



3. Identification of Existing Roles

This section will discuss government programs that have impacts on floodplain management and flood damage reduction. While many programs can have an impact on or can be impacted by flooding, this section is pointed toward those with greatest potential impact on floodplain management and flood damage reduction in West Virginia. Contact information for these agencies and other organizations can be found in Appendix P.

a. State Agencies

West Virginia Board of Examiners of Land Surveyors

P. O. Box 925
Fayetteville, WV 25840
(304) 574-2980

This Board is responsible for licensing surveyors. Licensure requires a certain level of knowledge to be displayed to obtain the license. Licensure can require agents to prove knowledge concerning floodplain location, use of floodplain maps, elevation certificates, basic flood-insurance knowledge, etc.

West Virginia Conservation Agency

1900 Kanawha Boulevard East
Charleston, WV 25305-0193
(304) 558-2204



Chapter 19, Article 21A of the West Virginia Code authorizes the creation of the State Conservation Committee and the Conservation Districts. The purpose is to conduct surveys, investigations, and research relating to the character of soil erosion, floodwater, and sediment damage to the conservation, development, use, and disposal of water and the preventive and control measures needed. The Conservation Agency is the umbrella under which the 14 districts operate. The Agency reviews and makes recommendations to the State Conservation Committee on all applications for assistance and final reports for all work carried out in the State under the

Watershed Protection and Flood Prevention Act (PL 566), administered by the USDA - Natural Resources Conservation Service (NRCS).

Watershed Resource Center

The Watershed Resource Center (The Center), funded through US Environmental Protection Agency, WV Department of Environmental Protection, and the WV Conservation Agency is West Virginia's centralized resource for watershed information. The Center provides training, information transfer and assistance to the local watershed associations and groups throughout West Virginia. Development of the resources needed by watershed groups, agencies, and others, both physical and web based, is another service provided by the Center. In addition, specific training and education, identified by local groups as necessary to understand their watershed and the variety of impacts and solutions available to them, is provided.

The Center could serve as a clearinghouse for flood information as well as be a contact for watershed and community groups working with flooding issues. The Center disseminates information on watershed issues through a variety of means including a web based list serve, a quarterly newsletter, its web site – www.wvwrc.org, attendance at watershed meetings, and through training provided to watershed groups.

***West Virginia Department of
Environmental Protection
Division of Water and Waste
Management***

601 57th Street SE
Charleston, WV 25304
(304)-926-0440
<http://www.wvdep.org>



The Division of Water and Waste Management (DWWM) implements programs to protect the quality of water resources of the State.

DWWM programs cover water-quality assessment and certification, permitting and engineering, construction assistance, groundwater protection, dam safety, and environmental enforcement. Significant portions of the Division of Water and Waste Management's responsibilities are designated to administer Federally mandated water-quality programs. Programs such as the National Pollutant Discharge Elimination System (NPDES), a water-pollution control permitting strategy; and underground injection control (UIC), a groundwater-protection permitting plan; strive to meet Clean Water Act objectives. The State revolving fund (SRF), a low-interest loan program, focuses on West Virginia communities seeking financial assistance to plan and construct sewer projects. The 401 Water Quality Certification program reviews and prepares certification responses for Army Corps of Engineers 404 permits and Federal Energy Regulatory Commission license applications.

Rules/regulations/laws

WV Code, Chapter 22, Article 11 – Laboratory Certification
WV Code, Chapter 22, Article 11 – Water Pollution Control Act
WV Code, Chapter 22, Article 12 – Ground Water Protection Act
WV Code, Chapter 22, Article 13 – Natural Streams Preservation Act
WV Code, Chapter 22, Article 14 – Dam Control Act
WV Code, Chapter 22, Article 15 – Solid Waste Management Act
WV Code, Chapter 22C, Article 02 – Water Pollution Control Revolving Fund Act
Regulation, Title 46, CSR, Series 1, 12
Regulation, Title 47, CSR, Series 3, 5A, 10, 11, 26, 31, 34, 38D, 55, 56, 57, 58, 59, 60
Federal Clean Water Act
Federal Safe Drinking Water Act

Flood Recovery Assistance Role

The Department of Environmental Protection's Division of Water and Waste Management provides up-to-date information on the status of sewage, drinking water, and wastewater treatment systems damaged or inoperable because of a flood event. The Department provides technical assistance to the owners/operators of such systems to expeditiously bring them into compliance. Point of Contact: William D. Brannon (304-558-2107).

***West Virginia Department of Environmental Protection
Division of Mining and Reclamation***

601 57th Street SE
Charleston, WV 25304
(304)-926-0440
<http://www.wvdep.org>

The Division of Mining and Reclamation (DMR) provides protection to the environment through the enforcement of West Virginia's Surface Mining Control and Reclamation Act (chapter 22, article 3) and Surface Mining and Reclamation of Minerals other than Coal (chapter 22, article 4). DMR also has jurisdiction in all matters pertaining to coal and other mineral resources (articles 11, 12, 13, and 14 of chapter 22, and article 1 of chapter 22B). This division establishes the goals and guidelines of the permitting program and is responsible for the review of all types of permit applications. Review teams in each of DMR's four regional offices consist of engineers, geologists, environmental inspectors, and resource specialists. Two subunits within permitting are responsible for specific application reviews: the hydrologic protection unit and the permit support unit. Inspection and enforcement of mining operations is an important function of the DMR. This section establishes and decides the goals and evaluation standards for inspection and enforcement activities.

Rules/regulations/laws

WV Code, Chapter 22, Article 3
WV Code, Chapter 22, Articles 11, 12, 13, 14
WV Code, Chapter 22B, Article 1
WV Code, Chapter 22, Article 4
Regulations, Title 38, Series 2 - West Virginia Surface Mining and Reclamation

Flood Recovery Assistance Role

The Department of Environmental Protection's Division of Mining and Reclamation maintains a listing of surface-mining permits and provides them to the West Virginia Housing and Development Fund, Office of Emergency Services, Federal Emergency Management Agency and other appropriate agencies and officials for potential use as temporary/permanent housing. In extreme situations, these sites may be useful for solid-waste disposal and burn sites. Point of Contact, Mike Shank (304-759-0520).

West Virginia Department of Environmental Protection Office of Waste Management

601 57th Street SE
Charleston, WV 25304
(304)-926-0440
<http://www.wvdep.org>

The Office of Waste Management (OWM) protects the public health and the environment by reducing the extent and duration of un-permitted releases. Through a technically sound compliance program, OWM works to ensure that an economic advantage is not gained by non-compliance. OWM operates two major sections, the Hazardous Waste and Solid Waste sections, with joint control over environmental enforcement.

Hazardous Waste section performs site inspections and compliance assistance, manages the technical and financial assurance requirements on the generation, collection, treatment, storage and disposal of hazardous waste by responsible persons and entities, resolves issues involving violations of environmental law, maintains an accurate database of underground storage tanks (UST) in West Virginia and this unit certifies UST workers.

Solid Waste section reviews and approves permits for all non industrial landfills and transfer stations, cleans up and reclaims open dumps and deals with the State closure of former unlined landfills. Environmental enforcement works with the Department of Environmental Protection's Division of Water and Waste Management. It promotes compliance by providing compliance assistance and/or enforcing permit conditions required of municipalities, solid waste facilities, industry and the public.

Rules/regulations/laws

WV Code, Chapter 22, articles 15, 16, 17, 18, 19
Regulations 47 CSR 35, 36, 37, and 38

Flood Recovery Assistance Role:

The Department of Environmental Protection's Division of Waste Management manages solid waste and hazardous waste handling and disposal. Following a flood event, access to permitted solid waste facilities, reopening of closed facilities or disposal and surface mine sites (only when absolutely necessary) is critical for disposal of the enormous amounts of solid waste generated. Hazardous waste handling, transporting and disposal, as well as coordination with the Federal Environmental Protection Agency, are equally critical. Contact Persons and telephone numbers: Sudhir Patel, Solid Waste, (304) 558-6350; Tom Fisher, Hazardous Waste, (304) 558-5989.

***West Virginia Department of Environmental Protection
Office of Environmental Remediation***

601 57th Street SE
Charleston, WV 25304
(304)-926-0440
<http://www.wvdep.org>

The Office of Environmental Remediation (OER) was created in November 1997 to consolidate the agency's remediation programs. The organizational structure allows the office to focus its energy and technical talent solely on the remediation sciences and procedures used to restore a contaminated site. The office is committed to consistency among its cleanup programs. The office is organized along a project management function, which oversees site activities; and a technical support function, which provides specialized technical support. OER operates four sections, Brownfield/voluntary remediation, Leaking Underground Storage Tanks, Hazardous Waste Management and Superfund.

These sections encourage voluntary remediation activities and brownfield revitalization, provides oversight of the cleanup of releases of regulated substances from leaking underground storage tanks, piping, or overfill spills, administers the federal Resource Conservation and Recovery Act (RCRA) that oversees the investigation and cleanup of hazardous waste releases, and coordinates federal Superfund cleanups with the EPA and the U.S. Department of Defense.

Rules/regulations/laws

WV Code, Chapter 22, Articles 17, 18, 19, 22
State regulations, 60 CSR 3, 33 CSR 30

***West Virginia Department of Environmental Protection
Division of Air Quality***

601 57th Street SE
Charleston, WV 25304
(304)-926-0440
<http://www.wvdep.org>

The Division of Air Quality (DAQ) develops and implements regulations and related programs mandated by the federal Clean Air Act, and the State Air Pollution Control Act. It works for the protection of public health, and the prevention or mitigation of environmental impacts, resulting

from air pollutant emissions. DAQ monitors air quality and regulates emissions of air pollutants from industrial and commercial facilities.

DAQ operates six sections that provide administrative support, monitors air quality; performs laboratory analyses of air quality samples, administers facilities that treat, store, and dispose of solid and hazardous waste, implements West Virginia's air permitting programs, and develops and revises the State implementation plan (SIP) that details how a state plans to attain and maintain compliance with National Ambient Air Quality Standards (NAAQS).

Rules/regulations/laws

Federal Resource Conservation and Recovery Act
Federal Clean Air Act
Federal Clean Air Act Amendments of 1990
State Air Pollution Control Act
Regulations, 45CSR13, 45CSR14, 45CSR16, 45CSR19, 45CSR23, 45CSR24, 45CSR25, 45CSR30, and 45CSR34

Flood Recovery Assistance Role:

The Department of Environmental Protection's Division of Air Quality regulates open burning, an issue that arises when handling and disposing of combustible flood debris by burning. Where appropriate, the Division of Air Quality waives strict compliance with the open burning regulations, but monitors, instructs and involves local fire departments in the appropriate methods for operating burn sites. Contact Person and phone number: Jesse Adkins (304) 926-3647.

West Virginia Department of Environmental Protection Office of Oil and Gas

601 57th Street SE
Charleston, WV 25304
(304)-926-0440
<http://www.wvdep.org>

The Office of Oil and Gas (OO&G) deals with all aspects of the oil and gas industry. These include: well work permitting, inspection, operator transfers, training of oil and gas operators, maintaining records on the 100,000 oil and gas wells drilled since 1860, environmental permits issued under solid waste and water pollution for the oil and gas production and transportation industry, gas storage wells, underground injection control (UIC) program, surface and mineral owner dispute resolution, evaluation and plugging of abandoned wells and clean up of polluted sites, and collecting, processing and maintaining Global Positioning System (GPS) data on all well locations.

OO&G operates three sections that address the permitting, enforcement and education of West Virginia's oil and gas industry; provide a forum to resolve disputes between affected parties in the oil and gas and coal industry through various hearings of the shallow gas review board, the

coal bed methane review board, and the oil and gas inspectors board; deal with the assessment of abandoned wells and oversees plugging of wells.

Rules/regulations/laws

WV Code, chapter 22, articles 6,7,8,9,10, 21

Regulation, 35 CSR 1-6

***West Virginia Department of Environmental Protection
Office of Abandoned Mine Lands & Reclamation***

601 57th Street SE
Charleston, WV 25304
(304)-926-0440
<http://www.wvdep.org>

A substantial number of acres of land in the United States have been disturbed by surface and underground coal mining. These un-reclaimed acres impose social and economic costs to residents, as well as impair environmental quality. With public health, general welfare, safety, and danger to property as its first priorities, the Office of Abandoned Mine Lands and Reclamation (AML&R) corrects hazardous conditions. The conditions are: old buildings, hazardous gases, refuse piles, abandoned equipment, subsidence, hazardous water bodies, mine drainage, clogged streams, mine entries (portals) and shafts, polluted water, mine fires, abandoned highwalls, and cleaning plants.

AML&R operates through eight sections responsible for the management and administration, decides what sites AML&R should reclaim, develops the most cost-effective and practical methods used to abate the many types of abandoned mine problems, obtains right-of-entry agreements from all private property owners and lessees for AML projects, administers construction contracts, in conjunction with The Federal Office of Surface Mining (OSM) addresses emergency problems and manages the water quality monitoring, and technical support for abandoned mine land reclamation environmental water pollution projects.

Rules, regulations, laws

Title IV, Surface Mining Control and Reclamation Act of 1977, of public law 95-87.

WV Code, Chapter 22, Articles 1, 3A.

WV Surface Mining Reclamation Regulation, Title 38, CSR-2D.

West Virginia Division of Forestry

Guthrie Center Building 13
1900 Kanawha Boulevard East
Charleston, WV 25305-0180
(304) 558-2788

The Division of Forestry (DOF), under chapter 19-1A-3 of the West Virginia Code, is charged with the protection and management of all West Virginia forest land resources. The DOF acts as the lead agency within the State to regulate and coordinate forestry activities of private industries

and landowners through partnerships emphasizing a stewardship ethic that protects, nurtures and promotes utilization and sustains the State's forest resources.

The DOF has a limited role regarding flooding events. However, many of the programs the DOF is charged with can have a positive impact on land use activities. Forest protection, Logging Sediment Control Act and management planning to name a few programs, all deal with land use activities and in part ensure those activities reduce or eliminate the movement of soil to our State's waters. These and other programs are ongoing across the State and will ensure our forests continue to provide jobs, scenic beauty, recreational opportunities and clean water.

West Virginia Division of Highways

Building 5, Room 109
1900 Kanawha Boulevard East
Charleston, WV 25305-0403
(304) 558-3505



The Division of Highways has limited responsibilities regarding flooding. Primarily, the Division maintains the highway system during and after flood events. Floodplain management by the Division is limited to monitoring highway construction activities to ensure new construction or maintenance does not increase the Base Flood Elevation. Indirect effects, however, may result from new construction incidental to the location of roads and highways in or adjacent to floodplains.

West Virginia Division of Labor

Building 3, Room 319
1900 Kanawha Boulevard East
Charleston, WV 25305-0570
(304) 558-7890

West Virginia Division of Labor – Manufactured Housing Section, licenses dealers and installers of manufactured homes and has rules concerning proper installation of manufactured homes including those located in the floodplain.

West Virginia Division of Natural Resources

Building 3, Room 669
1900 Kanawha Boulevard East
Charleston, WV 25305-0660
(304) 558-2754



One mission of the West Virginia Division of Natural Resources (DNR), under Chapter 20-2-1 of the West Virginia Code, is to protect and maintain all species of wildlife in the State for public benefits including hunting, fishing, recreational values, economic contributions and for scientific and educational uses.

DNR's role in floodplain management lies in its authority to protect wetlands, recreation opportunities and fish and wildlife habitats in the State and in its exercise of the legislative mandates of the Public Land Corporation that exist in these areas. Through a Memorandum of Agreement with the Department of Environmental Protection (DEP), DNR provides comments to DEP concerning their certification for wetland fills in accordance with the Federal Fish and Wildlife Coordination Act. The Public Land Corporation authorizes private sector actions that affect publicly owned minerals in the streambeds of the State.

DNR has developed management plans that preserve, enhance and protect floodplains on many State owned or controlled areas. DNR maintains a statewide inventory on wetlands; significant/sensitive fisheries and wildlife habitat; rare, threatened, and endangered species; and fish and wildlife related recreation areas. It also is developing GIS capabilities to assess the vegetative conditions and uses of the State's stream bank habitats.

West Virginia Geological and Economic Survey

Mont Chateau Research Center
Morgantown, WV 26507
(304) 294-5331



The West Virginia Geological and Economic Survey has no direct role in the assessment of flood damage. However, agency activities related to flood mitigation are summarized below:

- A set of USGS and FEMA flood maps are maintained and are available for public use;
- One staff member is available to assist the public in the use of these maps (fee service);
- Staff members are available to perform mineral and geological hazard reports for proposed development sites. These reports routinely consider the potential for flood hazards (fee service);
- Staff members provide consultations or presentations to inform the public about floods and other geologic hazards; and
- Landslide-prone area maps are maintained for the major urban areas of the State and information about the interrelationships between landslides and flooding is available.
- The agency manages the Mineral Lands Mapping Program (MLMP). This program is creating new and more accurate coal geology coverage in a GIS format to better assess the value of remaining coal reserves in the State. Other MLMP partners include the West Virginia University GIS Technical Center and the Department of Tax and Revenue.
- The agency has fiscal and administrative oversight of the State Geographic Information System (GIS) program and the State GIS Coordinator is an employee of the GES.

West Virginia Insurance Commission

1112 Smith Street
P. O. Box 50540
Charleston, WV 25305-0540
(304) 558-3345

The West Virginia Insurance Commission has responsibility for licensing Insurance Agents, requires certain level of knowledge to be displayed before issuing license, can require agents to prove knowledge concerning flood insurance. The Insurance Commission can also require insurance agents to notify customers that homeowner's policies do not usually cover flood damage.

West Virginia Office of Emergency Services

Capitol Complex
Building 1, Room EB-80
1900 Kanawha Boulevard East
Charleston, WV 25305-0360
(304) 558-5380



The Office of Emergency Services is designated by Chapter 15, Article 5, of the West Virginia Code as the coordinating agency for emergency services in the State. This includes the four phases of emergency operations known as mitigation, preparedness, response and recovery. These activities meet the demands of all hazards faced by the State, including flooding. Under the Integrated Emergency Management System concept, every activity of the office has some relevance to flood-loss reduction. However, the three principal activities are the Hazard Mitigation Grant Program (HMGP), the Integrated Flood Observing and Warning System (IFLOWS) and the National Flood Insurance Program (NFIP).

Authorized under Section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, the Hazard Mitigation Grant Program (HMGP) administered by the Federal Emergency Management Agency (FEMA) provides grants to States and local governments to implement long-term hazard mitigation measures after a major disaster declaration. The purpose of the program is to reduce the loss of life and property due to natural disasters and to enable mitigation measures to be implemented during the immediate recovery from a disaster.

IFLOWS originated in the late 1970's as a result of the April 1977 flood. It has expanded beyond the area affected by that flood to include 46 of West Virginia's 55 counties. IFLOWS goal is to provide better warning of flooding, especially on the upper portions of small streams. Information from automated, radio-reporting rain gages is available to counties participating in the system and to the National Weather Service. This allows the proper response activities, e.g., warning and/or evacuation, to be initiated as soon as possible.

The National Flood Insurance Program is a partnership between the Federal and local governments. The federal government ensures flood insurance is available in communities (counties, and incorporated municipalities) that regulate development in Special Flood Hazard Areas. The primary control is requiring new development to be built at an elevation above that of

the Base Flood Elevation or “100-year flood”. State law delegates to local governments the authority to take all actions necessary to participate in this program. WVOES, through the NFIP’s Community Assistance Program, provides technical assistance to local governments who manage the NFIP program.

West Virginia Real Estate Commission

1033 Quarrier Street
Suite 400
Charleston, WV 25301-2315

The West Virginia Real Estate Commission has the responsibility of licensing Real Estate Agents, requires certain level of knowledge to be displayed to obtain license, can require agents to prove knowledge concerning floodplain location, how to use a Flood Insurance Rate Map (FIRM), basic flood insurance knowledge, etc. The Real Estate Commission could also require agents to disclose if a property is located in a regulated floodplain.

West Virginia State Board of Professional Engineers

608 Union Building
Charleston, WV 25301-2104
(304) 558-3554

The West Virginia State Board of Professional Engineers has the responsibility of testing and registering graduate engineers, many of whom practice in the area of Civil Engineering. Many of these engineers design drainage structures and are proficient in the science of hydraulics. They are not only capable of establishing the floodplain and floodway from maps and other data, but can predict with reasonable accuracy the effect that modifications in the floodplain or floodway will have in future flooding events.

West Virginia University Cooperative Extension Service

PO Box 6031
West Virginia University
Morgantown, West Virginia 26506
(304) 293-5691



The West Virginia University, Cooperative Extension Service has a grass-roots educational delivery system that extends the University into communities throughout the State. Community development is one of the primary missions of the Extension Service. In support of this mission, County Extensions Agents (1) provide technical assistance and information for group decision-making and action, (2) organize and initiate community development efforts, and (3) offer leadership development and training. The Cooperative Extension Service, accordingly, can

assume a vital role in working with local communities to help them recover from flood events and to mitigate future flood damage.

The Extension Service also provides an educational framework and delivery system through which diverse University resources can be extended to local communities. Again, this can be relevant to helping communities recover from flood events and to mitigate future flood damage.

***West Virginia University
GIS Technical Center***

Department of Geology and
Geography
425 White Hall
Morgantown, WV 26507
(304) 293-5603



The GIS Technical Center has no direct role in the assessment of flood damage. However, as a partner in the Mineral Lands Mapping Program (MLMP) and in cooperation with the USGS, the center has generated digital versions of USGS quad sheets, including hydrographic and elevation contour layers. The center maintains a comprehensive set of GIS data for the State, a directory of state GIS users and services, as well as links to other GIS resources in the State and nation. The information is available for viewing at the website: <http://wvgis.wvu.edu>

***West Virginia University
Natural Resources Analysis Center (NRAC)***

College of Agriculture, Forestry, and Consumer Services
2009 Agriculture Sciences Building
Morgantown, WV 26506
(304) 293-6253

NRAC has no direct role in the assessment of flood damage. However, the center applies the latest remote sensing and digital mapping technology to analyze environmental issues such as watershed management and land use. The wide range of research and teaching activities at NRAC includes environmental planning, environmental and natural resource economics, forest and wild land recreation, wildlife management, forest ecology, and land and water resource reclamation.

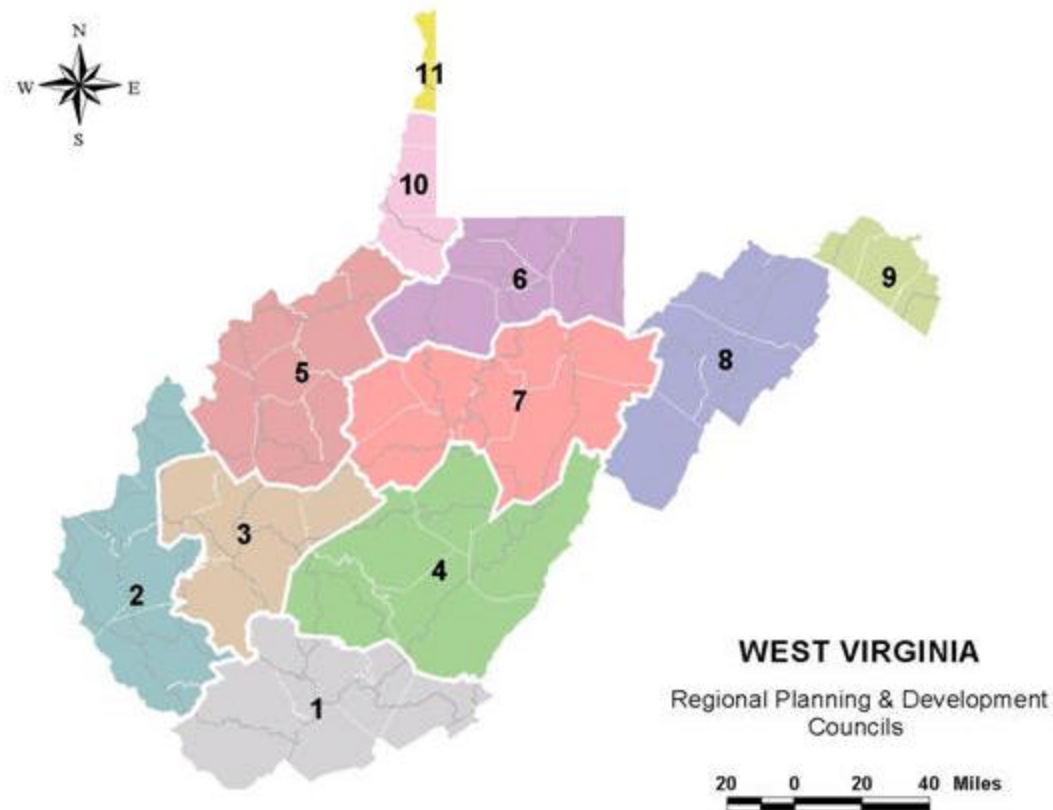
One current effort is underway to convert National Hydrographic Data (NHD) files to a 1:24,000 scale for improved stream network information for the State. Researchers at NRAC also developed the Watershed Characterization and Modeling System (WCMS) to bring spatial data and water quality modeling to the desktop in a customized GIS interface that combines a wide variety of spatial data layers and water quality modeling components to complete common tasks for WV DEP personnel. Other projects can be viewed at the center website at <http://www.nrac.wvu.edu/>

B. REGIONAL (MULTIPLE COUNTY) ORGANIZATIONS

Regional Planning & Development Councils

The eleven (11) Regional Planning and Development Councils (RP&DC) were established in 1972 by the West Virginia Legislature under Chapter 8, Article 25. They were formed as local, multi-jurisdictional agencies to assist with planning and development for improvement within their region. They prepare and recommend ordinances and regulations to implement plans.

The Councils' mission is to convert community and economic development needs into proactive strategies and plans. These plans become realistic opportunities and eventually become projects or programs. They operate as facilitators in a systematic and synergistic process. Their roles range from identification and prioritization of local goals, to assisting local, State, and federal bureaucracies in their pursuit of grants or project endorsement.



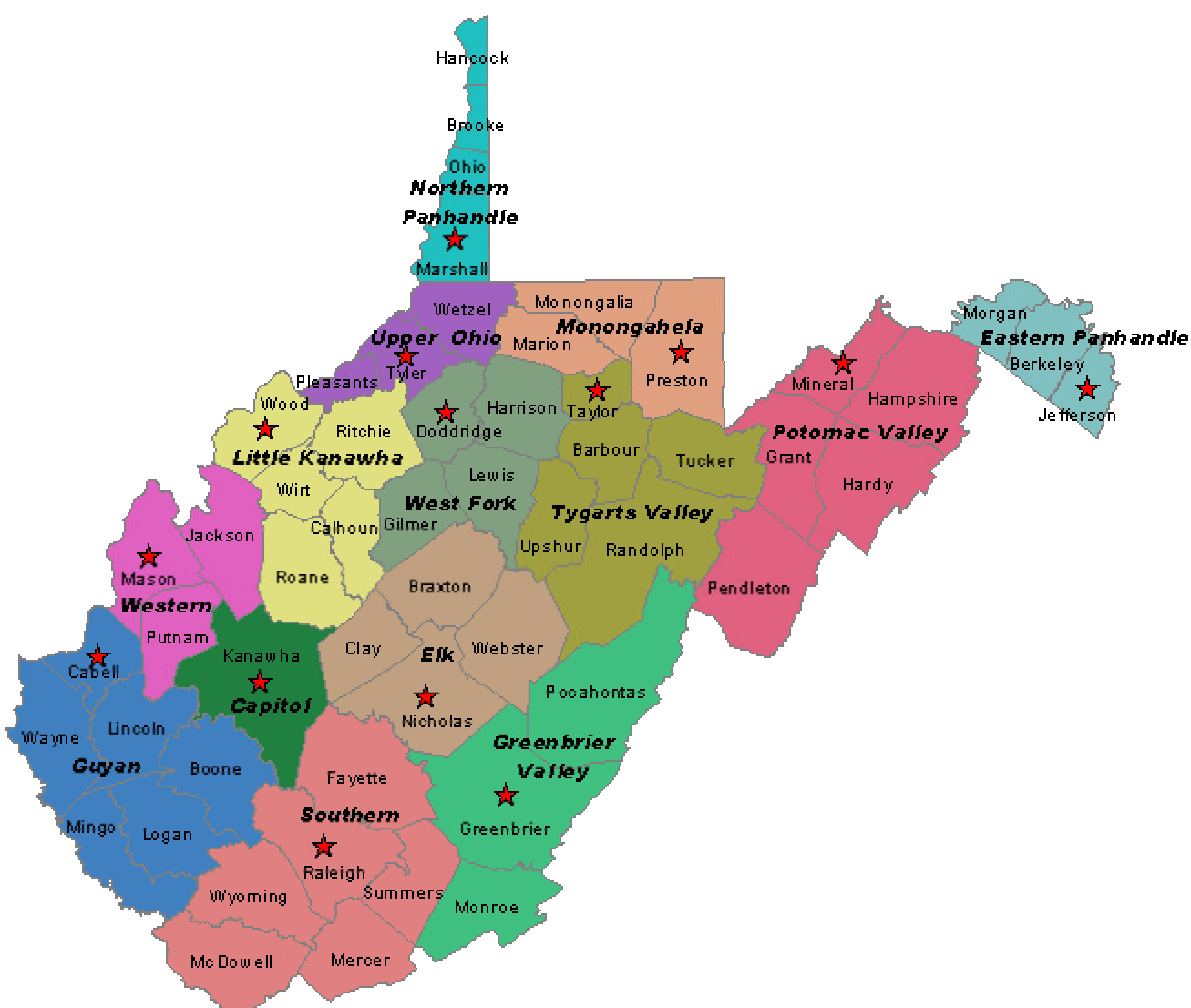
Map 3 –1: Regional Planning and Development Councils

The Councils are structured as locally oriented, public corporations. They are directed by elected officials from the counties and communities within their jurisdictions, as well as non-elected appointees from a cross-section of a region's social and economic institutions. Each Council has a staff adept in public administration, regional/community planning and economic development.

Typically, the Councils are able to leverage \$7 in grant funds for every \$1 of local matching funds. In other words, a local investment of \$140 million brings in an additional \$840 million in project capital.

West Virginia Conservation Districts

Under the “Conservation Districts Law of West Virginia.” (Chapter 19, Article 21A of the West Virginia Code) Conservation and Water Improvement districts may be established in West Virginia. West Virginia has fourteen fully functional conservation districts. These districts cooperate with Federal, State and local agencies in conservation activities across the State. The districts have assumed local leadership responsibilities for many flood protection projects in West Virginia.



Map 3 –2: Conservation Districts In West Virginia

Chapter 19, Article 21B of the West Virginia Code authorizes the creation of Watershed Improvement Districts. A Watershed Improvement District may be established within a Conservation District to promote soil conservation or the conservation, development, utilization or disposal of water by the construction of improvements for such purpose or purposes. A Watershed Improvement District may levy taxes; issue bonds and has the power to condemn property.

C. LOCAL ROLES AND RESPONSIBILITIES IN FLOOD PROTECTION

This brief section on local roles discusses a critical part of floodplain management. Under the WV Code, county and municipal governments are given authority to plan and control land uses within their jurisdictions. These local units of government also are responsible for the public safety and security of the residents within their jurisdiction. The code also provides opportunities for cooperative agreements between local units of government to perform certain of these activities on a regional scale. Regional corrections and solid-waste management are two good examples of these cooperative efforts. More opportunities for regionalizing floodplain management activities and flood protection need to be explored. Existing watershed associations that extend across many political boundaries are a prime example of the regional organizations that can play a critical local role in reducing flood damages, assuring sound floodplain management and accommodating economic growth without increasing damageable property.

Local units of government may ignore floodplain management or they may develop floodplain management programs that are national models. They use their planning and zoning authority to determine the complexion of the floodplain in their community. Local governments significantly influence the application and implementation of the mandatory state and federal floodplain management programs. The authority to issue floodplain construction permits (or not), the authority to grant variances from floodplain ordinances, and the opportunity to completely ignore these legal responsibilities falls directly on the shoulders of the county or municipal leadership. This local/regional authority and responsibility should not be subordinated by State or Federal government, but rather should be supported and encouraged through education, technical assistance and where appropriate financial resources.

Chapter 7, Article 1, Section 3v authorizes local governments to take the minimum actions necessary to maintain eligibility in the National Flood Insurance Program. This includes managing development in the Special Flood Hazard Areas, which requires new residential construction to be elevated above the Base Flood Elevation (the level of the 100-year flood). The success of this program rests in the hands of local officials who are often not committed to it.

Chapter 7, Article 1, Section 3u of the West Virginia Code known as “Authority Of Counties And Municipalities To Treat Streams To Prevent Floods”, empowers counties and municipalities to re-channel, dredge streams, remove debris, snags, sandbars, rocks and other obstructions from streams; straighten channels; and carry out erosion and sediment control programs. These units of government are also empowered to levy, acquire property by purchase, right of eminent domain, or other legal manner for the purpose of preventing floods. All activities of these bodies must comply with applicable federal and State laws.

Community Improvement Assessment Districts (CIAD) may be formed under this act to pay for such work or cost share with federal programs.

Local governing bodies may enter into agreements with federal agencies such as the U. S. Army Corps of Engineers, the Natural Resource Conservation Service and FEMA to act as the local sponsor for flood damage reduction programs and projects. For details on federal agency programs, see the appropriate section below.

D. NON-GOVERNMENTAL ORGANIZATIONS - CITIZEN INITIATIVE AND THE PRIVATE SECTOR

Too often as a society we turn to government to set boundaries, to set limits of risk, and to identify an acceptable impact on the natural and beneficial values of the floodplain.

Unfortunately, government programs are not tailor-made for all situations. Fortunately, many individuals, civic organizations, and private companies take the initiative to recognize flooding risks and impacts and to identify actions to reduce these risks and impacts. Individually these efforts may seem small, but collectively they represent a tangible benefit.

The Canaan Valley Institute

Kiena Smith
Executive Director
Canaan Valley Institute
P.O. Box 673
Davis, WV 26260
(1-800-922-3601)

The Canaan Valley Institute (CVI) is a dedicated and diverse team of scientists, landscape ecologists, economists and business professionals, watershed resources specialists, geographic information systems analysts, software developers, community and program developers, grant writers, and a highly skilled support staff, all working for the sustainability of communities in the Mid-Atlantic Highlands. The Institute's technology is cutting-edge, the expertise unparalleled, and the commitment 100 percent.

CVI serves as a clearinghouse for information about the resources of the Mid-Atlantic Highlands and shares that information with stakeholders. When gaps in information are identified, the Institute often works to fill them, using the best science and technology available. All of CVI's publications and studies are available to the public, and the Institute's staff is experienced and ready to serve as a facilitator between local groups and government agencies so that relevant information is continually collected from these sources, shared, and put to use.

The West Virginia Rivers Coalition

The coalition consists of twenty-one organizations interested in river management. This group and the West Virginia Chapter of the Sierra Club have recommended that portions of thirteen

rivers in West Virginia be evaluated for designation as Wild and Scenic Rivers. The Forest Service has agreed to include fourteen rivers (excluding the Cranberry River, which was previously studied), including five newly proposed streams, for evaluation. Designation as a Wild and Scenic River can prohibit construction of certain flood protection measures such as dams, channel modifications, diversions, floodwalls and levees.

West Virginia Beekeeper's Association

c/o John Campbell, Secretary/Treasurer
West Virginia Beekeeper's Association
102 First Street
Parsons, WV 26287
(304) 478-3675

The Association has established a program to provide a reconditioned hive, a queen and worker bees, supers (boxes where bees store honey), veil, gloves, smoker and other equipment to beekeepers that have lost their hive due to flooding or other disaster. These apian resources would cost more than \$300 if purchased new. For more information about this program, or about beekeeping in West Virginia, contact Mr. John Campbell at the above address or the West Virginia State Apiarist, George Clutter at Building 9, Guthrie Agricultural Center, 1900 Kanawha Boulevard East, Charleston, WV 25305-0170, (304) 558-2212

Watershed Associations

A recent movement in West Virginia has resulted in the development of a number of watershed associations dedicated to improving the health and safety of the watersheds within the State. Many of these watershed associations have expressed concern about the impacts flooding has on their homes and neighborhoods. Four agencies, the Department of Environmental Protection, the Division of Forestry, the Conservation Agency and the Division of Natural Resources have a Basin Coordinator and a Stream Partners group that works with these associations to help them become established and navigate the bureaucratic maze of government. The Watershed Basin Coordinator can be contacted at the WV DEP Division of Water and Waste Management at (304) 926-0440. A complete list of the watershed associations in West Virginia can be found at: http://www.wvwrc.org/CONTACTS/WV_watershed_contacts.htm.

The reasons people participate in watershed associations are as numerous as the people involved. They include:

- A desire to improve their neighborhood,
- The need to resolve a particular situation,
- The desire to increase the value of a project,
- To restore harmony in the community, or
- Because it improves on existing business practices.

Whatever the motive, these efforts are important. Examples of types of initiatives include: building to a higher flood standard, flood proofing a structure, organizing cleanups and river

watch campaigns, limiting construction impacts, limiting the size of the construction site, pre-disaster emergency planning, and other activities.

Faith-Based Organizations

Numerous faith based organizations provide assistance to flood victims in the form of donated food, clothing, money, family resources, home repair, temporary housing for disaster workers and displaced families, home cleanup and in some cases housing reconstruction. Many such groups are not formally organized; and respond only to disasters in their own area. Others are formal groups which respond to disasters throughout the State, the nation and inter-nationally. The following is a listing of some faith-based organizations active in West Virginia:

- McDowell Mission (United Methodists)
- Mustards Seeds and Mountains (Baptist)
- Catholic Community Services (Catholic)
- The West Virginia Conference (The United Methodist Church)
- The West Virginia Presbytery (The Presbyterian Church in the USA)
- Mennonite Disaster Services (Mennonites)
- Church of the Brethren
- Episcopal Diocese of West Virginia
- United Church of Christ
- United Methodist Church
- Southern Baptist Disaster Relief
- Lutherans and Lions Club
- Christian Outreach International

Other Relief and Recovery Organizations

There are a number of other private sector organizations that are active in West Virginia. These organizations provide monetary assistance and relief to flood victims following disasters as well as providing home construction services and educational materials regarding flooding and floodplain issues. These organizations include:

- Highland Education Project
- United Way
- The West Virginia University Cooperative Extension Service
- The American Red Cross
- SAFE – Stop Abusive Family Environments
- Habitat for Humanity
- The Council of the Southern Mountains
- Project Recovery
- National Ruritan Association
- The Salvation Army
- Appalachian Service Project
- Rural Appalachian Improvement League

E. FEDERAL AGENCIES



U.S. Army Corps of Engineers

US Army Corps of Engineers
USAED Huntington
502 8th Street
Huntington, WV 25701
(304)-399-5636

US Army Corps of Engineers
USAED Pittsburgh
1000 Liberty Ave
Pittsburgh, PA 15222-4186
(412)-395-7502

US Army Corps of Engineers
USAED Baltimore
10 South Howard Street
Baltimore, MD 21201
(410) 962-7608

The U. S. Army Corps of Engineers (Corps) is involved with a variety of water resource management activities in West Virginia. The State is divided between the three Corps Districts shown above. The primary watersheds controlled by those three Districts are shown in Table 3-5.

Table 3-5. Corps of Engineers District Jurisdictions in West Virginia

District	River Basins
Pittsburgh	Cheat River, Tygart River, Monongahela River, and Ohio River
Huntington	Big Sandy River, Kanawha/New River, Little Kanawha River and Ohio River
Baltimore	Potomac River
Norfolk	James River

Planning activities done by the Corps for the management and development of water and related land resources are undertaken through various congressional authorizations. The majority of studies fall under one of two following programs:

- **General Investigations Program** – Results in individual Congressionally authorized projects for major Federal investments in flood damage reduction. Includes studies for structural and nonstructural flood damage reduction features that would exceed the funding limitations of the Continuing Authorities Program.

The Corps is known for its civil works projects for water resources development including flood control, navigation, water supply, environmental restoration, and recreation. Although flood protection issues can be addressed by the Continuing Authorities Program (CAP), many projects, by virtue of their complexity and expense are implemented through the General Investigations (GI) program (see below). Flood protection measures may include dams, levees, floodwalls, or channel modifications. In some situations, nonstructural measures such as floodproofing and/or permanent floodplain evacuation and flood warning systems can be effective means to reduce

flood damages. Due to the magnitude and expense of projects investigated under the GI program, Congress authorizes them through Water Resources Development Act legislation that is normally enacted every two years. Many of the existing Corps of Engineer flood protection projects in the state were implemented through the GI program (see Appendix L for a list of Flood Control Projects in West Virginia).

Corps structural and nonstructural flood control measures require a local or nonfederal financial commitment for planning, design, construction and operations and maintenance of the project features. Projects developed through the General Investigations (GI) program are initiated through a Reconnaissance Study (100% Federal cost) followed by a cost shared (50%-50%) Feasibility Study that includes compliance with the National Environmental Policy Act provisions. These projects are authorized for construction by Congress based upon the recommendations of the feasibility study. For flood protection projects, non-federal sponsors must provide 35% of project design and construction costs and provide 100% of project O&M costs. The technical assistance and information provided through the Floodplain Management Services Program is also an essential element in fostering local self-help to reduce flood damages. Other planning and assistance programs are offered by the Corps to reduce flood damages.

- Continuing Authorities Program (CAP)

Pre-authorized by Congress – Projects are smaller in scope and are less expensive. This program provides the COE with a standing authority to respond quickly to water resource problems. Congress has authorized the Corps to construct small projects for flood control and environmental restoration within specified funding limits. Pre-authorization saves time in development and approval of projects. Funding limits for these small projects range from \$500,000 to \$7,000,000.

Under Section 205 of the Flood Control Act of 1948 (Continuing Authorities Program), as amended, projects may be constructed when the Chief of Engineers determines that the work is advisable. In addition, the project must constitute a complete solution to the flood problem involved, and not require subsequent improvements to insure effective operation. The Federal share may not exceed \$7,000,000. The initial \$100,000 in project feasibility studies is full federal expense. Thereafter all planning, design and construction costs are shared. Cost sharing is 65% Federal and 35% non-Federal. The Small Flood Control Projects (Section 205) would be the primary program for addressing flood damages at smaller communities.

- Planning Assistance to States Program (Section 22).

Through the Planning Assistance to States Program (Section 22, Water Resources Development Act of 1974) the COE is authorized to cooperate with any State, county or municipal governmental unit in preparing comprehensive plans for the development, utilization and conservation of water and related resources. This program is significant to conservation of water and related resources because it allows a broad range of eligible activities to be completed by the COE. The program uses COE staff and expertise to encourage and promote statewide comprehensive water resources planning, to avoid duplication of Federal/State efforts and to achieve Federal, State and community goals. Section 22 can be used effectively to tie together several water resource concerns including floodplain management.

- Technical and Engineering Assistance for Streambank Erosion

Section 55, Water Resources Development Act of 1974 allows the COE to provide technical and engineering assistance to nonfederal public interests for development of methods to prevent damage from shore and stream bank erosion.

- Emergency Flood Control Activities Disaster Assistance

Through this program the Chief of Engineers is authorized to spend funds for flood emergency preparation, flood fighting and rescue operations or for the repair and restoration of any flood control work threatened or destroyed by flood, regardless of origin or ownership of the project.

***United States Department of
Agriculture
West Virginia Farm Service
Agency***

John Rader, State Executive Director
Telephone (304) 284-4800
Fax (304) 284-4821



The Farm Service Agency's mission is to respond to disasters affecting the agricultural producers of West Virginia by:

- Completing damage assessment procedures to determine the extent and type of damage along with what programs may be available and/or requested.
- Implementing farm programs like the Emergency Conservation Program (ECP) that will rehabilitate farmlands and restore farm structures to preexisting conditions.
- Crop Loss Disaster Assistance Program Payments to help stabilize farm income.
- Non-Insured Assistance Program (NAP) provides payments for qualified crop losses.
- Emergency Loans are low interest loans to provide funds needed to maintain the agricultural operations.
- Develop the programs to cover specific needs in the affected area.
- Assisting other agencies as necessary.

FSA provides the needed resources to stabilize farm income, protect farmlands and agricultural operations through the various cost share programs.

***United States Department of Agriculture
Forest Service***

180 Canfield Street
Morgantown, WV 26505-3101
(304) 285-1508



The United States Department of Agriculture Forest Service is a Federal agency that manages public lands in national forests and grasslands, is the largest forestry research organization in the world, and provides technical and financial assistance to State and private forestry agencies. All three-mission areas of the Forest Service are represented in West Virginia – National Forest System, Research, and State and Private Forestry.

National Forest System – The Forest Service manages public lands, known collectively as the National Forest System. The Monongahela National Forest was established in West Virginia following the passage of the 1911 Weeks Act. In 1915, the first 7,200 acres were acquired to begin what would become the Monongahela National Forest. Today the forest is over 909,000 acres in Federal ownership in ten (10) counties. The Monongahela National Forest is managed for multiple uses and benefits that include water, forage, wildlife, wood, and recreation. Watershed management on Federal lands within the Monongahela National Forest is a key component of their work.

Research – The Forest Service provides the scientific and technical knowledge necessary to protect and sustain the Nation’s natural resources on all lands, providing benefits to people within the capabilities of the land.

The laboratory in Parsons, researches the natural and human induced factors in the sustainability of central Appalachian forest ecosystems. It provides guidelines for managing central Appalachian forests for a range of products and benefits while maintaining the productivity and diversity of the soil, water, and forest resources. Watershed management is a key component of this. The Fernow Experimental Forest, a field laboratory located in Parsons, supports this research.

State and Private Forestry – Forest Service State and Private Forest programs offer technical expertise and financial support for landowners to manage, protect, and better use their forests.

Fire Management protects lives, homes, and improved property as well as natural resources from uncontrolled wildfires by building strong, efficient West Virginia Division of Forestry and local fire protection programs.

Forest Stewardship encourages West Virginia private landowners to apply ecological and economic resource management principles as they manage their forestland to produce forest benefits for the present and future generations. The **Watershed and Clean Water Program** is a component of Forest Stewardship.

Forest Legacy fosters protection and continued use of forested lands threatened with conversion to non-forest uses by purchasing conservation easements or fee titles from willing private landowners.

Urban and Community Forestry enhances West Virginia cities and communities through planning and managing urban forest resources to promote their environmental, cultural, and biological health.

Addressing water issues, including flooding, on private lands requires integration of State and Private Forestry Programs. Implementing State and Private Forestry programs within watersheds results in an effective way to target actions, and to build partnerships with other agencies and groups to leverage results.

The Forest Service participates in the Emergency Watershed Protection (EWP) program, a component of the National Forest System emergency response program. It provides emergency response on National Forest System lands for a range of disasters such as earthquakes, hurricanes, and floods.

The Morgantown Field Office works closely with the West Virginia State Forester in flood related program areas. The Field Office assisted the State Forester in facilitating and producing the West Virginia Forest Resources Strategic Plan, that addresses water quality and flow, forest management, and wildfire control that affect flooding events in West Virginia. The Morgantown Field Office has representation on the West Virginia Governor's Advisory Committee to the State Forester. The Morgantown Field Office worked with the West Virginia State Forester in developing a proposal that utilizes Forest Service State and Private Forestry programs to provide a wide range of assistance to the State following the July 2001 flooding in West Virginia.

***US Department Of
Agriculture –
Natural Resources
Conservation Service***

75 High Street Room 301
Morgantown, WV 26505
(304) 284-7540



Under Public Law 83-566 (PL 566), the U.S. Natural Resources Conservation Service (NRCS) has the authority to assist local sponsors who are undertaking activities for the purpose of flood prevention, water conservation, fish and wildlife development, recreation, groundwater recharge, water quality management, and land conservation. The Act provides for technical, financial, and credit assistance by the US Department of Agriculture to local sponsors representing the people living in small watersheds. The NRCS's authority extends to all small watersheds with less than 250,000 acres. That distinction delineates the authorities of the NRCS and the US Army Corps of Engineers.

The NRCS has special authority under Public Law 78-534 (PL 534), for the Potomac Headwaters Drainage within West Virginia. PL 534, enacted in 1944, was the forerunner of PL 566 and authorized NRCS to carry out activities in eleven (11) selected watersheds across the United States. The Potomac Headwaters is one of these watersheds. The purposes and authorities of PL 534 are similar to PL 566, with some differences in cost sharing provisions.

PL 566 and PL 534 are administered by NRCS in cooperation with the WV State Conservation Agency, Conservation Districts, local units of government and the USDA Forest Service. These authorities are excellent examples of strong Federal, State and local partnerships designed to protect and enhance the soil, water and related resources of the State.

Requests for PL 566 and PL 534 assistance are channeled through the WV Conservation Committee, who approve applications for assistance and forward them to NRCS for action. If funding and staff resources are available, NRCS will prepare a watershed plan and if necessary a NEPA compliance document. Once a watershed plan is approved and authorized for operation, the sponsors are eligible for financial and technical assistance from NRCS for installation of the works of improvement.

Through PL 566 and PL 534, NRCS can assist local sponsors in planning and implementing flood damage reduction projects. These projects are based on watersheds, rather than political boundaries. NRCS has the authority to plan and implement a full spectrum of flood damage reduction measures including structural (dams, channel improvements, dikes, etc.), non-structural (flood warning systems, floodplain acquisition, relocation, retrofitting structures, etc.), and more innovative projects such as natural stream restoration. NRCS's authorities are unique in that assistance can also be provided to address land conservation issues on both public and private lands that impact flooding.


NRCS can also provide technical assistance in the form of floodplain management and watershed management studies. Since 1977, there have been fifty (50) floodplain Management Studies coordinated and completed by the NRCS in West Virginia. These studies have been used by local units of government to make land use planning decisions and develop land use regulations.

Since the 1950's, NRCS has received seventy-eight (78) applications for assistance from local communities. Sixty-six (66) of the applications were for assistance under PL 566. The others were for assistance under PL 534. Servicing the applications has resulted in forty-one (41) projects being approved for operations. Ten (10) are PL 534 projects and thirty-one are PL 566 projects. Nineteen (19) watershed projects have been completed and another seventeen (17) are in various stages ranging from just getting started to essentially complete. Four (4) projects have been de-authorized and one (1) project has been placed in an inactive status. Preliminary planning indicated that nineteen (19) projects lacked sufficient local support for implementation or would be unfeasible, resulting in those applications being withdrawn. Planning was terminated on ten (10) other applications. Eight (8) applications have not been serviced. NRCS is currently assisting project sponsors with the development of detailed plans on four watersheds in West Virginia.

Completed and operational projects cover almost two million acres of the State. They include applying 307,500 acres of land treatment measures, construction of 157 dams, 265,650 feet of

channel work and 4,600 feet of dikes. To date, approximately 233,100 acres of land treatment measures, 157 dams, 234,180 feet of channel work and 4,600 feet of earthen dikes have been installed.

Section 216 of Public Law 81-516 authorizes the NRCS's Emergency Watershed Protection (EWP) program. The EWP program assists sponsors and individuals in implementing emergency recovery measures to relieve imminent hazards created by a natural disaster that causes a sudden watershed impairment. EWP assistance may be made available upon a declaration by the State Conservationist when a Federal emergency has been declared by the President, or upon a request for assistance from a sponsoring agency. EWP assistance consists of the installation of emergency measures to reduce hazards to life and property and reduce further disaster expenditures through the purchase of floodplain easements by the Federal government. This program is designed for recovery work, not emergency response efforts or flood prevention measures. Requests for EWP assistance can be made through local NRCS service centers or through eligible sponsors, who then would request NRCS assistance.

<p><i>Department of Commerce (DOC)</i> <i>Economic Development</i> <i>Administration</i></p> <p>Disaster Recovery Coordinator, EDA Herbert C. Hoover Building Room 7327 Washington, DC 20230 (202) 482-2659</p>	
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Economic Adjustment Assistance Program

The Economic Adjustment Assistance Program is activated by the President declaring a disaster or by another federal declaration. Its purpose is to respond to the short and long-term effects of severe economic dislocation events on communities. The types of assistance provided includes: Categorical project economic adjustment grants (usually funded from supplemental appropriations) for planning, technical assistance, revolving loan funds, and infrastructure construction to assist affected communities in accelerating economic recovery and implementing strategic actions to reduce the risk of economic damage and loss in commercial and industrial areas from future disasters.

US Department Of Commerce -
National Oceanic and Atmospheric
Administration
National Weather Service

400 Parkway Road
Charleston, WV 25309
(304)-746-0180



The National Weather Service (NWS) is concerned with the atmospheric events, and the monitoring and/or prediction of routine and destructive weather events. The NWS describes and predicts those processes of the hydrologic cycle which impact the functioning of the nation's economy and communities. The information produced by the Weather Service takes the form of several different "products". One of the principal functions of the Weather Forecast Office (WFO) and Hydrologic Service Area (HAS) is issuance of river forecasts and flood warnings to the general public, specialized users and disseminating to media such as newspapers, radio and TV stations.

The National Weather Service operates three specific programs related to water management. These include the River Forecast Centers and River Districts activities, the Flood and Flash Flood Warning program and the Hydrologic Services activities. River and rainfall records kept by the weather service are indispensable to riverside industries and their engineers as they design flood protection systems. The flood and flash flood warnings issued by the NWS are a reliable tool to assist emergency operation managers in implementing flood fighting strategies. The river forecast centers produce forecasts which are essential for navigation activities, transportation commerce, crop management, reservoir operation, fish and wildlife management and industrial practices along rivers.

The operations of the WFO include the flash flood and flood watch/warning programs. Generally, flood/flash flood watches are issued by WFOs and focus on large areas such as portions of states. Flood/flash flood warnings are issued by the WFO and are primarily county-based. The River Forecast Center (RFC) focuses on longer-term flood events. Accordingly, RFCs prepare forecasts for rivers and river systems detailing river stages at specific gauging points.

The flood watch and warning program provides the following products:

- Flood Outlook (ESF) – An ESF may be issued by the WFO if forecast meteorological conditions indicate that a significantly heavy precipitation episode may occur that would either cause flooding or aggravate existing flooding.
- Flood Watch (FFA) – This product is used to inform the public and cooperating agencies that current and developing hydro-meteorological conditions are such that there is a threat of flooding, but the occurrence is neither certain nor imminent. Persons in the watch area are thereby advised to check flood action plans, keep informed and be ready to take necessary actions if a warning is issued or flooding is observed.
- Flash Flood Warning (FFW) – An FFW is a public warning issued by WFOs for life or property threatening situations within six (6) hours of the causative event. It is as specific as possible, focusing on specific communities, streams or areas where flooding is imminent or in progress. Persons in the warning area are advised to take necessary precautions immediately.
- Flood Warning (FLW) – An FLW is a public warning issued by WFOs for life or property threatening situations more than six (6) hours after the causative event or for river flooding when forecasts or conditions indicate that rivers will exceed flooding thresholds. It is as specific as possible, focusing on specific river points or communities, streams or areas where flooding is imminent or in progress. Persons in the warning area are advised to take necessary precautions immediately.
- Flood Statement (FLS) and Flash Flood Statement (FFS) – The office issuing a flood watch or a flood/flash flood warning is responsible for issuing follow-up statements keeping the public fully

informed about current conditions. The FLS can also be used to inform the public of minor or nuisance flooding problems.

- Ice Jam Flooding, Dam-break Flooding, Levee Failure – These are forms of flooding which are usually associated with already existing flooding conditions and would be announced along with the FFA, FFW, and FFS.

The NWS recognizes the importance of local flood warning and response systems to improve flood warning service to communities, and provides technical assistance to communities with flood problems. Technical support includes:

- Recommending alternative flood warning systems,
- Helping communities in the design, installation and implementation of warning and response systems,
- Training of personnel, and
- Providing operational support to responsible community officials.

The National Weather Service operates a StormReady program to assist local governments in becoming more resistant to weather related disasters.

The NOAA weather radio broadcasts 24 hours per day with local and regional weather forecasts. These forecasts can be monitored on any radio with the capability to monitor between 162.40 and 162.55 MHz. Some of these radios can be placed in a standby “mode” and will be activated by an emergency tone broadcast by the NWS alerting the user to the broadcast of an emergency message.

S.A.M.E. or Specific Area Message Encoding radios can be programmed to only receive advisories and warnings for specific counties. Three more S.A.M.E. transmitters are needed to cover the entire State.

Integrated Flood Observing and Warning System (IFLOWS) is an automated rain and river gauges early warning system installed in seven Appalachian states. This system is about 45 percent complete in the 46 West Virginia counties where it currently is under development. IFLOWS is monitored locally with information relayed to the State emergency operation center, and to the NWS office responsible for flood forecasting. State and local emergency personnel and NWS forecasters use the information for monitoring developing flooding situations and implementing emergency response plans.

US Department Of Interior - Fish and Wildlife Service

US Fish and Wildlife Service
694 Beverly Pike
Elkins, WV 26241
Phone: (304) 636-6586
Fax: (304) 636-7824



The mission of the U.S. Fish and Wildlife Service is “working with others to conserve, protect, and enhance fish and wildlife habitats for the continuing benefit of the people”. The Service’s

broad-based wetlands initiative includes floodplain management as the majority of wetlands occur in floodplains. The Service's wetlands and floodplain activities can be grouped under three headings: 1) protection; 2) restoration, enhancement and management; and 3) research, information transfer, and education.

Protection: The Service protects wetlands by assisting regulatory agencies with assessing impacts to wetlands and other waters of the United States from land and water development projects. These projects range from wetland fills for development and highway projects to stream channel alterations and dams. Based on their findings the Service makes recommendations to avoid, minimize and compensate for impacts to fish and wildlife resources to the Federal or State permitting agency. Wetlands protection occurs as a result of the Service's involvement with the implementation of the Farm Bill (including Swampbuster, Conservation Reserve Program, Wetland Reserve Program and Farm Debt Restructure and Conservation Set-Aside programs).

The Service also protects wetlands by managing easements on wetlands and purchasing priority wetlands. Land acquisition for the National Wildlife Refuge System is funded, in part, by the sale of Federal duck stamps. The National Wetlands Priority Conservation Plan identified priority wetlands for acquisition using Land and Water Conservation Act funds. The Service implements the North American Waterfowl Management Plan, an agreement between the U.S. and Canada relating to wetland habitat protection and the restoration of waterfowl populations.

Restoration, Enhancement, and Management: The Service investigates environmental contaminant sites (90 percent of which are located in wetlands) and assists with remediation and restoration of these sites. The Service's Partners for Fish and Wildlife program provides technical and financial assistance to private land owners for the protection and restoration of fish and wildlife habitat. The West Virginia Field Office Partners program specializes in riparian and wetland restoration via livestock exclusion fencing.

Research, Information Transfer, and Education: The National Wetlands Inventory is a project to map wetlands in the United States. NWI maps are based on the USGS 1:24,000 scale mapping. Wetland research is conducted at several locations nationwide.

US Department of the Interior - Geological Survey

US Geological Survey
Water Resources Division
11 Dunbar Street
Charleston, WV 25301
(304) 347-5130



The U.S. Geological Survey (USGS), in cooperation with several State and Federal agencies, conducts a wide range of activities related to the monitoring, measuring, and modeling of water in all phases of the hydrologic cycle. The USGS stands as the sole science agency for the Department of the Interior and serves the Nation by providing reliable information to 1) describe

and understand the earth; 2) minimize loss of life and property from natural disasters; 3) manage water, biological, energy, and mineral resources; and 4) enhance and protect our quality of life.

Information on the flow of rivers is a vital national asset that safeguards lives and property and ensures adequate water resources for a healthy economy. The USGS operates about 7,000 streamflow-gaging stations that keep watch on the Nation's rivers. Over 100 such gages are operated in West Virginia that transmit near real-time data via the world wide web at <http://water.usgs.gov> or directly to the National Weather Service for flood forecasting. Additional flood peak information is obtained from a network of 20 small streams equipped with crest-stage gages. Streamflow information obtained from these gaging stations is analyzed periodically by the USGS to predict the magnitude and frequency of future floods. This flood information is the basis for Federal Emergency Management Agency floodplain studies as well as many other flood-related evaluations such as bridge and culvert design.

USGS data are available to the public through published reports and the previously mentioned web site and includes:

- Daily streamflow records for all gaging stations,
- Annual peak discharge values,
- Topographic maps, and
- Flood magnitude and frequency studies.

The USGS is proud of its outstanding history of public service and scientific advances. The USGS has been at the forefront in providing information for understanding the earth. Better scientific data, tools, and understanding of the Nation's rivers are important to virtually all USGS stakeholders and customers. The Nation's rivers are in many ways the lifeblood of our country and represent a resource that needs protection and proper management for the benefit of present and future generations.

US Department of the Interior – National Park Service

P.O. Box 246
Glen Jean, WV 25846
(304) 465-0508



The role as steward of historic and natural area sites is the National Park Service's (NPS) most well known function. The NPS also provides valuable natural resource planning and technical assistance and educational opportunities through its Rivers and Trail Assistance Program. Through the Rivers and Trails Program, communities and regional organizations can request assistance from the NPS staff to help assess and prepare river corridor plans for a particular segment of river. Communities must apply for this service and are evaluated on a competitive basis. Factors considered include unique or special attributes of the resource, the level of local support and commitment, and the manageability and scope of the project. This program allows top quality professionals to become involved with local and regional river corridor planning projects, which may otherwise never get off the ground.

The National Park Service also coordinates the Nationwide Rivers Inventory, which generates a “Final List of Rivers.” This list identifies rivers that meet the minimum criteria for further study and/or potential inclusion into the National Wild and Scenic Rivers System.

US Department of Transportation Federal Highway Administration

700 Washington Street East
Geary Plaza
Suite 200
Charleston, WV 25301
(304) 347-5928

The Federal Highway Administration (FHWA) is responsible for the design, construction and maintenance of the Nation’s Federal highways. The construction of highways can pose a significant impact upon the ability of floodplains to function. The Federal Highway Administration is directed to minimize this impact through Federal regulations that reflect Executive Order 11988 Floodplain Management. Executive Order 11990 Protection of Wetlands contains provisions which are also addressed by Code 23 of Federal Regulations pertaining to highways.

Part 650 - The Emergency Relief Program governs the administration of emergency funds for the repair or reconstruction of Federal-aid highways, which are found to have suffered serious damage by natural disasters over a wide area or serious damage from catastrophic failures. This includes damage from floods.

US Environmental Protection Agency

Region 3
1650 Arch Street
Philadelphia, PA 19103-2029
(800) 438-2474
(215) 814-5000
<http://www.epa.gov/region03>



The Environmental Protection Agency’s (EPA) primary activities in floodplain management relate to regulations affecting water quality, wetlands protection and review of federal projects as established by the Clean Water Act. EPA has undertaken significant efforts to monitor wetland activities nationwide. This has bearing upon floodplain management concerns because of the overlapping nature of wetlands and floodplains. This work has produced information about the current status of wetlands in the State. Although EPA is the administering agency for the Clean Water Act, the Army Corps of Engineers actually issues 404 permits. The National Environmental Policy Act (NEPA) requires that impacts from projects involving Federal action be made public. Lead agencies must produce a document (Environmental Impact Statement or Environmental Assessment) discussing the existing environment, proposed action, alternatives, impacts and other information pertinent to reviewing the degree of environmental impact.

Encroachment on any water of the United States is prohibited without a permit from the Army Corps of Engineers section 404(b) (1) of the Clean Water Act (404). Information developed during the NEPA process may be utilized for the analysis required under Section 404. The standards, however, are not identical; NEPA requires the disclosure and evaluation of reasonable alternatives; Section 404 allows only the least environmentally damaging alternatives to be permitted.

The Section 404 guidelines set up four general restrictions. Under these guidelines discharges are not allowed if:

- There is a practicable alternative which would have less adverse impacts (so long as it does not have other adverse consequences),
- The discharge violates certain water quality standards, or, jeopardizes confirmed existence of endangered species,
- The discharge causes significant degradation of waters of the United States, or
- All appropriate and practicable measures to minimize potential harm to the ecosystem have not been taken.

This is what EPA considers to be mitigation under Section 404. In evaluating the potential short-term and long-term effects, the impact analysis must include consideration of physical and chemical values, biological values, special aquatic sites, human use characteristics and contaminated sediments.

In 1987 EPA created the Office of Wetlands Protection, within the Office of Water, to strengthen EPA's commitment to wetlands protection. That office has an important role in facilitating the implementation of the recommendations of the National Wetlands Policy Forum, a 20-member panel chaired by Governor Thomas Kean of New Jersey. The Forum produced a report entitled, Protecting American's Wetlands: An Action Agenda. The report contains over 100 specific actions for all levels of government and the private sector.

The EPA has adopted the goal of the National Wetlands Policy Forum to achieve no overall net loss of the Nation's remaining wetland base, as defined by acreage and function; and to restore and create wetlands, where feasible to increase the quality and quantity of the Nation's wetlands resource base. Consistent with this goal, EPA will review and, when necessary, revise its programs to protect the chemical, physical and biological integrity of wetlands.

To implement this goal, EPA has established the following objectives:

- Wetlands Planning Initiative – EPA will provide technical support and participate in the application of planning approaches to protect wetland resources including the preparation of State Wetlands Conservation plans.
- Mechanisms to Increase State/Local Role in Wetlands Protection – EPA will provide guidance, technical assistance and support to enhance the role of State and local governments in both regulatory and non-regulatory wetlands protection efforts.

- Section 404 Regulatory Fixes - EPA will increase enforcement through the application of administrative and judicial penalty authorities. EPA will work with the Corps of Engineers to increase enforcement against un-permitted discharges into wetlands.
- EPA will work with the Corps of Engineers to reduce uncertainty and confusion regarding the implementation of the Section 404 permit program.
- EPA will work with the Corps of Engineers, U.S. Fish and Wildlife Service, and Natural Resources Conservation Service to establish and implement a single delineation methodology for jurisdictional wetlands.
- Mitigation Policy – EPA actions will reflect a policy that unavoidable wetland impacts should be fully offset by wetlands restoration or creation. EPA will work with the other key Federal agencies in the Section 404 permit program to develop a joint mitigation policy focusing in particular on the goal of no net loss of wetlands.
- Information And Education – EPA will work to increase public awareness of wetland functions and values, of the Clean Water Act regulatory programs affecting wetlands, and of non-regulatory approaches for protecting wetlands.
- Cumulative Impacts – EPA will develop and test methods for assessing the cumulative effects of wetland loss and degradation. EPA will work to incorporate these assessment approaches into comprehensive planning and permit decisions for wetlands.
- Wetlands Restoration – EPA will identify opportunities and initiate projects to restore and create wetlands, to increase the quantity and quality of wetlands and to meet other national environmental goals, including those of the Clean Water Act. EPA will also identify areas appropriate for wetland restoration based upon advance planning processes and consideration of cumulative impacts such as point or non-point source problems within watershed areas.

These objectives and other activities of the Office of Wetlands protection affect floodplain management. Functioning wetlands serve an important role to attenuate or detain floodwaters in wetland areas, thereby reducing the peak flow of a flooding event downstream. Quantifying this function of wetlands to store floodwaters would be a useful tool for floodplain managers. It would give floodplain managers a specific basis on which to promote wetlands protection as a flood-loss reduction strategy. The activities of EPA's Office of Wetland Protection will undoubtedly link more carefully defined relationships between wetlands and floodplains.

Federal Emergency Management Agency

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The Federal Emergency Management Agency (FEMA) plays the most prominent role of all Federal agencies in floodplain management. FEMA's National Flood Insurance Program (NFIP) is a program that encourages property owners to buy federally backed flood insurance. The NFIP provides flood insurance to meet the rising costs of repairing damage caused by floods. Flood insurance is a better alternative than disaster assistance. The NFIP is based upon an agreement between local communities and the Federal government, that if the community will enforce certain practices in the 100-year floodplain, then flood insurance will be available in the community.

The NFIP is a voluntary program where communities elect to join and participate. However, if a community with identified flood hazard areas chooses not to participate, it will not be eligible for certain financial assistance in the event of a Presidentially declared disaster. To participate, communities must adopt a Floodplain Management Ordinance that requires a permit for all construction and development with FEMA mapped floodplains. This provides the basis for a local floodplain management program and should help the community identify its problems, develop resources to confront flooding problems, and establish realistic, achievable measures to reduce flooding risk in the community.

FEMA publishes Flood Insurance Rate Maps (FIRMS) that show the flood risk areas within a community along with Flood Insurance Studies (FIS) that include 100-year flood elevations, floodways, stream profiles, discharge amounts and other hydrologic and hydraulic information pertinent to understanding flooding. Currently 258 localities within the State have had these studies prepared.

Flood Mitigation Assistance

The Flood Mitigation Assistance program (FMA) is made available to a State on an annual basis. The FMA program provides grants to communities for projects that reduce the risk of flood damage to structures that have flood insurance coverage. This funding is available for mitigation planning and implementation of mitigation measures only. The State is the administrator of the FMA program and is responsible for selecting projects for funding from the applicants submitted by all communities within the State. The State then forwards selected applications to FEMA for an eligibility determination. Although individuals cannot apply directly for FMA funds, their local government may submit an application on their behalf.

Sustainability/Sustainable Re-development

A new initiative and integral part of the mitigation function is the concept of sustainability/sustainable re-development. The concept of sustainability brings a relatively new approach to environmental, economic, and social thought, and has the potential to enhance the achievement of mitigation goals in the post-disaster (as well as pre-disaster) environment. Sustainability is development that maintains or enhances economic opportunity and community well being while respecting, protecting and restoring the natural environment upon which people and economies depend. Sustainable re-development is simply the application of the concepts and practices of sustainable development to the disaster recovery process.

Mitigation Assistance Program

The Mitigation Assistance Program (MAP) provides financial assistance to states for the purpose of the development and maintenance of a comprehensive statewide hazard mitigation capability for the purpose of implementing pre- and post-disaster mitigation.

Community Assistance Program – State Support Services Element

The Community Assistance Program (CAP) is a product-oriented financial assistance program directly related to the flood-loss reduction objectives of the National Flood Insurance Program (NFIP). States and communities that are participating in the NFIP are eligible for this assistance. The CAP is intended to identify, prevent, and resolve floodplain management issues in participating communities before they develop into problems requiring enforcement action.

The NFIP's Community Rating System (CRS) was implemented in 1990 as a program for recognizing and encouraging community floodplain management activities that exceed the minimum NFIP standards. The National Flood Insurance Reform Act of 1994 codified the Community Rating System in the NFIP. Under the CRS, flood insurance premium rates are adjusted to reflect the reduced flood risk resulting from community activities that meet the three goals of the CRS: (1) reduce flood losses; (2) facilitate accurate insurance rating; and (3) promote the awareness of flood insurance

A reduction in flood insurance costs is only one of the benefits of a community participating in the CRS. Others include: increased public safety; avoidance of economic disruption and losses; reduced risks upon local public safety officials and utility personnel; and reduced human suffering. No communities in West Virginia participate in the CRS.

FEMA coordinates the Federal Disaster Relief Programs whenever the President declares an "emergency" or a "major disaster" under the Robert T. Stafford Disaster Relief and Emergency Assistance Act. FEMA provides grants to individuals, state, and local units of governments and qualified nonprofit agencies for the restoration, repair, or replacement of eligible buildings, bridges, roads and other eligible items. FEMA chairs a Federal Interagency Hazard Mitigation Team that examines the incident and issues recommendations to reduce future exposure to flood hazards.

Through the "Section 1362, Purchase of Flood Damaged Property Program" FEMA can purchase flood-damaged property that had flood insurance to provide property owners the chance

to relocate to non-flood-prone areas. This helps reduce the loss of lives and property in high-risk flood areas. The program also provides a community with a permanent open space in a floodplain that will be available for recreation. This enhances the beneficial natural values of the floodplain.

Through Section 1316 of the National Flood Insurance Act, flood insurance policy holders may file claims for structures that are subject to imminent collapse or subsidence from erosion due to their location along waterways.

The purpose of the Hazard Mitigation Grant Program (HMGP) is to provide 75/25 matching funds to states and to local communities to implement immediate and long-term hazard mitigation measures after a major disaster. The goal of the program is to effectively reduce a state's or community's vulnerability to natural hazards. Eligibility is the same for the HMGP as it is for the Public Assistance Program. Examples of hazard Mitigation Grant Program projects include:

- Structural hazard control, such as debris basins or floodwalls,
- Retrofitting (flood proofing) to protect structures from future damage,
- Acquisition and relocation of structures out of hazard prone areas,
- Warning systems and plans to protect communities from loss of life and property, or
- Development of state or local standards to protect new and substantially improved structures from disaster damage.