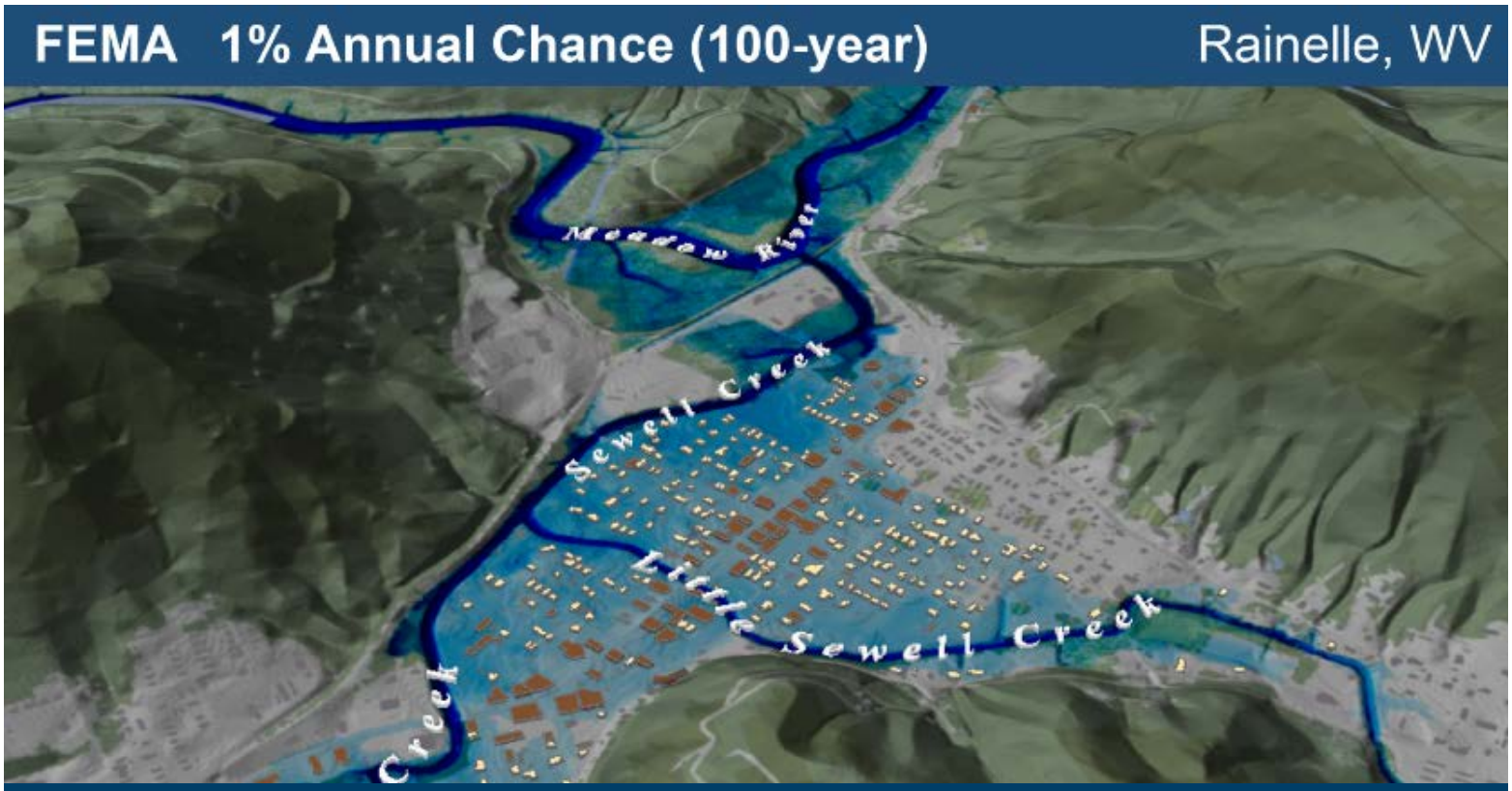


WV Emergency Management Division

COOPERATING TECHNICAL PARTNERS

FEMA-APPROVED COMMUNITY OUTREACH AND MITIGATION STRATEGIES (COMS)

STATEMENT OF WORK

COMS SOW No. 3

Fiscal Year 2024

FEMA

This page intentionally left blank

Table of Contents

List of Applicable Tables ii

1. Part 1 – Custom Statement of Work Information 3

1.1. Project and Point of Contact Information 3

1.2. Tasks and Deliverables to be Completed Under this SOW 5

1.3. Schedule and Performance 13

1.4. Guidelines and Standards 15

1.5. Use of Contractors 15

1.6. Reporting and Performance 17

1.7. Privacy and Protection of Personally Identifiable Information 18

2. Part 2 – Available COMS Scope Activities 19

2.1. COMS Engagement Plan (Required) 20

2.2. Strategic Planning for Community Outreach and Engagement 20

2.3. Meetings and Process Facilitation (if needed) 22

2.4. Mitigation Support 23

2.5. Communication and Outreach to Communities 24

2.6. Training and Community Capability Development 24

2.7. Mitigation Planning Technical Assistance 26

2.8. Staffing 26

2.9. Mentoring 26

2.10. COMS Pilot Projects 27

2.11. CTP Symposium 27

Authorized Representative Signatures 28

APPENDIX A: Scope of State NFIP Office COMS Tasks A-1

APPENDIX B: Scope of WVU Led COMS Tasks B-1

List of Applicable Tables

Table 1. Project and Point of Contact Information....3
Table 2. Narrative and Audience....5
Table 3. Task 1 – Develop COMS Engagement Plan....7
Table 4. Task 4 – Mitigation Support....8
Table 5. Task 6 – Training and Community Capability Development....11
Table 6. Task 7 – Mitigation Planning Technical Assistance....12
Table 7. COMS Deliverables Schedule....13
Table 8. Performance Measures Targets....14
Table 9. Use of Contractors....16

1. Part 1 – Custom Statement of Work Information

In accordance with the CTP Partnership Agreement referenced in Table 1 between the **WV Emergency Management Division / State NFIP Office** (herein referred to as "CTP") and FEMA, the following subsections explain the scope to be undertaken to enhance communication and coordination detailed within this **COMS SOW No. 3.**

1.1. Project and Point of Contact Information

Instructions: Complete Table 1 with the basic project information and points of contact for both the CTP and FEMA staff.

Table 1. Project and Point of Contact Information

Information Type	Insert Information
Project Name/Title (if applicable)	**WVEMD CTP COMS 2024-25**
CTP Organization Name:	**WV Emergency Management Division**
CTP Contractor Working on the activities in this SOW: *Optional, only if contractors have already been identified; contractor support may be engaged for all activities except Staffing and Mentoring, which must be completed by the CTP*	**WVU GIS Technical Center, West Virginia University**
Sub-Recipient Working on the activities in this SOW: *Optional, only if sub-recipients have already been identified; contractor support may be engaged for all activities except Staffing and Mentoring, which must be completed by the CTPs*	**N/A**
CTP Partnership Agreement Date:	**9/2024**
Period of Performance:	**10/1/2024 to 9/30/2025**
CTP Project Manager:	**Timothy W. Keaton, CFM**
FEMA Regional Project Officer: *When necessary, ask for FEMA assistance through the FEMA Regional Project Officer*	**Kristen Jones (primary contact)** **Senior Risk Analysis Management and Program Analyst | Mitigation | Region 3**

Information Type	Insert Information
FEMA Funding to Complete this COMS SOW:	$250,000
CTP Estimated Leverage: ***Final leverage dollars or units will be entered as applicable in the Manage Data Development Task Workflow in the Mapping Information Platform (MIP)****. The leverage noted here is an estimate of leverage available at the time when the scope is prepared. It may be refined at any time in the project. See Estimating the Value of Partner Contributions to Flood Mapping Projects "Blue Book" (Blue Book)*	N/A
Project Team Coordination Activities: *During the project, all members of the Project Team will coordinate, as needed, to see that activities, products and deliverables meet FEMA requirements and contain accurate, up-to-date information.*	• **Meetings, teleconferences, and video conferences with FEMA Region III, WVEMD, and other Project Team members biannually at a minimum with additional meetings scheduled as necessary.** • **Telephone conversations with FEMA and other Project Team members on a scheduled monthly basis and ad hoc basis, as required.** • **Email as needed**

1.2. Tasks and Deliverables to be Completed Under this SOW

1.2.1. NARRATIVE AND AUDIENCE

Table 2. Narrative and Audience

Information Type	Insert Information
SOW Narrative:	This CTP project focuses on mitigation support, communication and outreach to communities, and mitigation planning technical assistance activities as well as support for the WV Flood Tool. Specifically, the tasks for this year's CTP COMS grant will: • Update the COMS Engagement Plan. • Promote risk awareness and mitigation actions at the community level by way of training and outreach events. • Provide Global Outreach Services for the WV Flood Tool • Update the WV Building Level Risk Assessment (BLRA) from New Data Sources (e.g., Flood Studies, Building Characteristics) • Develop, verify, and publish flood risk profiles at eight geographic scale levels: State, Regional, County, Community, Unincorporated Area, Incorporated Place, Watershed, and Streams. Perform Building Cluster Analysis for CNMS Identification of Potential Approximate A Zones for Upgrade to Zone AE Detailed Mapping • Create flood visualizations at the viewshed and building level scales to communicate flood risk to the public more effectively. • Organize and publish an online WV Hazard Library of resources related to flood resiliency research, hazard risk assessments, floodplain management, and mitigation activities. • Support Local Hazard Mitigation Plans with Flood/Landslide Risk Assessment Data This project includes mitigation, outreach, and technical services that support the goals of FEMA's NFIP/CRS and Risk MAP programs. It also includes technical assistance activities that will produce and disseminate products and materials to the state and local jurisdictions to develop, evaluate, update, and implement their mitigation plans and strategies. This CTP COMS Project supports statewide global outreach services that process and integrate new flood and reference GIS layers, tool enhancements, flood risk information, etc. for the WV Flood Tool (www.mapwv.gov/Flood). In addition, an overarching goal of this CTP COMS project is to more proactively engage flood-prone communities to use the new statewide building-level risk assessment data for their floodplain management and mitigation planning activities. The major scoping activities are divided by WV NFIP Office Led (Appendix A) and WVU GIS Technical Center led (Appendix B). *Refer to Appendices A and B for detailed statements of work.*

Intended Audience:	**Target Audience:** Floodplain Managers, Community Planners, Emergency Preparedness Officials, and Citizens of affected communities. **Project Footprint:** State of West Virginia *Through collaboration with Local, State, and Federal entities, the WV Flood Tool delivers quality data that increases public awareness and leads to actions that reduce risk to life and property. To manage the wealth of available data and better communicate flood risk, the WV Flood Tool has maintained a public facing outreach tool for the public, communities, engineering/surveying companies, and others (Insurance companies, lending institutions, real estate companies, etc.) that has provided effective floodplain models, supporting datasets, water-surface elevations, floodplain boundaries, and additional enhanced flood risk information. During the past decade, the functionality and quality of data layers of the WV Flood Tool have progressed, resulting in an increased use of the application. Over time, the WV Flood Tool has become more than just a flood determination tool, and today is routinely used by floodplain managers for building permit applications, floodplain regulations enforcement, pre- and post-disaster assessments, and Community Rating System discounts. For community and emergency planners, the Risk MAP View of the WV Flood Tool now includes structure-level risk assessments and mitigated properties to aid in flood reduction efforts.*

1.2.2. PROJECT TASKS AND DELIVERABLES

The following 11 tasks can be accomplished under this COMS SOW. The yellow highlighted tasks will be realized for this project.

- COMS Engagement Plan (Required).
- Strategic Planning for Community Engagement.
- Meetings and Process Facilitation.
- Mitigation Support.
- Communication and Outreach to Communities.
- Training and Community Capability Development.
- Mitigation Planning Technical Assistance.
- Internal Partner Support Activities:
  - Directly Funded Staffing.
  - Mentoring.
- Pilot Projects.
- CTP Symposium. Task 1 – Develop COMS Engagement Plan (Required)

This task is **required** as a condition of COMS funding – see Part 2.1.

Table 3. Task 1 – Develop COMS Engagement Plan

COMS Task	Mark "X" if task will be done under this SOW	(A) FEMA Contribution	(B) Partner Contribution	(A+B) Total Project Cost
COMS Engagement Plan (required as a condition of COMS funding) *(see Part 2.1)*	☒	$5,000	$0	$5,000
Deliverable			**Mark "X" if deliverable will be done under this task**	
COMS Engagement Plan (required) (Task 1)			☒	
Custom Scope Elements				
COMS Engagement Plan ($5K) Task 1) **Complete a COMS Engagement.** Update the COMS Engagement Plan for delivery to FEMA Region III that advances the NFIP/CRS and Risk MAP programs in West Virginia. The COMS Engagement Plan will adhere to the guiding principles detailed in Appendix C of the NOFO FY24 CTP Program.				

Task 4 – Mitigation Support

Table 4. Task 4 – Mitigation Support

COMS Task	Mark "X" if task will be done under this SOW	(A) FEMA Contribution	(B) Partner Contribution	(A+B) Total Project Cost
Mitigation Support	☒	$199,000	$0	$199,000

Deliverable	Mark "X" if deliverable will be done under this task
Action Identification and Advancement Strategy (i.e., a summary of the partners' approach to encourage mitigation action by community)	☐
Quarterly projections indicating the potential collection of Actions Identified and Advanced Strategy	☐
Summary of new Actions Advanced or status updates on existing Actions Advanced through this coordination	☒
Other Task A: Provide Global Outreach Services for the WV Flood Tool. ($112K)	☒
Other Task B: Update the WV Building Level Risk Assessment (BLRA) from New Data Sources (e.g., Flood Studies, Building Characteristics. ($24K)	☒
Other Task C: Develop, verify, and publish flood risk profiles at eight geographic scale levels: State, Regional, County, Community, Unincorporated Area, Incorporated Place, Watershed, and Streams. ($28K)	☒
Other Task D: Create flood visualizations at the viewshed and building-level scales to communicate flood risk to the public more effectively. ($17K)	☒
Other Task E: Organize and publish an online WV Hazard Library of resources related to flood resiliency research, hazard risk assessments, floodplain management, and mitigation activities. ($18K)	☒

Custom Scope Elements

Mitigation Support WVU Led Tasks - $199K (See Appendix B for more details)

Task A) **Provide Global Outreach Services for the WV Flood Tool.** Statewide global outreach services that process and integrate new flood and reference GIS layers, tool enhancements, flood and landslide risk information, etc. for the WV Flood Tool (www.mapwv.gov/Flood). Services include computer programming, data development/geo-processing, customized mapping, technical support and training services. This task includes developing outreach materials along with in-person and remote training courses for the WV Flood Tool. Customized training often focuses on features that distinguishes the WV Flood Tool from FEMA's NFHL Viewer and Flood Insurance Rate Maps (FIRMs). For example, the WV Flood Tool provides BFEs for Approximate A Zones and high-resolution elevation date for qualifying LIDAR LOMAs. FEMA does not provide these map services. In addition, the WV Flood Tool publishes Elevation Certificates, Verified LOMA locations, HEC-RAS stream models, and 1%-annual-chance advisory floodplains / BFE's / depth grids not available by FEMA maps services. (WVU Task A)

Task B) **Update the WV Building Level Risk Assessment from New Data Sources (e.g., Flood Studies, Building Characteristics).** Update building-level flood risk assessments for structures in the high-risk flood zones using the best available Risk MAP data and products. New Risk MAP studies always trigger updating the identification and risk assessment of all structures in high-risk flood zones. Publish updated building-level assessments to the Risk MAP View of the WV Flood Tool. (WVU Task B)

Task C) **Develop, verify, and publish flood risk profiles at eight geographic scale levels: State, Regional, County, Community, Unincorporated Area, Incorporated Place, Watershed, and Streams.** A new risk tool named the WV Risk Explorer will allow communities to quickly view risk factors affecting their jurisdictions. Risk dashboards for risk assessment data shall be developed as well, all part of a suite of risk assessment and visualization tools for building community flood resilience in West Virginia. (WVU Task C).

Task D) **Create flood visualizations at the viewshed and building level scales to communicate flood risk to the public more effectively.** Incorporate high water marks of previous major flood disasters in flood models. Additionally, compare flood frequency flood depths between FEMA and First Street Foundation flood models. (WVU Task D). The online WV Hazard Library (WVU Task E) will allow users to access the flood visualizations, a collection of movies, animations, story maps, and other visualization media available at the building and community levels for communicating and understanding flood risk in West Virginia.

Task E) **WV Hazard Library. Organize and publish an online WV Hazard Library of resources related to flood resiliency research, hazard risk assessments, floodplain management, and mitigation activities.** A Hazard Library specific to West Virginia is being organized and populated into a database in which the public can search online resources. The library contains web links to various risk assessment and mitigation resources, to include

studies, graphics, reports, plans, model ordinances/regulations, movies, maps, presentations, best practice guides, training courses, publications, meeting notes, relevant data sets, etc. Users can search the Hazard Library by subject, spatial extent, geographic scale, or document type. The Hazard Library consists of major collections for risk assessments, flood events, and mitigation reduction efforts (mitigation measures, hazard planning, floodplain management, Risk MAP studies, flood models, etc.) The classification system of the Hazard Library is flexible in that additional subjects can be added. (WVU Task E)

Task 6 – Training and Community Capability Development

Table 5. Task 6 – Training and Community Capability Development

COMS Task	Mark "X" if task will be done under this SOW	(A) FEMA Contribution	(B) Partner Contribution	(A+B) Total Project Cost
Training and Community Capability Development *(see Part 2.6)*	☒	$33,000	$0	$33,000

Deliverable	Mark "X" if deliverable will be done under this task
Copies of draft training materials for FEMA review	☒
Copies of final training materials	☒
A list of training instructors	☒
A list of all participants and completed course evaluations (such as pre- and post-knowledge surveys) after each training course	☒
Report on outreach activities as part of training and community capability development.	☐
A description of how training will benefit the public and accomplish the Risk Mapping, Assessment, and Planning (Risk MAP) goals of awareness and action	☒
A narrative including how it was determined that the training was needed and how communities that received training were prioritized	☐
Other Sub-Task 2: Promote risk awareness and mitigation actions at the community level by way of training and outreach events. ($33K) (WV EMD/State NFIP Office)	☒

Custom Scope Elements

Training and Community Capability Development - $33K (See Appendix A for more details)

<< Sub-Task 2 >>

Task 2) **Complete a COMS Engagement.** Update the COMS Engagement Plan for delivery to FEMA Region III that advances the NFIP/CRS and Risk MAP programs in West Virginia. The COMS Engagement Plan will adhere to the guiding principles detailed in Appendix C of the NOFO FY24 CTP Program. (WV EMD/State NFIP Office)

Task 7 – Mitigation Planning Technical Assistance

Table 6. Task 7 – Mitigation Planning Technical Assistance

COMS Task	Mark "X" if task will be done under this SOW	(A) FEMA Contribution	(B) Partner Contribution	(A+B) Total Project Cost
Mitigation Planning Technical Assistance *(see Part 2.7)*	☒	$13,000	$0	$13,000

Deliverable	Mark "X" if deliverable will be done under this task
Copies of all technical data provided to local, state and tribal communities	☒
A report detailing the technical assistance provided including date(s) of technical assistance, type of assistance and communities' stakeholders supported	☒
Other Task F: Support Local Hazard Mitigation Plans with Flood/Landslide Risk Assessment Data. ($13K)	☒

Custom Scope Elements

Mitigation Planning Technical Assistance - $13K (See Appendix B for more details)

Task F) **Support Local Hazard Mitigation Plans with Flood/Landslide Risk Assessment Data.** This mitigation planning technical assistance task supports mitigation planners and consultants with various risk assessment products for updating their local hazard mitigation plans. The risk assessment and mitigation products were generated from the HMGP Statewide Multi-Hazard Risk Assessment Project and select data sets are updated each year. The multi-hazard data includes riverine flooding, landslides, and dam failure. Refer to the catalog or Risk Information Index to access various risk assessment products (reports, tables, graphics, risk dashboards, etc.) published in support of FEMA's Hazard Mitigation Plans and NFIP/CRS activities. See the 2022 TEIF-TEAL Close-out Report about risk assessment and mitigation products as well.

1.3. Schedule and Performance

Table 7. COMS Deliverables Schedule

SOW Activities	Deliverable	Deliverable Due Date	Submitted To
COMS Engagement Plan (required)	COMS Engagement Plan	9 months from Award date	FEMA Regional Project Officer
Training and Community Capability Development	Reporting on Outreach Activities	Quarterly	FEMA Regional Project Officer
Mitigation Support	Reporting on MS Activities	Quarterly	FEMA Regional Project Officer
Mitigation Planning Technical Assistance	Reporting on TA Activities	Quarterly	FEMA Regional Project Officer

The activities documented in this SOW will be completed in accordance with Table 7. COMS Deliverables Schedule. If this schedule needs to change, the CTP will coordinate with the FEMA Regional Project Officer and other necessary Mapping Partners as soon as possible. Deliverables must be uploaded to the MIP unless otherwise approved by the FEMA Regional Project Officer. The CTP must upload final deliverables in the MIP before the period of performance ends.

Table 8. Performance Measures Targets

Outcome[1]	Output Measurement[2] (with customized Target)	Recorded Unit/Scale
Advancement of program metrics and/or accomplishment of project performance measures, captured as Earned Value	Report on Schedule Performance Index (SPI). Must be between **0.92 and 1.08.** If it is not, provide information on what is being done to correct the problem.	SPI Ratio (Budgeted Cost of Work Performed/Budgeted Cost of Work Scheduled [planned])
Advancement of program metrics and/or accomplishment of project performance measures, captured as Earned Value	Report on Cost Performance Index (CPI). Must be between **0.92 and 1.08.** If it is not, provide information on what is being done to correct the problem.	CPI ratio (Budgeted Cost Work Performed/ Actual Cost Work Performed)
Update COMS Plan	COMS Plan Updated	Achieved / Not Achieved
Training and outreach events	Scheduled training and outreach events achieved	Achieved / Not Achieved
Update WV Flood Tool with new hazard data	Flood hazard, risk assessment, and key reference layers updated on the WV Flood Tool (www.mapwv.gov/flood).	Achieved / Not Achieved
WV Flood Tool training	• Develop and publish training materials. • Provide in-person and remote training.	Achieved / Not Achieved
WV Risk Explorer	Online interactive WV Risk Explorer for community risk assessments released	Achieved / Not Achieved
WV Hazard Library	Organize and publish an online WV Hazard Library for users to search hazard resources.	Achieved / Not Achieved
Flood Visualizations	Complete flood visualizations at the building and viewshed scales. Catalog visualizations in the Hazard Library for user access.	Achieved / Not Achieved
Support Local Hazard Mitigation Plans	Provide access to various risk assessment products (reports, tables, graphics, risk dashboards, etc.)	Achieved / Not Achieved
Update the WV Building Level Risk Assessment (BLRA) from New Data Sources	Update Hazus flood loss models and risk assessment products associated with inventoried floodplain buildings. New model inputs consist of: • Depth Grids: Incorporate 1-meter	Update BLRA of 98,000 flood-prone structures in State from new data sources (e.g., depth grids, tax assessment records,

Outcome[1]	Output Measurement[2] (with customized Target)	Recorded Unit/Scale
	resolution depth grids from regulatory (Risk MAP) and non-regulatory (Updated AE Redelineation, Advisory Flood Heights) flood studies. Incorporate flood depths for nearly all 55 counties. • Tax Year 2024 Building Characteristics: Updated building replacement values, occupancy class, stories, etc. from 1.4 million tax assessment data parcels. • Mitigated Structures: Incorporate elevated first-floor heights and foundation types (open, closed) from mitigated structure datasets: elevation certificates, building pictures, etc.	mitigated structures) Achieved / Not Achieved

1.4. Guidelines and Standards

The standards relevant to this SOW are presented in FEMA Policy 204-078-1 Standards for Flood Risk Analysis and Mapping, Revision 14.

This Policy supersedes all previous standards in the Guidelines and Specifications for Flood Hazard Mapping Partners. This includes all related appendices and procedure memoranda. Find more information and links to guidance documents, technical references, templates, and other resources that support these standards on the FEMA Guidelines and Standards website. This is at: Guidelines and Standards for Flood Risk Analysis and Mapping Activities Under the Risk MAP Program. FEMA reviews standards each year. Please use the most current version of the policy.

CTPs and their sub-awardees must also comply with the regulations in Title 44 of the Code of Federal Regulations (CFR). They must also comply with the appropriate year CTP funding opportunity and Agreement Articles. CTPs should work with their regional office to determine any additional requirements.

1.5. Use of Contractors

Check the applicable statement in Table 9.

Table 9. Use of Contractors

Select One	Description of Contractor Options
☒	Contractor support may be engaged for all activities within this SOW, except staffing and mentoring, which must be completed by the CTP. Guidance provided in this part includes, but is not limited to, contract administration and recordkeeping, notification requirements, review procedures, competition, methods of procurement, and cost and pricing analysis. For more information, refer to the online resource, Title 2 Code of Federal Regulations (CFR) Part 200 - Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards. Additionally, contractors must not pose a conflict-of-interest issue or be active in writing the SOW. Contractors support will be provided by the WV GIS Technical Center, West Virginia University
☐	The CTP does not intend to engage the services of a contractor for this SOW. No transfer of funds to agencies other than those identified in the approved cooperative agreement application will be made without prior approval from FEMA. The CTP will identify the name of the CTP contractor for services engaged as part of this SOW. The CTP will ensure that the procurement for all contractors engaged for this COMS Activity complies with the requirements of 2 CFR Part 200. Guidance provided in this part includes, but is not limited to, contract administration and recordkeeping, notification requirements, review procedures, competition, methods of procurement, and cost and pricing analysis. Additionally, contractors must not pose a conflict-of-interest issue.

1.6. Reporting and Performance

Financial Reporting: Because FEMA has provided funding to the CTP, financial reporting requirements for the CTP will be set by the terms of the funding opportunity, Articles of Agreement, or Award Notice for this SOW. The CTP will also refer to 2 CFR Part 200. The CTP will provide financial reports to the FEMA Regional Project Officer and Assistance Officer per the terms of the signed Cooperative Agreement for this SOW.

Performance Reporting: CTPs must provide a signed performance report (using the list of required information shown in the funding opportunity). The CTP will submit the report quarterly during the period of performance. Reports will be required for partial calendar quarters and periods when no grant award activity occurs. An old Standard Form-Performance Progress Report (SF-PPR) may be substituted for the performance report, if preferred. The CTP will refer to 2 CFR Part 200 for the minimum requirements for progress reporting. The FEMA Regional Project Officer, as needed, may request additional information on progress.

The CTP will meet with FEMA and/or its contractor(s) as frequently as needed to review the progress of the project. These meetings are in addition to the quarterly financial and status submittals. These meetings may alternate between the FEMA Regional Office, the CTP office and conference calls as necessary.

The CTP must report performance of the grant along with the progress reports. Table 8. Performance Measures Targets shows which performance measures the CTPs will use to track performance. If you are completing a COMS project alongside a Flood Risk Project MAS, use the relevant measures in the 2024 CTP Performance Measures Matrix. Quantitative Targets for performance measures are defined using the 2024 CTP Performance Measures Matrix in conjunction with your FEMA Regional Project Officer and those defined in Table 8

CTPs are responsible for entering their quarterly performance of each measure into the CTP Performance Measures Reporting Tool (Tool) each quarter, unless otherwise directed by their FEMA Regional Project Officer. Each output measurement identified above must have a quarterly performance reported in the Tool within one month of the end of the quarter. Quarterly performance data can be exported from the Tool and attached to the Quarterly Report that must be uploaded to FEMA GO.

Earned Value Data Entry:

The CTP must report on the earned value of projects that are in the MIP each month. They must explain variances outside of the tolerance defined in Table 8. Performance Measures Targets The FEMA Regional Offices must initiate and create a Corrective Action Plan (CAP) when a CTP is outside of the tolerance. The CTP is required to implement this CAP as instructed by their FEMA Regional Office. A CAP must define the reason for the variance and the intended resolution. FEMA Regional Offices will coordinate with FEMA Headquarters when CAPs are developed.

COMS SOW/PM SOW tasks are now tracked in the MIP. Cost and schedule performance measures are defined in this SOW. These measures will be used to monitor CTP performance and to determine

future funding eligibility. Earned Value data entry involves the CTP updating cost, schedule and performance (physical % complete) in the MIP each month for each assigned task. The CTP may contact the FEMA Regional Office to obtain additional guidance (as needed) for updating COMS/PM efforts in the MIP.

1.7. Privacy and Protection of Personally Identifiable Information

A CTP's organizational access to the MIP provides you access to PII. Please have your organization coordinate with the FEMA Regional Office. Each user must currently meet the new Risk Analysis Management (RAM) Access Portal (RAP) process requirements.

Please contact your FEMA Regional Project Officer for more information.

2. Part 2 – Available COMS Scope Activities

Note, unless otherwise noted in in the Custom Scope Elements cell(s) in Tables 3-6 in Part 1.2.2, the CTP will fulfill all scope requirements identified in the following tasks.

The activities outlined in this SOW will be completed as specified in the funding opportunity, Award Notice and/or Articles of Agreement. The SOW may be terminated at the option of FEMA or the CTP in accordance with the provisions of the Partnership Agreement. If the SOW is terminated, the CTP must return all products produced to date. The CTP will return remaining funds to FEMA for any uncompleted activities under this SOW.

The COMS tasks and activities in this SOW are meant to recognize and enhance activities CTPs carry out that help communities:

- Understand their flood risk and the importance of addressing that risk.
- Become more willing to engage with the CTP and FEMA to learn about their risks.
- Become better primed to take action that reduces their risk based on that analysis.

Tasks funded under this SOW strengthen COMS activities. All processes and deliverables will be completed in accordance with FEMA's Guidelines and Standards for Flood Risk Analysis and Mapping, Revision 12, dated December 2021. This document is on FEMA's website at Guidelines and Standards for Flood Risk Analysis and Mapping Activities Under the Risk MAP Program.

These guidelines and standards define how FEMA implements the statutory and regulatory requirements for National Flood Insurance Program (NFIP) flood risk projects.

COMS tasks cannot produce a Flood Insurance Rate Map (FIRM). Tasks that can be accomplished under this COMS SOW are as follows:

- COMS Engagement Plan (Required).
- Strategic Planning for Community Engagement.
- Meetings and Process Facilitation.
- Mitigation Support.
- Communication and Outreach to Communities.
- Training and Community Capability Development.
- Mitigation Planning Technical Assistance.

- Pilot Projects.
- Internal Partner Support Activities:
  - Mentoring.
  - Staffing.
- CTP Symposium.

2.1. COMS Engagement Plan (Required)

Intent: Document prepared by CTPs and used by Regional Offices to support Risk MAP Multi-year Planning. This plan should identify the overarching approach to community engagement. The detailed approach will be applied on a project-by-project basis. This plan must:

1. Document the CTP's COMS capabilities and accomplishments. For example, summarize how the CTP performs community outreach. Provide examples of successful community outreach efforts. Summarize the CTP's strategic approach to community engagement. Identify critical factors in successfully leading communities to reduce their risk.
2. Explain the CTP's vision for implementing or participating in Risk MAP. Describe how the CTP's activities advance the vision, goals and objectives of Risk MAP by encouraging communities to act to mitigate risk.
3. Include examples or updates from previous years' activities (if applicable).
4. Provide recommendations to FEMA regarding action and outreach potential for future Risk MAP projects within the state, regional or local area.

CTPs that are also completing activities under the PM SOW may combine the Business Plan and the COMS Engagement Plan for these two SOWs into a comprehensive Business Plan. The Business Plan should include the required elements for both the PM SOW Business Plan and the COMS SOW Engagement Plan. CTPs must work with their FEMA Regional Office for additional details and requirements of Business/Engagement Plans, including due dates for the state and/or local Business Plans.

If the CTP has both COMS and PM SOWs, then the COMS Engagement Plan and Business Plan requirements of the PM and COMS awards will be combined into a single deliverable. The FEMA Regional Project Officer must approve this combination. If this is the case, note it in Tables 3 to 6 in Part 1.2.2.

2.2. Strategic Planning for Community Outreach and Engagement

Intent: The CTP will strategically prepare to engage with communities and stakeholders to drive discussions towards reducing natural hazard risk. This work can include creating a framework for action and/or working with the community to support its progress in reducing risk.

There are many ways to encourage natural hazard reduction or mitigation:

- Ensure that the community understands and accepts its flood risk.
- Invite non-traditional partners and community-based organizations that represent socially vulnerable populations to the conversation.
- Educate the community about how mitigation can help them in a way that is meaningful to them.
- Provide technical assistance to help identify what mitigation priorities are achievable.
- Ensure the right stakeholders (e.g., community officials, local influencers, regional and state partners) are involved so decisions about mitigation are optimized.
- Understand the community's other key concerns. Their concerns might affect their interest and capacity. This information can inform how best to engage with them.

Note: The communication and outreach activities described in this task supplement or complement the ones in the Flood Risk Project MAS. CTPs and the FEMA Regional Office must confirm no duplication of effort in other awards (e.g., grants, cooperative agreements, interagency agreements and contracts).

Unless otherwise amended in the "Custom Scope Elements" cell of Table 4. Task 2 – Strategic Planning for Community Outreach and Engagement, completion of Strategic Planning for Community Outreach and Engagement task will include:

Awareness and Action Strategy – Develop a regional approach to better understand communities' needs and priorities. Do this by researching demographics and socio-economic factors, understanding community communications practices and preferences, evaluating local plans and initiatives, identifying local decision makers and potential advocates, understanding mitigation history and potential roadblocks, and identifying existing relationships with state and federal agencies. These collected insights can build stronger partnerships within a community, increase participation in and acceptance of the mapping process, and personalize risk messaging and meeting approaches. Identifying any barriers or inequities in a community can lead to a more equitable approach to serving the whole community.

Watershed and Community Assessment and Mitigation Action Plan – Assess a watershed and high priority communities to understand their mitigation priorities. Determine their existing relationships with FEMA and other federal agencies. The assessment may include local planners, floodplain administrators, elected officials, community leaders, local levee/dam/coastal leadership, business owners, residents, participants from other local departments such as public works, and others based on local needs such as Non-governmental Organizations (NGOs) or local initiatives. Local Hazard Mitigation Plans, FEMA's National Risk Index, the Center for Disease Control/Agency for Toxic Substances and Disease Registry's Social Vulnerability Index, and other planning

processes/documents can inform this work. Interviewing key stakeholders can inform the assessment.

Relationship Management Plan – Identify how to establish and/or build relationships among FEMA, the CTP and local stakeholders. Consider the objectives, roles and responsibilities and how you will measure success. Consult with local organizations or community champions to understand the nuances of a community. Ensure you capture all community dynamics.

Community Prioritization – Prioritize the action potential, action readiness or needs of communities within a watershed to inform project scoping and planning. Consider marginalized communities or populations and how you might address inequities when offering services to close the equity gap and build capabilities.

Integration Planning – Help federal, state and local partners coordinate efforts that move communities towards reducing flood risk. Convene a variety of stakeholders (who might have diverse goals) and provide tools and knowledge to conduct joint mitigation planning in a watershed. Consider a variety of planning tools, including those that address future conditions, and social vulnerability. The CTP will coordinate with their Regional Project Officer to ensure that they use up-to-date products and templates. New products must be assessed and fully reviewed before dissemination.

2.3. Meetings and Process Facilitation (if needed)

Intent: The CTP will hold meetings and facilitate the decision-making processes. Only meeting activities that are not funded under an award for a specific project area outlined in a Flood Risk Project MAS are allowed. However, the CTP may provide additional scope to clarify the difference between the funding under the COMS SOW and the MAS for the specific flood risk project. The following potential activities are included in this task:

Process Facilitation – Support for implementation of the strategic planning efforts includes identifying and supporting key community priorities and key influencers; supporting community identification of mitigation opportunities; gap analysis of community requirements for mitigation implementation; ongoing relationship management; monitoring, evaluation and update.

The CTP will create materials in “plain language” to increase understanding for meeting participants.

Where practical, CTPs will apply accessibility principles in meetings, such as language translation services, compliance with the Americans with Disabilities Act (ADA) accessibility and Section 508 compliance.

CTPS will follow all current PII policies regarding deliverables. If there are any questions regarding current PII policies, please reach out to your FEMA representative. CTPs may also reference the Federal Registrar Notice on the Privacy Act.

The CTP will notify FEMA and all applicable parties of all meetings with community officials at least 3 to 6 weeks before the meeting (with as much notice as possible). FEMA and/or its contractor(s) may or may not attend the community meetings.

2.4. Mitigation Support

Intent: The CTP will leverage Risk MAP data, analyses, products and/or processes to support communities to advance mitigation actions. Funds cannot be used to update all or part of a Hazard Mitigation Plan. Funds may be used to add hazard mitigation concepts to community plans and regulations.

The CTP will work closely with state and local Emergency Management Offices across the life cycle of a Risk MAP project. They will work together to collect and quantify actions identified and those advanced during a project-specific MAS. Actions should also be documented during the grant period of performance for any projects, even after the closeout of a Risk MAP project. This activity supports local emergency managers to talk with communities beyond completion of the project for all watersheds included in this SOW.

Activities include:

Action Identified – Providing information communities can use to identify mitigation opportunities and/or select alternatives. Data can either be new data or aggregation of existing data that is delivered in formats that are useable. Analysis (i.e., risk assessments, social vulnerability analysis, triple bottom line analysis, or feasibility assessments) will be performed to solve identified problems and/or develop requirements for project solutions. This is also a chance to help the community understand its geographic location in the larger watershed. Topography should be considered when choosing mitigation projects because one community's effort can have downstream or upstream effects. Support will also include helping communities understand what capacity they need to undertake a project, how to carry out project planning, how to get the right people at the table to gain consensus on project options, and how to pursue funding sources.

Action Advanced – Support for communities to advance mitigation opportunities such as scoping/design; budgeting; obtaining funding; project planning; and technical support for zoning, code and/or ordinance development. Support will include helping communities navigate jurisdictional boundaries, political challenges related to gaining consensus and funding, support in navigating federal and state regulations and program requirements, identifying potential project partners, and educating the public about the project's benefits and any potential impacts that might occur during implementation.

Evaluation and Valuation – Support provided to the community to evaluate and demonstrate the value of the mitigation investment. Value can include calculating economic, environmental and/or social benefits as well as avoided losses from natural hazard events.

Other – Other activities discussed with the FEMA Regional Office.

2.5. Communication and Outreach to Communities

Intent: The CTP will develop, promote and deliver resources to communities for risk awareness and mitigation action. This might include developing messages and products for strategic outreach campaigns. The CTP may also choose to adapt existing public resources to the needs of a community. In Part 1.2, the CTP should name the source of the adapted materials. Activities include:

Materials Development and Dissemination to Educate Communities – Develop and disseminate messages and materials that increase community understanding and awareness of both flood and other natural hazards. These tools should help to re-assess community risk. Materials include plain language explanations of how flood risk is assessed and shown in a regulatory product, how flood risk data can inform community planning, why community feedback is critical to a flood risk project, updated website content, and other associated information. Consider the community's needs, including translated or otherwise customized materials.

Materials Development to Help Community Officials in Their Own Outreach – Sample media materials to help promote a public meeting or explain project status. Materials can also include social media content and imagery for community officials to use, sample website copy, and other deliverables. Provide the best strategies for engaging a community based on the demographics, socioeconomic factors and other elements that might improve engagement and understanding.

Other – Other activities as discussed with the FEMA Regional Office.

2.6. Training and Community Capability Development

Intent: Develop and provide training to state and local officials during a flood risk project (at the discretion of the Regional Office) that promotes awareness of flood risk and mitigation action.

The CTP must ensure, and must provide documentation when requested by FEMA, that activities funded through this SOW do not replace those funded under other federal grant programs such as Hazard Mitigation Planning or Floodplain Management grant programs.

The CTP must identify whether in-house staff or contractors will give the training.

Training can occur at any time during a Risk MAP project. It may be beneficial to include a series of training activities during a flood risk project. The CTP will coordinate and/or give training to communities and/or individual groups. The CTP will:

- Determine target audience and effective methods of communication to reach them.
- Advertise to and confirm training participants.
- Determine training facility.
- Deliver training.

- Conduct training evaluations.
- Follow up with participants on unresolved issues.

Activities will include planning, developing and delivering trainings or direct support in the areas of:

Benefit Cost Analysis (BCA) – Support communities to identify, capture and document the necessary data to run a BCA. Explain how to run the FEMA-approved BCA model. Funds cannot be used to run a BCA.

Building Science – Teach communities about construction issues and opportunities in the identified natural hazard and risk areas.

Community Capability Development – Help build community capability to sponsor and implement mitigation actions. Activities can include capability assessment; gap analysis; and process, change and project management.

Community Rating System (CRS) – How to integrate CRS elements into mitigation plans and floodplain ordinances (public information, mapping and regulation, flood damage reduction, warning and response).

Community Planning – Support communities to assess natural hazards in all facets of community planning (e.g., comprehensive plans, capital improvement plans, stormwater management).

Grant Application Development – Support communities to develop SOWs, schedules and budgets to successfully apply for a grant. Funds may not be used to develop, submit or execute a grant proposal on behalf of a state, local, tribal, or territorial jurisdiction.

Mitigation Planning Technical Assistance – Support communities by the creating and providing training and technical assistance for achieving mitigation actions. This task cannot fund an activity that is already funded through another federal grant (including the PM SOW). This task should not duplicate assistance available to a community engaged in a Risk MAP project or through a pre- or post-disaster grant funded through the Hazard Mitigation Assistance (HMA) program. Training can be provided at any time during the Risk MAP project. A series of training activities can be provided during a flood risk project.

Risk Assessment – Support communities as they assess relative risk through Hazus or other methods. Provide technical assistance on how to use a risk assessment tool.

Risk MAP Data Availability and Tools – Help build community capability to use and understand the regulatory and flood risk components and tools of a Risk MAP project including Flood Risk Products.

Other – Other activities as discussed with the FEMA Regional Office.

2.7. Mitigation Planning Technical Assistance

Intent: Encourage Hazard Mitigation Plan implementation and advance community hazard mitigation actions through technical assistance that supports the Mitigation Planning Process and Risk MAP projects.

Develop and provide products and materials that support communities to develop, evaluate, update and implement their mitigation plans and strategies. Technical Assistance provided through Risk MAP should focus on building a community's capability to plan for and reduce risk. Technical Assistance will encourage a community to apply or update their Hazard Mitigation Plan and advance community hazard mitigation actions through the Mitigation Planning Process in the form of administration. Technical Assistance can provide data related to the flood study or training on specific planning requirements and resources for improved planning. The following steps are emphasized:

- Incorporating new flood hazard and risk information.
- Working with the community to update and refine mitigation strategies about new flood hazard/risk information.
- Training mitigation planning teams.
- Helping communities understand the benefits of incorporating mitigation concepts into existing community plans, programs and policies.

This task cannot fund the creation or update of a Hazard Mitigation Plan. This task cannot fund an activity that is already funded through another federal grant (including the PM SOW). This task should not duplicate assistance available to any community engaged in a Risk MAP project or an HMA planning or project grant including planning-related activities.

The CTP must keep the technical assistance activities proposed in the COMS SOW focused on support related to community engagement, risk communication and identifying and/or advancing mitigation action. These activities will not be duplicated in the Program Management SOW.

2.8. Staffing

Intent: Provide staff to support Risk MAP COMS activities. Contractor support may not be engaged for staffing and mentoring for this SOW. The CTP must complete Staffing. The CTP will provide details in appropriate tables.

2.9. Mentoring

Intent: Share CTP program experience and related information with peer participants regarding best practices and process improvements related to COMS activities. CTP will provide details in table for Mentoring.

2.10. COMS Pilot Projects

Intent: As defined by and negotiated with the FEMA Regional Office and approved in coordination with FEMA Headquarters, the CTP will provide details in table for Pilot Projects.

2.11. CTP Symposium

Intent: At the request of the FEMA region, the CTP will travel to and attend the CTP Symposium to participate in discussions and provide feedback on initiatives and program direction. CTP Symposium attendance from the CTP will occur no more frequently than once per calendar year. Contractor support may not be engaged for the CTP Symposium. In advance of travel, CTP will provide details for their travel to FEMA Regional Office and FEMA Headquarters. If travel to CTP Symposium attendance is not requested by the FEMA region, funds allocated to this activity may be repurposed for other travel related to this SOW with prior approval from the FEMA region.

Authorized Representative Signatures

Each party has caused this SOW to be executed by its duly authorized representative.

_____

Timothy Keaton Date
Project Manager
WV Emergency Management Division

_____

Kristen Jones Date
Regional Project Officer
Federal Emergency Management Agency, Region, Region 3

APPENDIX A: Scope of State NFIP Office COMS Tasks

2024-25 CTP COMS Scope: WV Focused Flood Reduction and Mitigation Engagement Activities

State: West Virginia
Total Cost: $38,000
Performance Period: October 1, 2024, to September 30, 2025 (12 months)
Plan by Tim Keaton, State NFIP Coordinator, **WV Emergency Management Division.** Technical support from the **WVU GIS Technical Center.**
9/9/2024

The State NFIP Office led COMS tasks will consist of updating the COMS Engagement Plan and for training and community development in support of flood reduction and mitigation programs.

1) Update COMS Engagement Plan
2) Training and Community Capability Development. Promote risk awareness and mitigation actions at the community level by way of training and outreach events.

COMS Engagement Plan ($5K) WVEMD Task 1

1) **Complete a COMS Engagement.** Update the COMS Engagement Plan for delivery to FEMA Region III that advances the NFIP/CRS and Risk MAP programs in West Virginia. The COMS Engagement Plan will adhere to the guiding principles detailed in Appendix C of the NOFO FY24 CTP Program.

Training and Community Capability Development ($33K) WVEMD Task 2

2) **Promote risk awareness and mitigation actions at the community level by way of training and outreach events.** These training and outreach meetings -- coordinated with FEMA Region -- focus on community engagement, risk communication, floodplain management, flood study coordination, and identifying and advancing mitigation actions. This task also includes the creation of customized floodplain management resources for the state. Targeted audiences include the public while specialized training and outreach activities focus on the community development of stakeholders that include floodplain managers, emergency preparedness officials, risk planners, and elected officials. Refer to the COMS Engagement Plan for previous and future training/outreach events.

   Elements of this the training and community development task include:

   - Maintain and/or utilize personnel to support COMS activities (such as attending Risk MAP meetings or meetings hosted by FEMA Regions).
   - Create a climate of understanding and ownership of the WV Flood Tool in support of the Risk MAP flood risk study phases among stakeholders.

- Promoting new training resources for State and Local Officials. Sponsored by the State NFIP Office, a new standardized Permit Application is being created by the company TETRA TECH for the local floodplain managers.
- Provide supplemental training and technical outreach services to:
    - Increase CRS participation by communities in the state. The Community Rating System (CRS) is a voluntary incentive program that recognizes and encourages community floodplain management practices to exceed the minimum requirements of the National Flood Insurance Program (NFIP).
    - Reduce repetitive loss structures via the submission of Repetitive Loss (RL) AW-501 Worksheets and FMA grant applications
    - Meet the new requirements of FEMA's Redesigned NFIP Compliance Audit Program which include the National Violation Tracker (NVT) property database.

`

APPENDIX B: Scope of WVU Led COMS Tasks

2024-25 CTP COMS Services and Projects performed by West Virginia University
State: West Virginia
Total Cost: $212,000
Performance Period: October 1, 2024, to September 30, 2025 (12 months)
Plan by Tim Keaton, State NFIP Coordinator, **WV Emergency Management Division.**
Subcontract work to **WVU GIS Technical Center.**
9/9/2024

Special Community Outreach Mitigation Strategies (COMS) projects performed by the WVU GIS Technical Center, to include:

The WVU led COMS tasks are organized by four scoping activities, to include:

A) Provide Global Outreach Services for the WV Flood Tool
B) Update the WV Building Level Risk Assessment (BLRA) from New Data Sources (e.g., Flood Studies, Building Characteristics)
C) Develop, verify, and publish flood risk profiles at eight geographic scale levels: State, Regional, County, Community, Unincorporated Area, Incorporated Place, Watershed, and Streams. Perform Building Cluster Analysis for CNMS Identification of Potential Approximate A Zones for Upgrade to Zone AE Detailed Mapping
D) Create flood visualizations at the viewshed and building level scales to communicate flood risk to the public more effectively.
E) Organize and publish an online WV Hazard Library of resources related to flood resiliency research, hazard risk assessments, floodplain management, and mitigation activities.
F) Support Local Hazard Mitigation Plans with Flood/Landslide Risk Assessment Data

Mitigation Support ($199K) (WVU Tasks A through E)

A) **WV Flood Tool. Provide Global Outreach Services for the WV Flood Tool.** Statewide global outreach services that process and integrate new flood and reference GIS layers, tool enhancements, flood and landslide risk information, etc. for the WV Flood Tool (www.mapwv.gov/Flood). Services include computer programming, data development/geo-processing, customized mapping, technical support and training services. This task includes developing outreach materials along with in-person and remote training courses for the WV Flood Tool. Customized training often focuses on features that distinguishes the WV Flood Tool from FEMA's NFHL Viewer and Flood Insurance Rate Maps (FIRMs). For example, the WV Flood Tool provides BFEs for Approximate A Zones and high-resolution elevation date for qualifying LIDAR LOMAs. FEMA does not provide these map services. In addition, the WV Flood Tool publishes Elevation Certificates, Verified LOMA locations, HEC-RAS stream models, and 1%-annual-chance advisory floodplains / BFE's / depth grids not available by FEMA maps services. See Table B-1 below for more details and for the scope of these services. (WVU Task A)

Table B-1. Detailed task description for WV Flood Tool.

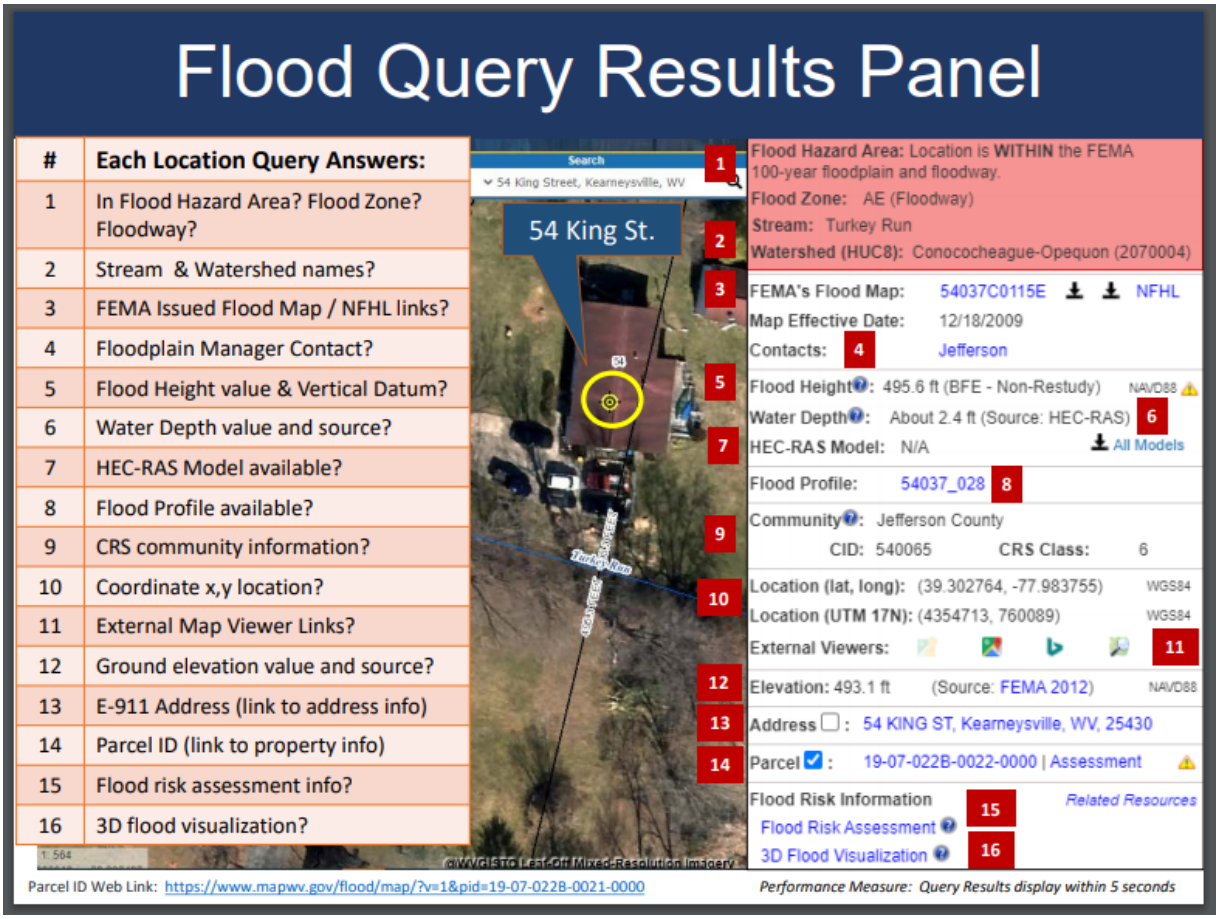
Task Description
[GLOBAL OUTREACH SERVICES FOR WV FLOOD TOOL] The WV Flood Tool and global outreach services support stakeholders in pre-disaster actions around adaptation, resilience, and mitigation. The global outreach supports FEMA's NFIP/CRS Program objectives to: • Maintain consistent national standards while interjecting a tailored, local focus • Use local data and integrate at state level to facilitate floodplain management • Utilize local experience and knowledge • Provide training and technical assistance • Provide communities with state-based CRS credits • Support Risk MAP Program Goals of Flood Hazard Data, Public Awareness and Outreach, Risk Planning, Enhanced Digital Platform, and Alignment and Synergies *Through collaboration with Local, State, and Federal entities, the WV Flood Tool delivers quality data that increases public awareness and leads to actions that reduce risk to life and property* To manage the wealth of available data and better communicate flood risk, the WV Flood Tool has maintained a public facing outreach tool for the public, communities, engineering/surveying companies, and others (Insurance companies, lending institutions, real estate companies, etc.) that has provided effective floodplain models, supporting datasets, water-surface elevations, floodplain boundaries, and additional enhanced flood risk information. During the past decade, the functionality and quality of data layers of the WV Flood Tool have progressed, resulting in an increased use of the application. Over time the WV Flood Tool has become more than just a flood

Task Description
determination tool, and today is routinely used by floodplain managers for building permit applications, floodplain regulations enforcement, pre- and post-disaster assessments, Community Rating System discounts, and flood risk planning. For risk assessment and planning, the Risk MAP View includes structure-level risk assessments and mitigated properties to aid in flood reduction efforts. This CTP activity enables the website and the WV Flood Tool's global outreach program to adapt and remain relevant as both the datasets and technology continue to evolve. Specific tasks under *global outreach services* in support of the WV Flood Tool include: New Flood Map Products: • Incorporate new regulatory and non-regulatory flood hazard layers into the WV Flood Tool. Publish all the flood layers, query layers, geoprocessing layers, models, and attributes according to standardized procedures and cartographic design. o Effective and Preliminary National Flood Hazard Layers (e.g., Countywide RiskMAP Studies, 2016 Flood PRM Reaches in Southeastern WV, Advisory Flood Heights) ▪ Add effective or draft/preliminary NFHL, WSEL, and Flood Depth ▪ Advisory Flood Heights and Base Flood Elevations ▪ For Preliminary Flood Heights, in Flood Query Results Panel link Preliminary Flood Zones to FEMA's Map Changes Viewer o Flood Study Status Graphics ▪ Active Flood Studies ▪ Advisory Flood Heights ▪ FEMA R3 Project Status Graphic o Floodplain Boundary, WSEL, Depth Layers ▪ Floodplain Boundary: Regulatory and Non-Regulatory Advisory Zones (Preliminary/Draft NFHL; Updated AE or Advisory A Zones) ▪ WSEL: Base flood Elevations and Advisory Flood Heights ▪ Depth Grid: Model-Backed (HEC-RAS) Advisory A Depth Grids o Other Flood or Flood-Related Layers ▪ Cross-Sections ▪ BFE Lines ▪ Panel Index (Geo-Index) ▪ LOMAs, LOMRs (including Location-Verified LOMAs to correct parcel or structure) ▪ Flood Study Profiles for Detailed AE Zones ▪ Flood Query Results Layers: Flood Zone Designation, Stream Name/Flood Source, HEC-RAS Engineering Model Download ▪ USGS High Water Marks and Stream Gages ▪ H&H Hydrologic/Hydraulic Downloadable Models ▪ Structure (bridges, culverts, etc.) ▪ Mitigated Buyout Properties

Task Description
▪ Elevation Certificates ▪ Flood Manager List on WV Flood Tool o Other Flood or Flood-Related Layers ▪ Upgraded cartography to support new FEMA Flood Risk products for Approximate A Zones that include unlabeled cross-sections and HEC-RAS models. • Model-Backed Studies. The statewide Hazus depth grid created in 2010 is inaccurate and thus has a negative impact on building-level flood risk assessments and flood visualizations. Adding model-backed depth grids from flood studies improves the coverage and accuracy of the statewide depth grid, a flood risk assessment priority of attaining model-backed, gridded flood-risk depth grids for all 1-percent flood zones in West Virginia. In addition, model-backed Base Flood Height values provide important information for the Flood Query Results Panel and for processing LiDAR LOMAs using the Print Function of the WV Flood Tool. Lastly, depth grid errors associated with mapping issues identified from anomalous building level risk assessments are forwarded to Region 3 for CNMS problem area tracking and for Risk MAP Discovery phase. • Procedural Documentation. Maintain and update technical documentation. o Updating Flood Layers on WV Flood Tool. Follow standardized procedures for processing and publishing new flood layers to WV Flood Tool. o Updated AE Redelineation. Follow WV GIS Technical Center's procedural guide for creating Flood Depth/Water Surface Elevation Grids and Redelineated AE Floodplains. The methodology creates a Water Surface TIN from the NHFL X-Sections, converts the WSEL TIN to a grid, and then subtracts the Ground Elevation Grid from the WSEL Grid to create the Water Depth Grid. Application Programming Development: • Execute software programming updates for desktop and mobile versions. Modify programming code of JavaScript application (www.mapwv.gov/flood) to enhance tool functions, messages, data layers, and cartography. Update flood risk information to the WV Property Search Tool, a companion product of the WV Flood Tool, to allow users to identify, for example, new structures built in flood zones. Make other tool enhancements based on requests from WV NFIP Coordinator. Desktop Version: https://www.mapwv.gov/flood Mobile Version: https://www.mapwv.gov/flood/mmap Property Search and Report: https://www.mapwv.gov/property o Enhance tool functions based on feedback or new opportunities. Program other application enhancements to include synchronizing with FEMA's National Flood Hazard

Task Description
Layer (NFHL) web services and FEMA Map Store products. Evaluate consuming NFHL web services with performance testing and other suitability measures. Program failover protocols for external web map services consumed by the Flood Tool. o Enhance the WV Flood Tool to leverage the statewide building-level flood risk assessments generated from a Hazard Mitigation Grant. o Incorporate 3D flood building visualizations for mitigated structures. <u>Update Flood Query Panel:</u> Maintain all functions and support for Flood Query Results Panel to include updating flood zone query logic for countywide studies. Follow standard operating procedures for incorporating floodplain layers, water surface elevation and depth grids. Update and publish all the flood layers, query layers (flood zone, stream name, HEC-RAS model) and geoprocessing layers (WSEL, Depth). Ensured the proper flood regulatory and flood risk attribute values are displayed properly in the Flood Query Results Panel. Upgrade flood zone query programming logic to support new FEMA Flood Risk products for Approximate A Zones that include unlabeled cross-sections and HEC-RAS models. << Query Results Panel >>

Task Description



Reference Data Layers:

- Key reference data sets are ground elevation, parcels/assessment records, E-911 addresses, and aerial imagery. Process and integrate new reference data to make the WV Flood Tool more accurate and current and for which communities can receive FEMA CRS credits. This task includes the publishing and caching of web map services that support the Flood Tool. Data processing includes caching of aerial imagery and elevation contours at 15 display levels from 1: 4,622,324 to 1:282 map scales. Besides the WV Flood Tool, there are no FEMA web applications or other publicly accessible web services in the Nation that allow users to view aerial imagery and 1-foot contours for West Virginia at the largest map scale of 1:282. The new FEMA-purchased LiDAR and derived elevation products are quite large in file size and require extensive computer processing and quality control checks before being published to the WV Flood Tool.

    - HI-RESOLUTION TOGPOGRAPHIC DATA: Maintain and process new Elevation Products for Flood Tool. This includes the LiDAR derived elevation products to include DEMs and

Task Description
contours. *Accurate, high-resolution LiDAR-derived elevation products such as one-foot contours and one-meter DEMS that are incorporated into the WV Flood Tool are beneficial for floodplain determinations, LIDAR LOMAs, LAGs, water depth flood visualizations, flood risk studies, etc.* ▪ Elevation Products - 1- or 2-foot contours (published to the highest zoom level 1:282 on Flood Tool) - 1-meter DEM (1-meter DEM elevation sources) - 1-meter Hillshade (1-meter DEM elevation sources) ▪ Metadata - Metadata: https://www.mapwv.gov/lidar-metadata - Elevation Download Site: https://data.wvgis.wvu.edu/elevation/ - FEMA-Purchased LiDAR Projects: Project coverage graphic o PROPERTY PARCELS AND ASSESSMENT RECORDS: Published Tax Year 2024 parcel geometry and assessment attributes (1.4 million records) to WV Flood Tool. *Accurate and current parcels and assessment attributes are essential to identifying flood risk structures in the WV Flood Tool* ▪ Statewide Parcel Products (annual update) for Flood tool: - Master surface parcel file and standardized assessment attributes - Integrate surface parcel geometry for all 55 West Virginia counties - Join assessment records for commercial and residential properties for current tax year - Sketch diagrams for building identification of residential properties - Parcel history (20 years) to search previous owners or deed book numbers. Important for improving positional accuracy of LOMAs and Buyout Properties. - Intersect statewide parcels/assessment records with flood hazard zones for display on the WV Flood Tool. Associating flood risk information with property parcels allows users to perform queries of parcels by the degree of flood risk using the WV Property Search Tool (Advanced Search Option). ▪ Intersect parcels/assessment records with flood zones and classify according to risk (high, moderate, low) for display on the WV Property Viewer, a gateway application of the WV Flood Tool o E-911 ADDRESSES: Perform quarterly updates of E-911 site (1 million address points) and street addressing layers and address matching geocoding services for Flood Tool. *Accurate and current E-911 site addresses are essential to identifying flood risk structures in the WV Flood Tool.* o AERIAL PHOTOGRAPHY: Add new 2024 county leaf-off aerial photography for multiple counties to Flood Tool. Coordinate with county, state, and federal agencies through West Virginia's Orthoimagery Program. *Accurate and current leaf-off aerial photography is*

Task Description
essential to identifying flood risk structures in the WV Flood Tool. o BUILDING FOOTPRINTS: Maintain 2018 Microsoft and 2018-23 WVGISTC footprints on the WV Flood Tool. *Building footprints are used for identifying flood risk structures and for 3D flood visualizations on the WV Flood Tool.* o OTHER LAYERS: Update other reference layers (e.g., community boundaries, wetlands, public lands) that support FEMA CRS/NFIP programs and the WV Flood Tool. *Accurate and current reference layers are important to Communities for state-base CRS credits and for users referencing features of interest.* o RESOURCE LINK: WV Flood Tool's Reference Layers   Technical Services: • Perform outreach and training services to include developing print and online educational materials, delivering presentations, administering email listserv, and participating in Flood Tool coordination meetings and data exchange with State NFIP, FEMA, USACE, NRCS, and other cooperators. Provide technical support to the Flood Hazard community like specifications (e.g., HEC-RAS downloadable model specifications) for contracts and other technical queries associated with flood and reference data. Enhance the WV Flood Tool to effectively increase flood risk communications for the public and communities. Educate and outreach to counties about submitting their locally produced address, parcel, imagery, and elevation data for inclusion in the Flood Tool. • Technical Services include: o Promotional materials (flyers, videos, etc.) o Presentations (webinars, meetings, etc.) o Update content and resources sections of Flood Tool launch page o Update listserv and contact list of community floodplain managers o Coordination meetings and project scoping for USACE WV Silver Jackets projects that support WV Flood Tool o Standardized Data Exchange o Instructional videos for Flood Tool and WV Building Level Risk Assessment (BLRA) o Maintain WV Flood Tool and Flood Risk Assessment Glossary o Update various WV Flood Tool Resources web pages and links o Bundle FEMA and other agency risk assessment and mitigation resources for the WV floodplain management community (Permits, Elevation Certificates, Mitigation Resources, Model Floodplain Management Ordinance, etc.).

Task Description

SFHA Change Letters for RiskMAP Studies:

- Communicate SFHA Map Changes to Affected Property Owners. Template mail merge documents from the FEMA Region 3 "Local Officials Toolkit: What to Do Before and After Your Flood Maps are Finalized" have been created to send to property owners with new flood mapping updates during the appeal period for the restudy. Mailing addresses of affected property owners are retrieved from the statewide tax assessment database. This activity qualifies for FEMA's Community Rating System credits. See SFHA Mail Merge Template and Instructions.

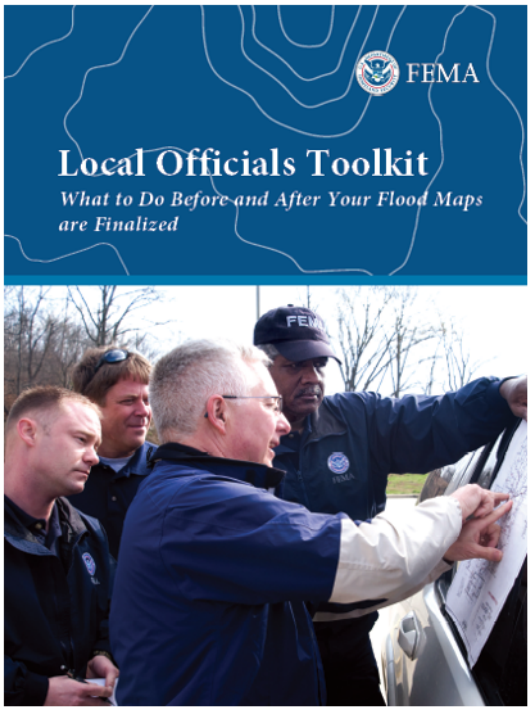
Example Outreach Letters. Mapped Out SFHA, Mapped In SFHA, Mapped in Floodway

- Clendenin, WV
- White Sulphur Springs, WV

<< SFHA Change Letters using FEMA Local Officials Toolkit >>

Flood Study Map Changes

*Incorporate 1% Floodplain Building Risk Assessment Inventory into **Mitigation** and **NFIP/CRS Management** Activities*



City of White Sulphur Springs

Date: 10/14/2021

Dear SMITH JOHN:

This letter is a test to show the use of mail merge a
copied the first two paragraphs from the Local Offic
two paragraphs for demonstration purposes.

White Sulphur Springs has 68 buildings being mapped into the SFHA

A multi-year project to re-examine City of White Sulphur Springs's flood zones and develop detailed digital flood hazard maps has been completed. The new maps, also known as Flood Insurance Rate Maps (FIRMs), were just released for public view. The new maps reflect current flood risk based on the latest data and a more accurate understanding of our area's topography. As a result, you and other property owners throughout GREENBRIER COUNTY will have up-to-date, Internet-accessible information about flood risk to your property.

How will these changes affect you?

Based on the new maps, your property is being mapped into a higher risk flood zone, known as the Special Flood Hazard Area (SFHA). If you have a mortgage from a federally regulated lender and your property is in the SFHA, you are required by Federal law to carry flood insurance when these flood maps are put into effect. We recommend that you use this time to contact your insurance agent to get the most favorable rate and learn about options offered by the National Flood Insurance Program (NFIP) for properties being mapped into higher risk areas for the first time.

You can find your property on the WV Flood tool in one of two ways: first, you can go to the following link in a web browser: https://mapwv.gov/flood/map/?wkid=102100&x=-8939196.678447664&y=4550352.316266677&l=13&v=2. Or, you can go to https://mapwv.gov/ map and enter your address, 177 PATTERSON ST, WHITE SULPHUR SPRINGS, WV, 24986, in the search bar.

Your property is within the Howard Creek flood zone and has a flood depth of 1.0 feet. Its FIRM status is Pre-FIRM.

FEMA Region 3 Toolkit for New Flood Studies

Mail Merge Template for SFHA Mapped-in Structures

Task Description
SFHA Change Letters for RiskMAP Studies: **Deliver Technical Support Services for LiDAR LOMAs.** West Virginia now has statewide coverage of QL2 LiDAR data and LiDAR-derived elevation products of one-meter DEMs and 1-foot contours. LiDAR LOMAs can be submitted for qualifying structures using FEMA's Online LOMA portal. The Flood Tool's Print Function generates map layouts for the LiDAR submissions using either the contour or point elevation methods. To save disadvantaged communities and homeowners the cost of needing a site elevation survey, this activity will communicate to these constituents how the "mapped out" structures (primary building structures symbolized by yellow squares where future map conditions exist) displayed on the RiskMAP View of the WV Flood Tool may qualify for removal of the structure from the SFHA. The only information required for an Online LOMA submission are a map layout from the Flood Tool and a copy of the deed. The WVU GIS Technical Center will support the state and local floodplain management community with the submission of LiDAR LOMAs when a field survey is not required, to include assisting floodplain managers with the online submissions to FEMA. LiDAR LOMA Documentation. • WV Flood Tool LiDAR LOMA: Instructions | Overview Slides and Guide • WV LIDAR LOMA Map Layout Examples

Task Description
<< Example LiDAR LOMA Print Layout generated from WV Flood Tool. >>

LiDAR LOMA: 394 MILL CREEK RD, PECKS MILL, WV

HIGH RISK	
Zone AE	1-Percent-Annual-Chance Flood Hazard Area **With Base Flood Elevation** (BFE)
Floodway	Regulatory **Floodway in AE Zone**
Zone A	1-Percent-Annual-Chance Flood Hazard Area **Without BFE** (may have Advisory Flood Heights)
Advisory	1-Percent-Annual-Chance **High Risk Advisory**

Dowaload the Full Legend for all flood tool symbols
https://www.mapwv.gov/flood/map/docs/wv_flood_tool_legend.pdf

WEB LINKS:

WV Flood Tool
FEMA 2018 LiDAR Metadata
Assessment Record 135-91
Building Diagram

Map created by Kurt Donaldson, WVU on 11/21/2020 — Flood Info Location

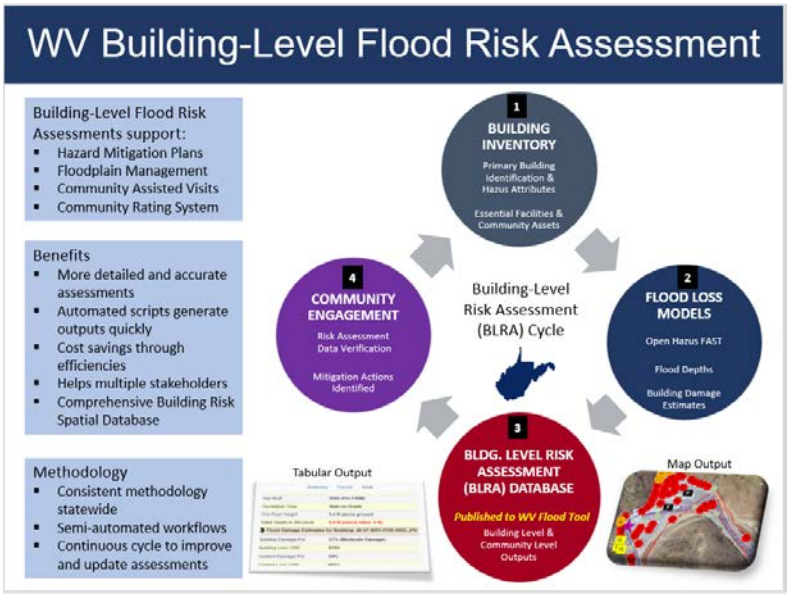
User Notes	Closest Lower Contour (CLC) = 675 feet.
Flood Hazard Area	Location is **WITHIN** the FEMA 100-year floodplain.
Flood Zone	A
Stream	Mill Creek
Watershed (HUC8)	Lower Guyandotte (5070102)
Flood Height (BFE)	673.6 ft (Source: User Defined) (NAVD88)
Water Depth	
Elevation (CLC)	675.0 ft (Source: FEMA 2018) (NAVD88)
Community & ID	Logan County (ID: 545536)
FEMA Map & Date	54045C0111E; Effective Date: 2/6/2008
Location (lat, long)	(37.932161, -81.977150) (WGS84)
Parcel ID	23-02-0135-0091-0000
E-911 Address	394 MILL CREEK RD, PECKS MILL, WV, 25547

B) **Building-Level Risk Assessments (BLRA). Update the WV Building Level Risk Assessment from New Data Sources (e.g., Flood Studies, Building Characteristics).** Update building-level flood risk assessments for structures in the high-risk flood zones using the best available Risk MAP data and products. New Risk MAP studies always trigger updating the identification and risk assessment of all structures in high-risk flood zones. Publish updated building-level assessments to the Risk MAP View of the WV Flood Tool. (WVU Task B)

Most floodprone communities in West Virginia are disadvantaged in one or more environmental, climate, or other burdens, and (2) at or above the threshold for an associated socioeconomic burden. In addition, the findings of the First Street Foundation's October 2021 risk assessment report states that West Virginia's built environment of critical facilities tops all other states for being vulnerable to flooding in current and future climate changing conditions. Consequently, for the built environment susceptible to riverine flooding, it is important to update the statewide building level risk assessment when new data sources become available (new flood studies, advisory flood height mapping, mitigated structures, elevation certificates - elevated building diagrams 5-8, LOMAS, etc.) so more accurate Hazus flood loss models and risk assessment products can be published in support of the state's flood reduction activities, especially those communities which are socially vulnerable in the State.

- Benefits to communities include the continued validation of primary floodplain structures, expansion on base level risk assessment information for further hazard reduction and planning efforts, and the use of risk assessment information for Community Rating System (CRS) insurance discounts. Besides technical support for hazard mitigation plans, updates from the Building Level Risk Assessment contribute to other CTP tasks such as SFHA Change Letter Communication Outreach, CNMS Discovery Mapping, Detailed Flood Studies, LiDAR LOMAs, Mitigation Plans, SDE Building Pre-loading, and other RiskMAP initiatives.
- BUILDING LEVEL RISK CYCLE. Refer to this directory for detailed documentation about how the building level risk assessment cycle (BLRA) creates the building-level risk assessments. See Task 1 of the Data Development tasks for *community-wide* building inventory which is required for the landslide hazard risk assessment. The building attributes can be updated annually when a new statewide tax assessment database is published.
- PRESENTATION. Flood Risk Assessment Presentation (2022) PDF | PPTX

Figure B-2. Building-Level Risk Assessment Cycle (updated annually)



C) **WV Risk Explorer. Develop, verify, and publish flood risk profiles at eight geographic scale levels: State, Regional, County, Community, Unincorporated Area, Incorporated Place, Watershed, and Streams.** A new risk tool named the WV Risk Explorer will allow communities to quickly view risk factors affecting their jurisdictions. Risk dashboards for risk assessment data shall be developed as well, all part of a suite of risk assessment and visualization tools for building community flood resilience in West Virginia. (WVU Task C).

An online WV Risk Explorer will use the building level-risk assessments to organize and curate community flood risk profiles at various geographic scales to support mitigation measures and risk planning to make communities more resilient. The interactive Community risk assessments aggregate structure-level risk data (flood hazard characteristics, exposure, vulnerability, loss estimates). Along with risk assessment data, the flood reduction and mitigation community assessment information (mitigated properties, opens space preservation, loss avoidance, etc.) will be part of website hub tools that maximize engagement, communication, collaboration, and data sharing.

Interactive online community flood risk profiles on the WV Risk Explorer will be beneficial for Risk MAP projects planned and implemented at the federal, state, and local levels. The community risk and mitigation profiles shall supplement FEMA's Flood Risk Dashboards, a snapshot of a community's flood risk statistics published at the time the community is participating in Risk MAP projects. Importantly, the community risk dashboards include social vulnerability factors to identify disadvantaged communities in the state that may be at higher risk due to climate change impacts and thus require additional focus and support in their flood protection measures. Lastly, this mitigation support activity supports the WV Flood Resilience Framework initiative advocated by the State Resiliency Office.

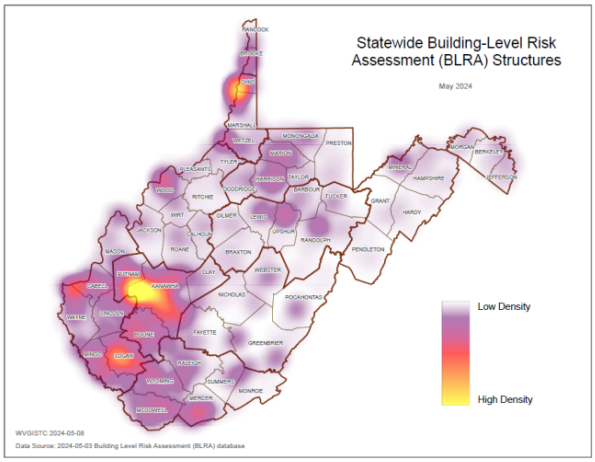
- Example Community Risk Assessment Matrices, Dashboards, Rankings.
  - Flood Risk Factor Matrices | Flood Risk Dashboards | Community Risk Rankings

- Example Detailed Risk Assessment Report for Building Counts at 8 Geographic Scales

Figure B-3. Example detailed building-level risk assessment

BUILDING COUNT (STATEWIDE SCALE)

DESCRIPTION: A count of all primary insurable structures in the high-risk, 1%-annual-chance (100-yr) floodplain, or Special Flood Hazard Area (SFHA) on FEMA's Flood Insurance Rate Maps (FIRMs).



HIGH-RISK REGULATORY ZONES		
Buildings in Special Flood Hazard Area 1% Annual Chance (100-YR) Flood Zone		
Special Flood Hazard Area		84,490
• Detailed Zone AE	65%	55,112
• Approximate Zone A	35%	29,378
○ Zone AE Floodway	10%	8,572

HIGH-RISK ADVISORY FLOOD ZONES		
Includes Buildings in Non-Regulatory Zones Future Map 1% AEP (100-YR) Flood Zones		
High-Risk Flood Zones		97,936
• Mapped No Change	70%	69,093
• Mapped out SFHA	16%	-15,528
• Mapped in SFHA (non-regulatory) *	14%	13,315
• SFHA net change	-2%	-2,213
Structures est. in SFHA		82,408

* 54 counties have Advisory A / AE Flood Zones

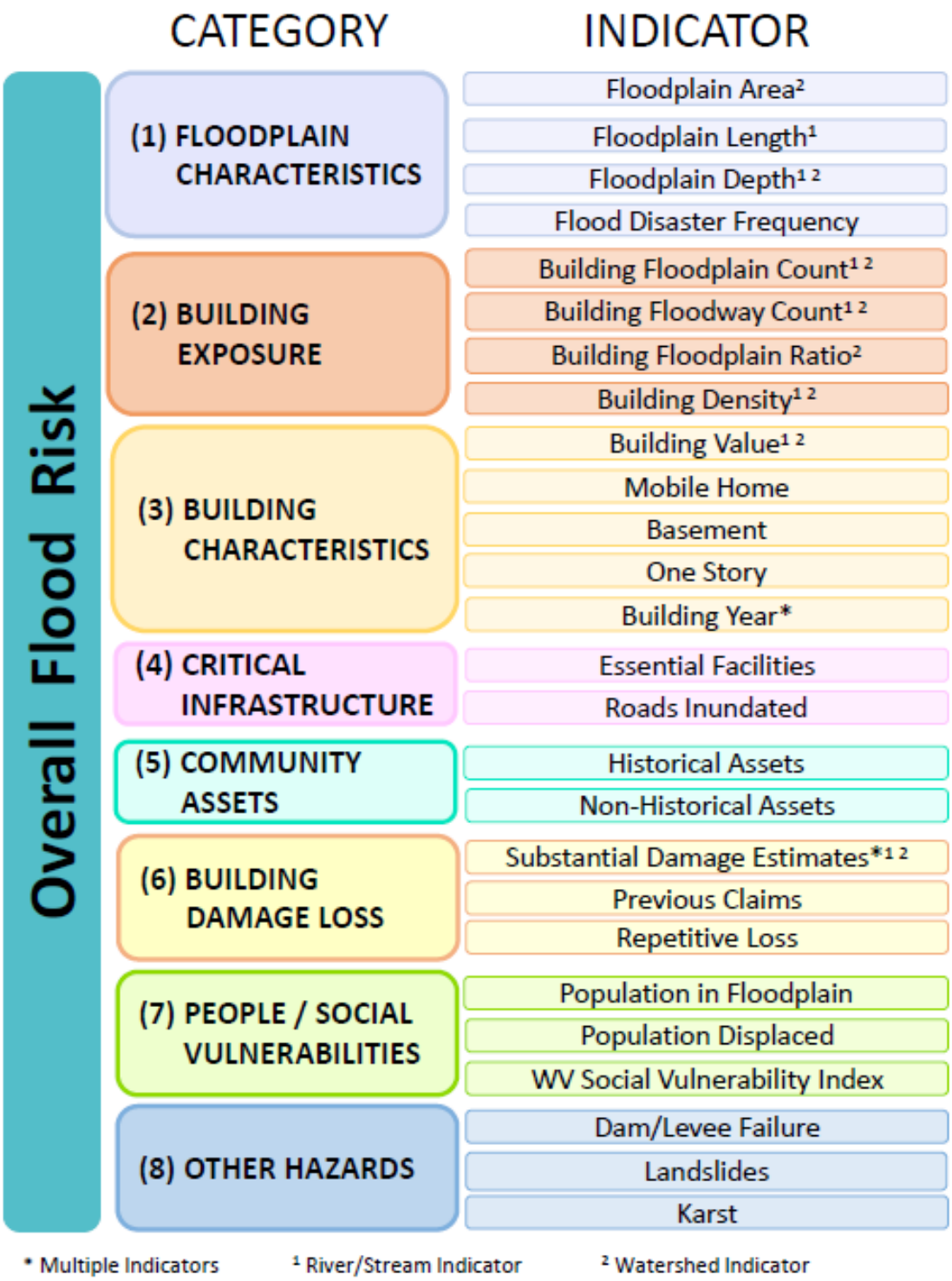
OTHER FLOOD ZONES	
Buildings in Shaded X Zones Moderate or Reduced Flood Risk Areas	
High and Moderate Risk Zones	138,623
• 0.2% annual chance (500-YR) flood (moderate risk)	44,415
• Levee Protected Zones (reduced risk)	9,718

SFHA ZONE A STUDY TYPES
- 70% Approximate A Zones
- 30% Detailed AE Zones

WEB LINKS:	SFHA Building Density Graphic	High-Risk Regulatory Zones	High-Risk Advisory Zones	SFHA Zone A/AE Study Types	Web Report

Sources: WV BLRA (Building-Level-Risk Assessment) for High-Risk Effective/Advisory Zones; FEMA Flood Insurance Rate Maps (FIRMs) for SFHA. Report Date 20240429.

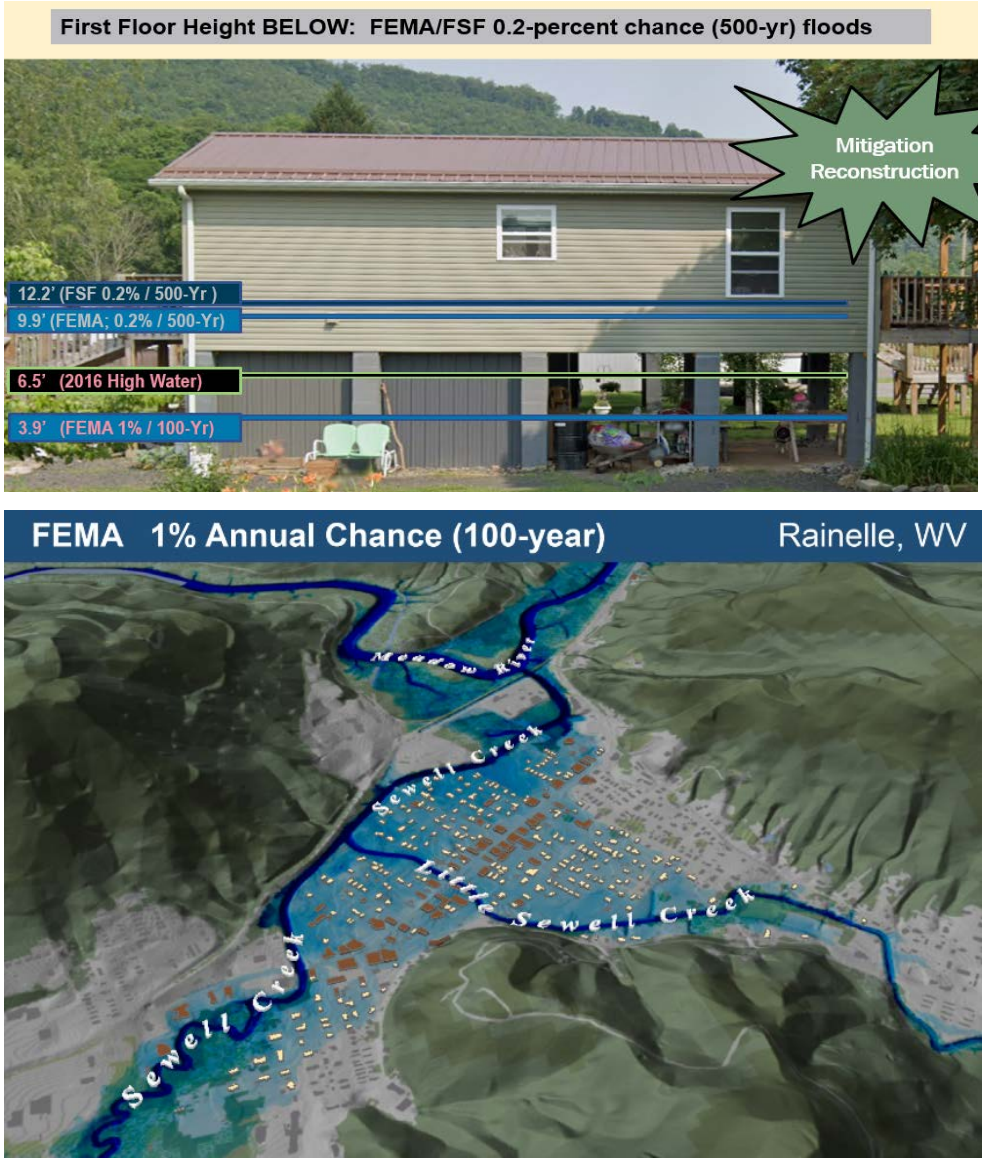
Figure B-4. Riverine flood risk factors for new WV Risk Explorer tool.



D) **WV Flood Visualizations. Create flood visualizations at the viewshed and building level scales to communicate flood risk to the public more effectively.** Incorporate high water marks of previous major flood disasters in flood models. Additionally, compare flood frequency flood depths between FEMA and First Street Foundation flood models. (WVU Task D). The online WV Hazard Library (WVU Task E) will allow users to access the flood visualizations, a collection of movies, animations, story maps, and other visualization media available at the building and community levels for communicating and understanding flood risk in West Virginia.

- Building-Level Visualizations
  - Building Flood Profiles for different sized storms (includes High Water Marks)
  - Building Flood Depth and Damage Assessment (WV Flood Tool)
- Community-Level Visualizations
- Story Maps (graphic or narrated movies at community or viewshed levels)
- Other multimedia (static graphics, videos)

Figure B-5. Building-level and viewshed flood visualizations.



E) **WV Hazard Library. Organize and publish an online WV Hazard Library of resources related to flood resiliency research, hazard risk assessments, floodplain management, and mitigation activities.** A Hazard Library specific to West Virginia is being organized and populated into a database in which the public can search online resources. The library contains web links to various risk assessment and mitigation resources, to include studies, graphics, reports, plans, model ordinances/regulations, movies, maps, presentations, best practice guides, training courses, publications, meeting notes, relevant data sets, etc. Users can search the Hazard Library by subject, spatial extent, geographic scale, or document type. The Hazard Library consists of major collections for risk assessments, flood events, and mitigation reduction efforts (mitigation measures, hazard planning, floodplain management, Risk MAP studies, flood models, etc.) The classification system of the Hazard Library is flexible in that additional subjects can be added. (WVU Task E).

Mitigation Planning Technical Assistance ($13K) (WVU Task F)

F) **Support Local Hazard Mitigation Plans with Flood/Landslide Risk Assessment Data.** This mitigation planning technical assistance task supports mitigation planners and consultants with various risk assessment products for updating their local hazard mitigation plans. The risk assessment and mitigation products were generated from the HMGP Statewide Multi-Hazard Risk Assessment Project and select data sets are updated each year. The multi-hazard data includes riverine flooding, landslides, and dam failure. Refer to the catalog or Risk Information Index to access various risk assessment products (reports, tables, graphics, risk dashboards, etc.) published in support of FEMA's Hazard Mitigation Plans and NFIP/CRS activities. See the 2022 TEIF-TEAL Close-out Report about risk assessment and mitigation products as well. (WVU Task F)

Resources Available: Technical support for local and state hazard mitigation plan updates. Accessed by an Index Guide spreadsheet named "RA_Info_Index.xlsx," the risk assessment products include GIS layers, tables, subject reports, 3D Visualizations, and community profile risk matrices to supplement FEMA's Community Flood Risk Dashboards.

Figure B-10. Risk Assessment Information Index provides access to risk assessment and mitigation data products in support of local hazard mitigation plans and other Risk MAP activities.

Access Risk Assessment Info

Use the Risk Information Index to access Data and Products

Risk Assessment Information Index
1/28/2022
Data Field Descriptions

Risk Assessment or Mitigation Layer	REPORT	Key Variable	Community Level (CL)			Building Level (BL) or Feature Level (FL)				
			Table	Graphic		Table	Community Extract	State Extract	Graphic	GIS
FLOOD ZONE MAPS & STUDIES										
Flood Zone Breakdown by Length and Area		Zone Length and Area	CL	Yes						GIS
Active Flood Studies and Mapping			CL	Yes	Yes					
Model-Backed A Zones		Info Sheet	CL	Yes						
FLOODPLAIN BUILDING INVENTORY AND FUTURE MAP CONDITIONS (*What at-risk structures are in floodplain?*)										
Primary Buildings in High-Risk Effective and Advisory Floodplains – Future Map Conditions		Flood Zone Type	CL	Yes	Yes	BLRA				GIS
Verified LOMA Properties Removal Status. Future SFHA Status.		SFHA Status	CL	Yes		BL				GIS
Buildings by Stream Name (Flood Source). Community and stream summaries.		Stream Name	CL	Yes		BLRA	FL	Top List	Yes	GIS
SIGNIFCANT STRUCTURES OF IMPORTANCE										
Essential Facilities (0.2% floodplain)	RPT	Facility Type	CL		Yes	BLEC				GIS
Community Assets	RPT	Facility Type	CL	Yes	Yes	BLCA				GIS
Historical Community Assets - National Register Areas	RPT	Register Area	CL			NRA				GIS
FLOODPLAIN BUILDING CHARACTERISTICS	RPT									
Building Exposure Dollar Value		Building Appraisal, Occupancy	CL	Yes	Yes	BLRA	High Value (Top 10%)	Top 100	Yes	GIS
Building Single Family (RES1)		Single Family RES1	CL	Yes	Yes	BLRA		Top 100	Yes	GIS
Building Manufactured Homes (RES2)		Mobile Home RES2	CL	Yes	Yes	BLRA		Top 100		GIS
Building Year and FIRM Status (Pre-FIRM/Post-FIRM)		Initial FIRM Date, Building Year	CL	Yes		BLRA				GIS
Building Median Value		Median Value	CL	Yes	Yes	BLRA				GIS
Building Median Year		Building Year	CL	Yes		BLRA				GIS
Foundation Type and Basement		Foundation Type				BLRA				GIS
FLOOD DAMAGE LOSS ESIMATES (1% FLOOD EVENT) (*What is degree of Flood Risk?*)										

Building Level Risk Assessment (BLRA) Products

- **GIS Files**
- **Tables** (Excel)
  - Community Level (CL)
  - Building (or Feature) Level (BL) with links to online maps
    - Table Extracts
    - Top Lists
- **Maps**
  - Interactive Web Maps
  - Graphics and Maps
- **Reports** (Word Docs)
- **3D Flood Visualizations**

Most of the risk assessment data can be viewed on the **RiskMAP View** of the WV Flood Tool

Figure B-6. Example Community Risk Assessment and Mitigation Dashboards.

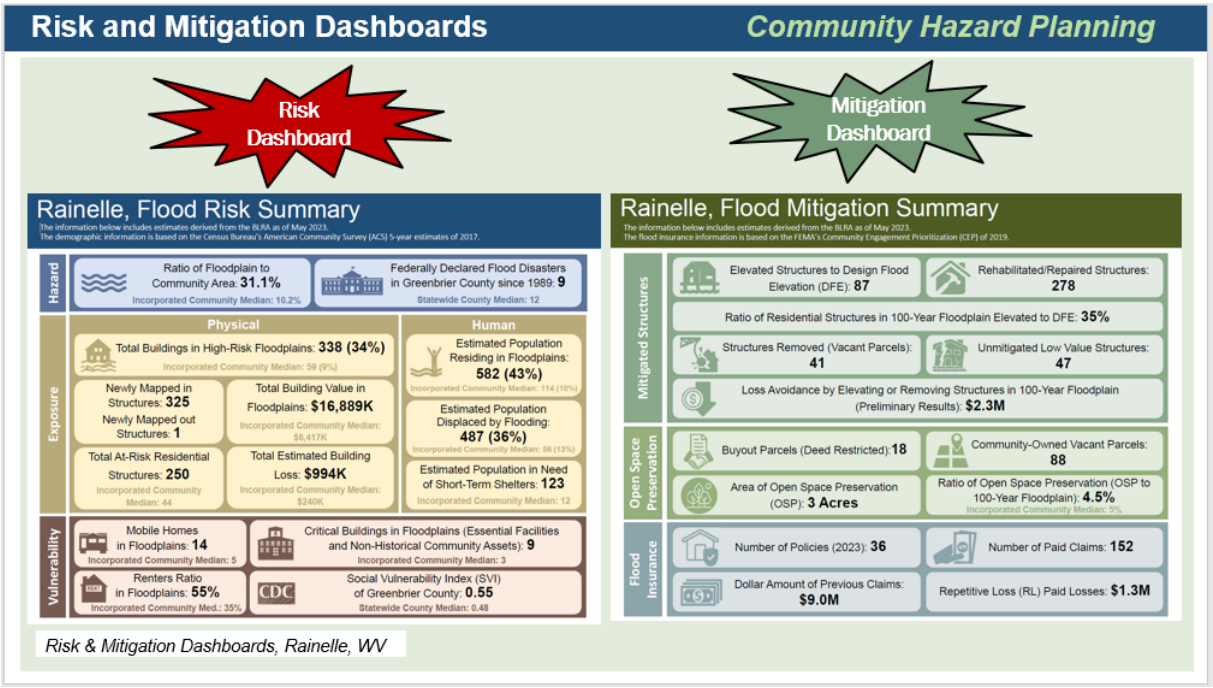
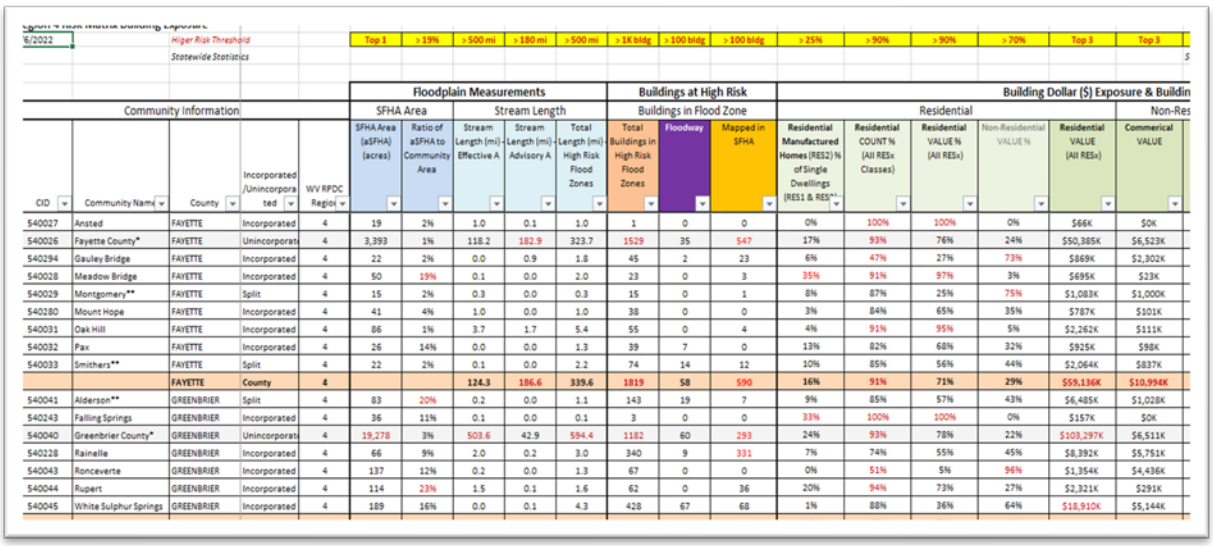


Figure B-7. Risk Indicator Tables and Matrices.



6/2022			*Higer Risk Threshold*		Top 1	> 19%	> 500 mi	> 180 mi	> 500 mi	> 1K bldg	> 100 bldg	> 100 bldg	> 25%	> 90%	> 90%	> 70%	Top 3	Top 3	
			Statewide Statistics																$
					Floodplain Measurements					Buildings at High Risk			Building Dollar ($) Exposure & Buildin						
Community Information					SFHA Area		Stream Length			Buildings in Flood Zone			Residential					Non-Res	
CID	Community Name	County	Incorporated /Unincorporated	WV RPDC Region	SFHA Area (aSFHA) (acres)	Ratio of aSFHA to Community Area	Stream Length (mi) - Effective A	Stream Length (mi) - Advisory A	Total Length (mi) - High Risk Flood Zones	Total Buildings in High Risk Flood Zones	Floodway	Mapped in SFHA	Residential Manufactured Homes (RES2) % of Single Dwellings (RES1 & RES	Residential COUNT % (All RESx Classes)	Residential VALUE % (All RESx)	Non-Residential VALUE %	Residential VALUE (All RESx)	Commerical VALUE	
540027	Ansted	FAYETTE	Incorporated	4	19	2%	1.0	0.1	1.0	1	0	0	0%	100%	100%	0%	$66K	$0K	
540026	Fayette County*	FAYETTE	Unincorporat	4	3,393	1%	118.2	182.9	323.7	1529	35	547	17%	93%	76%	24%	$50,385K	$6,523K	
540294	Gauley Bridge	FAYETTE	Incorporated	4	22	2%	0.0	0.9	1.8	45	2	23	6%	47%	27%	73%	$869K	$2,302K	
540028	Meadow Bridge	FAYETTE	Incorporated	4	50	19%	0.1	0.0	2.0	23	0	3	35%	91%	97%	3%	$695K	$23K	
540029	Montgomery**	FAYETTE	Split	4	15	2%	0.3	0.0	0.3	15	0	1	8%	87%	25%	75%	$1,083K	$1,000K	
540280	Mount Hope	FAYETTE	Incorporated	4	41	4%	1.0	0.0	1.0	38	0	0	3%	84%	65%	35%	$787K	$101K	
540031	Oak Hill	FAYETTE	Incorporated	4	86	1%	3.7	1.7	5.4	55	0	4	4%	91%	95%	5%	$2,262K	$111K	
540032	Pax	FAYETTE	Incorporated	4	26	14%	0.0	0.0	1.3	39	7	0	13%	82%	68%	32%	$925K	$98K	
540033	Smithers**	FAYETTE	Split	4	22	2%	0.1	0.0	2.2	74	14	12	10%	85%	56%	44%	$2,064K	$837K	
		FAYETTE	**County**	**4**			**124.3**	**186.6**	**339.6**	**1819**	**58**	**590**	**16%**	**91%**	**71%**	**29%**	**$59,136K**	**$10,994K**	
540041	Alderson**	GREENBRIER	Split	4	83	20%	0.2	0.0	1.1	143	19	7	9%	85%	57%	43%	$6,485K	$1,028K	
540243	Falling Springs	GREENBRIER	Incorporated	4	36	11%	0.1	0.0	0.1	3	0	0	33%	100%	100%	0%	$157K	$0K	
540040	Greenbrier County*	GREENBRIER	Unincorporat	4	19,278	3%	503.6	42.9	594.4	1182	60	293	24%	93%	78%	22%	$103,297K	$6,511K	
540228	Rainelle	GREENBRIER	Incorporated	4	66	9%	2.0	0.2	3.0	340	9	331	7%	74%	55%	45%	$8,392K	$5,751K	
540043	Ronceverte	GREENBRIER	Incorporated	4	137	12%	0.2	0.0	1.3	67	0	0	0%	51%	5%	96%	$1,354K	$4,436K	
540044	Rupert	GREENBRIER	Incorporated	4	114	23%	1.5	0.1	1.6	62	0	36	20%	94%	73%	27%	$2,321K	$291K	
540045	White Sulphur Springs	GREENBRIER	Incorporated	4	189	16%	0.0	0.1	4.3	428	67	68	1%	88%	36%	64%	$18,910K	$5,144K	