

Local Data Integration for Risk Assessment and Mitigation Planning

Credible building inventory information for reliable analytical results

Introduction

The West Virginia GIS Technical Center (WVGISTC), in partnership with FEMA and the West Virginia Division of Homeland Security and Emergency Management (DHSEM), seeks to improve countywide building inventory analysis by integrating accurate, current assessment, CAMA, parcel polygon and E-911 address point information.

Background

The DHSEM and individual West Virginia counties are required to participate in risk assessment and mitigation planning with the goal of creating safer and more resilient communities. Data from multiple sources is compiled and analyzed in order to quantify risk and better prepare for disaster events.

Key to this effort and its success is the inclusion of statewide property location and description information from CAMA and Assessment tables, and parcel polygons and attributes from local assessment data. These sources contribute to a more credible and useful aggregate building inventory and may enable more detailed analysis. See Table 1 for a comparison of default and updated values used in a county hazard risk assessment. The map in **Figure 1** depicts a spatial intersection of the 1% annual chance floodplain and building locations. **Figure 2** depicts a similar situation using the WV Flood Tool and E-911 address locations.

Table 1. Sample updated building stock information*

General Occupancy	Default Count	Updated Count	Default Exposure	Updated Exposure
Agricultural	37	585	\$3,224,000	\$32,257,000
Commercial	798	985	\$306,041,000	\$196,562,000
Education	31	21	\$16,893,000	\$167,626,000
Government	61	70	\$42,464,000	\$27,327,000
Industrial	195	355	\$39,096,000	\$19,665,000
Religious	85	109	\$52,862,000	\$44,222,000
Residential	17,364	18,671	\$1,753,425,000	\$2,388,759,000
Total	18,571	20,796	\$2,214,005,000	\$2,876,418,000

* Source: Hazard Risk Analyses Supplement to the Camden County, GA Joint Hazard Mitigation Plan, 2012, p. 6

Local Data Needs

- Parcel outlines and assessment data for determining property values
- E-911 address points and building footprints for building/structure inventory analysis
- Higher-resolution topography for improved flood zone delineations

Benefits of Building/Structure Inventories

- More refined flood risk analysis and mitigation planning for communities
- Flood risk information imported into MapWV.gov/Flood (Flood Tool) for public use
- Also important for economic development, transportation studies, etc.



Buildings in Floodplain

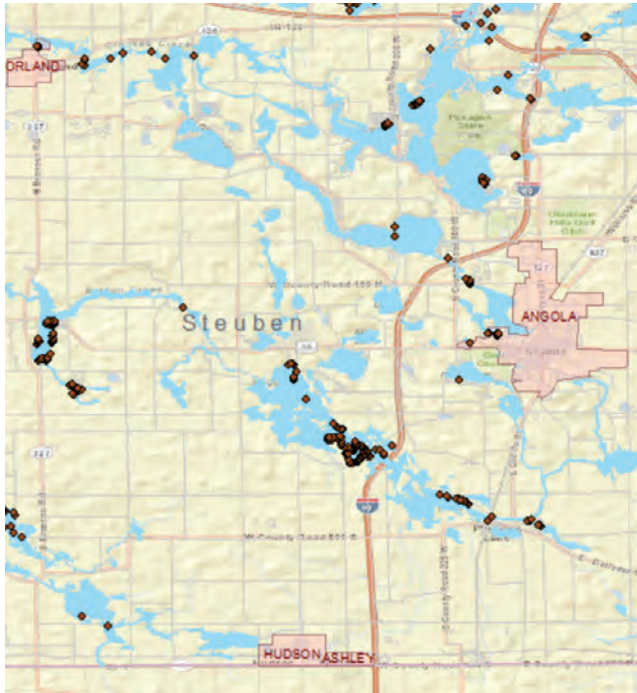


Figure 1. Buildings in 1% annual chance floodplain, sample extracted from Steuben County (Indiana) Multi-Hazard Mitigation Plan.

Flood Tool RiskMAP View



Figure 2. WV Flood Tool RiskMAP View showing address locations intersected with 1% annual chance floodplain and areas of aggregated loss. (www.MapWV.gov/flood)

Local Data Assistance

The WVGISTC and its partners request your assistance in obtaining the GIS and assessment data needed to perform analysis at an appropriate level of precision and accuracy. Local data will be aggregated and expressed in summary form for the purposes of flood risk assessment and mitigation planning. No locally acquired data from counties will be re-distributed without authorization from the data stewards. All flood-risk derived data layers and map products developed by the WVGISTC and its partners will be given to the local governments for their use.

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