FEMA

FLOOD RISK DISCOVERY REPORT

GAULEY | WEST VIRGINIA

Clay County, Fayette County, Town of Gauley Bridge, Greenbrier County, Town of Quinwood, Town of Rainelle, Town of Rupert, Kanawha County, City of Richwood, City of Summersville, Nicholas County, Pocahontas County, Randolph County, Summers County, Town of Camden-On-Gauley, Town of Cowen, Webster County

MEETING: July 25, 2023

FINAL REPORT: January 2024

RiskMAP
Increasing Resilience Together

GAULEY | WEST VIRGINIA

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EXECUTIVE SUMMARY

The Federal Emergency Management Agency's (FEMA) Risk Mapping, Assessment, and Planning (Risk MAP) program provides communities with flood information to help them understand their current flood risk and make informed decisions on actions to become stronger and safer against future risk. Discovery is the first phase of the Risk MAP process and begins a dialogue among FEMA and community members about (1) the nature of flooding in the watershed and the actions that communities are taking to address their flood hazards and risk; and (2) the data and information that may be used for developing the regulatory products and Flood Risk Products (for more information, please see page 14).

This report summarizes the Discovery efforts in the Gauley Watershed, which includes nine counties, two cities and six towns. The Discovery phase includes gathering tabular and spatial data and information on past and current flood risk from local communities and regional, State, and Federal entities. See Appendix H for a complete list of the stakeholders involved in Discovery.

The goals of Discovery are to (1) determine what flood hazard information already exists; (2) learn what flood hazard information is still needed to make mitigation decisions; and (3) identify what areas, critical infrastructure, and other resources could potentially be affected during a flood event. This report discusses the risks and needs identified during the Gauley Watershed Discovery process.

Highlights of the Discovery effort are listed on the right.

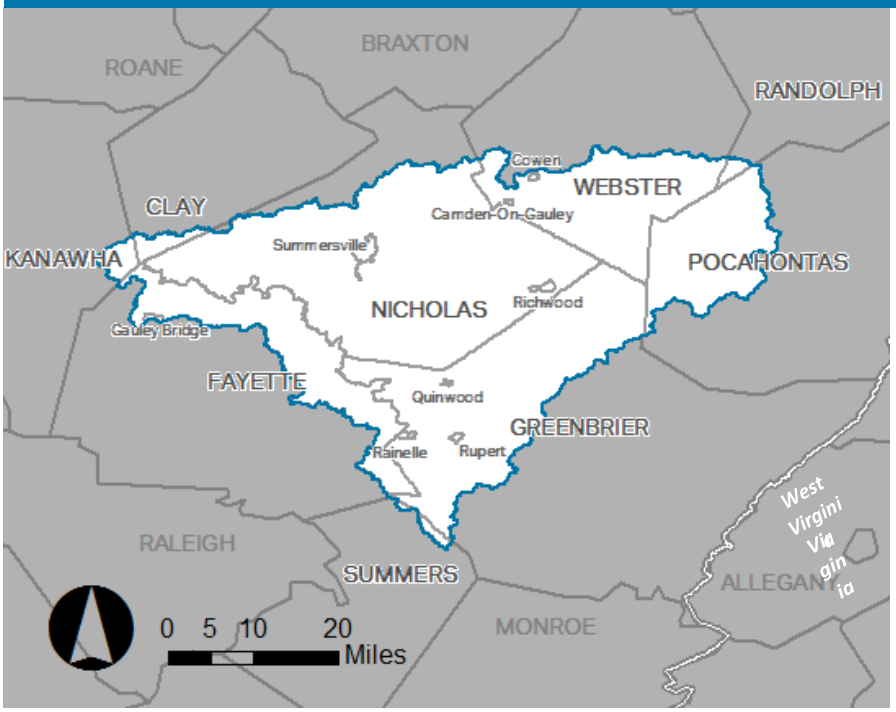
DISCOVERY HIGHLIGHTS:

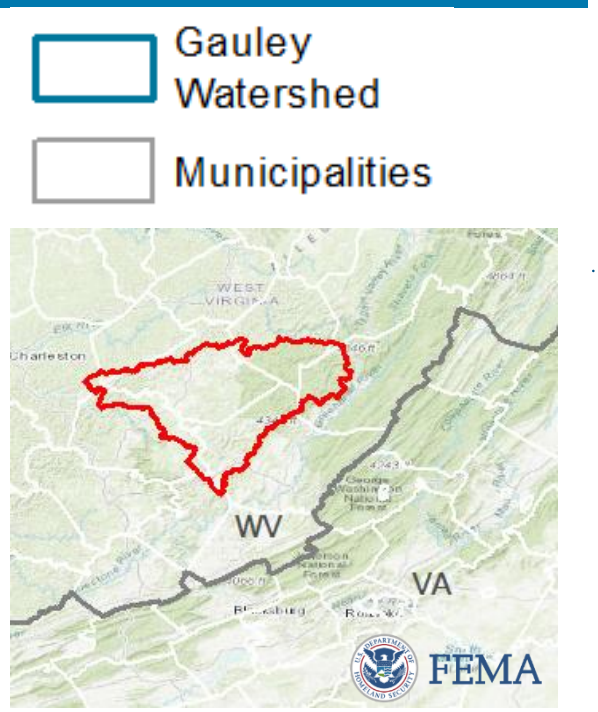
- New Light Detection and Ranging (LiDAR) data available for this watershed will allow for a dramatic increase in the accuracy of flood hazard mapping.
- All communities in the watershed participate in the National Flood Insurance Program (NFIP).
- The watershed is predominantly comprised of established, rural, and suburban communities.
- Specialized flood risk dashboards were distributed to each community within the four watersheds being studied. These dashboards provide communities with a snapshot of their flood risk, as well as their financial risk.

GAULEY | WEST VIRGINIA

PROJECT OVERVIEW

The Gauley Watershed includes all the land from the far southwestern corner of Randolph County, West Virginia, to the point where the Gauley River merges with New River to form the Kanawha River at the Town of Gauley Bridge, West Virginia. FEMA Region III identified the Gauley Watershed as a priority for the Risk MAP program because newly available data presented an opportunity to better define flood hazards in the area. This watershed encompasses approximately 1,421 square miles.





COMMUNITY	POPULATION[1]	POPULATION IN WATERSHED[2]
CITY OF RICHWOOD	1,660	1,660
CITY OF SUMMERSVILLE	3,431	3,431
CLAY COUNTY	8,051	270
FAYETTE COUNTY	40,488	10,100
GREENBRIER COUNTY	32,977	11,200
KANAWHA COUNTY	180,745	2,600
NICHOLAS COUNTY	24,604	20,500
POCAHONTAS COUNTY	7,869	1,200
RANDOLPH COUNTY	27,932	140

COMMUNITY	POPULATION[1]	POPULATION IN WATERSHED[2]
SUMMERS COUNTY	11,959	200
TOWN OF CAMDEN-ON-GAULEY	126	126
TOWN OF COWEN	487	487
TOWN OF GAULEY-BRIDGE	553	400
TOWN OF QUINWOOD	222	222
TOWN OF RAINELLE	1,190	1,190
TOWN OF RUPERT	877	877
WEBSTER COUNTY	8,378	2,800

[2] All populations are derived from the 2020 Census.
[2] Population in Watershed estimates are based on the percentage of jurisdiction's area within the watershed.

GAULEY WATERSHED | WEST VIRGINIA

YOUR FLOOD RISK MAPPING TIMELINE

Discovery Meeting
July 25, 2023

NEXT STEPS: REGULATORY STUDY SCOPE DETERMINATION

If the data and research collected and performed during the Discovery phase support the need for a flood map update, the following timeline shows the steps of that process.

Flood Risk Review	If a flood study is determined to be necessary as a result of the Discovery process, FEMA, State, and local officials will meet to review the draft floodplain mapping and methodologies used.
Issue Preliminary Map	FEMA issues preliminary maps and Flood Insurance Study (FIS) reports to the community for review.
Community Coordination and Outreach (CCO)	Preliminary maps are reviewed with community officials at the CCO Meeting. The comment and appeal process are also explained.
Facilitate Public Comment and Appeal Period	Stakeholders have 90 days after the appeal start date to submit comments and/or appeals. Comments and/or appeals are reviewed, and flood maps may be updated appropriately.
Issue Letter of Final Determination	Once a flood map is finalized, it is adopted by the community. A six-month adoption period begins to allow communities time to adopt adequate floodplain management ordinances based on the new flood map.
Manage Your Floodplain	Community leaders monitor and track local development. Letters of Map Revision are required within six months of project completion for projects that change flood hazards in a specific area.

GAULEY WATERSHED | WEST VIRGINIA

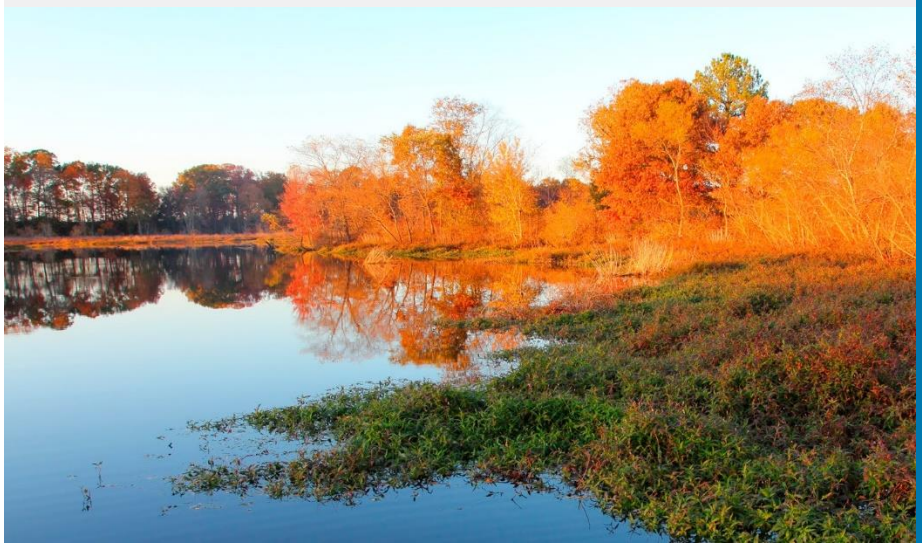
DATA COLLECTION

Discovery is a process of data mining, collection, and analysis through active collaboration with communities.

FEMA Region III gathered a significant amount of data before the Discovery Meeting to focus community engagement on identifying more localized information and sources of data. Additionally, the Region led the review of the Hazard Mitigation Plans (HMPs), FIS reports, and Comprehensive Plans for each of the jurisdictions prior to the Discovery Meeting.

The Region sent each community and stakeholder a Discovery Data Questionnaire prior to the meeting to collect additional local data such as current land use, zoning plans, risk assessment data, stormwater issues, latest orthophotography, and as-built information for manmade flood retention areas. FEMA also asked communities and stakeholders to identify areas of concern that could be addressed during the flood study through updated flood maps, revised ordinances, and desired mitigation projects.

The data collected were used to produce the Discovery Maps, Community Dashboards, and this Discovery Report. The table on the right provides an overview of the data collected. A complete list of data collected during the Discovery process is included in Appendix E.



- BASE MAP DATA (political boundaries, streamlines, transportation)
- TOPOGRAPHIC DATA (2016-2018 LiDAR)
- ORTHOPHOTOS (2022 pixel-based)
- DECLARED DISASTERS
- LEVEES, DAMS, STREAM GAGES
- EFFECTIVE FLOODPLAINS
- NFIP & CRS PARTICIPATION
- INDIVIDUAL & PUBLIC ASSISTANCE
- STRUCTURES
- POPULATION & SOCIOECONOMIC CHARACTERISTICS
- MITIGATION ACTIONS

GAULEY WATERSHED: CHARACTERISTICS

COMMUNITY CHARACTERISTICS

The Gauley Watershed community characteristics information was developed to inform the DiscoveryMeeting and, through the flood risk mapping update, will continue to be used to identify technical assistance and tools that could support the community in its needs. For additional information on community characteristics, please see the Community Dashboards in Appendix A.

GAULEY WATERSHED COMMUNITY CHARACTERISTICS

Part of the greater Ohio River Watershed, the Gauley Watershed includes all the land from the far southwestern corner of Randolph County, West Virginia, to the point where the Gauley River merges with New River to form the Kanawha River at the Town of Gauley Bridge, West Virginia. The Gauley River runs approximately 105 miles from the Town of Camden-on-Gauley, West Virginia to the Town of Gauley Bridge, West Virginia. The Gauley Watershed encompasses approximately 1,421 square miles in Clay, Fayette, Greenbrier, Kanawha, Nicholas, Pocahontas, Randolph, Summers, and Webster Counties.

All communities within the Gauley Watershed participate in the NFIP. Participating jurisdictions adopt and enforce floodplain management ordinances to implement development standards in flood hazard areas. NFIP regulations represent the minimum standard for floodplain management. Communities are encouraged to consider higher standards and the adoption of more comprehensive regulations, especially when planning for future conditions. These standards can include buffers or setbacks, additional freeboard, regulation of high-risk land uses, conservation and designation of open space areas, and lower thresholds for substantial damage. Higher standards further reduce flood risk and can take advantage of the additional information and knowledge of local conditions available to community officials.

Communities that exceed the minimum requirements of the NFIP may be eligible to participate in the Community Rating System (CRS) program. Three jurisdictions in the Gauley Watershed (Fayette, Greenbrier, and Kanawha Counties) currently participate in the NFIP's CRS program.

GAULEY WATERSHED: CHARACTERISTICS

COMMUNITY	TOTAL POLICIES	TOTAL CLAIMS	RL[1] BUILDINGS	LEVEL OF NFIP REGS REQ'D	EFFECTIVE DATE OF FIRM/FIS	CAV[2]/ CAC[3] DATES	# OF LOMCS[4]	TOTAL EXPOSURE IN THE FLOODPLAIN 1.0[5]
CAMDEN-ON-GAULEY, TOWN OF	2	21	5	D	01/06/2012	N/A 12/04/2018	0	$1,964,235
CLAY COUNTY (UNINCORPORATED AREAS)	94	60	5	D	02/06/2013	05/14/2018 08/01/2018	2	$6,329,677
COWEN, TOWN OF	8	6	0	B	01/06/2012	N/A 12/04/2018	0	$5,695,822
FAYETTE COUNTY (UNINCORPORATED AREAS)	125	199	19	D	09/03/2010	05/18/2015 01/24/2018	8	$28,863,822
GAULEY BRIDGE, TOWN OF	7	9	4	D	09/03/2010	02/01/1990 06/05/2019	0	$262,839
GREENBRIER COUNTY (UNINCORPORATED AREAS)	225	475	56	D	10/16/2012	03/15/2015 07/19/2018	10	$31,641,475
KANAWHA COUNTY (UNINCORPORATED AREAS)	1207	1585	296	D	02/06/2008	08/18/2014 01/25/2018	0	$1,543,214
NICHOLAS COUNTY (UNINCORPORATED AREAS)	59	66	2	D	09/24/2021	05/03/2013 07/05/2017	21	$69,906,329
POCAHONTAS COUNTY (UNINCORPORATED AREAS)	124	155	13	D	11/04/2010	N/A 06/28/2021	0	$2,754,202
QUINWOOD, TOWN OF	0	1	0	A	10/16/2012	N/A N/A	0	$0
RAINELLE, TOWN OF	46	154	22	D	10/16/2012	04/23/1991 07/25/2017	0	$3,194,722
RANDOLPH COUNTY (UNINCORPORATED AREAS)	137	302	43	C	09/29/2010	09/19/2014 10/04/2021	0	$0
RICHWOOD, CITY OF	44	144	38	D	09/24/2021	N/A 08/29/2017	0	$87,363,347
RUPERT, TOWN OF	4	17	4	B	10/16/2012	12/08/1986 07/25/2017	0	$4,483,348
SUMMERS COUNTY (UNINCORPORATED AREAS)	139	444	105	D	10/07/2021	03/01/2013 06/30/2017	0	$0
SUMMERSVILLE, CITY OF	3	5	1	B	07/04/2011	N/A 08/10/2016	3	$8,006,277
WEBSTER COUNTY	77	140	13	D	01/06/2012	12/04/2018 06/08/2017	2	$19,251,184

[1] RL=Repetitive Loss, [2] CAV=Community Assistance Visits, [3] CAC=Community Assistance Contacts

[4] LOMC count reflects the number of LOMCs in the watershed for the entire county, not just the county unincorporated areas.

[5] TEIF 2.1 (County Buildings) was created using local Building Footprint Features. Hazus building value data was subsequently dispersed proportionately to the footprints based on the area of the footprint. TEIF is intended to evaluate potential risk or economic loss in a dollar amount per community based on Hazus General Building Stock (Total Exposure) Values from FEMA's Hazus Version 2.2. VGIN building footprints for Quarter #1 of 2016 were utilized and building duplicates/overlapping buildings were removed prior to distribution of Hazus Building Value.

GAULEY WATERSHED: CHARACTERISTICS

RECENT FLOOD-RELATED PRESIDENTIAL DISASTER DECLARATIONS (2012-2021)

There are two forms of Presidential action that authorize Federal disaster assistance. Emergency Declarations (EMs) spur activities to protect property and strengthen public safety through Federal assistance, and Major Disaster Declarations (DRs) provide supplemental coordination and assistance beyond the ability of State and local governments.

OCT 2012 — DR-4093: HURRICANE SANDY
Clay, Kanawha, Nicholas, Fayette, Pocahontas, Randolph, and Webster Counties

MAY 2015 — DR-4221: SEVERE STORMS
Greenbrier County

JUNE 2016 — DR-4273: SEVERE STORMS
Clay, Fayette, Greenbrier, Randolph, Kanawha, Nicholas, Webster, Summers, and Pocahontas Counties

MAY 2021 — DR-4605: SEVERE STORMS
Kanawha County

HISTORY OF FLOOD-RELATED DISASTERS

The following is a list of past major flood events in the Gauley Watershed as reported in the effective FIS reports for each jurisdiction.

- November 1985: Severe Storm
- January 1996: Severe Storm
- February 2000: Severe Storm
- June 2004: Severe Storm
- August 2005: Hurricane Katrina
- October 2012: Hurricane Sandy
- May 2015: Severe Storm
- June 2016: Severe Storm

INDIVIDUAL ASSISTANCE & PUBLIC ASSISTANCE

FEMA grant-funded assistance programs for communities with disaster declarations.

Individual Assistance provides community services or individual or household assistance. Communities in the watershed received more than $124 million in Individual Assistance funds since 1998. Communities that are ineligible for Individual Assistance, or households and individuals ineligible to receive funds under this program, can work with FEMA Disaster Recovery Centers to identify additional programs for financial assistance.

Public Assistance is separated into seven project categories (A-G). Projects in categories C through G are permanent work projects and are only available for major disasters. Communities in the watershed received approximately $100 million in total public assistance since 1998 (approximately $60 million for categories A and B and approximately $40 million for categories C-G). Funding for these projects is summarized by county below. Project amounts for categories A (debris removal), B(emergency protective measures), and C-G since 1998 are also shown on the Community Dashboards in the Appendix.

COUNTY	C – ROADS & BRIDGES	D – WATER CONTROL FACILITIES	E – PUBLIC BUILDINGS	F – PUBLIC UTILITIES	G – RECREATIONAL OR OTHER
CLAY COUNTY	$82K	$0	$4.5M	$1.2M	$5.6M
FAYETTE COUNTY	$218K	$0	$236K	$1.6M	$1.1M
GREENBRIER COUNTY	$385K	$0	$1.M	$1.4M	$1.3M
KANAWHA COUNTY	$1.6M	$0	$6.5M	$2.4M	$2.8M
NICHOLAS COUNTY	$571K	$3K	$1.9M	$1.7M	$726K
POCAHONTAS COUNTY	$0	$0	$25K	$0	$2K
RANDOLPH COUNTY	$18K	$0	$44K	$1.8M	$13K
SUMMERS COUNTY	$33K	$0	$122K	$61K	$159K

GAULEY WATERSHED: CHARACTERISTICS

PRINCIPAL FLOOD PROBLEMS BY COUNTY	
CLAY COUNTY	• Periodic flooding can occur any time of the year due to overflows of the Elk River, Laurel Creek, Middle Creek, and Big Otter Creek, however the main flood season is December through April. • Large frontal storms or decaying tropical storms produce the worst flooding on the larger streams, while high-intensity thunderstorms produce severe flooding on smaller areas. • The last major flood to occur was in 1985.
FAYETTE COUNTY	• Floods periodically occur due to the overflows of the Kanawha River from heavy rains over the Kanawha River basin combined with spring thaw and snowmelt. This also affects lower portions of the New and Gauley Rivers in Fayette County. • The most recent significant flood occurred in 1936, and the most severe flooding occurred in 1861 at approximately 54 feet.
GREENBRIER COUNTY	• Flooding typically occurs due to hurricane generated rainfall and rapid spring snowmelt. The most devastating of these floods occurred in 1972 (Hurricane Agnes) and 1985 (Hurricane Juan). Both of which resulted in deaths as well as severe infrastructure and structural damage. The 1972 flood was estimated to have a 4% chance of occurrence, or it can be expected to occur once every 25 years. • Significant flash floods also occurred in 1996, 2003, and 2010. The 1996 and 2003 floods also resulted in significant infrastructure and structural damage and evacuation. These flash floods occurred due to damaging thunderstorm winds and heavy rainfall in combination with significant snowmelt.
KANAWHA COUNTY	• 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, causing temporary loss of police, fire, and medical protection. • Severe storms throughout the last 20 years have caused severe property damage, resulting in Presidential Disaster declarations for the county.
NICHOLAS COUNTY	• Flooding can occur during any season of the year, though the main flood season is December through April. Most of the floods during this season occur due to heavy rain and snowmelt. • The last major flood occurred in June 2016 and was the third deadliest flood in state history. This severe flooding devastated Nicholas County and the City of Richwood, causing thousands of dollars in damage.
POCAHONTAS COUNTY	• Flooding can occur due to the overflows of Deer Creek, East Fork Greenbrier River, and Knapp Creek and can occur any time during the year. • Large frontal storms or decaying tropical storms produce the worst flooding on the larger streams, while high-intensity thunderstorms produce severe flooding on streams with smaller drainage areas.
RANDOLPH COUNTY	• Major floods may occur on the Tygart Valley River anytime throughout the year, floods occurring during the winter months are usually the result of heavy rainfall and snowmelt. Flooding in other areas is the result of high-intensity, short duration storms. • The largest flood on the Tygart Valley River occurred in 1985 and had a peak flow of 28,000 cfs at the Elkins gage. • At Craven Run, floods may occur at various times throughout the year, however the main flood season is from June to October. Due to its basin size, shape, and slope, Craven Run is more susceptible to flash flooding from short duration thunderstorms rather than winter storms. • The lower reach of Leading Creek is subjected to backwater flooding from the Tygart Valley River during the spring and summer months due to short-duration storms.

GAULEY WATERSHED: CHARACTERISTICS

PRINCIPAL FLOOD PROBLEMS BY COUNTY	
SUMMERS COUNTY	• Flooding occurs periodically due to overflow of the Greenbrier and New Rivers during the winter or early spring because of heavy rains and snowmelt. • The last major flood occurred in June 2016 and was the third deadliest in the state's history. This severe flooding devastated Summers County, causing thousands of dollars in damage.
WEBSTER COUNTY	• Floods occur due to overflows of the Birch River, Left Fork Holly River, Hodam Creek, Right Fork Holly River, Laurel Creek, Elk River, Back Fork Elk River, Leatherwood Creek, Gauley River, Big Ditch Run, Williams River, Grassy Creek, Strouds Creek, Sugar Creek, and Price Glade Run. On the larger streams, the worst floods are caused by large frontal storms, while on smaller drainage areas floods are caused by high-intensity thunderstorms. • The mountainous topography of the county is conductive to rapid rises on streams and flash flooding. This is made worse by mining or timbering activities in the county. • The last major flood occurred in June 2016 and devastated Webster county's infrastructure.

GAULEY WATERSHED: CHARACTERISTICS

HAZARD MITIGATION PLANS

FEMA provides communities with resources to help them integrate the flood risk assessment data into their ongoing planning processes, including hazard mitigation planning. Information about the status of HMPs in the Gauley Watershed is provided in the table below. For more information about mitigation actions identified by each community in these plans, please see the Community Dashboards included in the Appendix.

COMMUNITY	HAZARD MITIGATION PLAN	STATUS
RANDOLPH COUNTY	Planning and Development Council Region 7 Hazard Mitigation Plan	Approved Expires 7/4/2023
SUMMERS COUNTY	Planning and Development Council Region 1 Hazard Mitigation Plan	Expired 1/31/2022 Plan In Progress
FAYETTE COUNTY POCAHONTAS COUNTY GREENBRIER COUNTY NICHOLAS COUNTY WEBSTER COUNTY TOWN OF GAULEY BRIDGE CITY OF RICHWOOD TOWN OF QUINWOOD CITY OF SUMMERSVILLE TOWN OF COWEN TOWN OF CAMDEN-ON-GAULEY TOWN OF RAINELLE TOWN OF RUPERT	Planning and Development Council Region 4 Hazard Mitigation Plan	Expired 2/21/2022 Plan In Progress
KANAWHA COUNTY CLAY COUNTY	Planning and Development Council Region 3 Hazard Mitigation Plan	Expired 05/22/2022 Plan in Progress

HAZARD MITIGATION ASSISTANCE

FEMA administers three **Hazard Mitigation Assistance (HMA)** programs to provide funding for projects that reduce the risk to individuals and property from natural hazards.

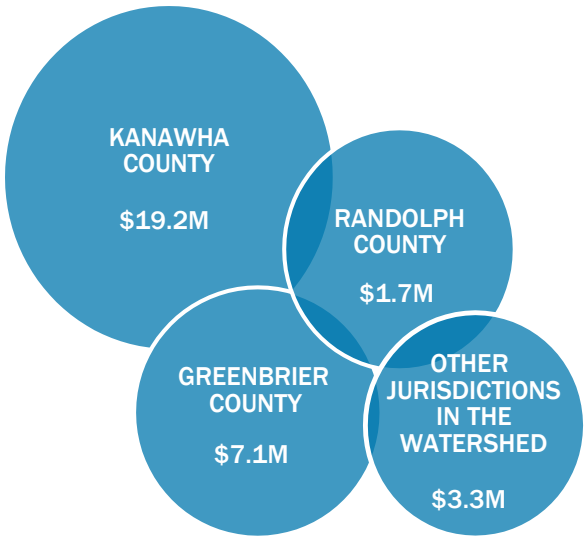
Hazard Mitigation Grant Program (HMGP): Funding to implement long-term hazard mitigation planning and projects after a Presidential Major Disaster Declaration.

Pre-Disaster Mitigation (PDM): Funding to implement hazard mitigation planning and projects that prevent future losses before disaster strikes.

Flood Mitigation Assistance (FMA): Funding to implement planning and projects that reduce or eliminate long-term risk of flood damage to structures insured under the NFIP.

A summary of HMA grants received by county is provided to the right.

HMA GRANTS RECEIVED

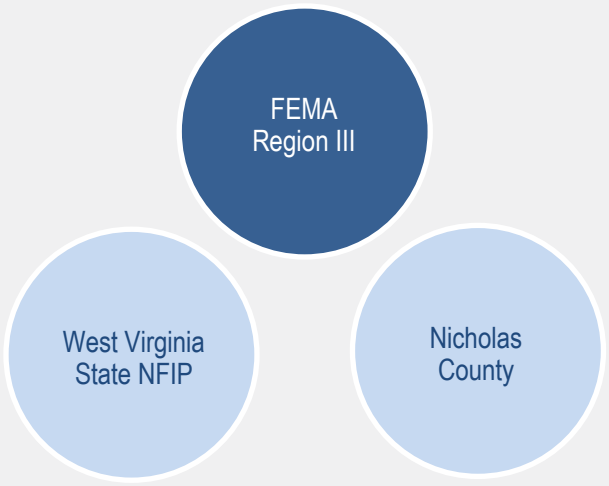


GAULEY WATERSHED | WEST VIRGINIA

DISCOVERY MEETING

The Discovery Meeting is an opportunity for FEMA to engage directly with the communities in the study watershed. The meeting serves both to introduce communities to the flood risk mapping process and to gather information on local concerns, resources, and needs.

A Discovery Meeting was conducted for the Gauley Watershed on July 25, 2023. Representatives of the following communities and agencies attended the meeting:



During the meeting, attendees were asked to provide information on areas of local concern, past risk assessment and mitigation projects, and future risk assessment and mitigation needs. Meeting attendees discussed their priorities with the project team and participated in a mapping exercise to provide information on specific reaches, contributing areas, and structures. Meeting invitees also received questionnaires designed to gather information on local resources, flood hazards, and mapping and mitigation priorities.

Discovery Meeting outcomes based on the meeting, mapping exercise, and questionnaires are summarized on the right.

The Discovery Map comments and Discovery Meeting minutes are included in Appendices F and G, respectively.

MAP UPDATES REQUESTED:

- **No map updates requested during the Gauley Discovery Meeting or associated comment period**

FLOOD RISK CONCERNS:

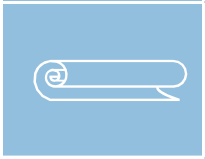
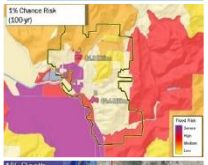
- **No flood risk concerns were offered during the Gauley Discovery Meeting or associated comment period.**

GAULEY WATERSHED | WEST VIRGINIA

POTENTIAL FLOOD RISK PRODUCTS AND DATASETS

Based on the findings of the Discovery process, FEMA Region III will consider a potential flood risk mapping project within the Gauley Watershed. FEMA Region III will explore the possibility of studying all riverine areas or a project studying limited stream reaches within the watershed.

A flood risk mapping project takes about three to five years to complete. When it is final, communities are provided with an updated Flood Insurance Rate Map (FIRM), FIS reports, and FIRM databases, also known as Flood Hazard Products. Additionally, communities may receive a set of non-regulatory tools that they can use to better understand and make informed decisions to reduce risk. The following non-regulatory products may be delivered to the communities at the end of a project.

FLOOD RISK PRODUCT		WHAT IS IT?	HOW IS IT USED?
	FLOOD RISK MAP	Illustrates overall flood risk within the project area by including the outcomes of assessments completed during the flood risk mapping project.	Can be used by communities as outreach tools to communicate risk to residents more clearly.
	FLOOD RISK DATABASE	Provides communities with geospatial information collected during the risk assessment process and offers effective ways to visualize and communicate flood risk. Four datasets are included.	
	1. Changes Since Last FIRM	Highlights how the latest FIRM differs from the previous maps to help communities understand the changes and prepare for adoption of new maps.	Communities can use this to engage residents and businesses about their changing risk and the implications for flood insurance.
	2. Flood Risk Assessment	Focuses on damage that results from floods of various magnitudes. Identifies flood-prone areas and vulnerable populations and property and provides an estimate of potential losses.	Can help guide community mitigation efforts by highlighting areas where risk reduction actions may produce the most effective results.
	3. Flood Depth and Analysis Grid	Communicates detailed information about the depth and velocity of floodwaters, as well as the probability of an area being flooded over time.	Officials can use depth grids to show individuals the depth of flooding their home might experience at different flood frequencies.
	4. Areas of Mitigation Interest	Explains how various physical factors affect the severity of flooding.	Information can be tied to the local HMP, which can help projects gain traction and help officials secure funding for those projects.

SUMMARY

As the first phase of a flood risk mapping project, Discovery helps commence a coordinated effort within the Gauley Watershed to ensure communities have information to improve their risk reduction efforts, including their hazard mitigation planning, mitigation action identification and implementation, and community outreach. The findings from the Gauley Watershed Discovery Report and Maps are based on an analysis of watershed-wide research, information provided by watershed communities and stakeholders, and input from meetings and engagement with the communities and stakeholders. This process and the resulting report and maps serve as the first step toward increasing communities' resilience to flooding within the Gauley Watershed. The coordination with communities in the watershed and the detailed study of flooding within those communities will continue at the outset of a flood risk mapping project in the Gauley Watershed.

ACTION ITEMS AND NEXT STEPS

- Communities will provide feedback to FEMA on training and technical assistance needs.
- FEMA will have follow-up discussions with communities to discuss next steps in the flood risk mapping process should the data and research collected and performed during Discovery support the need for an update.
- Communities should continue to explore ideas to increase their resilience to flooding, such as cost-efficient mitigation projects and integration with hazard mitigation planning.
- Communities should review their Floodplain Management Ordinance and Building Code to ensure alignment with flood risks discussed and identified during Discovery.
- Communities should stay in contact with FEMA for any additional mapping and public assistance needs.

QUESTIONS

If you have any questions, please contact the FEMA Region 3 Project Manager, Andrew Jackson, at Andrew.Jackson4@fema.dhs.gov.

GAULEY WATERSHED | WEST VIRGINIA

FEDERAL AND STATE CONTACT INFORMATION

AGENCY	NAME	TITLE	EMAIL
YOUR PRIMARY FEMA CONTACT	ANDREW JACKSON	FEMA Region 3 Project Manager	Andrew.Jackson4@fema.dhs.gov
FEMA REGION 3	ELIZABETH RANSON	FEMA Region 3 Floodplain Management Specialist	Elizabeth.ranson@fema.dhs.gov
WEST VIRGINIA EMERGENCY MANAGEMENT DIVISION	TIMOTHY W. KEATON	WV NFIP/CTP Coordinator	Tim.w.keaton@wv.gov
WEST VIRGINIA GIS TECHNICAL CENTER	KURT DONALDSON	Project Manager	Kurt.Donaldson@mail.wvu.edu

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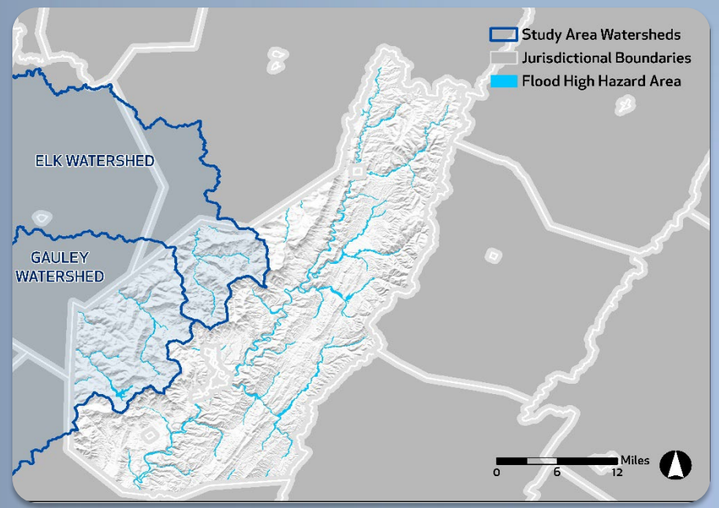
    g. County Border Special Flood Hazard Area Floodplain Boundary Tie-In Issues
    h. LOMCs Identified in the Watershed by Jurisdiction
F. Discovery Maps
G. Meeting Minutes
H. Meeting Attendance Record
I. Meeting Presentation

APPENDIX A | COMMUNITY DASHBOARDS

Pocahontas County (Unincorporated Areas)/

Pocahontas County, WV **KNOW YOUR RISK** (The information presented below are estimates as of August 2022.)



10/17/1989
Initial FIRM[1] date

11/04/2010
Effective FIRM date

$2.2M
Total paid losses[2]

155
Total paid claims[2]

111
Flood insurance policies in force

65
Policies in the effective flood high hazard area

8,480
Estimated structures in the community

530
Estimated structures in the flood high hazard area

10
Letters of Map Change

22
Flood-related countywide presidential disaster declarations

9
Paid claims outside of the effective flood high hazard area[2]

$498K
Repetitive Loss (RL) paid losses[2]

13
RL properties[2]

19%
of households spend 30% or more of their income on housing

5%
of the population is in the flood high hazard area

KEEPING COMMUNITIES INFORMED: Your Risk MAP Timeline

YOU ARE HERE — Discovery Meeting

~YEAR 1 — Flood Risk Review Meeting

Preliminary Map Issuance

Community Coordination & Outreach Meeting

Appeal Period

~YEAR 5 — Letter of Final Determination

Effective Maps

Pocahontas County (Unincorporated Areas)/Pocahontas, WV

Your Hazard Mitigation Plan expired on **February 21, 2022,** and now is the time to update it. Some projects you identified to reduce flood risk in this previous plan include the following:

- Review and update floodplain ordinances to ensure full compliance with National Flood Insurance Program (NFIP) standards.
- Educate local government representatives about the NFIP and its requirements. This project may include the facilitation of public forums to encourage questions regarding the NFIP.
- Coordinate with appropriate agencies to obtain updated NFIP policy-holder information within Pocahontas County.
- Coordinate with FEMA to maintain an updated list of repetitive loss properties throughout Pocahontas County and the municipalities therein.
- Input repetitive loss properties into a GIS database for use in future mitigation activities.
- As funds become available, undertake buyout and/or elevation projects to lessen the number of repetitive loss properties. This project also includes non-RL properties. As part of this process, hold a series of public meetings with property owners to identify specific project areas and to gauge interest in project participation.
- Coordinate with WVDOH to repair or install culverts in an effort to alleviate backup onto roads during high volume rain incidents.

Find ideas to mitigate flood risk on fema.gov: https://www.fema.gov/sites/default/files/2020-06/fema-mitigation-ideas_02-13-2013.pdf

Land Use Trend:
Rural

N/A
Date of Last CAV[4]

06/28/2021
Date of Last CAC[4]

PARTICIPATING
in the National Flood Insurance Program

NOT PARTICIPATING
in the Community Rating System

Countywide Public Assistance received

$0
Category A: Debris Removal

$137K
Category B: Protective Measures

$27K
Categories C-G: Permanent Work

Hazard Mitigation Assistance Projects Countywide

2
Hazard Mitigation Grant Program

0
Pre-Disaster Mitigation

0
Flood Mitigation Assistance

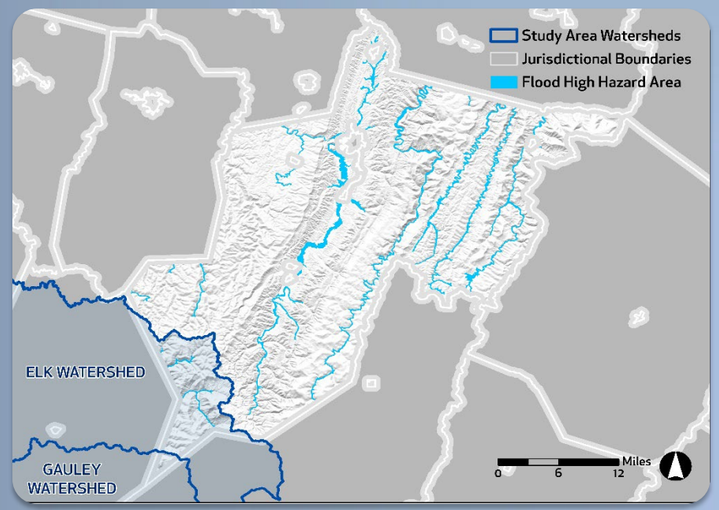
NEXT STEPS:

1. Communities should review their Floodplain Management Ordinance and Building Code to ensure alignment with flood risks discussed and identified during Discovery.
2. Stay in contact with FEMA for community mapping and Public Assistance needs.
3. **Long-term Horizon: Possible Flood Risk Review Meeting**

[1] Flood Insurance Rate Map (FIRM)
[2] Since 1978
[3] Community Assistance Visit (CAV) / Community Assistance Contact (CAC)

Randolph County Unincorporated Areas)/

Randolph County, WV **KNOW YOUR RISK** (The information presented below are estimates as of August 2022.)



09/27/1991
Initial FIRM[1] date

09/29/2010
Effective FIRM date

$2.9M
Total paid losses[2]

302
Total paid claims[2]

123
Flood insurance policies in force

85
Policies in the effective flood high hazard area

13,105
Estimated structures in the community

1,595
Estimated structures in the flood high hazard area

98
Letters of Map Change

21
Flood-related countywide presidential disaster declarations

33
Paid claims outside of the effective flood high hazard area[2]

$1.5M
Repetitive Loss (RL) paid losses[2]

43
RL properties[2]

19%
of households spend 30% or more of their income on housing

10%
of the population is in the flood high hazard area

KEEPING COMMUNITIES INFORMED: Your Risk MAP Timeline

YOU ARE HERE — ~YEAR 1 — ~YEAR 5

- Discovery Meeting
- Flood Risk Review Meeting
- Preliminary Map Issuance
- Community Coordination & Outreach Meeting
- Appeal Period
- Letter of Final Determination
- Effective Maps

Randolph County Unincorporated Areas)/Randolph, WV

Your Hazard Mitigation Plan has been approved through **July 4, 2023**, and now is the time to review it. Some projects you identified to reduce flood risk include the following:

- Participate in acquisition and demolition, relocation, mitigation reconstruction and elevation.
- Preserve open space areas as a means of eliminating structures that could sustain flood damage.

Find ideas to mitigate flood risk on fema.gov: https://www.fema.gov/sites/default/files/2020-06/fema-mitigation-ideas_02-13-2013.pdf

Land Use Trend:
Rural

09/19/2014
Date of Last CAV[4]

10/04/2021
Date of Last CAC[4]

PARTICIPATING
in the National Flood Insurance Program

NOT PARTICIPATING
in the Community Rating System

Countywide Public Assistance received

$92K
Category A: Debris Removal

$327K
Category B: Protective Measures

$1.9M
Categories C-G: Permanent Work

Hazard Mitigation Assistance Projects Countywide

7
Hazard Mitigation Grant Program

0
Pre-Disaster Mitigation

0
Flood Mitigation Assistance

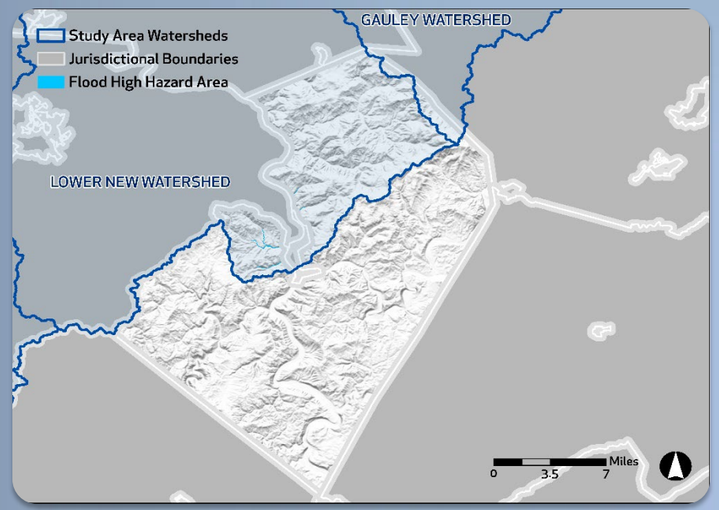
NEXT STEPS:

1. Communities should review their Floodplain Management Ordinance and Building Code to ensure alignment with flood risks discussed and identified during Discovery.
2. Stay in contact with FEMA for community mapping and Public Assistance needs.
3. **Long-term Horizon: Possible Flood Risk Review Meeting**

[1] Flood Insurance Rate Map (FIRM)
[2] Since 1978
[3] Community Assistance Visit (CAV) / Community Assistance Contact (CAC)

Summers County (Unincorporated Areas)/

Summers County, WV **KNOW YOUR RISK** (The information presented below are estimates as of August 2022.)



11/05/1980
Initial FIRM[1] date

10/07/2021
Effective FIRM date

$7.7M
Total paid losses[2]

444
Total paid claims[2]

130
Flood insurance policies in force

103
Policies in the effective flood high hazard area

10,240
Estimated structures in the community

35
Estimated structures in the flood high hazard area

14
Letters of Map Change

22
Flood-related countywide presidential disaster declarations

54
Paid claims outside of the effective flood high hazard area[2]

$3.1M
Repetitive Loss (RL) paid losses[2]

105
RL properties[2]

19%
of households spend 30% or more of their income on housing

0%
of the population is in the flood high hazard area

KEEPING COMMUNITIES INFORMED: Your Risk MAP Timeline

YOU ARE HERE — Discovery Meeting

~YEAR 1 — Flood Risk Review Meeting; Preliminary Map Issuance; Community Coordination & Outreach Meeting; Appeal Period

~YEAR 5 — Letter of Final Determination; Effective Maps

Summers County (Unincorporated Areas)/Summers, WV

Your Hazard Mitigation Plan expired on **January 31, 2022,** and now is the time to update it. Some projects you identified to reduce flood risk in this previous plan include the following:

- Minimize the loss of life, damage to property, and disruption in commerce and governmental services posed by flooding.
- Review existing floodplain management practices, and revise as necessary.
- Increase public awareness of natural hazards and methods available to reduce the possible losses.
- Increase public education efforts: Establish a speaker's bureau available to any interested group, Seasonal public service announcements, conduct public meetings to educate the public regarding natural hazards, Distribute natural hazard literature at public locations such as schools, churches, post offices, etc.
- Take practice measures to remove homes from hazard areas.
- Increase enforcement of floodplain ordinances; implement stricter regulations for floodplain development.
- Increase participation in Hazard Mitigation Grant Programs.
- Apply for grant funding to acquire, elevate, or relocate structures in hazard-prone areas.

Find ideas to mitigate flood risk on fema.gov: https://www.fema.gov/sites/default/files/2020-06/fema-mitigation-ideas_02-13-2013.pdf

Land Use Trend:
Rural

03/01/2013
Date of Last CAV[4]

06/30/2017
Date of Last CAC[4]

PARTICIPATING
in the National Flood Insurance Program

NOT PARTICIPATING
in the Community Rating System

Countywide Public Assistance received

$168K
Category A: Debris Removal

$68K
Category B: Protective Measures

$375K
Categories C-G: Permanent Work

Hazard Mitigation Assistance Projects Countywide

5
Hazard Mitigation Grant Program

0
Pre-Disaster Mitigation

0
Flood Mitigation Assistance

NEXT STEPS:

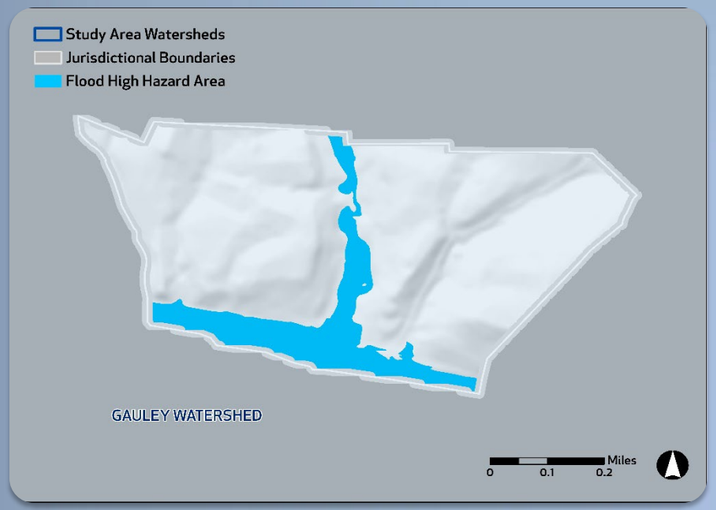
1. Communities should review their Floodplain Management Ordinance and Building Code to ensure alignment with flood risks discussed and identified during Discovery.
2. Stay in contact with FEMA for community mapping and Public Assistance needs.
3. **Long-term Horizon: Possible Flood Risk Review Meeting**

[1] Flood Insurance Rate Map (FIRM)
[2] Since 1978
[3] Community Assistance Visit (CAV) / Community Assistance Contact (CAC)

FEMA

Town of Camden-On-Gauley/ Webster County, WV

KNOW YOUR RISK (The information presented below are estimates as of August 2022.)



08/24/1984
Initial FIRM[1] date

01/06/2012
Effective FIRM date

$358K
Total paid losses[2]

21
Total paid claims[2]

2
Flood insurance policies in force

0
Policies in the effective flood high hazard area

95
Estimated structures in the community

25
Estimated structures in the flood high hazard area

0
Letters of Map Change

22
Flood-related countywide presidential disaster declarations

3
Paid claims outside of the effective flood high hazard area[2]

$132K
Repetitive Loss (RL) paid losses[2]

5
RL properties[2]

17%
of households spend 30% or more of their income on housing

28%
of the population is in the flood high hazard area

KEEPING COMMUNITIES INFORMED: Your Risk MAP Timeline

YOU ARE HERE — ~YEAR 1 — ~YEAR 5

- Discovery Meeting
- Flood Risk Review Meeting
- Preliminary Map Issuance
- Community Coordination & Outreach Meeting
- Appeal Period
- Letter of Final Determination
- Effective Maps

Town of Camden-On-Gauley/Webster, WV

Your Hazard Mitigation Plan expired on **February 21, 2022,** and now is the time to update it. Some projects you identified to reduce flood risk in this previous plan include the following:

- Identify culverts, storm drains, etc. that frequently back-up, causing flash flooding.
- Institute stricter floodplain enforcement.
- Identify all Repetitive Loss (RL) and flood prone non-RL properties within the county and coordinate with owners who would like to participate in future elevation, buyout, and retrofitting projects.

Find ideas to mitigate flood risk on fema.gov: https://www.fema.gov/sites/default/files/2020-06/fema-mitigation-ideas_02-13-2013.pdf

Land Use Trend:
Small Town

N/A
Date of Last CAV[4]

12/04/2018
Date of Last CAC[4]

PARTICIPATING
in the National Flood Insurance Program

NOT PARTICIPATING
in the Community Rating System

Countywide Public Assistance received

$1.5M
Category A: Debris Removal

$287K
Category B: Protective Measures

$1.9M
Categories C-G: Permanent Work

Hazard Mitigation Assistance Projects Countywide

1
Hazard Mitigation Grant Program

0
Pre-Disaster Mitigation

0
Flood Mitigation Assistance

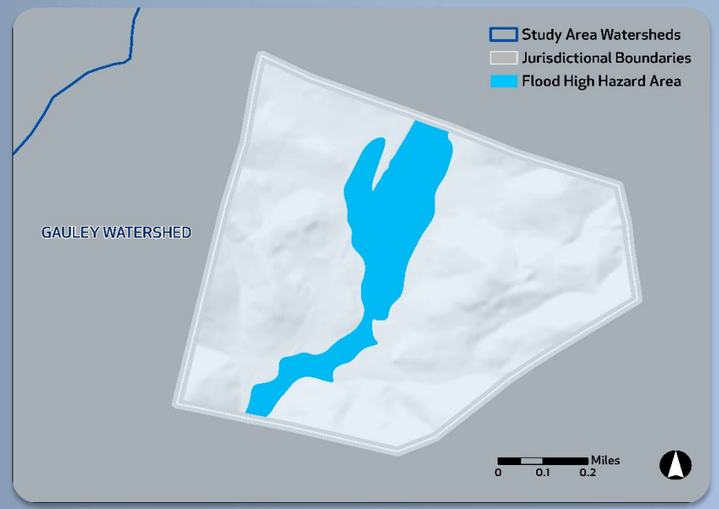
NEXT STEPS:

1. Communities should review their Floodplain Management Ordinance and Building Code to ensure alignment with flood risks discussed and identified during Discovery.
2. Stay in contact with FEMA for community mapping and Public Assistance needs.
3. **Long-term Horizon: Possible Flood Risk Review Meeting**

[1] Flood Insurance Rate Map (FIRM)
[2] Since 1978
[3] Community Assistance Visit (CAV) / Community Assistance Contact (CAC)

Town of Cowen/Webster County, WV

KNOW YOUR RISK (The information presented below are estimates as of August 2022.)



08/24/1984
Initial FIRM[1] date

01/06/2012
Effective FIRM date

$25K
Total paid losses[2]

6
Total paid claims[2]

7
Flood insurance policies in force

6
Policies in the effective flood high hazard area

315
Estimated structures in the community

45
Estimated structures in the flood high hazard area

0
Letters of Map Change

22
Flood-related countywide presidential disaster declarations

2
Paid claims outside of the effective flood high hazard area[2]

$0
Repetitive Loss (RL) paid losses[2]

0
RL properties[2]

37%
of households spend 30% or more of their income on housing

13%
of the population is in the flood high hazard area

KEEPING COMMUNITIES INFORMED: Your Risk MAP Timeline

YOU ARE HERE ~YEAR 1 ~YEAR 5

- Discovery Meeting
- Flood Risk Review Meeting
- Preliminary Map Issuance
- Community Coordination & Outreach Meeting
- Appeal Period
- Letter of Final Determination
- Effective Maps

Town of Cowen/Webster, WV

Your Hazard Mitigation Plan expired on **February 21, 2022,** and now is the time to update it. Some projects you identified to reduce flood risk in this previous plan include the following:

- Institute stricter floodplain enforcement.
- Identify all Repetitive Loss (RL) and flood prone non-RL properties within the county and coordinate with owners who would like to participate in future elevation, buyout, and retrofitting projects.
- Clean waterways to prevent water from backing up and possibly flooding certain areas.

Find ideas to mitigate flood risk on fema.gov: https://www.fema.gov/sites/default/files/2020-06/fema-mitigation-ideas_02-13-2013.pdf

Land Use Trend:
Small Town

N/A
Date of Last CAV[4]

12/04/2018
Date of Last CAC[4]

PARTICIPATING
in the National Flood Insurance Program

NOT PARTICIPATING
in the Community Rating System

Countywide Public Assistance received

$1.5M
Category A: Debris Removal

$287K
Category B: Protective Measures

$1.9M
Categories C-G: Permanent Work

Hazard Mitigation Assistance Projects Countywide

1
Hazard Mitigation Grant Program

0
Pre-Disaster Mitigation

0
Flood Mitigation Assistance

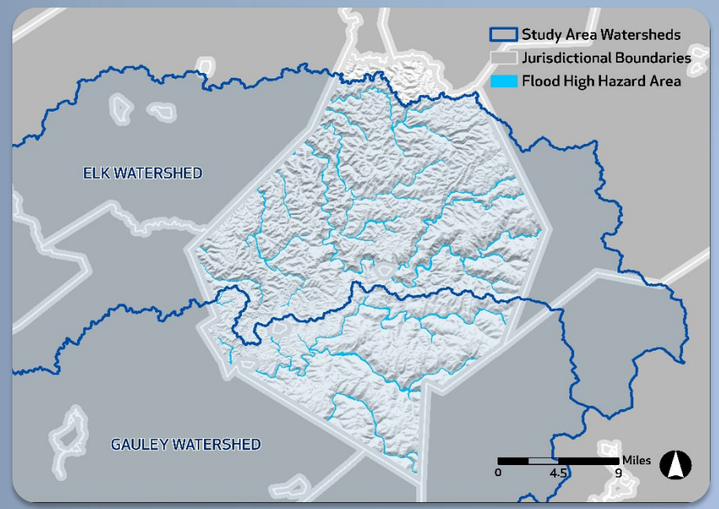
NEXT STEPS:

1. Communities should review their Floodplain Management Ordinance and Building Code to ensure alignment with flood risks discussed and identified during Discovery.
2. Stay in contact with FEMA for community mapping and Public Assistance needs.
3. **Long-term Horizon: Possible Flood Risk Review Meeting**

[1] Flood Insurance Rate Map (FIRM)
[2] Since 1978
[3] Community Assistance Visit (CAV) / Community Assistance Contact (CAC)

Webster County (Unincorporated Areas)/

Webster County, WV **KNOW YOUR RISK** (The information presented below are estimates as of August 2022.)



02/16/1990
Initial FIRM[1] date

01/06/2012
Effective FIRM date

$1.9M
Total paid losses[2]

140
Total paid claims[2]

69
Flood insurance policies in force

45
Policies in the effective flood high hazard area

4,950
Estimated structures in the community

1,000
Estimated structures in the flood high hazard area

6
Letters of Map Change

22
Flood-related countywide presidential disaster declarations

46
Paid claims outside of the effective flood high hazard area[2]

$418K
Repetitive Loss (RL) paid losses[2]

13
RL properties[2]

18%
of households spend 30% or more of their income on housing

17%
of the population is in the flood high hazard area

KEEPING COMMUNITIES INFORMED: Your Risk MAP Timeline

YOU ARE HERE — Discovery Meeting

~YEAR 1 — Flood Risk Review Meeting; Preliminary Map Issuance; Community Coordination & Outreach Meeting; Appeal Period

~YEAR 5 — Letter of Final Determination; Effective Maps

Webster County (Unincorporated Areas)/Webster, WV

Your Hazard Mitigation Plan expired on **February 21, 2022,** and now is the time to update it. Some projects you identified to reduce flood risk in this previous plan include the following:

- Institute stricter floodplain enforcement.
- Identify all Repetitive Loss (RL) and flood prone non-RL properties within the county and coordinate with owners who would like to participate in future elevation, buyout, and retrofitting projects.
- Clean waterways to prevent water from backing up and possibly flooding certain areas.
- Undertake Source Water Protection Planning measures following state guidelines.

Find ideas to mitigate flood risk on fema.gov: https://www.fema.gov/sites/default/files/2020-06/fema-mitigation-ideas_02-13-2013.pdf

Land Use Trend:
Rural

12/04/2018
Date of Last CAV[4]

06/08/2017
Date of Last CAC[4]

Countywide Public Assistance received

$1.5M
Category A: Debris Removal

$287K
Category B: Protective Measures

$1.9M
Categories C-G: Permanent Work

Hazard Mitigation Assistance Projects Countywide

1
Hazard Mitigation Grant Program

0
Pre-Disaster Mitigation

0
Flood Mitigation Assistance

PARTICIPATING
in the National Flood Insurance Program

NOT PARTICIPATING
in the Community Rating System

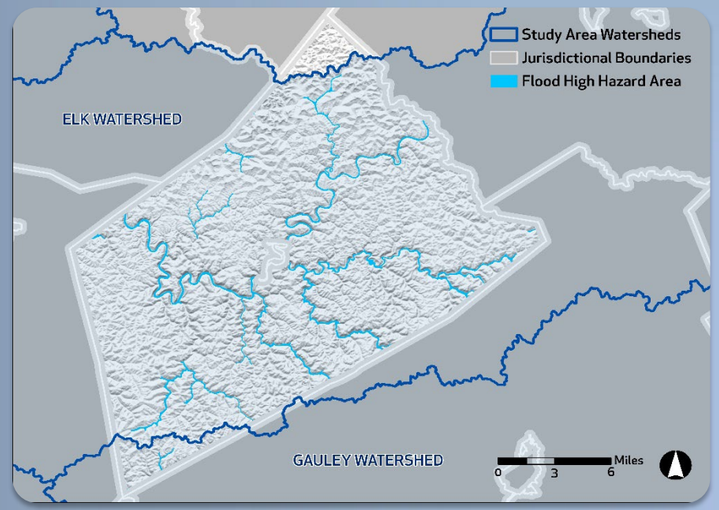
NEXT STEPS:

1. Communities should review their Floodplain Management Ordinance and Building Code to ensure alignment with flood risks discussed and identified during Discovery.
2. Stay in contact with FEMA for community mapping and Public Assistance needs.
3. **Long-term Horizon: Possible Flood Risk Review Meeting**

[1] Flood Insurance Rate Map (FIRM)
[2] Since 1978
[3] Community Assistance Visit (CAV) / Community Assistance Contact (CAC)

Clay County (Unincorporated Areas)/Clay County, WV

KNOW YOUR RISK (The information presented below are estimates as of August 2022.)



03/18/1991
Initial FIRM[1] date

02/06/2013
Effective FIRM date

$1.5M
Total paid losses[2]

60
Total paid claims[2]

78
Flood insurance policies in force

47
Policies in the effective flood high hazard area

4260
Estimated structures in the community

740
Estimated structures in the flood high hazard area

48
Letters of Map Change

24
Flood-related countywide presidential disaster declarations

25
Paid claims outside of the effective flood high hazard area[2]

$301K
Repetitive Loss (RL) paid losses[2]

5
RL properties[2]

18%
of households spend 30% or more of their income on housing

17%
of the population is in the flood high hazard area

KEEPING COMMUNITIES INFORMED: Your Risk MAP Timeline

YOU ARE HERE — Discovery Meeting

~YEAR 1 — Flood Risk Review Meeting

Preliminary Map Issuance

Community Coordination & Outreach Meeting

Appeal Period

~YEAR 5 — Letter of Final Determination

Effective Maps

Clay County (Unincorporated Areas)/Clay, WV

Your Hazard Mitigation Plan expired on **May 22, 2022,** and now is the time to update it. Some projects you identified to reduce flood risk in this previous plan include the following:

- Create a GIS data layer of flood maps on county mapping database to identify floodplain areas of Clay County.
- Institute a countywide permitting process that will require residents and/or developers to file a permit with the county before beginning any new construction as a means of regulating floodplain development.
- Educate citizens to clear trash, vegetation, and tree stumps from nearby creeks that impede water flow.
- Review existing regulations to ensure adequacy in reducing the amount of future development in identified hazard areas.
- Provide additional training to county and municipal development officials on NFIP requirements.
- As funding is available, consider traditional flood mitigation projects such as acquisition and demolition, elevation, relocation, and mitigation reconstruction.

Find ideas to mitigate flood risk on fema.gov: https://www.fema.gov/sites/default/files/2020-06/fema-mitigation-ideas_02-13-2013.pdf

Land Use Trend:
Rural

05/14/2018
Date of Last CAV[4]

08/01/2018
Date of Last CAC[4]

PARTICIPATING
in the National Flood Insurance Program

NOT PARTICIPATING
in the Community Rating System

Countywide Public Assistance received

$1.7M
Category A: Debris Removal

$468K
Category B: Protective Measures

$11.4M
Categories C-G: Permanent Work

Hazard Mitigation Assistance Projects Countywide

0
Hazard Mitigation Grant Program

0
Pre-Disaster Mitigation

0
Flood Mitigation Assistance

NEXT STEPS:

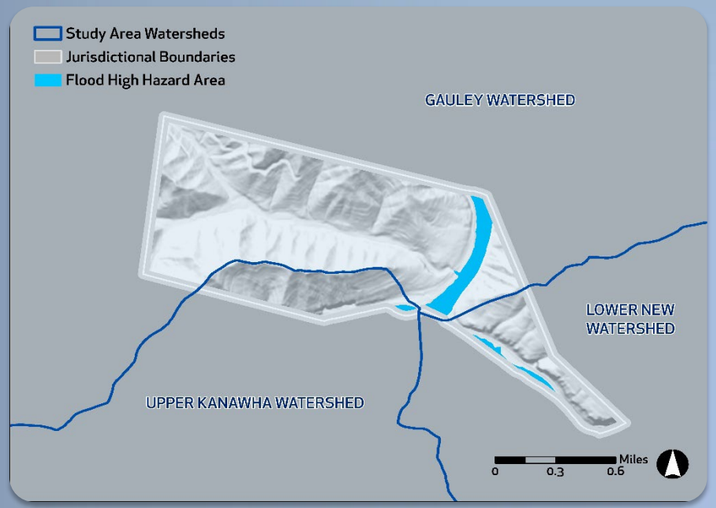
1. Communities should review their Floodplain Management Ordinance and Building Code to ensure alignment with flood risks discussed and identified during Discovery.
2. Stay in contact with FEMA for community mapping and Public Assistance needs.
3. **Long-term Horizon: Possible Flood Risk Review Meeting**

[1] Flood Insurance Rate Map (FIRM)
[2] Since 1978
[3] Community Assistance Visit (CAV) / Community Assistance Contact (CAC)

FEMA

Town of Gauley Bridge/ Fayette County, WV

KNOW YOUR RISK (The information presented below are estimates as of August 2022.)



09/18/1991
Initial FIRM[1] date

09/03/2010
Effective FIRM date

$88K
Total paid losses[2]

9
Total paid claims[2]

7
Flood insurance policies in force

2
Policies in the effective flood high hazard area

220
Estimated structures in the community

20
Estimated structures in the flood high hazard area

0
Letters of Map Change

22
Flood-related countywide presidential disaster declarations

2
Paid claims outside of the effective flood high hazard area[2]

$74K
Repetitive Loss (RL) paid losses[2]

4
RL properties[2]

26%
of households spend 30% or more of their income on housing

2%
of the population is in the flood high hazard area

KEEPING COMMUNITIES INFORMED: Your Risk MAP Timeline

YOU ARE HERE — Discovery Meeting

~YEAR 1 — Flood Risk Review Meeting

Preliminary Map Issuance

Community Coordination & Outreach Meeting

Appeal Period

~YEAR 5 — Letter of Final Determination

Effective Maps

Town of Gauley Bridge/Fayette, WV

Your Hazard Mitigation Plan expired on **February 21, 2022,** and now is the time to update it. Some projects you identified to reduce flood risk in this previous plan include the following:

- Develop more in-depth municipal asset list to better understand the value of structures within the town.
- Enforce the floodplain ordinance for all new construction.
- Continue to buy both repetitive and non-repetitive loss properties in flood prone areas.

Find ideas to mitigate flood risk on fema.gov: https://www.fema.gov/sites/default/files/2020-06/fema-mitigation-ideas_02-13-2013.pdf

Land Use Trend:
Small Town

02/01/1990
Date of Last CAV[4]

06/05/2019
Date of Last CAC[4]

PARTICIPATING
in the National Flood Insurance Program

NOT PARTICIPATING
in the Community Rating System

Countywide Public Assistance received

$668K
Category A: Debris Removal

$797K
Category B: Protective Measures

$3.2M
Categories C-G: Permanent Work

Hazard Mitigation Assistance Projects Countywide

5
Hazard Mitigation Grant Program

0
Pre-Disaster Mitigation

0
Flood Mitigation Assistance

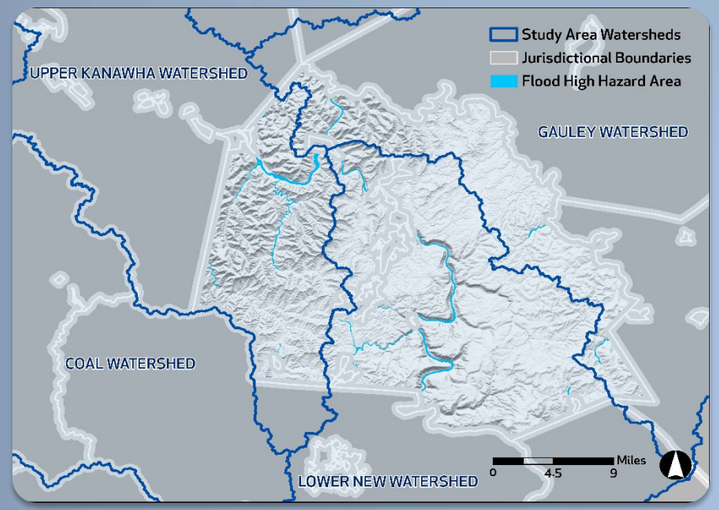
NEXT STEPS:

1. Communities should review their Floodplain Management Ordinance and Building Code to ensure alignment with flood risks discussed and identified during Discovery.
2. Stay in contact with FEMA for community mapping and Public Assistance needs.
3. **Long-term Horizon: Possible Flood Risk Review Meeting**

[1] Flood Insurance Rate Map (FIRM)
[2] Since 1978
[3] Community Assistance Visit (CAV) / Community Assistance Contact (CAC)

Fayette County (Unincorporated Areas)/

Fayette County, WV **KNOW YOUR RISK** (The information presented below are estimates as of August 2022.)



03/04/1988
Initial FIRM[1] date

09/03/2010
Effective FIRM date

$2.1M
Total paid losses[2]

201
Total paid claims[2]

108
Flood insurance policies in force

67
Policies in the effective flood high hazard area

17,030
Estimated structures in the community

1,155
Estimated structures in the flood high hazard area

41
Letters of Map Change

22
Flood-related countywide presidential disaster declarations

50
Paid claims outside of the effective flood high hazard area[2]

$438K
Repetitive Loss (RL) paid losses[2]

19
RL properties[2]

19%
of households spend 30% or more of their income on housing

7%
of the population is in the flood high hazard area

KEEPING COMMUNITIES INFORMED: Your Risk MAP Timeline

YOU ARE HERE ~YEAR 1 ~YEAR 5

- Discovery Meeting
- Flood Risk Review Meeting
- Preliminary Map Issuance
- Community Coordination & Outreach Meeting
- Appeal Period
- Letter of Final Determination
- Effective Maps

Fayette County (Unincorporated Areas)/Fayette, WV

Your Hazard Mitigation Plan expired on **February 21, 2022,** and now is the time to update it. Some projects you identified to reduce flood risk in this previous plan include the following:

- Develop a countywide storm water/drainage plan.
- Enforce the floodplain ordinance for all new construction.
- Identify undersized and inadequate culverts to correct the problem.
- Study wastewater issues related to flooding, storm water, and public health.
- Continue to buy both repetitive and non-repetitive loss properties in flood prone areas.
- Work toward meeting the requirements for participation in the Community Rating System (CRS).
- Undertake buy out projects in Dunloup Watershed areas (i.e. the Dunloup Watershed Voluntary Buyout Program).

Find ideas to mitigate flood risk on fema.gov: https://www.fema.gov/sites/default/files/2020-06/fema-mitigation-ideas_02-13-2013.pdf

Land Use Trend:
Rural

05/18/2015
Date of Last CAV[4]

01/24/2018
Date of Last CAC[4]

PARTICIPATING
in the National Flood Insurance Program

PARTICIPATING
in the Community Rating System

Countywide Public Assistance received

$668K
Category A: Debris Removal

$797K
Category B: Protective Measures

$3.2M
Categories C-G: Permanent Work

Hazard Mitigation Assistance Projects Countywide

5
Hazard Mitigation Grant Program

0
Pre-Disaster Mitigation

0
Flood Mitigation Assistance

NEXT STEPS:

1. Communities should review their Floodplain Management Ordinance and Building Code to ensure alignment with flood risks discussed and identified during Discovery.
2. Stay in contact with FEMA for community mapping and Public Assistance needs.
3. **Long-term Horizon: Possible Flood Risk Review Meeting**

[1] Flood Insurance Rate Map (FIRM)
[2] Since 1978
[3] Community Assistance Visit (CAV) / Community Assistance Contact (CAC)

Town of Quinwood/ Greenbrier County, WV

KNOW YOUR RISK (The information presented below are estimates as of August 2022.)

02/27/1981
Initial FIRM[1] date

10/16/2012
Effective FIRM date

$3K
Total paid losses[2]

1
Total paid claims[2]

0
Flood insurance policies in force

0
Policies in the effective flood high hazard area

175
Estimated structures in the community

0
Estimated structures in the flood high hazard area

0
Letters of Map Change

25
Flood-related countywide presidential disaster declarations

0
Paid claims outside of the effective flood high hazard area[2]

$0
Repetitive Loss (RL) paid losses[2]

0
RL properties[2]

25%
of households spend 30% or more of their income on housing

0%
of the population is in the flood high hazard area

KEEPING COMMUNITIES INFORMED: Your Risk MAP Timeline

YOU ARE HERE ~YEAR 1 ~YEAR 5

- Discovery Meeting
- Flood Risk Review Meeting
- Preliminary Map Issuance
- Community Coordination & Outreach Meeting
- Appeal Period
- Letter of Final Determination
- Effective Maps

Town of Quinwood/Greenbrier, WV

Your Hazard Mitigation Plan expired on **February 21, 2022,** and now is the time to update it. Some projects you identified to reduce flood risk in this previous plan include the following:

- Continue to make permitting necessary (that is consistent with local floodplain ordinances) before any new construction is allowed.
- Maintain a database of all at risk structures in floodways and floodplains and distribute information to homeowners and businesses on the importance of purchasing flood insurance and flood proof techniques to protect their homes and businesses.
- Determine feasibility of floodwalls or other structures to protect water treatment facilities from flooding.

Find ideas to mitigate flood risk on fema.gov: https://www.fema.gov/sites/default/files/2020-06/fema-mitigation-ideas_02-13-2013.pdf

Land Use Trend:
Small Town

N/A
Date of Last CAV[4]

N/A
Date of Last CAC[4]

PARTICIPATING
in the National Flood Insurance Program

NOT PARTICIPATING
in the Community Rating System

Countywide Public Assistance received

$6.8M
Category A: Debris Removal

$1.6M
Category B: Protective Measures

$4.1M
Categories C-G: Permanent Work

Hazard Mitigation Assistance Projects Countywide

34
Hazard Mitigation Grant Program

0
Pre-Disaster Mitigation

0
Flood Mitigation Assistance

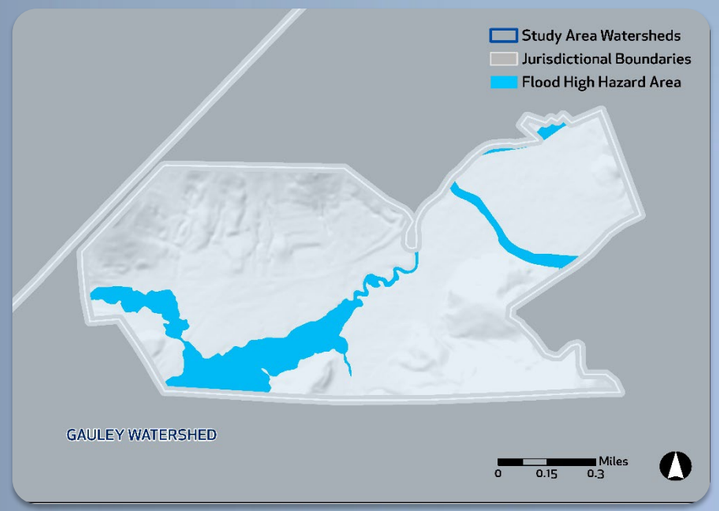
NEXT STEPS:

1. Communities should review their Floodplain Management Ordinance and Building Code to ensure alignment with flood risks discussed and identified during Discovery.
2. Stay in contact with FEMA for community mapping and Public Assistance needs.
3. **Long-term Horizon: Possible Flood Risk Review Meeting**

[1] Flood Insurance Rate Map (FIRM)
[2] Since 1978
[3] Community Assistance Visit (CAV) / Community Assistance Contact (CAC)

Town of Rainelle/ Greenbrier County, WV

KNOW YOUR RISK (The information presented below are estimates as of August 2022.)



11/19/1987
Initial FIRM[1] date

10/16/2012
Effective FIRM date

$3.7M
Total paid losses[2]

154
Total paid claims[2]

44
Flood insurance policies in force

5
Policies in the effective flood high hazard area

855
Estimated structures in the community

25
Estimated structures in the flood high hazard area

0
Letters of Map Change

25
Flood-related countywide presidential disaster declarations

31
Paid claims outside of the effective flood high hazard area[2]

$1.3M
Repetitive Loss (RL) paid losses[2]

22
RL properties[2]

36%
of households spend 30% or more of their income on housing

3%
of the population is in the flood high hazard area

KEEPING COMMUNITIES INFORMED: Your Risk MAP Timeline

YOU ARE HERE ~YEAR 1 ~YEAR 5

- Discovery Meeting
- Flood Risk Review Meeting
- Preliminary Map Issuance
- Community Coordination & Outreach Meeting
- Appeal Period
- Letter of Final Determination
- Effective Maps

Town of Rainelle/Greenbrier, WV

Your Hazard Mitigation Plan expired on **February 21, 2022,** and now is the time to update it. Some projects you identified to reduce flood risk in this previous plan include the following:

- Continue to make permitting necessary (that is consistent with local floodplain ordinances) before any new construction is allowed.
- Maintain a database of all at risk structures in floodways and floodplains and distribute information to homeowners and businesses on the importance of purchasing flood insurance and flood proof techniques to protect their homes and businesses.
- Determine feasibility of floodwalls or other structures to protect water treatment facilities from flooding.

Find ideas to mitigate flood risk on fema.gov: https://www.fema.gov/sites/default/files/2020-06/fema-mitigation-ideas_02-13-2013.pdf

Land Use Trend:
Small Town

04/23/1991
Date of Last CAV[4]

07/25/2017
Date of Last CAC[4]

PARTICIPATING
in the National Flood Insurance Program

NOT PARTICIPATING
in the Community Rating System

Countywide Public Assistance received

$6.8M
Category A: Debris Removal

$1.6M
Category B: Protective Measures

$4.1M
Categories C-G: Permanent Work

Hazard Mitigation Assistance Projects Countywide

34
Hazard Mitigation Grant Program

0
Pre-Disaster Mitigation

0
Flood Mitigation Assistance

NEXT STEPS:

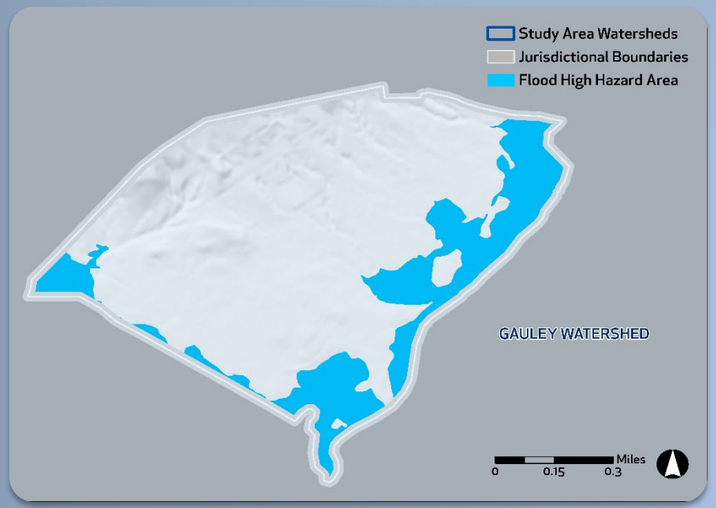
1. Communities should review their Floodplain Management Ordinance and Building Code to ensure alignment with flood risks discussed and identified during Discovery.
2. Stay in contact with FEMA for community mapping and Public Assistance needs.
3. **Long-term Horizon: Possible Flood Risk Review Meeting**

[1] Flood Insurance Rate Map (FIRM)
[2] Since 1978
[3] Community Assistance Visit (CAV) / Community Assistance Contact (CAC)

FEMA

Town of Rupert/Greenbrier County, WV

KNOW YOUR RISK (The information presented below are estimates as of August 2022.)



08/24/1984
Initial FIRM[1] date

10/16/2012
Effective FIRM date

$496K
Total paid losses[2]

17
Total paid claims[2]

3
Flood insurance policies in force

0
Policies in the effective flood high hazard area

570
Estimated structures in the community

35
Estimated structures in the flood high hazard area

0
Letters of Map Change

25
Flood-related countywide presidential disaster declarations

6
Paid claims outside of the effective flood high hazard area[2]

$333K
Repetitive Loss (RL) paid losses[2]

4
RL properties[2]

27%
of households spend 30% or more of their income on housing

6%
of the population is in the flood high hazard area

KEEPING COMMUNITIES INFORMED: Your Risk MAP Timeline

YOU ARE HERE — Discovery Meeting

~YEAR 1 — Flood Risk Review Meeting

Preliminary Map Issuance

Community Coordination & Outreach Meeting

Appeal Period

~YEAR 5 — Letter of Final Determination

Effective Maps

Town of Rupert/Greenbrier, WV

Your Hazard Mitigation Plan expired on **February 21, 2022,** and now is the time to update it. Some projects you identified to reduce flood risk in this previous plan include the following:

- Continue to make permitting necessary (that is consistent with local floodplain ordinances) before any new construction is allowed.
- Maintain a database of all at risk structures in floodways and floodplains and distribute information to homeowners and businesses on the importance of purchasing flood insurance and flood proof techniques to protect their homes and businesses.
- Determine feasibility of floodwalls or other structures to protect water treatment facilities from flooding.
- Continue to apply for HMGP funds for acquisitions, elevations, or relocations of the three identified repetitive loss properties in Rupert.

Find ideas to mitigate flood risk on fema.gov: https://www.fema.gov/sites/default/files/2020-06/fema-mitigation-ideas_02-13-2013.pdf

Land Use Trend:
Small Town

12/08/1986
Date of Last CAV[4]

07/25/2017
Date of Last CAC[4]

PARTICIPATING
in the National Flood Insurance Program

NOT PARTICIPATING
in the Community Rating System

Countywide Public Assistance received

$6.8M
Category A: Debris Removal

$1.6M
Category B: Protective Measures

$4.1M
Categories C-G: Permanent Work

Hazard Mitigation Assistance Projects Countywide

34
Hazard Mitigation Grant Program

0
Pre-Disaster Mitigation

0
Flood Mitigation Assistance

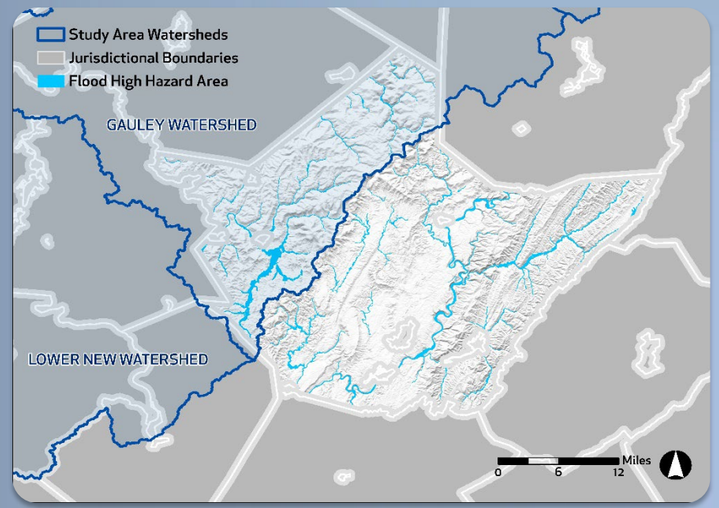
NEXT STEPS:

1. Communities should review their Floodplain Management Ordinance and Building Code to ensure alignment with flood risks discussed and identified during Discovery.
2. Stay in contact with FEMA for community mapping and Public Assistance needs.
3. **Long-term Horizon: Possible Flood Risk Review Meeting**

[1] Flood Insurance Rate Map (FIRM)
[2] Since 1978
[3] Community Assistance Visit (CAV) / Community Assistance Contact (CAC)

Greenbrier County (Unincorporated Areas)/

Greenbrier County, WV **KNOW YOUR RISK** (The information presented below are estimates as of August 2022.)



01/15/1988
Initial FIRM[1] date

10/16/2012
Effective FIRM date

$10.6M
Total paid losses[2]

475
Total paid claims[2]

204
Flood insurance policies in force

111
Policies in the effective flood high hazard area

19540
Estimated structures in the community

1290
Estimated structures in the flood high hazard area

45
Letters of Map Change

25
Flood-related countywide presidential disaster declarations

56
Paid claims outside of the effective flood high hazard area[2]

$2.0M
Repetitive Loss (RL) paid losses[2]

56
RL properties[2]

19%
of households spend 30% or more of their income on housing

6%
of the population is in the flood high hazard area

KEEPING COMMUNITIES INFORMED: Your Risk MAP Timeline

YOU ARE HERE — ~YEAR 1 — ~YEAR 5

- Discovery Meeting
- Flood Risk Review Meeting
- Preliminary Map Issuance
- Community Coordination & Outreach Meeting
- Appeal Period
- Letter of Final Determination
- Effective Maps

Greenbrier County (Unincorporated Areas)/Greenbrier, WV

Your Hazard Mitigation Plan expired on **February 21, 2022,** and now is the time to update it. Some projects you identified to reduce flood risk in this previous plan include the following:

- Continue to work with the WVDOH to design road construction to be at the 100-year base flood elevation or higher.
- Maintain a database of all at risk structures in floodways and floodplains and distribute information to homeowners and businesses on the importance of purchasing flood insurance and flood proof techniques to protect their homes and businesses.
- Continue to make informational pamphlets available to Greenbrier County citizens that promote buying flood insurance.
- Continue to make permitting necessary (that is consistent with local floodplain ordinances) before any new construction is allowed.
- Determine feasibility of floodwalls or other structures to protect water treatment facilities from flooding.
- Provide opportunities for the leaders in Greenbrier County to participate in FEMA (and/or other agency) proactive programs.
- Install additional river or stream gauges in high-risk areas to gather critical flood data and provide rapid notification to residents, possibly by the installation of sirens or other alert methods.

Find ideas to mitigate flood risk on fema.gov: https://www.fema.gov/sites/default/files/2020-06/fema-mitigation-ideas_02-13-2013.pdf

Land Use Trend:
Rural

03/15/2015
Date of Last CAV[4]

07/19/2018
Date of Last CAC[4]

PARTICIPATING
in the National Flood Insurance Program

PARTICIPATING
in the Community Rating System

Countywide Public Assistance received

$6.8M

Category A: Debris Removal

$1.6M

Category B: Protective Measures

$4.1M

Categories C-G: Permanent Work

Hazard Mitigation Assistance Projects Countywide

34

Hazard Mitigation Grant Program

0

Pre-Disaster Mitigation

0

Flood Mitigation Assistance

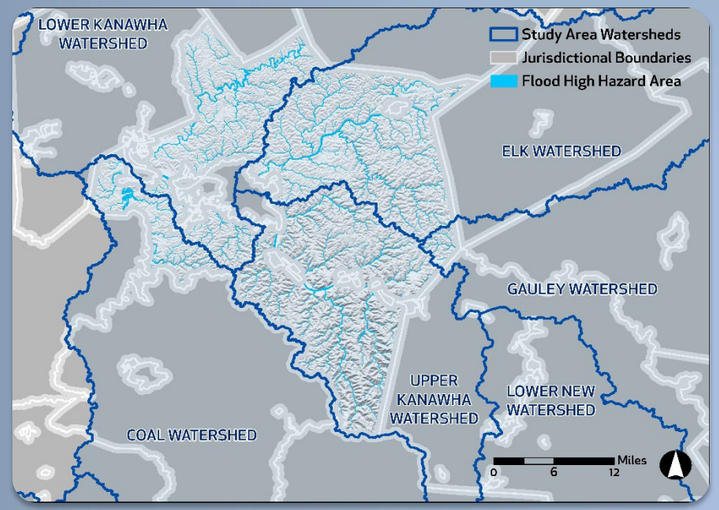
NEXT STEPS:

1. Communities should review their Floodplain Management Ordinance and Building Code to ensure alignment with flood risks discussed and identified during Discovery.
2. Stay in contact with FEMA for community mapping and Public Assistance needs.
3. **Long-term Horizon: Possible Flood Risk Review Meeting**

[1] Flood Insurance Rate Map (FIRM)
[2] Since 1978
[3] Community Assistance Visit (CAV) / Community Assistance Contact (CAC)

Kanawha County (Unincorporated Areas)/

Kanawha County, WV **KNOW YOUR RISK** (The information presented below are estimates as of August 2022.)



03/18/1985
Initial FIRM[1] date

02/06/2008
Effective FIRM date

$28.8M
Total paid losses[2]

1587
Total paid claims[2]

1099
Flood insurance policies in force

832
Policies in the effective flood high hazard area

48530
Estimated structures in the community

10135
Estimated structures in the flood high hazard area

308
Letters of Map Change

29
Flood-related countywide presidential disaster declarations

348
Paid claims outside of the effective flood high hazard area[2]

$11.5M
Repetitive Loss (RL) paid losses[2]

296
RL properties[2]

18%
of households spend 30% or more of their income on housing

20%
of the population is in the flood high hazard area

KEEPING COMMUNITIES INFORMED: Your Risk MAP Timeline

YOU ARE HERE — Discovery Meeting

~YEAR 1 — Flood Risk Review Meeting; Preliminary Map Issuance; Community Coordination & Outreach Meeting; Appeal Period

~YEAR 5 — Letter of Final Determination; Effective Maps

Kanawha County (Unincorporated Areas)/Kanawha, WV

Your Hazard Mitigation Plan expired on **May 22, 2022,** and now is the time to update it. Some projects you identified to reduce flood risk in this previous plan include the following:

- Continue to hold courses on the National Flood Insurance Program for realtors, banks, and insurers.
- Work with municipalities to update all floodplain ordinances adopted prior to 1987.
- Provide additional training to county and municipal personnel responsible for the enforcement of the floodplain regulations.
- Explore participation in the Community Rating System (CRS).
- Maintain a database of information on all repetitive loss properties including maps.
- As funding is available, consider traditional flood mitigation projects such as acquisition and demolition, elevation, relocation, and mitigation reconstruction.
- Work with WV Department of Transportation to identify areas of frequent roadway flooding and develop mitigation strategies.

Find ideas to mitigate flood risk on fema.gov: https://www.fema.gov/sites/default/files/2020-06/fema-mitigation-ideas_02-13-2013.pdf

Land Use Trend:
Rural

08/18/2014
Date of Last CAV[4]

01/25/2018
Date of Last CAC[4]

PARTICIPATING
in the National Flood Insurance Program

PARTICIPATING
in the Community Rating System

Countywide Public Assistance received

$3.6M
Category A: Debris Removal

$23.4M
Category B: Protective Measures

$13.2M
Categories C-G: Permanent Work

Hazard Mitigation Assistance Projects Countywide

53
Hazard Mitigation Grant Program

1
Pre-Disaster Mitigation

0
Flood Mitigation Assistance

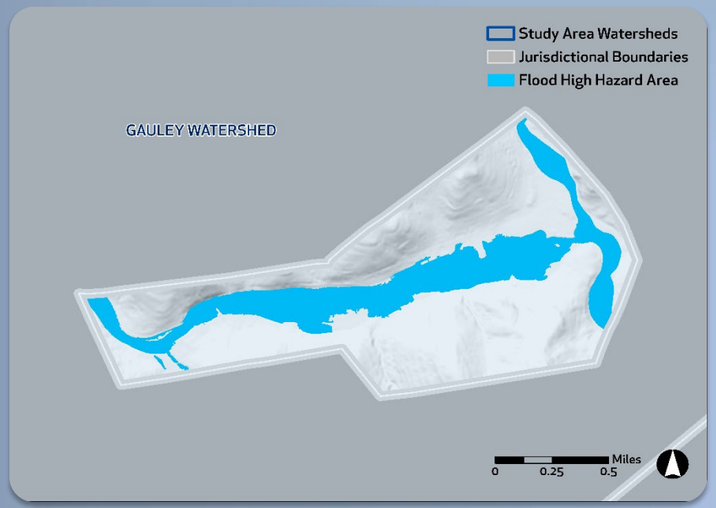
NEXT STEPS:

1. Communities should review their Floodplain Management Ordinance and Building Code to ensure alignment with flood risks discussed and identified during Discovery.
2. Stay in contact with FEMA for community mapping and Public Assistance needs.
3. **Long-term Horizon: Possible Flood Risk Review Meeting**

[1] Flood Insurance Rate Map (FIRM)
[2] Since 1978
[3] Community Assistance Visit (CAV) / Community Assistance Contact (CAC)

City of Richwood/Nicholas County, WV

KNOW YOUR RISK (The information presented below are estimates as of August 2022.)



09/27/1991
Initial FIRM[1] date

09/24/2021
Effective FIRM date

$6.8M
Total paid losses[2]

144
Total paid claims[2]

41
Flood insurance policies in force

36
Policies in the effective flood high hazard area

1,140
Estimated structures in the community

335
Estimated structures in the flood high hazard area

0
Letters of Map Change

24
Flood-related countywide presidential disaster declarations

18
Paid claims outside of the effective flood high hazard area[2]

$5.3M
Repetitive Loss (RL) paid losses[2]

38
RL properties[2]

30%
of households spend 30% or more of their income on housing

29%
of the population is in the flood high hazard area

KEEPING COMMUNITIES INFORMED: Your Risk MAP Timeline

YOU ARE HERE — Discovery Meeting

~YEAR 1 — Flood Risk Review Meeting

Preliminary Map Issuance

Community Coordination & Outreach Meeting

Appeal Period

~YEAR 5 — Letter of Final Determination

Effective Maps

City of Richwood/Nicholas, WV

Your Hazard Mitigation Plan expired on **February 21, 2022,** and now is the time to update it. Some projects you identified to reduce flood risk in this previous plan include the following:

- Raise Route 39 from Go-Mart to Bridge Ave.
- Work to restore stream corridors.
- Separate storm water / sewer systems.
- Relocate wastewater treatment plant out of the floodplain.
- Construct flood walls/dykes/abatements where needed and feasible.
- Periodically clear local rivers of debris and other impediments.
- Repair as needed those sidewalks that serve as retaining walls.

Find ideas to mitigate flood risk on fema.gov: https://www.fema.gov/sites/default/files/2020-06/fema-mitigation-ideas_02-13-2013.pdf

Land Use Trend:
Small Town

N/A
Date of Last CAV[4]

08/29/2017
Date of Last CAC[4]

PARTICIPATING
in the National Flood Insurance Program

NOT PARTICIPATING
in the Community Rating System

Countywide Public Assistance received

$920K
Category A: Debris Removal

$22.1M
Category B: Protective Measures

$4.9M
Categories C-G: Permanent Work

Hazard Mitigation Assistance Projects Countywide

9
Hazard Mitigation Grant Program

0
Pre-Disaster Mitigation

0
Flood Mitigation Assistance

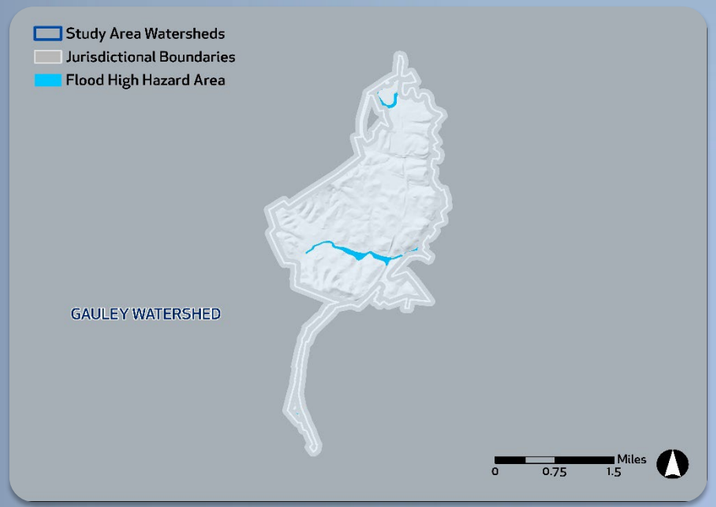
NEXT STEPS:

1. Communities should review their Floodplain Management Ordinance and Building Code to ensure alignment with flood risks discussed and identified during Discovery.
2. Stay in contact with FEMA for community mapping and Public Assistance needs.
3. **Long-term Horizon: Possible Flood Risk Review Meeting**

[1] Flood Insurance Rate Map (FIRM)
[2] Since 1978
[3] Community Assistance Visit (CAV) / Community Assistance Contact (CAC)

City of Summersville/ Nicholas County, WV

KNOW YOUR RISK (The information presented below are estimates as of August 2022.)



08/24/1984
Initial FIRM[1] date

07/04/2011
Effective FIRM date

$44K
Total paid losses[2]

5
Total paid claims[2]

3
Flood insurance policies in force

2
Policies in the effective flood high hazard area

1,625
Estimated structures in the community

60
Estimated structures in the flood high hazard area

3
Letters of Map Change

24
Flood-related countywide presidential disaster declarations

3
Paid claims outside of the effective flood high hazard area[2]

$29K
Repetitive Loss (RL) paid losses[2]

1
RL properties[2]

16%
of households spend 30% or more of their income on housing

2%
of the population is in the flood high hazard area

KEEPING COMMUNITIES INFORMED: Your Risk MAP Timeline

YOU ARE HERE — ~YEAR 1 — ~YEAR 5

- Discovery Meeting
- Flood Risk Review Meeting
- Preliminary Map Issuance
- Community Coordination & Outreach Meeting
- Appeal Period
- Letter of Final Determination
- Effective Maps

City of Summersville/Nicholas, WV

Your Hazard Mitigation Plan expired on **February 21, 2022,** and now is the time to update it. Some projects you identified to reduce flood risk in this previous plan include the following:

- Develop written policies to define goals, mitigate impacts of natural disasters, and establish long term goals.
- Continue to improve mitigation training and provide public information to the citizens of Summersville and surrounding areas before, during, and after emergency events.
- Continue to train and recertify the City's Floodplain Coordinator to assist citizens in complying with the floodplain ordinance.
- Continue to keep local ordinances and codes updated and enforce the regulations consistent with current laws
- Continue to encourage and recommend building with proper flood resistant construction techniques.

Find ideas to mitigate flood risk on fema.gov: https://www.fema.gov/sites/default/files/2020-06/fema-mitigation-ideas_02-13-2013.pdf

Land Use Trend:
Suburban

N/A
Date of Last CAV[4]

08/10/2016
Date of Last CAC[4]

PARTICIPATING
in the National Flood Insurance Program

NOT PARTICIPATING
in the Community Rating System

Countywide Public Assistance received

$920K
Category A: Debris Removal

$22.1M
Category B: Protective Measures

$4.9M
Categories C-G: Permanent Work

Hazard Mitigation Assistance Projects Countywide

9
Hazard Mitigation Grant Program

0
Pre-Disaster Mitigation

0
Flood Mitigation Assistance

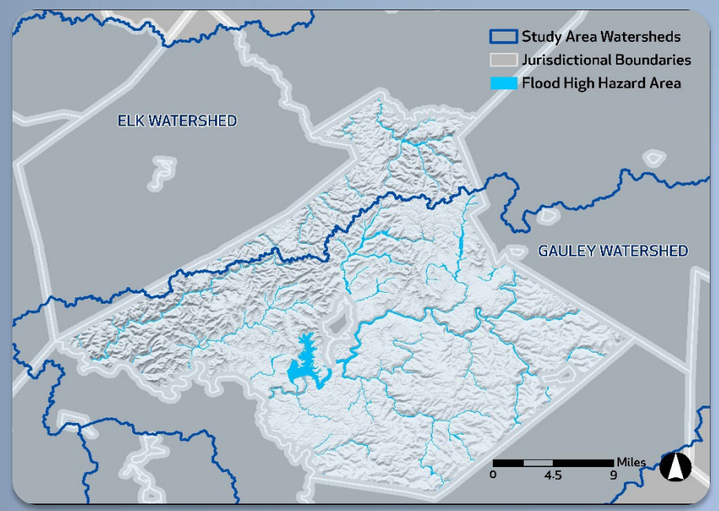
NEXT STEPS:

1. Communities should review their Floodplain Management Ordinance and Building Code to ensure alignment with flood risks discussed and identified during Discovery.
2. Stay in contact with FEMA for community mapping and Public Assistance needs.
3. **Long-term Horizon: Possible Flood Risk Review Meeting**

[1] Flood Insurance Rate Map (FIRM)
[2] Since 1978
[3] Community Assistance Visit (CAV) / Community Assistance Contact (CAC)

Nicholas County (Unincorporated Areas)/

Nicholas County, WV **KNOW YOUR RISK** (The information presented below are estimates as of August 2022.)



11/06/1991
Initial FIRM[1] date

09/24/2021
Effective FIRM date

$2.0M
Total paid losses[2]

67
Total paid claims[2]

51
Flood insurance policies in force

34
Policies in the effective flood high hazard area

13,720
Estimated structures in the community

800
Estimated structures in the flood high hazard area

23
Letters of Map Change

24
Flood-related countywide presidential disaster declarations

19
Paid claims outside of the effective flood high hazard area[2]

$70K
Repetitive Loss (RL) paid losses[2]

2
RL properties[2]

17%
of households spend 30% or more of their income on housing

6%
of the population is in the flood high hazard area

KEEPING COMMUNITIES INFORMED: Your Risk MAP Timeline

YOU ARE HERE — Discovery Meeting

~YEAR 1 — Flood Risk Review Meeting

Preliminary Map Issuance

Community Coordination & Outreach Meeting

Appeal Period

Letter of Final Determination

~YEAR 5 — Effective Maps

Nicholas County (Unincorporated Areas)/Nicholas, WV

Your Hazard Mitigation Plan expired on **February 21, 2022,** and now is the time to update it. Some projects you identified to reduce flood risk in this previous plan include the following:

- Continue to review and update floodplain ordinances to regulate development within the 100-year flood plain. Make sure the public is aware of requirements in the ordinances.
- Continue to train and recertify the county Floodplain Coordinator to assist citizens in complying with the floodplain ordinances.
- Continue to update the GIS data layer of flood maps on the county mapping database to identify floodplain areas of Nicholas County.
- Continue working with municipalities to update floodplain ordinances adopted prior to 1987.
- Continue training the county and municipal development officials on NFIP requirements.
- As funds become available, undertake buyout and/or elevation projects to lessen the number of repetitive loss properties.

Continue to review all capital improvement plans to ensure that infrastructure improvements are not directed towards hazardous areas. If they are, build mitigation measures into development plans.

Find ideas to mitigate flood risk on fema.gov:
https://www.fema.gov/sites/default/files/2020-06/fema-mitigation-ideas_02-13-2013.pdf

Land Use Trend:
Rural

05/03/2013
Date of Last CAV[4]

07/05/2017
Date of Last CAC[4]

PARTICIPATING
in the National Flood Insurance Program

NOT PARTICIPATING
in the Community Rating System

Countywide Public Assistance received

$920K
Category A: Debris Removal

$22.1M
Category B: Protective Measures

$4.9M
Categories C-G: Permanent Work

Hazard Mitigation Assistance Projects Countywide

9
Hazard Mitigation Grant Program

0
Pre-Disaster Mitigation

0
Flood Mitigation Assistance

NEXT STEPS:

1. Communities should review their Floodplain Management Ordinance and Building Code to ensure alignment with flood risks discussed and identified during Discovery.
2. Stay in contact with FEMA for community mapping and Public Assistance needs.
3. **Long-term Horizon: Possible Flood Risk Review Meeting**

[1] Flood Insurance Rate Map (FIRM)
[2] Since 1978
[3] Community Assistance Visit (CAV) / Community Assistance Contact (CAC)

APPENDIX B | ACRONYMS AND ABBREVIATIONS

ACRONYM	DEFINITION
CAC	Community Assistance Contact
CAV	Community Assistance Visit
CCO	Consultation Coordination Officer
CHHA	Coastal High Hazard Area
CIS	Community Information System
CNMS	Coordinated Needs Management Strategy
CRS	Community Rating System
DR	Presidential Major Disaster Declaration
EM	Presidential Emergency Declaration
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FIS	Flood Insurance Study
FMA	Flood Mitigation Assistance
GIS	Geographic Information System
HMA	Hazard Mitigation Assistance
HMGP	Hazard Mitigation Grant Program
HMP	Hazard Mitigation Plan
IHP	Individual and Households Program
LiDAR	Light Detection and Ranging
LOMA	Letter of Map Amendment
LOMC	Letter of Map Change
LOMR	Letter of Map Revision
MIP	Mapping Information Platform
MLI	Mid-Term Levee Inventory
MSC	Map Service Center
NFHL	National Flood Hazard Layer
NFIP	National Flood Insurance Program
NRCS	Natural Resources Conservation Service
PDM	Pre-Disaster Mitigation
Risk MAP	Risk Mapping, Assessment, and Planning
SFHA	Special Flood Hazard Area
STN	Short-Term Network
TEIF	Total Exposure in Floodplain
TGA	Targeted Growth Area
USACE	U.S. Army Corps of Engineers
USGS	U.S. Geological Survey
VDEM	Virginia Department of Emergency Management
WSEL	Water-Surface Elevation

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APPENDIX D | GLOSSARY

0.2-Percent-Annual-Chance Flood – The flood elevation that has a 0.2-percent chance of being equaled or exceeded each year. Sometimes referred to as the 500-year flood.

1-Percent-Annual-Chance Flood – The flood elevation that has a 1-percent chance of being equaled or exceeded each year. Sometimes referred to as the 100-year flood.

Approximate Stream Miles – Refers to areas mapped with approximate study methods. Approximate study methods show the approximate outline of the base floodplain, but generally do not produce a base flood elevation. These studies are performed in areas with little or no development or expectation of development.

Base Flood Elevation (BFE) – Elevation of the 1-percent-annual-chance flood. This elevation is the basis of the insurance and floodplain management requirements of the NFIP.

Cfs – Cubic feet per second, the unit by which discharges are measured (a cubic foot of water is about 7.5 gallons).

Community Assistance Contact (CAC) – The CAC is a telephone call or brief visit to an NFIP community for the purpose of establishing or re-establishing contact to determine if any program-related problems exist and to offer assistance.

Community Assistance Visit (CAV) – A CAV is a scheduled visit to an NFIP community for the purpose of conducting a comprehensive assessment of the community's floodplain management program. A CAV typically involves a tour of the floodplain, a meeting with local floodplain management officials, a review of the community's floodplain management ordinances, an examination of the community's floodplain development permit and variance files, and a meeting with the community to discuss any identified deficiencies, offer technical assistance, help address any deficiencies, and identify good floodplain management practices.

Comprehensive Plans – Local comprehensive plans, also referred to as master plans or general plans, provide a framework for the physical design and development of a community over a long-term planning horizon.

Critical Facilities – Facilities that, if damaged, would present an immediate threat to life, public health, and safety. Critical facilities may include hospitals, emergency operations centers, police stations, fire stations, and schools.

Dam – An artificial barrier that has the ability to impound water, wastewater, or any liquid-borne material, for the purpose of storage or control of water.

Detailed Stream Miles – Refers to areas mapped with detailed study methods. Detailed studies use hydrologic and hydraulic methods that produce BFEs, floodways, and other pertinent flood data. These studies are performed in developed areas and in areas experiencing rapid growth.

Flood – A general and temporary condition of partial or complete inundation of normally dry land areas from (1) the overflow of inland or tidal waters or (2) the unusual and rapid accumulation or runoff of surface waters from any source.

Flood Insurance Rate Map (FIRM) – An official map of a community, on which FEMA has delineated both the SFHAs and the risk premium zones applicable to the community.

APPENDIX D | GLOSSARY

Flood Insurance Study (FIS) Report – Contains an examination, evaluation, and determination of the flood hazards of a community and, if appropriate, the corresponding water-surface elevations.

Flood Risk – Probability multiplied by consequence; the degree of probability that a loss or injury may occur as a result of flooding. This is sometimes referred to as flood vulnerability.

Floodplain – The land adjoining the channel of a river, stream, ocean, lake, or other watercourse or water body that is susceptible to flooding.

Floodplain Boundary Tie-Ins – Refers to the contiguity of floodplain boundaries along the edges of the Risk MAP project study area. Areas where a significant mismatch, gap, or overlap is identified must be addressed to create a seamless transition.

Freeboard – A factor of safety usually expressed in feet above a flood level for purposes of floodplain management. "Freeboard" tends to compensate for the many unknown factors that could contribute to flood heights greater than the height calculated for a selected size flood and floodway conditions, such as wave action, bridge openings, and the hydrological effect of urbanization of the watershed.

Hazard Mitigation Plan (HMP) – A community's HMP documents the findings of its risk assessment and the long-term strategies it will pursue to reduce the effects of disasters on people, property, and the environment.

HEC-RAS – A computer modeling software used to conduct a hydraulic study, which produces flood elevations, velocities, and floodplain widths.

Letter of Map Amendment (LOMA) – One type of LOMC. Typically, a LOMA is issued when the scale of the FIRM does not allow for small areas of natural high ground to be shown outside the SFHA.

Letter of Map Change (LOMC) – A letter that reflects an official revision and/or an amendment to an effective FIRM, which has various uses. If a property owner thinks their property has been inadvertently mapped in an SFHA, property owners or their representatives may submit a request to FEMA for a LOMC. In another use, FEMA issues LOMCs in place of physically revising an effective FIRM.

Letter of Map Revision (LOMR) – One type of LOMC. LOMRs are generally based on the implementation of physical measures that affect the hydrologic or hydraulic characteristics of a flooding source and thus result in the modification of the existing regulatory floodway, the effective BFEs, or the SFHA. The LOMR officially revises the FIRM.

Levee – A human-made structure, usually an earthen embankment, designed and constructed in accordance with sound engineering practices to contain, control, or divert the flow of water so as to reduce risk from temporary flooding.

Light Detection and Ranging (LiDAR) – A remote sensing technology that produces highly accurate and dense elevation data. FEMA uses LiDAR data to create digital elevation models for hydraulic modeling of floodplains, digital terrain maps, and other NFIP products.

National Flood Insurance Program (NFIP) – The program of flood insurance coverage and floodplain management administered under the National Flood Insurance Act of 1968 and any amendments to it, and

applicable Federal regulations promulgated in Title 44 of the Code of Federal Regulations, Subchapter B.

Orthophotography – Orthophotography data typically are high-resolution aerial images that combine the visual attributes of an aerial photograph with the spatial accuracy and reliability of a planimetric map.

Redelineated Stream Miles – Refers to areas that are remapped using more detailed topographic data than that used to prepare the effective FIRM. Redelineation is a useful technique for updating flood hazard information when effective discharges and BFEs appear accurate, but the SFHA seems inaccurate.

Repetitive Loss (RL) Building – Any insurable building for which two or more claims of more than $1,000 were paid by the NFIP within any rolling 10-year period, since 1978. An RL property may or may not be currently insured by the NFIP.

Risk Mapping, Assessment, and Planning (Risk MAP) – A FEMA strategy to work collaboratively with State, local, and Tribal entities to deliver quality flood data that increases public awareness and leads to action that reduces risk to life and property.

Riverine – Of, or produced by, a river. Riverine floodplains have readily identifiable channels.

Special Flood Hazard Area (SFHA) – Portion of the floodplain subject to inundation by the 1-percent-annual-chance or base flood.

Stafford Act – Robert T. Stafford Disaster Relief and Emergency Assistance Act, PL 100-707, signed into law November 23, 1988; amended the Disaster Relief Act of 1974, PL 93-288. This Act constitutes the statutory authority for most Federal disaster response activities, especially as they pertain to FEMA and FEMA programs.

Substantial Damage – Damage of any origin sustained by a structure whereby the cost of restoring the structure to its pre-damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

Total Exposure in Floodplain (TEIF) – An analysis of the total potential economic losses (exposure) in the SFHA.

Watershed – An area that drains into a lake, stream, or other body of water.

Zone A – Areas subject to inundation by the 1-percent-annual-chance flood event generally determined using approximate methodologies. Because detailed hydraulic analyses have not been performed, no BFEs or flood depths are shown. Mandatory flood insurance purchase requirements and floodplain management standards apply.

Zone AE – Areas subject to inundation by the 1-percent-annual-chance flood event determined by detailed methods. BFEs are shown. Mandatory flood insurance purchase requirements and floodplain management standards apply.

Zone AO – Areas subject to inundation by 1-percent-annual-chance shallow flooding (usually sheet flow on sloping terrain) where average depths are between one and three feet. Average flood depths derived from detailed hydraulic analyses are shown in this zone. Mandatory flood insurance purchase requirements

and floodplain management standards apply. Some Zone AO have been designated in areas with high flood velocities such as alluvial fans and washes. Communities are encouraged to adopt more restrictive requirements for these areas.

Zone AH – Areas subject to inundation by 1-percent-annual-chance shallow flooding (usually areas of ponding) where average depths are between one and three feet. BFEs derived from detailed hydraulic analyses are shown in this zone. Mandatory flood insurance purchase requirements and floodplain management standards apply.

APPENDIX E | ADDITIONAL DATA

a. Data Collection for the Gauley Watershed

Data Types	Deliverable/Product	Source
Average Annual Loss	Discovery Map Geodatabase	FEMA's Hazus Average Annualized Loss Viewer
Boundaries: Community	Discovery Map Geodatabase	Flood Insurance Rate Map (FIRM) Databases
Boundaries: County and State	Discovery Map Geodatabase	U.S. Census
Boundaries: Watershed	Discovery Map Geodatabase	U.S. Geological Survey (USGS)
Census Blocks	Discovery Map Geodatabase	U.S. Census
Comprehensive Plan Summary	Discovery Report, Community Dashboards	City, County, and Town Planning Commissions
CRS Participation	Discovery Report, Community Dashboards	FEMA Community Information System (CIS)
Dams	Discovery Map Geodatabase, Discovery Report, Community Dashboard	U.S. Army Corps of Engineers (USACE) National Dam Inventory
Declared Disasters	Discovery Report, Community Dashboards	Disaster Declaration Database
Effective Floodplains: Special Flood Hazard Areas (SFHAs)	Discovery Map Geodatabase	FEMA's National Flood Hazard Layer (NFHL) from the Flood Map Service Center (MSC)
Hazard Mitigation Assistance Grants	Discovery Report, Community Dashboards	FEMA Region III's Database
Identified Mitigation Actions	Discovery Map Geodatabase, Discovery Report, Community Dashboard	Planning District Commission Hazard Mitigation Plans
Individual Assistance	Discovery Report	FEMA Individuals and Households Program Database
Letters of Map Change	Discovery Map Geodatabase, Discovery Report, Community Dashboard	FEMA's Mapping Information Platform (MIP)
Levee Inventory	Discovery Map Geodatabase, Discovery Report, Community Dashboard	FEMA's National Levee Inventory Map
Mitigation Plan Status and Summary	Discovery Report, Community Dashboard	Planning District Commissions
National Hydrography Stream Data	Discovery Map Geodatabase	FEMA's NFHL
NFIP Participation	Discovery Report, Community Dashboard	CIS
Population and Socioeconomic Characteristics	Discovery Report, Community Dashboard	U.S. Census Bureau
Public Assistance	Discovery Report	FEMA Public Assistance Database
Stream Gages	Discovery Map Geodatabase, Discovery Report, Community Dashboard	USGS
Structures	Discovery Map Geodatabase, Community Dashboard	FEMA's NFHL
Study Needs: FEMA	Discovery Map Geodatabase, Discovery Report	CNMS
Topography	Discovery Map Geodatabase	See Table b.
Total Exposure in Floodplain (TEIF)	Discovery Map Geodatabase, Discovery Report	Region III TEIF Database
Transportation: Roads and Railroads	Discovery Map Geodatabase	U.S. Census

APPENDIX E | ADDITIONAL DATA

b. List of Topographic Data Sources by County

County or City	Source	Date	Website
Clay County	2018 FEMA Region III South Central (Central Lot) QL2 LiDAR	2018	Pending
Fayette County	2018 FEMA South Central WV (Center Lot) QL2 LiDAR	2018	Pending
Greenbrier County	2018 FEMA South Central WV (Center Lot) QL2 LiDAR	2018	Pending
Kanawha County	2018 FEMA South Central WV (Center Lot) QL2 LiDAR	2018	Pending
Nicholas County	2018 FEMA Region III South Central (Central Lot) QL2 LiDAR	2018	Pending
Pocahontas County	2018 FEMA South Central WV (Center Lot) QL2 LiDAR	2018	Pending
Randolph County	2018 FEMA South Central WV (Center Lot) QL2 LiDAR	2018	Pending
Summers County	2016 FEMA Region III 3DEP WV Northeast	2016	http://data.wvgis.wvu.edu/elevation/
Webster County	2018 FEMA Region III South Central (Central Lot) QL2 LiDAR	2018	Pending

c. Results of CNMS Showing Flood Study Validity

County	Detailed Study Stream Mileage			Approximate Study Stream Mileage			Redelineated Study Stream Mileage		
	Unverified	Unknown	Valid	Unverified	Unknown	Valid	Unverified	Unknown	Valid
Clay County	0	0	0	3.55	0	0	0	0	0
Fayette County	0	0	0	41.93	0	0	0	0	2.17
Greenbrier County	0	0	0	183.23	0	0	4.25	0	5.62
Kanawha County	0	0	0	17.89	0	0	0	0	0
Nicholas County	2.68	0	14.84	352.81	0	0	0	0	0
Pocahontas County	0	0	0	41.62	0	0	0	0	0
Randolph County [1]	0	0	0	0	0	0	0	0	0
Summers County [1]	0	0	0	0	0	0	0	0	0
Webster County	0	0	0	66.55	0	0	20.83	0	7.45
Total	2.68	0	14.84	707.58	0	0	25.08	0	15.24

[1] Counties do not have any streams.
Valid: Study is accurate per known data
Unknown: Validity needs to be assessed
Unverified: Study needs to be updated

APPENDIX E | ADDITIONAL DATA

d. Dams in the Watershed by County

County	Total
Clay County	0
Fayette County	0
Greenbrier County	2
Kanawha County	0
Nicholas County	8
Pocahontas County	0
Randolph County	0
Summer County	0
Webster County	4
Total	14

e. Levees in the Watershed by County

County	Total
Clay County	0
Fayette County	0
Greenbrier County	0
Kanawha County	0
Nicholas County	0
Pocahontas County	0
Randolph County	0
Summers County	0
Webster County	0
Total	0

f. Stream Gage Information

Gage ID	Gage Location	County	Years of Record
03189863	Meadow River Near Hines, WV	Greenbrier	2
0318989690	Sewell Creek AB LTL Sewell Creek at Rainelle, WV	Greenbrier	2
03187500	Cranberry River Near Richwood, WV	Nicholas	63
03188900	Laurel Creek Near Fenwick, WV	Nicholas	9
03189100	Gauley River Near Craigsville, WV	Nicholas	56
03189600	Gauley River Below Summersville Dam, WV	Nicholas	51
03190000	Meadow River at Nallen, WV	Nicholas	59
03191500	Peters Creek Near Lockwood, WV	Nicholas	49
03192000	Gauley River Above Belva, WV	Nicholas	93
03186500	Williams River at Dyer, WV	Webster	91
03187000	Gauley River at Camden-On-Gauley, WV	Webster	94

g. County Border Special Flood Hazard Area Floodplain Boundary Tie-In Issues

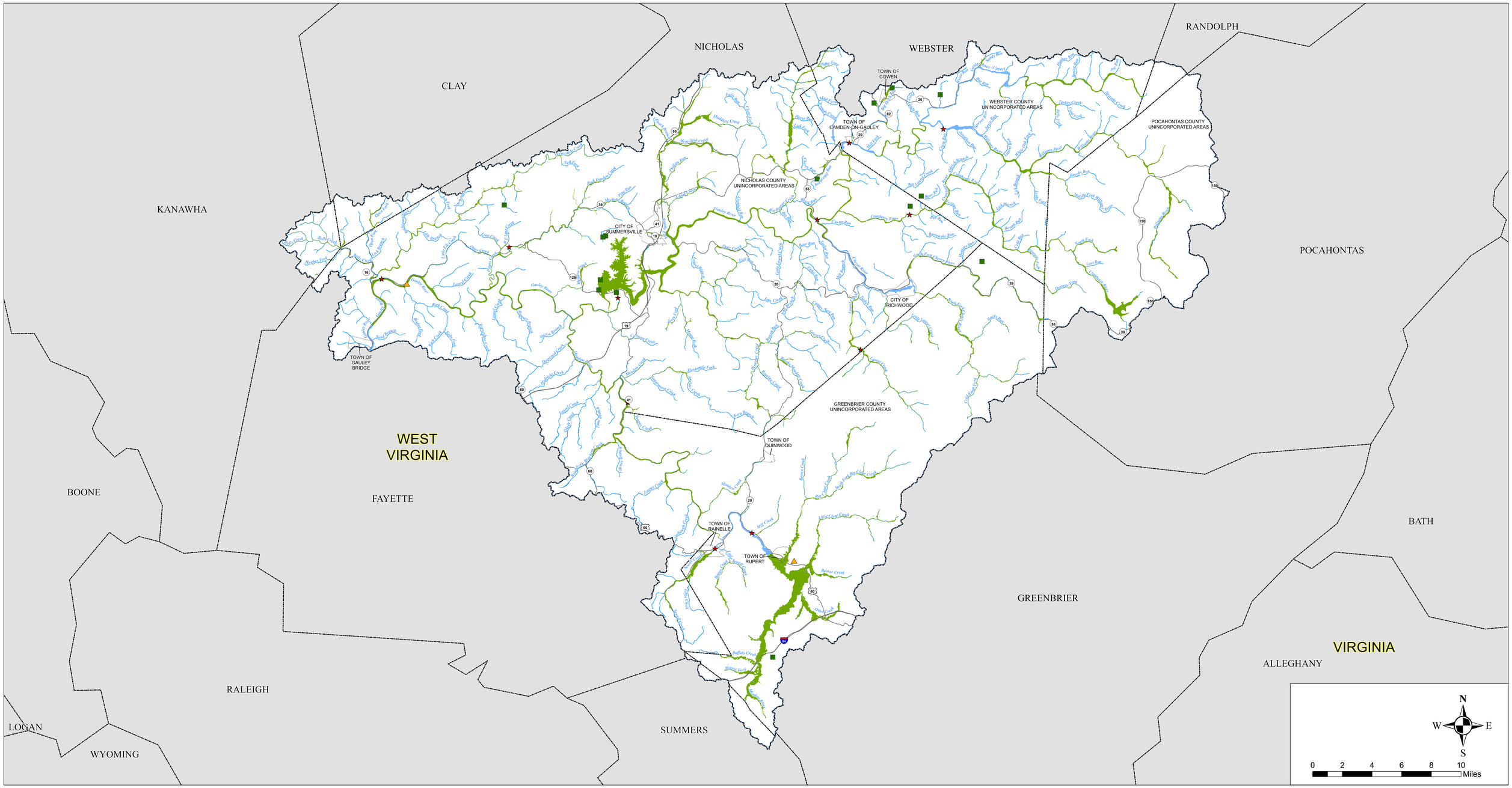
County Border	Issue/Problem	Stream Reach	Latitude	Longitude
Fayette-Greenbrier	Flood Zones Mismatched	Sewell Creek	37° 56' 22.820" N	80° 48' 12.834" W
Fayette-Greenbrier	Flood Zones Misaligned	Meadow River	37° 59' 10.324" N	80° 46' 18.728" W
Fayette-Nicholas	Pol_Ar Gaps/Overlaps	Meadow River	38° 6' 41.452" N	80° 52' 49.976" W
Fayette-Nicholas	Pol_Ar Gaps/Overlaps	Gauley River	38° 13' 5.262" N	81° 0' 29.855" W
Fayette-Nicholas	Flood Zones Mismatch	Bells Creek	38° 14' 51.838" N	81° 12' 15.942" W
Clay-Nicholas	Flood Zones Mismatch	Open Fork	38° 16' 48.202" N	81° 11' 45.638" W
Nicholas-Webster	Flood Zones Misaligned	Big Beaver Creek	38° 26' 13.713" N	80° 38' 48.504" W
Nicholas-Webster	Flood Zones Misaligned	Board Fork	38° 25' 36.724" N	80° 38' 31.330" W
Nicholas-Webster	Flood Zones Mismatched	Gauley River	38° 21' 46.861" N	80° 36' 44.486" W
Nicholas-Webster	Flood Zones Misaligned	Cranberry River	38° 17' 58.453" N	80° 29' 49.087" W
Nicholas-Webster	Pol_Ar Gaps/Overlaps	Cranberry River	38° 14' 52.249" N	80° 23' 59.496" W
Nicholas-Webster	Flood Zones Misaligned	Cranberry River	38° 14' 30.628" N	80° 21' 33.081" W
Webster-Pocahontas	Flood Zones Misaligned	Middle Fork Williams River	38° 20' 5.953" N	80° 21' 10.390" W
Webster-Pocahontas	Flood Zones Misaligned	Williams River	38° 22' 16.929" N	80° 16' 24.457" W
Randolph-Webster	Flood Zones Misaligned	Gauley River	38° 24' 31.194" N	80° 14' 9.987" W
Pocahontas-Greenbrier	Flood Zones Misaligned	Bear Run	38° 11' 31.231" N	80° 21' 38.685" W
Greenbrier-Nicholas	Flood Zones Misaligned	Hominy Creek	38° 9' 24.204" N	80° 37' 26.985" W
Clay-Kanawha	Flood Zones Mismatched	Elk River	38° 22' 23.231" N	81° 15' 24.286" W
Fayette-Kanawha	Flood Zone Mismatched	Bullpush Fork	38° 13' 18.062" N	81° 16' 23.556" W

h. LOMCs Identified in the Watershed by Jurisdiction

Jurisdiction	Number of Letters of Map Amendment	Number of Letters of Map Revision	Number of Letters of Map Change
City of Richwood	0	0	0
City of Summersville	3	0	3
Clay County	48	0	48
Fayette County	41	0	41
Greenbrier County	39	6	45
Kanawha County	306	2	308
Nicholas County	24	0	24
Pocahontas County	10	0	10
Randolph County	96	1	97
Summers County	14	0	14
Town of Camden-On-Gauley	0	0	0
Town of Cowen	0	0	0
Town of Gauley Bridge	0	0	0
Town of Quinwood	0	0	0
Town of Rainelle	0	0	0
Town of Rupert	0	0	0
Webster County	7	0	7
Total	588	9	597

APPENDIX F | DISCOVERY MAPS

Flood Risk: *Gauley Watershed*

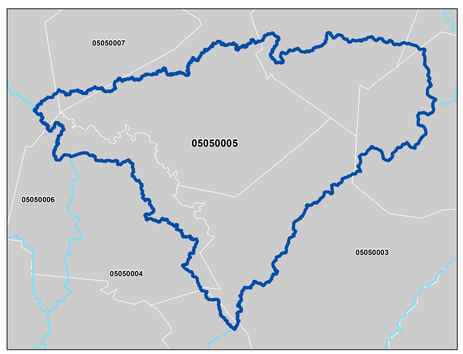


MAP SYMBOLOGY

Effective Special Flood Hazard Area

- Zone A (Approximate 1% Annual Chance)
- Zone AE (Detailed 1% Annual Chance)
- Dam (National Inventory of Dams)
- LOMC (Letter of Map Change) Clusters (4+)
- USGS Stream Gage
- Watershed Boundary
- State Boundary
- Municipal Boundary
- County Boundary
- Stream Line
- Major Road and Highway
- Levee (National Levee Inventory)

WATERSHED LOCATOR



NATIONAL FLOOD INSURANCE PROGRAM

FLOOD RISK DISCOVERY MAP

GAULEY WATERSHED

Study Area:

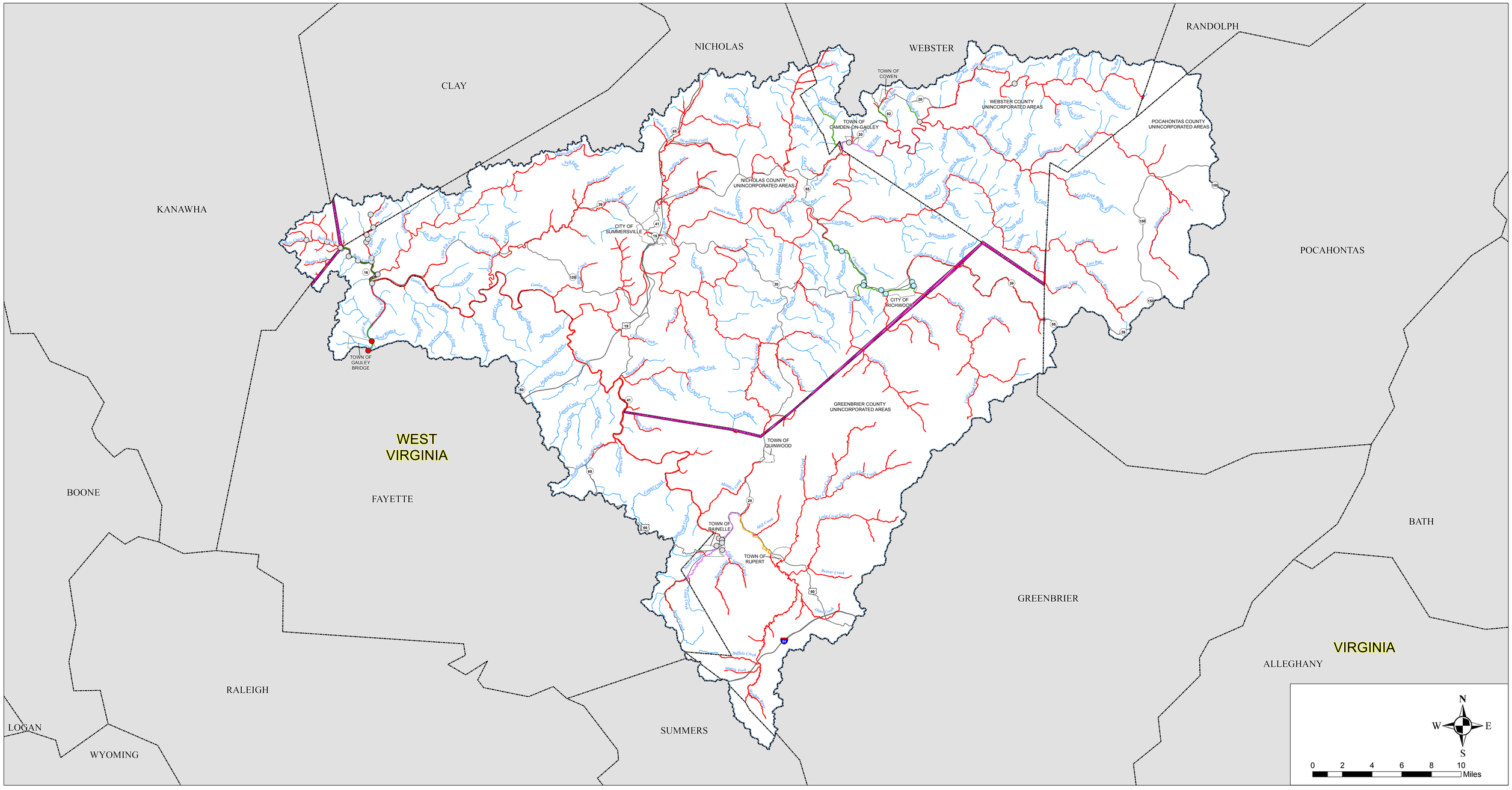
CLAY COUNTY, WV
FAYETTE COUNTY, WV
GREENBRIER COUNTY, WV
KANAWHA COUNTY, WV
NICHOLAS COUNTY, WV
POCAHONTAS COUNTY, WV
RANDOLPH COUNTY, WV
SUMMERS COUNTY, WV
WEBSTER COUNTY, WV

FEMA

HUC-8 Code
05050005

RELEASE DATE
JANUARY 2024

Mapping Needs: *Gauley Watershed*



MAP SYMBOLOGY

Coordinated Needs Management Strategy (CNMS) Validation Status

- BEING STUDIED
- NVUE COMPLIANT
- TO BE ASSESSED
- TO BE STUDIED

Other

- Watershed Boundary
- State Boundary
- Municipal Boundary
- County Boundary
- Stream Line
- Major Road and Highway
- Special Flood Hazard Area Matching Issues

FIS Discharge Standard Deviation from Regression Equation

- -2
- -1
- 0
- 1
- 2

ELEVATION DATA AVAILABLE FOR THE GAULEY WATERSHED

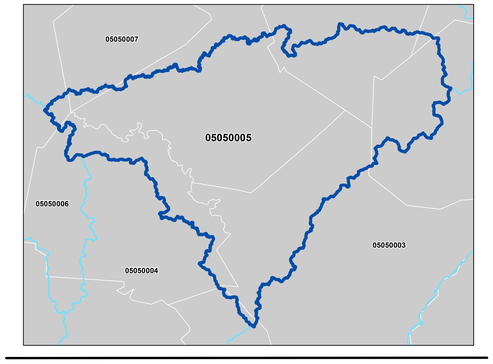
USGS acquired FEMA Region III South Central (Central Lot) QL2 LiDAR for Clay, Nicholas and Webster County in 2018.

USGS acquired FEMA South Central WV (Central Lot) QL2 LiDAR for Fayette,Pocahontas, Summers, Greenbrier and Kanawha County in 2018.

USGS acquired FEMA Region III 3DEP WV Northeast for Summers County in 2016.

All sources listed above are pending publication except Summers County

WATERSHED LOCATOR



NATIONAL FLOOD INSURANCE PROGRAM

FLOOD RISK DISCOVERY MAP

GAULEY WATERSHED

Study Area:

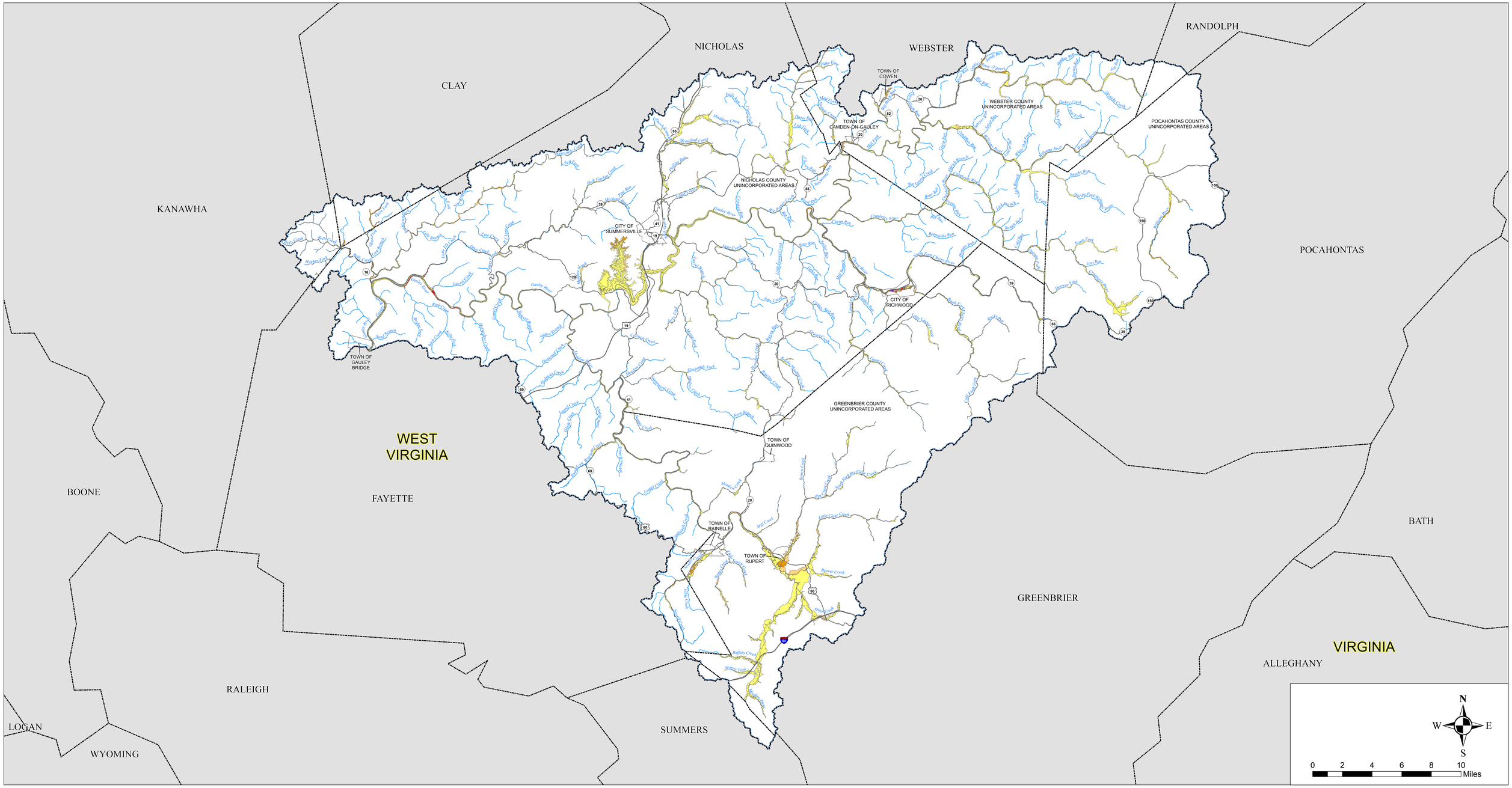
CLAY COUNTY, WV
FAYETTE COUNTY, WV
GREENBRIER COUNTY, WV
KANAWHA COUNTY, WV
NICHOLAS COUNTY, WV
POCAHONTAS COUNTY, WV
RANDOLPH COUNTY, WV
SUMMERS COUNTY, WV
WEBSTER COUNTY, WV

FEMA

HUC-8 Code
05050005

RELEASE DATE
JANUARY 2024

Potential Loss: *Gauley Watershed*



MAP SYMBOLOGY

Total Exposure in Floodplain (TEIF) Loss
(per census block):

- Very Low
- Low
- Medium
- High
- Very High

- Watershed Boundary
- State Boundary
- Municipal Boundary
- County Boundary
- Stream Line
- Major Road and Highway

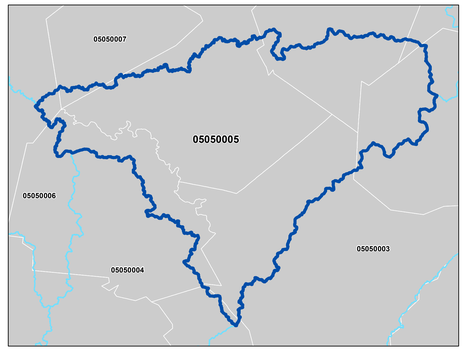
NUMBER OF REPETITIVE LOSSES

Clay County	
Fayette County	
Greenbrier County	
Kanawha County	
Nicholas County	
Pocahontas County	
Randolph County	
Summers County	
Webster County	
Town of Rupert	
Town of Rainelle	
Town of Quinwood	
Town of Cowen	
Town of Camden-on-Gauley	
City of Summersville	
City of Richwood	

NUMBER OF FLOOD INSURANCE POLICIES

Clay County	
Fayette County	
Greenbrier County	
Kanawha County	
Nicholas County	
Pocahontas County	
Randolph County	
Summers County	
Webster County	
Town of Rupert	
Town of Rainelle	
Town of Quinwood	
Town of Cowen	
Town of Camden-on-Gauley	
City of Summersville	
City of Richwood	

WATERSHED LOCATOR



NATIONAL FLOOD INSURANCE PROGRAM

FLOOD RISK DISCOVERY MAP

GAULEY WATERSHED

Study Area:

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WEBSTER COUNTY, WV

FEMA

HUC-8 Code
05050005

RELEASE DATE
JANUARY 2024

APPENDIX G | MEETING MINUTES

MEETING SYNOPSIS:
GAULEY & LOWER NEW WATERSHEDS FLOOD RISK DISCOVERY MEETING

Meeting Details

Date	*07/25/2023*		**Time**	*10:00 a.m. - 12:00 p.m.*
Watershed	*Gauley*		**Location**	*Summersville City Office, 400 Broad Street, Summersville, WV 26651*
Total Community Sign-Ins	*2*		**Communities Represented**	*Nicholas County*
Total Non-Community Sign-Ins *(e.g., Federal, State, Regional organizations or NGOs)*	*6*		**Entities Represented**	***Federal:*** *FEMA Region III* ***State:*** *WV State NFIP* ***Regional:***
Format	*The meeting opened with a formal presentation/slide-show followed by a Discovery Map review and comment exercise.*		**Materials Shared**	• *Agenda* • *PowerPoint Presentation: Agenda, Introductions, the NFIP and Flood Risk Data, Project Area Overview, Risk MAP Program and Discovery Overview, Reducing Risk in Communities, Next Steps, Watershed Discovery Maps, Risk and Action Identification Exercise* • *Discovery Maps: Flood Risk, Mapping Needs, Potential Loss* • *Community Dashboards*

Gauley and Lower New Watersheds Flood Risk Discovery Meeting Minutes

Tuesday, July 25, 2023
10:00 a.m. – 12:00 p.m.

400 Broad Street, Summersville, WV 26651

Welcome and Introductions

- Introductions were made for the presenters of the meeting:
  - Crystal Smith, Program Specialist
  - Andrew Jackson, Civil Engineer, FAC-COR Level III

- Agenda Overview
  - Welcome and Overview
  - The National Flood Insurance Program and Flood Risk Data
  - Flood Risk Study Project and Discovery Overview
  - Reducing Flood Risk in Communities
  - Next Steps
  - Risk and Action Identification Exercise

Presentation

See the presentation for the slides that align with the notes throughout this section.

The National Flood Insurance Program and Flood Risk Data

- An overview was provided of the National Flood Insurance Program (NFIP), which allows property owners to purchase flood insurance at a reduced rate when communities adopt and enforce floodplain management ordinances based on current flood maps.

- Over 22,616 communities participate in the NFIP, with over 5 million policies.

- Over 5 million policies in the NFIP nationwide, >14,700 in WV

- Flood Risk Data for West Virginia can be accessed by the following platforms:

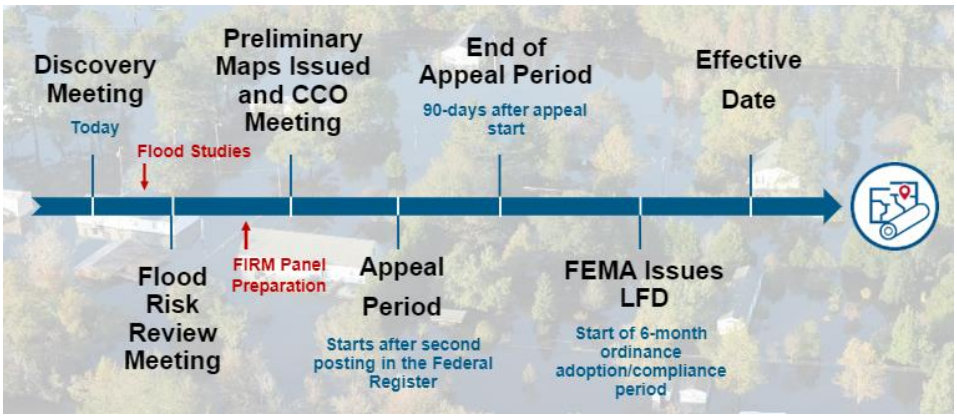
  - The West Virginia Flood Tool at www.mapwv.gov/flood

  - FEMA's Flood Map Service Center (MSC) at https://msc.fema.gov/portal/home

  - National Flood Hazard Layer (NFHL) at https://www.fema.gov/flood-maps/national-flood-hazard-layer

Flood Risk Study Project and Discovery Overview

- The goal of the Risk MAP program is to deliver quality flood hazard data that helps communities increase public awareness and leads to action that reduces risk to life and property.
- FEMA has decided to update the existing maps due to factors such as the recent availability of high-resolution elevation data (Light Detection and Ranging [LiDAR]), the advanced age of effective flood studies for non- coastal areas, new hydrologic calculations, affordable model-backed Zone A flood studies, and ability to provide new flood risk products.
- Many different types of data are collected and analyzed before the Discovery meeting, including:
    - Watershed and Jurisdiction Boundaries
    - Dams and Levees
    - Stream Data
    - Declared Disasters
    - Effective Floodplains: Special Flood Hazard Areas
- The typical Risk MAP project takes an average of 3-5 years to complete.



- The goal of the Discovery phase is to share information to communities and learn about flood risk and mitigation activities and capabilities.
- Outcomes of the Discovery process include a Discovery report, Discovery maps, and identification of potential study areas.

Reducing Flood Risk in Communities

- Specialized flood risk dashboards are available and will be distributed to each community within the four watersheds being studied. These dashboards provide communities with a snapshot of their flood risk as well as their financial risk.
- Ways a community can improve their resilience to flooding were shared, including:
    - Improving and implementing Hazard Mitigation Plans
    - Influencing decisions about development, ordinances, and flood mitigation projects
    - Communicating with citizens about flood risk
- Implementing hazard mitigation actions can save communities money in the long run. By implementing higher

standards in a floodplain management ordinance, communities can experience a benefit-cost ratio of $5: $1. Additionally, for every $1 spent on federally funded actions that reduce riverine flood risk, $7 is saved.

Next Steps

- Information provided by communities is crucial to the Risk MAP process. Requested information includes:
    - Completed Discovery data questionnaire, with GIS contact
    - Areas of Concern
    - Areas of historical flooding and other flood risks
    - Mitigation projects addressing flood risks
    - Ideas about ways to increase resilience

Closing

Project contacts were provided to meeting attendees, and meeting concluded with a Discovery Map review and comment exercise.

Action Items

1. Participants will:
    a. Complete and submit Discovery data questionnaires to FEMA, with GIS contact information
    b. Provide areas of concern, including areas of recent or planned development and areas of high growth or other significant land changes
    c. Provide information about areas of historical flooding and other flood risks
    d. Provide information about mitigation projects that address flood risks
    e. Provide ideas to increase their community's resilience to flooding, such as training, cost-efficient mitigation, and integration with hazard mitigation planning
2. FEMA and Partners will:
    a. Have follow-up discussions with communities regarding areas to be updated
    b. Provide a copy of the final Discovery report and meeting materials to all meeting participants and communities

Contacts

FEMA Region III

Andrew Jackson
Civil Engineer
Andrew.Jackson4@fema.dhs.gov
202-718-2755

Elizabeth Ranson
Mitigation Planning
Elizabeth.Ranson@fema.dhs.gov
215-347-0686

State Partners

Timothy W. Keaton
State NFIP/CTP Coordinator
Tim.W.Keaton@wv.gov
304-414-7659

Kurt Donaldson
WVGISTC Manager
Kurt.Donaldson@mail.wvu.edu
304-293-9467

Mapping Partners

Crystal Smith
Stakeholder Engagement Specialist
Crystal.Smith@wsp.com

Madison Matera
Stakeholder Engagement Specialist
Madison.Matera@wsp.com

Questions/Comments

Comment: There is a new school being built in Nicholas County right by the river. There is push to ensure that it is built outside of the floodplain.

Comment: It was noted that the whole town of Ridgewood, in Nicholas County, is in the floodway.

Comment: There was discussion surrounding a pipeline being built in the area. There is more water coming down and flooding due to the removal of trees to build the pipeline.

Comment: The 2016 flood in the area had a large impact. It was noted that there were mudslides, many of which occurred in Clay County.

APPENDIX H | MEETING ATTENDANCE RECORD

FEMA

Discovery Meeting – Gauley and Lower New Watersheds

Date / Time: July 25 – 10am

Location: Summersville City Office - 400 Broad Street, Summersville, WV 26651

First Name	Last Name	Affiliation	Email	Sign-In
Sheena	McClung	Nicholas County	Smcclung.ncdhsem@yahoo.com	
Annette	Taylor	Nicholas County	Annette_26651@yahoo.com	
Tim	Keaton	State NFIP	tim.w.keaton@wv.gov	
Ruthie	Maniscalchi	State NFIP	Ruthie.a.maniscalchi@wv.gov	
Julie	Sears	State NFIP	Julia.r.sears@wv.gov	
Andrew	Jackson	FEMA R3	Andrew.jackson4@fema.dhs.gov	
Crystal	Smith	ARC PTS	Crystal.smith@wsp.com	
Madison	Matera	ARC PTS	Madison.matera@wsp.com	

** For a complete list of all invited stakeholders, please refer to the Community Contact List – CERC.xlsx that is delivered to FEMA's Mapping Information Platform (MIP) in conjunction with this report under case number 19-03-0005S (within the Gauley Discovery Preparation subfolder).

APPENDIX I | MEETING PRESENTATION

RiskMAP
Increasing Resilience Together

Gauley and Lower New Watershed Flood Risk Discovery Meeting

FEMA REGION 3
July 25 - 26, 2023

FEMA

Why Are We Here?

- **Discuss flood risk changes**
- **Gather local information**
- **Collaborate on planning, taking action, and communicating risk**

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Agenda

- Welcome and Overview
- The National Flood Insurance Program and Flood Risk Data
- Flood Risk Study Project and Discovery Overview
- Reducing Flood Risk in Communities
- Next Steps
- Risk and Action Identification Exercise

FEMA

RiskMAP

Increasing Resilience Together

Introductions

- **Name**
- **Municipality or organization**
- **Role in floodplain management**

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RiskMAP
Increasing Resilience Together

The National Flood Insurance Program and Flood Risk Data

FEMA

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Increasing Resilience Together

National Flood Insurance Program (NFIP)

- **Allows property owners to purchase flood insurance at reduced rates**
- **State and local governments agree to adopt and enforce floodplain management ordinances**
- **Over 22,616 communities participate in the NFIP***
- **Over 5 million policies in the NFIP nationwide, >14,700 in WV***

***Data current as of April 2023: FEMA Community Status Book.**

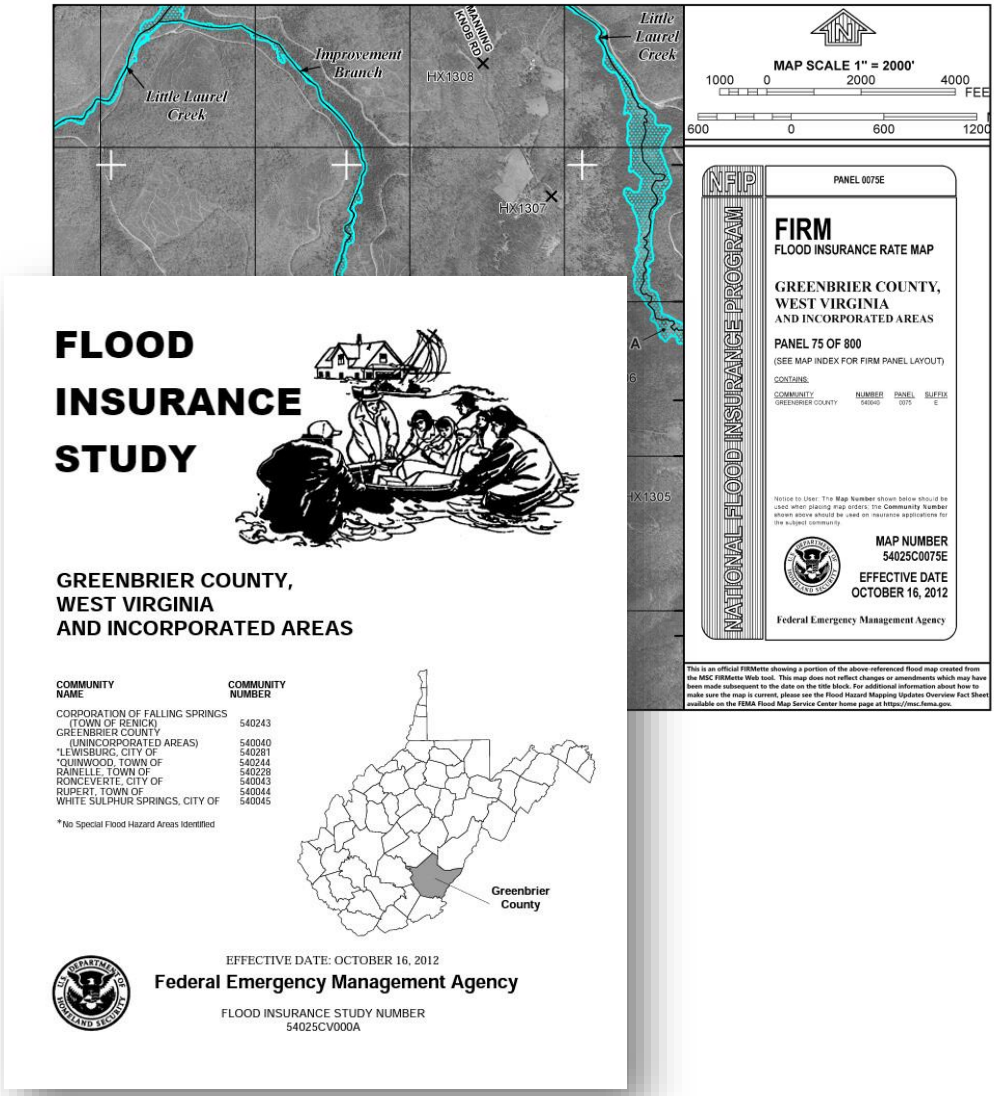
FEMA

RiskMAP
Increasing Resilience Together

Flood Insurance Rate Maps and Studies

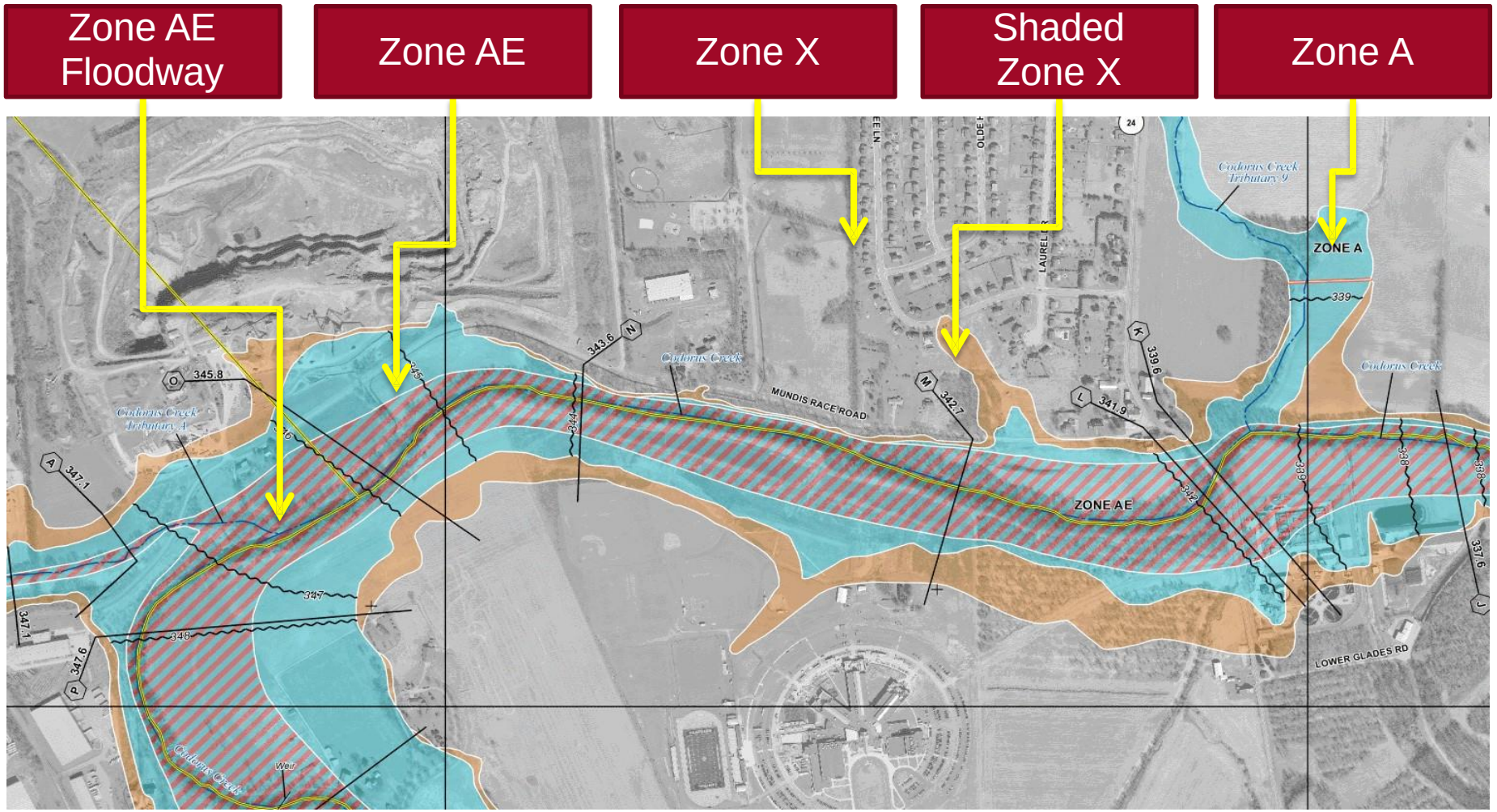
Key Terms:

- Flood Insurance Rate Map (**FIRM**)
- Flood Insurance Study (**FIS**) Report
- Special Flood Hazard Area (**SFHA**)
- Flood Zone
- Base Flood Elevation (**BFE**)
- Regulatory Floodway
- Cross Section



FEMA

Typical FIRM Panel and Flood Zones



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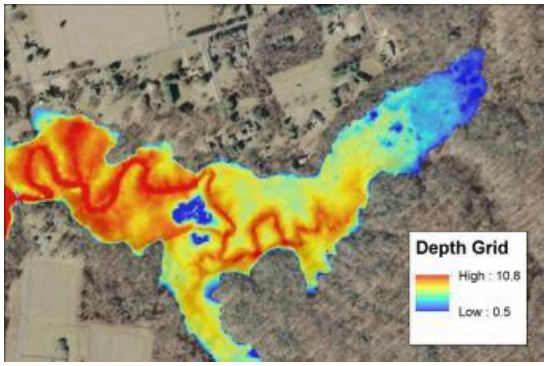
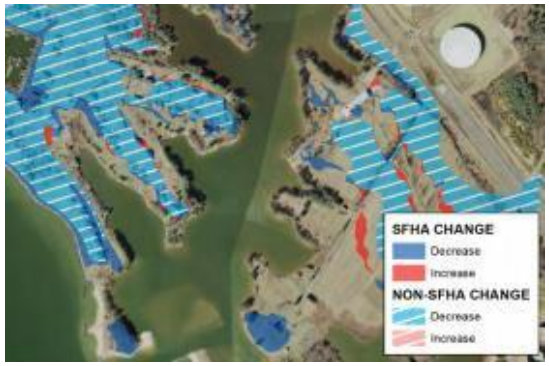
Study Types

		Approximate (Zone A)	Detailed (Zone AE)
Survey	Channel XS	None	Field survey at road crossings
	Hydraulic Structures	None	Field survey
Hydrology	Methodology	Historically regression equations with gage analysis where applicable - Alternate methods such as HEC-HMS or Rainfall Run off	
Hydraulics	Recurrence Interval	10%, 4%, 2%, 1%, 1%+ and 0.2% annual chance	
	Manning's "n"	Aerial Imagery (Horizontal Variation)	
	Channel Geometry	LiDAR	LiDAR; Supplemented with field survey
Mapping	Boundaries	1% annual chance	1% and 0.2% annual chance
	Flood Zones	Zone A (no mapped BFEs but WSELs available in FEMA National Flood Hazard Layer)	Zone AE (all XS with labeled WSELs, and Floodways) and 'Shaded' Zone X
FIS Report	Tables	Study Summaries, Summary of Discharges	Study Summaries, Summary of Discharges, Floodway Data, Roughness Coefficient
	Profiles	None	10-, 4-, 2-, 1-, 1+, and 0.2% annual chance

FEMA Flood Risk GIS Datasets

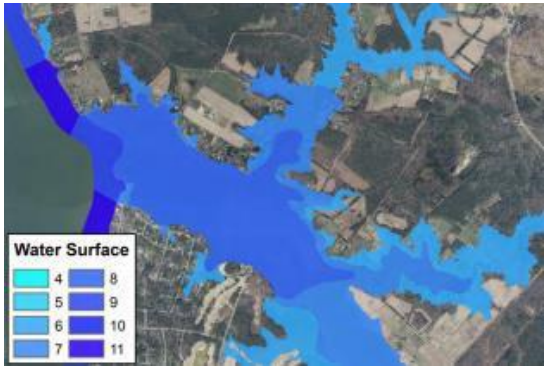
Flood Depth & Analysis Grids





Changes Since Last FIRM

Water Surface Elevation Grids



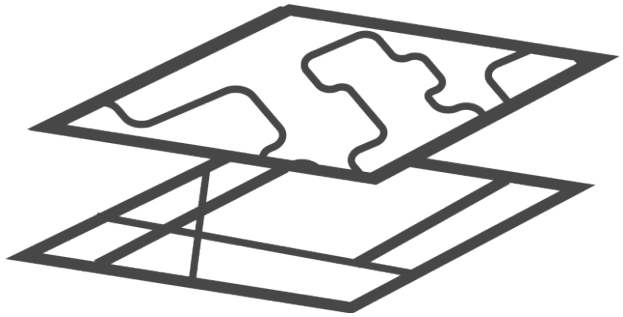
Flood Risk Assessment

FEMA

Where to Find Flood Risk Data

WV Flood Tool

- Digital mapping source publicly available that shows property-level flood risk
- www.mapwv.gov/flood



FEMA's Flood Map Service Center (MSC)

- Where you can view effective maps online for free
- https://msc.fema.gov/portal/home

National Flood Hazard Layer (NFHL)

- Geospatial database that contains current effective flood hazard data
- https://www.fema.gov/flood-maps/national-flood-hazard-layer

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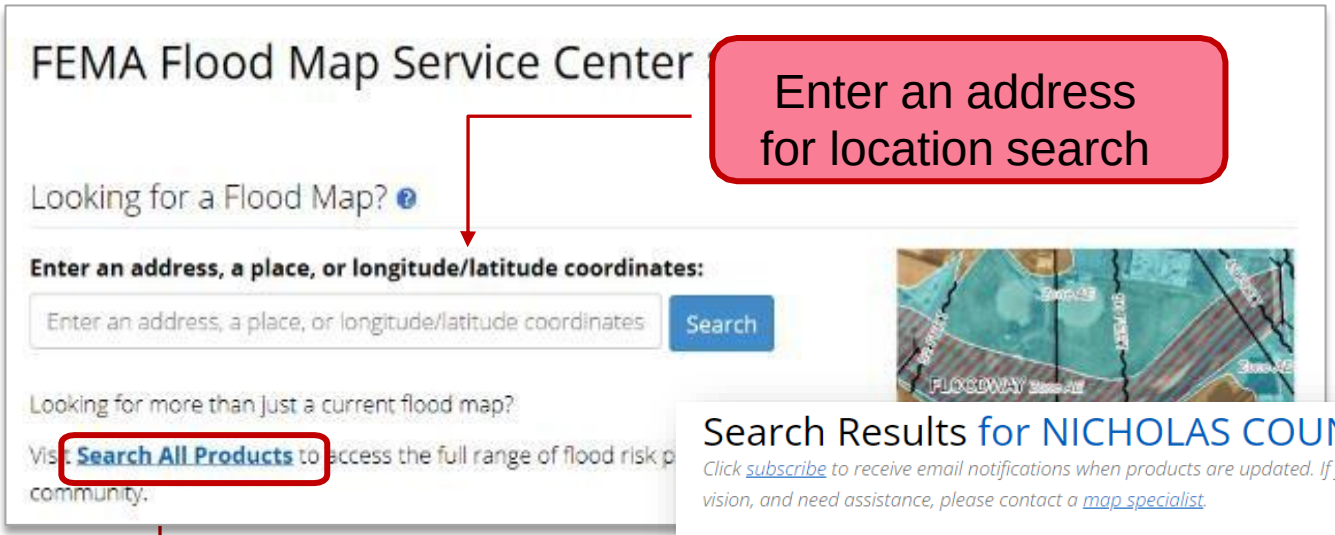
Where Can I Find My Flood Maps?

The FEMA Map Service Center (MSC) is the official public source for flood hazard information: https://msc.fema.gov/portal/home



Enter an address for location search

Menu Search

FEMA

National Flood Hazard Layer

Visit https://www.fema.gov/national-flood-hazard-layer-nfhl for multiple options to view and download NFHL data.

Accessing the National Flood Hazard Layer

Map Service Center

Access localized National Flood Hazard Layer data by searching FEMA's Map Service Center.

FEMA's Map Service Center ↗

NFHL ArcGIS Viewer

Or you may view, download, and print current local digital effective flood hazard data in an ArcGIS map.

NFHL Viewer ↗

In the NFHL Viewer, you can use the address search or map navigation to locate an area of interest and the NFHL Print Tool to download and print a full Flood Insurance Rate Map (FIRM) or FIRMette (a smaller, printable version of a FIRM) where modernized data exists. Technical GIS users can also utilize a series of dedicated GIS web services that allow the NFHL database to be incorporated into websites and GIS applications. For more information on available services, go to the NFHL GIS Services User Guide.

You can also use the address search on the FEMA Flood Map Service Center (MSC) to view the NFHL data or download a FIRMette. Using the "Search All Products" on the MSC, you can download the NFHL data for a County or State in a GIS file format. This data can be used in most GIS applications to perform spatial analyses and for integration into custom maps and reports. To do so, you will need GIS or mapping software that can read data in shapefile format.

FEMA also offers a download of a KMZ (keyhole markup file zipped) file, which overlays the data in Google Earth™. For more information on using the data in Google Earth™, please see Using the National Flood Hazard Layer Web Map Service (WMS) in Google Earth™.

Draft National Flood Hazard Layer

The Draft National Flood Hazard Layer is for early awareness of possible changes to regulatory flood map information. Until the data becomes effective and it appears in the National Flood Hazard Layer, the data cannot be used to rate flood insurance policies or enforce the federal mandatory purchase requirement.

Preliminary Flood Hazard Data

Preliminary flood hazard data provides the public an early look at their home or community's projected risk to flood hazards. Preliminary data may include new or revised Flood Insurance Rate Maps (FIRM), Flood Insurance Study (FIS) Reports and FIRM Databases. View your community's preliminary flood hazard data.

Pending Flood Hazard Data

Pending flood hazard data provides the public an early look at their home or community's projected risk to flood hazards. Pending data may include new or revised Flood Insurance Rate Maps (FIRM), Flood Insurance Study (FIS) Reports and FIRM Databases. View your community's preliminary flood hazard data.

Flood Risk Study Project and Discovery Overview

FEMA

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Why Are We Here?

Through collaboration with state and local partners like yourselves, our goal is to deliver **quality flood hazard data** that helps you **increase public awareness** and **leads to action** that reduces risk to life and property.

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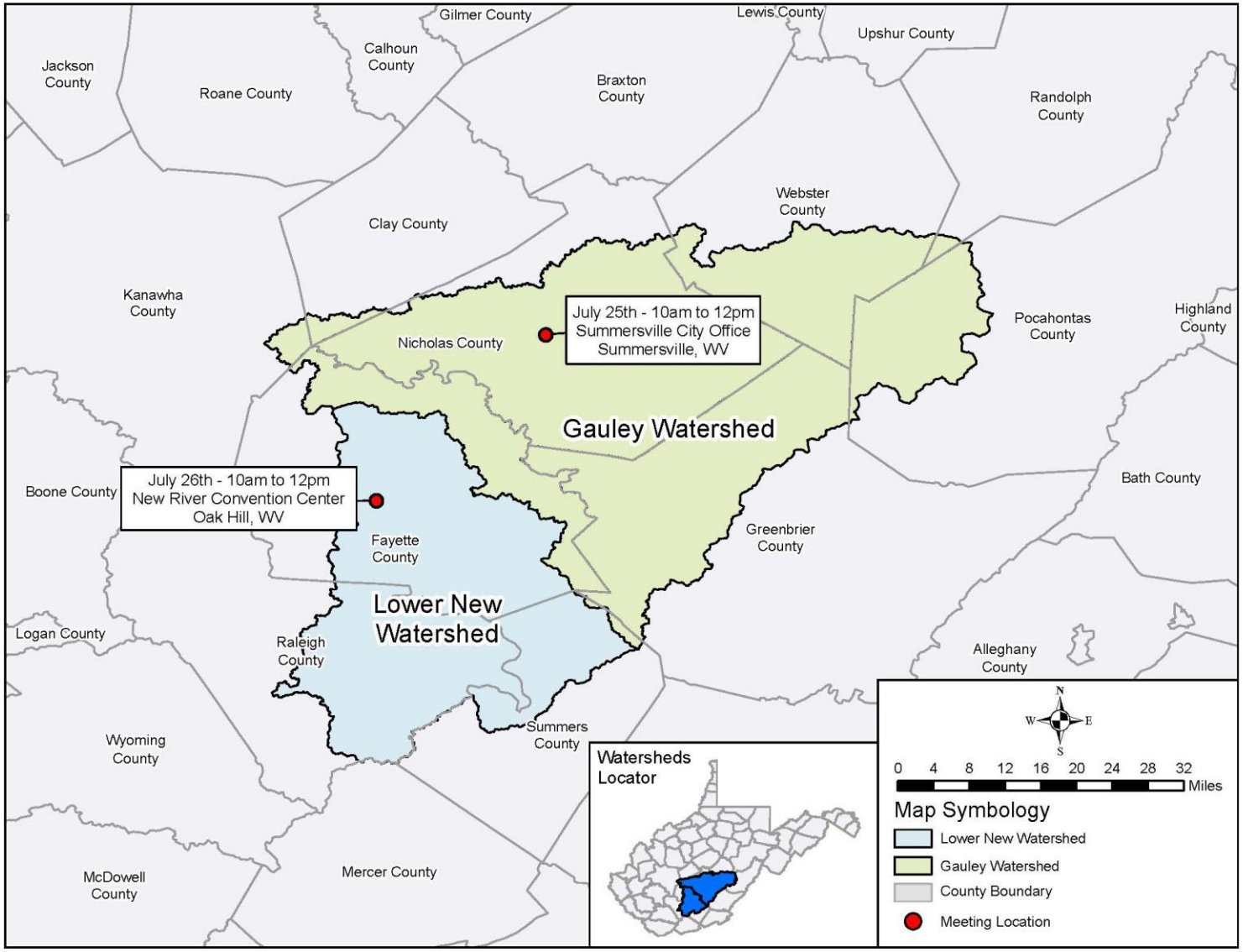
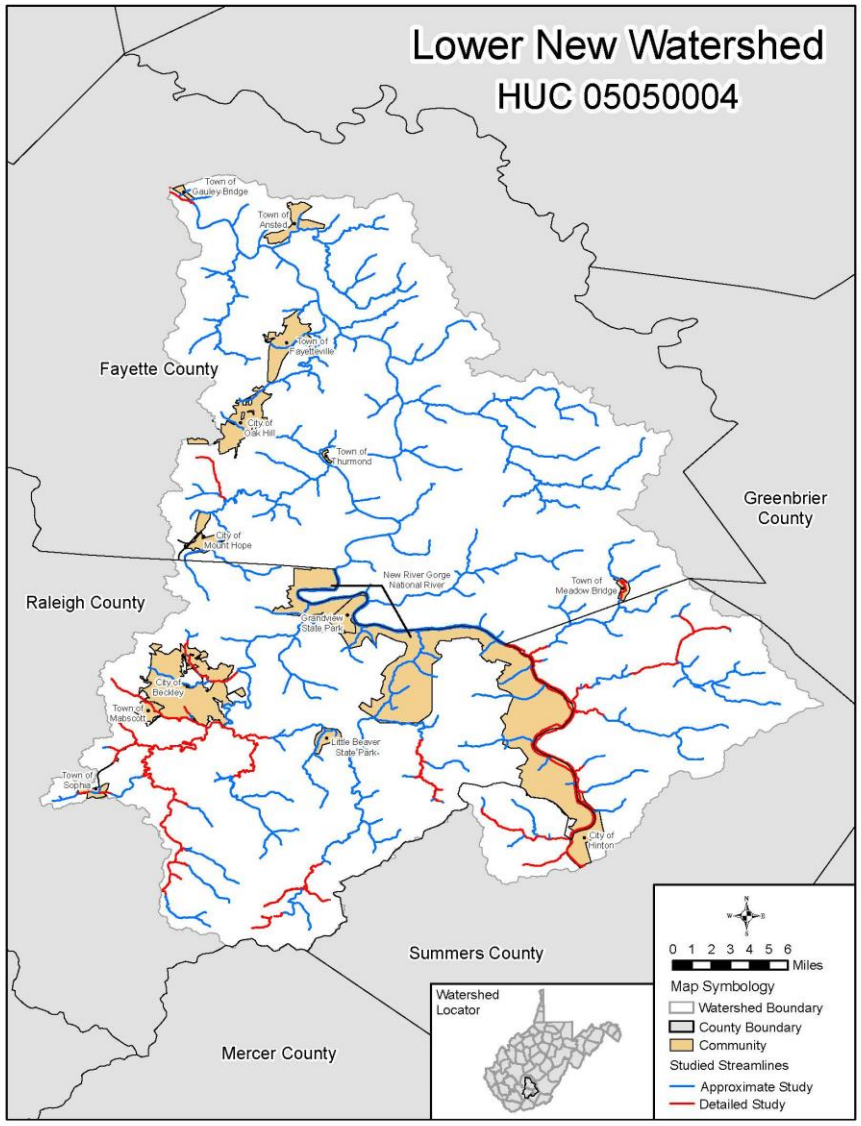
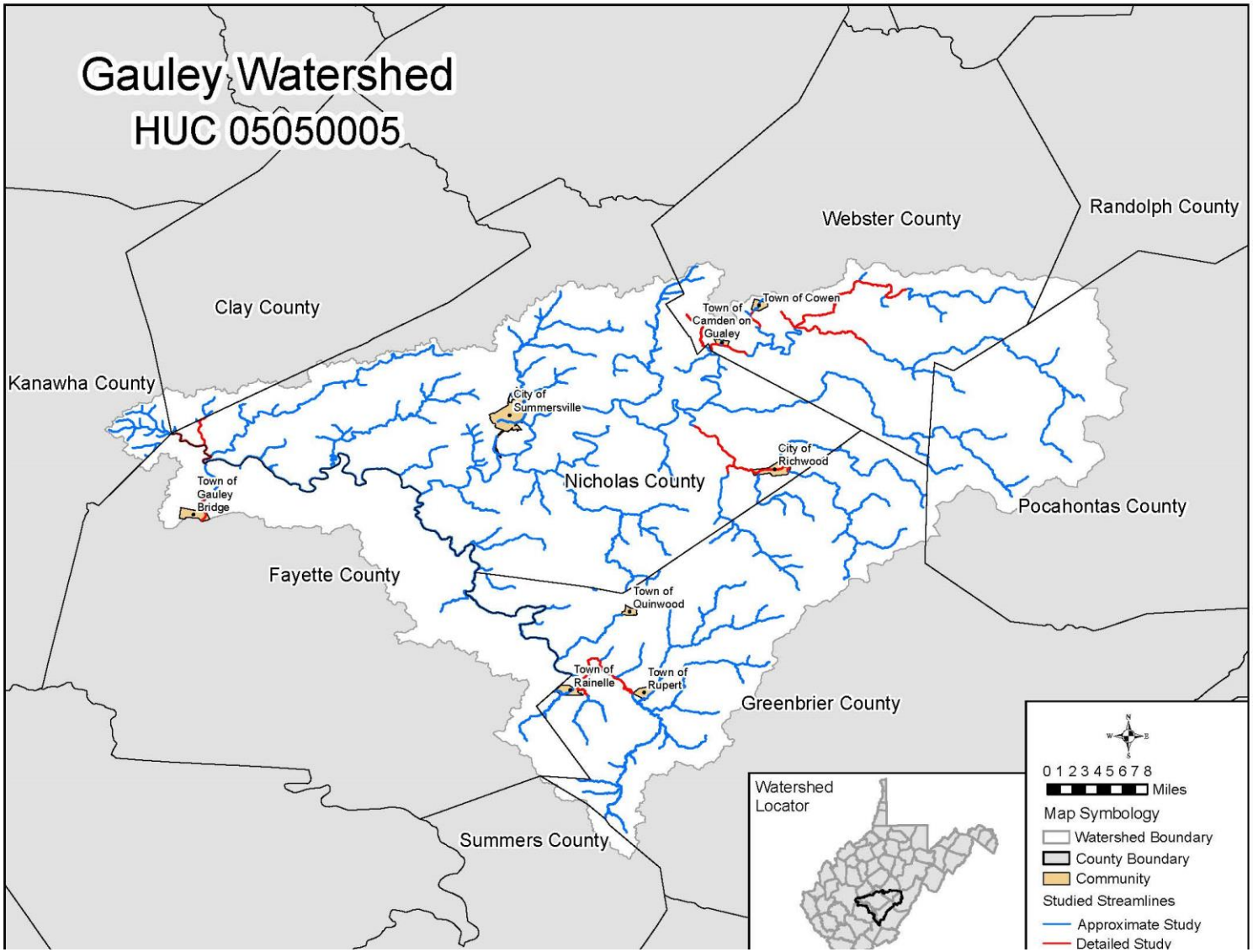
Watershed Maps



Watershed Maps



Watershed Maps



Flood Insurance Rate Map (FIRM) Status

Jurisdiction	Effective FIRM Date	Jurisdiction	Effective FIRM Date
Clay County	02/06/2013	Raleigh County	06/16/2009
Fayette County	09/03/2010	Randolph County	09/29/2010
Greenbrier County	07/05/2023	Summers County	10/07/2021
Kanawha County	08/01/2023	Webster County	05/03/2022
Nicholas County	09/24/2021		
Pocahontas County	11/04/2010		

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Why Now? Better Data!

- **Availability of High-Resolution Elevation Data (LiDAR)**
  (USGS QL2 LiDAR) http://data.wvgis.wvu.edu/elevation/
- **Age of effective flood studies**
- **New hydrologic calculations (30-40 more years of rainfall data)**
- **Affordable model-backed Zone A flood studies (HEC-RAS)**
- **Ability to provide new Flood Risk Products (depth grids, etc.)**

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Discovery: Data Collection & Collaboration

- **Examples of data gathered and analyzed before the meeting include the following:**
  - Watershed and Jurisdiction Boundaries
  - Dams and Levees
  - Stream Data
  - Declared Disasters
  - Effective Floodplains: Special Flood Hazard Areas
  - Letters of Map Change
  - NFIP Participation
  - Individual and Public Assistance
  - Mitigation Plan Status and Summary
  - Population and Socioeconomic Characteristics

Flood Risk Data Questions

- **Data**
  - What data do you already have available?
  - What is your data wish list?
- **Technical Assistance**
  - What technical challenges are you facing, and what assistance could support your efforts right now?
- **Training and Outreach**
  - What trainings and outreach would help support your existing or planned efforts?

*For more information on floodplain management, insurance and mitigation strategies, sign up for FEMA's "Resilience Report" e-newsletter

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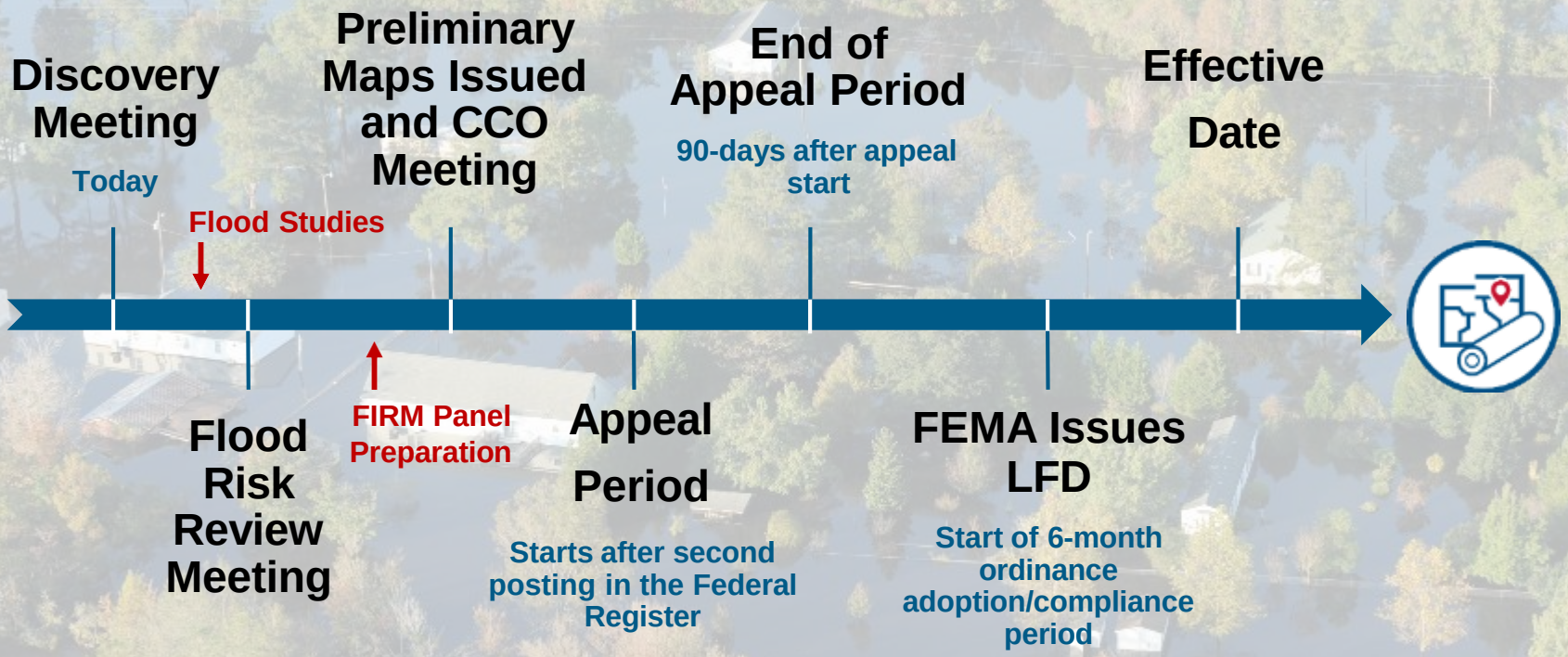
Typical Flood Study Timeline



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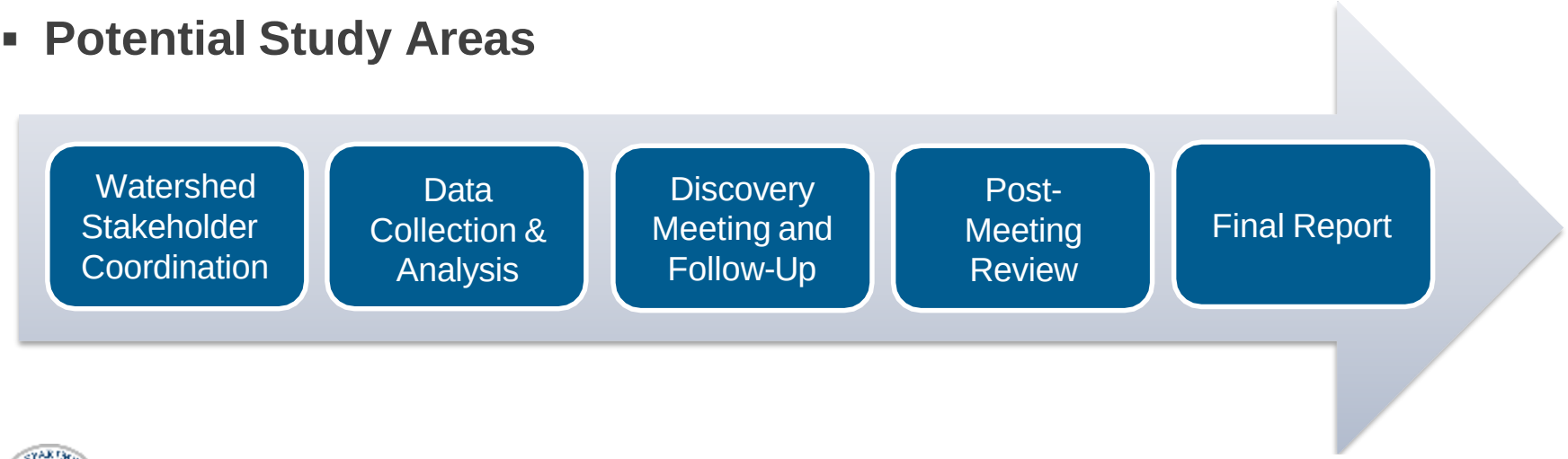
RiskMAP

Discovery: Outcomes

- **Discovery Report**
  - Summary of data, analysis, meetings and action items or decisions
- **Discovery Maps**
  - Flood Hazards
  - Potential Economic Loss
  - Mapping Needs
- **Potential Study Areas**



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Reducing Flood Risk in Communities

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Flood Risk Dashboard

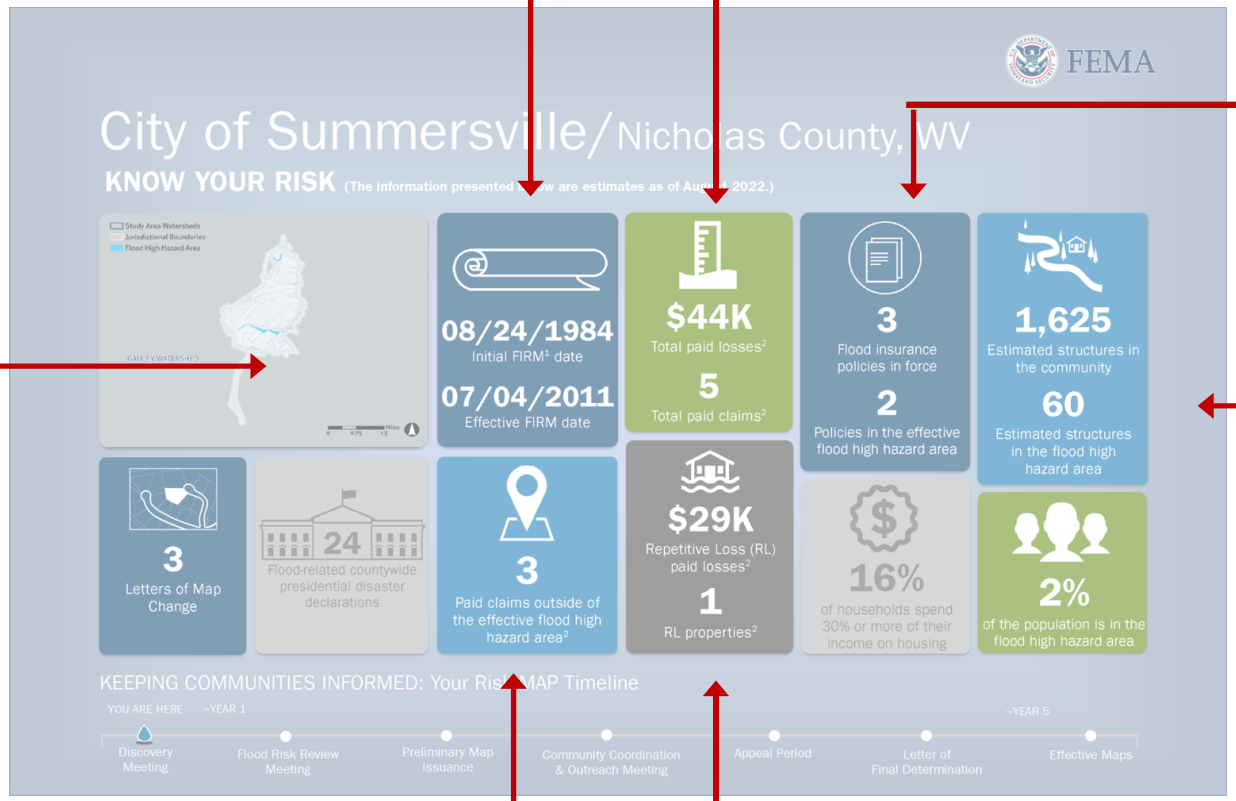
NFIP FLOOD CLAIM PAYOUTS

CLAIMS OUTSIDE OF SFHA

NFIP FLOOD POLICIES

AFFECTED RESIDENTS

HIGH-RISK STRUCTURES



FEMA

AVERAGE PREMIUM

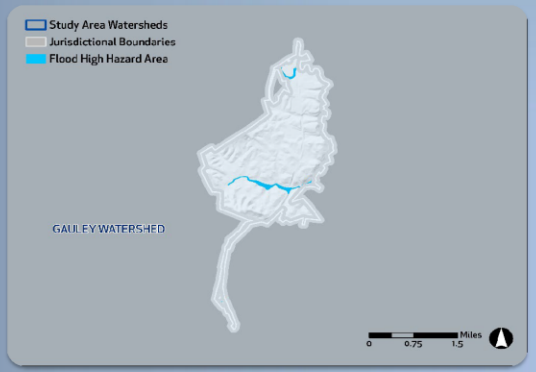
REPETITIVE LOSSES

Dashboard of Your Community Profile

FEMA

City of Summersville/ Nicholas County, WV

KNOW YOUR RISK (The information presented below are estimates as of August 2022.)



08/24/1984
Initial FIRM[1] date

07/04/2011
Effective FIRM date

$44K
Total paid losses[2]

5
Total paid claims[2]

3
Flood insurance policies in force

2
Policies in the effective flood high hazard area

1,625
Estimated structures in the community

60
Estimated structures in the flood high hazard area

3
Letters of Map Change

24
Flood-related countywide presidential disaster declarations

3
Paid claims outside of the effective flood high hazard area[2]

$29K
Repetitive Loss (RL) paid losses[2]

1
RL properties[2]

16%
of households spend 30% or more of their income on housing

2%
of the population is in the flood high hazard area

KEEPING COMMUNITIES INFORMED: Your Risk MAP Timeline

YOU ARE HERE ~YEAR 1 ~YEAR 5

- Discovery Meeting
- Flood Risk Review Meeting
- Preliminary Map Issuance
- Community Coordination & Outreach Meeting
- Appeal Period
- Letter of Final Determination
- Effective Maps

How Can You Improve Your Community's Resilience to Flooding Now?

Improve and implement your Hazard Mitigation Plans.

Influence decisions about development, ordinances and flood mitigation projects.

Help to maintain the sustainability of your community by **increasing resilience to flooding.**

Communicate with citizens about flood risk

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Increasing Resilience Together

Hazard Mitigation Actions Save

National Benefit-Cost Ratio (BCR) Per Peril *BCR numbers in this study have been rounded	Beyond Code Requirements	Federally Funded
Overall Hazard Benefit-Cost Ratio	$4:1	$6:1
Riverine Flood	$5:1	$7:1
Hurricane Surge	$7:1	Too few grants
Wind	$5:1	$5:1
Earthquake	$4:1	$3:1
Wildland-Urban Interface Fire	$4:1	$3:1

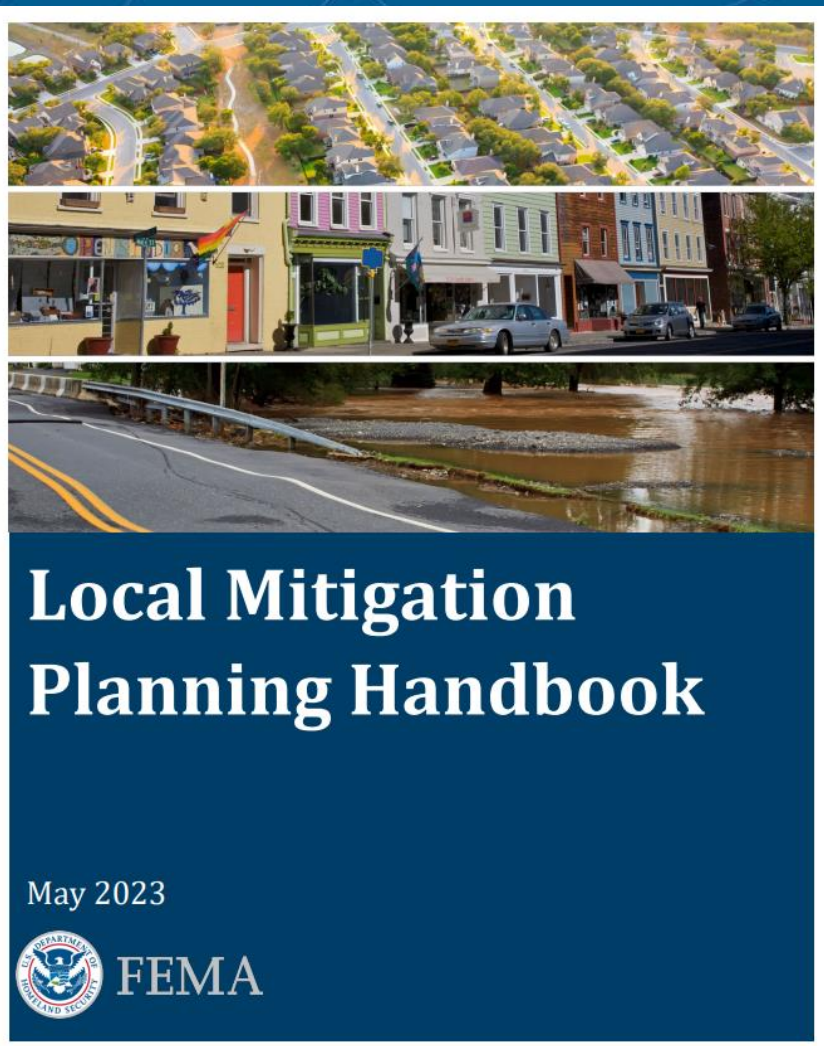
Mitigation Saves Fact Sheet (fema.gov)

FEMA

Hazard Mitigation Plans

- **Hazard Mitigation is the effort to reduce loss of life and property by lessening the impact of disasters.**
  - Occurs before, during and after disasters and serves to break the cycle of damage and repair
  - Long-term risk reduction
  - Essential part of community resilience

www.fema.gov/sites/default/files/documents/fema_local-mitigation-planning-handbook_052023.pdf



FEMA

RiskMAP
Increasing Resilience Together

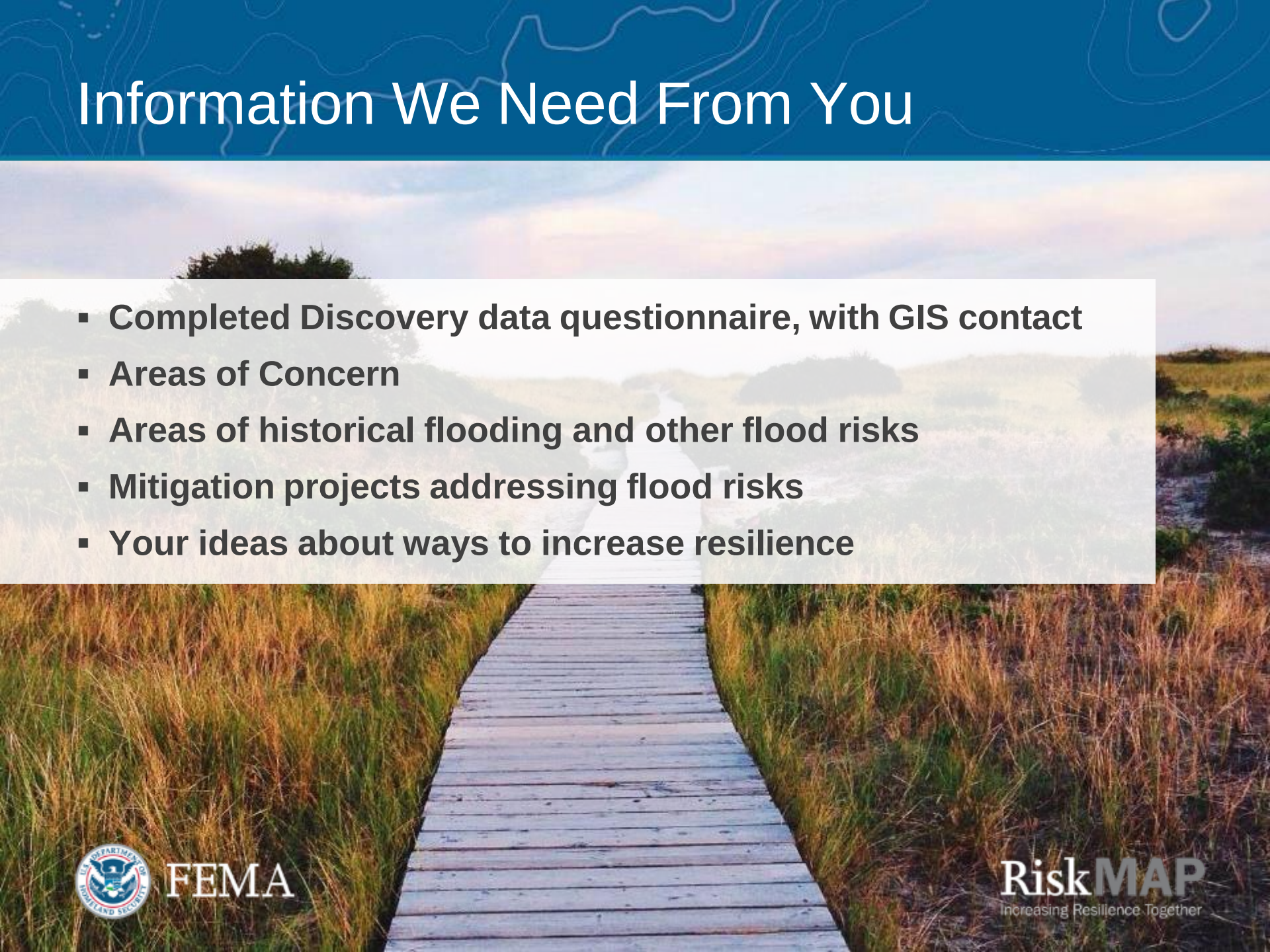
Next Steps

FEMA

RiskMAP
Increasing Resilience Together

Information We Need From You

- **Completed Discovery data questionnaire, with GIS contact**
- **Areas of Concern**
- **Areas of historical flooding and other flood risks**
- **Mitigation projects addressing flood risks**
- **Your ideas about ways to increase resilience**



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Project Contacts

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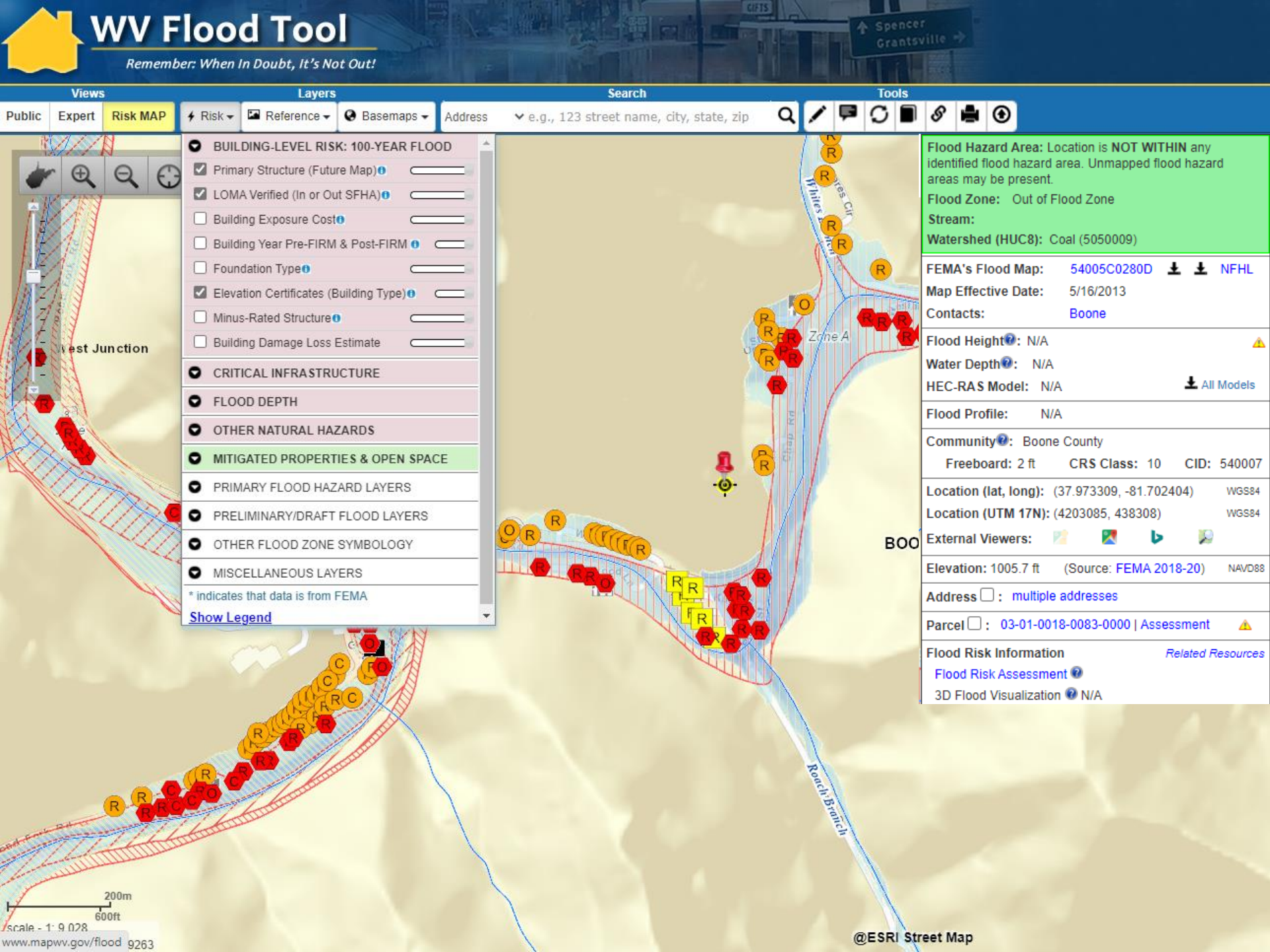
WV Flood Tool
Remember: When In Doubt, It's Not Out!
Views
Public
Expert
Risk MAP
Layers
Risk
Reference
Basemaps
Search
Address
e.g., 123 street name, city, state, zip
Tools
BUILDING-LEVEL RISK: 100-YEAR FLOOD
Primary Structure (Future Map)
LOMA Verified (In or Out SFHA)
Building Exposure Cost
Building Year Pre-FIRM & Post-FIRM
Foundation Type
Elevation Certificates (Building Type)
Minus-Rated Structure
Building Damage Loss Estimate
CRITICAL INFRASTRUCTURE
FLOOD DEPTH
OTHER NATURAL HAZARDS
MITIGATED PROPERTIES & OPEN SPACE
PRIMARY FLOOD HAZARD LAYERS
PRELIMINARY/DRAFT FLOOD LAYERS
OTHER FLOOD ZONE SYMBOLOGY
MISCELLANEOUS LAYERS
* indicates that data is from FEMA
Show Legend
Flood Hazard Area: Location is NOT WITHIN any identified flood hazard area. Unmapped flood hazard areas may be present.
Flood Zone: Out of Flood Zone
Stream:
Watershed (HUC8): Coal (5050009)
FEMA's Flood Map: 54005C0280D NFHL
Map Effective Date: 5/16/2013
Contacts: Boone
Flood Height: N/A
Water Depth: N/A
HEC-RAS Model: N/A
All Models
Flood Profile: N/A
Community: Boone County
Freeboard: 2 ft
CRS Class: 10
CID: 540007
Location (lat, long): (37.973309, -81.702404) WGS84
Location (UTM 17N): (4203085, 438308) WGS84
External Viewers:
Elevation: 1005.7 ft (Source: FEMA 2018-20) NAVD88
Address : multiple addresses
Parcel : 03-01-0018-0083-0000 | Assessment
Flood Risk Information
Related Resources
Flood Risk Assessment
3D Flood Visualization N/A
Zone A
Roach Branch
200m
600ft
scale - 1: 9,028
www.mapwv.gov/flood 9263
@ESRI Street Map