater effect from Oconomowoc River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY
JEFFERSON COUNTY, WI
 AND INCORPORATED AREAS

FLOODWAY DATA

BARK RIVER - BATTLE CREEK - CARRIAGE HILL DRIVE TRIBUTARY

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
CARRIAGE HILL DRIVE TRIBUTARY (continued)								
P	6,722 ¹	30	185	0.9	826.7	826.7	826.7	0.0
Q	7,647 ¹	115	444	0.3	826.7	826.7	826.7	0.0
R	7,951 ¹	240	838	0.1	829.3	829.3	829.3	0.0
S	8,407 ¹	432	927	0.1	829.3	829.3	829.3	0.0
CARRIAGE HILL DRIVE TRIBUTARY - DIVERSION STRUCTURE								
A	30 ²	33	129	1.2	798.1	798.1	798.1	0.0
B	2,072 ²	22	58	2.8	816.3	816.3	816.3	0.0
CARRIAGE HILL DRIVE TRIBUTARY - OVERLAND FLOWPATH								
A	54 ²	697	1,362	0.2	826.7	826.7	826.7	0.0
B	787 ²	84	51	2.0	826.8	826.8	826.8	0.0
C	992 ²	53	29	3.4	829.1	829.1	829.1	0.0

¹ Feet above confluence with Rock River

² Feet above confluence with Carriage Hill Drive Tributary

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY
JEFFERSON COUNTY, WI
AND INCORPORATED AREAS

FLOODWAY DATA

CARRIAGE HILL DRIVE TRIBUTARY - CARRIAGE HILL DRIVE TRIBUTARY DIVERSION
STRUCTURE - CARRIAGE HILL DRIVE TRIBUTARY OVERLAND FLOWPATH

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
CRAWFISH RIVER								
A	1,391	1,165	6,566	1.0	788.6	788.60	788.60	0.0
B	5,359	646	5,899	1.1	788.9	788.90	788.90	0.0
C	8,417	776	6,626	1.0	789.0	789.00	789.00	0.0
D	10,174	1,101	7,250	0.9	789.2	789.2	789.2	0.0
E	14,462	1,802	11,772	0.6	789.3	789.3	789.3	0.0
F	19,236	556	3,884	1.7	789.5	789.5	789.5	0.0
G	21,851	654	5,580	1.2	789.9	789.9	789.9	0.0
H	26,510	575	5,008	1.3	790.1	790.1	790.1	0.0
I	31,132	348	3,735	1.8	790.4	790.4	790.4	0.0
J	36,201	426	3,847	1.7	790.8	790.8	790.8	0.0
K	41,129	605	5,413	1.2	791.3	791.3	791.3	0.0
L	45,123	1,203	8,411	0.8	791.5	791.5	791.5	0.0
M	49,502	640	5,590	1.2	791.8	791.8	791.8	0.0
N	52,242	449	3,611	1.8	792.1	792.1	792.1	0.0
O	56,520	384	3,576	1.7	792.4	792.4	792.4	0.0
P	61,388	783	6,347	1.0	792.8	792.8	792.8	0.0
Q	66,200	4,714	22,639	0.3	792.9	792.9	792.9	0.0
R	70,741	8,741	42,303	0.2	792.9	792.9	792.9	0.0
S	75,003	8,906	38,430	0.2	792.9	792.9	792.9	0.0
T	78,641	10,114	43,265	0.1	792.9	792.9	792.9	0.0
U	84,326	6,834	29,819	0.2	792.9	792.9	792.9	0.0
V	89,101	4,709	26,615	0.2	793.0	793.0	793.0	0.0
W	95,367	2,863	15,863	0.4	793.0	793.0	793.0	0.0
X	98,344	3,650	22,832	0.3	793.1	793.1	793.1	0.0

¹ Feet above confluence with Rock River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY
JEFFERSON COUNTY, WI
AND INCORPORATED AREAS

FLOODWAY DATA

CRAWFISH RIVER

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
GALLOWAY CREEK								
A	2,511 ¹	1,188	2,637	0.6	787.9	786.5 ³	786.5 ³	0.0
B	3,252 ¹	1,078	2,641	0.6	787.9	786.8 ³	786.8 ³	0.0
C	4,329 ¹	994	2,101	0.7	787.9	787.4 ³	787.4 ³	0.0
D	5,653 ¹	1,062	1,802	0.6	787.9	787.9	787.9	0.0
E	6,916 ¹	806	1,797	0.6	788.3	788.3	788.3	0.0
F	8,034 ¹	842	1,328	1.2	788.9	788.9	788.9	0.0
JOHNSON CREEK								
A	3,376 ²	776	2,201	0.5	789.8	787.0 ⁴	787.0 ⁴	0.0
B	4,379 ²	321	830	1.3	789.8	787.6 ⁴	787.6 ⁴	0.0
C	5,937 ²	210	708	1.5	789.8	788.9 ⁴	788.9 ⁴	0.0
D	6,904 ²	53	233	4.6	790.8	790.8	790.8	0.0
E	7,412 ²	151	682	1.6	792.2	792.2	792.2	0.0
F	8,891 ²	189	813	1.3	792.9	792.9	792.9	0.0
G	10,635 ²	268	1,164	0.8	793.5	793.5	793.5	0.0

¹ Feet above confluence with Whitewater Creek

³ Elevations without considering backwater effect from Whitewater Creek

² Feet above confluence with Rock River

⁴ Elevations without considering backwater effect from Rock River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY
JEFFERSON COUNTY, WI
 AND INCORPORATED AREAS

FLOODWAY DATA

GALLOWAY CREEK - JOHNSON CREEK

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
KOSHKONONG CREEK								
A	17,351	1,473	5,304	0.6	784.9	784.9 ²	784.9 ²	0.0
B	20,101	1,617	5,338	0.6	785.1	785.1	785.1	0.0
C	22,905	1,588	4,308	0.8	785.4	785.4	785.4	0.0
D	24,320	1,371	4,487	1.0	785.8	785.8	785.8	0.0
E	27,184	1,898	5,838	0.8	786.5	786.5	786.5	0.0
F	29,681	1,852	8,027	0.9	787.7	787.7	787.7	0.0
G	33,370	2,251	6,120	0.8	789.0	789.0	789.0	0.0
H	36,406	1,426	3,771	1.0	789.9	789.9	789.9	0.0
I	39,345	1,168	4,331	0.8	791.2	791.2	791.2	0.0
J	42,027	1,072	3,497	1.0	792.8	792.8	792.8	0.0
K	43,350	1,014	5,201	0.7	795.5	795.5	795.5	0.0
L	45,659	375	1,584	2.0	796.1	796.1	796.1	0.0
M	126,352	1,504 / 1,366 ³	10,573	0.3	832.3	832.3	832.3	0.0
N	129,236	436	2,311	2.1	832.3	832.3	832.3	0.0
O	131,870	859	3,336	1.0	832.8	832.8	832.8	0.0
P	133,705	201	901	3.0	833.9	833.9	833.9	0.0
Q	135,037	910	4,132	0.7	834.3	834.3	834.3	0.0
R	137,464	879	31,413	1.0	834.4	834.4	834.4	0.0
S	139,124	392	1,655	1.5	834.9	834.9	834.9	0.0
T	140,088	556	2,037	1.2	835.4	835.4	835.4	0.0
U	141,214	401	2,815	1.8	835.9	835.9	835.9	0.0
V	142,613	878	4,063	0.8	837.2	837.2	837.2	0.0
W	143,389	582	1,578	1.5	837.4	837.4	837.4	0.0
X	144,542	205	652	3.7	838.6	838.6	838.6	0.0
Y	145,682	182	673	3.6	840.4	840.4	840.4	0.0
Z	147,160	183	753	3.2	842.5	842.5	842.5	0.0
AA	148,397	292	1,228	2.0	844.2	844.2	844.2	0.0

¹ Feet above confluence with Rock River

³ Width / Width Within Jefferson County Limits

² Elevations without considering backwater effect from Rock River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY
JEFFERSON COUNTY, WI
 AND INCORPORATED AREAS

FLOODWAY DATA

KOSHKONONG CREEK

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
MAUNESHA RIVER								
A	19,402	670 / 313 ²	1,052	2.6	795.1	795.1	795.1	0.0
B	21,792	179	689	4.0	798.2	798.2	798.2	0.0
C	22,587	250	999	2.8	799.9	799.9	799.9	0.0
D	23,171	327	1,674	1.7	801.3	801.3	801.3	0.0
E	24,303	315	1,423	2.0	802.0	802.0	802.0	0.0
F	26,914	649	3,302	0.8	803.1	803.1	803.1	0.0
G	28,834	801	2,505	1.1	803.4	803.4	803.4	0.0
H	29,380	535	1,818	1.4	803.7	803.7	803.7	0.0
I	30,872	67	455	5.5	805.0	805.0	805.0	0.0
J	32,105	55	348	7.2	807.4	807.4	807.4	0.0
K	32,357	61	365	6.9	808.4	808.4	808.4	0.0
L	33,051	70	468	5.4	810.9	810.9	810.9	0.0
M	33,585	85	486	5.1	811.4	811.4	811.4	0.0
N	33,894	80	483	5.2	812.2	812.2	812.2	0.0
O	34,653	103	745	3.4	813.7	813.7	813.7	0.0
P	36,020	144	838	3.0	815.5	815.5	815.5	0.0
Q	36,347	215	1,370	1.8	816.3	816.3	816.3	0.0
R	37,736	58	367	6.8	817.3	817.3	817.3	0.0
S	38,333	96	518	4.8	820.1	820.1	820.1	0.0
T	38,693	133	579	4.3	821.0	821.0	821.0	0.0
U	39,267	75	277	9.0	822.2	822.2	822.2	0.0
V	39,677	408	1,558	1.6	824.9	824.9	824.9	0.0
W	40,191	222	833	3.0	825.6	825.6	825.6	0.0
X	40,767	304	1,278	1.9	826.6	826.6	826.6	0.0

¹ Feet above confluence with Rock River

² Width / Width Within Jefferson County Limits

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY
JEFFERSON COUNTY, WI
 AND INCORPORATED AREAS

FLOODWAY DATA

MAUNESHA RIVER

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
OCONOMOWOC RIVER								
A	3,619 ¹	1,093	3,648	0.4	839.5	839.5	839.5	0.0
B	5,235 ¹	455	1,838	0.8	839.8	839.8	839.8	0.0
C	8,756 ¹	882	2,319	0.6	840.2	840.2	840.2	0.0
D	11,967 ¹	430	1,205	1.2	840.8	840.8	840.8	0.0
E	12,509 ¹	405	1,612	0.9	841.8	841.8	841.8	0.0
F	17,493 ¹	1,449	4,546	0.3	841.9	841.9	841.9	0.0
G	20,262 ¹	2,268	4,800	0.3	841.9	841.9	841.9	0.0
H	23,484 ¹	2,827	6,572	0.2	842.0	842.0	842.0	0.0
I	25,841 ¹	135	478	3.2	842.4	842.4	842.4	0.0
J	26,284 ¹	335	1,183	1.3	843.6	843.6	843.6	0.0
K	29,752 ¹	510	1,331	1.2	844.0	844.0	844.0	0.0
L	33,991 ¹	793	2,172	0.7	845.2	845.2	845.2	0.0
M	35,235 ¹	525	1,537	1.0	845.7	845.7	845.7	0.0
N	39,540 ¹	1,473	2,458	0.3	845.9	845.9	845.9	0.0
O	43,414 ¹	491	777	1.0	846.2	846.2	846.2	0.0
P	46,327 ¹	210	414	1.8	847.2	847.2	847.2	0.0
ROCK CREEK								
A	2,358 ²	278	1,080	0.6	792.7	789.3 ³	789.3 ³	0.0
B	2,829 ²	259	1,135	0.6	792.7	789.6 ³	789.6 ³	0.0
C	5,811 ²	435	1,053	0.7	792.7	789.8 ³	789.8 ³	0.0
D	8,578 ²	222	315	2.2	792.7	790.1 ³	790.1 ³	0.0
E	9,900 ²	120	259	2.7	792.7	791.4 ³	791.4 ³	0.0
F	10,114 ²	125	536	1.3	793.9	793.9	793.9	0.0
G	10,675 ²	86	498	1.4	794.0	794.0	794.0	0.0

¹ Feet above confluence with Rock River

³ Elevations without considering backwater effect from Crawfish River

² Feet above confluence with Crawfish River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY
JEFFERSON COUNTY, WI
 AND INCORPORATED AREAS

FLOODWAY DATA

OCONOMOWOC RIVER - ROCK CREEK

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
ROCK CREEK (continued)								
H	11,068	277	2,064	0.3	800.5	800.5	800.5	0.0
I	11,791	84	378	1.8	800.5	800.5	800.5	0.0
J	12,174	321	1,155	0.6	807.4	807.4	807.4	0.0
K	16,407	314	559	1.6	807.8	807.8	807.8	0.0
L	16,723	90	498	1.8	811.3	811.3	811.3	0.0
M	17,057	83	340	2.7	811.9	811.9	811.9	0.0
N	18,111	225	689	1.3	812.6	812.6	812.6	0.0
O	18,529	337	1,725	0.5	815.8	815.8	815.8	0.0
P	19,757	668	1,914	0.4	815.9	815.9	815.9	0.0
Q	20,792	352	750	0.2	815.9	815.9	815.9	0.0
R	22,102	176	272	0.6	816.1	816.1	816.1	0.0
S	22,466	60	189	0.9	816.2	816.2	816.2	0.0
T	23,023	76	249	0.3	816.3	816.3	816.3	0.0
U	23,627	58	186	0.4	816.6	816.6	816.6	0.0
V	23,935	30	79	0.9	816.9	816.9	816.9	0.0
W	25,335	27	61	1.2	817.1	817.1	817.1	0.0
X	25,666	23	65	1.1	817.7	817.7	817.7	0.0
Y	26,511	21	48	1.3	817.9	817.9	817.9	0.0
Z	26,757	10	26	2.3	818.1	818.1	818.1	0.0
AA	26,797	11	11	5.6	824.8	824.8	824.8	0.0
AB	26,941	33	52	1.2	829.5	829.5	829.5	0.0
AC	28,470	806	5,156	0.0	829.5	829.5	829.5	0.0
AD	31,909	4,218	96,416	0.0	829.5	829.5	829.5	0.0

¹ Feet above confluence with Crawfish River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY
JEFFERSON COUNTY, WI
 AND INCORPORATED AREAS

FLOODWAY DATA

ROCK CREEK

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
ROCK RIVER								
A	199.466	15,133	231,514	0.1	784.9	784.9	784.9	0.0
B	200.374	13,654	201,753	0.1	784.9	784.9	784.9	0.0
C	201.492	10,977	214,877	0.1	784.9	784.9	784.9	0.0
D	202.868	14,059	226,219	0.1	784.9	784.9	784.9	0.0
E	203.778	10,432	119,970	0.1	784.9	784.9	784.9	0.0
F	204.651	5,000	96,744	0.4	785.0	785.0	785.0	0.0
G	205.465	1,900	60,325	1.0	785.0	785.0	785.0	0.0
H	205.632	970	19,231	1.7	785.0	785.0	785.0	0.0
I	205.681	930	16,069	1.8	785.1	785.1	785.1	0.0
J	205.787	1,385	14,621	1.3	785.1	785.1	785.1	0.0
K	206.180	2,860	25,544	0.6	785.2	785.2	785.2	0.0
L	206.644	2,472	18,887	0.9	785.2	785.2	785.2	0.0
M	206.974	3,081	21,526	0.8	785.3	785.3	785.3	0.0
N	207.786	1,841	23,671	1.1	785.4	785.4	785.4	0.0
O	208.180	379	4,903	3.5	785.4	785.4	785.4	0.0
P	208.499	364	4,603	3.4	785.6	785.6	785.6	0.0
Q	208.741	400	4,415	3.6	785.7	785.7	785.7	0.0
R	208.880	316	3,848	4.1	785.8	785.8	785.8	0.0
S	208.906	308	4,126	4.0	785.8	785.8	785.8	0.0
T	208.929	327	3,917	4.0	785.8	785.8	785.8	0.0
U	208.949	368	4,083	4.0	785.8	785.8	785.8	0.0
V	209.063	358	4,143	3.8	786.0	786.0	786.0	0.0
W	209.094	317	3,908	4.1	786.0	786.0	786.0	0.0
X	209.111	329	3,803	4.4	786.0	786.0	786.0	0.0
Y	209.130	293	4,120	4.3	786.1	786.1	786.1	0.0
Z	209.204	321	3,942	4.3	786.1	786.1	786.1	0.0

¹ Miles above mouth

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY
JEFFERSON COUNTY, WI
AND INCORPORATED AREAS

FLOODWAY DATA

ROCK RIVER

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
ROCK RIVER (continued)								
AA	209.233	302	4,101	4.0	786.2	786.2	786.2	0.0
AB	209.256	312	4,216	3.9	786.3	786.3	786.3	0.0
AC	209.285	309	4,309	3.9	786.3	786.3	786.3	0.0
AD	209.543	537	5,804	2.7	786.6	786.6	786.6	0.0
AE	209.771	1,150	10,445	1.6	786.7	786.7	786.7	0.0
AF	210.371	2,450	43,205	0.6	786.9	786.9	786.9	0.0
AG	210.563	2,880	29,871	0.6	786.9	786.9	786.9	0.0
AH	210.752	2,099	25,666	0.8	786.9	786.9	786.9	0.0
AI	210.782	2,003	23,508	1.0	787.0	787.0	787.0	0.0
AJ	210.886	1,390	18,562	1.1	787.0	787.0	787.0	0.0
AK	211.260	1,110	17,216	1.3	787.1	787.1	787.1	0.0
AL	211.697	1,150	9,743	1.4	787.1	787.1	787.1	0.0
AM	212.032	548	8,477	1.8	787.2	787.2	787.2	0.0
AN	212.364	611	7,913	1.7	787.3	787.3	787.3	0.0
AO	212.649	507	6,302	2.1	787.3	787.3	787.3	0.0
AP	212.945	644	8,010	1.6	787.4	787.4	787.4	0.0
AQ	213.336	785	8,946	1.4	787.5	787.5	787.5	0.0
AR	213.601	838	9,166	1.4	787.6	787.6	787.6	0.0
AS	213.940	769	9,579	1.6	787.7	787.7	787.7	0.0
AT	214.209	547	6,523	2.0	787.7	787.7	787.7	0.0
AU	214.576	476	6,079	2.1	787.8	787.8	787.8	0.0
AV	214.824	465	6,113	2.1	787.9	787.9	787.9	0.0
AW	215.103	936	9,004	1.4	788.0	788.0	788.0	0.0
AX	215.309	1,206	13,631	1.1	788.1	788.1	788.1	0.0
AY	215.577	1,102	12,238	1.3	788.1	788.1	788.1	0.0
AZ	215.774	619	7,541	1.8	788.1	788.1	788.1	0.0

¹ Miles above mouth

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY
JEFFERSON COUNTY, WI
AND INCORPORATED AREAS

FLOODWAY DATA

ROCK RIVER

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
ROCK RIVER (continued)								
BA	215.968	715	10,018	1.6	788.2	788.2	788.2	0.0
BB	216.176	420	7,510	2.4	788.3	788.3	788.3	0.0
BC	216.300	409	7,307	2.4	788.5	788.5	788.5	0.0
BD	216.420	490	6,171	2.4	788.5	788.5	788.5	0.0
BE	216.536	424	5,208	1.5	788.6	788.6	788.6	0.0
BF	216.619	405	4,380	1.5	788.6	788.6	788.6	0.0
BG	216.641	360	3,016	2.2	788.7	788.7	788.7	0.0
BH	216.704	269	2,949	2.3	788.7	788.7	788.7	0.0
BI	216.731	239	2,742	2.4	788.7	788.7	788.7	0.0
BJ	216.780	359	3,834	1.8	788.8	788.8	788.8	0.0
BK	216.822	385	4,010	1.7	788.8	788.8	788.8	0.0
BL	216.926	297	3,389	2.0	788.8	788.8	788.8	0.0
BM	217.005	320	3,298	2.0	788.8	788.8	788.8	0.0
BN	217.050	258	3,092	2.2	788.9	788.9	788.9	0.0
BO	217.080	420	3,513	1.9	788.9	788.9	788.9	0.0
BP	217.170	485	4,245	1.6	789.0	789.0	789.0	0.0
BQ	217.262	380	3,421	1.9	789.0	789.0	789.0	0.0
BR	217.340	461	5,407	1.4	789.0	789.0	789.0	0.0
BS	217.373	524	5,467	1.3	789.0	789.0	789.0	0.0
BT	217.426	719	5,702	1.2	789.1	789.1	789.1	0.0
BU	217.579	737	6,354	1.0	789.1	789.1	789.1	0.0
BV	217.731	664	5,846	1.1	789.1	789.1	789.1	0.0
BW	218.037	700	5,000	1.3	789.1	789.1	789.1	0.0
BX	218.275	489	3,827	1.7	789.2	789.2	789.2	0.0
BY	218.531	801	8,090	0.9	789.2	789.2	789.2	0.0
BZ	218.669	774	8,989	1.0	789.3	789.3	789.3	0.0

¹ Miles above mouth

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY
JEFFERSON COUNTY, WI
AND INCORPORATED AREAS

FLOODWAY DATA

ROCK RIVER

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
ROCK RIVER (continued)								
CA	218.806	904	7,758	0.9	789.3	789.3	789.3	0.0
CB	219.100	579	5,747	1.2	789.3	789.3	789.3	0.0
CC	219.213	553	5,368	1.2	789.3	789.3	789.3	0.0
CD	219.416	406	4,115	1.6	789.3	789.3	789.3	0.0
CE	219.604	538	4,159	1.6	789.4	789.4	789.4	0.0
CF	219.828	396	4,010	1.6	789.5	789.5	789.5	0.0
CG	220.029	338	3,445	1.9	789.5	789.5	789.5	0.0
CH	220.257	719	5,266	1.3	789.6	789.6	789.6	0.0
CI	220.510	1,152	7,973	0.8	789.6	789.6	789.6	0.0
CJ	220.729	834	6,178	1.1	789.7	789.7	789.7	0.0
CK	220.979	1,636	9,717	0.7	789.7	789.7	789.7	0.0
CL	221.353	1,519	9,062	0.7	789.7	789.7	789.7	0.0
CM	221.750	2,386	13,835	0.5	789.8	789.8	789.8	0.0
CN	221.985	1,176	8,644	0.9	789.8	789.8	789.8	0.0
CO	222.094	280	7,395	2.1	789.8	789.8	789.8	0.0
CP	222.124	310	9,879	1.7	789.8	789.8	789.8	0.0
CQ	222.318	720	10,776	1.0	789.9	789.9	789.9	0.0
CR	222.727	1,423	10,129	0.7	790.0	790.0	790.0	0.0
CS	223.072	933	10,183	0.8	790.0	790.0	790.0	0.0
CT	223.183	381	6,857	1.5	790.0	790.0	790.0	0.0
CU	223.239	339	19,114	1.3	790.1	790.1	790.1	0.0
CV	223.619	1,623	11,827	0.6	790.1	790.1	790.1	0.0
CW	224.117	2,275	16,465	0.4	790.1	790.1	790.1	0.0
CX	224.782	1,644	11,876	0.5	790.2	790.2	790.2	0.0
CY	225.247	1,905	12,922	0.5	790.2	790.2	790.2	0.0
CZ	225.960	2,422	16,473	0.4	790.2	790.2	790.2	0.0

¹ Miles above mouth

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY
JEFFERSON COUNTY, WI
AND INCORPORATED AREAS

FLOODWAY DATA

ROCK RIVER

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
ROCK RIVER (continued)								
DA	226.535	2,378	12,371	0.5	790.3	790.3	790.3	0.0
DB	227.268	2,912	16,746	0.4	790.3	790.3	790.3	0.0
DC	227.780	2,655	21,712	0.4	790.4	790.4	790.4	0.0
DD	228.393	1,812	13,009	0.5	790.4	790.4	790.4	0.0
DE	229.215	2,932	19,630	0.4	790.4	790.4	790.4	0.0
DF	229.805	3,175	35,255	0.3	790.5	790.5	790.5	0.0
DG	230.333	2,322	32,382	0.4	790.5	790.5	790.5	0.0
DH	230.786	1,324	35,179	0.7	790.5	790.5	790.5	0.0
DI	231.140	817	14,526	1.0	790.6	790.6	790.6	0.0
DJ	231.426	1,081	7,428	0.9	790.6	790.6	790.6	0.0
DK	231.684	1,986	9,000	0.9	790.6	790.6	790.6	0.0
DL	231.891	1,174	6,152	1.0	790.7	790.7	790.7	0.0
DM	232.413	972	6,847	0.9	790.8	790.8	790.8	0.0
DN	232.929	426 / 603 ²	5,331	1.9	790.9	790.9	790.9	0.0
DO	233.322	1,316	7,415	0.9	791.1	791.1	791.1	0.0
DP	233.608	833	8,966	1.0	791.1	791.1	791.1	0.0
DQ	233.883	967	6,845	1.0	791.3	791.3	791.3	0.0
DR	234.032	872	5,381	1.2	791.3	791.3	791.3	0.0
DS	234.255	402	3,330	1.9	791.4	791.4	791.4	0.0
DT	234.434	400	3,506	1.8	791.5	791.5	791.5	0.0
DU	234.549	310	2,107	3.0	791.6	791.6	791.6	0.0
DV	234.657	200	1,302	4.9	791.6	791.6	791.6	0.0
DW	234.727	369	2,239	2.9	792.1	792.1	792.1	0.0
DX	234.899	539	2,364	2.7	792.4	792.4	792.4	0.0
DY	235.066	403	1,666	3.8	792.9	792.9	792.9	0.0
DZ	235.295	185	794	8.0	794.0	794.0	794.0	0.0

¹ Miles above mouth

² Modeled topwidth for skewed cross section / mapped topwidth

TABLE 7	FEDERAL EMERGENCY MANAGEMENT AGENCY	FLOODWAY DATA
	JEFFERSON COUNTY, WI	
	AND INCORPORATED AREAS	ROCK RIVER

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
ROCK RIVER (continued)								
EA	235.463	499	2,043	3.1	796.1	796.1	796.1	0.0
EB	235.511	433	2,076	3.1	796.4	796.4	796.4	0.0
EC	235.544	267	1,547	4.2	796.8	796.8	796.8	0.0
ED	235.569	282	1,582	4.0	796.9	796.9	796.9	0.0
EE	235.692	250	1,242	5.1	797.4	797.4	797.4	0.0
EF	235.835	177	829	7.7	798.4	798.4	798.4	0.0
EG	235.856	199 / 220 ²	1,011	6.3	799.1	799.1	799.1	0.0
EH	235.881	153 / 170 ²	732	8.7	799.2	799.2	799.2	0.0
EI	235.907	139	742	8.6	799.8	799.8	799.8	0.0
EJ	236.022	222	1,394	4.6	801.7	801.7	801.7	0.0
EK	236.063	209	1,268	5.0	801.9	801.9	801.9	0.0
EL	236.153	220	1,289	4.9	802.5	802.5	802.5	0.0
EM	236.180	227	1,560	4.1	802.8	802.8	802.8	0.0
EN	236.193	242	2,756	2.3	811.1	811.1	811.1	0.0
EO	236.347	97	920	6.9	811.1	811.1	811.1	0.0
EP	236.371	123	1,213	5.3	811.3	811.3	811.3	0.0
EQ	236.383	129	1,293	4.9	811.4	811.4	811.4	0.0
ER	236.475	211	2,021	3.2	811.8	811.8	811.8	0.0
ES	236.508	163	1,830	3.5	811.8	811.8	811.8	0.0
ET	236.529	188	2,078	3.1	812.0	812.0	812.0	0.0
EU	236.555	208	2,210	2.9	812.0	812.0	812.0	0.0
EV	237.865	253 / 98 ³	2,838	2.6	813.0	813.0	813.0	0.0
EW	237.881	251	4,436	2.5	813.2	813.2	813.2	0.0
EX	237.903	770	6,289	1.0	813.3	813.3	813.3	0.0
EY	238.037	508	2,957	2.1	813.3	813.3	813.3	0.0
EZ	238.242	522	3,018	2.1	813.4	813.4	813.4	0.0

¹ Miles above mouth

³ Width / Width Within Jefferson County Limits

² Modeled topwidth for skewed cross section / mapped topwidth

TABLE 7	FEDERAL EMERGENCY MANAGEMENT AGENCY JEFFERSON COUNTY, WI AND INCORPORATED AREAS	FLOODWAY DATA
		ROCK RIVER

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
ROCK RIVER (continued)								
FA	238.445	397	2,673	2.5	813.6	813.6	813.6	0.0
FB	238.487	274	1,757	3.6	814.0	814.0	814.0	0.0
FC	238.516	359	2,376	2.7	814.2	814.2	814.2	0.0
FD	238.604	757	2,664	2.4	814.2	814.2	814.2	0.0
FE	238.698	387	2,467	2.9	814.4	814.4	814.4	0.0
FF	238.768	349	2,189	2.9	814.6	814.6	814.6	0.0
FG	238.801	461	4,096	1.8	824.1	824.1	824.1	0.0
FH	238.842	485	4,044	1.7	824.1	824.1	824.1	0.0
FI	238.901	537	3,777	1.7	824.2	824.2	824.2	0.0
FJ	238.985	384	2,954	2.1	824.3	824.3	824.3	0.0
FK	239.212	353	2,576	2.5	824.5	824.5	824.5	0.0
FL	239.519	316	2,444	2.6	824.7	824.7	824.7	0.0
FM	239.713	455	3,067	2.1	824.9	824.9	824.9	0.0
FN	239.938	377	2,717	2.3	825.1	825.1	825.1	0.0
FO	240.142	359	2,174	2.9	825.3	825.3	825.3	0.0
FP	240.249	530	2,559	2.5	825.4	825.4	825.4	0.0
FQ	240.324	281 / 325 ²	2,415	4.3	825.5	825.5	825.5	0.0
FR	240.351	282 / 325 ²	1,965	3.5	826.6	826.6	826.6	0.0
FS	240.383	305	2,143	3.1	826.7	826.7	826.7	0.0
FT	240.545	208	1,642	3.8	826.9	826.9	826.9	0.0
FU	240.718	365	2,188	2.9	827.2	827.2	827.2	0.0
FV	241.005	448	2,791	2.3	827.5	827.5	827.5	0.0
FW	241.159	225	1,873	3.4	827.6	827.6	827.6	0.0
FX	241.272	489	2,663	2.4	827.8	827.8	827.8	0.0
FY	241.542	327	1,750	3.6	828.0	828.0	828.0	0.0
FZ	241.773	341	2,163	2.9	828.4	828.4	828.4	0.0

¹ Miles above mouth

² Modeled topwidth for skewed cross section / mapped topwidth

TABLE 7	FEDERAL EMERGENCY MANAGEMENT AGENCY JEFFERSON COUNTY, WI	FLOODWAY DATA
	AND INCORPORATED AREAS	ROCK RIVER

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
ROCK RIVER (continued)								
GA	241.975	242	1,729	3.6	828.6	828.6	828.6	0.0
GB	242.212	413	2,596	2.7	829.0	829.0	829.0	0.0
GC	242.467	601	3,898	1.8	829.3	829.3	829.3	0.0
GD	242.685	310	1,939	3.3	829.3	829.3	829.3	0.0
GE	242.813	236	1,556	4.1	829.5	829.5	829.5	0.0
GF	243.046	729	3,331	1.9	830.0	830.0	830.0	0.0
GG	243.289	1,002	2,607	2.5	830.2	830.2	830.2	0.0
GH	243.479	468	1,682	3.8	830.9	830.9	830.9	0.0
GI	243.715	215	1,069	5.9	831.9	831.9	831.9	0.0
GJ	243.839	276	1,435	4.5	832.8	832.8	832.8	0.0
GK	243.960	304	1,482	4.3	833.2	833.2	833.2	0.0
GL	244.087	415	1,498	4.3	833.8	833.8	833.8	0.0
GM	244.160	290	1,481	5.4	834.2	834.2	834.2	0.0
GN	244.186	306	1,441	4.4	834.6	834.6	834.6	0.0
GO	244.235	445	1,884	3.3	834.9	834.9	834.9	0.0
GP	244.360	266	1,422	4.4	835.2	835.2	835.2	0.0
GQ	244.492	286	1,453	4.3	835.7	835.7	835.7	0.0
GR	244.835	278	1,577	4.0	836.8	836.8	836.8	0.0
GS	245.207	318	1,685	3.7	837.8	837.8	837.8	0.0
GT	245.484	284	1,870	3.4	838.4	838.4	838.4	0.0
GU	245.750	472	2,365	2.7	838.7	838.7	838.7	0.0
GV	246.242	958	3,858	1.6	839.2	839.2	839.2	0.0
GW	246.783	2,340	9,596	0.7	839.5	839.5	839.5	0.0
GX	247.091	3,677	13,421	0.5	839.6	839.6	839.6	0.0
GY	247.647	3,205	12,781	0.5	839.7	839.7	839.7	0.0
GZ	248.482	2,258	8,163	0.8	839.9	839.9	839.9	0.0

¹ Miles above mouth

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY
JEFFERSON COUNTY, WI
 AND INCORPORATED AREAS

FLOODWAY DATA

ROCK RIVER

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
ROCK RIVER (continued)								
HA	248.969	4,585	14,177	0.4	840.0	840.0	840.0	0.0
HB	249.408	1,542	5,116	1.2	840.1	840.1	840.1	0.0
HC	249.781	1,050	6,635	1.5	840.3	840.3	840.3	0.0
HD	249.875	231	4,447	3.8	840.4	840.4	840.4	0.0
HE	249.908	240	4,377	3.6	840.6	840.6	840.6	0.0
HF	250.131	947	4,545	1.4	841.0	841.0	841.0	0.0
HG	250.505	2,223	7,896	0.8	841.3	841.3	841.3	0.0
HH	250.894	1,151	7,617	1.2	841.5	841.5	841.5	0.0
HI	251.240	1,995	23,205	0.8	841.6	841.6	841.6	0.0
HJ	251.704	1,277	12,663	1.0	841.8	841.8	841.8	0.0
HK	251.907	997	7,043	1.3	841.9	841.9	841.9	0.0
HL	252.083	239	7,939	3.0	842.0	842.0	842.0	0.0
HM	252.112	281	7,282	2.7	842.2	842.2	842.2	0.0
HN	252.211	700	8,964	1.4	842.3	842.3	842.3	0.0
HO	252.346	205	1,964	3.6	842.4	842.4	842.4	0.0
HP	252.578	1,279	13,433	1.1	842.8	842.8	842.8	0.0
HQ	253.015	827	14,655	1.3	843.0	843.0	843.0	0.0
HR	253.093	245 / 270 ²	16,592	2.4	843.1	843.1	843.1	0.0
HS	253.128	299 / 330 ²	17,637	2.3	843.2	843.2	843.2	0.0
HT	253.283	850	9,877	1.5	843.3	843.3	843.3	0.0
HU	253.406	437	2,418	2.5	843.4	843.4	843.4	0.0
HV	253.644	275 / 389 ²	4,789	2.9	843.6	843.6	843.6	0.0
HW	253.681	228 / 323 ²	2,648	3.3	843.8	843.8	843.8	0.0
HX	253.824	1,650	14,212	0.7	844.1	844.1	844.1	0.0
HY	254.159	1,882	20,241	0.5	844.2	844.2	844.2	0.0
HZ	254.211	1,498	10,973	0.6	844.3	844.3	844.3	0.0

¹ Miles above mouth

² Modeled topwidth for skewed cross section / mapped topwidth

TABLE 7	FEDERAL EMERGENCY MANAGEMENT AGENCY	FLOODWAY DATA
	JEFFERSON COUNTY, WI	
	AND INCORPORATED AREAS	ROCK RIVER

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
ROCK RIVER (continued)								
IA	254.731	1,685	8,305	0.7	844.3	844.3	844.3	0.0
IB	255.140	1,413	8,579	0.7	844.5	844.5	844.5	0.0
IC	255.754	2,706	18,700	0.3	844.6	844.6	844.6	0.0
ID	256.088	2,284	16,275	0.4	844.6	844.6	844.6	0.0
IE	256.643	2,037	9,760	0.7	844.7	844.7	844.7	0.0
IF	257.186	3,702	17,730	0.4	844.8	844.8	844.8	0.0
IG	257.918	3,575	20,260	0.3	844.8	844.8	844.8	0.0
IH	258.382	1,162	5,410	1.1	844.9	844.9	844.9	0.0
II	258.773	1,336	5,397	1.1	845.1	845.1	845.1	0.0
IJ	259.163	2,400	12,510	0.6	845.3	845.3	845.3	0.0
IK	259.529	1,790	9,291	0.7	845.3	845.3	845.3	0.0
IL	259.894	1,001	7,284	1.0	845.4	845.4	845.4	0.0
IM	260.100	785	6,357	1.1	845.4	845.4	845.4	0.0
IN	260.441	1,556	12,205	0.5	845.8	845.8	845.8	0.0
IO	260.591	2,118	15,418	0.4	845.8	845.8	845.8	0.0
IP	261.044	2,039	19,707	0.5	845.9	845.9	845.9	0.0
IQ	261.403	3,504	38,058	0.3	845.9	845.9	845.9	0.0
IR	261.973	3,875	38,436	0.3	845.9	845.9	845.9	0.0

¹ Miles above mouth

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY
JEFFERSON COUNTY, WI
 AND INCORPORATED AREAS

FLOODWAY DATA

ROCK RIVER

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
SCUPPERNONG RIVER								
A	41,870	683	1,221	0.7	795.7	795.7	795.7	0.0
B	42,909	103	293	2.5	797.1	797.1	797.1	0.0
C	43,565	156	659	1.5	797.7	797.7	797.7	0.0
D	44,318	127	431	1.9	798.2	798.2	798.2	0.0
E	45,107	260	899	1.0	798.7	798.7	798.7	0.0
F	45,638	82	444	2.5	799.0	799.0	799.0	0.0
G	46,232	191	673	1.1	799.6	799.6	799.6	0.0
H	46,674	242	841	0.9	799.8	799.8	799.8	0.0
I	47,700	566	1,061	0.6	802.6	802.6	802.6	0.0
J	48,380	51	141	4.3	802.8	802.8	802.8	0.0
K	48,818	243	559	1.2	803.6	803.6	803.6	0.0
L	49,256	64	251	4.5	805.3	805.3	805.3	0.0
M	49,551	72	191	3.2	806.4	806.4	806.4	0.0
N	50,294	652	3,852	0.2	817.7	817.7	817.7	0.0
O	51,190	1,100	8,025	0.1	817.7	817.7	817.7	0.0
P	51,960	927	4,254	0.2	817.7	817.7	817.7	0.0
Q	53,214	425	1,579	0.7	817.7	817.7	817.7	0.0
R	54,031	106	160	4.2	817.9	817.9	817.9	0.0
S	54,887	167	333	2.0	820.1	820.1	820.1	0.0
T	55,705	334	594	1.2	821.6	821.6	821.6	0.0
U	56,461	133	682	2.6	822.8	822.8	822.8	0.0
V	56,916	98	295	3.8	824.7	824.7	824.7	0.0
W	57,550	296	2,927	0.2	838.0	838.0	838.0	0.0
X	58,606	226	1,382	0.5	838.0	838.0	838.0	0.0
Y	59,641	750	3,053	0.4	838.0	838.0	838.0	0.0
Z	60,764	218	513	1.3	838.1	838.1	838.1	0.0

¹ Feet above confluence with Bark River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY
JEFFERSON COUNTY, WI
 AND INCORPORATED AREAS

FLOODWAY DATA

SCUPPERNONG RIVER

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
SCUPPERNONG RIVER (continued)								
AA	61,943 ¹	336	714	0.9	838.7	838.7	838.7	0.0
AB	62,805 ¹	406	1,026	0.6	839.0	839.0	839.0	0.0
AC	63,875 ¹	367	968	0.7	839.2	839.2	839.2	0.0
SOUTH BRANCH								
A	199 ²	168	392	0.5	799.9	799.9	799.9	0.0
B	1,115 ²	68	77	1.4	801.0	801.0	801.0	0.0
C	1,493 ²	49	62	1.7	801.5	801.5	801.5	0.0
D	1,670 ²	30	44	2.4	801.8	801.8	801.8	0.0
E	1,962 ²	27	23	4.6	803.2	803.2	803.2	0.0
F	2,148 ²	30	35	3.0	805.1	805.1	805.1	0.0
G	2,313 ²	20	114	0.9	817.6	817.6	817.6	0.0
H	2,422 ²	38	125	0.9	817.6	817.6	817.6	0.0
I	2,652 ²	74	2,710	0.2	817.7	817.7	817.7	0.0
J	3,180 ²	293	1,559	0.1	817.7	817.7	817.7	0.0
SOUTH BRANCH TRIBUTARY								
A	344 ³	23	19	0.3	801.2	801.2	801.2	0.0
B	555 ³	13	9	0.6	801.3	801.3	801.3	0.0
C	880 ³	13	2	2.4	803.1	803.1	803.1	0.0

¹ Feet above confluence with Bark River

³ Feet above confluence with South Branch

² Feet above confluence with Scuppernong River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY
JEFFERSON COUNTY, WI
 AND INCORPORATED AREAS

FLOODWAY DATA

**SCUPPERNONG RIVER - SOUTH BRANCH -
 SOUTH BRANCH TRIBUTARY**

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
SPRING CREEK								
A	20,000 ¹	22	154	1.8	796.8	796.8	796.8	0.0
B	20,454 ¹	58	70	1.1	797.2	797.2	797.2	0.0
C	21,375 ¹	126	79	0.9	797.9	797.9	797.9	0.0
D	22,659 ¹	48	59	1.2	798.8	798.8	798.8	0.0
E	23,372 ¹	57	108	1.1	799.2	799.2	799.2	0.0
F	24,343 ¹	10	24	2.9	801.1	801.1	801.1	0.0
G	24,424 ¹	23	71	1.0	803.2	803.2	803.2	0.0
H	24,495 ¹	18	83	0.8	803.2	803.2	803.2	0.0
I	24,556 ¹	37	1,314	0.3	812.5	812.5	812.5	0.0
TRIBUTARY TO GALLOWAY CREEK								
A	19,196 ²	44	60	2.8	810.6	810.6	810.6	0.0
B	19,929 ²	21	39	4.4	814.4	814.4	814.4	0.0
C	20,299 ²	19	40	4.3	816.6	816.6	816.6	0.0
D	20,947 ²	14	29	5.9	823.3	823.3	823.3	0.0
E	21,677 ²	12	25	6.8	833.0	833.0	833.0	0.0
F	22,228 ²	23	21	4.2	838.9	838.9	838.9	0.0
G	22,863 ²	15	21	4.3	845.2	845.2	845.2	0.0
H	23,741 ²	31	24	3.7	853.9	853.9	853.9	0.0
I	24,246 ²	59	39	2.3	856.2	856.2	856.2	0.0
J	24,698 ²	81	48	1.8	858.0	858.0	858.0	0.0
K	25,507 ²	59	45	2.0	860.5	860.5	860.5	0.0
L	26,504 ²	162	184	0.5	863.9	863.9	863.9	0.0
M	27,265 ²	430	677	0.2	864.5	864.5	864.5	0.0
N	28,382 ²	82	42	2.1	867.8	867.8	867.8	0.0
O	29,162 ²	92	49	1.8	871.3	871.3	871.3	0.0

¹ Feet above confluence with Scuppernong River

² Feet above confluence with Whitewater Creek

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY
JEFFERSON COUNTY, WI
 AND INCORPORATED AREAS

FLOODWAY DATA

SPRING CREEK - TRIBUTARY TO GALLOWAY CREEK

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
TRIBUTARY TO WHITEWATER CREEK								
A	735	338	688	0.9	799.7	796.1 ²	796.1 ²	0.0
B	1,269	297	502	1.2	799.7	796.3 ²	796.3 ²	0.0
C	1,495	398	2,995	0.9	799.7	796.4 ²	796.4 ²	0.0
D	1,884	320	1,599	1.1	799.7	796.5 ²	796.5 ²	0.0
E	2,570	99	233	3.5	799.7	797.6 ²	797.6 ²	0.0
F	3,257	57	244	3.3	799.7	799.3 ²	799.3 ²	0.0
G	3,748	160	403	1.1	799.9	799.9	799.9	0.0
H	4,102	255	1,168	1.0	800.2	800.2	800.2	0.0
I	4,454	571	2,001	0.2	800.2	800.2	800.2	0.0
J	4,975	125	864	2.1	800.2	800.2	800.2	0.0
K	5,560	275	1,567	0.9	800.5	800.5	800.5	0.0
L	5,988	225	958	1.6	800.6	800.6	800.6	0.0
M	6,521	154	262	1.7	800.9	800.9	800.9	0.0
N	7,497	585	2,982	0.2	801.9	801.9	801.9	0.0
O	8,146	794	2,693	0.2	801.9	801.9	801.9	0.0
P	8,783	692	2,156	0.2	801.9	801.9	801.9	0.0
Q	9,367	76	1,979	1.8	801.9	801.9	801.9	0.0
R	9,981	28	109	0.9	802.2	802.2	802.2	0.0
S	10,482	27	86	1.2	802.2	802.2	802.2	0.0
T	11,064	17	195	2.6	802.4	802.4	802.4	0.0
U	11,786	16	43	3.1	804.0	804.0	804.0	0.0
V	12,376	15	32	3.1	805.4	805.4	805.4	0.0

¹ Feet above confluence with Whitewater Creek

² Elevations without considering backwater effects from Whitewater Creek

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY
JEFFERSON COUNTY, WI
 AND INCORPORATED AREAS

FLOODWAY DATA

TRIBUTARY TO WHITEWATER CREEK

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
UNNAMED TRIBUTARY TO JOHNSON CREEK								
A	7,021 ¹	225	272	1.3	800.7	800.7	800.7	0.0
B	8,236 ¹	156	218	1.7	801.8	801.8	801.8	0.0
C	9,728 ¹	49	146	2.5	803.3	803.3	803.3	0.0
D	10,209 ¹	225	508	0.7	804.3	804.3	804.3	0.0
E	12,278 ¹	177	305	1.2	804.7	804.7	804.7	0.0
F	13,022 ¹	188	267	1.4	805.4	805.4	805.4	0.0
G	13,711 ¹	83	188	1.9	805.9	805.9	805.9	0.0
UNNAMED TRIBUTARY TO KOSHKONONG CREEK								
A	2,263 ²	209	74	1.6	832.3	829.2 ³	829.2 ³	0.0
B	2,723 ²	33	48	2.4	832.3	831.5 ³	831.5 ³	0.0
C	2,907 ²	108	260	0.5	834.0	834.0	834.0	0.0
D	3,102 ²	148	279	0.4	834.0	834.0	834.0	0.0
E	3,515 ²	35	64	3.0	834.7	834.7	834.7	0.0
F	3,666 ²	150	273	0.4	836.6	836.6	836.6	0.0
G	3,826 ²	92	84	1.9	836.7	836.7	836.7	0.0
H	3,941 ²	112	1,670	0.2	837.8	837.8	837.8	0.0

¹ Feet above confluence with Johnson Creek

³ Elevations without considering backwater effects from Koshkonong Creek

² Feet above confluence with Koshkonong Creek

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY
JEFFERSON COUNTY, WI
 AND INCORPORATED AREAS

FLOODWAY DATA

**UNNAMED TRIBUTARY TO JOHNSON CREEK -
 UNNAMED TRIBUTARY TO KOSHKONONG CREEK**

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
WHITEWATER CREEK								
A	1,674	1,337	2,939	0.8	787.0	783.6 ²	783.6 ²	0.0
B	3,740	965	2,979	0.9	787.0	784.2 ²	784.2 ²	0.0
C	5,551	972	2,723	1.0	787.0	784.7 ²	784.7 ²	0.0
D	7,192	362	1,319	1.8	787.0	785.9 ²	785.9 ²	0.0
E	8,115	363	1,314	1.8	787.2	787.2	787.2	0.0
F	10,271	719	3,850	0.8	787.6	787.6	787.6	0.0
G	13,068	1,740	10,269	0.4	787.9	787.9	787.9	0.0
H	13,814	2,237	13,804	0.3	787.9	787.9	787.9	0.0
I	15,807	2,217	7,879	0.3	787.9	787.9	787.9	0.0
J	17,897	559	1,658	1.4	788.0	788.0	788.0	0.0
K	20,578	1,414	4,539	0.5	788.6	788.6	788.6	0.0
L	22,715	1,095	2,557	1.0	788.8	788.8	788.8	0.0
M	24,597	802	1,900	1.1	790.0	790.0	790.0	0.0
N	26,565	1,278	1,684	1.2	791.5	791.5	791.5	0.0
O	27,864	1,517	2,401	0.9	792.1	792.1	792.1	0.0
P	30,246	589	2,767	1.8	793.4	793.4	793.4	0.0
Q	32,335	339	820	3.5	795.6	795.6	795.6	0.0
R	33,319	417	2,064	1.0	798.4	798.4	798.4	0.0
S	33,931	278	1,298	1.6	798.5	798.5	798.5	0.0
T	34,510	324	1,598	1.3	798.7	798.7	798.7	0.0
U	35,116	238	3,495	1.7	798.8	798.8	798.8	0.0
V	36,225	930	5,789	0.4	799.7	799.7	799.7	0.0
W	36,997	1,563	11,692	0.3	799.8	799.8	799.8	0.0
X	38,217	817	2,768	0.9	799.8	799.8	799.8	0.0

¹ Feet above confluence with Bark River

² Elevations without considering backwater effects from Bark River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY
JEFFERSON COUNTY, WI
 AND INCORPORATED AREAS

FLOODWAY DATA

WHITEWATER CREEK

5.0 INSURANCE APPLICATIONS

For flood insurance rating purposes, flood insurance zone designations are assigned to a community based on the results of the engineering analyses. The zones are as follows:

Zone A

Zone A is the flood insurance rate zone that corresponds to the 1-percent annual chance floodplains that are determined in the FIS by approximate methods. Because detailed hydraulic analyses are not performed for such areas, no base flood elevations or depths are shown within this zone.

Zone AE

Zone AE is the flood insurance rate zone that corresponds to the 1-percent annual chance floodplains that are determined in the FIS by detailed methods. In most instances, whole-foot base flood elevations derived from the detailed hydraulic analyses are shown at selected intervals within this zone.

Zone X

Zone X is the flood insurance rate zone that corresponds to areas outside the 0.2-percent annual chance floodplain, areas within the 0.2-percent annual chance floodplain, and to areas of 1-percent annual chance flooding where average depths are less than 1 foot, areas of 1-percent annual chance flooding where the contributing drainage area is less than 1 square mile, and areas protected from the 1-percent annual chance flood by levees. No base flood elevations or depths are shown within this zone.

6.0 FLOOD INSURANCE RATE MAP

The FIRM is designed for flood insurance and floodplain management applications.

For flood insurance applications, the map designates flood insurance rate zones as described in Section 5.0 and, in the 1-percent annual chance floodplains that were studied by detailed methods, shows selected whole-foot base flood elevations or average depths. Insurance agents use the zones and base flood elevations in conjunction with information on structures and their contents to assign premium rates for flood insurance policies.

For floodplain management applications, the map shows by tints, screens, and symbols, the 1- and 0.2-percent annual chance floodplains. Floodways and the locations of selected cross sections used in the hydraulic analyses and floodway computations are shown where applicable.

The current FIRM presents flooding information for the entire geographic area of Jefferson County. Previously, separate FHBMs and/or FIRMs were prepared for each identified flood-prone incorporated community of the county. This countywide FIRM also includes flood hazard information that was presented separately on Flood Boundary and Floodway Maps (FBFMs), where applicable.

Historical data relating to the maps prepared for each community, up to and including this countywide FIS, are presented in Table 8, "Community Map History."

7.0 OTHER STUDIES

FISs are currently being prepared for Dane, Dodge, Rock, Walworth and Waukesha Counties. These adjacent counties should match all information related to this FIS report.

This FIS report either supersedes or is compatible with all previous studies published on streams studied in this report and should be considered authoritative for the purposes of the NFIP.

8.0 LOCATION OF DATA

Information concerning the pertinent data used in preparation of this study can be obtained by contacting the Federal Insurance and Mitigation Division, FEMA Region V, 536 South Clark Street, Sixth Floor, Chicago, Illinois 60605.

COMMUNITY NAME	INITIAL IDENTIFICATION	FLOOD HAZARD BOUNDARY MAP REVISION DATE(S)	FLOOD INSURANCE RATE MAP EFFECTIVE DATE	FLOOD INSURANCE RATE MAP REVISION DATE(S)
Cambridge, Village of (Dual County Community) (Dane County)	December 17, 1973	May 14, 1976	June 4, 1980	June 17, 2003 (Countywide Dane Co.)
Fort Atkinson, City of	August 7, 1971	None	August 7, 1971	July 1, 1974 March 12, 1976 June 1, 1984
Jefferson County (Unincorporated Areas)	September 29, 1978	None	September 29, 1978	October 16, 1984
Jefferson, City of	May 26, 1972	None	May 26, 1972	July 1, 1974 September 5, 1975 August 1, 1984
Johnson Creek, Village of	January 9, 1974	April 23, 1976 April 14, 1978	September 30, 1982	June 1, 1984
Lac La Belle, Village of (Dual County Community) (Waukesha County)	January 31, 1975	September 21, 1979	January 18, 1984	November 19, 2008
Lake Mills, City of	May 17, 1974	November 21, 1975 April 9, 1982	July 2, 1987	None
Palmyra, Village of	May 17, 1974	June 4, 1976	May 3, 1990	None

TABLE 8	FEDERAL EMERGENCY MANAGEMENT AGENCY JEFFERSON COUNTY, WI AND INCORPORATED AREAS	COMMUNITY MAP HISTORY
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COMMUNITY NAME	INITIAL IDENTIFICATION	FLOOD HAZARD BOUNDARY MAP REVISION DATE(S)	FLOOD INSURANCE RATE MAP EFFECTIVE DATE	FLOOD INSURANCE RATE MAP REVISION DATE(S)
Sullivan, Village of	April 12, 1974	July 2, 1976	September 18, 1985	None
Waterloo, City of	December 28, 1973	July 30, 1976	September 18, 1985	None
Watertown, City of (Dual County Community) (Dodge County)	May 31, 1974	June 11, 1976	April 1, 1981	February 16, 1996
Whitewater, City of (Dual County Community) (Walworth County)	January 9, 1974	June 4, 1976	June 1, 1982	None
FEDERAL EMERGENCY MANAGEMENT AGENCY				
TABLE 8	JEFFERSON COUNTY, WI AND INCORPORATED AREAS		COMMUNITY MAP HISTORY	

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