



January 14, 2019

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Project: Statewide Multi-Hazard Risk Assessments
Project Number: FEMA-4273-DR-WV-0031
Performance Period: 6/20/2018 – 6/4/2021

Project Overview: The Statewide Hazard Mitigation Project funded by the FEMA Hazard Mitigation Grant Program (HMGP) involves three major components. The grant recipient and sub-recipient are the State Hazard Mitigation Office (Brian Penix) and the WV GIS Technical Center at West Virginia University (Kurt Donaldson), respectively.

- **Flood Risk Assessments:** Create site-specific flood risk assessments for 287 communities (232 municipalities and 55 unincorporated areas. Referred to as the Total Exposure in Floodplains (TEIF) project. Results will be published on the WV Flood Tool (www.mapwv.gov/flood) and to the Flood Risk Assessment Geographic Information System (FRAGIS).
- **Landslide Risk Assessments:** Generate landslide incident and susceptibility maps for 55 counties. Referred to as the Total Exposure in Areas of Landslides (TEAL) project. Results will be published on the WV Landslide Tool (www.mapwv.gov/landslide).
- **GIS Data Development:** The development of complete and current community boundaries, parcels, site addresses, and leaf-off imagery is necessary to fulfill the requirements of county and state hazard risk assessments and products. These GIS data layers are essential for pinpointing and estimating building loss for at-risk structures and facilities.

Mitigation Actions: Below is a review of the mitigation actions listed in Appendix D of the 2018 WV Statewide Hazard Mitigation Plan that are associated with the Multi-Hazard Risk Assessment Project. The review shows how this project relates to 16 mitigation actions. *The WV GIS Technical Center at West Virginia University requires coordination assistance from the SRO and other partners for this specific project in support of the State's hazard mitigation activities.*

Table 1. Mitigation Actions associated with State Multi-Hazard Risk Assessment Project being conducted by West Virginia University’s GIS Technical Center and partners. Refer to Appendix D of 2018 WV Statewide Hazard Mitigation Plan. *Italicized text refers to coordination needed.*

Mitigation Strategy Element	Action #	Association with State Multi-Hazard Risk Assessments Project
Promote/Enhance RL/SRL Program	FL-01	RSL/SRL properties with no redactions are needed to validate flood risk assessment models for 287 communities. <i>Need FEMA account to access RSL/SRL properties</i>
Promote/Enhance CRS Program	FL-02	Support CRS communities through community profiles that include flood and landslide risk assessment information. Provide floodplain managers with CRS counts of buildings (bSF) and area (aSFHA) in floodplain. CRS credit breakdown will be published as part of community profile pages. <i>Need ISO/CRS Specialist to determine state-based credits for West Virginia State NFIP Office</i>
Promote/Enhance NFIP	FL-03	Provide a detailed building inventory and loss estimate for all structures and facilities located in 100-year regulatory and non-regulatory flood zones
Conduct Flood Mitigation Planning	FL-04	Activity 1 – Advisory A Development: Statewide Advisory A development is linked to the acquisition and processing of FEMA-purchased QL2 lidar elevation data for West Virginia. <i>Coordination required with FEMA, NFIP, and contractor Wood Group.</i> Activity 2 – State Facility Flood Risk Assessments: <i>Coordination is required with WVDHSEM GIS Section to conduct detailed flood-risk assessments of state-owned or leased facilities</i>
Understanding Landslide Risks	LS-02	WVU creating landslide incident and susceptibility maps for State. WVU knowledge experts include geologist, soil scientist, and spatial modeler.
Coordinate Dam & Levee Safety Issues	DL-01	Building inventories can integrate with dam/safety levee studies for CRS credits. <i>Coordination needed with USACE Silver Jackets funding opportunities.</i>
Complete Threat Assessments	CF-01	Flood and landslide hazard assessment reports and data will provided for local and state updates. <i>Need the local mitigation plan update schedule from FEMA or WVDHSEM. Coordination with FEMA, USACE, WV DHSEM, and Regional Planning and Development Councils to minimize duplicative costs of generating Hazus flood risk loss assessments for local hazard mitigation plan updates. It is anticipated that this project should be publishing community flood risk assessments by summer-fall 2019.</i>
Utilize Risk Information in Planning	CF-02	Detailed Hazus Level 2 Flood Analysis for buildings and facilities in flood hazard zones. Publish hazard identification data and results.

Mitigation Strategy Element	Action #	Association with State Multi-Hazard Risk Assessments Project
		<i>Further coordination required with FEMA, USACE, WV DHSEM, Regional Planning and Development Councils, local floodplain and emergency operation managers</i>
Build Relationships with Critical Facilities	CF-03	<i>Coordinate with WV DHSEM, BRIM and other partners on flood risk assessments. The BRIM database should record full addresses, x-y coordinates, or other spatial reference information.</i>
Promote Building Codes	CF-04	Publish building code standard on community profile pages. <i>Coordinate with WVDHSEM NFIP Office</i>
Enhance Planning Process	PL-01	Site-specific flood risk assessments to determine economic and social losses for 287 jurisdictions will be conducted for a riverine 1% annual flood event and with a Hazus Level 2 analysis. County-level resolution landslide hazard risk assessments will be completed for all 55 counties and validated with a statewide inventory of landslides. Standardized risk assessments for flood and landslide hazards will be made available to integrate into local and state hazard mitigation plan updates.
Integration of Climate/Land Use Change into Planning	PL-03	A statewide landslide geodatabase is being developed by WVU. <i>Coordination needed with WV and KY Geological Surveys and with WV DOT.</i>
Conduct Public Outreach	TE-01	Publish flood and landslide risk information via community profile web pages that follow a dashboard design and links to web applications WV Flood and Landslide Tools. <i>Coordination needed with FEMA, USACE, SRO, WVDHSEM, etc.</i>
Improve Use of Media	TE-02	Improve sharing of risk assessment information using Story Maps, 3D flood visualizations, web applications, web PDF reports, etc.
Obtain Executive / Legislative Support	GL-01	Promulgate a Procedural Rule that requires municipal and county offices to submit E-911 addresses to the WV DHSEM's Statewide Addressing and Mapping System (SAMS) on an annual basis. Follow similar procedural rules published for submission of digital tax map parcels by county assessors to WV Property Tax Division to perform state-level integration. <i>Coordinate with SRO and WVDHSEM.</i>
Explore Enhanced Funding Methods	GL-02	<ul style="list-style-type: none"> • HMGP seed funding used to create a statewide imagery acquisition. A statewide contract improves purchasing power for counties, state agencies, and other partners for leaf-off aerial imagery. <i>Coordination with SRO</i> • Silver Jackets funding was awarded in support of the statewide risk assessments. A Silver Jackets Coordination meeting is set for February 5 in Charleston. <i>Coordination with USACE, WVDHSEM, SRO, and other partners needed.</i>

Timeline: The performance period for the Statewide Multi-Hazard Risk Assessments (Project Number: FEMA-4273-DR-WV-0031) is 6/201/2018 to 6/4/2021. Outputs of this project include the flood and landslide risk assessments for upcoming local and state hazard mitigation plan updates.

Please contact me if you have any questions.

Sincerely,

A handwritten signature in cursive script that reads "Kurt Donaldson".

Kurt Donaldson
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