



Appendix D — Flood Damage Assessment

There is no single definition of the phrase “flood-damage assessment” that is applicable to all agencies. Such a definition would be difficult to develop and may be unnecessary. Every agency collects damage data that is specific to their mission. Some agencies collect data to aid in determining the scope, severity, and size of the flood as it impacts business and residential structures. Other agencies collect data on specific types of structures (agricultural, highways ,etc.). Still other agencies collect data on the flooding impacts on the stream banks. Figures D-1, D-2, and D-3 show the types of damages for which data is collected by various agencies.



Figure D-1. Flood Damaged Vehicle



Figure D-2. Residential Flood Damages



Figure D-3. Damaged Stream Banks

Anyone attempting to locate specific information on historical floods, potential flooding, and flood damage will soon discover that agencies typically organize their data using criteria and software that differ from those of other agencies, making no attempt to relate their data to any other data. This makes it difficult for agencies to access one another's information concerning flood damage assessments, and therefore difficult to analyze the impacts of the flooding and the performance of the agencies involved.

Table D-1 shows the agencies, organizations, associations, and individuals that collect data relating to flood damage for their own mission specific purposes in West Virginia.

Table D-1
Agencies, Organizations and Associations Collecting Flood Damage Data

American Red Cross
County and Municipal Governments
Federal Emergency Management Agency
Insurance Agents
Public Utilities
Volunteer Organizations Active in Disaster
Regional Planning and Development Offices
Small Business Administration
US Army Corps of Engineers—Baltimore District
US Army Corps of Engineers—Huntington District
US Army Corps of Engineers—Pittsburgh District
USD A—Farm Service Agency
USDA—Natural Resources Conservation Service
WV Bureau for Public Health
WV Department of Agriculture
WV Department of Education
WV Department of Environmental Protection
WV Department of Health and Human Resources
WV Department of Transportation
WV Development Office
WV Division of Corrections
WV Division of Forestry
WV Division of Natural Resources
WV Housing Development Fund
WV National Guard
WV Office of Emergency Services
WV Conservation Agency
WV State Fire Marshal's Office
WV University Extension Service

No effort is ongoing to compile a definitive database of flood damage or flood protection information for all organizations in West Virginia. Furthermore, no one agency is responsible for keeping all flood damage data current. Therefore, no historical flood-damage data is compiled and available for predicting potential damage, nor can flood damage data from different flood events be compared with any confidence.

To facilitate developing comparable data for future floods, the Task Force recommends establishment of a single point of contact or clearinghouse and repository of historic data. This should be one agency, mandated to collect all flood related data including an inventory of at-risk structures, repetitive loss data, flood control project data, and other databases. This data should include information on losses sustained by residences, businesses, farms/ agricultural losses, roadways, railroads and other types of losses.

The WV Office of Emergency Services would be the logical place for such a database providing WVOES is adequately staffed with two database managers and funding to support their activities.

Two systems are used to organize flood damage and flood frequency data in West Virginia: by county and by watershed. The Corps of Engineers and the Natural Resource Conservation Service usually study flood damages on a watershed basis. Numerous watersheds in the state span several counties (see Figure 1-5), therefore flooding usually impacts more than one county at a time. When planning for flood control or flood mitigation projects, it is imperative that the entire watershed be examined to determine the effects of any project or event on flooding from the headwaters to the mouth of the watershed.

Other forms of flood damage assessments are done on a county-by-county basis since that is how Federal assistance is generally provided. The Federal Emergency Management Agency, West Virginia Office of Emergency Services, American Red Cross, and the Small Business Administration typically collect flood damage information on a county-by-county basis. County governments are also the most likely local sponsors for small-scale flood control projects. Few watershed associations have the capacity either in financial resources or in management structure to administer flood control or planning projects.

To ensure that flood information is available for watersheds and for counties, the Task Force recommends that all data including data on repetitive loss structures, be compiled with latitude, longitude, and elevation reference data. In this manner, the data can be extracted from the databases to generate Geographic Information System mapping layers for county or watershed flood protection planning.

The Natural Resource Conservation Service has developed a database of land use and damage assessment for most of the 11-digit HUC code watersheds in West Virginia.. These tables should be examined by NRCS and updated on a regular basis. The Corps of Engineers should develop similar figures for the watersheds along major rivers not covered by the NRCS.

Information on repetitive loss structures is available. However, it is impossible to locate these structures with an acceptable degree of precision. Privacy issues may prevent the information being made available to the public, but it should be available to local, State and Federal agencies involved in floodplain management, flood protection planning, and project planning. All local jurisdictions should obtain the repetitive loss data from WV OES and develop 11-digit HUC codes or latitude, longitude, and elevation figures for each repetitive loss structure in their jurisdiction. This data can then be included in a GIS database for use by local, State and Federal agencies.

Many local officials, State and Federal agencies, and the public are uncertain about whom to contact for information or assistance relating to flooding. With the constant evolution of programs, it is impossible for all agencies to stay abreast of developments in the other agencies involved in flood preparation, response, recovery, and mitigation. It's imperative that the Statewide Flood Protection Plan Task Force take steps to alleviate this by developing a chart that identifies who to contact for information or assistance on the issues related to flooding. This chart should be available in a printed version and in a web-based version for distribution to the public.

It was discovered that information on the mortality from flooding at different recurrence levels has never been examined in West Virginia or comparable areas. Nor is there a portable morgue in West Virginia for use in the event of a major disaster involving loss of life. Current plans provide for borrowing a portable morgue from Pennsylvania. The Task Force recommends that the West Virginia State Medical Examiner's Office be provided the necessary funds to purchase, equip and staff a portable morgue for use in mass casualty disasters and conduct a study of the expected mortality from flooding at different recurrence levels.