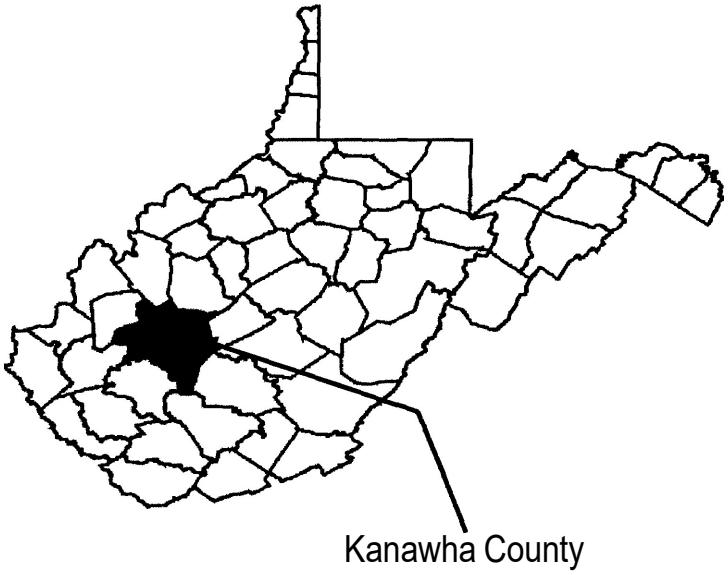
FLOOD INSURANCE STUDY

VOLUME 1 OF 3

KANAWHA COUNTY, WEST VIRGINIA
AND INCORPORATED AREAS

COMMUNTY NAME	COMMUNITY NUMBER
BELLE, TOWN OF	540071
CEDAR GROVE, TOWN OF	540072
CHARLESTON, CITY OF	540073
CHESAPEAKE, TOWN OF	540074
CLENDENIN, TOWN OF	540075
DUNBAR, CITY OF	540076
EAST BANK, TOWN OF	540077
GLASGOW, TOWN OF	540078
HANDLEY, TOWN OF	540279
KANAWHA COUNTY, UNINCORPORATED AREAS	540070
MARMET, TOWN OF	540079
NITRO, CITY OF	540081
PRATT, TOWN OF	540082
SOUTH CHARLESTON, CITY OF	540223
ST. ALBANS, CITY OF	540083



Revised: [PMR Date Pending]

Federal Emergency Management Agency

FLOOD INSURANCE STUDY NUMBER
54039CV001B

REVISED PRELIMINARY
February 25, 2021

NOTICE TO
FLOOD INSURANCE STUDY USERS

Communities participating in the National Flood Insurance Program (NFIP) 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 FIS report at any time. In addition, part of this FIS may be revised by the Letter of Map Revision process, which does not involve republication or redistribution of the FIS. It is, therefore, the responsibility of the user to consult with community officials and to check the community repository to obtain the most current FIS components.

Initial Countywide FIS Effective Date: February 6, 2008
Revised Countywide FIS Dates:

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FLOOD INSURANCE STUDY
KANAWHA COUNTY, WEST VIRGINIA AND INCORPORATED AREAS

1.0 INTRODUCTION

1.1 Purpose of Study

This countywide Flood Insurance Study (FIS) investigates the existence and severity of flood hazards in the geographic area of Kanawha County, including: the Towns of Belle, Cedar Grove, Chesapeake, Clendenin, East Bank, Glasgow, Handley, Marmet, and Pratt; the Cities of Charleston, Dunbar, Nitro, South Charleston and St. Albans; and the unincorporated areas of Kanawha County (hereinafter referred to collectively as Kanawha County), and aids in the administration of the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973. This study has developed flood-risk data for various areas of the community that will be used to establish actuarial flood insurance rates and to assist the community in its efforts to promote sound floodplain management. Minimum floodplain management requirements for participation in the National Flood Insurance Program (NFIP) are set forth in the Code of Federal Regulations at 44 CFR, 60.3.

Please note that the City of Montgomery and the Town of Smithers are geographically located in Kanawha and Fayette Counties and that the City of Nitro is geographically located in Kanawha and Putnam Counties. Flood hazard information for the City of Montgomery and the Town of Smithers is not included in the countywide study. All of the flood hazard information for the City of Nitro is included as part of this countywide study.

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 Acknowledgements

The sources of authority for this Flood Insurance Study 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 Kanawha County in a countywide format FIS. Information on the authority and acknowledgments for previous FIS issued for each jurisdiction in Kanawha County is as follows:

Belle, Town of:	the hydrologic and hydraulic analyses for the FIS report dated October 15, 1981, were prepared by the Huntington District of the U. S. Army Corps of Engineers (USACE) for Federal Emergency Management Agency (FEMA), under Inter-Agency

Agreement No. IAA-H-10-77, Project Order No. 28. This work was completed in July 1980.

Cedar Grove, Town of: the hydrologic and hydraulic analyses for the FIS report dated December 1, 1981, were prepared by the USACE for FEMA, under Inter-Agency Agreement No. IAA-H-10-77, Project Order No. 28, Amendment No.3. This work was completed in July 1980.

Charleston, City of: the hydrologic and hydraulic analyses for the FIS report dated April 3, 1985, were performed by the USACE for FEMA during the course of the FIS for the unincorporated areas of Kanawha County, under Inter-Agency Agreement No. IAA-H-9-79, Project Order No. 42. The Kanawha County study was completed in June 1983. The original hydrologic and hydraulic analyses for this study were also prepared by the Huntington District of USACE for FEMA, under Inter-Agency Agreement No. H-10-77, Project Order No. 40. This original work was completed in May 1980.

Chesapeake, Town of: the hydrologic and hydraulic analyses for the FIS report dated December 1, 1981, were prepared by the Huntington District of the USACE for FEMA, under Inter-Agency Agreement No. IAA-H-10-77, Project Order No. 28. This work was completed in July 1980.

Clendenin, Town of: the hydrologic and hydraulic analyses for the FIS report dated January 16, 1984, were prepared by the USACE for FEMA, under Inter-Agency Agreement No. IAA-H-9-79, Project Order No. 42. This work was completed in February 1983.

Dunbar City of: the hydrologic and hydraulic analyses for the FIS report dated April 3, 1985, were prepared by the USACE for FEMA during the course of the FIS for the unincorporated areas of Kanawha County, under Inter-Agency Agreement No. IAA-H-9-79, Project Order No. 42. The Kanawha County study was completed in June 1983. The original hydrologic and hydraulic analyses for this study were also prepared by the Huntington District of the USACE for FEMA, under Inter-Agency Agreement No. IAA-H-7-76, Project Order No. 15. This original work was completed in June 1980.

East Bank, Town of:	the hydrologic and hydraulic analyses for the FIS report dated December 1, 1981, were prepared by the Huntington District of the USACE for FEMA, under Inter-Agency Agreement No. IAA-H-10-77, Project Order No. 28. This work was completed in July 1980.
Glasgow, Town of:	the hydrologic and hydraulic analyses for the FIS report dated December 15, 1981, were prepared by the USACE for FEMA, under Inter-Agency Agreement No. IAA-H-10-77, Project Order No. 28, Amendment No. 3. This work was completed in July 1980.
Handley, Town of:	the hydrologic and hydraulic analyses for the FIS report dated January 5, 1984, were prepared by the USACE for FEMA, under Inter-Agency Agreement No. IAA-H-9-79, Project Order No. 42. This work was completed in November 1982.
Marmet, Town of:	the hydrologic and hydraulic analyses for the FIS Report dated April 3, 1985, were prepared by the Huntington District of the USACE for FEMA, under an Inter-Agency Agreement. This work was completed in June 1983. The original work was also performed by the Huntington District of the USACE for FEMA under Inter-Agency Agreement No. IAA-H-10-77, Project Order No. 28. This original work was completed in July 1980.
Nitro, City of:	the hydrologic and hydraulic analyses for the FIS report dated October 15, 1981, were prepared by the Huntington District of the USACE for FEMA, under Inter-Agency Agreement No. IAA-H-10-77, Project Order No. 28. This work was completed in July 1980.
Pratt, Town of:	the hydrologic and hydraulic analyses for the FIS report dated November 1, 1983, were prepared by the USACE for FEMA, under Inter-Agency Agreement No. IAA-H-9-79, Project Order No. 42. This work was completed in November 1982.
South Charleston, City of:	the hydrologic and hydraulic analyses for the FIS report dated April 3, 1985, were prepared by the USACE for the FEMA, during the course of the FIS for the unincorporated areas of Kanawha County, under Inter-Agency Agreement No. IAA-H-9-79, Project No. 42. The Kanawha County study was

	completed in June 1983. The original work was performed by the Huntington District of the USACE for FEMA under Inter-Agency Agreement Nos. IAA-H-7-76 and IAA-H-10-77, Project Order No. 25. This original work was completed in June 1980.
St. Albans, City of:	the hydrologic and hydraulic analyses for the FIS report dated December 15, 1981, were prepared by the Huntington District of the USACE for the FEMA, under Inter-Agency Agreement No. IAA-H-10-77, Project Order No. 28. This work was completed in July 1980.
Kanawha County, (Unincorporated Areas):	the hydrologic and hydraulic analyses for the FIS report dated September 18, 1984, were prepared by the USACE for FEMA, under Inter-Agency Agreement No. IAA-H-9-79, Project Order No. 42. This work was completed in June 1983. The hydrologic and hydraulic analyses for the revision effective November 6, 1991 for the Big Coal River, were performed by Dodson-Lindblom Associates, Inc. for FEMA during the preparation of the Flood Insurance Study for Boone County and Incorporated Areas, West Virginia. This work was completed in January 1989.

For the February 6, 2008 countywide FIS, revised hydrologic and hydraulic analyses were prepared for FEMA by AMEC Earth & Environmental, Inc. under Contract No. FS-2001-EMP-2001-RP-2411 and this work was completed in November 2005. The extents of these analyses are listed in Section 2.1 of this report. Additional hydrologic and hydraulic analyses for Magazine Branch were completed by the USACE, Huntington District. AMEC used the existing hydraulic analyses for Kanawha County and Areas to redelineate floodplains based on more detailed and up-to-date topographic information. AMEC also added an approximate study for Green Creek. Planimetric base map and topographic information was provided in digital format by the Kanawha County. These files were compiled at scales of 6000 and 12000. Additional information was derived from U.S. Census Bureau TIGER Line Data. Users of this Flood Insurance Rate Map (FIRM) should be aware that minor adjustments may have been made to specific base map features. For Magazine Branch, the topographical data (20ft contours) for the hydrologic computations was based on Digital Elevation Mapping (DEM) from the US Geological Survey (USGS). The projection for the DEM is the UTM (NAD27) meter coordinate system.

For this FIS revision, revised engineering analysis and mapping for portions of Elk River were prepared for the West Virginia Division of Homeland Security and Emergency Management (WV DHSEM) by Wood Environment & Infrastructure Solutions, Inc. under Mapping Activity Statement (MAS)

WVDHSEM-2017-2, Purchase Order Number HSE1800000001. This work was completed in September 2020. In addition, an advisory study completed in 2016 produced updated approximate floodplain boundaries which were incorporated by this revision for certain streams. Base map information shown on the FIRM was derived from U.S. Department of Agriculture's National Agriculture Imagery Program orthoimagery (dated 2016 and downloaded from West Virginia Geographic Information System (GIS) Technical Center) and National Flood Hazard Layer database (downloaded from FEMA Map Service Center). The projection used in the preparation of this map is Universal Transverse Mercator (UTM) zone 17, North American Datum of 1983 (NAD 83), GRS80 spheroid.

1.3 Coordination

An initial Consultation Coordination Officer's (CCO) meeting is held with representatives from FEMA, the community, and the study contractor to explain the nature and purpose of a FIS, and to identify the streams to be studied by detailed methods. A final CCO meeting is held with representatives from FEMA, the community, and the study contractor to review the results of the study.

The dates of the initial and final CCO meetings held for Kanawha County and the incorporated communities within its boundaries prior to the countywide FIS are shown in the Table 1, "Community CCO Meetings for Precountywide FISs."

Table 1 – Community CCO Meetings for Precountywide FISs

Community Name	Initial CCO Date	Final CCO Date
Town of Belle	September 21, 1976	May 12, 1981
Town of Cedar Grove	October 26, 1976	July 21, 1981
City of Charleston	November 5, 1975	October 8, 1981
Town of Chesapeake	September 21, 1977	July 21, 1981
Town of Clendenin	January 12, 1979	August 11, 1983
City of Dunbar	November 5, 1975	July 20, 1981
Town of East Bank	October 28, 1976	July 22, 1981
Town of Glasgow	October 28, 1976	July 7, 1981
Town of Handley	January 12, 1979	August 11, 1983
Town of Marmet	October 27, 1976	May 19, 1981
City of Nitro	September 21, 1976	May 13, 1981
Town of Pratt	January 12, 1979	June 8, 1983
City of South Charleston	August 9, 1976	July 20, 1981
City of St. Albans	October 27, 1976	July 22, 1981
Kanawha County (Unincorporated Areas)	January 12, 1979	April19, 1984

For the February 6, 2008 countywide study, the initial CCO meeting was held on June 29, 2004. In attendance were representatives from FEMA, the State of West Virginia, Incorporated Communities, the National Service Provider and AMEC

Earth and Environmental, Inc. A final CCO meeting was held on November 9, 2006 and was attended by representatives of FEMA, U.S. Army Corps of Engineers, the State of West Virginia, Incorporated Communities, the National Service Provider and AMEC Earth and Environmental, Inc. All problems raised at that meeting have been addressed in this study.

For this FIS revision, a Flood Risk Review (FRR) meeting to discuss draft results of the Elk River restudy was held on May 30, 2019 and was attended by representatives of Kanawha County, Clendenin, FEMA, WV DHSEM, and the study contractor. Following issuance of preliminary FIRMs and FIS Report, a final CCO meeting was held on [DATE TBD] and attended by [TBD].

No Letter of Map Revision (LOMRs) were recorded for this study.

2.0 AREA STUDIED

2.1 Scope of Study

This FIS covers the geographic area of Kanawha County, West Virginia.

Table 2 – Flooding Sources Studied by Detailed Methods by Precountywide FISs

Stream Name	Study Limits
Big Coal River	from a point approximately 1.4 miles downstream of the confluence of Dry Branch to approximately 1,850 feet upstream of the confluence with Dry Branch;
Big Sandy Creek	from the downstream county boundary to a point approximately 0.14 mile upstream of the confluence of Thorofare Run;
Blue Creek	from its confluence with the Elk River to a point approximately 2.7 miles upstream;
Cabin Creek	from its confluence with the Kanawha River to County Road 76;
Campbells Creek	from its confluence with the Kanawha River to a point approximately 2.6 miles upstream of County Road 73;
Coal River	from its confluence with the Kanawha River to a point approximately 1.1 miles upstream of State Route 214;
Coopers Creek	from its confluence with the Elk River to a point approximately 0.85 mile upstream of County Road 28;
Davis Creek	from Interstate 64 to a point approximately 10.4 miles upstream;
East Bank Tributary	from its confluence with the Kanawha River to a point approximately 500 feet upstream;
Edens Fork	from its confluence with Twomile Creek to a point approximately 0.27 mile upstream of County Road 27;

Elk River	from the confluence of Twomile Creek to the upstream county boundary;
Elk Twomile Creek	from its confluence with the Elk River to a point just upstream of County Road 46/2;
Fields Creek	from its confluence with the Kanawha River to a point approximately 0.6 mile upstream of County Road 13;
Huggard Branch	from its confluence with Legg Fork to a point approximately 1.6 miles upstream;
Hughes Creek	from its confluence with the Kanawha River to a point approximately 1.6 miles upstream;
Hurricane Fork	from its confluence with Kellys Creek to a point approximately 1.4 miles upstream;
Kanawha River	for its entire length within the county;
Kellys Creek	from the downstream county boundary to the confluence of Hurricane Fork;
Legg Fork	from its confluence with Tupper Creek to the confluence of Huggard Branch;
Lens Creek	from its confluence with the Kanawha River to a point approximately 6 miles upstream;
Little Sandy Creek	from its confluence with the Elk River to a point approximately 1.1 miles upstream of County Road 43/14;
Little Smith Creek	from its confluence with Smith Creek to a point approximately 2.8 miles upstream;
Paint Creek	from its confluence with the Kanawha River to State Route 77;
Pocatalico River	for its entire length within the county;
Rocky Fork	from its confluence with the Pocatalico River to Dam Road;
Smith Creek	from its confluence with the Coal River to a point approximately 0.2 mile upstream of County Road 21;
Thorofare Run	from its confluence with Big Sandy Creek to a point approximately 2.4 miles upstream;
Tupper Creek	from its confluence with the Pocatalico River to a point approximately 0.16 mile upstream of U.S. Route 21;
Tyler Creek	from its confluence with Kanawha River to a point approximately 0.4 mile upstream of State Route 62;
Twomile Creek	from the downstream county boundary to a point approximately 0.4 mile upstream of County Road 27;
Upper Creek	from the downstream county boundary to a point approximately 200 feet upstream;
Witcher Creek	from its confluence with the Kanawha River to a point approximately 0.4 mile upstream of an access road.

As part of the precountywide FIS reports for Kanawha County and Incorporated Areas, a large number of flooding sources were previously studied by detailed methods. The extents of these studies are listed in Table 2 above.

For the February 6, 2008 countywide revision, the 1-percent and 0.2-percent annual chance floodplains have been redelineated for all streams previously studied in detail based on more detailed and up-to-date topographic information. Approximate flood zones were mapped for all stream extents with drainage areas greater than 0.75 square mile. These 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 Kanawha County. Reaches listed in Table 3 below were studied by detailed methods. 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.

Table 3 – Flooding Sources Studied by Detailed Methods by the February 6, 2008 Countywide Revision

Stream Name	Study Limits	Reach Length (miles)
Alum Creek	From its confluence with Coal River to a point 3.5 miles upstream	3.5
Brier Creek	From its confluence with Big Coal River to a point 3.6 miles upstream	3.6
Dutch Hollow	From its confluence with Finney Branch to a point 1.5 miles upstream	1.5
Finney Branch	From its confluence with Kanawha River to a point 1.5 miles upstream	1.5
Georges Creek	From its confluence with Kanawha River to a point 1.5 miles upstream	1.5
Indian Creek	From its confluence with Elk River to a point 3.5 miles upstream	3.5
Magazine Branch	From its confluence with Elk River to a point 50 feet upstream of Pacific Street	1.65
Middle Creek	From its confluence with Davis Creek to a point 1.0 mile upstream	1.0
Mill Creek	From its confluence with Elk River to a point 5.0 miles upstream	5.0
Two and Three Quarter Mile Creek	From its confluence with Kanawha River to a point 2.0 miles upstream	2.0

The February 6, 2008 revision also incorporated a LOMR issued on December 7, 1993 for Kanawha River in the Unincorporated Areas of Kanawha County.

For this FIS revision, an approximately 29-mile reach of Elk River, from 2.9 miles upstream of its confluence with Kanawha River to 0.6 miles downstream of the county boundary, was restudied by detailed methods in response to the June 2016 flood event. In addition, an advisory study completed in 2016 produced updated approximate floodplain boundaries down to two square miles drainage area for selected streams in Kanawha County. This revision incorporated the updated approximate floodplains for Big Sandy Creek, Blue Creek, Bufflick Run, Falling Rock Creek, Gabes Creek, Indian Creek, Jordan Creek, King Shoals Run, Leatherwood Creek, Left Fork Leatherwood Creek, Left Hand Creek, Little Blue Creek, Mile Fork, Morris Creek, Pinch Creek, Queen Shoals Creek, Upper King Shoals Run, and Wills Creek. No LOMR was recorded for this study.

2.2 Community Description

Kanawha County is located in the west-central portion of West Virginia. It is bordered by Raleigh County to the south, Fayette County to the southeast, Clay County to the east, Roane and Jackson Counties to the north, Putnam County to the west, and Boone and Lincoln Counties to the southwest. The total land area contained within Kanawha County is 907 square miles, making it the fourth largest county in the state.

The population of the county was 200,073 in 2000 and 193,063 in 2010 according to the US census and was estimated to be 187,827 by the 2013-2017 American Community Survey 5-Year Data.

Kanawha County was formed from parts of Greenbriar and Montgomery Counties in 1788. It was named after the Great Kanawha River, which received its name from the Indian tribe that once inhabited the territory. The county seat and State capitol is the City of Charleston.

The county grew from its beginning as an agricultural community into the leading manufacturing and trade center of the state. Development of the chemical industry occurred during World War I when a, shortage in supply of important chemicals made their production at home expedient. The Kanawha River valley had all the basic ingredients for these chemicals in its indigenous fossil fuels, especially coal and natural gas. The valley also had the advantage of being near the geographical center of the eastern third of the nation where two-thirds of the nation's people reside, plus excellent water and rail transportation facilities. In recent years, growth in health services, government and the state banking industry has outpaced that of other sectors. Today, Kanawha enjoys a diverse economy. An abundant and well-educated workforce is employed in thriving chemical, automotive, telecommunications, healthcare, and professional services sectors. Retail trade and tourism are also thriving economic sectors.

The Kanawha River divides the county as it flows northwest. The Kanawha River is one of the principal rivers in West Virginia. Its length of 97 miles extends from

the junction of the New River and Gauley River just above Kanawha Falls, West Virginia, northwest to Point Pleasant, West Virginia, and the Ohio River. The drainage area of the Kanawha River encompasses 12,242 square miles. The terrain of the county is characterized by level river bottom land surrounded by mountains.

According to the Weather Observation Station in the City of Charleston, located in Kanawha County, the average annual precipitation is 44.0 inches with an average annual snowfall of 34.0 inches. The mean annual temperature is approximately 55 degrees Fahrenheit (°F). The lowest mean temperature of 33.4 °F is recorded in January, and the highest mean temperature of 73.9 °F in July (NOAA data compiled from 1971-2000).

2.3 Principal Flood Problems

Portions of Kanawha County along the Kanawha River and its tributaries are subject to frequent flooding. The principal result is the flooding of basements, garages, lawns, and gardens, and a deposit of mud, filth, and refuse. Street and highway travel is disrupted, which causes the temporary loss of police, fire, and medical protection.

In July 1998, severe storms caused flooding in western West Virginia resulting in major damage to private property. In February 2000, severe winter storms caused flooding in parts of western West Virginia which also caused major damage to private property. In June 2001, severe storms caused flooding and landslides in parts of southern West Virginia. Southwestern West Virginia was again hit with thunderstorms and subsequent flash flooding in June 2004. The July 1998, February 2000, June 2001 and June 2004 events all resulted in Presidential Disaster declarations for Kanawha County.

The flood of record on the Kanawha River and the Elk River occurred in September 1861. The U.S. Weather Bureau gage at river mile 58.5 on the Kanawha River reached an elevation of 605.5 feet, 5.3 feet higher than the second-highest flood of record at Charleston, which occurred in September 1878 (USACE 1958). The 1861 flood was approximately 1.5 feet lower than the 100-year flood under natural conditions and 9.5 feet higher than the 100-year flood under current modified conditions.

The floods of June 23 and 24, 2016, devastated many communities across West Virginia, including Kanawha County. Repeated rounds of torrential thunderstorms dumped more than 9 inches of rain in the hardest hit areas of West Virginia, causing the third deadliest flood event in state history with millions of dollars in damage to infrastructure and economic resources. While this flood event seemed to West Virginia residents to be an extremely unusual event, research by the USGS and the FEMA suggests otherwise. It is critical to understand the June

2016 event so that West Virginia communities can take action to be safer in the future. This revision was initiated as a result.

2.4 Flood Protection Measures

There are three existing USACE reservoirs in the Kanawha River basin being operated for flood control as well as other purposes. One reservoir is operated on the Gauley River (Summersville), another on the New River (Bluestone), and the third on the Elk River (Sutton). The combined functions of these reservoirs reduce flood heights considerably in the study area. The information presented concerning future flood levels reflects the reduction of flood heights attributable to existing reservoirs.

The Soil Conservation Service (SCS) has planned several flood retention projects in Kanawha County, of which six are planned for the Elk Twomile Creek basin. The two completed projects control approximately seven percent of the Elk Twomile Creek watershed. These projects will not have a significant effect on overall flood reductions in the basin.

Other SCS projects in Kanawha County consist of one completed and one planned flood reduction project in the Pocatalico River basin above Sissonville. Although the projects are somewhat larger than those in the Elk Twomile Creek basin, they too will have only insignificant effects on flood reduction.

A project by the SCS was completed on Blakes Creek in the early 1970's and controls approximately 6 square miles of drainage area. It provides flood flow reduction from its site downstream of its confluence with Armour Creek. Neither stream was studied in conjunction with this report.

The National Weather Service maintains a forecast center near Yeager Airport to furnish river forecasts for key points in the Kanawha River basin. The forecast information is made available to all interested parties by the fastest means possible.

London Lock and Dam No.3, located across the Kanawha River from Handley, is used for hydroelectric power generation. It does not have any effect on flood flows from the Kanawha River.

There is one existing USACE reservoir on the Elk River being operated for flood control, as well as for pollution abatement, recreation, and fish and wildlife conservation. This dam, which forms Sutton Lake, is located 77 miles upstream of Clendenin and has a drainage area of 537 square miles. Completed in June 1960, the reservoir reduces the 100-year flood by 3 feet at Clendenin (USACE 1981).

There are no local flood control structures or zoning ordinances related to flooding in Clendenin.

A flood control reservoir has been constructed on Blakes Creek. It controls 1,560 acres of the 2.4 square miles of the watershed. The reservoir provides 541.6 acre-feet of flood storage, 80.6 acre-feet of recreational water storage, and 127.8 acre-feet of sediment storage.

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-, 50-, 100-, or 500-year period (recurrence interval) have been selected as having special significance for floodplain management and or flood insurance rates. These events, commonly termed the 10-, 50-, 100-, and 500-year floods, have a 10-, 2-, 1-, and 0.2-percent chance, respectively, of being equaled or exceeded during a 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 100-year 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 each flooding source studied in detail affecting the county.

Precountywide Analysis

Each community within Kanawha County had a previously printed FIS report. The hydrologic analyses described in those reports have been compiled and are summarized below.

Hydrologic analyses were carried out to establish the peak discharge-frequency relationships for each flooding source studied in detail affecting the county. Natural discharge-frequency curves used in this study were previously developed on a regional basis in accordance with the method outlined by Leo R. Beard and with Water Resources Council Bulletin 17 (Beard 1962; WRC 1976). Fifty gaging stations in the Kanawha River basin were used in the regional analysis. Periods of record range from 8 to 86 years and represent drainage areas of 32 to 10,419 square miles. An "N" value of 45 years was adopted as being representative and was used in computing the estimated frequency for each evaluation center (USACE&SCS 1971).

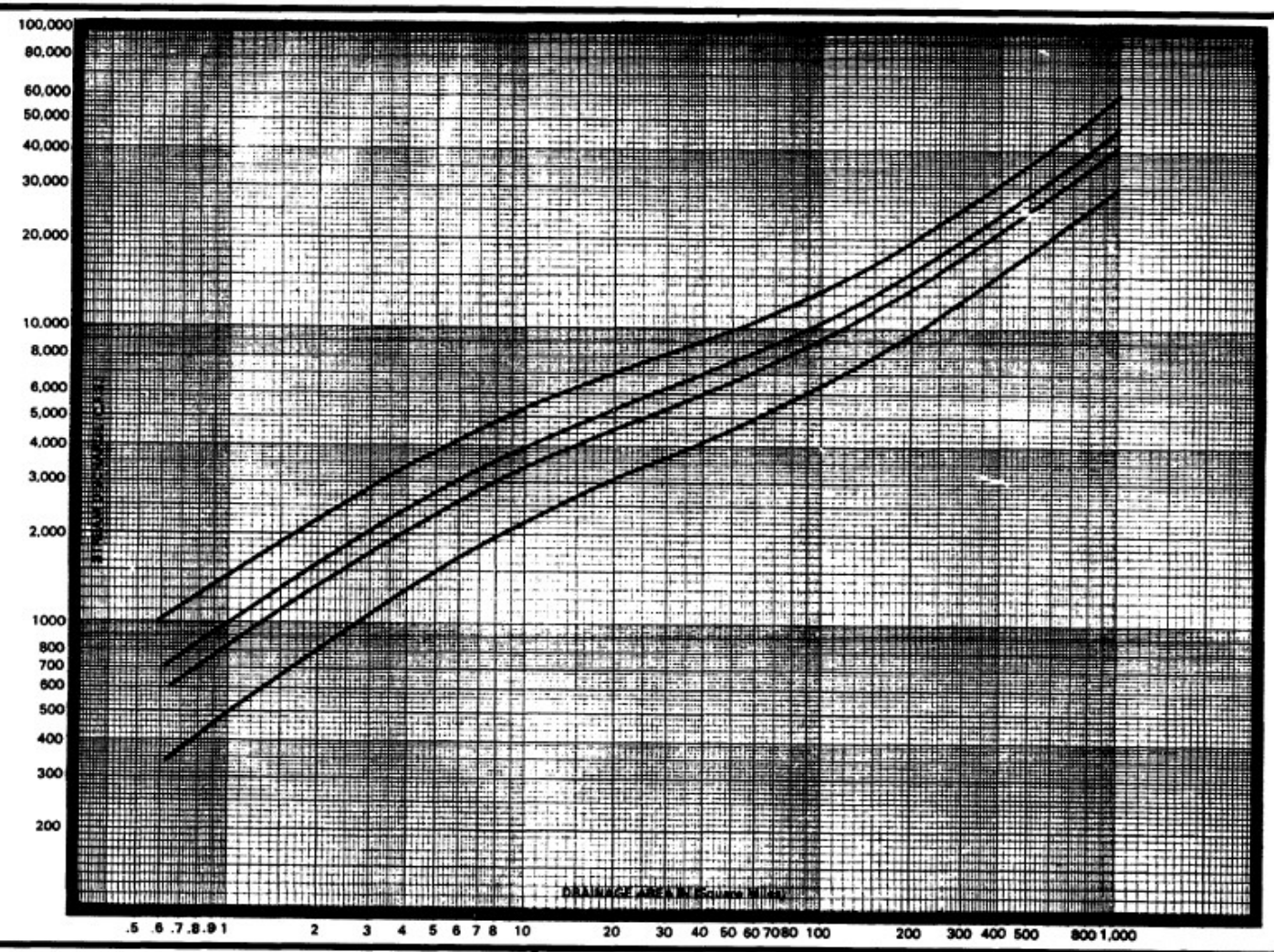

FIGURE 1

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV
(AND INCORPORATED AREAS)

DISCHARGE vs DRAINAGE AREA CURVES

POCATALICO RIVER

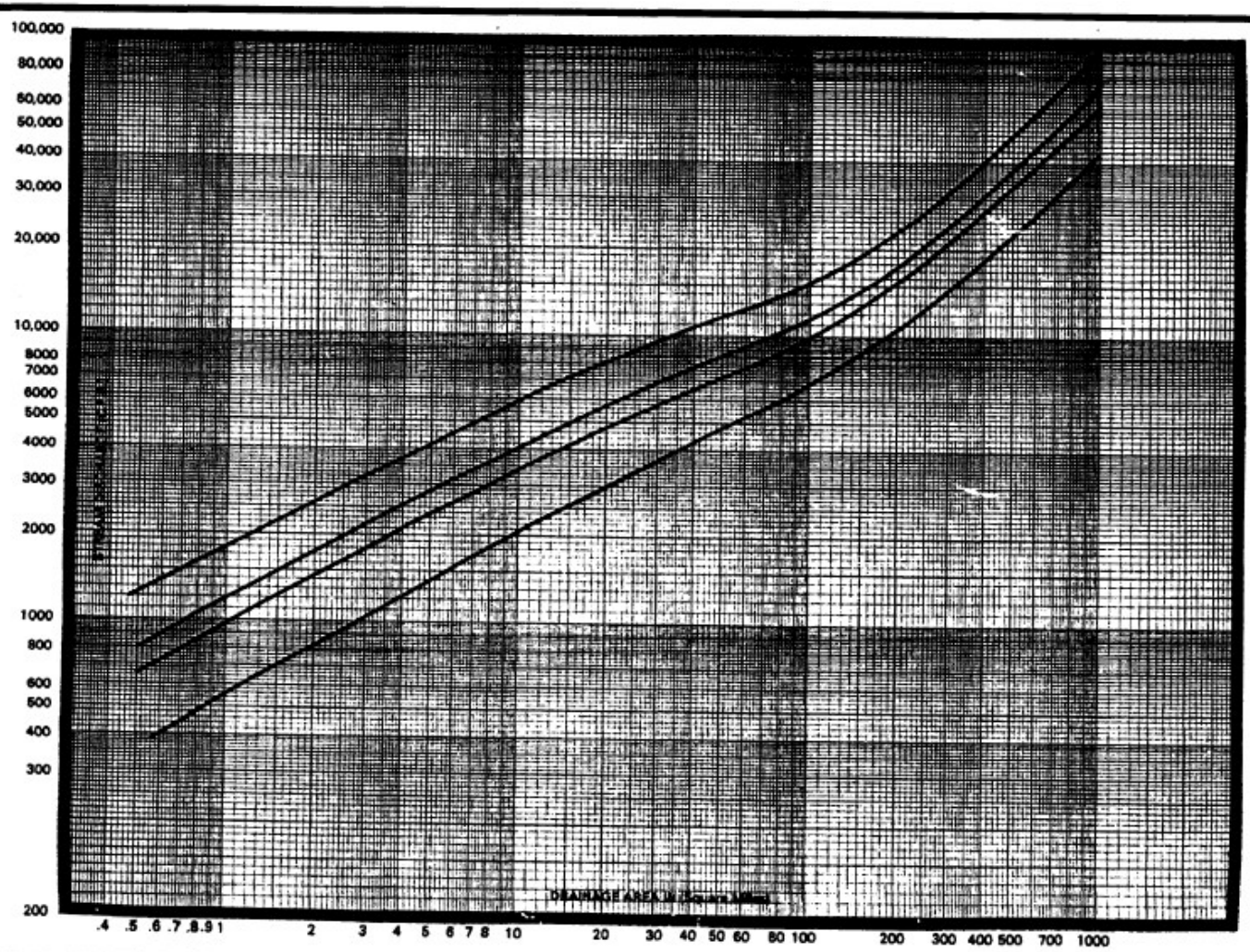

FIGURE 1

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV (AND INCORPORATED AREAS)

DISCHARGE vs DRAINAGE AREA CURVES

COAL RIVER BASIN

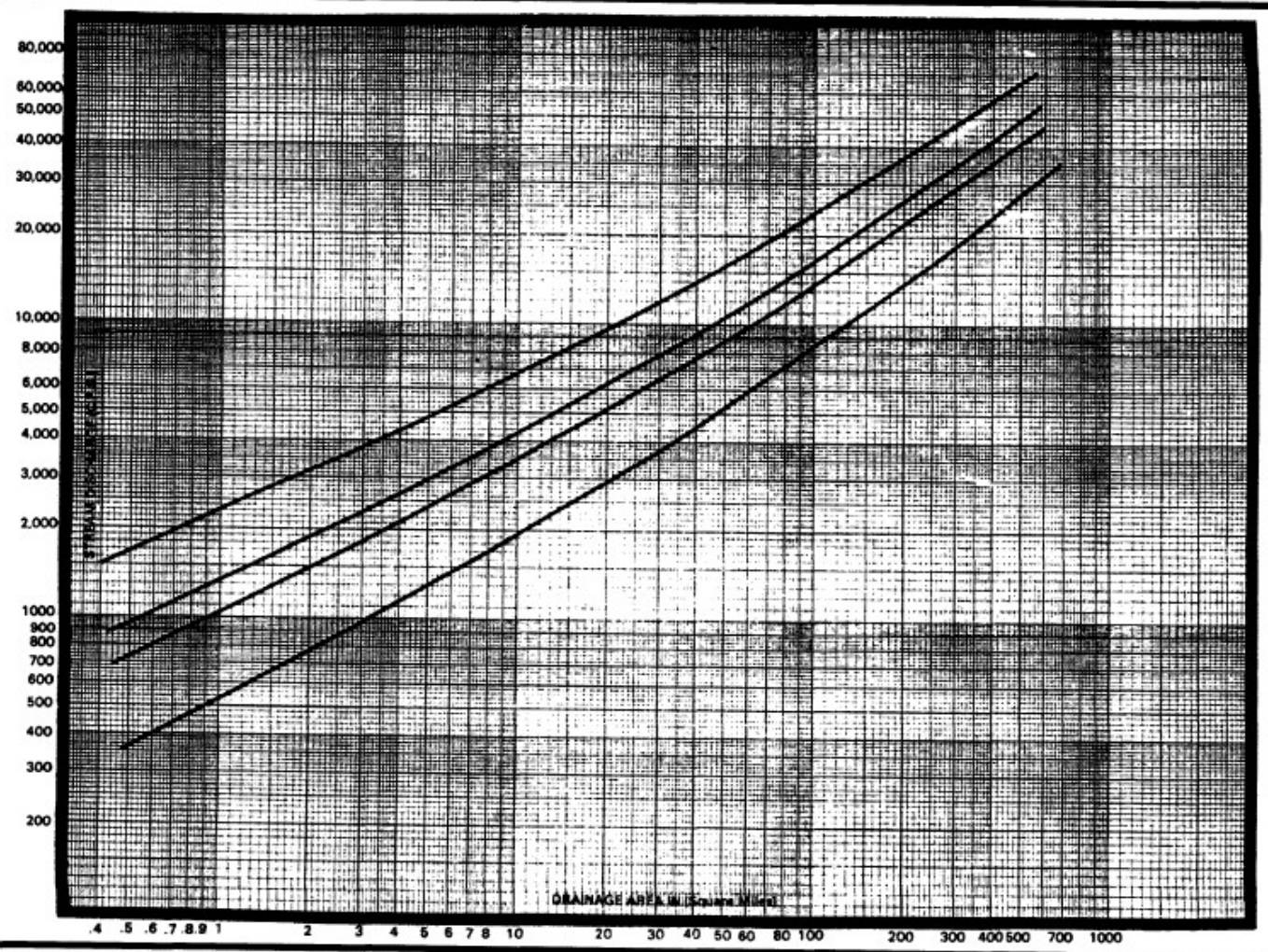

FIGURE 1

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV (AND INCORPORATED AREAS)

DISCHARGE vs DRAINAGE AREA CURVES

ELK RIVER BASIN

The hydrologic analysis for Upper Creek was obtained from the Flood Insurance Study for the Town of Handley (FEMA 1983).

The 1 percent annual discharges for the Big Coal River were determined by the USACE using data relating the drainage area to peak discharges. These data were developed by the USACE from flood flow-frequency data obtained at stream gaging stations on this stream and neighboring streams. This information was taken from the FIS for Boone County and Incorporated Areas (FEMA 1991).

Discharges for Elk Twomile Creek and Twomile Creek were obtained from the Flood Insurance Study for the unincorporated areas of Kanawha County (FEMA unpublished).

Peak discharges for Tyler Creek were obtained from the Flood Insurance Study for Kanawha County (FEMA unpublished).

Discharges for Davis Creek were obtained from the Flood Insurance Study for Kanawha County (FEMA unpublished).

For Wilmouth Hollow, a regional relationship was established between the drainage area and the depth of water based on elevation- frequency estimates for streams having similar characteristics at gaged locations.

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

Countywide Analysis

For the February 6, 2008 countywide revision, all flooding sources designated for restudy are located in the Kanawha River Basin. Alum Creek and Brier Creek are part of the Coal River subbasin, which is located in the southwestern portion of the County. Indian Creek Magazine branch, and Mill Creek fall in the Elk River subbasin while Middle Fork lies in the Davis Creek subbasin. Finney Branch, Dutch Hollow, Georges Creek and Two and Three Quarter Mile Creek drain directly into the Kanawha River.

The regression equations outlined in the USGS report titled Estimating Magnitude and Frequency of Peak Discharges in Rural, Unregulated. Streams in West Virginia, (U.S. Department of the Interior, 2000) were used to determine flood discharges for all streams listed above. All of the watersheds can be considered rural and unregulated

The discharge for Magazine Branch was calculated using the XP-SWMM Model, and was check by comparison against gaging station data, a regional relation between base flood discharges and drainage published in the November 6, 1991 Flood Insurance Study (FIS) report for Kanawha County, West Virginia, and a

regional regression equation published in USGS Water Resources Investigations Report (WRIR) 00-4080.

Elk River Revision (TBD)

For this revision, flows along Elk River were calculated at hydrologically significant locations. Discharges were computed following the USGS Scientific Investigation Report (SIR) 2010-5033 (USGS 2010) regression equations and weighted according to the methods presented in the report and based on records from the USGS gage at Queen Shoals (site 03197000), with the following deviation on “known” discharges. Bulletin 17C’s Expected Moments Algorithm analysis (England et al. 2018) was performed on post-regulation (1961-2016) gage records and these resultant “known” discharges were used in gage weighting all recurrence intervals other than the 0.2-percent annual chance event. The 0.2-percent annual chance event was excluded from this post-regulation 17C analysis to account for the effects of Sutton Dam, commissioned in 1961 and approximately 70 miles upstream of the study area. It was concluded that the dam has not experienced 0.2-percent annual chance event, and its performance is thus unpredictable at flows of such magnitude. Therefore, gage-weighting for the 0.2-percent annual chance flow was performed using "known" discharges computed from the entire (i.e. pre- and post-regulation) gage record, as provided by the 2010 SIR. This revision incorporated results from the 2016 advisory study for Big Sandy Creek, Blue Creek, Bufflick Run, Falling Rock Creek, Gabes Creek, Indian Creek, Jordan Creek, King Shoals Run, Leatherwood Creek, Left Fork Leatherwood Creek, Left Hand Creek, Little Blue Creek, Mile Fork, Morris Creek, Pinch Creek, Queen Shoals Creek, Upper King Shoals Run, and Wills Creek. The hydrological analyses of the 2016 advisory study were performed according to the USGS SIR 2010-5033.

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."

Discharge- frequency curves for only those streams in the Pocatalico River, Coal River, and Elk River basins are shown in Figure 1.

Table 4 – Summary of Discharges

Peak Discharge (cubic feet per second)

Flooding Source and Location	Drainage Area (sq. miles)	10-Percent-Annual-Chance	4-Percent-Annual-Chance	2-Percent-Annual-Chance	1-Percent-Annual-Chance	1-Percent-Plus-Annual-Chance	0.2-Percent-Annual-Chance
Armour Creek							
Mile 0.745	6.47	862	*	1,540	1,950	*	3,399
Mile 1.946	2.54	338	*	605	766	*	1,334
Big Coal River							
Upstream of the confluence with Fork Creek	413.5	*	*	*	45,000	*	*
Blakes Creek							
At the confluence with Armour Creek	2.84	378	*	676	856	*	1,492
Alum Creek							
At the confluence with Coal River	5.62	740	*	1,120	1,300	*	1,740
Upstream of the confluence with Little Alum Creek	2.48	400	*	610	700	*	950
Blue Creek							
At its confluence with Elk River	78.7	7,200	*	12,000	14,400	*	21,000
Big Sandy Creek							
At its confluence with Elk River	133.5	10,400	*	16,800	20,000	*	28,600
Brier Creek							
At confluence with Big Coal River	15.94	1,640	*	2,470	2,840	*	3,770
Upstream of the confluence of Mudlick Branch	12.47	1,360	*	2,050	2,360	*	3,140
Cabin Creek							
At its confluence with Kanawha River	73.1	6,800	*	11,300	13,500	*	19,800
Campbells Creek							
At its confluence with Kanawha River	39.3	4,500	*	7,600	9,200	*	14,000

* Data not computed

Table 4 – Summary of Discharges (continued)

Flooding Source and Location	Drainage Area (sq. miles)	Peak Discharge (cubic feet per second) 10-Percent-Annual-Chance	4-Percent-Annual-Chance	2-Percent-Annual-Chance	1-Percent-Annual-Chance	1-Percent-Plus-Annual-Chance	0.2-Percent-Annual-Chance
Coal River							
At its confluence with Kanawha River	899	38,500	*	56,500	66,500	*	88,000
Coopers Creek							
At its confluence with Elk River	14.4	2,400	*	4,250	5,200	*	8,200
Davis Creek							
At its confluence with Kanawha River	45.5	4,900	*	8,400	10,000	*	15,000
Dutch Hollow							
At its confluence with with Finney Branch	1.11	210	*	330	380	*	520
Upstream of the intersection with 1-64	0.90	180	*	280	330	*	450
East Bank Tributary							
At its confluence with Kanawha River	0.6	210	*	380	480	*	840
Edens Fork							
At its confluence with Twomile Creek	10.8	2,040	*	3,650	4,500	*	7,100
Elk River							
At its confluence with Kanawha River [1]	1,536	39,500	*	58,800	75,900	*	168,000
Approximately 250 feet downstream of confluence of Mill Creek	1,508.7	45,501	57,233	66,695	76,646	94,180	112,498
Approximately 240 feet downstream of confluence of Blue Creek	1,416	43,381	54,657	63,773	73,409	90,203	107,681
Approximately 260 feet downstream of confluence of Big Sandy Creek	1,289	40,407	51,040	59,670	68,860	84,613	100,921

* Data not computed

[1] Not studied by this revision, discharge values carried over from previous FIS

Table 4 – Summary of Discharges (continued)

Flooding Source and Location	Drainage Area (sq. miles)	Peak Discharge (cubic feet per second) 10-Percent-Annual-Chance	4-Percent-Annual-Chance	2-Percent-Annual-Chance	1-Percent-Annual-Chance	1-Percent-Plus-Annual-Chance	0.2-Percent-Annual-Chance
Elk River (cont.)							
At the confluence of Queen Shoals Creek	1,145	37,232	47,165	55,177	63,624	78,053	93,000
Elk Twomile Creek							
At its confluence with Elk River	13.1	2,300	*	4,000	5,000	*	7,800
Fields Creek							
At its confluence with Kanawha River	11.5	2,100	*	3,800	4,650	*	7,300
Finney Branch							
At its confluence with Kanawha River	3.06	460	*	710	820	*	1,100
Upstream of confluence of Dutch Hollow	1.86	320	*	490	570	*	760
Georges Creek							
At its confluence with Kanawha River	2.56	410	*	620	720	*	970
Upstream of the intersection with US Route 60	2.42	390	*	590	690	*	930
Huggard Branch							
At its confluence with Legg Fork	1.6	690	*	1,150	1,360	*	1,950
Hughes Creek							
At its confluence with Kanawha River	12.8	2,250	*	4,000	4,900	*	7,620
Hurricane Fork							
At its confluence with Kellys Creek	3.1	990	*	1,870	2,350	*	3,900
Indian Creek							
At its confluence with Elk River	8.08	980	*	1,480	1,710	*	2,280

* Data not computed

Table 4 – Summary of Discharges (continued)

Flooding Source and Location	Drainage Area (sq. miles)	Peak Discharge (cubic feet per second) 10-Percent-Annual-Chance	4-Percent-Annual-Chance	2-Percent-Annual-Chance	1-Percent-Annual-Chance	1-Percent-Plus-Annual-Chance	0.2-Percent-Annual-Chance
Indian Creek (cont.)							
Upstream of the confluence of Flatwood Run	4.84	660	*	1,000	1,160	*	1,560
Indian Creek (Tributary to Coal River)							
At the confluence with Coal River	0.75	280	*	470	560	*	780
At the confluence of an unnamed tributary	0.45	168	*	282	336	*	468
Kanawha River							
Above Pocatalico	11,435	137,300	*	175,500	215,000	*	430,000
Above the confluence of Coal River	10,519	113,500	*	147,200	185,000	*	365,500
Above Lock No. 6	10,446	111,700	*	145,000	183,000	*	360,500
At Patrick Street	10,419	111,000	*	144,000	182,000	*	358,000
Above the confluence of Elk River	8,882	95,000	*	123,000	155,000	*	305,400
At Marmet Locks	8,816	99,750	*	128,750	159,000	*	327,000
At the confluence of Cabin Creek	8,662	104,640	*	134,660	161,740	*	341,750
At London Locks and Dam	8,490	110,100	*	147,270	164,800	*	358,220
Kellys Creek							
At its confluence with Kanawha River	24.2	3,300	*	5,700	6,900	*	10,600
Lens Creek							
At its confluence with Kanawha River	19.6	2,900	*	5,080	6,150	*	9,500
Legg Fork							
At its confluence with Tupper Creek	9.3	2,100	*	3,300	3,800	*	5,150
Little Sandy Creek							
At its confluence with Elk River	49.8	5,200	*	8,800	10,500	*	16,000

* Data not computed

Table 4 – Summary of Discharges (continued)

Flooding Source and Location	Drainage Area (sq. miles)	Peak Discharge (cubic feet per second) 10-Percent-Annual-Chance	4-Percent-Annual-Chance	2-Percent-Annual-Chance	1-Percent-Annual-Chance	1-Percent-Plus-Annual-Chance	0.2-Percent-Annual-Chance
Little Smith Creek							
At its confluence with Smith Creek	2.1	850	*	1,470	1,790	*	2,680
Lower Creek							
At confluence with Kanawha River	1.4	635	*	1,340	1,580	*	2,700
Magazine Branch							
At confluence with Elk River	1.5	1,177	*	1,652	1,833	*	2,177
Middle Fork							
At its confluence with Davis Creek	8.08	980	*	1,480	1,710	*	2,280
Mill Creek							
At its confluence with Elk River	8.27	990	*	1,500	1,740	*	2,320
3.4 miles upstream of its confluence with Elk River	4.62	640	*	970	1,120	*	1,500
Morris Creek							
At the confluence with Kanawha River	7.4	990	*	1,760	2,230	*	3,900
Paint Creek							
At its confluence with Kanawha River	123.6	9,800	*	16,000	19,000	*	27,000
Pocatalico River							
At the downstream county boundary	320.8	13,100	*	18,400	20,900	*	26,400
Rocky Fork							
At its confluence with the Pocatalico River	18.4	3,000	*	4,400	5,200	*	6,800
Smith Creek							
At its confluence with Coal River	7.1	1,700	*	2,900	3,450	*	5,000

* Data not computed

Table 4 – Summary of Discharges (continued)

Flooding Source and Location	Drainage Area (sq. miles)	Peak Discharge (cubic feet per second) 10-Percent-Annual-Chance	4-Percent-Annual-Chance	2-Percent-Annual-Chance	1-Percent-Annual-Chance	1-Percent-Plus-Annual-Chance	0.2-Percent-Annual-Chance
Thorofare Run							
At its confluence with Big Sandy Creek	1.3	610	*	1,200	1,510	*	2,600
Tupper Creek							
At its confluence with Pocatalico River	23.1	3,300	*	4,800	5,600	*	7,400
Twomile Creek							
At its confluence with Kanawha River	24.2	3,300	*	5,700	6,900	*	10,600
Two and Three Quarter Mile Creek							
At its confluence with Kanawha River	4.31	600	*	920	1,060	*	1,430
Upstream of the confluence of Big Spring Fork	3.08	470	*	710	830	*	1,110
Tyler Creek							
At its confluence with the Kanawha River	3.3	1,025	*	1,940	2,420	*	4,000
Upper Creek							
At its confluence with Kanawha River	7.1	1,600	*	2,900	3,600	*	5,800
Witcher Creek							
At its confluence with the Kanawha River	21	3,000	*	5,250	6,400	*	9,800

* Data not computed

3.2 Hydraulic Analyses

Analyses of the hydraulic characteristics of flooding from the source 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 the 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.

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.

Flood profiles were drawn showing computed water-surface elevations for floods of the selected recurrence intervals.

Flood elevations in the county are often raised by debris blockages that restrict the flow of flood waters. The hydraulic analyses for this study, however, were based only on the effects of unobstructed flow. The flood elevations shown on the profiles are thus considered valid only if hydraulic structures remain unobstructed, operate properly, and do not fail.

All elevations are referenced to the North American Vertical Datum of 1988.

Precountywide Analyses

Each community within Kanawha County has a previously printed FIS report. The hydraulic analyses described in those reports have been compiled and are summarized below.

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.

The hydraulic analyses for Upper Creek was obtained from the Flood Insurance Study for the Town of Handley (FEMA 1983).

The hydraulic models for the Big Coal River were obtained from a USACE Channel Rehabilitation Study. Modifications were made to the models to reflect any changes in topography or hydraulic structures that may have occurred since the USACE study was completed. This information was taken from the FIS for Boone County and Incorporated Areas (FEMA 1991).

Cross-Sections

Cross sections for the streams studied by detailed methods were obtained using photogrammetric methods (Berger and Associates 1978). The wet sections were obtained from soundings taken in March 1978. Cross sections were located at close intervals above and below bridges in order to compute the backwater effects of these structures. Bridge opening geometry was established by field measurements taken from March to August 1982.

Cross-sections for the backwater analysis of Indian Creek were obtained from field measurements taken in May 1980. Cross-sections were located at close intervals above and below bridges in order to compute the backwater effects.

Water-Surface Elevations

Water-surface elevations of floods of the selected recurrence intervals were computed using the USACE Hydraulic Engineering Center (HEC)-2 step-backwater computer program (USACE 1984). Flood profiles were drawn showing computed water-surface elevations for floods of the selected recurrence intervals.

Table 5 – Manning's "n" Values from Precountywide Analyses

Stream	Channel "n"	Overbank "n"
Armour Creek	0.040	0.070-0.080
Big Coal River	0.035-0.063	0.035-0.130
Big Sandy Creek	0.045	0.060-0.070
Blakes Creek	0.040	0.070-0.080
Blue Creek	0.050-0.065	0.070-0.100
Campbells Creek	0.030	0.090
Cabin Creek	0.050-0.065	0.075-0.150
Coal River	0.040-0.060	0.080-0.120
Coopers Creek	0.060-0.065	0.075-0.090
Davis Creek	0.030	0.040
East Bank Tributary	0.040	0.070
Edens Fork	0.030-0.060	0.070-0.100
Elk River	0.030-0.050	0.050-0.080
Elk Twomile Creek	0.060	0.100
Fields Creek	0.040-0.060	0.080
Huggard Branch	0.050-0.070	0.080-0.100
Hughes Creek	0.060-0.070	0.080-0.100
Hurricane Fork	0.070	0.080
Indian Creek	0.022-0.065	0.040-0.100
Kanawha River	0.020-0.046	0.053-0.130
Kellys Creek	0.032-0.070	0.075-0.080
Legg Fork	0.050-0.060	0.080-0.090
Lens Creek	0.070	0.080-0.100
Little Sandy Creek	0.060-0.065	0.075-0.085
Little Smith Creek	0.075	0.080-0.100
Lower Creek	0.035-0.070	0.070-0.150
Little Smith Creek	0.075	0.080-0.100
Morris Creek	0.040	0.080
Paint Creek	0.060	0.080-0.120
Pocatalico River	0.050-0.070	0.080-0.100
Rocky Fork	0.035-0.070	0.050-0.090
Smith Creek	0.032-0.060	0.060-0.100
Thorofare Run	0.045-0.060	0.065-0.080

Table 5 – Manning's "n" Values from Precountywide Analyses (continued)

Stream	Channel "n"	Overbank
Tupper Creek	0.070	0.100
Twomile Creek	0.060	0.100
Tyler Creek	0.060-0.080	0.080-0.100
Upper Creek	0.035-0.070	0.070-0.150
Witcher Creek	0.060	0.080

Starting Water-Surface Elevations

Starting water-surface elevations for the Kanawha River were determined using the corresponding coincident flood peaks on the Ohio River at Point Pleasant. The profiles were then modeled to agree with established ratings at the USACE navigation structures on the Kanawha River at Winfield, Marmet, and London. Starting water-surface elevations for the remaining streams studied by detailed methods were determined by the slope/area method.

Starting water-surface elevations for Davis Creek were determined using the corresponding coincident flood peaks on the Kanawha River.

Starting water-surface elevations for Fields Creek were determined using normal depth calculations. It was determined that Fields Creek is entirely affected by backwater from the Kanawha River within the Town of Chesapeake.

Starting water-surface elevations for Lens Creek were obtained from the FIS for Kanawha County (FEMA unpublished).

Starting water-surface elevations for Armour Creek were selected using the corresponding flood crests on the Kanawha River. Starting water-surface elevations for Blakes Creek were selected using corresponding flood crests on Armour Creek.

Roughness Factors

Roughness factors (Manning's "n") used in the hydraulic computations were determined on the basis of characteristics of historic floods and existing floodplain conditions. The channel "n" and overbank "n" values for the streams studied by detailed methods are shown in Table 5.

Countywide Analyses

For the February 6, 2008 countywide revision, all streams for which water-surface elevations had been previously calculated were redelineated using new topographic information, unless these streams were restudied, as described below.

For all restudied streams except Magazine Branch

Water-surface elevations of floods for the selected recurrence intervals were computed using the USACE's HEC-RAS (River Analysis System) 3.1.2 computer program (USAUSACE, 2004). All streams were studied using the steady flow program (SNET) within HEC-RAS.

The HEC-GeoRAS extension was used within ArcGIS 9.1 to assist in developing the HEC-RAS models. Normal depth was used for the initial water surface elevations in the hydraulic modeling for all of the restudied streams. Slopes for the normal depth calculation were estimated from the lower reaches of the studied streams from land and aerial survey data.

Stream centerline locations were digitized within ArcGIS using 2-foot aerial photographic data and field survey data. Cross-sections were placed within ArcGIS using the GeoRAS extension at intervals less than 400 feet. Stream stationing for each designated reach begins at its outlet.

Overbank geometric data was developed from 2-foot aerial survey data provided by Kanawha County. Channel cross section data was derived from field surveyed information at selected locations.

Hydraulic structures and channel cross-sections upstream and downstream of these structures were surveyed for all detailed studied streams. Cross-sections were placed at necessary locations near structures within ArcGIS and were extracted into HEC-RAS using the GeoRAS extension and the aforementioned process to create channel geometry for the entire length of each flooding source. The field survey data was used to define the structure geometry within HEC-RAS.

Site visits were conducted in October 2004 to assess stream conditions, field survey locations and appropriate Manning's "n" values. Based upon the field review and comparison to values within 'Open-Channel Hydraulics' and 'Roughness Characteristics of Natural Channels' (Interior, 1967) the following values were selected for use in the modeling and placed in locations using the aerial photography.

Table 6 – Manning's "n" value from the February 6, 2008 Revision

Stream	Channel "n"
Alum Creek	0.045
Brier Creek (Upper Reach)	0.044
Brier Creek (Lower Reach)	0.045
Dutch Hollow Creek (Upper Reach)	0.044
Dutch Hollow Creek (Lower Reach)	0.042
Finney Branch	0.045
Georges Creek	0.044
Indian Creek	0.043

Table 6 – Manning's "n" value from the February 6, 2008 Revision (continued)

Stream	Channel "n"
Middle Fork	0.043
Mill Creek	0.043
Two and Three Quarter Mile Creek	0.044

Overbank values range from 0.055-0.1 for the above referenced flooding sources.

For Magazine Branch

The data that was developed in the hydraulics block in the XP-SWMM software was calculated using the XP-SWMM hydrology data and the HEC-GeoRAS extension for ArcView 3.2a. Topographical mapping (2ft contours) provided by the City of Charleston, West Virginia, was used during this process. The HEC-GeoRAS extension was used to generate cross sections at the locations where XP-SWMM nodes were defined. Those cross sections where inserted into the XP-SWMM model along with Manning's n values. The Manning's n values were based on engineering judgment upon viewing the study site. The topographical data provided by the City of Charleston is in West Virginia State Plane 1983 South feet coordinate system.

Elk River Revision (TBD)

For this revision, an approximately 29-mile reach of Elk River, from 2.9 miles upstream of confluence with Kanawha River to 0.6 miles downstream of the county boundary, was restudied using detailed methods. Light Detection and Ranging (LiDAR) data collected in 2016 by Quantum Spatial, Inc., as well as a leave-off imagery service hosted by the GIS Technical Center of West Virginia University were used to support the modeling effort. Structure information for the Henry C "Hoppy" Shores Drive bridge was obtained from a 2014 HEC-RAS model prepared by Michael Baker Jr, Inc. For the State Route 114 bridge, structure information was recorded in 1995 by the West Virginia Department of Highways Structures Division. The remaining four structures on the studied reach were surveyed by Erickson Contract Surveying Inc. in Spring 2018. A one-dimensional, steady state hydraulic model was developed using HEC-RAS 5.0.7 to estimate the floodway and water-surface elevations for the 10-, 4-, 2-, 1-, 1-plus, 0.2%- percent annual chance exceedance events. The model stream centerline was adjusted to follow the imagery and topographic data. Cross sections were placed perpendicular to flow at representative locations, approximately 400-1200 feet apart along the stream centerline, with variation based on stream width and floodplain shape. Inverts from the effective model were used to inform the channel bathymetry in locations where there was no survey data. The water-surface elevation from the effective AE model downstream of the studied reach was applied as the downstream boundary condition for the model. Manning's "n" values for the overbanks were acquired from the Land Use Land Cover (LULC) data set and blocked obstructions from

the US Buildings Layer dataset developed by Microsoft and available under the Open Data Commons Open Database License, and then further adjusted based on the imagery. The range of the model Manning's "n" values is 0.028 – 0.120 for the channel and 0.016 – 0.120 for overbank. High water marks from the June 2016 flood were used to calibrate the model.

In addition, this revision incorporated results from the 2016 advisory study for Big Sandy Creek, Blue Creek, Bufflick Run, Falling Rock Creek, Gabes Creek, Indian Creek, Jordan Creek, King Shoals Run, Leatherwood Creek, Left Fork Leatherwood Creek, Left Hand Creek, Little Blue Creek, Mile Fork, Morris Creek, Pinch Creek, Queen Shoals Creek, Upper King Shoals Run, and Wills Creek. For the advisory study, one-dimensional, steady state hydraulic models were developed using HEC-RAS and USGS 1/9 arc-second DEM.

3.3 Vertical Datum

All FIS reports and FIRMs are referenced to a specific vertical datum. The vertical datum provides a starting point against which flood, ground, and structure elevations can be referenced and compared. Until recently, the standard vertical datum in use for newly created or revised FIS reports 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. Structure and ground elevations in the community must, therefore, be referenced to NGVD 88. It is important to note that adjacent communities may be referenced to NGVD 29. This may result in differences in base flood elevations across the corporate limits between the communities.

For more information on NAVD 88, see Converting the National Flood Insurance Program to the North American Vertical Datum of 1988, FEMA Publication FIA-20/June 1992, or contact the Vertical Network Branch, National Geodetic Survey, Coast and Geodetic Survey, National Oceanic and Atmospheric Administration, Rockville, Maryland 20910 (Internet address http://www.ngs.noaa.gov).

Bench marks cataloged by the NGS and entered into the NSRS vary widely in vertical stability classification. NSRS vertical stability classifications are as follows:

- Stability A: Monuments of the most reliable nature, expected to hold position/elevation (e.g., mounted in bedrock)

- Stability B: Monuments which generally hold their position/elevation (e.g., concrete bridge abutment)

- Stability C: Monuments which may be affected by surface ground movements (e.g., concrete monument below frost line)

- Stability D: Mark of questionable or unknown vertical stability (e.g., concrete monument above frost line, or steel witness post)

In addition to NSRS bench marks, the FIRM may also show vertical control monuments established by a local jurisdiction; these monuments will be shown on the FIRM with the appropriate designations. Local monuments will only be placed on the FIRM if the community has requested that they be included, and if the monuments meet the aforementioned NSRS inclusion criteria.

To obtain current elevation, description, and/or location information for bench marks shown on the FIRM for this jurisdiction, please contact the Information Services Branch of the NGS at (301)-713-3242, or visit their Web site at www.ngs.noaa.gov.

It is important to note that 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 associated with this FIS and FIRM. Interested individuals may contact FEMA to access this data.

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 report provides 1-percent annual chance floodplain data, which may include a combination of the following: 10-, 2-, 1-, and 0.2-percent annual chance flood elevations; delineations of the 1- and 0.2-percent annual chance floodplains; and a 1-percent annual chance floodway. This information is presented on the FIRM and in many components of the FIS report, including Flood Profiles and Floodway Data tables. Users should reference the data presented in the FIS report 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. The delineations are based on the best available topographic information.

For the February 6, 2008 revision, topographic mapping was provided by Kanawha County to support floodplain mapping efforts. The county provided 2-foot and 10-foot contour data developed from aerial topographic information. The 2-foot contour data existed in more densely populated areas, while 10-foot contour data was present for the entire county. This aerial data was supplemented with ground survey data for the specified detailed study reaches. For the streams studied in detail, the 1-percent annual chance floodplains have been delineated using the water-surface elevations determined at each cross section. The delineation was based on the aforementioned topographic mapping. Floodplains were delineated from the provided contour data using the Ras Mapper extension in HEC-RAS 5.0.7 software.

For this revision, a 1-meter cell size DEM derived from the LiDAR data collected in 2016 by Quantum Spatial, Inc. was used to intersect the water-surface grid to delineate floodplain boundaries in ArcGIS.

The 1- and 0.2-percent annual chance floodplain boundaries are shown on the FIRM. 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 studied by approximate methods, only the 1-percent annual chance floodplain boundary is shown on the FIRM.

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. The floodways in this FIS

are presented to local agencies as minimum standards that can be adopted directly or that can be used as a basis for additional floodway studies.

The floodways presented in this FIS were computed for certain stream segments on the basis of equal conveyance reduction from each side of the floodplain. For the streams studied in detail for the revision, floodway widths were computed at cross sections. Between cross sections, the floodway boundaries were interpolated. The results of the floodway computations are tabulated for selected cross sections (Table 7). The computed floodways are shown on the FIRM. In cases where the floodway and 100-year floodplain boundaries are either to close together or collinear, only the floodway boundary is shown.

For streams that were redelineated for the February 6, 2008 countywide revision, floodway boundaries were digitized from the effective floodway maps and superimposed on the revised floodplain boundaries. All floodway widths, section areas, flows and elevations were taken directly from the effective floodway tables, with a datum adjustment of 0.61 downward applied to the elevations. Floodway adjustments were necessary to comply with more detailed topographic mapping for stream alignment refinements.

Near the mouths of streams studied in detail, floodway computations are made without regard to flood elevations on the receiving water body. Therefore, "Without Floodway" elevations presented in Table 7 for certain downstream cross sections are lower than the regulatory flood elevations in that area, which must take into account the 1-percent annual chance flooding due to backwater from other sources.

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." 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.

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 1.0 foot at any point. Typical relationships between the floodway and the floodway fringe and their significance to floodplain development are shown in Figure 2.

For this revision, floodway was computed for the updated reach of Elk River and mapped using ArcGIS.

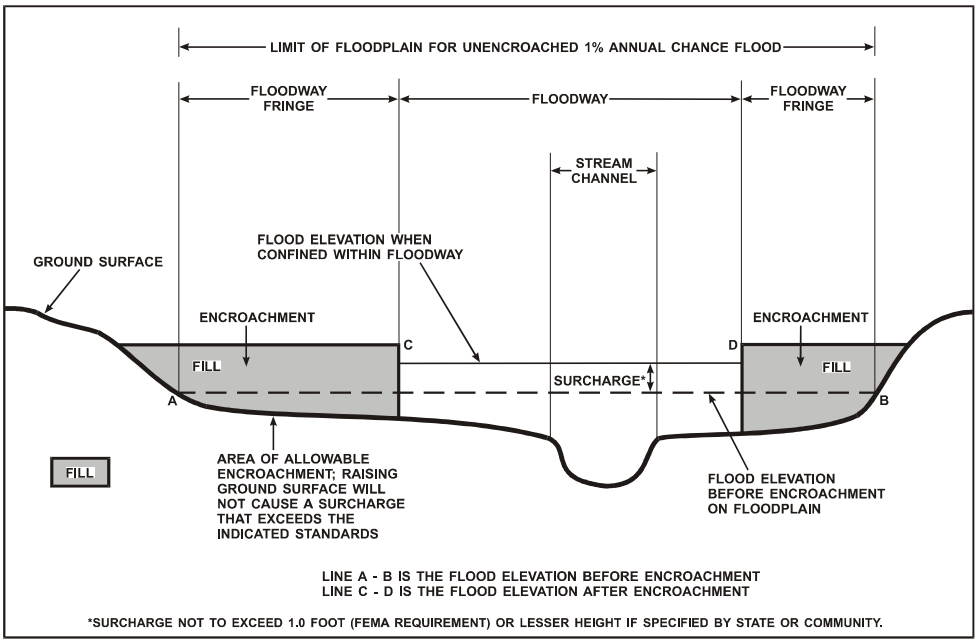

Figure 2: Floodway Schematic

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Alum Creek								
A	134	30	201	6.5	624.0	590.2[2]	590.2	0.0
B	1,250	70	373	3.5	624.0	595.3[2]	595.5	0.2
C	2,250	39	200	6.5	624.0	600.1[2]	600.1	0.0
D	3,249	77	474	2.7	624.0	604.9[2]	604.9	0.0
E	4,750	50	240	5.1	624.0	607.6[2]	608.3	0.7
F	5,682	43	248	4.9	624.0	613.4[2]	613.4	0.0
G	6,790	75	209	5.8	624.0	616.1[2]	616.1	0.0
H	8,001	58	337	3.6	629.4	629.4	629.4	0.0
I	8,749	50	284	3.3	634.6	634.6	634.8	0.2
J	10,250	80	417	2.3	645.6	645.6	646.6	0.9
K	11,470	40	139	6.8	651.4	651.4	651.7	0.3
L	12,750	36	134	7.1	659.2	659.2	659.4	0.2
M	13,785	42	129	7.4	665.5	665.5	665.5	0.0
N	14,750	45	137	5.1	675.2	675.2	675.2	0.0
O	16,000	16	62	11.2	688.6	688.6	688.5	0.0
P	16,999	35	100	7.0	694.1	694.1	694.2	0.1
Q	18,500	27	98	4.7	709.2	709.2	709.8	0.6

[1]Feet above confluence with Coal River
[2]Elevation computed without consideration of backwater effects from Coal River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

ALUM CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Armour Creek								
A	7,767	110	607	3.2	584.8	575.5[2]	575.7	0.2
B	8,654	171	637	3.1	584.8	576.5[2]	576.8	0.3
C	9,694	236	829	2.4	584.9	578.3[2]	578.7	0.4
D	10,275	115	383	2.0	584.9	579.0[2]	579.2	0.2
E	11,083	82	231	3.3	584.9	579.7[2]	579.9	0.2
F	12,155	128	595	1.3	585.0	583.5[2]	584.0	0.5
G	12,572	60	349	2.2	588.1	588.1	588.3	0.2
H	12,815	31	160	4.8	588.2	588.2	588.4	0.2
I	13,258	51	245	3.1	590.1	590.1	590.9	0.8
J	13,881	59	242	3.2	591.4	591.4	591.7	0.3
K	14,736	70	170	4.5	593.4	593.4	593.4	0.0
L	15,851	70	350	2.2	602.6	602.6	603.1	0.5
M	16,320	55	370	2.1	603.1	603.1	603.6	0.5
N	17,477	48	112	6.9	606.3	606.3	606.3	0.0
O	18,279	41	139	5.5	613.0	613.0	613.3	0.3
P	18,929	50	96	8.0	620.7	620.7	621.0	0.3
Big Coal River								
A	134,740	161/120[3]	4,547	9.9	643.1	643.1	644.1	1.0
B	135,920	262/160[3]	6,767	6.7	644.6	644.6	645.6	1.0
C	136,960	262/160[3]	6,835	6.6	645.1	645.1	646.1	1.0
D	136,000	435/160[3]	7,860	5.7	645.6	645.6	646.6	1.0
E	139,030	240/380[3]	6,278	7.2	645.8	645.8	646.8	1.0
F	140,940	504/140[3]	10,763	4.2	647.2	647.2	648.2	1.0
G	142,820	358/270[3]	8,183	5.5	647.4	647.4	648.4	1.0

[1]Feet above confluence with Kanawha River
[2]Elevation computed without consideration of backwater from Kanawha River
[3]Width/width within county boundary

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

ARMOUR CREEK – BIG COAL RIVER

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Big Sandy Creek								
A	100	143	3,026	6.6	631.5	619.0[2]	620.0	1.0
B	805	222	4,207	4.8	631.5	619.9[2]	620.8	0.9
C	1,635	286	5,186	3.9	631.5	620.3[2]	621.2	0.9
D	2,620	153	3,297	6.1	631.5	620.5[2]	621.4	0.9
E	3,740	145	3,152	6.3	631.5	621.2[2]	622.1	0.9
F	4,665	164	3,373	5.9	631.5	622.0[2]	622.9	0.9
G	4,890	337	7,109	2.8	631.5	623.0[2]	623.9	0.9
H	6,010	157	3,594	5.6	631.5	623.1[2]	624.0	0.9
I	7,130	205	3,903	5.1	631.5	623.8[2]	624.7	0.9
J	8,035	269	4,998	4.0	631.5	624.6[2]	625.5	0.9
K	8,930	557	8,328	2.4	631.5	625.0[2]	626.0	1.0
L	10,300	182	3,466	5.6	631.5	625.2[2]	626.1	0.9
M	11,315	177	3,639	5.3	631.5	625.8[2]	626.7	0.9
N	12,410	246	4,059	4.8	631.5	626.5[2]	627.4	0.9
O	12,620	264	4,354	4.4	631.5	626.7[2]	637.6	0.9
P	13,690	301	4,209	4.6	631.5	627.1[2]	628.0	0.9
Q	14,500	149	3,196	6.0	631.5	627.4[2]	628.4	1.0
R	16,000	198	3,903	4.9	631.5	628.4[2]	629.4	1.0
S	17,200	257	4,523	4.3	631.5	629.0[2]	630.0	1.0
T	17,700	223	4,084	4.0	631.5	629.2[2]	630.2	1.0
U	19,100	194	3,736	4.4	631.5	629.8[2]	630.8	1.0
V	20,300	238	14,371	3.8	631.5	630.4[2]	631.4	1.0

[1]Feet above confluence with Elk River
[2]Elevation computed without consideration of backwater effects from Elk River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

BIG SANDY CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Blakes Creek								
A	449[1]	70	239	3.5	584.9	577.2[2]	578.2	1.0
B	1,373[1]	80	259	3.2	585.0	581.9[2]	582.1	0.2
C	2,144[1]	25	116	7.2	585.0	583.6[2]	584.6	1.0
D	3,268[1]	80	285	2.9	590.4	590.4	590.5	0.1
E	3,796[1]	33	106	7.9	591.4	591.4	591.4	0.0
F	4,746[1]	50	194	4.3	597.2	597.2	597.2	0.0
G	5,460[1]	54	176	4.8	599.2	599.2	599.2	0.0
H	5,861[1]	40	143	5.9	601.3	601.3	601.4	0.1
Blue Creek								
A	340[3]	115	1,672	8.6	617.4	603.0[4]	603.3	0.3
B	1,340[3]	207	2,779	5.2	617.4	605.3[4]	605.9	0.6
C	2,620[3]	177	1,591	9.1	617.4	607.1[4]	607.7	0.6
D	3,880[3]	240	2,427	5.9	617.4	611.7[4]	612.7	1.0
E	5,340[3]	290	2,901	5.0	617.4	614.6[4]	615.5	0.9
F	6,330[3]	83	1,538	9.4	617.4	615.9[4]	616.7	0.8
G	7,490[3]	364	2,438	5.9	619.1	619.1	619.9	0.8
H	8,480[3]	227	2,967	4.7	621.0	621.0	621.8	0.8
I	8,720[3]	233	2,317	6.0	621.9	621.9	622.5	0.6
J	9,090[3]	242	2,930	4.8	622.9	622.9	623.6	0.7
K	9,230[3]	255	3,238	4.3	623.6	623.6	624.4	0.8
L	10,330[3]	246	3,326	4.2	624.8	624.8	625.6	0.8
M	11,640[3]	300	4,045	3.5	626.0	626.0	626.8	0.8
N	11,900[3]	360	3,665	3.8	626.5	626.5	627.4	0.9
O	12,970[3]	175	2,553	5.5	627.6	627.6	628.5	0.9
P	14,200[3]	345	4,301	3.3	629.1	629.1	630.1	1.0

[1]Feet above confluence with Armour Creek
[2]Elevation computed without consideration of coincident peak flow from Armour Creek
[3]Feet above confluence with Elk River
[4]Elevation computed without consideration of backwater from Elk River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

BLAKES CREEK – BLUE CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Brier Creek								
A	45	67	392	7.3	607.3	607.3	607.3	0.0
B	500	103	545	5.2	614.7	614.7	614.7	0.0
C	1,500	100	657	4.3	619.6	619.6	619.6	0.4
D	2,250	95	562	5.1	624.3	624.3	624.6	0.3
E	3,574	95	723	3.4	628.8	628.8	628.9	0.2
F	4,997	58	237	10.3	634.9	634.9	634.9	0.0
G	6,676	95	498	4.7	641.3	641.3	642.0	0.7
H	7,750	103	563	4.2	644.1	644.1	644.5	0.4
I	9,000	37	186	12.7	649.3	649.3	649.3	0.0
J	9,998	90	547	4.3	653.9	653.9	654.4	0.5
K	10,763	80	377	5.8	658.9	658.9	659.2	0.3
L	11,750	80	403	5.4	660.9	660.9	661.6	0.7
M	12,384	76	335	6.5	665.1	665.1	665.4	0.2
N	12,997	88	397	5.5	666.9	666.9	667.6	0.8
O	13,750	109	333	6.6	670.1	670.1	670.9	0.8
P	14,500	80	383	5.7	675.8	675.8	676.0	0.2
Q	15,250	55	325	4.5	677.8	677.8	678.6	0.8
R	16,000	89	369	4.0	680.9	680.9	681.7	0.8
S	16,879	56	237	6.2	684.1	684.1	684.9	0.8
T	17,930	80	348	4.2	692.4	692.4	692.6	0.2
U	19,184	19	116	12.6	696.1	696.1	697.1	1.0
V	20,250	40	210	5.9	702.4	702.4	703.0	0.6

[1]Feet above confluence with Big Coal River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

BRIER CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Cabin Creek								
A	210	115	1,708	7.9	606.3	599.7	600.7	1.0
B	537	110	1,715	7.9	606.3	600.9	601.9	1.0
C	688	121	1,962	6.9	606.3	601.7	602.7	1.0
D	981	135	2,142	6.3	606.3	603.5	603.9	0.4
E	1,280	112	1,613	8.4	606.3	604.1	604.5	0.4
F	1,631	154	1,946	6.9	606.3	605.5	606.2	0.7
G	2,925	275	2,554	5.3	608.6	608.6	609.5	0.9
H	4,100	329	4,714	2.9	610.3	610.3	611.2	0.9
I	4,669	287	3,467	3.9	610.6	610.6	611.5	0.9
J	4,862	210	2,639	5.1	610.8	610.8	611.7	0.9
K	5,819	249	3,451	3.9	612.4	612.4	613.3	0.9
L	6,500	206	2,753	4.9	613.2	613.2	614.1	0.9
M	7,519	245	2,524	5.3	615.3	615.3	616.2	0.9
N	7,812	212	2,233	6.0	616.4	616.4	617.3	0.9
O	8,790	206	1,744	7.7	619.8	619.8	620.8	1.0
P	9,750	270	2,485	5.4	624.3	624.3	625.1	0.8
Q	11,012	240	2,000	6.7	628.7	628.7	629.3	0.6
R	11,205	275	2,915	4.6	632.7	632.7	633.2	0.5
S	11,706	284	2,893	4.7	633.2	633.2	633.9	0.7
T	12,475	348	3,895	3.5	634.3	634.3	635.0	0.7
U	14,195	471	2,910	4.6	640.3	640.3	641.2	0.9
V	15,362	143	1,422	9.5	642.9	642.9	643.7	0.8
W	16,150	260	2,651	5.1	647.8	647.8	648.4	0.6
X	16,300	261	2,595	5.2	648.3	648.3	648.9	0.6
Y	17,245	111	1,438	9.4	650.9	650.9	651.4	0.5
Z	18,530	112	1,640	8.2	657.8	657.8	657.8	0.7

[1]Feet above confluence with Kanawha River
[2]Elevation computed without consideration of backwater from Kanawha River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

CABIN CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Cabin Creek (continued)								
AA	19,800	231	3,244	4.2	660.5	660.5	661.3	0.8
AB	20,669	289	2,364	5.7	661.6	661.6	662.4	0.8
AC	21,575	208	2,122	6.4	664.5	664.5	665.2	0.7
AD	21,725	225	2,392	5.6	665.1	665.1	665.8	0.7
AE	22,705	226	2,287	5.9	667.1	667.1	667.9	0.8
AF	24,020	361	3,774	3.6	669.6	669.6	670.5	0.9
AG	24,912	228	2,425	5.6	670.5	670.5	671.5	1.0
AH	25,444	280	2,699	5.0	671.7	671.7	672.7	1.0
AI	25,625	293	3,501	2.1	673.3	673.3	674.2	0.9
AJ	25,869	280	2,400	3.0	673.3	673.3	674.2	0.9
AK	26,350	200	1,755	4.2	673.7	673.7	674.5	0.8
AL	27,605	160	1,506	4.8	676.1	676.1	672.4	0.7
AM	27,950	165	1,263	5.8	678.1	678.1	678.3	0.2
AN	29,175	135	1,115	6.5	680.7	680.7	681.6	0.9
AO	30,110	138	1,287	5.7	683.4	683.4	684.0	0.6
AP	31,462	138	1,093	6.7	686.3	686.3	687.0	0.7
AQ	32,388	157	1,022	7.1	689.3	689.3	690.3	1.0
AR	32,650	180	1,824	4.0	691.4	691.4	692.4	1.0
AS	34,000	82	889	8.2	693.5	693.5	694.3	0.8
AT	35,262	95	876	8.3	698.8	698.8	704.0	0.7
AU	36,100	95	839	8.7	703.4	703.4	704.0	0.6
AV	36,975	95	871	8.4	708.9	708.9	709.4	0.5
AW	37,800	88	1,013	7.2	713.2	713.2	713.8	0.4
AX	38,830	74	930	7.8	716.2	716.2	716.7	0.7
AY	39,050	63	878	8.3	718.9	718.9	719.6	0.9
AZ	40,412	70	885	8.2	723.4	723.4	724.3	0.9

[1]Feet above confluence with Kanawha River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

CABIN CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Cabin Creek (continued)								
BA	41,005	231	1,916	3.8	726.0	726.0	727.0	0.9
BB	42,020	79	1,133	6.4	727.5	727.5	728.4	0.9
BC	42,240	68	1,064	6.9	729.6	729.6	730.5	0.9
BD	43,425	75	888	8.2	732.7	732.7	733.7	0.9
BE	44,410	143	1,042	7.0	737.3	737.3	738.1	0.9
BF	45,125	53	674	10.8	741.4	741.4	742.4	0.9
BG	45,300	68	980	7.4	744.5	744.5	745.5	0.9
BH	46,182	85	739	9.9	747.1	747.1	748.1	1.0
BI	47,605	147	1,066	6.8	756.6	756.6	756.9	0.8
BJ	48,750	123	1,103	6.6	761.0	761.0	762.0	0.6
BK	49,588	143	1,250	5.8	764.5	764.5	765.4	0.5
BL	49,738	160	1,436	5.1	768.7	768.7	769.2	0.7
BM	50,588	177	1,328	5.5	772.0	772.0	772.6	0.7
BN	51,950	113	899	8.1	779.2	779.2	780.1	0.9
BO	52,810	91	957	7.6	785.8	785.8	786.6	0.8
BP	54,090	225	1,408	5.2	792.5	792.5	793.3	0.6
BQ	54,838	264	751	9.7	797.0	797.0	797.1	0.5
BR	55,162	110	1,102	6.6	800.4	800.4	800.6	0.7
BS	55,940	231	1,385	5.3	803.6	803.6	804.4	0.8
BT	57,400	98	819	8.9	813.8	813.8	814.2	0.4
BU	58,075	165	1,000	7.3	819.8	819.8	820.4	0.6
BV	58,225	305	1,958	3.7	821.7	821.7	822.5	0.8
BW	58,840	246	1,763	4.1	824.0	824.0	825.0	1.0
BX	59,650	150	1,137	6.4	828.0	828.0	828.2	0.2
BY	60,775	237	1,475	4.9	835.1	835.1	835.8	0.7
BZ	62,138	112	763	9.6	847.4	847.4	847.7	0.3

[1]Feet above confluence with Kanawha River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

CABIN CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Cabin Creek (continued)								
CA	62,425	130	1,537	4.7	851.2	851.2	851.5	0.3
CB	63,438	180	1,213	6.0	853.9	853.9	854.8	0.9
CC	64,595	181	1,501	4.9	862.7	862.7	863.6	0.9
CD	65,369	236	1,841	4.0	866.5	866.5	867.4	0.9
CE	66,126	91	748	9.8	870.9	870.9	871.8	0.9
CF	66,350	74	785	9.3	875.2	875.2	875.7	0.5
CG	67,112	140	1,178	5.1	880.3	880.3	881.1	0.8
CH	67,650	151	1,081	5.6	882.6	882.6	883.3	0.7
CI	67,850	215	1,353	4.5	888.3	888.3	888.8	0.5
CJ	69,300	163	910	6.6	896.1	896.1	896.9	0.8
CK	69,788	110	732	8.3	901.7	901.7	902.4	0.7
CL	69,988	135	1,022	5.9	906.4	906.4	906.5	0.1
CM	70,538	185	963	6.3	909.0	909.0	909.4	0.4
CN	71,443	115	746	8.1	917.3	917.3	917.9	0.6
CO	71,588	116	1,061	5.7	920.1	920.1	920.6	0.5
CP	72,775	184	886	6.8	928.2	928.2	928.9	0.7
CQ	73,638	121	776	7.8	939.5	939.5	940.5	1.0
CR	74,638	101	933	6.5	947.0	947.0	947.9	0.9
CS	76,238	70	420	12.0	960.5	960.5	960.5	0.3
CT	77,075	185	1,279	3.9	969.1	969.1	969.9	0.8
CU	78,000	195	630	8.0	978.0	978.0	978.3	0.3
CV	78,150	180	1,283	3.9	982.8	982.8	983.8	1.0
CW	79,300	160	618	8.2	992.8	992.8	993.2	0.4
CX	80,315	85	679	7.4	1,006.8	1,006.8	1,007.6	0.8

[1]Feet above confluence with Kanawha River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

CABIN CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Cabin Creek (continued)								
CY	81,256	86	602	8.4	1,016.2	1,016.2	1,017.1	0.9
CZ	82,038	55	590	8.6	1,023.5	1,023.5	1,024.1	0.6
DA	82,430	55	542	9.3	1,031.4	1,031.4	1,031.4	0.0
DB	83,200	40	374	13.5	1,040.9	1,040.9	1,041.1	0.2
DC	84,180	127	721	7.0	1,054.5	1,054.5	1,055.5	1.0
DO	84,975	160	686	7.4	1,062.8	1,062.8	1,063.0	0.2
DE	85,262	95	670	7.5	1,066.6	1,066.6	1,067.2	0.6
DF	85,920	200	987	5.1	1,073.7	1,073.7	1,074.5	0.8
DG	87,080	87	604	8.4	1,088.1	1,088.1	1,088.4	0.3
DH	87,225	140	1,274	4.0	1,093.0	1,093.0	1,093.5	0.5
DI	88,438	114	529	9.5	1,102.4	1,102.4	1,102.5	0.1
DJ	89,212	140	949	5.3	1,113.8	1,113.8	1,114.8	1.0
DK	90,275	80	538	9.4	1,124.5	1,124.5	1,124.8	0.3
DL	90,375	165	955	5.3	1,129.0	1,129.0	1,130.0	1.0

[1]Feet above confluence with Kanawha River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

CABIN CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Campbells Creek								
A	650	82	1,222	7.5	596.9	584.9[2]	585.5	0.6
B	1,580	169	2,232	4.1	596.9	588.1[2]	588.8	0.7
C	2,360	118	1,549	5.9	596.9	589.1[2]	589.7	0.6
D	3,540	72	1,128	8.2	596.9	592.0[2]	592.7	0.7
E	4,400	89	1,351	6.8	596.9	594.6[2]	595.5	0.9
F	6,220	370	3,784	2.4	597.1	597.1	598.1	1.0
G	7,240	112	1,512	6.0	597.9	597.9	598.8	0.9
H	8,140	100	1,403	6.6	600.2	597.9	600.9	0.7
I	9,350	235	2,246	4.1	603.1	600.2	603.9	0.8
J	10,400	320	2,706	3.4	604.8	603.1	605.6	0.8
K	11,400	122	1,208	7.6	606.4	604.8	606.9	0.5
L	11,630	212	2,047	4.5	610.5	606.4	611.1	0.6
M	12,820	74	822	11.2	613.2	610.5	613.7	0.5
N	14,460	174	1,405	5.4	618.4	613.2	619.3	0.9
O	15,790	188	1,301	5.8	623.5	618.4	624.2	0.7
P	16,160	190	1,482	5.1	626.0	623.5	626.9	0.9
Q	17,100	74	657	11.6	628.9	626.0	629.4	0.5
R	18,020	177	1,868	4.1	633.9	628.9	634.9	1.0
S	18,220	201	2,387	3.2	634.6	633.9	635.6	1.0
T	19,350	422	4,322	1.8	635.5	634.6	636.4	0.9
U	20,280	357	2,856	2.7	636.1	635.5	637.0	0.9
V	20,460	395	3,088	2.5	636.5	636.1	637.4	0.9
W	21,670	298	2,232	3.1	637.8	637.8	638.7	0.9
X	22,810	205	2,092	3.3	639.5	639.5	640.3	0.8
Y	23,410	92	758	9.2	640.2	640.2	640.8	0.6
Z	24,190	116	1,112	6.3	645.7	648.4	646.6	0.9

[1]Feet above confluence with Kanawha River
[2]Elevation computed without consideration of backwater from Kanawha River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

CAMPBELLS CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Campbells Creek (continued)								
AA	25,000	128	1,072	6.5	649.1	649.1	649.9	0.8
AB	25,220	138	1,118	6.3	650.8	650.8	651.7	0.9
AC	26,340	246	1,601	4.4	655.3	655.3	656.3	1.0
AD	27,140	443	3,497	2.0	656.6	656.6	657.5	0.9
AE	27,560	291	2,678	2.6	657.0	657.0	657.9	0.8
AF	28,190	223	1,874	3.7	657.8	657.8	658.6	0.9
AG	29,620	204	1,747	4.0	661.4	661.4	662.3	0.8
AH	31,100	226	1,951	3.6	664.6	664.6	665.4	0.8
AI	31,270	255	2,302	3.0	665.5	665.5	666.3	0.8
AJ	31,920	237	1,839	3.8	666.5	666.5	667.3	0.8
AK	32,410	200	1,538	4.6	667.6	667.6	668.4	0.1
AL	32,550	200	1,494	4.7	669.4	669.4	669.5	0.6
AM	33,000	372	2,269	3.1	670.6	670.6	671.2	0.8
AN	33,920	263	1,524	4.6	674.2	674.2	675.0	0.8
AO	34,620	366	1,921	3.6	677.3	677.3	678.1	0.8
AP	35,980	141	1,161	6.0	683.2	683.2	684.0	0.8
AQ	36,950	200	1,637	2.9	686.8	686.8	687.6	0.7
AR	38,000	140	673	7.0	689.6	689.6	690.3	0.9
AS	38,450	150	952	4.9	693.0	693.0	693.9	0.1
AT	38,550	141	918	5.1	694.3	694.3	694.4	1.0
AU	39,170	265	1,252	3.7	696.5	696.5	697.5	0.6
AV	39,930	154	856	5.5	701.2	701.2	701.8	0.8
AW	40,110	110	834	5.6	702.9	702.9	703.0	0.1
AX	40,250	110	682	6.9	703.7	703.7	703.7	0.0
AY	40,770	150	1,012	4.6	706.3	706.3	707.2	0.9
AZ	41,420	183	860	5.4	709.9	709.9	710.6	0.7

[1]Feet above confluence with Kanawha River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

CAMPBELLS CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Campbells Creek (continued)								
BA	41,690	102	810	5.8	711.6	711.6	712.6	1.0
BB	42,790	161	595	7.9	718.7	718.7	719.4	0.7
BC	44,010	69	631	7.4	729.9	729.9	730.7	0.8
BD	45,200	196	1,340	3.5	734.7	734.7	735.2	0.5
BE	46,020	179	1,444	3.2	736.2	736.2	737.0	0.8
BF	46,830	172	1,303	3.6	738.0	738.0	738.9	0.9
BG	47,470	169	1,094	4.3	740.1	740.1	741.0	0.9
BH	47,840	285	1,754	2.7	743.1	743.1	743.9	0.8
BI	48,020	240	1,571	3.0	743.4	743.4	744.2	0.8
BJ	48,220	230	1,447	3.2	744.6	744.6	745.3	0.7
BK	49,360	179	896	5.2	748.5	748.5	749.1	0.6
BL	50,360	187	824	5.7	755.5	755.5	756.2	0.7
BM	51,120	123	658	7.1	763.1	763.1	763.8	0.7
BN	52,420	187	1,014	4.6	771.1	771.1	772.1	1.0
BO	53,610	156	640	7.3	781.0	781.0	781.0	0.0
BP	54,560	220	976	4.8	788.2	788.2	789.1	0.9
BQ	55,280	157	705	6.6	793.1	793.1	793.7	0.6

[1]Feet above confluence with Kanawha River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

CAMPBELLS CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Coal River								
A	312	310	8,480	6.6	587.3	579.0[2]	580.0	1.0
B	1,505	350	9,406	5.9	587.3	579.3[2]	580.3	1.0
C	2,221	272	7,982	8.3	587.3	580.7[2]	581.7	1.0
D	2,427	255	7,069	9.4	587.3	580.7[2]	581.7	1.0
E	3,700	235	7,396	9.0	587.3	582.4[2]	583.3	0.9
F	4,529	275	8,578	7.8	587.3	583.1[2]	584.1	1.0
G	5,416	202	6,010	11.1	587.3	583.1[2]	584.1	1.0
H	6,757	284	8,494	7.8	587.3	585.0[2]	585.9	0.9
I	7,829	246	7,953	8.4	587.3	585.5[2]	586.4	0.9
J	9,175	241	8,057	8.3	587.3	586.2[2]	587.1	0.9
K	10,247	244	8,428	7.9	587.3	586.8[2]	587.6	0.8
L	11,350	250	9,038	7.4	587.4	587.4	588.2	0.8
M	12,296	302	11,926	5.6	588.0	588.0	588.8	0.8
N	13,473	257	8,895	7.5	588.0	588.0	588.8	0.8
O	14,719	256	8,195	8.1	588.4	588.4	589.3	0.9
P	16,140	267	8,143	8.2	589.1	589.1	590.0	0.9
Q	17,900	355	7,442	8.9	590.7	590.7	591.5	0.8
R	19,760	258	7,608	8.7	592.5	592.5	593.2	0.7
S	21,280	229	6,347	10.5	593.3	593.3	594.0	0.7
T	22,810	246	7,416	9.0	595.1	595.1	595.8	0.7
U	25,140	574	12,756	5.2	596.9	596.9	597.7	0.8
V	26,500	358	10,168	6.5	597.4	597.4	598.2	0.8
W	27,600	346	10,201	6.5	597.8	597.8	598.6	0.8
X	29,750	321	9,606	6.9	598.5	598.5	599.3	0.8
Y	31,250	292	7,925	8.4	599.1	599.1	600.0	0.9
Z	33,020	292	8,280	8.0	600.2	600.2	600.9	0.7

[1]Feet above confluence with Kanawha River
[2]Elevation computed without consideration of backwater from Kanawha River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

COAL RIVER

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Coal River (continued)								
AA	34,550	263	8,377	7.9	601.2	601.2	602.0	0.8
AB	36,130	283	8,950	7.4	602.1	602.1	602.9	0.8
AC	37,930	265	8,253	7.8	602.9	602.9	603.8	0.9
AD	39,590	273	8,805	7.3	603.6	603.6	604.4	0.8
AE	41,300	260	7,843	8.2	604.3	604.3	605.1	0.8
AF	42,700	269	7,722	8.3	605.0	605.0	605.8	0.8
AG	44,390	262	8,518	7.5	606.4	606.4	607.2	0.8
AH	45,700	302	8,587	7.5	607.0	607.0	607.9	0.9
AI	47,930	221	7,659	8.4	608.1	608.1	608.9	0.8
AJ	49,810	310	10,094	6.3	609.3	609.3	610.2	0.9
AK	51,200	292	9,335	6.9	609.6	609.6	610.5	0.9
AL	52,570	883	18,421	3.5	610.4	610.4	611.3	0.9
AM	54,130	596	12,796	5.0	610.6	610.6	611.5	0.9
AN	55,620	235	8,215	7.8	610.9	610.9	611.8	0.9
AO	57,760	298	8,927	7.2	612.0	612.0	613.0	1.0
AP	59,050	743	14,967	4.3	612.8	612.8	613.7	0.9
AQ	59,970	490	15,924	4.0	613.3	613.3	614.1	0.8
AR	60,670	430	11,224	5.7	613.3	613.3	614.3	1.0
AS	61,120	435	10,468	6.1	613.3	613.3	614.3	1.0
AT	62,780	350	10,822	5.9	613.9	613.9	614.8	0.9
AU	64,200	300	9,875	6.5	614.3	614.3	615.2	0.9
AV	66,040	326	10,304	6.2	614.9	614.9	615.9	1.0
AW	67,420	497	9,309	6.9	615.1	615.1	616.1	1.0
AX	69,500	346	10,317	6.2	616.4	616.4	617.4	1.0
AY	70,960	270	8,734	7.1	616.8	616.8	617.8	1.0
AZ	72,830	675	17,291	3.6	617.7	617.7	618.7	1.0

[1]Feet above confluence with Kanawha River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

COAL RIVER

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Coal River (continued)								
BA	74,370	275	9,477	6.5	617.9	617.9	618.9	1.0
BB	75,950	268	9,502	6.5	618.3	618.3	619.3	1.0
BC	77,790	452	12,339	5.0	619.0	619.0	620.0	1.0
BD	79,400	294	10,141	6.1	619.4	619.4	620.4	1.0
BE	81,170	310	10,226	6.1	620.0	620.0	621.0	1.0
BF	82,890	342	10,748	5.8	620.4	620.4	621.4	1.0
BG	84,360	457	11,737	5.3	620.9	620.9	621.9	1.0
BH	86,030	648	15,652	4.0	621.4	621.4	622.4	1.0
BI	87,520	473	10,100	6.1	621.7	621.7	622.7	1.0
BJ	89,090	415	11,404	5.4	622.5	622.5	623.5	1.0
BK	91,070	301	9,983	6.2	623.0	623.0	624.0	1.0
BL	92,140	264	8,884	7.0	623.2	623.2	624.2	1.0
BM	93,300	232	7,553	8.2	623.5	623.5	624.5	1.0
BN	93,770	360	10,917	5.7	624.1	624.1	625.1	1.0
BO	96,500	333	10,023	6.2	624.9	624.9	625.9	1.0
BP	97,860	340	11,053	5.6	625.3	625.3	626.3	1.0
BQ	99,490	436	14,576	4.3	625.9	625.9	626.9	1.0

[1]Feet above confluence with Kanawha River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

COAL RIVER

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Coopers Creek								
A	395	84	809	6.4	605.9	589.0[2]	589.0	0.0
B	625	122	1,454	3.6	605.9	589.9[2]	589.9	0.0
C	1,250	122	1,307	4.0	605.9	591.0[2]	597.4	0.8
D	2,662	75	970	5.4	605.9	596.5[2]	599.4	0.9
E	3,660	99	1,101	4.7	605.9	598.5[2]	600.4	0.9
F	4,080	65	733	7.1	605.9	599.6[2]	601.5	0.8
G	4,538	101	950	4.5	605.9	600.6[2]	602.6	0.9
H	5,038	80	661	6.4	605.9	602.0[2]	604.2	0.6
I	5,432	150	1,072	4.0	605.9	603.4[2]	591.8	0.8
J	6,310	99	881	4.8	606.5	606.5	607.1	0.6
K	6,948	76	688	6.2	608.5	608.5	608.8	0.3
L	7,855	104	1,084	3.9	610.7	610.7	611.2	0.5
M	7,982	129	1,343	3.2	611.5	611.5	612.2	0.7
N	8,770	98	858	4.7	612.4	612.4	613.1	0.7
O	9,360	96	765	5.2	613.9	613.9	614.7	0.8
P	9,500	109	1,055	3.8	615.0	615.0	615.9	0.9
Q	10,135	135	960	4.2	616.1	616.1	616.9	0.8
R	10,571	131	919	4.4	617.2	617.2	618.0	0.8
S	10,775	99	711	5.6	618.3	618.3	619.2	0.9
T	11,813	55	576	6.7	622.9	622.9	623.7	0.8
U	11,964	49	428	9.0	624.4	624.4	625.0	0.6
V	12,825	99	852	4.5	629.2	629.2	629.9	0.7
W	13,660	98	711	5.4	631.7	631.7	632.4	0.7
X	13,855	119	799	4.8	633.2	633.2	608.8	0.9
Y	14,430	85	681	5.3	635.1	635.1	635.8	0.7
Z	14,618	78	624	5.7	635.7	635.7	636.4	0.7

[1]Feet above confluence with Elk River
[2]Elevation computed without consideration of backwater from Elk River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

COOPERS CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Coopers Creek (continued)								
AA	14,769	89	684	5.2	636.8	636.8	637.6	0.8
AB	14,954	94	778	4.6	637.5	637.5	638.4	0.9
AC	15,092	103	820	4.4	638.3	638.3	639.2	0.9
AD	15,920	122	851	4.2	640.6	640.6	641.5	0.9
AE	16,733	79	612	5.8	643.4	643.4	644.2	0.8
AF	17,250	117	1,022	3.5	645.0	645.0	645.9	0.9
AG	17,585	142	1,260	2.8	647.2	647.2	648.2	1.0
AH	18,305	98	797	3.6	648.0	648.0	648.9	0.9
AI	19,155	82	523	5.5	650.0	650.0	650.9	0.9
AJ	19,836	69	546	5.3	653.0	653.0	653.9	0.9
AK	19,980	101	861	3.3	654.1	654.1	655.1	1.0
AL	20,650	81	714	4.0	655.1	655.1	656.0	0.9
AM	21,845	121	686	4.2	657.8	657.8	658.7	0.9
AN	22,358	124	844	2.7	661.2	661.2	662.1	0.9
AO	22,473	122	876	2.6	661.5	661.5	662.4	0.9
AP	22,987	72	456	5.0	662.4	662.4	663.2	0.8
AQ	23,460	74	478	4.8	664.5	664.5	665.4	0.9
AR	23,658	72	485	4.7	665.5	665.5	666.4	0.9
AS	23,979	116	640	3.6	666.6	666.6	667.5	0.9
AT	24,356	63	371	5.7	667.8	667.8	668.6	0.8
AU	24,580	131	681	3.1	669.2	669.2	670.1	0.9
AV	25,390	42	262	8.0	671.9	671.9	672.6	0.7
AW	25,945	95	564	3.7	675.4	675.4	676.4	1.0
AX	26,170	105	462	4.5	676.7	676.7	677.6	0.9

[1]Feet above confluence with Elk River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

COOPERS CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Davis Creek								
A	301	70	1,107	9.0	591.8	575.7[2]	575.8	0.1
B	517	85	2,051	4.9	591.8	576.5[2]	576.8	0.3
C	1,225	144	2,716	3.7	591.8	576.9[2]	577.3	0.4
D	1,600	113	1,825	5.5	591.8	576.9[2]	577.3	0.4
E	2,466	145	1,487	6.7	591.8	577.2[2]	577.5	0.3
F	4,120	110	1,070	9.3	591.8	580.4[2]	581.2	0.8
G	5,170	136	1,869	5.4	591.8	585.5[2]	586.1	0.6
H	6,300	131	1,778	5.6	591.8	587.5[2]	588.2	0.7
I	7,510	135	2,150	4.7	591.8	589.6[2]	590.2	0.6
J	8,430	93	1,582	6.3	591.8	590.8[2]	591.7	0.9
K	9,440	178	2,721	3.7	592.6	592.6	593.6	1.0
L	10,230	99	1,139	8.8	594.4	594.4	595.3	0.9
M	11,220	111	1,574	6.4	599.6	599.6	600.1	0.5
N	11,830	281	4,088	2.4	600.5	600.5	601.1	0.6
O	12,070	176	2,335	4.3	600.8	600.8	601.5	0.7
P	12,630	193	1,746	5.7	601.5	601.5	602.2	0.7
Q	13,040	203	2,319	4.3	602.6	602.6	603.4	0.8
R	13,210	210	3,465	2.9	603.3	603.3	604.1	0.8
S	14,010	141	2,215	3.8	603.7	603.7	604.5	0.8
T	14,810	155	2,419	3.5	604.4	604.4	605.2	0.8
U	15,600	110	1,681	5.0	605.1	605.1	606.0	0.9
V	16,110	168	2,502	3.4	605.8	605.8	606.8	1.0
W	16,370	210	2,931	2.9	606.0	606.0	607.0	1.0
X	17,210	218	2,559	2.8	606.5	606.5	607.5	1.0
Y	18,480	98	1,355	5.3	607.9	607.9	608.9	1.0
Z	18,650	117	1,371	5.3	609.5	609.4	610.4	1.0

[1]Feet above confluence with Kanawha River
[2]Elevation computed without consideration of backwater from Kanawha River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

DAVIS CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Davis Creek (continued)								
AA	19,610	113	1,342	5.4	611.4	611.4	612.4	1.0
AB	20,450	129	1,998	3.6	612.8	612.8	613.8	1.0
AC	20,630	187	2,372	3.0	613.4	613.4	614.4	1.0
AD	20,960	166	2,572	2.8	613.7	613.7	614.7	1.0
AE	21,150	154	1,912	3.8	613.9	613.9	614.9	1.0
AF	21,370	169	1,599	4.5	614.1	614.1	615.1	1.0
AG	21,560	125	1,816	4.0	614.4	614.4	615.6	1.0
AH	22,130	134	1,609	4.5	615.3	615.3	616.2	0.9
AI	22,570	151	1,705	4.2	616.0	616.0	616.9	0.9
AJ	22,800	168	1,630	4.4	616.5	616.5	617.4	0.9
AK	23,620	243	2,660	2.7	617.6	617.6	618.5	0.9
AL	24,050	248	2,869	2.5	617.9	617.9	618.8	0.9
AM	24,360	365	3,611	2.0	618.2	618.2	619.1	0.9
AN	25,620	152	1,435	5.0	618.9	618.9	619.8	0.9
AO	26,750	92	1,181	6.1	621.8	621.8	622.7	0.9
AP	27,500	116	1,373	5.2	624.0	624.0	624.9	0.9
AQ	28,820	223	1,913	3.8	626.4	626.4	627.4	1.0
AR	28,990	143	1,476	4.9	627.2	627.2	628.2	1.0
AS	29,770	144	1,394	5.2	629.2	629.2	630.1	0.9
AT	30,830	169	1,443	5.0	632.2	632.2	633.1	0.9
AU	30,990	224	1,788	4.0	633.1	633.1	634.0	0.9
AV	32,360	135	1,341	5.4	636.3	636.3	637.1	0.8
AW	33,800	121	1,217	5.9	641.0	641.0	641.6	0.6
AX	34,880	116	1,067	6.7	645.3	645.3	645.9	0.6
AY	35,480	177	1,705	4.2	647.3	647.3	648.1	0.8
AZ	35,890	154	1,345	5.4	648.6	648.6	649.4	0.8

[1]Feet above confluence with Kanawha River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

DAVIS CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Davis Creek (continued)								
BA	36,700	128	1,210	5.1	651.2	651.8	652.0	0.8
BB	36,910	102	767	8.1	652.0	652.6	652.9	0.9
BC	37,830	145	1,643	3.8	655.5	656.1	656.5	1.0
BD	38,040	78	829	7.5	656.6	657.2	657.5	0.9
BE	38,660	123	1,354	4.6	659.0	659.6	660.0	1.0
BF	38,850	76	1,104	5.6	660.1	660.7	661.1	1.0
BG	39,420	92	923	6.7	661.7	662.3	662.6	0.9
BH	39,940	118	1,021	6.1	664.0	664.6	665.0	1.0
BI	40,130	170	1,468	4.2	665.3	665.9	666.3	1.0
BJ	40,870	186	1,255	4.9	667.0	667.6	667.9	0.9
BK	41,760	97	1,145	5.4	669.4	670.0	670.3	0.9
BL	41,920	83	1,028	6.0	669.8	670.4	670.7	0.9
BM	42,640	106	1,150	5.4	672.0	672.6	673.0	1.0
BN	43,090	80	971	6.4	673.3	673.9	674.2	0.9
BO	43,240	106	1,244	5.0	674.4	675.0	675.4	1.0
BP	44,250	136	1,514	3.7	676.5	677.1	677.4	0.9
BQ	45,010	127	1,338	4.2	677.7	678.3	678.6	0.9
BR	45,880	145	1,499	3.7	679.4	680.0	680.3	0.9
BS	46,830	114	1,088	5.2	681.4	682.0	682.4	1.0
BT	47,110	173	1,113	5.1	683.1	683.7	684.0	0.9
BU	47,940	147	1,048	5.4	685.3	685.9	686.3	1.0
BV	48,290	111	1,154	4.9	686.6	687.2	687.6	1.0
BW	48,430	101	1,036	5.4	687.6	688.2	688.6	1.0
BX	49,230	131	1,285	3.6	689.9	690.5	690.8	0.9
BY	50,010	156	1,659	2.8	691.0	691.6	691.9	0.9
BZ	50,240	158	1,442	3.2	691.4	692.0	692.3	0.9

[1]Feet above confluence with Kanawha River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

DAVIS CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Davis Creek (continued)								
CA	51,060[1]	66	491	9.5	693.3	693.3	693.9	0.6
CB	51,680[1]	76	802	5.8	697.9	697.9	698.9	1.0
CC	52,330[1]	82	914	5.1	700.3	700.3	701.3	1.0
CD	52,520[1]	73	723	6.4	701.1	701.1	702.1	1.0
CE	53,470[1]	132	974	4.8	705.2	705.2	706.1	0.9
CF	53,620[1]	81	782	5.9	705.7	705.7	706.6	0.9
CG	53,750[1]	93	887	5.2	706.3	706.3	707.3	1.0
CH	53,860[1]	98	1,027	4.5	706.8	706.8	707.8	1.0
CI	54,820[1]	225	2,091	2.2	708.2	708.2	709.2	1.0
Dutch Hollow								
A	1,009[2]	25	126	3.0	590.0	580.1[3]	580.2	0.0
B	2,553[2]	43	58	6.6	590.0	581.4[3]	581.4	0.0
C	3,316[2]	23	56	6.8	591.5	591.5	591.5	0.1
D	4,348[2]	16	38	8.8	605.2	605.2	605.2	0.0
E	5,440[2]	25	59	5.6	626.9	626.9	627.0	0.1
F	6,143[2]	24	65	5.1	636.4	636.4	636.6	0.2
G	6,552[2]	35	176	1.6	646.7	646.7	647.5	0.9
H	7,022[2]	21	54	5.4	652.1	652.1	652.1	0.0
I	7,869[2]	25	87	3.3	665.9	665.9	666.6	0.7

[1]Feet above confluence with Kanawha River
[2]Feet above confluence with Finney Branch
[3]Elevation computed without consideration of backwater effects from Finney Branch

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

DAVIS CREEK – DUTCH HOLLOW

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
East Bank Tributary								
A	686	19	104	4.6	619.5	619.5	619.5	0.0
B	787	23	95	5.1	619.7	619.7	619.7	0.0
C	876	40	139	3.5	620.0	620.0	620.3	0.3
D	1,098	90	177	2.7	624.7	624.7	624.9	0.2
E	1,647	25	56	8.6	644.8	644.8	644.8	0.0
F	2,144	28	67	7.1	661.1	661.1	661.4	0.3
G	2,804	33	70	6.9	690.9	690.9	691.5	0.6
H	3,633	26	56	8.5	755.1	755.1	755.1	0.0

[1]Feet above confluence with Kanawha River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

EAST BANK TRIBUTARY

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Edens Fork								
A	550	125	983	4.6	607.9	604.5[2]	605.5	1.0
B	745	72	770	5.8	607.9	605.6[2]	606.2	0.6
C	1,300	225	1,600	2.8	607.9	606.8[2]	607.7	0.9
D	2,050	89	759	5.9	607.9	607.9	608.7	0.8
E	2,950	129	1,051	4.3	611.1	611.1	612.1	1.0
F	3,350	210	1,299	3.5	612.0	612.0	613.0	1.0
G	3,560	141	993	4.5	612.7	612.7	613.7	1.0
H	3,735	84	740	6.1	613.2	613.2	614.1	0.9
I	4,240	83	851	5.3	615.3	615.3	616.2	0.9
J	4,760	110	960	4.7	616.8	616.8	617.7	0.9
K	4,900	96	787	5.7	617.3	617.3	618.2	0.9
L	4,985	90	761	5.9	617.6	617.6	618.5	0.9
M	5,150	88	743	6.1	618.6	618.6	619.5	0.9
N	5,320	70	648	6.9	619.4	619.4	620.3	0.9
O	5,660	102	880	5.1	621.3	621.3	622.2	0.9
P	5,760	82	696	6.5	621.9	621.9	622.8	0.9
Q	5,945	93	1,025	4.4	623.6	623.6	624.5	0.9
R	6,320	90	813	5.5	624.4	624.4	625.1	0.7
S	6,710	119	912	4.2	626.9	626.9	627.3	0.4
T	7,790	66	683	5.6	629.4	629.4	629.8	0.4
U	8,860	86	709	5.4	632.9	632.9	633.7	0.8
V	9,915	50	467	8.1	638.6	638.6	639.2	0.6
W	10,620	60	601	6.3	643.3	643.3	644.1	0.8
X	11,010	100	935	4.1	645.4	645.4	645.9	0.5
Y	11,335	99	1,054	3.6	645.6	645.6	646.5	0.9
Z	12,475	80	677	2.2	656.0	656.0	656.7	0.7

[1]Feet above confluence with Twomile Creek
[2]Elevation computed without consideration of backwater from Twomile Creek

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

EDENS FORK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Edens Fork (continued)								
AA	12,980	83	690	2.2	656.4	656.4	657.2	0.8
AB	13,190	93	360	4.2	656.4	656.4	657.1	0.7
AC	14,200	54	237	6.4	667.0	667.0	667.0	0.0
AD	15,310	113	325	4.7	679.2	679.2	680.1	0.9
AE	16,350	70	215	7.1	691.3	691.3	691.5	0.2
AF	17,305	73	270	5.6	702.6	702.6	703.4	0.8
AG	17,900	49	125	5.5	709.0	709.0	709.0	0.0
AH	18,285	37	100	6.9	714.5	714.5	714.5	0.0
AI	18,910	24	57	8.1	723.2	723.2	723.2	0.0
AJ	19,130	43	143	3.2	727.7	727.7	727.9	0.2
AK	19,635	39	62	7.4	734.5	734.5	734.5	0.0
AL	19,885	34	65	7.1	740.5	740.5	740.5	0.0
AM	20,318	31	87	5.3	748.6	748.6	748.9	0.3
AN	20,600	43	71	6.5	753.8	753.8	753.8	0.0
AO	21,239	36	75	6.2	768.1	768.1	768.3	0.2
AP	21,418	27	73	6.3	772.1	772.1	773.1	1.0
AQ	21,915	20	51	9.1	786.8	786.8	786.8	0.0

[1]Feet above confluence with Twomile Creek

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

EDENS FORK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Elk River								
A	839	280	6,367	13.7	594.0	580.0[2]	580.9	0.9
B	1,093	290	7,254	12.0	594.0	581.5[2]	582.1	0.6
C	1,890	320	7,968	10.9	594.0	583.0[2]	583.6	0.6
D	2,207	330	8,411	10.4	594.0	583.6[2]	584.2	0.6
E	3,268	296	7,784	11.2	594.0	584.4[2]	585.0	0.6
F	4,514	250	7,221	12.1	594.0	586.0[2]	586.4	0.4
G	5,021	235	7,582	11.5	594.0	587.1[2]	587.6	0.5
H	5,802	290	8,758	9.9	594.0	588.7[2]	589.3	0.6
I	7,011	290	9,025	9.7	594.0	589.6[2]	589.9	0.3
J	8,078	245	8,101	10.8	594.0	590.0[2]	590.7	0.7
K	9,081	237	7,124	12.2	594.0	590.4[2]	591.1	0.7
L	10,322	296	9,773	8.9	594.0	592.5[2]	593.1	0.6
M	11,130	280	9,822	9.1	594.0	592.9[2]	593.7	0.8
N	13,453	256	8,705	10.0	594.0	593.8[2]	594.6	0.8
O	14,703	336	10,197	8.5	594.7	594.7	595.5	0.8

[1]Feet above confluence with Kanawha River
[2]Elevation computed without consideration of backwater from Kanawha River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

ELK RIVER

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE [1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
P	15,090	264	8,840	8.7	595.3	595.3	596.1	0.8
Q	15,933	273	8,795	8.7	595.5	595.5	596.3	0.8
R	17,527	258	8,241	9.3	595.9	595.9	596.6	0.7
S	17,850	292	9,490	8.1	596.4	596.4	597.0	0.6
T	18,567	493	15,753	4.9	597.2	597.2	598.1	0.9
U	21,193	329	10,656	7.2	597.3	597.3	598.2	0.9
V	23,003	342	10,451	7.3	597.8	597.8	598.7	0.9
W	24,588	290	8,663	8.8	597.9	597.9	598.8	0.9
X	25,252	289	9,564	8.0	598.5	598.5	599.4	0.9
Y	26,622	290	8,971	8.5	598.7	598.7	599.5	0.8
Z	28,489	377	10,576	7.2	599.7	599.7	600.5	0.8
AA	29,793	363	10,289	7.4	600.4	600.4	601.3	0.9
AB	30,902	324	9,159	8.4	600.6	600.6	601.4	0.8
AC	31,808	318	9,325	8.2	601.0	601.0	601.9	0.9
AD	32,678	300	8,990	8.5	601.3	601.3	602.1	0.8
AE	35,168	283	9,210	8.3	602.4	602.4	603.1	0.7
AF	35,849	308	9,927	7.7	602.8	602.8	603.5	0.7
AG	38,301	272	9,318	8.2	603.8	603.8	604.4	0.6
AH	39,861	308	9,828	7.8	604.3	604.3	604.9	0.6
AI	41,165	329	10,354	7.4	604.8	604.8	605.5	0.7

[1] Feet above confluence with Kanawha River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: ELK RIVER

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE [1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
AJ	41,949	512	15,956	4.8	605.8	605.8	606.4	0.6
AK	43,838	312	10,562	7.3	606.1	606.1	606.6	0.5
AL	45,590	275	9,646	7.9	606.5	606.5	607.1	0.6
AM	46,629	296	10,272	7.5	606.8	606.8	607.5	0.7
AN	47,868	279	9,387	8.2	607.0	607.0	607.6	0.6
AO	48,733	304	10,123	7.6	607.4	607.4	608.0	0.6
AP	49,156	291	9,668	7.9	607.4	607.4	608.0	0.6
AQ	50,482	304	9,664	7.9	607.8	607.8	608.4	0.6
AR	52,041	373	11,360	6.7	608.4	608.4	609.1	0.7
AS	53,988	307	9,110	8.4	608.6	608.6	609.2	0.6
AT	56,834	340	10,992	7.0	609.9	609.9	610.4	0.5
AU	58,036	351	10,722	7.1	610.1	610.1	610.6	0.5
AV	59,402	334	10,128	7.6	610.3	610.3	610.8	0.5
AW	62,117	316	9,971	7.7	611.4	611.4	611.9	0.5
AX	63,561	285	9,930	7.7	612.0	612.0	612.6	0.6
AY	64,420	356	11,035	6.9	612.3	612.3	612.9	0.6
AZ	65,733	323	10,464	7.3	612.7	612.7	613.3	0.6
BA	66,520	420	12,554	6.1	613.5	613.5	614.3	0.8
BB	67,716	360	11,194	6.8	614.1	614.1	614.5	0.4
BC	69,749	252	9,184	8.3	614.6	614.6	615.3	0.7

[1] Feet above confluence with Kanawha River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: ELK RIVER

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE [1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
BD	71,721	315	10,972	7.0	615.7	615.7	616.5	0.8
BE	73,521	550[3]	15,499	4.9	616.8	616.8	617.6	0.8
BF	74,621	694	22,865	3.4	617.3	617.3	618.1	0.8
BG	76,419	332	10,857	6.8	618.1	618.1	618.8	0.7
BH	78,575	358	11,425	6.4	618.7	618.7	619.5	0.8
BI	79,905	353	11,254	6.5	619.2	619.2	620.0	0.8
BJ	81,086	468	13,115	5.6	619.9	619.9	620.6	0.7
BK	82,231	349	11,288	6.5	620.1	620.1	620.9	0.8
BL	83,743	532	15,974	4.6	621.1	621.1	621.8	0.7
BM	86,121	340	11,578	6.3	621.7	621.7	622.4	0.7
BN	87,102	390	11,368	6.5	622.1	622.1	622.8	0.7
BO	88,530	321	10,190	7.2	622.5	622.5	623.2	0.7
BP	90,434	419	10,650	6.9	623.4	623.4	624.1	0.7
BQ	91,669	460	15,310	4.8	624.5	624.5	625.2	0.7
BR	93,809	375[3]	10,573	6.9	624.8	624.8	625.5	0.7
BS	95,460	496	13,999	5.2	625.8	625.8	626.4	0.6
BT	96,946	460	14,048	5.2	626.2	626.2	626.9	0.7
BU	97,880	425	14,254	5.2	626.4	626.4	627.2	0.8
BV	101,337	410	13,063	5.6	627.5	627.5	628.1	0.6
BW	102,904	380	12,037	6.1	627.8	627.8	628.5	0.7

[1] Feet above confluence with Kanawha River

[3] While a bare earth Digital Elevation Model is used for this study, some buildings are modeled as obstructions in the HEC-RAS model. Floodway width reported by HEC-RAS excludes obstructions therefore is different from the floodway width measured on the map.

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: ELK RIVER

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE [1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
BX	103,858	585	14,576	5.0	628.2	628.2	628.9	0.7
BY	106,061	380	13,823	5.3	628.7	628.7	629.5	0.8
BZ	107,671	335	11,658	6.3	629.1	629.1	629.8	0.7
CA	109,718	440	13,209	5.6	629.6	629.6	630.4	0.8
CB	111,707	370	12,266	6.0	630.4	630.4	630.9	0.5
CC	112,747	374[3]	11,205	6.1	630.5	630.5	631.2	0.7
CD	114,374	482[3]	15,446	4.5	631.5	631.5	632.4	0.9
CE	116,823	465[3]	11,912	5.8	631.8	631.8	632.6	0.8
CF	117,435	507[3]	13,502	5.1	632.1	632.1	632.9	0.8
CG	119,180	445	11,787	5.8	632.3	632.3	633.3	1.0
CH	120,805	532	16,391	4.2	633.3	633.3	634.2	0.9
CI	123,069	499[3]	13,735	5.0	633.8	633.8	634.6	0.8
CJ	125,342	485	13,772	5.0	634.6	634.6	635.3	0.7
CK	126,988	455	15,122	4.6	635.1	635.1	635.8	0.7
CL	129,025	392	11,299	6.1	635.3	635.3	636.1	0.8
CM	130,664	395	11,049	6.2	635.8	635.8	636.6	0.8
CN	133,324	450	14,242	4.8	637.3	637.3	638.0	0.7
CO	134,964	411	13,325	5.2	637.7	637.7	638.4	0.7
CP	136,345	362	11,446	5.6	638.1	638.1	638.6	0.5
CQ	138,918	305	9,051	7.0	638.6	638.6	639.4	0.8

[1] Feet above confluence with Kanawha River

[3] While a bare earth Digital Elevation Model is used for this study, some buildings are modeled as obstructions in the HEC-RAS model. Floodway width reported by HEC-RAS excludes obstructions therefore is different from the floodway width measured on the map.

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: ELK RIVER

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE [1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
CR	140,883	290	8,869	7.2	639.5	639.5	640.3	0.8
CS	143,597	365	10,714	5.9	640.5	640.5	641.3	0.8
CT	145,827	281	9,352	6.8	641.1	641.1	641.9	0.8
CU	147,575	310	9,941	6.4	641.7	641.7	642.5	0.8
CV	148,870	365	10,326	6.2	641.9	641.9	642.7	0.8
CW	159,272	323	9,374	6.8	645.6	645.6	646.3	0.7
CX	160,882	280	8,367	7.6	646.1	646.1	646.8	0.7
CY	162,297	445	12,270	5.2	647.0	647.0	647.8	0.8
CZ	164,621	342	9,464	6.7	647.3	647.3	648.0	0.7
DA	166,249	415	11,178	5.8	647.6	647.6	648.6	1.0
DB	167,189	280	7,374	8.8	647.8	647.8	648.8	1.0

[1] Feet above confluence with Kanawha River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: ELK RIVER

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Elk Twomile Creek								
A	150	103	993	5.0	594.0	581.3[2]	582.3	1.0
B	450	82	696	7.2	594.0	582.3[2]	583.0	0.7
C	865	103	1,007	5.0	594.0	586.1[2]	586.5	0.4
D	1,650	161	2,206	2.3	594.0	586.1[2]	587.6	0.6
E	2,240	131	1,461	3.4	594.0	587.0[2]	587.9	0.6
F	2,970	87	1,003	5.0	594.0	587.3[2]	588.9	0.7
G	3,750	80	735	6.8	594.0	590.7[2]	591.5	0.8
H	4,440	75	747	6.7	594.4	594.4	595.0	0.6
I	4,765	90	781	6.4	595.9	595.9	596.7	0.8
J	5,100	128	1,036	4.8	597.5	597.5	598.2	0.7
K	5,265	150	1,201	4.2	598.7	598.7	599.6	0.9
L	6,055	96	809	6.2	601.0	601.0	602.0	1.0
M	7,370	78	742	6.7	607.1	607.1	607.7	0.6
N	7,575	99	910	5.5	608.5	608.5	609.2	0.7
O	7,870	84	672	7.4	609.4	609.4	609.9	0.5
P	8,400	100	677	7.4	612.7	612.7	613.4	0.7
Q	8,535	117	1,139	4.4	615.2	615.2	616.2	1.0
R	9,300	80	677	7.4	617.7	617.7	618.4	0.7
S	9,885	72	637	7.8	621.7	621.7	621.9	0.2
T	10,465	107	1,287	3.5	626.6	626.6	626.9	0.3
U	11,150	69	717	6.2	627.2	627.2	627.6	0.4
V	11,300	89	790	5.6	627.6	627.6	628.1	0.5
W	11,770	130	1,076	4.1	629.1	629.1	629.5	0.4
X	12,040	170	1,652	2.7	630.4	630.4	631.2	0.8
Y	12,275	220	2,047	2.2	630.6	630.6	631.4	0.8
Z	12,520	170	1,291	3.4	630.8	630.8	631.7	0.9

[1]Feet above confluence with Elk River
[2]Elevation computed without consideration of backwater from Elk River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

ELK TWOMILE CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Elk Twomile Creek (continued)								
AA	12,990	292	1,887	2.4	631.6	631.6	632.6	1.0
AB	13,130	340	1,919	2.3	631.7	631.7	632.7	1.0
AC	13,405	145	1,249	3.6	632.0	632.0	633.0	1.0
AD	13,990	116	1,086	4.1	633.3	633.3	634.3	1.0
AE	14,825	89	765	5.8	636.3	636.3	637.1	0.8
AF	15,140	76	642	5.9	638.9	638.9	639.8	0.9
AG	16,040	52	475	8.0	642.8	642.8	643.6	0.8
AH	16,370	115	1,328	2.9	644.9	644.9	645.7	0.8
AI	16,800	107	863	4.4	645.2	645.2	646.0	0.8
AJ	17,650	119	867	4.4	646.9	646.9	647.8	0.9
AK	17,810	115	848	4.5	647.5	647.5	648.4	0.9
AL	18,580	53	483	7.9	653.8	653.8	653.9	0.1
AM	19,000	86	694	5.5	655.7	655.7	656.4	0.7
AN	19,320	104	710	5.4	658.5	658.5	659.4	0.9
AO	19,850	74	582	6.5	660.5	660.5	661.3	0.8
AP	20,090	75	699	5.4	663.1	663.1	664.1	1.0
AQ	20,700	88	643	5.9	664.9	664.9	665.8	0.9
AR	20,865	68	456	8.3	666.1	666.1	666.9	0.8
AS	21,720	68	535	7.1	672.2	672.2	673.0	0.8
AT	21,910	62	475	8.0	673.5	673.5	674.4	0.9
AU	22,215	135	1,049	3.6	675.3	675.3	676.2	0.9
AV	22,320	133	1,091	3.5	675.7	675.7	676.6	0.9
AW	22,690	101	835	4.5	676.9	676.9	677.7	0.8
AX	22,940	89	788	4.8	677.9	677.9	678.7	0.8
AY	23,200	100	815	4.7	678.8	678.8	679.6	0.8
AZ	24,075	107	761	5.0	683.3	683.3	684.2	0.9

[1]Feet above confluence with Kanawha River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

ELK TWOMILE CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Elk Twomile Creek (continued)								
BA	24,590[1]	92	771	4.9	686.0	686.0	686.8	0.8
BB	24,740[1]	112	884	4.3	687.5	687.5	688.4	0.9
BC	25,565[1]	68	540	6.1	691.4	691.4	692.1	0.7
BD	25,860[1]	61	505	6.5	694.1	694.1	694.9	0.8
BE	26,465[1]	69	617	5.3	697.7	697.7	698.6	0.9
BF	26,970[1]	68	502	6.6	700.9	700.9	701.6	0.7
BG	27,260[1]	126	1,113	3.0	703.1	703.1	703.9	0.8
BH	27,820[1]	97	749	4.4	704.3	704.3	705.1	0.8
BI	28,010[1]	148	1,108	3.0	707.2	707.2	708.2	1.0
BJ	28,860[1]	99	646	5.1	710.1	710.1	711.0	0.9
Fields Creek								
A	1,5252	110	857	4.0	603.6	601.5[3]	602.4	0.9
B	1,7502	200	1,102	4.2	603.6	603.1[3]	604.0	0.9
C	2,8502	190	1,129	4.1	607.1	607.1	608.0	0.9
D	3,8302	70	510	9.1	612.9	612.9	613.4	0.5
E	4,4202	77	694	6.7	618.1	618.1	619.1	1.0
F	4,7002	100	639	7.3	622.4	622.4	622.4	0.0
G	5,5002	100	856	5.4	625.5	625.5	625.8	0.3
H	6,1302	141	1,227	3.8	627.2	627.2	627.9	0.7
I	6,4302	96	520	8.1	630.0	630.0	630.0	0.0
J	6,7602	85	570	7.4	632.3	632.3	633.0	0.7
K	7,5602	99	706	5.9	638.1	638.1	638.7	0.6
L	8,4902	41	314	13.4	646.8	646.8	646.8	0.0
M	8,7802	100	930	4.5	651.8	651.8	652.3	0.5
N	9,3802	48	337	12.5	654.6	654.6	654.9	0.3

[1]Feet above confluence with Elk River
[2]Feet above confluence with Kanawha River
[3]Elevation computed without consideration of backwater from Kanawha River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

ELK TWOMILE CREEK – FIELDS CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Fields Creek (continued)								
O	10,390	121	967	4.3	663.4	663.4	664.3	0.9
P	11,000	59	379	10.6	667.4	667.4	667.4	0.0
Q	11,200	150	1,127	3.6	671.4	671.4	672.3	0.9
R	12,300	69	333	10.5	676.8	676.8	677.2	0.4
S	13,050	57	486	7.2	688.2	688.2	689.1	0.9
T	14,250	61	389	9.0	700.7	700.7	701.1	0.4
Finney Branch								
A	2,005	60	600	1.4	590.0	578.1[2]	578.4	0.3
B	2,665	40	367	2.2	590.0	578.1[2]	578.5	0.4
C	3,579	42	157	3.6	590.0	580.7[2]	580.9	0.1
D	4,428	35	322	1.8	590.0	583.9[2]	584.2	0.3
E	5,367	22	103	5.5	590.0	583.3[2]	584.3	1.0
F	6,044	38	182	3.1	590.0	586.1[2]	587.0	0.9
G	6,443	30	151	3.1	590.0	588.1[2]	588.6	0.5
H	6,706	54	179	2.6	590.0	589.1[2]	589.9	0.9
I	7,293	22	73	6.5	593.3	593.3	593.2	0.0
J	7,735	40	151	3.1	598.9	598.9	599.5	0.6
K	8,100	30	142	3.3	600.8	600.8	601.0	0.3
Georges Creek								
A	1,228	31	134	6.0	597.0	594.2[2]	595.1	1.0
B	1,997	41	104	6.6	607.4	607.4	607.4	0.0
C	2,754	36	94	7.3	622.5	622.5	622.6	0.1
D	3,340	13	64	10.7	630.4	630.4	630.9	0.6
E	3,729	28	103	6.7	639.2	639.2	639.3	0.1

[1]Feet above confluence with Kanawha River
[2]Elevation computed without consideration of backwater effects from Kanawha River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

FIELDS CREEK – FINNEY BRANCH – GEORGES CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Georges Creek (continued)								
F	4,076[1]	77	181	3.8	647.3	647.3	647.5	0.2
G	4,532[1]	55	147	4.7	656.9	656.9	657.0	0.1
H	5,007[1]	63	155	3.8	664.6	664.6	664.7	0.1
I	5,410[1]	70	114	5.1	672.7	672.7	672.7	0.0
J	5,779[1]	45	83	7.0	681.6	681.6	681.6	0.0
K	6,235[1]	41	168	3.5	693.4	693.4	693.4	0.4
L	6,656[1]	32	78	7.4	698.2	698.2	698.2	0.0
M	6,848[1]	37	89	6.5	702.3	702.3	702.6	0.3
N	7,100[1]	67	107	5.4	706.6	706.6	706.7	0.1
O	7,408[1]	48	91	6.4	713.1	713.1	713.1	0.0
P	7,711[1]	38	84	6.9	721.2	721.2	721.2	0.0
Huggard Branch								
A	90[2]	95	531	2.6	701.1	701.1	701.6	0.5
B	1,330[2]	78	313	4.3	716.3	716.3	717.2	0.9
C	2,270[2]	28	166	6.0	727.2	727.2	727.8	0.6
D	3,260[2]	66	222	4.5	739.7	739.7	740.6	0.9
E	4,130[2]	60	244	4.1	750.3	750.3	751.0	0.7
F	4,910[2]	46	202	3.7	757.4	757.4	758.3	0.9
G	5,140[2]	44	185	4.1	761.9	761.9	762.6	0.7
H	5,610[2]	73	265	2.8	765.1	765.1	766.0	0.9
I	6,330[2]	19	72	10.4	774.8	774.8	775.1	0.3
J	6,670[2]	75	233	2.2	780.7	780.7	781.5	0.8
K	7,000[2]	29	102	5.1	784.0	784.0	784.6	0.6
L	7,750[2]	27	110	4.7	794.5	794.5	795.2	0.7
M	8,590[2]	17	87	6.0	807.1	807.1	807.8	0.7

[1]Feet above confluence with Kanawha River
[2]Feet above confluence with Legg Fork

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

GEORGES CREEK – HUGGARD BRANCH

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Hughes Creek								
A	160[1]	120	974	5.0	615.1	598.6[2]	599.6	1.0
B	1,000[1]	105	798	6.1	615.1	602.7[2]	603.4	0.7
C	1,490[1]	70	518	9.5	615.1	607.0[2]	607.8	0.8
D	1,840[1]	110	784	6.3	615.1	614.8[2]	614.8	0.0
E	3,080[1]	123	963	5.1	623.5	623.5	623.6	0.1
F	3,350[1]	197	1,371	3.6	623.6	623.6	624.4	0.8
G	3,575[1]	285	1,077	4.6	624.3	624.3	625.3	1.0
H	4,335[1]	97	518	9.5	629.3	629.3	629.7	0.4
I	5,285[1]	90	787	6.2	636.8	636.8	637.4	0.6
J	6,125[1]	167	860	5.7	644.2	644.2	645.0	0.8
K	7,350[1]	70	538	9.1	655.3	655.3	656.2	0.9
L	8,500[1]	75	501	9.8	669.0	669.0	669.3	0.3
Hurricane Fork								
A	110[3]	73	353	6.7	864.4	864.4	865.4	1.0
B	500[3]	83	395	6.0	871.0	871.0	871.7	0.7
C	1,275[3]	89	278	8.5	888.1	888.1	888.6	0.5
D	1,430[3]	50	299	7.9	892.7	892.7	892.8	0.1
E	1,960[3]	95	485	4.8	898.2	898.2	899.2	1.0
F	2,900[3]	45	202	11.7	915.3	915.3	915.4	0.1
G	3,070[3]	44	248	9.5	919.8	919.8	920.3	0.5
H	3,860[3]	108	474	4.5	932.0	932.0	932.9	0.9
I	4,495[3]	40	251	8.5	942.3	942.3	942.8	0.5
J	5,370[3]	46	236	9.1	960.6	960.6	960.7	0.1
K	6,100[3]	63	281	7.6	974.2	974.2	975.0	0.8
L	7,220[3]	56	248	8.6	996.8	996.8	997.2	0.4

[1]Feet above confluence with Kanawha River
[2]Elevation computed without consideration of backwater from Kanawha River
[3]Feet above confluence with Kellys Creek

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

HUGHES CREEK – HURRICANE FORK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Indian Creek								
A	510[1]	85	417	4.1	607.9	587.6[2]	587.6	0.0
B	1,767[1]	145	492	3.5	607.9	589.4[2]	589.8	0.4
C	3,249[1]	112	814	2.1	607.9	595.0[2]	595.0	0.0
D	4,115[1]	63	385	4.1	607.9	597.9[2]	597.9	0.0
E	4,916[1]	65	369	4.3	607.9	601.1[2]	601.1	0.0
F	5,568[1]	80	398	3.8	607.9	603.4[2]	604.3	0.9
G	6,611[1]	60	182	8.3	607.9	606.7[2]	607.0	0.3
H	7,613[1]	60	242	6.2	612.6	612.6	612.6	0.0
I	8,429[1]	65	415	3.6	619.0	619.0	619.9	1.0
J	9,347[1]	65	335	4.5	624.8	624.8	625.8	1.0
K	10,229[1]	65	407	3.2	633.8	633.8	634.8	0.0
L	11,209[1]	50	213	6.1	635.0	634.9	635.6	0.7
M	12,232[1]	35	210	6.3	642.3	642.3	642.3	0.0
N	13,011[1]	34	123	9.4	647.5	647.5	647.6	0.1
O	14,030[1]	60	297	3.9	654.0	654.0	655.0	1.0
P	14,974[1]	59	182	6.4	661.6	661.6	662.1	0.5
Q	16,057[1]	75	154	7.3	672.0	672.0	672.0	0.0
R	16,802[1]	73	244	4.6	679.8	679.8	679.8	0.0
S	17,712[1]	65	210	5.3	686.0	686.0	686.0	0.0
T	18,229[1]	45	303	3.7	693.7	693.7	693.8	0.1
Indian Creek (Trib. to Coal River)								
A	2,223[3]	116	937	0.6	587.2	577.8[4]	578.7	0.9
B	3,853[3]	85	728	0.5	587.2	577.8[4]	578.7	0.9

[1]Feet above confluence with Elk River
[2]Elevation computed without consideration of backwater effects from Elk River
[3]Feet above confluence with Coal River
[4]Elevation computed without consideration of backwater effects from Coal River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

INDIAN CREEK – INDIAN CREEK (TRIBUTARY TO COAL RIVER)

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Kanawha River								
A	230,398	830	34,864	6.2	585.8	583.0[2]	583.8	0.8
B	231,686	795	34,261	6.3	585.9	583.2[2]	584.0	0.8
C	233,059	795	34,413	6.2	586.1	583.4[2]	584.2	0.8
D	234,221	840	34,685	6.2	586.2	583.6[2]	584.4	0.8
E	235,646	840	34,873	6.2	586.4	583.8[2]	584.6	0.8
F	237,072	795	32,370	6.6	586.5	583.9[2]	584.7	0.8
G	238,656	795	32,594	6.6	586.7	584.2[2]	585.0	0.8
H	239,976	825	34,423	6.2	587.0	584.5[2]	585.3	0.8
I	241,782	825	34,765	5.3	587.3	584.9[2]	585.7	0.8
J	243,524	790	33,969	5.6	587.5	585.1[2]	585.9	0.8
K	244,802	800	33,084	5.6	587.6	585.3[2]	586.1	0.8
L	246,312	785	32,225	5.6	587.7	585.5[2]	586.3	0.8
M	247,579	831	33,560	5.7	587.9	585.6[2]	586.4	0.8
N	248,751	795	33,202	5.6	588.0	585.8[2]	586.6	0.8
O	250,272	845	33,344	5.5	588.2	586.0[2]	586.8	0.8
P	251,750	845	34,698	5.3	588.3	586.2[2]	587.0	0.8
Q	253,123	825	34,808	5.3	588.5	586.3[2]	587.1	0.8
R	254,496	825	33,628	5.5	588.6	586.5[2]	587.3	0.8
S	255,974	890	33,757	5.5	588.7	586.7[2]	587.5	0.8
T	257,400	825	33,629	5.5	588.8	586.8[2]	587.6	0.8
U	258,456	820	33,726	5.5	588.9	586.9[2]	587.7	0.8
V	259,459	825	33,956	5.4	589.0	587.0	587.8	0.8
W	260,357	860	34,036	5.4	589.1	587.2	588.0	0.8
X	261,202	850	32,293	5.7	589.2	587.2	588.0	0.8
Y	261,835	785	32,354	5.7	589.2	587.3	588.2	0.9
Z	262,416	830	31,879	5.8	589.3	587.4	588.3	0.9

[1]Feet above confluence with Ohio River
[2]Elevation computed without consideration of coincident peak flows with Ohio River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

KANAWHA RIVER

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY[2]	WITH FLOODWAY	INCREASE
Kanawha River (continued)								
AA	263,050	810	31,944	5.8	589.4	587.5	588.4	0.9
AB	263,525	820	34,055	5.4	589.5	587.6	588.5	0.9
AC	264,475	790	34,137	5.4	589.6	587.7	588.6	0.9
AD	265,267	775	32,009	5.8	589.6	587.7	588.6	0.9
AE	265,795	780	32,059	5.8	589.7	587.8	588.7	0.9
AF	266,376	880	37,431	4.9	589.9	588.0	588.8	0.8
AG	267,168	885	37,494	4.9	589.9	588.1	589.0	0.9
AH	267,854	810	32,756	5.6	589.9	588.1	589.0	0.9
AI	268,858	800	32,851	6.4	590.0	588.2	589.1	0.9
AJ	269,755	745	29,489	6.4	590.0	588.3	589.2	0.9
AK	270,706	739	29,595	6.3	590.2	588.4	589.3	0.9
AL	272,163	745	32,465	5.7	590.4	588.7	589.6	0.9
AM	272,939	745	32,532	5.7	590.5	588.8	589.7	0.9
AN	275,178	735	31,518	5.9	590.7	589.1	590.0	0.9
AO	276,672	729	31,410	5.9	590.9	589.3	590.2	0.9
AP	278,304	689	28,126	6.6	591.0	589.4	590.3	0.9
AQ	279,618	700	27,927	6.6	591.2	589.6	590.5	0.9
AR	280,653	640	27,456	6.7	591.4	589.8	590.7	0.9
AS	282,644	944	33,288	5.6	591.8	590.3	591.2	0.9
AT	283,995	937	36,928	5.0	592.1	590.7	591.6	0.9
AU	285,178	937	37,047	4.9	592.2	590.8	591.7	0.9
AV	286,894	661	29,424	6.2	592.2	590.8	591.8	1.0
AW	287,924	874	29,810	6.1	592.4	591.0	592.0	1.0
AX	289,386	1,075	38,783	4.7	592.7	591.3	592.3	1.0
AY	290,580	1,020	39,370	4.6	592.8	591.4	592.4	1.0
AZ	292,380	980	32,414	5.6	592.8	591.5	592.5	1.0

[1]Feet above confluence with Ohio River
[2]Elevation computed without consideration of coincident peak flows with Ohio River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

KANAWHA RIVER

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY[2]	WITH FLOODWAY	INCREASE
Kanawha River (continued)								
BA	294,212	1,037	39,276	4.7	593.1	591.8	592.8	1.0
BB	295,981	1,113	45,848	4.0	593.3	592.0	593.0	1.0
BC	297,491	920	35,155	5.2	593.3	592.0	593.0	1.0
BD	298,410	920	35,089	5.2	593.4	592.1	593.1	1.0
BE	299,767	768	30,830	5.9	593.4	592.2	593.2	1.0
BF	300,807	720	30,815	5.9	593.5	592.3	593.3	1.0
BG	301,947	813	32,420	5.6	593.7	592.5	593.5	1.0
BH	303,341	869	33,666	5.4	593.9	592.6	593.6	1.0
BI	304,440	990	33,206	5.5	594.0	592.8	593.8	1.0
BJ	306,140	645	26,126	5.9	594.0	592.9	593.9	1.0
BK	307,581	540	23,578	6.6	594.1	592.9	593.9	1.0
BL	308,959	600	27,585	5.6	594.4	593.3	594.3	1.0
BM	310,179	650	30,396	5.1	594.6	593.5	594.5	1.0
BN	311,763	724	32,216	4.8	594.7	593.6	594.6	1.0
BO	313,115	667	27,976	5.5	594.7	593.6	594.6	1.0
BP	314,271	697	28,720	5.4	594.9	593.7	594.7	1.0
BQ	315,528	705	30,397	5.1	595.0	593.9	594.9	1.0
BR	317,064	713	30,489	5.1	595.2	594.1	595.1	1.0
BS	318,590	693	29,672	5.2	595.3	594.2	595.2	1.0
BT	319,736	705	29,740	5.2	595.4	594.3	595.3	1.0
BU	321,452	692	29,231	5.3	595.7	594.6	595.6	1.0
BV	322,085	670	28,875	5.4	595.7	594.7	595.7	1.0
BW	323,247	645	27,125	5.7	595.8	594.7	595.7	1.0
BX	324,694	625	26,843	5.8	595.9	594.9	595.9	1.0
BY	326,283	733	27,729	5.6	596.1	595.0	596.0	1.0
BZ	327,751	623	25,681	6.0	596.2	595.0	596.2	1.0

[1]Feet above confluence with Ohio River
[2]Elevation computed without consideration of coincident peak flows with Ohio River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

KANAWHA RIVER

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY[2]	WITH FLOODWAY	INCREASE
Kanawha River (continued)								
CA	329,108	650	28,741	5.4	596.5	595.0	596.5	1.0
CB	330,127	650	28,802	5.4	596.6	595.0	596.6	1.0
CC	330,972	648	26,848	5.8	596.6	595.0	596.6	1.0
CD	332,144	630	26,930	5.8	596.7	595.0	596.7	1.0
CE	333,300	673	29,375	5.3	596.9	595.0	596.9	1.0
CF	336,199	637	27,232	5.7	597.1	595.0	597.2	1.0
CG	337,112	665	28,306	5.5	597.2	596.3	597.3	1.0
CH	338,532	924	30,490	5.1	597.4	596.5	597.5	1.0
CI	339,467	685	28,468	5.4	597.4	596.5	597.5	1.0
CJ	340,470	685	28,532	5.4	597.5	596.6	597.6	1.0
CK	341,436	694	28,419	5.5	597.6	596.7	597.7	1.0
CL	342,989	685	28,356	5.5	597.8	596.9	597.9	1.0
CM	343,960	706	28,330	5.5	597.9	597.0	598.0	1.0
CN	346,584	735	29,749	5.2	598.2	597.3	598.3	1.0
CO	348,797	755	29,862	5.2	598.3	597.5	598.5	1.0
CP	350,434	650	24,366	6.3	598.3	597.5	598.5	1.0
CQ	352,387	655	24,542	6.3	598.6	597.8	598.8	1.0
CR	353,918	710	32,135	4.8	599.0	598.2	599.1	0.9
CS	355,555	765	31,410	4.9	599.1	598.3	599.3	1.0
CT	357,667	930	33,989	4.7	600.0	598.4	599.4	1.0
CU	359,357	745	26,320	6.0	600.3	598.7	599.7	1.0
CV	360,994	800	27,919	5.7	600.6	599.1	600.1	1.0
CW	362,842	970	36,004	4.4	601.0	599.6	600.5	0.9
CX	365,059	750	25,575	6.2	601.1	599.6	600.5	0.9
CY	367,330	800	25,950	6.1	601.5	600.1	601.0	0.9
CZ	369,547	800	26,314	6.0	601.9	600.6	601.5	0.9

[1]Feet above confluence with Ohio River
[2]Elevation computed without consideration of coincident peak flows with Ohio River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

KANAWHA RIVER

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY[2]	WITH FLOODWAY	INCREASE
Kanawha River (continued)								
DA	371,501	910	30,221	5.3	602.4	601.2	602.1	0.9
DB	373,507	1,260	27,481	5.8	602.8	601.6	602.4	0.8
DC	374,774	1,082	24,754	6.4	603.1	601.9	602.7	0.8
DD	375,936	1,025	31,454	5.1	603.6	602.5	603.3	0.8
DE	377,467	840	29,838	5.3	603.9	602.8	603.6	0.8
DF	379,315	720	24,727	6.4	604.0	603.0	603.8	0.8
DG	381,322	660	25,071	6.3	604.4	603.4	604.1	0.7
DH	383,222	655	28,306	6.3	604.7	603.8	604.5	0.7
DI	385,651	710	28,036	5.7	605.2	604.3	605.0	0.7
DJ	387,235	875	33,019	4.8	605.6	604.7	605.4	0.7
DK	389,136	650	25,190	6.3	605.6	604.7	605.4	0.7
DL	390,720	800	30,162	5.3	606.0	605.2	605.9	0.7
DM	392,410	1,210	31,496	5.0	606.4	605.5	606.2	0.7
DN	393,518	873	25,061	6.5	606.4	605.5	607.2	0.7
DO	395,472	755	29,742	5.4	606.9	606.2	606.9	0.7
DP	397,637	730	29,967	5.4	607.2	606.5	607.2	0.7
DQ	399,485	1,450	32,514	5.0	607.7	606.9	607.6	0.7
DR	400,699	930	27,896	5.8	607.9	606.2	606.9	0.7
DS	402,653	670	23,025	7.0	608.2	607.5	608.2	0.7
DT	404,237	665	23,287	6.9	608.6	607.9	608.6	0.7
DU	405,768	580	21,347	7.6	608.8	608.2	608.9	0.7
DV	407,088	665	26,035	6.2	609.2	608.8	609.5	0.7
DW	408,830	695	26,121	6.2	609.5	609.1	609.8	0.7
DX	410,309	675	26,302	6.1	609.8	609.4	610.1	0.7
DY	410,890	675	24,179	6.7	609.8	609.4	610.1	0.7
DZ	411,946	660	24,337	6.6	610.0	609.6	610.4	0.8

[1]Feet above confluence with Ohio River
[2]Elevation computed without consideration of coincident peak flows with Ohio River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

KANAWHA RIVER

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY[2]	WITH FLOODWAY	INCREASE
Kanawha River (continued)								
EA	413,899	585	20,878	7.7	610.3	610.0	610.8	0.8
EB	415,800	690	24,828	6.5	611.1	610.7	611.5	0.8
EC	417,754	685	23,582	6.9	611.4	611.1	611.9	0.8
ED	420,077	790	28,283	5.8	612.0	611.7	612.5	0.8
EE	422,453	915	27,909	5.9	612.4	612.1	613.0	0.9
EF	424,987	685	21,203	7.8	612.8	612.6	613.5	0.9
EG	427,046	580	20,251	8.1	613.5	613.3	614.1	0.8
EH	428,894	680	25,884	6.4	614.4	614.2	615.1	0.9
EI	430,742	670	23,787	6.9	614.7	614.5	615.4	0.9
EJ	432,907	560	19,951	8.3	615.1	614.8	615.7	0.9
EK	435,183	560	24,952	6.6	616.0	615.8	616.7	0.9
EL	436,978	890	33,559	4.9	616.6	616.4	617.3	0.9
EM	438,773	725	21,059	7.8	617.8	616.1	617.1	1.0
EN	440,780	1,075	21,689	6.0	618.7	617.3	618.2	0.9
EO	442,575	640	19,901	8.3	619.1	617.6	618.5	0.9
EP	444,792	705	20,559	8.0	620.1	618.8	619.6	0.8
EQ	446,746	870	23,683	7.0	621.0	619.9	620.6	0.7
ER	448,119	685	15,530	10.6	621.2	620.1	620.7	0.6
ES	449,016	635	21,199	7.8	622.3	621.3	622.1	0.8
ET	449,650	610	21,351	7.7	622.5	621.6	622.4	0.8
EU	450,600	570	19,384	8.5	622.7	621.8	622.6	0.8
EV	451,076	620	21,373	7.7	623.1	622.2	622.9	0.7
EW	452,290	660	22,425	7.3	623.6	622.7	623.4	0.7
EX	453,399	875	21,099	7.8	623.9	623.1	623.8	0.7

[1]Feet above confluence with Ohio River
[2]Elevation computed without consideration of coincident peak flows with Ohio River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

KANAWHA RIVER

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Kellys Creek								
A	79	83	958	6.3	610.0	603.0[2]	604.0	1.0
B	1,388	6	1,200	5.0	610.0	604.7[2]	605.4	0.7
C	1,874	74	889	6.7	610.0	605.1[2]	605.8	0.7
D	2,619	56	553	10.9	610.0	607.1[2]	608.0	0.9
E	3,326	85	762	7.9	610.9	610.9	611.4	0.5
F	4,129	68	485	12.4	613.4	613.4	613.9	0.5
G	5,185	71	813	7.4	619.3	619.3	619.8	0.5
H	6,442	154	1,151	5.2	628.1	628.1	628.1	0.0
I	7,545	47	392	15.3	630.4	630.4	630.6	0.2
J	9,020	225	1,551	4.4	642.5	642.5	643.0	0.5
K	9,810	131	1,081	6.4	645.7	645.7	646.3	0.6
L	10,665	180	1,074	6.4	651.6	651.6	652.4	0.8
M	12,220	130	1,096	5.5	661.3	661.3	662.1	0.8
N	12,855	392	3,069	2.0	669.9	669.9	670.9	1.0
O	13,825	91	718	8.4	673.8	673.8	674.4	0.6
P	14,585	126	863	7.0	680.7	680.7	681.2	0.5
Q	15,750	219	1,500	4.0	686.5	686.5	687.0	0.5
R	16,630	174	843	7.2	690.3	690.3	691.1	0.8
S	17,785	170	1,020	5.9	702.4	702.4	703.2	0.8
T	18,605	198	1,057	5.7	712.7	712.7	713.6	0.9
U	19,325	69	644	9.4	718.1	718.1	719.1	1.0
V	19,565	187	1,272	4.8	721.4	721.4	722.3	0.9
W	20,260	113	929	6.5	724.8	724.8	725.7	0.9
X	21,175	235	1,440	4.2	732.9	732.9	733.8	0.9
Y	22,140	68	534	11.3	740.0	740.0	740.3	0.3
Z	22,800	85	826	7.3	747.8	747.8	748.3	0.5

[1]Feet above confluence with Kanawha River
[2]Elevation computed without consideration of backwater from Kanawha River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

KELLYS CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Kellys Creek (continued)								
AA	23,060[1]	162	982	6.2	751.8	751.8	752.7	0.9
AB	23,800[1]	109	812	7.5	759.6	759.6	760.4	0.8
AC	24,765[1]	168	982	6.2	769.3	769.3	770.2	0.9
AD	25,975[1]	144	1,060	5.7	778.3	778.3	779.0	0.7
AE	27,080[1]	206	683	8.9	793.9	793.9	794.7	0.8
AF	27,710[1]	180	983	3.0	801.7	801.7	802.7	1.0
AG	28,450[1]	62	264	11.2	810.8	810.8	811.0	0.2
AH	29,240[1]	89	553	5.3	822.5	822.5	823.5	1.0
AI	30,050[1]	46	273	10.8	831.0	831.0	831.6	0.6
AJ	30,680[1]	95	457	6.5	842.0	842.0	843.0	1.0
AK	30,915[1]	113	765	3.9	845.3	845.3	846.0	0.7
AL	31,345[1]	152	380	7.8	849.9	849.9	850.3	0.4
AM	31,520[1]	142	837	3.5	854.4	854.4	855.1	0.7
AN	32,150[1]	135	382	7.7	859.5	859.5	859.9	0.4
AO	32,215[1]	97	402	7.3	862.0	862.0	862.8	0.8
Legg Fork								
A	360[2]	167	1,184	3.2	628.8	625.2[3]	626.2	1.0
B	1,320[2]	153	981	3.9	628.8	627.3[3]	628.3	1.0
C	2,230[2]	146	1,186	3.2	629.4	629.4	630.3	0.9
D	3,640[2]	141	1,349	2.8	631.3	631.3	632.2	0.9
E	4,670[2]	118	908	4.2	632.8	632.8	633.7	0.9
F	6,220[2]	122	715	5.3	637.9	637.9	638.7	0.8
G	6,400[2]	133	895	4.2	639.5	639.5	640.5	1.0
H	7,300[2]	73	597	6.4	642.8	642.8	643.6	0.8
I	8,610[2]	161	1,096	3.5	647.5	647.5	648.3	0.8

[1]Feet above confluence with Kanawha River
[2]Feet above confluence with Tupper Creek
[3]Elevation computed without consideration of backwater from Tupper Creek

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

KELLYS CREEK – LEGG FORK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Legg Fork (continued)								
J	9,660	51	418	9.1	650.5	650.5	651.1	0.6
K	10,450	101	834	4.6	655.3	655.3	656.3	1.0
L	10,620	72	558	6.8	655.9	655.9	656.8	0.9
M	11,150	131	1,075	3.5	658.7	658.7	659.5	0.8
N	11,600	127	851	4.5	659.6	659.6	660.3	0.7
O	12,000	130	885	4.3	660.8	660.8	661.5	0.7
P	12,350	111	680	5.6	662.0	662.0	662.7	0.7
Q	13,200	83	550	6.9	666.8	666.8	667.5	0.7
R	14,030	88	734	4.0	670.3	670.3	671.1	0.8
S	14,660	64	474	6.2	671.8	671.8	672.5	0.7
T	14,810	71	481	6.1	672.7	672.7	673.4	0.7
U	15,140	84	547	5.4	674.9	674.9	675.6	0.7
V	15,360	95	694	4.2	676.0	676.0	676.8	0.8
W	15,530	65	495	6.0	678.1	678.1	678.9	0.8
X	15,860	82	589	5.0	679.5	679.5	680.4	0.9
Y	16,010	100	713	4.1	680.6	680.6	681.4	0.8
Z	16,400	51	344	8.6	682.0	682.0	682.6	0.6
AA	16,550	105	706	4.2	685.3	685.3	686.3	1.0
AB	17,160	33	257	7.1	687.5	687.5	688.4	0.9
AC	17,840	70	535	3.4	690.8	690.8	691.8	1.0
AD	18,220	30	192	9.5	692.5	692.5	692.9	0.4
AE	18,780	50	334	5.5	698.8	698.8	698.9	0.1
AF	18,850	60	355	5.2	699.0	699.0	699.3	0.3

[1]Feet above confluence with Tupper Creek

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

LEGG FORK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Lens Creek								
A	790	152	1,464	4.2	601.0	598.5	599.4	0.9
B	7,050	150	1,827	3.4	613.3	613.3	614.0	0.7
C	8,000	176	2,044	2.8	614.0	614.0	615.0	1.0
D	9,150	135	936	6.2	616.3	616.3	617.1	0.8
E	10,281	154	1,362	4.3	621.6	621.6	622.4	0.8
F	11,140	124	1,001	5.8	624.5	624.5	625.5	1.0
G	11,630	250	1,875	2.4	626.2	626.2	627.1	0.9
H	13,100	85	458	9.7	629.6	629.6	630.2	0.6
I	14,165	104	1,046	4.2	637.1	637.1	638.0	0.9
J	15,250	38	282	15.6	643.9	643.9	643.9	0.0
K	16,230	316	1,638	2.7	654.0	654.0	654.9	0.9
L	16,350	245	1,162	3.8	654.3	654.3	655.2	0.9
M	16,745	75	505	8.7	657.3	657.3	658.0	0.7
N	16,900	75	797	5.5	661.5	661.5	661.5	0.0
0	17,250	127	989	4.5	662.4	662.4	662.7	0.3
P	18,050	140	973	4.5	665.2	665.2	665.9	0.7
Q	18,250	93	692	6.4	666.6	666.6	667.3	0.7
R	18,410	105	862	5.1	667.7	667.7	668.5	0.8
S	19,405	200	744	5.9	673.2	673.2	674.2	1.0
T	20,630	103	768	5.8	683.3	683.3	683.6	0.3
U	21,380	45	427	6.4	687.4	687.4	688.2	0.8
V	22,695	46	324	8.5	700.3	700.3	701.2	0.9
W	23,330	101	687	4.0	706.9	706.9	707.7	0.8
X	24,420	61	296	9.3	717.2	717.2	717.6	0.4
Y	25,450	55	439	6.3	730.1	730.1	730.9	0.8
Z	26,262	75	391	7.0	736.9	736.9	737.6	0.7
AA	27,082	100	441	6.2	747.4	747.4	747.7	0.3
AB	27,320	100	659	4.2	751.2	751.2	751.4	0.2
AC	28,610	64	225	9.8	762.7	762.7	762.8	0.1
AD	29,610	50	362	6.1	780.0	780.0	781.0	1.0

[1]Feet above confluence with Kanawha River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

LENS CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Lens Creek (continued)								
AE	30,350[1]	42	232	9.5	789.9	789.9	790.3	0.4
AF	31,275[1]	50	356	6.2	803.8	803.8	804.3	0.5
Little Sandy Creek								
A	150[2]	193	2,591	4.1	608.6	598.3[3]	599.3	1.0
B	530[2]	165	2,166	4.8	608.6	598.8[3]	599.7	0.9
C	750[2]	119	1,659	6.3	608.6	599.1[3]	599.9	0.8
D	1,890[2]	145	2,242	4.7	608.6	601.3[3]	601.9	0.6
E	2,860[2]	152	2,058	5.1	608.6	602.6[3]	603.1	0.5
F	3,510[2]	128	2,209	4.8	608.6	603.4[3]	604.1	0.7
G	3,700[2]	137	2,511	4.2	608.6	603.7[3]	604.4	0.7
H	5,080[2]	270	3,967	2.6	608.6	604.5[3]	605.4	0.9
I	5,630[2]	139	2,366	4.4	608.6	604.7[3]	605.6	0.9
J	6,840[2]	370	5,423	1.9	608.6	605.4[3]	606.4	1.0
K	7,840[2]	253	4,165	2.5	608.6	605.7[3]	606.7	1.0
L	8,960[2]	287	4,683	2.2	608.6	606.1[3]	607.1	1.0
M	9,360[2]	225	3,650	2.9	608.6	606.2[3]	607.2	1.0
N	9,500[2]	210	2,952	3.6	608.6	606.4[3]	607.4	1.0
O	10,360[2]	183	2,437	4.3	608.6	607.2[3]	608.2	1.0
P	11,810[2]	201	2,798	3.8	608.8	608.8	609.7	0.9
Q	12,570[2]	333	4,975	2.0	609.3	609.3	610.3	1.0
R	13,300[2]	300	3,930	2.6	609.5	609.5	610.5	1.0
S	13,490[2]	260	3,190	3.2	609.7	609.7	610.7	1.0
T	14,430[2]	210	2,524	4.0	610.9	610.9	611.8	0.9
U	15,750[2]	183	2,183	4.6	613.4	613.4	614.3	0.9
V	16,560[2]	143	1,860	5.4	615.2	615.2	615.9	0.7
W	17,420[2]	177	2,403	4.2	616.8	616.8	617.6	0.8

[1]Feet above confluence with Kanawha River
[2]Feet above confluence with Elk River
[3]Elevation computed without consideration of backwater from Elk River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

LENS CREEK – LITTLE SANDY CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Little Sandy Creek (continued)								
X	17,970	145	2,120	4.8	617.4	617.4	618.2	0.8
Y	18,660	117	1,614	6.3	619.3	619.3	620.2	0.9
Z	19,690	152	1,870	5.4	621.6	621.6	622.3	0.7
AA	20,700	139	2,164	4.7	623.2	623.2	624.0	0.8
AB	21,890	198	3,157	3.1	624.2	624.2	625.1	0.9
AC	23,020	111	1,915	5.2	624.9	624.9	625.8	0.9
AD	24,370	178	2,712	3.6	626.3	626.3	627.2	0.9
AE	24,930	155	2,084	4.7	626.6	626.6	627.6	1.0
AF	25,850	312	4,138	2.4	627.6	627.6	628.6	1.0
AG	26,120	306	3,706	2.7	627.7	627.7	628.7	1.0
AH	26,450	138	2,144	4.6	627.9	627.9	628.9	1.0
AI	26,780	120	1,839	5.4	628.3	628.3	629.3	1.0
AJ	28,280	279	3,795	2.6	630.1	630.1	631.1	1.0
AK	29,090	270	3,888	2.5	630.5	630.5	631.5	1.0
AL	29,440	178	2,520	3.9	631.4	631.4	632.3	0.9
AM	30,420	118	2,041	4.8	632.4	632.4	633.3	0.9
AN	31,580	161	2,425	4.0	633.7	633.7	634.6	0.9
AO	31,990	114	1,735	5.6	634.0	634.0	634.9	0.9
AP	32,390	170	2,498	3.9	634.5	634.5	635.4	0.9
AQ	33,120	110	1,869	5.2	635.2	635.2	636.1	0.9
AR	33,330	181	2,540	3.8	635.5	635.5	636.5	1.0
AS	34,720	99	1,728	4.9	636.8	636.8	637.8	1.0
AT	34,960	327	3,908	2.2	638.0	638.0	639.0	1.0
AU	35,830	220	3,218	2.6	638.3	638.3	639.3	1.0
AV	36,650	245	3,774	2.3	638.7	638.7	639.7	1.0
AW	36,920	289	4,216	1.8	638.9	638.9	639.9	1.0

[1]Feet above confluence with Elk River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

LITTLE SANDY CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Little Sandy Creek (continued)								
AX	37,950	172	2,699	2.7	639.1	639.1	640.1	1.0
AY	38,800	177	2,302	3.2	639.6	639.6	640.5	0.9
AZ	39,790	218	3,067	2.4	640.2	640.2	641.1	0.9
BA	41,150	341	3,538	2.1	640.8	640.8	641.7	0.9
BB	42,460	138	1,234	6.0	641.8	641.8	642.6	0.8
BC	43,060	172	1,951	3.8	643.5	643.5	644.5	1.0
BD	43,290	89	982	7.5	645.2	645.2	645.7	0.5
BE	44,220	175	2,355	3.1	648.0	648.0	648.4	0.4
BF	45,920	155	2,101	3.5	649.3	649.3	649.9	0.6
BG	46,900	195	2,365	2.7	650.1	650.1	650.8	0.7
BH	47,820	295	2,703	2.3	650.8	650.8	651.5	0.7
BI	48,670	204	1,938	3.3	651.5	651.5	652.3	0.8
BJ	50,190	208	1,578	4.0	654.0	654.0	654.8	0.8
BK	50,970	181	1,908	3.3	655.4	655.4	656.3	0.9
BL	51,590	177	1,851	3.4	656.1	656.1	657.0	0.9
BM	51,820	163	1,751	3.6	657.1	657.1	658.0	0.9
BN	52,710	160	1,533	4.1	658.6	658.6	659.5	0.9
BO	53,860	181	1,894	3.3	660.5	660.5	661.4	0.9
BP	55,200	211	2,011	3.1	662.3	662.3	663.2	0.9
BQ	56,700	179	1,947	3.2	664.2	664.2	665.1	0.9
BR	57,350	128	1,477	4.3	665.0	665.0	665.9	0.9
BS	57,600	107	1,212	5.2	666.2	666.2	667.2	1.0

[1]Feet above confluence with Elk River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

LITTLE SANDY CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Little Smith Creek								
A	0	85	564	3.2	677.3	677.3	678.3	1.0
B	130	123	696	2.6	678.9	678.9	679.7	0.8
C	640	56	280	6.4	682.1	682.1	682.5	0.4
D	1,140	72	401	4.5	687.5	687.5	688.3	0.8
E	1,360	65	449	4.0	691.1	691.1	691.7	0.6
F	1,770	95	517	3.5	693.8	693.8	694.7	0.9
G	1,920	80	454	3.9	697.0	697.0	697.3	0.3
H	2,120	95	376	4.8	698.4	698.4	699.0	0.6
I	2,340	52	302	5.9	701.6	701.6	702.1	0.5
J	3,220	80	476	3.8	709.5	709.5	710.3	0.8
K	4,430	51	193	9.3	722.5	722.5	722.7	0.2
L	4,600	52	346	5.2	726.2	726.2	727.1	0.9
M	4,990	33	187	9.6	730.7	730.7	730.7	0.0
N	5,240	100	770	2.3	737.4	737.4	738.2	0.8
O	6,010	67	209	8.6	744.1	744.1	744.3	0.2
P	6,890	142	587	3.0	752.7	752.7	753.5	0.8
Q	7,620	66	274	6.5	758.4	758.4	758.8	0.4
R	7,830	120	559	3.2	761.1	761.1	761.8	0.7
S	8,660	40	117	7.3	768.6	768.6	769.4	0.8
T	9,840	52	190	4.5	791.5	791.5	792.1	0.6
U	10,050	80	287	3.0	798.2	798.2	798.3	0.1
V	10,370	75	243	3.5	800.0	800.0	800.4	0.4
W	10,550	45	146	5.8	803.0	803.0	803.4	0.4
X	11,350	28	140	6.1	817.6	817.6	818.1	0.5
Y	12,370	28	114	7.5	838.5	838.5	839.3	0.8
Z	13,730	57	186	4.6	873.8	873.8	874.4	0.6
AA	14,710	43	108	7.9	908.4	908.4	908.7	0.3

[1]Feet above confluence with Smith Creek

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

LITTLE SMITH CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Lower Creek								
A	778[1]	94	217	7.3	636.0	636.0	636.0	0.0
B	1,080[1]	37	181	8.7	644.3	644.3	644.6	0.3
C	1,245[1]	34	179	8.8	647.7	647.7	648.5	0.8
D	1,460[1]	61	284	5.6	652.2	652.2	652.8	0.6
E	1,710[1]	67	265	6.0	660.7	660.7	661.0	0.3
F	2,010[1]	48	154	10.2	671.9	671.9	671.9	0.0
G	2,435[1]	46	184	8.6	686.5	686.5	687.1	0.6
H	2,605[1]	32	142	11.1	692.4	692.4	693.1	0.7
I	3,160[1]	68	196	8.1	713.9	713.9	714.0	0.1
J	3,850[1]	54	160	9.9	743.7	743.7	743.7	0.0
Middle Fork								
A	573[2]	62	345	5.0	606.0	599.4[3]	600.3	0.8
B	1,286[2]	47	237	7.2	606.0	603.4[3]	603.6	0.2
C	2,034[2]	47	321	5.3	608.1	608.1	608.1	0.0
D	2,815[2]	99	460	3.7	612.3	612.3	613.3	1.0
E	3,814[2]	65	207	8.1	618.6	618.6	618.7	0.0
F	4,220[2]	43	203	8.3	620.8	620.8	621.2	0.5
G	4,891[2]	60	318	5.3	626.0	626.0	626.8	0.8
H	5,377[2]	50	308	5.5	629.8	629.8	630.4	0.7

[1]Feet above confluence with Kanawha River
[2]Feet above confluence with Davis Creek
[3]Elevation computed without consideration of backwater from Davis Creek

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

LOWER CREEK – MIDDLE FORK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Mill Creek								
A	29	30	213	8.2	602.8	573.7[2]	573.7	0.0
B	1,400	60	430	4.1	602.8	586.7[2]	587.0	0.3
C	2,639	23	132	13.2	602.8	592.5[2]	592.4	0.0
D	3,612	105	492	3.5	602.8	596.4[2]	597.0	0.7
E	4,204	50	273	6.4	602.8	598.6[2]	599.4	0.8
F	5,200	59	213	7.3	609.3	609.3	609.3	0.0
G	6,200	72	212	7.3	617.9	617.9	617.9	0.0
H	7,227	58	196	8.0	629.0	629.0	629.0	0.0
I	8,389	66	188	8.3	646.8	646.8	646.8	0.0
J	9,400	41	165	9.4	674.0	674.0	674.0	0.0
K	10,505	50	210	7.4	693.1	693.1	693.1	0.0
L	11,407	50	323	4.8	697.4	697.4	697.9	0.5
M	12,759	75	371	3.9	701.0	701.0	701.2	0.2
N	13,371	60	280	5.1	702.1	702.1	702.8	0.6
O	14,600	50	240	6.0	706.0	706.0	706.2	0.2
P	15,719	70	332	4.3	709.0	709.0	709.2	0.2
Q	16,709	50	296	4.8	715.2	715.2	715.2	0.0
R	17,579	75	430	2.9	717.8	717.8	718.3	0.6
S	18,783	80	395	3.2	720.8	720.8	721.7	0.9
T	19,851	55	291	3.8	726.0	726.0	726.3	0.3
U	21,193	60	267	4.2	730.1	730.1	730.4	0.3
V	22,166	55	287	3.9	735.6	735.6	736.0	0.4
W	23,483	70	297	3.6	740.5	740.5	741.1	0.6
X	24,522	60	266	4.1	744.4	744.4	744.7	0.4
Y	25,179	110	498	2.2	746.2	746.2	746.2	0.0
Z	26,000	70	296	3.7	748.7	748.7	749.2	0.5
AA	27,356	45	231	4.7	753.4	753.4	754.2	0.7
AB	28,633	40	126	7.0	761.1	761.1	761.4	0.2
AC	29,900	75	300	2.9	771.5	771.5	772.1	0.6

[1]Feet above confluence with Elk River
[2]Elevation computed without consideration of backwater from Elk River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

MILL CREEK

FLOODING SOURCE		FLOODWAY[1]			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[2]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Morris Creek								
A	26	36	273	8.2	620.9	618.2[3]	619.2	1.0
B	391	76	503	4.4	621.1	621.1	621.8	0.7
C	507	96	600	3.7	621.8	621.8	622.0	0.2
D	1,278	64	424	5.3	628.8	628.8	628.8	0.0
E	1,874	96	281	7.9	636.9	636.9	636.9	0.0

[1]Floodway is within City of Montgomery (Area Not Included)
[2]Feet above confluence with Kanawha River
[3]Elevation computed without consideration of backwater from Kanawha River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

MORRIS CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Paint Creek								
A	145	390	5,470	3.5	612.9	609.7[2]	610.7	1.0
B	445	260	3,626	5.2	612.9	610.9[2]	611.5	0.6
C	1,065	230	3,997	4.8	612.9	612.0[2]	612.6	0.6
D	1,865	190	2,636	7.2	612.9	612.6[2]	613.6	1.0
E	2,167	215	3,054	6.2	614.0	614.0	614.9	0.9
F	3,067	250	4,519	4.2	615.4	615.4	616.1	0.7
G	4,222	197	3,475	5.5	616.2	616.2	617.2	1.0
H	5,715	270	4,266	4.5	618.3	618.3	619.3	1.0
I	6,885	563	7,278	2.6	619.9	619.9	620.8	0.9
J	8,165	174	2,602	7.3	623.6	623.6	624.1	0.5
K	9,492	182	2,617	7.3	627.6	627.6	628.4	0.8
L	11,008	235	2,941	6.5	632.5	632.5	633.5	1.0
M	12,455	193	2,660	7.1	636.7	636.7	637.5	0.8
N	13,573	344	2,922	6.5	640.2	640.2	640.8	0.6
O	14,523	158	2,008	9.5	643.6	643.6	644.3	0.7
P	15,874	352	4,900	3.9	649.9	649.9	650.9	1.0
Q	17,389	361	3,912	4.9	651.8	651.8	652.6	0.8
R	18,861	249	2,925	6.4	655.2	655.2	655.9	0.7
S	19,861	307	2,633	7.1	658.5	658.5	659.1	0.6
T	21,081	196	2,758	6.7	662.5	662.5	663.3	0.8
U	22,702	220	2,562	7.3	668.7	668.7	669.1	0.4
V	24,095	268	3,178	5.9	672.7	672.7	673.7	1.0
W	25,283	188	2,430	7.7	676.8	676.8	677.8	1.0
X	26,544	207	2,345	7.5	682.9	682.9	683.7	0.8
Y	27,873	153	2,245	7.8	689.0	689.0	689.9	0.9
Z	29,241	345	4,659	3.8	695.1	695.1	696.0	0.9

[1]Feet above confluence with Kanawha River
[2]Elevation computed without consideration of backwater from Kanawha River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

PAINT CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Paint Creek (continued)								
AA	30,741	250	3,304	5.3	697.1	697.1	697.9	0.8
AB	31,468	144	2,051	8.5	698.8	698.8	699.8	1.0
AC	33,305	347	4,680	3.7	709.3	709.3	709.6	0.3
AD	34,608	157	2,286	7.7	714.3	714.3	715.2	0.9
AE	35,268	250	3,054	5.7	716.9	716.9	717.7	0.8
Pocatalico River								
A	53,670	325	7,543	2.8	600.5	600.5	601.5	1.0
B	54,780	710	8,727	2.4	600.8	600.8	601.8	1.0
C	56,130	307	7,387	2.8	601.1	601.1	602.1	1.0
D	57,080	205	5,798	3.6	601.4	601.4	602.4	1.0
E	58,310	286	6,240	3.3	601.9	601.9	602.9	1.0
F	60,070	526	12,459	1.6	602.5	602.5	603.5	1.0
G	61,420	452	10,602	1.9	602.7	602.7	603.7	1.0
H	62,800	424	9,257	2.2	602.9	602.9	603.9	1.0
I	64,240	552	11,320	1.8	603.3	603.3	604.3	1.0
J	65,270	664	14,314	1.4	603.4	603.4	604.4	1.0
K	65,650	675	14,360	1.4	603.5	603.5	604.5	1.0
L	66,830	705	15,229	1.3	603.6	603.6	604.6	1.0
M	67,800	1,050	17,931	1.1	603.7	603.7	604.7	1.0
N	68,960	557	10,140	2.0	603.8	603.8	604.8	1.0
O	70,410	402	6,301	3.2	604.1	604.1	605.1	1.0
P	72,190	400	8,890	2.2	604.9	604.9	605.9	1.0
Q	73,380	185	4,811	4.2	605.1	605.1	606.1	1.0
R	75,070	315	4,736	4.2	605.9	605.9	606.9	1.0
S	76,450	207	4,909	4.1	606.9	606.9	607.8	0.9

[1]Feet above confluence with Kanawha River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

PAINT CREEK – POCATALICO RIVER

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Pocatalico River (continued)								
T	77,920	307	7,455	2.7	607.6	607.6	608.6	1.0
U	79,230	430	8,455	2.3	608.0	608.0	609.0	1.0
V	79,460	395	8,281	2.3	608.1	608.1	609.1	1.0
W	80,580	379	7,538	2.6	608.3	608.3	609.3	1.0
X	81,910	195	4,462	4.3	608.6	608.6	609.6	1.0
Y	83,620	272	6,882	2.8	609.6	609.6	610.6	1.0
Z	85,030	197	4,944	3.9	610.1	610.1	611.1	1.0
AA	86,250	238	5,793	3.2	610.8	610.8	611.8	1.0
AB	87,510	299	6,700	2.8	611.3	611.3	612.3	1.0
AC	88,800	258	5,956	3.1	611.7	611.7	612.7	1.0
AD	90,090	288	5,921	3.1	612.3	612.3	613.3	1.0
AE	91,460	171	4,069	4.6	612.9	612.9	613.9	1.0
AF	92,770	292	6,509	2.9	613.9	613.9	614.9	1.0
AG	93,960	228	5,391	3.5	614.4	614.4	615.4	1.0
AH	95,260	225	5,353	3.5	614.9	614.9	615.9	1.0
AI	97,100	281	6,220	3.0	615.7	615.7	616.7	1.0
AJ	97,270	335	7,293	2.6	616.0	616.0	617.0	1.0
AK	98,170	158	4,175	4.5	616.0	616.0	617.0	1.0
AL	99,530	215	5,330	3.5	616.6	616.6	617.6	1.0
AM	100,990	182	4,285	4.3	617.1	617.1	618.1	1.0
AN	102,380	250	6,220	3.0	617.8	617.8	618.8	1.0
AO	103,660	567	7,680	2.4	618.2	618.2	619.2	1.0
AP	105,150	268	4,921	3.8	618.4	618.4	619.4	1.0
AQ	106,590	223	5,038	3.7	619.0	619.0	620.0	1.0
AR	108,300	394	7,616	2.4	619.5	619.5	620.5	1.0
AS	109,820	217	5,290	3.5	619.8	619.8	620.8	1.0
AT	111,470	668	6,018	3.1	620.4	620.4	621.4	1.0
AU	111,810	639	10,453	1.8	620.8	620.8	621.8	1.0

[1]Feet above confluence with Kanawha River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

POCATALICO RIVER

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Pocatalico River (continued)								
AV	113,000	486	7,117	2.6	621.0	621.0	622.0	1.0
AW	114,430	432	6,942	2.7	621.5	621.5	622.5	1.0
AX	116,020	404	6,886	2.7	622.0	622.0	623.0	1.0
AY	117,000	177	4,578	4.1	622.3	622.3	623.3	1.0
AZ	118,180	141	3,769	4.9	623.0	623.0	623.9	0.9
BA	119,560	184	4,709	3.7	624.2	624.2	625.2	1.0
BB	120,730	218	4,933	3.5	624.6	624.7	625.7	1.0
BC	122,660	604	11,606	1.5	625.5	625.5	626.5	1.0
BD	123,690	268	5,891	3.0	625.6	625.6	626.6	1.0
BE	124,060	273	6,792	2.6	626.3	626.3	627.3	1.0
BF	125,020	448	6,441	2.7	626.5	626.5	627.5	1.0
BG	126,670	230	4,420	4.0	627.0	627.0	628.0	1.0
BH	128,340	442	5,624	3.1	627.9	627.9	628.9	1.0
BI	129,690	600	6,038	2.9	628.5	628.5	629.5	1.0
BJ	131,310	598	6,412	2.7	629.1	629.1	630.0	0.9
BK	132,440	300	5,613	3.1	629.5	629.5	630.4	0.9
BL	133,410	200	5,096	3.4	629.9	629.9	630.7	0.8
BM	133,700	225	4,525	3.8	630.0	630.0	630.9	0.9
BN	134,250	320	5,845	2.9	630.2	630.2	631.2	1.0
BO	135,530	690	11,818	1.4	630.7	630.7	631.7	1.0
BP	136,940	504	8,485	2.0	630.8	630.8	631.8	1.0
BQ	138,440	171	4,134	4.1	631.2	631.2	632.2	1.0
BR	139,650	292	5,581	3.1	632.0	632.0	633.0	1.0
BS	141,500	409	3,962	4.3	633.0	633.0	634.0	1.0

[1]Feet above confluence with Kanawha River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

POCATALICO RIVER

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Pocatalico River (continued)								
BT	142,500	157	3,659	4.7	633.8	633.8	634.8	1.0
BU	143,990	513	7,217	2.4	635.0	635.0	636.0	1.0
BV	145,470	482	6,607	2.6	635.7	635.7	636.7	1.0
BW	146,700	353	4,268	4.0	636.2	636.2	637.2	1.0
BX	148,120	215	4,514	3.8	637.2	637.2	638.2	1.0
BY	149,460	218	3,988	4.3	638.2	638.2	639.2	1.0
BZ	150,990	265	5,438	3.1	639.4	639.4	640.4	1.0
CA	152,420	256	4,106	4.2	640.2	640.2	641.2	1.0
CB	153,810	228	5,314	3.2	641.1	641.1	642.1	1.0
CC	154,580	241	5,178	3.3	641.4	641.4	642.4	1.0
CD	154,740	266	5,154	3.3	641.5	641.5	642.5	1.0
CE	155,330	175	4,257	4.0	642.4	642.4	643.4	1.0
CF	156,280	254	5,330	3.2	643.0	643.0	644.0	1.0
CG	157,600	253	5,566	3.1	643.5	643.5	644.5	1.0
CH	158,920	289	5,135	3.3	643.9	643.9	644.9	1.0
CI	159,980	330	6,178	2.8	644.5	644.5	645.5	1.0
CJ	161,100	332	7,302	2.3	644.9	644.9	645.9	1.0
CK	162,190	270	6,279	2.7	645.2	645.2	646.2	1.0
CL	162,460	225	5,147	3.3	645.3	645.3	646.3	1.0
CM	163,760	232	5,163	3.3	645.8	645.8	646.8	1.0
CN	165,110	288	5,160	3.3	646.4	646.4	647.4	1.0
CO	166,770	252	4,568	3.7	647.3	647.3	648.3	1.0
CP	167,930	307	4,962	3.4	647.9	647.9	648.9	1.0
CQ	169,010	414	6,576	2.6	648.6	648.6	649.6	1.0
CR	170,540	188	4,121	4.1	649.1	649.1	650.1	1.0
CS	171,690	208	4,553	3.8	649.9	649.9	650.9	1.0

[1]Feet above confluence with Kanawha River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

POCATALICO RIVER

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Pocatalico River (continued)								
CT	172,980	303	5,707	3.0	650.6	650.6	651.6	1.0
CU	174,250	504	6,872	2.5	651.1	651.1	652.1	1.0
CV	175,330	202	4,737	3.6	651.5	651.5	652.5	1.0
CW	176,470	377	5,676	3.0	652.1	652.1	653.1	1.0
CX	177,450	359	5,868	2.9	652.5	652.5	653.5	1.0
CY	178,680	239	4,838	3.5	653.1	653.1	654.1	1.0
CZ	179,630	318	6,112	2.8	653.5	653.5	654.5	1.0
DA	180,590	303	5,049	3.4	653.8	653.8	654.8	1.0
DB	182,010	229	5,053	3.4	654.5	654.5	655.5	1.0
DC	182,740	357	5,878	2.9	654.9	654.9	655.9	1.0
DD	182,920	335	5,553	3.1	655.0	655.0	656.0	1.0
DE	184,040	225	4,353	3.9	655.7	655.7	656.7	1.0
DF	185,370	302	6,858	2.5	656.5	656.5	657.5	1.0
DG	186,510	402	8,009	2.1	656.9	656.9	657.9	1.0
DH	188,100	443	6,088	2.8	657.4	657.4	658.4	1.0
DI	189,570	403	8,729	2.0	658.1	658.1	659.1	1.0
DJ	190,370	321	6,069	2.8	658.3	658.3	659.3	1.0
DK	191,220	292	5,843	2.9	658.7	658.7	659.7	1.0
DL	192,500	388	6,074	2.8	659.3	659.3	660.3	1.0
DM	193,440	279	5,591	3.1	659.8	659.8	660.8	1.0
DN	194,980	341	6,672	2.6	660.5	660.5	661.5	1.0
DO	196,360	183	4,175	4.1	661.1	661.1	662.1	1.0
DP	197,460	215	4,403	3.9	662.0	662.0	663.0	1.0
DQ	198,730	197	4,605	3.7	662.9	662.9	663.9	1.0
DR	199,700	327	5,414	3.2	663.6	663.6	664.6	1.0
DS	201,170	752	8,442	2.1	664.3	664.3	665.3	1.0
DT	202,750	266	6,206	2.8	664.7	664.7	665.7	1.0

[1]Feet above confluence with Kanawha River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

POCATALICO RIVER

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Pocatalico River (continued)								
DU	203,660	334	5,934	2.9	665.1	665.1	666.1	1.0
DV	205,000	224	3,999	4.4	665.9	665.9	666.9	1.0
DW	206,080	349	5,578	3.1	666.9	666.9	667.9	1.0
DX	207,520	482	8,396	2.1	667.6	667.6	668.6	1.0
DY	208,640	475	7,119	2.5	667.9	667.9	668.9	1.0
DZ	210,010	401	7,380	2.4	668.4	668.4	669.4	1.0
EA	210,840	285	5,950	2.9	668.7	668.7	669.7	1.0
EB	212,110	288	6,321	2.8	669.3	669.3	670.3	1.0
EC	213,760	407	7,056	2.5	669.9	669.9	670.9	1.0
ED	214,920	330	6,554	2.7	670.3	670.3	671.3	1.0
EE	216,200	325	6,936	2.5	670.8	670.8	671.8	1.0
EF	217,860	278	5,812	3.0	671.4	671.4	672.4	1.0
EG	218,640	278	4,903	3.6	671.8	671.8	672.8	1.0

[1]Feet above confluence with Kanawha River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

POCATALICO RIVER

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Rocky Fork								
A	475	61	502	10.4	602.2	581.2[2]	581.6	0.4
B	1,250	74	700	7.4	602.2	588.2[2]	588.9	0.7
C	2,555	124	1,396	3.7	602.2	591.8[2]	592.7	0.9
D	3,610	260	3,143	1.7	602.2	592.6[2]	593.5	0.9
E	4,485	70	635	8.2	602.2	593.4[2]	594.1	0.7
F	5,010	129	983	5.3	602.2	596.8[2]	597.3	0.5
G	5,920	374	3,326	1.6	602.2	597.9[2]	598.7	0.8
H	6,175	512	4,703	1.1	602.2	598.2[2]	599.0	0.8
I	6,545	239	1,910	2.3	602.2	598.2[2]	599.0	0.8
J	6,710	232	1,888	2.3	602.2	598.7[2]	599.7	1.0
K	6,910	239	2,097	2.1	602.2	598.8[2]	599.8	1.0
L	7,230	368	1,437	3.1	602.2	599.0[2]	600.0	1.0
M	7,490	267	1,988	2.2	602.2	599.6[2]	600.6	1.0
N	8,390	196	1,618	2.7	602.2	600.5[2]	601.5	1.0
O	9,260	182	1,666	2.6	602.2	601.2[2]	602.2	1.0
P	9,850	114	1,111	4.0	602.2	601.8[2]	602.7	0.9
Q	10,215	229	2,406	1.8	602.7	602.7	603.6	0.9
R	10,910	219	2,001	2.2	603.1	603.1	604.0	0.9
S	11,635	429	2,852	1.5	603.5	603.5	604.4	0.9
T	12,155	252	1,725	2.6	603.9	603.9	604.8	0.9
U	12,395	164	1,192	3.7	605.6	605.6	606.2	0.6
V	13,140	153	1,074	4.1	607.1	607.1	608.0	0.9
W	13,460	103	793	5.6	607.9	607.9	608.8	0.9
X	13,830	131	1,280	3.4	609.7	609.7	610.7	1.0
Y	14,720	246	2,104	2.1	610.8	610.8	611.8	1.0
Z	15,750	302	2,369	1.9	611.5	611.5	612.4	0.9

[1]Feet above confluence with Pocatalico River
[2]Elevation computed without consideration of backwater from Pocatalico River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

ROCKY FORK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Rocky Fork (continued)								
AA	16,520	50	514	8.6	611.9	611.9	612.7	0.8
AB	17,520	145	1,313	3.4	615.5	615.5	616.5	1.0
AC	19,035	143	1,465	3.0	617.5	617.5	618.4	0.9
AD	19,935	154	1,331	3.3	618.6	618.6	619.5	0.9
AE	21,150	124	1,166	3.8	620.5	620.5	621.4	0.9
AF	22,180	81	758	5.8	622.8	622.8	623.6	0.8
AG	23,085	187	1,536	2.9	625.1	625.1	626.0	0.9
AH	23,430	169	1,810	1.9	626.9	626.9	627.8	0.9
AI	24,265	133	1,016	3.3	627.4	627.4	628.3	0.9
AJ	24,970	212	1,567	2.1	628.2	628.2	629.2	1.0
AK	25,220	112	818	4.1	628.7	628.7	629.7	1.0
AL	26,120	221	1,463	2.3	630.1	630.1	631.1	1.0
AM	26,955	115	692	4.8	631.4	631.4	632.3	0.9
AN	27,600	143	901	3.7	633.5	633.5	634.5	1.0
AO	27,855	166	1,058	3.2	634.1	634.1	635.0	0.9
AP	28,390	148	1,191	2.8	634.9	634.9	635.8	0.9
AQ	28,550	85	696	4.8	635.5	635.5	636.4	0.9
AR	28,790	126	845	4.0	636.3	636.3	637.1	0.8
AS	28,950	133	968	3.5	637.7	637.7	638.7	1.0
AT	29,490	139	1,134	3.0	638.5	638.5	639.4	0.9
AU	29,720	135	1,025	3.3	638.8	638.8	639.7	0.9
AV	29,880	141	1,077	3.1	639.6	639.6	640.6	1.0
AW	30,830	193	888	3.5	641.1	641.1	642.0	0.9
AX	31,070	257	1,677	1.8	641.5	641.5	642.4	0.9
AY	31,490	73	486	6.4	641.7	641.7	642.5	0.8
AZ	31,935	246	1,528	2.0	643.1	643.1	644.0	0.9

[1]Feet above confluence with Pocatalico River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

ROCKY FORK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Rocky Fork (continued)								
BA	32,400[1]	160	986	3.1	644.2	644.2	645.2	1.0
BB	33,390[1]	162	786	3.9	646.8	646.8	647.6	0.8
BC	34,145[1]	131	969	3.2	648.7	648.7	649.5	0.8
BD	35,375[1]	280	1,160	2.5	650.9	650.9	651.7	0.8
BE	36,000[1]	68	260	6.9	652.2	652.2	652.9	0.7
BF	36,320[1]	141	596	3.0	656.9	656.9	657.1	0.2
BG	36,675[1]	181	939	1.9	657.4	657.4	657.7	0.3
BH	36,825[1]	83	302	6.0	658.1	658.1	658.3	0.2
BI	36,990[1]	80	384	4.7	658.7	658.7	659.7	1.0
BJ	37,320[1]	60	608	3.0	664.4	664.4	665.2	0.8
BK	37,710[1]	70	474	3.8	664.5	664.5	665.5	1.0
BL	37,960[1]	280	1,700	1.1	692.2	692.2	692.8	0.6
Smith Creek								
A	120[2]	61	1,008	3.4	611.7	591.4[3]	592.4	1.0
B	1,590[2]	391	2,913	1.2	611.7	592.4[3]	593.4	1.0
C	1,990[2]	515	5,603	0.6	611.7	593.6[3]	594.6	1.0
D	2,720[2]	436	4,291	0.8	611.7	593.6[3]	594.6	1.0
E	3,020[2]	335	3,348	1.0	611.7	593.7[3]	594.7	1.0
F	3,830[2]	375	2,907	1.2	611.7	593.8[3]	594.8	1.0
G	5,200[2]	87	672	5.1	611.7	594.3[3]	595.2	0.9
H	5,860[2]	99	659	5.2	611.7	596.6[3]	597.5	0.9
I	6,080[2]	75	613	5.6	611.7	597.4[3]	598.4	1.0
J	6,930[2]	86	663	5.2	611.7	601.0[3]	602.0	1.0
K	8,240[2]	108	782	4.4	611.7	606.0[3]	606.9	0.9
L	9,190[2]	118	892	3.9	611.7	608.3[3]	609.3	1.0
M	9,340[2]	110	1,023	3.4	611.7	608.7[3]	609.7	1.0

[1]Feet above confluence with Pocatalico River
[2]Feet above confluence with Coal River
[3]Elevation computed without consideration of backwater from Coal River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

ROCKY FORK – SMITH CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Smith Creek (continued)								
N	10,600	84	526	6.6	611.7	611.2[2]	612.2	1.0
O	11,600	105	969	3.6	615.8	615.8	616.7	0.9
P	11,740	125	937	3.7	616.7	616.7	617.5	0.8
Q	11,980	85	765	3.9	617.0	617.0	617.8	0.8
R	12,120	123	1,402	2.1	619.7	619.7	620.4	0.7
S	13,170	73	724	4.1	620.4	620.4	621.1	0.7
T	13,870	86	766	3.9	621.9	621.9	622.6	0.7
U	14,700	144	633	4.7	624.1	624.1	624.7	0.6
V	14,910	115	839	3.6	627.3	627.3	628.2	0.9
W	15,530	85	607	4.9	630.7	630.7	631.3	0.6
X	15,790	55	430	7.0	633.9	633.9	633.9	0.0
Y	16,920	87	625	4.8	643.4	643.4	643.9	0.5
Z	17,200	135	1,053	2.9	645.2	645.2	646.1	0.9
AA	18,060	60	334	9.0	649.2	649.2	649.2	0.0
AB	18,750	75	579	5.2	655.9	655.9	656.7	0.8
AC	18,930	75	615	4.9	658.8	658.8	659.0	0.2
AD	19,450	90	449	5.8	660.1	660.1	661.0	0.9
AE	19,620	90	439	5.9	662.3	662.3	662.9	0.6
AF	20,160	80	445	5.8	667.1	667.1	667.5	0.4
AG	20,320	86	669	3.9	669.7	669.7	670.6	0.9
AH	21,080	83	402	6.5	672.8	672.8	673.5	0.7
AI	21,670	40	158	7.1	679.1	679.1	679.3	0.2
AJ	21,860	75	252	4.4	682.6	682.6	682.8	0.2
AK	21,990	55	171	6.6	685.1	685.1	685.5	0.4
AL	22,170	49	190	5.9	687.6	687.6	688.1	0.5
AM	22,670	37	137	8.2	695.9	695.9	696.2	0.3
AN	22,800	33	146	7.7	698.8	698.8	699.4	0.6

[1]Feet above confluence with Coal River
[2]Elevation computed without consideration of backwater from Coal River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

SMITH CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Smith Creek (continued)								
AO	23,240	30	114	9.8	707.6	707.6	707.7	0.1
AP	23,440	51	234	4.8	710.1	710.1	710.9	0.8
AQ	24,000	49	107	6.4	716.9	716.9	716.9	0.0
AR	24,460	69	194	3.6	722.6	722.6	723.6	1.0
AS	24,610	37	186	3.7	723.7	723.7	724.3	0.6
AT	24,800	20	75	9.3	725.7	725.7	725.9	0.2
AU	25,380	60	188	3.7	736.7	736.7	737.5	0.8
AV	25,820	61	133	5.2	745.3	745.3	745.9	0.6
AW	26,100	30	112	6.2	752.3	752.3	752.9	0.6
AX	26,390	25	98	7.0	757.0	757.0	757.5	0.5
AY	26,550	30	104	6.6	762.5	762.5	762.6	0.1
AZ	26,860	35	111	6.2	767.8	767.8	768.3	0.5
BA	27,010	35	140	4.9	772.2	772.2	773.0	0.8
BB	27,400	57	101	6.8	785.7	785.7	785.9	0.2
BC	27,650	23	98	7.1	790.8	790.8	791.5	0.7
BD	28,180	12	58	11.8	819.8	819.8	820.0	0.2

[1]Feet above confluence with Coal River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

SMITH CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Thorofare Run								
A	85	46	293	5.2	631.5	613.0[2]	614.0	1.0
B	1,065	61	227	6.7	631.5	620.9[2]	621.7	0.8
C	2,190	50	230	6.6	635.8	635.8	636.5	0.7
D	3,445	41	165	7.0	650.9	650.9	651.3	0.4
E	4,065	50	198	5.8	658.2	658.2	658.3	0.1
F	4,900	50	178	6.5	668.2	668.2	668.4	0.2
G	5,630	47	155	7.4	682.4	682.4	682.5	0.1
H	5,800	18	127	9.1	686.8	686.8	687.3	0.5
I	5,975	73	386	3.0	689.5	689.5	690.3	0.8
J	6,410	57	161	7.1	694.4	694.4	694.4	0.0
K	6,930	23	107	10.8	704.3	704.3	704.3	0.0
L	7,100	30	163	7.1	706.8	706.8	707.4	0.6
M	7,525	26	117	9.8	713.3	713.3	713.3	0.0
N	7,655	87	526	2.2	719.0	719.0	719.7	0.7
O	8,100	20	103	11.2	725.4	725.4	725.4	0.0
P	8,650	20	105	6.7	734.0	734.0	734.8	0.8
Q	8,870	63	473	1.5	741.1	741.1	741.9	0.8
R	9,060	48	203	3.5	741.1	741.1	741.9	0.8
S	9,195	46	201	3.5	744.7	744.7	745.6	0.9
T	10,130	38	103	6.8	764.7	764.7	764.7	0.0
U	10,840	45	127	5.5	776.1	776.1	776.9	0.8
V	11,035	50	110	6.4	781.5	781.5	782.5	1.0
W	11,710	23	77	9.1	800.5	800.5	800.7	0.2
X	12,650	16	72	9.7	844.6	844.6	844.6	0.0

[1]Feet above confluence with Big Sandy Creek
[2]Elevation computed without consideration of backwater from Big Sandy Creek

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

THOROFARE RUN

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Tupper Creek								
A	220	91	1,321	4.2	623.2	615.2[2]	616.2	1.0
B	690	85	1,344	4.2	623.2	616.0[2]	617.0	1.0
C	1,290	128	1,822	3.1	623.2	616.7[2]	617.7	1.0
D	1,490	135	2,069	2.7	623.2	617.0[2]	618.0	1.0
E	2,450	96	1,602	3.5	623.2	617.6[2]	618.6	1.0
F	3,850	356	4,216	1.3	623.2	618.3[2]	619.3	1.0
G	4,950	154	1,803	3.1	623.2	618.7[2]	619.7	1.0
H	5,890	82	909	6.2	623.2	620.1[2]	621.1	1.0
I	6,630	161	1,972	2.8	623.2	621.6[2]	622.6	1.0
J	7,200	144	1,852	3.0	623.2	622.0[2]	623.0	1.0
K	7,600	100	1,217	4.6	623.2	622.9[2]	623.8	0.9
L	8,170	180	2,110	2.7	623.6	623.6	624.6	1.0
M	9,340	295	3,488	1.6	624.1	624.1	625.1	1.0
N	10,130	270	3,202	1.7	624.3	624.3	625.3	1.0
O	10,580	296	3,265	1.7	624.6	624.6	625.6	1.0
P	11,110	119	1,407	3.8	624.7	624.7	625.7	1.0
Q	11,960	127	1,548	3.5	625.7	625.7	626.7	1.0
R	12,110	128	1,578	3.4	626.2	626.2	627.2	1.0
S	12,440	80	1,079	5.0	626.5	626.5	627.5	1.0
T	12,621	75	982	5.5	626.7	626.7	627.7	1.0
U	13,670	126	1,542	3.5	628.7	628.7	629.7	1.0
V	14,670	302	3,272	1.3	629.4	629.4	630.4	1.0
W	16,040	104	828	5.1	629.9	629.9	630.8	0.9
X	17,000	63	627	6.7	634.5	634.5	635.3	0.8
Y	18,070	127	1,128	3.7	638.6	638.6	639.4	0.8
Z	19,350	126	1,112	3.8	641.5	641.5	642.2	0.7

[1]Feet above confluence with Pocatalico River
[2]Elevation computed without consideration of backwater from Pocatalico River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

TUPPER CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Tupper Creek (continued)								
AA	20,320	87	917	4.6	643.7	643.7	644.5	0.8
AB	20,730	85	803	5.2	644.3	644.3	645.3	1.0
AC	21,240	139	1,214	3.5	645.7	645.7	646.5	0.8
AD	21,460	115	1,008	4.2	646.0	646.0	646.6	0.6
AE	22,500	113	1,019	4.1	647.7	647.7	648.7	1.0
AF	23,130	78	704	6.0	649.7	649.7	650.5	0.8
AG	23,461	81	705	6.0	650.7	650.7	651.3	0.6
AH	24,450	95	678	6.2	654.6	654.6	655.4	0.8
AI	25,390	74	715	5.9	658.7	658.7	659.2	0.5
AJ	25,880	61	803	5.2	659.7	659.7	660.4	0.7
AK	26,540	135	1,345	1.9	661.8	661.8	662.4	0.6
AL	26,920	53	639	3.9	662.4	662.4	663.0	0.6
AM	27,910	150	1,258	2.0	663.2	663.2	664.0	0.8
AN	28,670	89	626	4.0	663.7	663.7	664.5	0.8
AO	29,210	62	454	5.5	665.6	665.6	666.5	0.9
AP	29,400	39	366	6.9	668.8	668.8	669.6	0.8
AQ	30,130	100	672	3.8	672.9	672.9	673.9	1.0
AR	31,290	68	466	4.9	677.9	677.9	678.5	0.6
AS	32,220	102	620	3.7	682.3	682.3	683.0	0.7
AT	32,940	60	275	8.4	687.2	687.2	687.5	0.3
AU	33,220	45	309	3.6	690.3	690.3	691.3	1.0
AV	34,180	38	116	9.5	698.5	698.5	698.8	0.3
AW	35,050	40	234	4.7	711.1	711.1	711.6	0.5
AX	36,010	44	211	5.2	717.9	717.9	718.5	0.6
AY	36,210	44	183	6.0	720.9	720.9	721.6	0.7
AZ	36,620	48	204	5.4	726.5	726.5	726.6	0.1

[1]Feet above confluence with Pocatalico River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

TUPPER CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Tupper Creek (continued)								
BA	36,800[1]	45	216	5.1	728.6	728.6	729.2	0.6
BB	37,000[1]	29	158	7.0	730.3	730.3	731.1	0.8
BC	37,130[1]	37	139	7.9	732.9	732.9	733.8	0.9
BD	37,540[1]	85	422	2.6	737.0	737.0	737.9	0.9
BE	37,750[1]	52	190	2.8	738.6	738.6	739.6	1.0
BF	37,860[1]	29	83	6.4	739.8	739.8	740.2	0.4
BG	38,140[1]	31	94	5.6	746.3	746.3	746.3	0.0
BH	38,860[1]	19	121	4.3	768.7	768.7	768.7	0.0
BI	39,600[1]	64	530	1.0	790.0	790.0	790.0	0.0
BJ	39,720[1]	52	541	1.0	790.0	790.0	790.0	0.0
BK	39,820[1]	65	547	1.0	790.1	790.1	790.1	0.0
BL	39,930[1]	54	334	1.6	790.1	790.1	790.1	0.0
BM	40,040[1]	37	203	2.6	790.3	790.3	790.4	0.1
BN	40,160[1]	27	77	6.8	790.4	790.4	790.5	0.1
BO	40,360[1]	26	76	6.9	796.7	796.7	796.7	0.0
Two and Three Quarter Mile Creek								
A	3,080[2]	28	107	9.7	589.0	573.3[3]	573.4	0.1
B	4,258[2]	100	418	2.5	589.0	577.1[3]	577.5	0.4
C	5,598[2]	60	219	3.8	589.0	580.4[3]	581.3	0.9
D	6,230[2]	42	163	5.1	589.0	584.1[3]	584.7	0.6
E	7,025[2]	30	129	6.4	589.0	587.8[3]	588.2	0.4
F	8,046[2]	65	239	3.5	596.5	596.5	596.5	0.0
G	8,983[2]	49	157	4.0	602.1	602.1	602.1	0.0
H	9,598[2]	45	147	4.3	607.5	607.5	607.5	0.1
G	10,000[2]	49	139	4.5	611.5	611.5	611.5	0.0
H	10,601[2]	45	120	5.3	617.5	617.5	617.6	0.1

[1]Feet above confluence with Pocatalico River
[2]Feet above confluence with Kanawha River
[3]Elevation computed without consideration of backwater from Kanawha River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

TUPPER CREEK – TWO AND THREE QUARTER MILE CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Twomile Creek								
A	90	135	1,407	4.9	593.2	572.4[2]	573.4	1.0
B	880	93	1,008	6.8	593.2	574.1[2]	574.7	0.6
C	1,200	88	1,025	6.7	593.2	575.3[2]	575.8	0.5
D	1,730	100	1,258	5.5	593.2	578.0[2]	578.2	0.2
E	2,520	90	1,049	6.6	593.2	579.7[2]	579.9	0.2
F	2,980	98	1,245	5.8	593.2	581.4[2]	581.4	0.0
G	3,400	95	1,242	5.6	593.2	582.3[2]	582.7	0.4
H	3,880	81	1,026	6.7	593.2	583.5[2]	583.9	0.4
I	4,180	100	1,532	4.5	593.2	584.7[2]	585.2	0.5
J	4,830	145	2,176	3.2	593.2	585.8[2]	586.2	0.4
K	5,660	121	1,904	3.6	593.2	586.5[2]	587.0	0.5
L	5,960	100	1,542	4.5	593.2	587.3[2]	588.0	0.7
M	6,790	182	2,507	2.8	593.2	588.4[2]	589.1	0.7
N	8,000	143	1,745	4.0	593.2	589.7[2]	590.6	0.9
O	8,760	154	1,895	3.6	593.2	591.0[2]	592.0	1.0
P	9,720	127	1,712	3.5	593.2	592.5[2]	593.5	1.0
Q	10,610	165	1,639	3.7	593.8	593.8	594.8	1.0
R	11,510	169	1,878	3.2	595.0	595.0	596.0	1.0
S	11,710	130	1,326	4.5	595.1	595.1	596.1	1.0
T	12,080	130	1,443	4.2	596.1	596.1	597.0	0.9
U	12,420	178	1,531	3.9	598.2	598.2	599.1	0.9
V	13,120	180	1,967	3.1	599.6	599.6	600.6	1.0
W	14,040	63	862	7.0	600.9	600.9	601.8	0.9
X	14,760	111	1,451	4.1	603.4	603.4	604.4	1.0
Y	15,530	173	2,139	2.8	604.3	604.3	605.3	1.0
Z	16,200	150	933	6.4	604.9	604.9	605.8	0.9

[1]Feet above confluence with Kanawha River
[2] Elevation computed without consideration of backwater from Kanawha River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

TWOMILE CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Twomile Creek (continued)								
AA	16,790	164	2,072	2.9	606.8	606.8	607.8	1.0
AB	17,020	171	1,751	3.4	607.1	607.1	608.1	1.0
AC	17,200	196	1,642	3.7	607.4	607.4	608.4	1.0
AD	17,650	200	1,764	2.2	608.0	608.0	609.0	1.0
AE	17,790	200	2,236	1.7	608.6	608.6	609.5	0.9
AF	18,610	104	981	3.9	609.2	609.2	610.0	0.8
AG	19,170	85	910	4.2	610.4	610.4	611.2	0.8
AH	19,670	102	1,479	2.6	613.1	613.1	614.0	0.9
AI	20,250	220	2,809	1.4	613.4	613.4	614.3	0.9
AJ	20,970	213	1,706	1.1	613.5	613.5	614.5	1.0
AK	21,240	150	700	2.6	614.6	614.6	615.4	0.8
AL	21,740	118	453	4.0	616.8	616.8	617.8	1.0
AM	21,930	99	431	4.2	620.4	620.4	621.2	0.8
AN	22,670	50	286	6.4	627.3	627.3	628.0	0.7
AO	22,980	75	643	2.8	638.4	638.4	638.6	0.2
AP	23,070	59	486	3.7	638.5	638.5	638.8	0.3
AQ	23,420	68	276	6.6	639.5	639.5	640.0	0.5
AR	24,000	75	492	3.7	644.7	644.7	645.2	0.5
AS	24,630	54	196	9.3	652.5	652.5	652.5	0.0
AT	24,720	75	453	4.0	655.2	655.2	655.8	0.6
AU	24,850	72	527	3.5	656.0	656.0	656.9	0.9
AV	25,020	61	361	5.0	657.5	657.5	658.4	0.9
AW	25,440	74	316	5.8	662.9	662.9	663.7	0.8
AX	26,190	65	227	8.0	675.4	675.4	675.6	0.2
AY	26,700	100	382	4.8	681.0	681.0	682.0	1.0
AZ	26,900	58	238	7.6	684.4	684.4	685.0	0.6

[1]Feet above confluence with Kanawha River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

TWOMILE CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Twomile Creek (continued)								
BA	27,300	56	169	6.4	690.2	690.2	690.4	0.2
BB	27,730	69	207	5.3	695.1	695.1	695.3	0.2
BC	27,990	33	108	10.1	699.9	699.9	699.9	0.0
BD	28,170	75	187	5.8	704.1	704.1	704.6	0.5
BE	28,340	37	117	9.3	707.3	707.3	707.3	0.0
BF	28,650	75	602	1.8	716.3	716.3	716.3	0.0
BG	29,610	62	152	7.2	735.6	735.6	735.6	0.0
BH	30,060	58	166	6.6	749.8	749.8	750.5	0.7
BI	30,150	69	231	4.7	752.7	752.7	753.7	1.0
BJ	30,240	70	250	4.4	754.7	754.7	755.2	0.5
BK	30,430	70	227	4.8	759.0	759.0	759.3	0.3
BL	30,910	30	110	9.9	773.7	773.7	773.7	0.0
BM	31,640	50	117	9.3	804.7	804.7	804.7	0.0

[1]Feet above confluence with Kanawha River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

TWOMILE CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Tyler Creek								
A	550	100	2,784	0.9	597.9	597.9	598.9	1.0
B	2,050	100	1,783	1.4	597.9	597.9	598.9	1.0
C	2,260	100	1,839	1.3	597.9	597.9	598.9	1.0
D	2,405	100	1,674	1.4	598.0	598.0	599.0	1.0
E	3,190	88	1,324	1.8	598.2	598.2	599.2	1.0
F	3,690	100	1,946	1.2	598.2	598.2	599.2	1.0
G	3,980	75	873	2.8	598.3	598.3	599.3	1.0
H	4,780	95	351	6.9	599.4	599.4	600.3	0.9
I	5,335	73	442	3.6	603.1	603.1	604.1	1.0
J	6,115	43	199	7.9	604.9	604.9	605.9	1.0
K	6,620	34	206	7.7	610.8	610.8	611.6	0.8
L	6,830	80	256	6.2	613.0	613.0	613.7	0.7
M	7,060	60	379	4.2	616.1	616.1	617.1	1.0
N	7,362	100	686	2.3	617.3	617.3	618.3	1.0
O	7,870	108	257	6.1	622.7	622.7	622.7	0.0
P	8,500	29	220	7.2	628.5	628.5	633.3	0.7
Q	8,810	58	389	4.1	631.4	631.4	632.0	0.6
R	8,923	67	528	3.0	631.8	631.8	632.4	0.6
S	9,070	52	361	4.4	632.4	632.4	633.3	0.9
T	9,180	52	312	5.1	632.7	632.7	633.6	0.9
U	9,460	30	168	9.4	636.9	636.9	637.5	0.6
V	9,880	80	354	4.5	642.5	642.5	643.4	0.9
W	10,650	155	327	3.9	649.9	649.9	650.3	0.4
X	10,865	140	381	3.3	654.2	654.2	655.1	0.9

[1]Feet above confluence with Kanawha River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

TYLER CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Upper Creek								
A	450	91	1,015	3.5	635.7	635.7	635.7	0.0
B	870	100	531	6.8	636.1	636.1	636.2	0.1
C	1,175	75	383	9.4	640.0	640.0	640.0	0.0
D	1,380	69	301	12.0	644.6	644.6	644.7	0.1
E	2,008	50	271	13.3	664.7	664.7	664.7	0.0
F	2,505	70	313	11.5	681.8	681.8	682.3	0.5
G	3,265	62	302	11.9	704.7	704.7	705.0	0.3
H	4,100	82	335	10.8	730.9	730.9	731.4	0.5
Witcher Creek								
A	260	193	761	8.4	603.4	596.7[2]	596.9	0.2
B	480	100	1,110	5.8	603.4	597.8[2]	598.4	0.6
C	770	285	2,763	2.3	603.4	600.9[2]	601.8	0.9
D	1,420	316	3,569	1.8	603.4	601.2[2]	602.1	0.9
E	2,260	230	2,465	2.6	603.4	601.5[2]	602.4	0.9
F	2,510	192	1,816	3.5	603.4	602.0[2]	602.9	0.9
G	3,180	231	2,059	3.1	603.4	602.8[2]	603.8	1.0
H	3,890	136	1,236	5.2	603.8	603.8	604.7	0.9
I	4,140	129	1,213	5.3	605.5	605.5	606.4	0.9
J	4,370	134	1,130	5.7	606.0	606.0	607.0	1.0
K	4,630	217	1,765	3.6	607.5	607.5	608.3	0.8
L	5,220	125	988	6.5	608.8	608.8	609.6	0.8
M	5,500	72	772	8.3	612.3	612.3	612.8	0.5
N	5,830	138	1,396	4.2	614.1	614.1	614.8	0.7
O	6,100	140	1,573	3.7	614.6	614.6	615.4	0.8
P	6,270	220	1,629	3.6	615.5	615.5	616.4	0.9

[1]Feet above confluence with Kanawha River
[2] Elevation computed without consideration of backwater from Kanawha River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

UPPER CREEK – WITCHER CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Witcher Creek								
Q	7,230	248	1,250	4.7	620.6	620.6	621.6	1.0
R	7,800	254	1,299	4.5	624.7	624.7	625.7	1.0
S	8,450	93	873	6.8	628.5	628.5	629.2	0.7
T	9,420	169	1,195	4.9	633.6	633.6	634.3	0.7
U	10,670	115	785	7.5	641.2	641.2	641.7	0.5
V	11,430	79	638	9.2	650.5	650.5	650.5	0.0
W	12,570	122	1,023	5.1	658.3	658.3	658.8	0.5
X	13,920	93	618	8.4	666.3	666.3	667.1	0.8
Y	15,220	87	753	6.9	679.5	679.5	680.2	0.7
Z	15,870	94	714	7.3	684.3	684.3	685.3	1.0
AA	16,080	131	1,183	4.4	688.0	688.0	688.9	0.9
AB	16,930	109	810	6.5	691.4	691.4	692.0	0.6
AC	17,890	113	672	7.7	700.7	700.7	701.0	0.3

[1]Feet above confluence with Kanawha River

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

WITCHER 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. These zones are as follows:

Zone A

Zone A is the flood insurance risk 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 (BFEs) or base flood depths are shown within this zone.

Zone AE

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

Zone AH

Zone AH is the flood insurance rate zone that corresponds to the areas of 1-percent annual chance shallow flooding (usually areas of ponding) where average depths are between 1 and 3 feet. Whole-foot base flood elevations derived from the detailed hydraulic analyses are shown at selected intervals within this zone.

Zone AO

Zone AO is the flood insurance rate zone that corresponds to the areas of 1-percent annual chance shallow flooding (usually sheet flow on sloping terrain) where average depths are between 1 and 3 feet. Average whole-depths derived from the detailed hydraulic analyses are shown within this zone.

Zone V

Zone V is the flood insurance rate zone that corresponds to the 1-percent annual chance coastal floodplains that have additional hazards associated with storm waves. Because approximate hydraulic analyses are performed for such areas, no base flood elevations are shown within this zone.

Zone VE

Zone VE is the flood insurance rate zone that corresponds to the 1-percent annual chance coastal floodplains that have additional hazards associated with storm waves. 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 risk zone that corresponds to areas outside the 0.2-percent annual chance floodplain, areas within the 0.2-percent annual chance floodplain, 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 BFEs or base flood depths are shown within this zone.

Zone D

Zone D is the flood insurance rate zone that corresponds to unstudied areas where flood hazards are undetermined, but possible.

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 risk 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 BFEs or average depths. Insurance agents use the zones and BFEs 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 Kanawha County. Previously, separate Flood Hazard Boundary Maps and/or FIRMs were prepared for each identified flood-prone incorporated community and the unincorporated areas 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."

COMMUNITY NAME	INITIAL IDENTIFICATION	FLOOD HAZARD BOUNDARY MAP REVISIONS DATE	INITIAL FIRM DATE	FIRM REVISIONS DATE
Belle, Town of	March 1, 1974	April 25, 1975 October 31, 1975	April 15, 1982	February 6, 2008
Cedar Grove, Town of	March 8, 1974	June 4, 1976	June 1, 1982	February 6, 2008
Charleston, City of	May 10, 1974	January 24, 1975	June 15, 1983	April 3, 1985 February 6, 2008
Chesapeake, Town of	March 15, 1974	June 11, 1976 March 25, 1977	June 1, 1982	February 6, 2008
Clendenin, Town of	August 9, 1974	June 11, 1976	July 16, 1984	February 6, 2008
Dunbar, City of	March 1, 1974	November 14, 1975	June 1, 1982	April 3, 1985 February 6, 2008
East Bank, Town of	March 22, 1974	September 26, 1975	June 1, 1982	February 6, 2008
Glasgow, Town of	March 8, 1974	October 10, 1975	June 15, 1982	February 6, 2008

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, MD
AND INCORPORATED AREAS

COMMUNITY MAP HISTORY

COMMUNITY NAME	INITIAL IDENTIFICATION	FLOOD HAZARD BOUNDARY MAP REVISIONS DATE	INITIAL FIRM DATE	FIRM REVISIONS DATE
Handley, Town of	January 17, 1975	None	July 5, 1984	February 6, 2008
Kanawha County (Unincorporated Areas)	April 25, 1975	December 12, 1975 December 24, 1982	March 18, 1985	February 6, 2008
Marmet, Town of	April 12, 1974	June 11, 1976	April 15, 1982	April 3, 1985 February 6, 2008
Nitro, City of	March 15, 1974	October 17, 1975	April 15, 1982	February 6, 2008
Pratt, Town of	March 8, 1974	September 26, 1975	May 1, 1984	February 6, 2008
South Charleston, City of	November 1, 1974	None	June 15, 1982	April 3, 1985 February 6, 2008
St. Albans, City of	March 8, 1974	October 3, 1975	June 15, 1982	February 6, 2008

TABLE 8

FEDERAL EMERGENCY MANAGEMENT AGENCY

KANAWHA COUNTY, MD
AND INCORPORATED AREAS

COMMUNITY MAP HISTORY

7.0 OTHER STUDIES

An advisory study for Kanawha County was complete in 2016. It produced updated approximate floodplain boundaries for selected streams down to two square miles drainage area. The updated approximated floodplains for Big Sandy Creek, Blue Creek, Bufflick Run, Falling Rock Creek, Gabes Creek, Indian Creek, Jordan Creek, King Shoals Run, Leatherwood Creek, Left Fork Leatherwood Creek, Left Hand Creek, Little Blue Creek, Mile Fork, Morris Creek, Pinch Creek, Queen Shoals Creek, Upper King Shoals Run, and Wills Creek were incorporated by this revision where appropriate.

This is a multi-volume FIS. Each volume may be revised separately, in which case it supersedes the previously printed volume. Users should refer to the Table of Contents in Volume 1 for the current date of each volume; volumes bearing these dates contain the most up-to-date flood hazard data.

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.

FISs have been prepared for the following adjacent countywide studies, which may undergo separate periodic updates (whether full or partial), and users are encouraged to reference the latest information at the FEMA Map Service Center (www.msc.fema.gov): Boone, Clay, Fayette, Jackson, Lincoln, Putnam, Raleigh, and Roane Counties, West Virginia.

8.0 LOCATION OF DATA

Information concerning the pertinent data used in the preparation of this study can be obtained by contacting the Flood Insurance and Mitigation Division, Federal Emergency Management Agency, One Independence Mall, Sixth Floor, 615 Chestnut Street, Philadelphia, PA 19106-4404.

9.0 BIBLIOGRAPHY AND REFERENCES

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APPENDIX A

With this revision, a subset of the FIRM panels for Kanawha County, including the Town of Clendenin, have been updated to the most current format. Each FIRM panel may contain specific notes to the user that provide additional information regarding the flood hazard data shown on that map. However, the format of the FIRM panel does not contain enough space to show all the notes that may be relevant in helping to better understand the information on the panel. Figure 3 contains the full list of these notes for the panels updated in this revision.

Figure 3: FIRM Notes to Users

NOTES TO USERS

For information and questions about this Flood Insurance Rate Map (FIRM), available products associated with this FIRM, including historic versions, the current map date for each FIRM panel, how to order products, or the National Flood Insurance Program (NFIP) in general, please call the FEMA Map Information eXchange at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA Flood Map Service Center website at https://msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study (FIS) Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website.

Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index. These may be ordered directly from the Flood Map Service Center at the number listed above.

For community and countywide map dates, refer to Table 8 in this FIS report.

To determine if flood insurance is available in this community, contact your Insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

PRELIMINARY FIS REPORT: FEMA maintains information about map features, such as street locations and names, in or near designated flood hazard areas. Requests to revise information in or near designated flood hazard areas may be provided to FEMA during the community review period, at the final Consultation Coordination Officer's meeting, or during the statutory 90-day appeal period. Approved requests for changes will be shown on the final printed FIRM.

The map is for use in administering the NFIP. It may not identify all areas subject to flooding, particularly from local drainage sources of small size. Consult the community map repository to find updated or additional flood hazard information.

BASE FLOOD ELEVATIONS: For more detailed information in areas where Base Flood Elevations (BFEs) and/or floodways have been determined, consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables within this FIS Report. Use the flood elevation data within the FIS Report in conjunction with the FIRM for construction and/or floodplain management.

FLOODWAY INFORMATION: Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the FIS Report for this jurisdiction.

FLOOD CONTROL STRUCTURE INFORMATION: Certain areas not in Special Flood Hazard Areas may be protected by flood control structures. Refer to Section 2.4 "Flood Protection Measures" of this FIS Report for information on flood control structures for this jurisdiction.

PROJECTION INFORMATION: The projection used in the preparation of the map was Universal Transverse Mercator (UTM) Zone 17. The horizontal datum was NAD83, GRS1980 spheroid. Differences in datum, spheroid, projection or State Plane zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of the FIRM.

ELEVATION DATUM: Flood elevations on the FIRM are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov/ or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

Local vertical monuments may have been used to create the map. To obtain current monument information, please contact the appropriate local community.

BASE MAP INFORMATION: Base map information shown on the FIRM was provided by various sources. For information about base maps, refer to Section 1.2 “Authority and Acknowledgements” in this FIS Report.

Corporate limits shown on the map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after the map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Base map information shown on the FIRM was derived from U.S. Department of Agriculture's National Agriculture Imagery Program orthoimagery (dated 2016 and downloaded from West Virginia Geographic Information System (GIS) Technical Center) and National Flood Hazard Layer database (downloaded from FEMA Map Service Center).

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

NOTES FOR FIRM INDEX

REVISIONS TO INDEX: As new studies are performed and FIRM panels are updated within Monroe County, West Virginia, corresponding revisions to the FIRM Index will be incorporated within the FIS Report to reflect the effective dates of those panels. Please refer to Table 4 of this FIS Report to determine the most recent FIRM revision date for each community. The most recent FIRM panel effective date will correspond to the most recent index date.

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

FLOOD RISK REPORT: A Flood Risk Report (FRR) may be available for many of the flooding sources and communities referenced in this FIS Report. The FRR is provided to increase public awareness of flood risk by helping communities identify the areas within their jurisdictions that have the greatest risks. Although non-regulatory, the information provided within the FRR can assist communities in assessing and evaluating mitigation opportunities to reduce these risks. It can also be used by communities developing or updating flood risk mitigation plans. These plans allow communities to identify and evaluate opportunities to reduce potential loss of life and property. However, the FRR is not intended to be the final authoritative source of all flood risk data for a project area; rather, it should be used with other data sources to paint a comprehensive picture of flood risk.

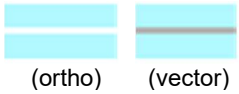
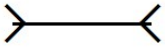
Each FIRM panel contains an abbreviated legend for the features shown on the maps. However, the FIRM panel does not contain enough space to show the legend for all map features. Figure 4 shows the full legend of all map features that could apply to the panels in this revision. Note that not all of these features may appear on the FIRM panels in Kanawha County, West Virginia.

Figure 4: Map Legend for FIRM

SPECIAL FLOOD HAZARD AREAS: *The 1% annual chance flood, also known as the base flood or 100-year flood, has a 1% chance of happening or being exceeded each year. Special Flood Hazard Areas are subject to flooding by the 1% annual chance flood. The Base Flood Elevation is the water surface elevation of the 1% annual chance flood. The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights. See note for specific types. If the floodway is too narrow to be shown, a note is shown.*

Special Flood Hazard Areas subject to inundation by the 1% annual chance flood (Zones A, AE, AH, AO, AR, A99, V and VE)

Zone A	The flood insurance rate zone that corresponds to the 1% annual chance floodplains. No base (1% annual chance) flood elevations (BFEs) or depths are shown within this zone.
Zone AE	The flood insurance rate zone that corresponds to the 1% annual chance floodplains. Base flood elevations derived from the hydraulic analyses are shown within this zone.
Zone AH	The flood insurance rate zone that corresponds to the areas of 1% annual chance shallow flooding (usually areas of ponding) where average depths are between 1 and 3 feet. Whole-foot BFEs derived from the hydraulic analyses are shown at selected intervals within this zone.
Zone AO	The flood insurance rate zone that corresponds to the areas of 1% annual chance shallow flooding (usually sheet flow on sloping terrain) where average depths are between 1 and 3 feet. Average whole-foot depths derived from the hydraulic analyses are shown within this zone.
Zone AR	The flood insurance rate zone that corresponds to areas that were formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
Zone A99	The flood insurance rate zone that corresponds to areas of the 1% annual chance floodplain that will be protected by a Federal flood protection system where construction has reached specified statutory milestones. No base flood elevations or flood depths are shown within this zone.
Zone V	The flood insurance rate zone that corresponds to the 1% annual chance coastal floodplains that have additional hazards associated with storm waves. Base flood elevations are not shown within this zone.
Zone VE	Zone VE is the flood insurance rate zone that corresponds to the 1% annual chance coastal floodplains that have additional hazards associated with storm waves. Base flood elevations derived from the coastal analyses are shown within this zone as static whole-foot elevations that apply throughout the zone.

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

22.0	River mile Markers
CROSS SECTION & TRANSECT INFORMATION	
B 20.2	Lettered Cross Section with Regulatory Water Surface Elevation (BFE)
5280 21.1	Numbered Cross Section with Regulatory Water Surface Elevation (BFE)
17.5	Unlettered Cross Section with Regulatory Water Surface Elevation (BFE)
8	Coastal Transect
	Profile Baseline: Indicates the modeled flow path of a stream and is shown on FIRM panels for all valid studies with profiles or otherwise established base flood elevation.
	Coastal Transect Baseline: Used in the coastal flood hazard model to represent the 0.0-foot elevation contour and the starting point for the transect and the measuring point for the coastal mapping.
513	Base Flood Elevation Line
ZONE AE (EL 16)	Static Base Flood Elevation value (shown under zone label)
ZONE AO (DEPTH 2)	Zone designation with Depth
ZONE AO (DEPTH 2) (VEL 15 FPS)	Zone designation with Depth and Velocity
BASE MAP FEATURES	
Missouri Creek	River, Stream or Other Hydrographic Feature
234	Interstate Highway
234	U.S. Highway
234	State Highway
234	County Highway
MAPLE LANE	Street, Road, Avenue Name, or Private Drive if shown on Flood Profile
RAILROAD	Railroad
	Horizontal Reference Grid Line
	Horizontal Reference Grid Ticks

+	Secondary Grid Crosshairs
Land Grant	Name of Land Grant
7	Section Number
R. 43 W. T. 22 N.	Range, Township Number
$^{42}76^{000m}E$	Horizontal Reference Grid Coordinates (UTM)
365000 FT	Horizontal Reference Grid Coordinates (State Plane)
80° 16’ 52.5”	Corner Coordinates (Latitude, Longitude)