



## Appendix K — Education

Public comments and workgroup discussions clearly determined that confusion prevails regarding flood protection programs. During the many meetings conducted to prepare this plan, it became evident that there is a serious lack of adequate education and training on flooding and floodplain management in West Virginia. The West Virginia Office of Emergency Services (WVOES) offers independent study, field and classroom training in floodplain management, flood mitigation, flood proofing, and similar topics for flooding and for other hazards. Most of these courses and workshops were developed by the Emergency Management Institute in Emmittsburg, Maryland. This training is free or low cost. While other training may be available to State, county and municipal officials on these topics, no one else offers such a complete range of training at such an affordable cost.

The Task Force recommends that anyone interested in floodplain management, community planning, building inspection, emergency services, or enforcement of land use regulations be encouraged to participate in this training. WVOES should develop and present at least one state specific flooding workshop each year in West Virginia. Topics could include:

- Local Floodplain Ordinances
- The Potential Impact of Regional Flooding
- The West Virginia State Code Factors that Contribute to Flooding
- Q3 GIS Data
- The Perils of Building in the Floodplain
- Updated Flood Maps
- Flood Proofing
- Land Use Management
- Flood-Resistant Construction Techniques
- Storm-Water Management
- Reducing Flood Insurance Premiums
- Flood Damage
- The Concepts of Stable Streams
- Floodplain Management
- Maintenance of Stream Crossings
- Floodplain Protection
- Dam Safety and Emergency Action Plans

**Table K-1**  
*Training for Floodplain Coordinators, Public Officials*

*And the Public, Offered by FEMA and WVOES*

| Number   | Course Name   | Time              |
|--|---|-------------------|
| <b>Federal Emergency Management Agency – Emergency Management Institute<br/>- Independent Studies Courses</b>                              |   |                   |
| IS-002   | Emergency Preparedness, USA   | Independent Study |
| IS-007   | A Citizen's Guide to Public Assistance  | Independent Study |
| IS-009   | Managing Floodplain Development through the National Flood Insurance Program            | Independent Study |
| IS-012   | Property Acquisition for Local Communities  | Independent Study |
| IS-271   | Anticipating Hazardous Weather & Community Risk   |                   |
| IS-279   | Engineering Principles and Practices for Retrofitting Flood Prone Residential Buildings | Independent Study |
| IS-393   | Introduction to Mitigation  | Independent Study |
| IS-394   | Mitigation for Homeowners   | Independent Study |
| <b>Federal Emergency Management Agency – Resident Courses available at<br/>Emergency Management Institute, Emmitsburg, Maryland</b>        |   |                   |
| E-202  | Debris Management   | 28 hour           |
| E-234  | Digital Hazard Data   | 36 hours – 5 days |
| E-273  | Managing Floodplain Development through the National Flood Insurance Program            | 36 hours – 5 days |
| E-278  | National Flood Insurance Program / Community Rating System                              | 36 hours – 5 days |
| E-279  | Retrofitting Flood-Prone Residential Buildings  | 36 hours – 5 days |
| E-380  | Building Consensus in Disaster Resistant Communities                                    | 36 hours – 5 days |
| <b>Federal Emergency Management Agency – Non Resident Courses which may<br/>be presented by West Virginia Office of Emergency Services</b> |   |                   |
| G-271  | Hazardous Weather and Flood Preparedness  | 2 ½ days          |
| G-278  | Benefit-Cost Analysis: Entry Level Training   | 2 days            |
| G-279  | Retrofitting Flood-Prone Residential Buildings  | 2 days            |
| G-361  | Flood Fight Operations  | 2 ½ days          |
| G-376  | State Hazard Mitigation Planning  | 1 day             |
| G-377  | Regional Hazard Mitigation Planning   | 2 to 3 days       |
| G-398.2  | Mitigation and Recovery Exercises (Flood)   | 1 day             |

WVOES should present at least one Federal Emergency Management Agency field course directly related to flooding each year in West Virginia. Further information on FEMA courses can be found at [www.fema.gov/emi](http://www.fema.gov/emi).

The Task Force in conjunction with the National Flood Insurance Program Coordinator at WVOES should develop and conduct an annual conference/seminar on floodplain management in West Virginia for all floodplain managers, public officials, and other interested parties to encourage training and develop peer support. The Insurance Commission should provide incentives for insurance agents to be educated about the National Flood Insurance Program (NFIP). Ten to twenty agents should be randomly checked each year to ensure that they are offering flood insurance to businesses and residents or providing appropriate referrals; and to determine if flood policies are being rated properly. One incentive that currently exists provides for a partial reimbursement from NFIP for the cost of advertisements that include flood insurance as part of the ad. Few insurance agents are aware of this program.

The Task Force recommends that West Virginia provide free training in flood related issues to local jurisdictions. In addition, the State should reimburse counties for a portion of the salary of trained and nationally certified floodplain managers. Reimbursement would be limited to \$10,000 to counties with a certified floodplain manager in charge of the program at the county level. The estimated cost statewide is \$550,000.

West Virginia should encourage participation in training activities by providing continuing education credits for courses and workshops. Potential attendees would include employees of insurance companies, financial institutions, real-estate companies, utility companies, members of watershed associations, surveyors, professional engineers, floodplain managers, public officials, elected officials, building inspectors, community planners, interested parties and State, county, and municipal governments.

West Virginia should encourage educational outlets (Vo-tech, Community Colleges, publicly owned colleges and universities) to develop classes and curriculums that address floodplain and flood issues. Floodplain management and flooding should be addressed during appropriate sessions of the current curriculum.

To ensure that consistent accurate information is disseminated, brochures should be prepared and distributed to all NFIP policyholders in West Virginia on flood proofing, flood resistant construction techniques, reducing flood insurance premiums, and similar topics. To provide consistent, accurate information, a brochure on the concepts of stable streams should be prepared and distributed. The Vocational Technical schools should incorporate training on retrofitting and other mitigation rebuilding techniques in all construction courses. These personnel should be tasked to work with communities and individuals immediately after a flood event to assist them in building “smarter”



Figure K-1. Statewide Flood Protection Task Force Flood Display

and in a sustainable manner. In addition every vocational technical school should be encouraged to flood proof at least one structure within the county to demonstrate the beauty, functionality, and ability of flood-proofed structures to blend into the environment. All Surveyor classes (college, vocational, high school) should include a

session on completion of elevation certificates, their importance in floodplain management, and a general outline of the floodplain permitting process. To provide the public with a readily visible indication of the elevation of the base flood, all Surveyor classes should require students to survey the Base Flood Elevation and indicate this elevation on utility poles and/or street sign posts within a community, where appropriate. These would be general guides and would not be legal reference points for determining flood insurance premiums.

The WVDOH should establish or reestablish elevation reference marks on all bridges. The Department of Motor Vehicles should identify the dangers of flooded roadways through all high school drivers' education classes and through the license testing process. The Task Force recommends that WVOES make training in maps and map reading available to all Federal, State, local and volunteer personnel involved in flooding in West Virginia on a regular basis.