

Chapter 4 Capability Assessment

Disaster Mitigation Act of 2000

§201.4(c)(3)(ii): A discussion of the State's pre- and post-disaster hazard management policies, programs, and capabilities to mitigate the hazards in the area, including: and evaluation of State laws, regulations, policies, and programs related to hazard mitigation as well as to development in hazard-prone areas; a discussion of State funding capabilities for hazard mitigation projects; and a general description and analysis of the effectiveness of local mitigation policies, programs, and capabilities.

4.1 State Capability Assessment

The following section has been revised by the Virginia Department of Emergency Management staff and reviewed by the CVHMSC. Suggested revisions were received by VDEM mitigation staff and updated accordingly. Changes in federal, state, and local capabilities are included, as well as information from local hazard mitigation plans. The capability assessment was previously within the Mitigation Strategy chapter, but has since been removed and is now a stand alone chapter.

A comprehensive capability assessment includes an examination of administrative, political and financial support for the proposed strategies and projects. A partial listing of traditional mitigation and conservation programs available to fund some types of mitigation efforts follows. This is not a complete listing but is intended to initiate discussion of funding. It should be recognized that since the plan focuses on mitigation of state facilities, funding may be available through capital improvement budgets that each agency submits as part of the biennial budgeting process tied to the legislature.

Table 4.1 uses the following phrases to describe the program's support or relevance to mitigation. It must be noted that some of the federal programs have not been used in Virginia due to timing, funding or appropriateness. The programs are listed however, as resources that have potential use in the state's mitigation programs. As implementation of the plan begins, all relevant programs will be explored as potential funding sources or technical support resources to assist successful funding and implementation of projects and strategies ranked "high."

Effectiveness Regarding Loss Reduction:

Support - programs, policies, funding or other assistance that helps implement mitigation.

Facilitate - programs, policies or technical assistance that assists implementation of mitigation measures.

Funding - programs that provide funding to support mitigation.



4.2 Pre-disaster Mitigation Programs

Mitigation programs reduce the vulnerability of citizens, property and natural resources to the destructive forces of natural events and human actions. Temporary measures are often implemented in emergency situations during response. Permanent measures use structural and non-structural approaches to reduce hazards.

The programs described in Table 4.1 were created by Congress and the Commonwealth to address specific natural hazards. *When adequately staffed and funded*, these programs are comprehensive and extremely effective in reducing the effects of natural hazards. However, during the past decade of state and federal budget challenges, full funding and staffing of programs has been rare. The result is inadequate application of mitigation programs, in particular those addressing stream and riverbank restoration, channel maintenance and stormwater management.

4.3 Disaster Response, Recovery and Community Preparedness

These programs can improve state and local disaster response capabilities through planning, training, personnel, information and equipment assistance. The programs are designed to address specific areas to support preparedness for natural disasters as well as adequate emergency response. The programs are extremely effective when adequately staffed and funded but budget challenges continue on the state and federal level. In addition, many programs require a 5% to 50% non-federal local match. Local governments have been equally challenged during the past decade; inability for local governments to provide match has impeded successful use of some of the HMA programs.

The programs listed in Table 4.1 provide special assistance to state and local authorities once an emergency or disaster has occurred. These programs are designed to supplement state and local efforts to protect the public from the effects of an emergency and identify those killed in a disaster. These programs, while not often needed or used, are considered adequate to provide specific assistance in response to natural or, in some cases, human-caused hazards.

4.4 Federally Funded Assistance under a Presidential Declaration

The Stafford Act revision impacted several key disaster assistance programs. The Hazard Mitigation Grant Program (HMGP) provides grants to States and local governments to implement long-term hazard mitigation measures after a major disaster declaration. The purpose of the HMGP 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. HMGP, in the Commonwealth, is 20% of the total costs of eligible federal disaster assistance, for any disaster occurring after the



March 14, 2007 approval of the Enhanced plan. This assistance is available but not limited to reducing residential, commercial and property damage through structural mitigation, mitigation planning, and initiative projects.

The Public Assistance (PA) Grant Program provides assistance to State, Tribal and local governments, and certain types of Private Nonprofit organizations so that communities can quickly respond to and recover from major disasters or emergencies declared by the President. Through the PA Program, FEMA provides supplemental Federal disaster grant assistance for debris removal, emergency protective measures, and the repair, replacement, or restoration of disaster-damaged, publicly owned facilities and the facilities of certain Private Non-Profit (PNP) organizations. The PA Program also encourages protection of these damaged facilities from future events by providing assistance for hazard mitigation measures during the recovery process.

The Individuals and Households Program (IHP) provides assistance to citizens who have suffered disaster related damages or have certain other disaster related needs. The most typical forms of aid are for rental assistance, home repair, and loss of personal property. An Individual Assistance declaration also provides help in a few other categories, such as unemployment assistance, legal assistance and, if requested and approved, crisis counseling. The Post-Katrina Reform Act of 2006 made two substantial changes to IHP. The act removed the \$5,000 cap on home repairs for primary residences; it also allowed more financial assistance to be paid for primary residences that were completely destroyed. In addition the act now provides the president the authority to help states with case management services. There has been no change in the type of assistance available to businesses. The only form of assistance available to businesses is low interest loans through the Small Business Administration (SBA). Individuals are also able to apply for SBA loans to supplement any assistance they have received through IHP.

Following Hurricane Isabel, Governor Mark Warner appointed a task force to report on the Commonwealth's response to the disaster. The task force provided numerous specific recommendations for improvement of Commonwealth disaster response programs. At the writing of the *Commonwealth of Virginia Emergency Operations Plan Volume II, Support Annex III: Standard Hazard Mitigation Plan*: during summer, 2004, all of the recommendations of the task force had been reviewed and were in the process of implementation as recommended or with slight refinement or improvement. The report primarily addressed disaster response and recovery specific to Hurricane Isabel. Released in December 2003, the report did not really address mitigation, which is acknowledged as a long-term effort. The Isabel after Action Report and the process used by the Commonwealth's Department of Emergency Management to improve disaster response will likely be a model for evaluation of program delivery to specific events and continued improvement of preparedness, response and recovery by local and state government. The recommendations and actions from the report are available to be downloaded from the Virginia Department of Emergency Management website:

http://www.vaemergency.com/newsroom/disasters/isabel2003/Hurricane_Isabel_Assessment.pdf



4.5 Funding Capabilities

There is never enough funding to adequately provide mitigation programs that will completely address properties at risk. It is hoped that as awareness of hazard mitigation increases, due in part to implementation of this plan, funding can be increased through creative use of existing programs as well as incorporation of mitigation into other non-traditional hazard mitigation programs. It should be noted that in the funding column within the program capacity analysis provided in Table 4-1, a check [✓] only means that funding is possible within the stated program. The check does not indicate that funding is adequate, readily available or has ever been applied to Commonwealth of Virginia Disaster Response, Recovery or Mitigation Programs.

4.5.1 Traditional Funding Programs

Following development of the Standard Plan, an outreach program was initiated at VDEM to increase participation in traditional FEMA-Commonwealth mitigation grant programs. More information on grant outreach can be found in Chapter 8, Enhanced Plan. The funding programs listed below are the more common and most utilized programs in the Commonwealth.

A. Hazard Mitigation Assistance (HMA)

Hazard Mitigation Grant Program (HMGP)

Authorized by Section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended (the Stafford Act), Title 42, United States Code (U.S.C.) 5170c. The key purpose of HMGP is to ensure that the opportunity to take critical mitigation measures to reduce the risk of loss of life and property from future disasters is not lost during the reconstruction process following a disaster. HMGP is available, when authorized under a Presidential major disaster declaration, in the areas of the State requested by the Governor. The amount of HMGP funding available to the Applicant is based upon the estimated total Federal assistance to be provided by FEMA for disaster recovery under the Presidential major disaster declaration.

Pre-Disaster Mitigation (PDM)

Authorized by Section 203 of the Stafford Act, 42 U.S.C. 5133. The PDM program is designed to assist States, Territories, Indian Tribal governments, and local communities to implement a sustained pre-disaster natural hazard mitigation program to reduce overall risk to the population and structures from



future hazard events, while also reducing reliance on Federal funding from future disasters.

In the late 1990s, FEMA's *Project Impact* initiative was created to promote the concept of disaster resistant communities through public-private partnerships. The program was eliminated following the Stafford Act revision in 2000. This law created the requirement to develop all-hazard mitigation plans. The Pre-disaster Mitigation Program was created to fund common-sense, damage-reduction approaches, based on planning developed with three principles: (1) preventive actions must be decided at the local level; (2) private sector participation is vital; and (3) long-term efforts and investments in prevention measures are essential. Projects identified in the Structural Mitigation goal section of the plan may pursue PDM funding as FEMA releases Requests for Proposals for this program. Local governments are currently revising local hazard mitigation plans that will allow them to compete for Pre-Disaster Mitigation funds once their local plan is approved.

Flood Mitigation Assistance (FMA)

Authorized by Section 1366 of the National Flood Insurance Act of 1968, as amended (NFIA), 42 U.S.C. 4104c, with the goal of reducing or eliminating claims under the National Flood Insurance Program (NFIP). This grant program is intentionally focused on those properties that, if mitigated, will benefit to the National Flood Insurance Program and its policyholders. For the most part, the projects acquire, elevate or relocate residential buildings that have a history of repetitive claims against the NFIP. All projects, including measures other than acquisition and elevation, must be cost effective and not have adverse environmental impacts. Localities wishing to apply for these funds must have an approved Flood Mitigation Assistance Plan or All-Hazards Mitigation Plan that meets all of the criteria of an FMA plan as provided in CFR §78.5. During 2005, FEMA offered to review any local 322 plan for FMA compliance. Thus, a large percentage of the local plans in Virginia meet the criteria for both. SRL properties submitted under FMA can receive 90% federal funding.

Repetitive Flood Claims (RFC)

Authorized by Section 1323 of the NFIA, 42 U.S.C. 4030 with the goal of reducing flood damages to individual properties for which one or more claim payments for losses have been made under flood insurance coverage and that will result in the greatest savings to the National Flood Insurance Fund (NFIF) in the shortest period of time.

Severe Repetitive Loss (SRL)

Authorized by Section 1361A of the NFIA, 42 U.S.C. 4102a, with the goal of reducing flood damages to residential properties that have experienced severe repetitive losses under flood insurance coverage and that will result in the greatest savings to the NFIF in the shortest period of time. The NFIF provides



the funding for FMA, RFC, and SRL programs. The PDM, FMA, RFC, and SRL programs are subject to the availability of appropriation funding, as well as any program specific directive or restriction made with respect to such funds. Furthermore, availability of the PDM and SRL programs is subject to anticipated reauthorization of the program beyond September 30, 2009.

B. Commonwealth Sum-Sufficient Match, HMGP

During the past decade, the FEMA HMGP program allows federal funding of up to 75%. The remaining 25% local match must be provided by non-federal sources. During the past few years, the Commonwealth has provided up to 20% of the project costs, resulting in local match requirements of only 5%. The state's support of the program has made HMGP available to many local governments who otherwise could not provide the required 25% local match. Presently, this can not be used with any of the other HMA programs.

C. Virginia Dam Safety, Flood Prevention & Protection Assistance Fund

The Virginia Dam Safety, Flood Prevention and Protection Assistance Fund were established to:

- Make matching grants and/or loans to local governments and to make loans to private entities owning dams for the correction of dam safety conditions (see category 1 projects description). State-owned and federally-owned dams, or dams not regulated pursuant to the Dam Safety Act (§10.1-604 et seq. of the Code of Virginia) are ineligible.
- Make loans to a local government that has developed a low-interest loan program to provide loans or other incentives to facilitate the correction of dam deficiencies, as required by the Department of Conservation and Recreation (DCR), provided that the monies are to be used only for the program and that the dams to be repaired or upgraded are owned by private individuals or entities.
- Make matching grants to dam owners for the mapping of dam break inundation zones of dams regulated pursuant to the Dam Safety Act (§10.1-604 et seq. of the Code of Virginia) (see category 3 projects description).
- Make matching grants to dam owners to conduct incremental damage analysis in accordance with the Virginia Impounding Structure Regulations (4VAC50-20).
- Make matching grants or loans to any local government for the purpose of assisting the local government in the development and implementation of flood prevention plans, studies, and mapping.



- Make matching grants or loans to any local government for the purpose of assisting the local government in the development and implementation of flood prevention or protection projects, including damage mitigation and reduction activities (see category 6 projects description). (DCR – VSWCB – 018) (06/09) (DCR199-183) (06/09) 2
- Provide up to \$50,000 annually for cost share with federal agencies in flood protection studies of statewide or regional significance. (For more information regarding this purpose of the Fund, which is not addressed through this manual, contact DCR) The Fund consists of moneys appropriated by the General Assembly, assessments made on flood insurance premium income pursuant to §38.2-401.1 of the Code of Virginia, funds returned in the form of interest and loan principal by recipients of funding, income from the investment of monies contained in the Fund, and other public and private funds eligible for deposit. The Fund is permanent and non-reverting and is administered and managed by the Virginia Resources Authority (VRA) in cooperation with the Department of Conservation and Recreation (DCR). The Director of DCR will determine the type and amounts of funding available prior to each funding period, and will specify the categories that will be considered for loan and/or grant assistance. The Director is authorized to make expenditures in accordance with § 10.1-603.16 et seq. and the terms of this guidance document following approval of applications from the Virginia Soil and Water Conservation Board (Board).

D. Commonwealth of Virginia General Fund

Many of the structural mitigation projects detailed in this plan and envisioned by Steering Committee members can be incorporated into capital improvement budgets that support renovation of existing structures or initiate new construction. Facilities managers have been active participants in the planning process and will serve an integral role in seeking non-traditional mitigation funding to support structural mitigation projects.

E. Homeland Security Grant Program (HSGP)

One of the core missions of the Department of Homeland Security (DHS) is to enhance the ability of state, territory, local, and tribal governments to prevent, protect against, respond to and recover from terrorist attacks and other disasters. FEMA's comprehensive suite of grant programs is an important part of the Administration's larger, coordinated effort to strengthen homeland security preparedness. These programs implement objectives addressed in a series of post-9/11 laws, strategy documents, plans and Homeland Security Presidential Directives (HSPDs). The Homeland Security Grant Program (HSGP) is comprised of four interconnected grant programs:



- State Homeland Security Program (SHSP)
- Urban Areas Security Initiative (UASI)
- Metropolitan Medical Response System (MMRS)
- Citizen Corps Program (CCP)

The HSGP is one tool among a comprehensive set of measures authorized by Congress and implemented by the Administration to help strengthen the Nation against risks associated with potential terrorist attacks.

F. Community Development and Block Grants [CDGB]

Administered by the Commonwealth's Department of Housing and Community Development, this program provides housing and commercial revitalization to many Commonwealth communities. CDGB has been effectively used in comprehensive recovery from major disasters such as Hurricanes Fran, Floyd and Isabel as well as severe storm and flooding events. CDBG will continue to be a critical funding source for housing mitigation programs, because it can also be used as the non-federal match for all the HMA programs that require a match.

H. Increased Cost of Compliance [ICC]

If a home or business is damaged by a flood, individuals may be required to meet certain building requirements in their community to reduce future flood damage before you repair or rebuild. To help cover the costs of meeting those requirements, the National Flood Insurance Program (NFIP) includes Increased Cost of Compliance (ICC) coverage for all new and renewed Standard Flood Insurance Policies. Flood insurance policyholders in high-risk areas, also known as special flood hazard areas, can get up to \$30,000 to help pay the costs to bring their home or business into compliance with their community's floodplain ordinance. ICC assisted in recovery from major disasters such as Hurricane Isabel and will continue to be a critical funding source as the non-federal match for all HMA programs that require a match.



Table 4.1 Mitigation Programs		Effects of Loss Reduction			Description	Pre-Disaster	Post Disaster	Emergency Response
		Support	Facilitate	Funding				
Agency	Programs, Plans, Policies, Regulations, Funding and Practices							
US Army Corps of Engineers	Flood Control Projects	✓	✓		Design and construction of local flood control projects not specifically authorized by Congress, State, political subdivisions and other local agencies established within state law with full authority and ability to undertake required legal and financial responsibilities.	✓		
	River Bank Protection	✓	✓	✓	Design & construction of stream and river bank protection projects to safeguard highways, highway bridges, essential public works, churches, hospitals, schools and other non-profit public critical facilities endangered by flood-caused erosion. State, political subdivisions and other local agencies established within state law with full authority and ability to undertake required legal and financial responsibilities.	✓		
	Drought Assistance			✓	<ul style="list-style-type: none"> Coordinate the development of drought plans and procedures for lakes and dams within the Commonwealth under the jurisdiction of the Corps of Engineers. Provide information and reports as needed. Coordinate USACOE drought related activities. Provide water from USACOE reservoirs and dams, as available during emergencies. 	✓		
	Flood Control Clearing	✓	✓	✓	Design and construction of snagging and clearing projects for navigable waters and their tributaries to reduce potential flood damages. State, political subdivisions and other local agencies established within state law with full authority and ability to undertake required legal and financial responsibilities.	✓		
	Flood Plain Management	✓	✓		Technical assistance in identification of flood-prone areas, potential losses and the flood hazard of proposed building sites; guidance in land use management to prevent flood damage. Funding limitations are set by the district office, state, political subdivisions and other public organizations.	✓		



Agency	Programs, Plans, Policies, Regulations, Funding and Practices	Effects of Loss Reduction			Description	Pre-Disaster	Post Disaster	Emergency Response
		Support	Facilitate	Funding				
FEMA	National Flood Insurance Program (NFIP):	✓	✓	✓	Insurance at a reasonable rate is provided to properties within communities participating in the National Flood Insurance Program. In Virginia, 270 cities, counties and towns participated in the NFIP as of July 1, 2004.	✓	✓	
	HMA Programs: Flood Mitigation Assistance (FMA) Pre-Disaster Mitigation (PDM) Repetitive Flood Claims (RFC) Severe Repetitive Loss (SRL)	✓	✓	✓	FMA, PDM, RFC and SRL may be used to enhance State mitigation planning (FMA, PDM), and implement structural flood mitigation programs to directly assist communities to reduce flood losses (FMA, PDM, RFC, SRL). State or communities can receive financial and technical support for flood mitigation planning and implementation of flood mitigation projects. FMA, RFC and SRL must be used for repetitive loss properties that are covered through the NFIP. (Updated since last plan)	✓		
	Map Modernization (Risk Map)	✓	✓	✓	FEMA is beginning to transition from Flood Map Modernization (Map Mod) to Risk Mapping, Assessment, and Planning (Risk MAP) in fiscal year (FY) 2009. The vision for Risk MAP is to work collaboratively with State, local, and Tribal entities to deliver quality data that increases public awareness and leads to action that reduces risk to life and property. It also aims to foster informed risk management decisions and actions to mitigate risk through a consistent risk-based approach to assessing potential vulnerability and losses. By analyzing and depicting flood risk, communities and the American public can better understand their risk and make informed decisions to reduce their vulnerability. Map Mod transformed the majority of the flood hazard mapping inventory to 21st century digital technology and restored confidence in the reliability of floodplain boundaries, while making updates to the underlying engineering data. (Updated since last plan)	✓		
Agency	Programs, Plans, Policies,	Effects of Loss			Description	Disas	Disas	gency Respo



	Regulations, Funding and Practices	Reduction						
		Support	Facilitate	Funding				
FEMA	HMA Programs: Hazard Mitigation Grant Program (HMGP)	✓	✓	✓	Grants to state and local governments to support hazard mitigation projects per the disaster-specific Mitigation Strategy state priorities. Projects included incentive projects at up to 5% of the total HMGP allocation, planning projects at up to 7% of the allocation and structural projects that are cost-beneficial at >88% of the allocation <i>(Updated since last plan)</i>		✓	
FEMA, EPA	Superfund Amendment and Reauthorization Act (SARA), Title III			✓	Support programs that are designed to improve emergency planning, preparedness, mitigation, response and recovery capabilities with special emphasis on emergencies associated with hazardous materials. For state and local governments and university-sponsored programs.			✓
FEMA	Disaster Housing	✓	✓	✓	<ul style="list-style-type: none"> Temporary Housing Program: Residents within Presidentially declared areas are eligible for temporary housing assistance. The FEMA Administrator or their designee determines whether circumstances necessitate temporary housing assistance. Home Repair Program: Home repairs may be provided to those eligible applicants who are owner-occupants of the primary residence to be made habitable, whose property can be made habitable by repairs to the essential living area within 30 days following feasibility determination. The FEMA Region III Director may extend this period. 		✓	
	Disaster Preparedness Improvement Grant (DPIG):	✓	✓	✓	Grants to encourage the maintenance and improvement of disaster preparedness plans and activities. State and local governments.		✓	



Agency	Programs, Plans, Policies, Regulations, Funding and Practices	Effects of Loss Reduction			Description	Pre-Disaster	Post Disaster	Emergency Response
		Support	Facilitate	Funding				
FEMA	Individual and Housing Programs (Name Change from previous plan)	✓	✓	✓	Under a Robert T. Stafford Act Individual Assistance declaration, the Individuals and Households Program (IHP) provides assistance to citizens who have suffered disaster related damages or have certain other disaster related needs. The most typical forms of aid are for rental assistance, home repair, and loss of personal property. An Individual Assistance declaration also provides help in a few other categories, such as unemployment assistance, legal assistance and, if requested and approved, crisis counseling. The Post-Katrina Reform Act of 2006 made two substantial changes to IHP. The act removed the \$5,000 cap on home repairs for primary residences; it also allowed more financial assistance to be paid for primary residences that were completely destroyed. In addition the act now provides the president the authority to help states with case management services. There has been no change in the type of assistance available to businesses. The only form of assistance available to businesses is low interest loans through the Small Business Administration (SBA). Individuals are also able to apply for SBA loans to supplement any assistance they have received through IHP.		✓	
FEMA	Community Disaster Loans	✓	✓	✓	Provides loans to any eligible jurisdiction in a designated disaster area that has suffered a substantial loss of tax and other revenue. The jurisdiction must demonstrate a need for financial assistance to perform its governmental functions. Loans should not to exceed 25 percent of the local government's annual operating budget for the fiscal year in which the major disaster occurs, up to a maximum of \$5 million.		✓	
	Community Emergency Response Teams (CERT)	✓	✓	✓	The Community Emergency Response Team (CERT) Program educates people about disaster preparedness for hazards that may impact their area and trains them in basic disaster response skills, such as fire safety, light search and rescue, team organization, and disaster medical operations. FEMA supports CERT by conducting or sponsoring Train-The-Trainer programs for members of the fire, medical, and emergency management community.			✓



Agency	Programs, Plans, Policies, Regulations, Funding and Practices	Effects of Loss Reduction			Description	Pre-Disaster	Post Disaster	Emergency Response
		Support	Facilitate	Funding				
U.S. Department of Agriculture (Natural Resources Conservation Service)	Emergency Watershed Protection	✓	✓		<ul style="list-style-type: none"> • Technical services to determine eligibility and to plan needed measures. • Financial assistance to construct approved measures. • Any state agency, county (or group of counties), municipality, town, soil and water conservation district, flood prevention or control district or any other non-profit agency with authority under state law to carry out, maintain and operate watershed improvement works. 	✓		
U.S. Department of Agriculture Farm Service Agency (FSA)	Emergency Loans for recovery from drought				<p>Provide assessments of drought damages; Coordinate requests for drought related Presidential Declaration of Drought Emergency; Recommend federal drought assistance declaration to the Governor through Department of Emergency Management; Implement federal drought assistance programs; Administer drought-related relief in coordination with the Virginia Department of Agriculture and Consumer Services.</p> <p>The following agencies may also assist in drought emergencies with a variety of loans, grants and programs for material and personal support: USDA, US Department of Commerce, Internal Revenue Service, Small Business Administration, FEMA, US Department of Interior, US Department of Labor, US Army Corps of Engineers, General Services Administration, US Department of Interior.</p>		✓	



Agency	Programs, Plans, Policies, Regulations, Funding and Practices	Effects of Loss Reduction			Description	Pre-Disaster	Post Disaster	Emergency Response
		Support	Facilitate	Funding				
US Department of Agriculture	Disaster Supplemental Nutrition Assistance Program (D-SNAP)		✓	✓	Provides supplemental nutrition assistance to disaster victims coordinating with state social services and the Virginia Department of Agriculture and Consumer Services.			✓
U.S. Department of Agriculture (Rural Development)	Rural Housing Service (RHS) Homeownership Loans	✓	✓	✓	Loans for the purchase, construction, rehabilitation or relocation of a dwelling and related facilities for low or moderate-income persons in rural areas. RHS can help subsidize monthly mortgage payments, limiting these costs to no more than 30 percent of the adjusted monthly income of the applicant.		✓	
US Department of Agriculture (Rural Development)	Disaster Funding	✓	✓	✓	The Secretary of Agriculture can request additional funding for communities affected by hurricanes, floods, and other natural disasters. These funds can be allocated to communities declared major disaster areas by the President. Additional funds generally are available in Rural Development Programs to help individuals, businesses and communities recover. Community Facilities programs finance the development of essential community facilities in rural areas. These include hospitals, medical clinics, elderly care, first responder equipment and facilities, vocational and medical rehabilitation centers, and educational facilities. Eligible applicants include public entities such as local governments and special-purpose districts, nonprofit corporations, including Faith-based and neighborhood organizations, and Federally-recognized tribal governments in designated disaster areas with a population of 20,000 or less. Through the Housing Program the USDA can make additional funds available for guaranteed loans to purchase or refinance homes; funds for direct loans; funds for loans to build or repair multi-family housing; funds for grants to repair homes; funds for rental assistance vouchers and funds for housing repair loans.		✓	



Agency	Programs, Plans, Policies, Regulations, Funding and Practices	Effects of Loss Reduction			Description	Pre-Disaster	Post Disaster	Emergency Response
		Support	Facilitate	Funding				
US Department of Agriculture (Rural Development)	Disaster Funding	✓	✓	✓	Business and Industry Guaranteed Loan Program: USDA can make additional funds available for guaranteed loans to support the development of small and emerging private businesses. Eligible applicants include cooperative organizations, corporations, partnerships, nonprofit groups, Federally recognized Indian tribes, public bodies and individuals.		✓	
US Department of Agriculture	Disaster Assistance	✓	✓	✓	<ul style="list-style-type: none"> Emergency Conservation program shares with agricultural producers the cost of rehabilitating eligible farmlands damaged by natural disaster. Farm Service Agency provides emergency loans to assist producers recover from production and physical losses due to drought, flooding, other natural disasters or quarantine. Natural Resources Conservation Service's Emergency Watershed Protection Program (EWP) provides emergency measures, including purchase of floodplain easements for runoff retardation and soil erosion prevention to safeguard lives and property from floods, drought, and the products of erosion on the watershed. Food and Nutrition Service's Food Distribution division has the primary responsibility of supplying food to disaster relief organizations. 		✓	
U.S. Department of Commerce	Fire Accident Analysis	✓	✓		Provides detailed on-site studies of uncontrolled fires or the remains of fires by teams of experienced fire investigators, scientists and engineers to determine the causes, character of and ways of avoiding serious fire accidents. Elected or appointed state and local officials concerned with fire disasters and authorized to request such assistance.		✓	



Agency	Programs, Plans, Policies, Regulations, Funding and Practices	Effects of Loss Reduction			Description	Pre-Disaster	Post Disaster	Emergency Response
		Support	Facilitate	Funding				
Department of Housing and Community Development	Statewide Building Code which includes International Building Code, 2003	✓	✓		Through the 2003 International Building Code, adopted by the state and local governments, along with the provisions of local floodplain management ordinances, buildings that are substantially damaged, i.e. repair costs are equal to or exceed 50% of the current appraised value of the structure, must be re-constructed or repaired to be compliant to current code requirements. The state floodplain management program, in partnership with the Department of Emergency Management and FEMA, has increased visibility of NFIP and building code requirements following disasters through aggressive contacts and educational programs directed to building officials, the insurance industry and contractors. While the code provisions and program requirements are adequate, future mitigation plans should address strengthening of educational efforts to ensure that every opportunity is used to strengthen structures through the substantial damage / substantial improvement element of the building code and NFIP.	✓		
U.S. Department of Health and Human Services	Contaminated Food and Drugs	✓	✓	✓	Through coordinated planning, advice, technical information, assistance and expertise can be provided to establish public health controls and to protect citizens from contaminated and unsafe food and drugs. Assists state and local agencies through the Department of Agriculture and Consumer Services and the Department of Health.	✓		
U.S. Department of Agriculture (Natural Resources Conservation Service)	Resource Conservation & Development	✓	✓	✓	Grants and technical assistance to aid public agencies in implementing long-range resource conservation and development programs, including flood control projects. Public agencies and non-profit organizations having legal authority to plan, install, operate and maintain community projects benefiting the public.	✓		
FEMA	National Dam Safety Program (NDSP):	✓	✓	✓	Grants to reduce the risks to life and property from dam failure, through the establishment and maintenance of an effective dam safety program. States with new and existing impoundment structures.		✓	



Agency	Programs, Plans, Policies, Regulations, Funding and Practices	Effects of Loss Reduction			Description	Pre-Disaster	Post Disaster	Emergency Response
		Support	Facilitate	Funding				
U.S. Department of Housing and Urban Development		✓	✓	✓	<p>Community Development Block Grants – grants to entitlement communities. Preferred use of funding is for long-term needs but may be used for emergency response activities.</p> <ul style="list-style-type: none"> • Multi-family home mortgage insurance. Guaranteed/insured loans to finance the acquisition of proposed, under construction or existing single-family units. • Homeowners are permitted to make a low down payment. For any person able to meet the cash investment, the mortgage payments and credit requirements. • Special Mortgage Insurance for Low and Moderate Income Families, mortgage insurance for low and moderate-income families. The program can be used to finance rehabilitation of sub-standard properties. Anyone may apply; displaced households qualify for special terms. • Co-insurance: Joint mortgage insurance by the federal government and private lenders to facilitate homeownership financing everyone eligible for mortgage insurance under the full insurance programs may apply for co-insured loans to lenders approved by HUD as co-insurers. The co-insuring lender (any mortgage approved by FSA), based upon the characteristics of the property and the credit qualifications of the borrower, determines whether to make the loan. 			✓



Agency	Programs, Plans, Policies, Regulations, Funding and Practices	Effects of Loss Reduction			Description	Pre-Disaster	Post Disaster	Emergency Response
		Support	Facilitate	Funding				
U.S. Department of Health and Human Services, Public Health Service	Vector Control			✓	Advice and technical assistance to prevent the spread of communicable diseases by disease-carrying animals or insects in the aftermath of a disaster. State and local public health authorities may access this program as coordinated by the Virginia Department of Health.	✓		
Small Business Administration	Emergency Loans	✓	✓	✓	The SBA offers three types of loans: 1. Home Disaster Loans for homeowners and tenants to repair or replace disaster damages to real estate and/or personal property. Tenants are eligible for personal property losses only. 2. Business Physical Disaster Loans are for businesses to repair or replace disaster damages to property owned by the business. These losses could be to real estate, machinery and equipment, leasehold improvements, inventory and supplies. Businesses of any size are eligible to apply. 3. Economic Injury Disaster Loans are working capital loans for small businesses and small agricultural cooperatives to assist them through the disaster recovery period. These loans are available to applicants without credit available elsewhere.		✓	
Office of Domestic Preparedness	State Homeland Security Grant Program (HSGP)	✓	✓	✓	Provides financial assistance to states and territories to prepare for terrorist attacks involving weapons of mass destruction (WMD). Grants are administered through the Virginia Department of Emergency Management.	✓		
US Department of Homeland Security	Urban Areas Security Initiative (UASI)	✓	✓	✓	A discretionary grant program that provides funding to metropolitan areas, including counties and mutual aid partners, to prepare for, prevent and respond to terrorist incidents.	✓		
US Department of Homeland Security	Emergency Management Performance Grants (EMPG)	✓	✓	✓	The Emergency Management Performance Grant assists in the development, maintenance and improvement of state and local emergency management capabilities. These also include an Urban Search and Rescue and Interoperable Communications Grant.	✓		



Agency	Programs, Plans, Policies, Regulations, Funding and Practices	Effects of Loss Reduction			Description	Pre-Disaster	Post Disaster	Emergency Response
		Support	Facilitate	Funding				
Virginia Department of Emergency Management VDEM	The Emergency Operations Plan	✓	✓		Directs emergency operations in response to any large-scale disaster impacting the Commonwealth. It assigns duties and responsibilities to agencies and support organizations for disaster preparedness, response, recovery and mitigation. Funding is achieved through appropriations in the biennial budget development process orchestrated by the Virginia General Assembly, and is supplemented in response to disaster declarations through sum-sufficient provisions that can provide state match to federal funding for individual assistance, public assistance and mitigation programs.			✓
Virginia Department of Emergency Management VDEM	Disaster Recovery Programs	✓	✓	✓	The Virginia Department of Emergency Management (VDEM) is established as the agency responsible for the management and administration of disaster relief for the Commonwealth. The Governor appoints its director, the State Coordinator for Emergency Services. During a Presidentially declared major disaster, the Governor's Authorized Representative (GAR) is designated by the Governor as the official responsible for administration of the disaster recovery effort, to include Human Services, Public Assistance and Mitigation. The Governor's Authorized Representative serves as the State Coordinating Officer (SCO) for the disaster. These efforts are coordinated by the SCO and implemented by VDEM staff and reservists, cooperating state agencies and organizations.		✓	
Virginia Department of Emergency Management VDEM	Commonwealth Public Assistance Program	✓	✓	✓	When the threshold of damage to public infrastructure is not reached to qualify for FEMA Public Assistance, the Commonwealth Emergency Relief for Localities program can provide reimbursement to local governments. This program can be used for localized major disasters or emergencies that do not result in sufficient total damages to warrant a Presidential disaster declaration. Cities, counties and towns are eligible to reimbursement of costs incurred; State agencies are not eligible. There are thresholds of costs incurred per capita, insurance must be maintained and each locality must certify that they have not other means to cover disaster-related costs.		✓	



Agency	Programs, Plans, Policies, Regulations, Funding and Practices	Effects of Loss Reduction			Description	Pre-Disaster	Post Disaster	Emergency Response
		Support	Facilitate	Funding				
American Red Cross, Salvation Army, Virginia Volunteer Organizations Active in Disaster (VOAD)	Collection and Distribution of Donated goods		✓	✓	Establish and manage centers for receipts and distribution of donated goods such as food, clothing, furniture, medical supplies, building materials, cleaning supplies, bedding, utensils and tools. This is usually organized with a designated distribution center.		✓	
DBHD, Department of Social Services, DCJS, Red Cross, Salvation Army, VOAD	Counseling		✓	✓	Crisis intervention counseling designed to assist disasters victims and responders in coping with their situation to avoid serious psychological impairment.		✓	
American Red Cross, Salvation Army, Department of Agriculture and Consumer Services, VOAD, food banks, Meals-on-Wheels	Food			✓	<p>Food can be provided to disaster victims and workers in several ways:</p> <ol style="list-style-type: none"> 1. Direct provision of food stocks donated by individuals and groups to disaster victims through distribution centers as described above. 2. Direct grants for food purchase or food stamp allotments (through section 409) provided to disaster victims (described earlier in the Federal Assistance section). 3. Meals provided at feeding centers or from mobile distribution canteens. 4. Through section 410, provision of food stocks for emergency mass feeding or distribution to an area suffering a major disaster or emergency. <p>In large scale disasters FEMA will be acting as main agent in distribution of food.</p>		✓	



Agency	Programs, Plans, Policies, Regulations, Funding and Practices	Effects of Loss Reduction			Description	Pre-Disaster	Post Disaster	Emergency Response
		Support	Facilitate	Funding				
VOAD, Virginia Guard, Americorps, Others	Personnel	✓	✓	✓	Provision of personnel to supplement the labor necessary to respond to emergency disaster events, especially for clean-up and damaged home repair.			✓
Department of Health, VDEM, State Police, Virginia Guard, ARC, Office of Commonwealth Medical Examiner	Medical Assistance			✓	Professional medical aid in the treatment of disaster victims, prevention or control of disease and handling and identification of persons killed during the event.			✓
VOAD, Department of Health, AmeriCorps, NGOs	Repair of Homes	✓	✓	✓	Aid to homeowners to repair their homes in the absence of or to supplement FEMA's Minimal Repair Program. The ability of the listed agencies to provide assistance may vary for each event and is tied to the income level and demonstrated need of each victim.		✓	
Local governments, Virginia National Guard, American Red Cross, Salvation Army, VOAD.	Shelter	✓	✓	✓	Establishment of shelters to protect the lives and health of persons forced to evacuate their homes due to an emergency or disaster occurs on a local, as needed basis. Shelters are short-term facilities (a few days to one week); families are returned to their homes or are placed in temporary housing locations as quickly as possible. Shelter locations are pre-designated in local Emergency Operations Plans.	✓		
Department of Forestry	Wildfire Prevention & Suppression	✓	✓	✓	The DOF provides training & equipment to local fire departments that fight brush and forest fires. <ul style="list-style-type: none"> • A network of dry hydrants throughout the state to supplement water sources such as rivers, reservoirs, lakes and ponds. • An aggressive woodland homes prevention program is also managed. 	✓		
Federal Bureau of Investigation	Victim Identification	✓	✓	✓	Fingerprint identification of disaster victims for any authorized state or local law enforcement agency.			✓
Virginia Department of Health	Emergency Health Assistance			✓	Federal agencies including, but not limited to, the U.S. Public Health Service, provide emergency health care assistance as required. The Virginia Department of Health requests this assistance as needed.			✓



Agency	Programs, Plans, Policies, Regulations, Funding and Practices	Effects of Loss Reduction			Description	Pre-Disaster	Post Disaster	Emergency Response
		Support	Facilitate	Funding				
U.S. Department of Housing and Urban Development		✓	✓	✓	<p>Major Home Improvements Loan Insurance:</p> <ul style="list-style-type: none"> Federal insurance of loans to help families repair or improve existing residential structures outside urban renewal areas. The program provides for long-term insured mortgage financing of major improvements or alterations to structures containing up to four family units. For any owner of the property to be improved or the lessee under a 99-year renewable lease or a lease having an expiration date at least ten years beyond the maturity date of the mortgage. <p>Home Improvement Loan Insurance:</p> <ul style="list-style-type: none"> For property owners and tenants whose leases are at least six months longer than the 1 month. 	✓		
U.S. Department of Energy	Radiological Emergency Assistance	✓	✓	✓	Provision of specialized services, advisory services, counseling and dissemination of technical information to assist in responding to incidents involving loss of control of radioactive materials and supporting efforts to protect public health and safety. This program is for any person or organization with knowledge of an incident believed to involve ionizing radiation or radioactive material hazardous to health and safety.			✓
NOAA National Weather Service	Forecasts and Warnings	✓	✓	✓	<p>Public forecasts and warnings of hazardous weather phenomena and floods, and training programs on disaster safety rules.</p> <p>Available to agencies and the general public.</p>	✓		
USDOT	Hazardous Materials Emergency Preparedness (HMEP) Grant Program	☐	☐	✓	Planning and training grants to help local governments carry out Emergency Planning and Community Right-to-Know activities (SARA Title III) throughout the state. HMEP Planning Grants: Eligible LEPCs, used by VDEM to provide HAZMAT First Responder Training to public sector firefighters, emergency medical and law enforcement personnel. Other public sector personnel with HAZMAT response requirements are also eligible for the training.	✓		
U.S. Department of Energy	Disaster-related Power Outage				Implements emergency related functions under the Federal Response Plan.			✓



4.6 Federal Agencies & Programs

The following list of federal programs is intended to focus on those that are most applicable to the hazards that have occurred recently in Virginia. After each declared disaster, federal resources that may support recovery are identified. Some federal programs can be accessed in an ongoing capacity to support local initiatives. More detailed information on these programs and others can be found in *Federal Programs Offering Flood Recovery and Floodplain Management Alternatives* (Office of Management and Budget, 1998) and *Economic Impact Assessment of Hurricane Floyd for Virginia* (EDA and FEMA, 2000). As with local and state programs, these programs were in the background of the development of this plan, but were not specifically integrated into the final *Standard Virginia Hazard Mitigation Plan – Emergency Operations Plan, Support Annex 3* because the plan primarily addresses state facilities determined to be at risk following analysis of vulnerability of state facilities to natural hazards. As implementation of the plan ensues, every opportunity to integrate existing federal programs into hazard mitigation will be explored.

Federal Emergency Management Agency (FEMA). As the nation’s emergency management agency, FEMA’s programs focus mainly on supporting state and local initiatives that will reduce the impacts of disasters. The programs provide technical assistance, regulatory standards and financial assistance. Additional information is available online at www.fema.gov. Some programs are activated only after a disaster is declared; others are ongoing:

- **Response & Recovery – Public Assistance (PA).** Immediately following the declaration of a major disaster, FEMA and state implement procedures to assess damage, estimate the cost of restoration, and allocate funds for recovery. Public Assistance program focuses on restoration of certain non-profit and public buildings, public utility and transportation infrastructure that covers a portion of the costs to respond and recover from the event. Under certain circumstances, mitigation measures can be factored into recovery of public buildings and facilities in order to minimize the potential for future losses from comparable events through use of the 406 program. Use of this program to strengthen structures impacted by disasters as part of the repair and recovery process will be pursued as disasters occur that provide federal Public Assistance funding for eligible structures. VDEM is responsible for coordinating response and recovery efforts with FEMA and local jurisdictions. Additional information is available on FEMA’s website at <http://www.fema.gov/government/grant/pa/index.shtm>.
- **Response & Recovery – Individual Assistance (IA).** Also implemented jointly immediately following a major disaster declaration for events which impacts citizens, the IA program provides funds for temporary housing, basic housing repairs, and replacement of essential household items. Contact VDEM for additional information and check FEMA’s website at <http://www.fema.gov/assistance/process/assistance.shtm>.
- **National Flood Insurance Program (NFIP).** The NFIP offers flood insurance to residents who reside in local jurisdictions that adopt and enforce certain provisions that will help to



minimize future flood losses. The measures apply to all activities proposed within special flood hazard areas that are designated on maps provided by FEMA. All development must be designed and constructed to withstand damage (from water and wind-related hazards) and must not create any adverse impacts on other properties. The single most effective measure (other than building outside of flood-prone areas) is to elevate buildings above the base flood elevation. Additional information is available through DCR or on FEMA's website at <http://www.fema.gov/business/nfip>.

- **RISK Map (Map Mod Phase II).** FEMA is beginning to transition from Flood Map Modernization (Map Mod) to Risk Mapping, Assessment, and Planning (Risk MAP) in fiscal year (FY) 2009. The vision for **Risk MAP** is to work collaboratively with State, local, and Tribal entities to deliver quality data that increases public awareness and leads to action that reduces risk to life and property. It also aims to foster informed risk management decisions and actions to mitigate risk through a consistent risk-based approach to assessing potential vulnerability and losses. By analyzing and depicting flood risk, communities and the American public can better understand their risk and make informed decisions to reduce their vulnerability. Map Mod transformed the majority of the flood hazard mapping inventory to 21st century digital technology and restored confidence in the reliability of floodplain boundaries, while making updates to the underlying engineering data.
- **Cooperating Technical Partners (CTP).** With over 20,000 communities in the National Flood Insurance Program (NFIP), maintaining current maps is a daunting task. The current map modernization effort is a collaborative process which spans all levels of government as well as a multitude of other organizations. This collaborative process results in partnerships among state, regional, and local stakeholders. The Commonwealth participates in the Map Modernization initiative as a CTP. DCR completed its Map Modernization Program Business Plan in 2004 and has initiated implementation of this plan. Several local jurisdictions participated in this effort as well. Additional Information is available through DCR.
- **Community Rating System (CRS).** The CRS is an incentive program that rewards communities that exceed NFIP regulations in ways that reduce damage and improve safety. The incentive is a reduction in the cost of flood insurance premiums. Communities must apply, annually certify their programs, and undergo periodic audits. In Virginia, 16 communities participate in providing flood insurance premium discounts of 5% to 10% to their residents. Additional details are available from DCR.
- **National Earthquake Program (NEP).** The National Earthquake Program, coordinated by FEMA, has four basic goals directly related to the mitigation of seismic related hazards: (1) promote understanding of earthquakes and their effects; (2) work to better identify earthquake risk; (3) improve earthquake-resistant design and construction techniques; and (4) encourage the use of earthquake-safe policies and planning practices.
- **National Hurricane Program (NHP).** FEMA funding is provided to hurricane-prone states to establish, enhance and maintain basic levels of preparedness and mitigation capabilities, to promote effective mitigation measures, to conduct hazard identification and evacuation studies, to conduct post-storm analyses of mitigation measures, to conduct



training, and to promote public awareness and education of hurricane safety and preparedness. Commonwealth's participation is coordinated with a hurricane planner within VDEM.

- **National Dam Safety Program (NDSP).** FEMA coordinates the NDSP among federal agencies and state partners. In addition to maintaining a dam inventory, encouraging research, and promoting the implementation of state programs, the program also provides training and funds. Virginia's participation is coordinated with the Division of Dam Safety and Floodplain Management at DCR with constant and continual integration with VDEM regarding community eligibility status in the NFIP, Training, Repetitive Loss Data, Map Modernization and Technical Assistance on Flood proofing, Floodplain Management and Coastal Flooding issues.
- **Hazards U.S. (HAZUS).** HAZUS is a computer program that utilizes a set of Geographic Information System (GIS)-based mapping tools that help to estimate losses associated with earthquakes, floods, and wind. Developed in partnership with the National Institutes for Building Safety, HAZUS can be used to model event scenarios useful to compare risks between regions as well as evaluate effects of certain mitigation measures. Each state receives a copy of the software and certain baseline data. Recent improvements were made in the quality of data that characterize building types and locations, significantly improving analysis results. HAZUS was utilized within this plan update for the hurricane and earthquake modules.

U.S. Department of Housing and Urban Development (HUD). HUD programs are administered through the Virginia Department of Housing and Community Development and offer several programs to support local efforts to address hazards and implement mitigation measures. The following are some of the more active programs used to minimize flood hazards:

- **Community Development Block Grant (CDBG).** CDBG funds are available to support activities which meet one of the three National Objectives criteria established by HUD:
 - benefits low and moderate income persons;
 - prevents or eliminates slum and blight conditions; or
 - meets other community development needs having a particularly urgency due to existing conditions posing a serious and immediate threat to the health and welfare of the community, and where other financial resources are not available.

CDGB funds are routinely used in disaster-impacted areas for repair, elevation and acquisition/demolition of damaged structures, particularly citizens that qualify for the HMGP program. Following Hurricane Isabel, a special CDGB congressional funding allotment was targeted to communities where HGMP funds could not fully address mitigation needs. This is the most recent example of coordination between CDBG and FEMA-VDEM funding to assist disaster recovery.

Emergency Home Repair Program. The Emergency Home Repair Program improves housing conditions and opportunities for low and very low-income Virginians. The program provides



funds to remove imminent health and safety hazards, and/or barriers to habitability in their homes. Assistance is available to occupants from local nonprofit organizations based on income. Eligible repairs can include plumbing, structural, electrical, roofing, wheelchair ramps, and handicapped accessible appliances. The Virginia Department of Housing and Community Development coordinates the Emergency Home Repair Program.

U.S. Department of Commerce, Economic Development Administration (EDA). EDA supports economic recovery strategies, in part by providing cost-shared funds for planning and technical assistance, emergency infrastructure grants, construction grants and a Revolving Loan Fund to assist communities and quasi-public entities such as local development corporations and public or private non-profit organizations. EDA funds have been used to retrofit or relocate public water supply or wastewater treatment facilities. After disasters, some communities use EDA long-term recovery funding to help businesses move to safer locations.

U.S. Army Corps of Engineers. In addition to managing several large dams, levee protection projects and beach nourishment projects, the Corps supports state and local floodplain management and mitigation through the following programs:

- **Floodplain Management Services (FPMS).** Under FPMS, the Corps provides a full range of technical services and planning guidance support for state and local efforts. The same services are available to non-governmental entities, including individuals, on a reimbursable basis. The Corps can provide information on flooding, estimates of potential flood losses, and guidance for managing floods hazard areas. Under FPMS, the Corps investigates methods to prevent and reduce flood damage, including retrofit and other flood proofing methods.
- **Planning Assistance to States (Section 22).** Assistance and planning guidance to state, regional and local governments is provided on a cost-shared basis and can address a variety of water resources issues, including floodplain management, flood damage reduction, dam safety, water supply, water quality, coastal zone management, wetlands management and environmental conservation and preservation.
- **Hurricane Evacuation Studies (HES).** Coordinated with FEMA and the National Weather Service (NWS), the Corps leads development of regional evacuation studies based on predicted storm conditions developed by the NWS. Virginia's involvement is coordinated by VDEM and resulted in the Virginia Hurricane Response plan, revised in June of 2008 and is part of the COVEOP.

The Corps is currently working on several projects within the Commonwealth that are critical to hazard reduction and support the principle goals and objectives of the Standard Plan. These include the Roanoke River Valley Flood Reduction Project, Map Modernization projects and support of the Hurricane Evacuation Program through modeling studies.

U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS). The NRCS is dedicated to the conservation of soil and water and related resources. Technical



assistance is provided to individuals, groups, organizations and government agencies through conservation districts. Virginia's Departments of Agriculture and Consumer Services and Department of Conservation and Recreation are the state's contacts for NRCS programs:

- Under authority in Public Law 566, numerous flood reduction projects were constructed to address problems in small watersheds. NRCS supports river basin and watershed planning initiatives undertaken by local jurisdictions.
- The Emergency Watershed Protection Program can provide technical and financial assistance to communities to repair and restore clogged and damaged waterways to pre-disaster conditions.
- The Emergency Conservation Program, coordinated with the USDA Farm Services Agency, provides technical assistance to the agricultural community after disasters.
- Wetland Reserve Program provides technical and financial support to help landowners implement wetland restoration, conservation and wildlife practices.

NRCS most frequently works with disaster recovery and mitigation in a post-disaster setting in the Commonwealth addressing stream and river flooding issues through the EWP program. This has been used extensively in western mountain flood events in the 1990's and the early part of this decade. NRCS recently assisted with flood evaluation in urban watersheds following the severe weather disaster of June, 2006 (DR-1655-VA).

U.S. Department of Agriculture, Other Programs. USDA has a number of loan and grant programs that may support mitigation initiatives and post-disaster recovery. Additional information may be obtained from the U.S. Department of Agriculture or on-line at www.usda.gov:

- Rural Business-Cooperative Development Service Business and Industrial Loans help create jobs and stimulate rural economies by backing rural businesses.
- Rural Housing Service Community Facilities Loans and Grants can be used to construct, enlarge or improve community services for health care, public safety, and public services.
- Water and Waste Grants and Loans are used to develop, replace, or repair water and waste disposal (including storm drainage) systems in rural areas and small towns.
- Farm Service Agency Emergency Conservation Program assistance can be used to rehabilitate certain farmland damaged by floods or other disasters.
- Farm Service Agency Tree Assistance provides cost-shared payments to orchardists, maple sugar producers, greenhouse operators and vineyard growers who incur losses due to damaging weather.
- Federal Multi-Peril Crop Insurance policies insure against losses due to natural causes such as drought, excessive moisture, hail, wind, frost, insects and disease.
- Non-insured Crop Disaster Assistance Program helps growers of crops for which crop insurance is not available.



- Farm Service Agency Flood Risk Reduction allows farmers to voluntarily enter into contracts to receive payments on lands with high flood potential in return for foregoing certain USDA program benefits.
- Conservation Reserve Program helps landowners conserve and improve soil, water and wildlife resources by converting environmentally sensitive acreage to long-term approved cover.
- Emergency Conserve Program provides funding to address new conservation problems created by disaster that, if not treated, would impair or endanger the land. Funds can be used to rehabilitate farmland damaged by wind erosion, floods, hurricanes, or other natural disasters and to carry out water conservation measures during drought.

U.S. Small Business Administration (SBA). The SBA has the authority to declare disaster areas based on the number of homes and businesses that are affected, even if the event does not warrant a declaration by the President. SBA provides low-interest loans, and can authorize loan amounts up to 20% above the costs of restoration if the applicant agrees to implement mitigation measures. Individuals and businesses can use SBA funds to pay for the non-federal share of HMGP and FMA projects to elevate-in-place, relocate, or flood-proof buildings in flood hazard areas. The Virginia Department of Business Assistance is one source of information, and the SBA is on-line at www.sba.gov:

- **SBA Business Physical Damage Loan Program.** Available to help businesses and nonprofit organizations repair or replace uninsured damaged property such as real estate, machinery and equipment, inventory, and supplies. SBA requires borrowers to obtain and maintain appropriate insurance, especially if located in a flood hazard area.
- **SBA Economic Injury Disaster Loan.** These loans of “last resort” provide working capital to small businesses and small agricultural cooperatives to help them through the recovery period.
- **SBA Disaster Assistance Program Loans.** These loans are available to eligible homeowners through the Robert T. Stafford Act as part of the Individual Assistance Program. The loans can include mitigation measures such as drainage improvement, flood proofing and hurricane shutter installation. This program provides an opportunity for citizens within declared jurisdictions to work independently of a traditional grant program to assume responsibility for mitigation of their disaster-prone property. During 2006, the Commonwealth sought and received SBA assistance for two federally declared Public Assistance Disasters so that some assistance was available to affected residents.



4.7 State Programs and Capabilities

The following agencies and programs either have a direct or indirect role in mitigation in the Commonwealth. Many of these agencies are a part of the Virginia Emergency Response Team (VERT) as Emergency Support Functions (ESF). These programs play a key role in reducing risk to natural hazards in the Commonwealth and improve the effectiveness of mitigation activities.

- **Virginia Department of Emergency Management (VDEM).** VDEM's primary mission is to protect the lives and property of Virginia's citizens from emergencies and disasters by coordinating state emergency preparedness, response, recovery and mitigation programs. The responsibility of VDEM is to ensure a comprehensive, efficient and effective response to emergencies and disasters throughout Virginia, including provision of assistance in the absence of events for which federal aid is made available. VDEM is charged with supporting mitigation planning and administers Hazard Mitigation Grant Programs that provides grants to eligible entities to implement cost effective mitigation projects in post-disaster periods. VDEM and the Department of Conservation & Recreation coordinate the administration of FEMA's NFIP-funded Flood Mitigation Assistance Program. VDEM also leads the state and federal Public Assistance Programs, which provide disaster assistance to state agencies, local jurisdictions, and certain private nonprofit entities to repair and restore damaged facilities. Damaged facilities must be repaired in a manner that is compliant with existing codes and standards. VDEM manages the National Weather Service's Integrated Flood Observing and Warning System (IFLOWS) in several western and southwestern counties. IFLOWS improves local flash flood warnings through a linked wide area monitoring and communications network. With other state agencies and local jurisdictions, VDEM coordinates hurricane evacuations, relying in part on information developed as part of the updated Virginia Hurricane Response Plan.

Use of the HMA grant programs was explored as funding sources for structural mitigation and data development objectives and strategies. FMA funding is very limited and is not really targeted for use in the Commonwealth to mitigation Commonwealth structures. Mitigation most directly interfaces the public assistance program through use of the section 406 public assistance mitigation program immediately post-disaster. As the structural mitigation measures were not directed specifically at post-disaster actions but were more proactive in examination of holistic, long-term mitigation strategies, public assistance was not directly integrated into the plan.

The Commonwealth of Virginia has many tools in building a mitigation plan to address human caused disasters. Since the 2007 plan, the Commonwealth has developed and/or revised the Pandemic Flu, Terrorism and Consequence Management, Oil and Hazardous Materials, and the Critical Infrastructure Protection Plan. The Commonwealth also has been involved in the Buffer Zone Protection Plan program.



- **Department of Conservation & Recreation (DCR).** DCR enhances natural and recreational resources through land management planning, funding, education and regulations. DCR is the State Coordinating Office for National Flood Insurance Programs, administers the dam safety program, and participates in interagency initiatives concerning coastal erosion. A number of DCR's programs have the potential to support certain flood mitigation projects. *The Flood Prevention and Protection Assistance Fund* helps local jurisdictions address problem areas. Some easement and other programs may support floodplain acquisition projects, including Scenic Rivers Program, funding from the Virginia Outdoors Fund, Conservation Reserve & Enhancement Program, and Best Management Practices implemented with Water Quality Improvement grants.

The Map Modernization Program is coordinated by the Virginia Department of Conservation and Recreation. It is described in several sections of this plan. Implementation of the map modernization strategic plan has impacted local and state HIRAs and has been included in the analysis in Chapter 3.

- **Department of Housing & Community Development (DHCD).** DHCD collaborates with communities to assist them in fully developing their economic potential, and create a healthy, safe and affordable living environment. Three key aspects of DHCD's broad responsibilities merit particular attention: Several funding programs can support local mitigation measures, including the Community Development Block Grant program and other federally funded programs. Following Hurricane Isabel, DHCD grant staff coordinated with VDEM hazard mitigation and human service managers to target funds to communities hardest hit by Isabel. This effort resulted in more than \$5M in CDGB monies supporting elevations of flood prone properties, increasing the capacity of the Isabel HMGP program (\$19M) by 25%.

After catastrophic disasters of regional proportions, DHCD coordinates local Long-Term Disaster Recovery Task Force. These task forces are critical to coordination of various economic assistance and redevelopment programs, volunteer efforts, donations and redevelopment. Strong local recovery task forces have support disaster recovery in southwest Virginia (flooding and severe weather), Franklin Virginia (Hurricane Floyd) and Poquoson (Hurricane Isabel).

- **Department of Forestry (DOF).** One of Virginia's strongest programs in the nation is responsible for 15 million acres of forestland, providing protection and management for forest fire, insects, and disease. DOF is directly responsible for suppression of forest fires and supports response to natural disasters. Full-time and part-time wildland firefighters are trained and qualified by DOF in fire control tactics and the Incident Command System. An emergency interagency response center is located in Charlottesville; mobile command centers that are available for rapid deployment. Funded by National Fire Plan grants, DOF has initiated statewide wildland fire risk assessments that are maintained in a geographic information database system.



- **Virginia Resources Authority (VRA).** The VRA facilitates loans to support local infrastructure for projects concerning environmental quality, public health, transportation and economic development. Since its inception, VRA has funded more than 875 critical projects across the Commonwealth exceeding \$4.2 billion of investment in Virginia’s communities. Financing solutions draw on VRA’s creativity and unique ability to provide revolving fund loans to localities at below-market interest rates and to issue bonds backed by the moral obligation of the Commonwealth. The VRA staff offers extensive experience and expertise in a variety of financings and provides ongoing assistance to localities in connection with their public projects.
- **Department of General Services (DGS).** DGS oversees the design and construction of state-owned buildings, applying the International 2000 Building Code provisions related to wind, seismic, snow, and flood loads. The *Governor’s Executive Memorandum 2-97* designates DGS as the agency responsible for ensuring state construction proposed in mapped flood hazard areas complies with the National Flood Insurance Program (NFIP). All proposals are processed as variances, and must be reviewed by DCR.
- **Virginia Department of Transportation (VDOT).** VDOT is responsible for building, maintaining and operating state’s roads, bridges and tunnels, including repairs and replacements required after natural disasters. In accordance with requirements of the Federal Highway Administration, VDOT routinely factors flood hazards into the planning and design of transportation infrastructure, and seismic provisions are required in the southwestern portion of the state.
- **Risk Management Division, Department of Treasury (RMD).** RMD maintains a blanket insurance policy, which covers all state buildings. Each agency pays premiums based on their buildings and loss history. Claims can be made for building structural and contents damage. RMD also houses the Virginia Property System (VAPS) database.
- **Department of Mines, Minerals & Energy (DMME).** DMME operates six divisions, which focus on the production of more than 30 different mineral resources such as coal, gas and oil, and non-petroleum minerals like rock and gravel. A primary goal of DMME is that these mining operations have no off-site effects such as increased flood hazards and slope failure potential. The State Geologist’s office provides mapping and digital data to local jurisdictions to be included in local plans. Maps of steep slope areas, including areas where landslides have occurred, are available for some areas.
- **Department of Environmental Quality (DEQ).** DEQ is the lead agency for the Virginia Drought Monitoring Task Force, DEQ then compiles Drought Status Reports using information from several state and federal agencies. The reports, which are distributed by VDEM, contain sections relating to current climatologically conditions and situation reports regarding water supplies, water quality, forest fire risks and agriculture and crop reports. DEQ also has major responsibility for the environmental consequences of accidents and disasters. The agency plays a major role in hazardous materials containment, testing and abatement and provides oversight to the section 401/404 joint permitting process that oversees any activity with potential impacts to rivers, streams or wetlands



- **Virginia Coastal Program.** The Department of Environmental Quality leads the networked Virginia Coastal Program and helps with development and implementation of coordinated policies. DCR manages the Shoreline Erosion Advisory Service (SEAS), which advises shoreline property owners and coastal resources managers about shoreline erosion control and stabilization methods. The Virginia Marine Resources Commission regulates sand dune modifications; many local jurisdictions have adopted ordinances for sand dune protection and issue permits with the Marine Resources Commission in an oversight role. The Virginia Institute of Marine Science provides technical and research support. The Board on Conservation and Development of Public Beaches provides for the conservation of tidal public beaches by allocating state-funded grants to local jurisdictions to conserve, protect, improve, maintain and develop public beaches and tidal shorelines.

4.7.1 Related State Plans and Documents

There are many state plans and documents related to mitigation planning in Virginia. Existing state plans and documents that most affect mitigation are summarized below.

Floodplain Management Plan for the Commonwealth of Virginia (2005) (Virginia Department of Conservation and Recreation). This document contains valuable information on flood hazards and risks, and defines the state's role in floodplain management. It contains a modest action agenda, which is reflective of concerns about reductions in program staff and resources in the early 1990s. A summary of the status of the action agenda set forth in the Plan is included. A review of the Plan, on file with VDEM and DCR, recommends that the *Floodplain Management Plan* form the technical basis for the flood-related actions set forth in this Hazard Mitigation Plan. However, delay of revision of the *State Floodplain Management Plan* precluded its use in developing the hazard and risk analysis for this plan. The State Floodplain Management Coordinator began revision of the plan during spring, 2004. It was completed in March, 2005 and serves as an annex to the state Hazard Mitigation Plan.

Executive Memorandum 2-97, Floodplain Management for State Agencies (1997). Developed in the early 1990s and adopted after Hurricane Fran in 1996, this document is a clear statement of the Governor's intent that all state agencies have some responsibility in managing flood hazards and reducing their impacts through a series of different avoidance, promotion, and coordination activities. A summary review is on file with VDEM and DCR. As set forth in the Executive Memorandum, the Governor addresses important aspects of state performance:

- DCR is charged as the State Coordinating Office of the NFIP and the technical advisor on the viability of proposed flood mitigation projects;
- All State agencies engaged in construction or land disturbing activities are to comply with locally adopted floodplain management ordinances;
- New state buildings in flood hazard areas must be authorized by a variance obtained from the Director of Department of General Services' Division of Engineering and Buildings in consultation with DCR; and



- The State Corporation Commission determines the adequacy of the Commonwealth's insurance with respect to potential flood damage.

All state agencies follow the directives listed above routinely. Therefore, the Executive Memorandum is considered state policy that must be followed by all state agencies. It represents ongoing mitigation efforts, not new initiatives, so is not further addressed by this plan.

Mitigation Strategies: Prepared by the Commonwealth and FEMA immediately following establishment of a Disaster Field Office to respond to each presidential declared disaster, the Mitigation Strategy focuses mitigation priorities specific to recovery from that disaster. In conjunction with the state's mitigation goals and vision statement, the Mitigation Strategy priorities are determined to support recovery operations for the specific disaster event. These priorities can include education, support of local officials in administration of floodplain ordinance requirements, targeted technical training and development of specific mitigation messages for affected residents, businesses and local governments. The Strategy outlines priorities for implementing Hazard Mitigation Grant Program funding that is determined as 20% of eligible program expenditures for the disaster. Immediate recovery priorities are outlined to guide eligible HMGP applicants. Examples of mitigation strategies from DR 1655 and 1661 can be found in Appendix 9.

4.8 Local Capabilities

With respect to addressing natural hazards, local jurisdictions control land use through plans, ordinances and codes. These programs are enabled through state law and regulation and like the many state programs described in this chapter, contribute significantly to mitigation of natural hazards. These programs were not directly considered during development of the final *Emergency Operations Plan, Support Annex 3: Standard Virginia Hazard Mitigation Plan* because the plan primarily addresses state facilities determined to be at risk following analysis of vulnerability of state facilities to natural hazards. However, these efforts are extremely relevant as state agencies generally manage state facilities in a manner that is consistent and complementary of local comprehensive planning and zoning. State-sponsored construction adheres to the Uniform Statewide Building Code that incorporates the International Building Code, 2006. Use of the Uniform Statewide Building Code is required for all new construction as well as significant repairs or additions within Commonwealth cities, counties and towns. Many of the local strategies that were identified by Virginia jurisdictions (see Appendix 10) reflect the building code and address natural hazards. These local initiatives significantly contribute to mitigating hazards.

- **Comprehensive Plans** are prepared by local planning commissions and address the physical development of land within a jurisdiction's boundaries. The comprehensive plan "shall be made with the purpose of guiding and accomplishing a coordinated, adjusted and harmonious development of the territory which will, in accordance with present and probable future needs and resources, best promote the health, safety, morals, order, convenience, prosperity and



general welfare of the inhabitants” (§15.2-2223, *Code of Virginia*). Most plans evaluate and provide guidance for both land uses and the environment. Residential, business, industrial, agricultural, parks and open space, public land, floodplains, transportation corridors, community facilities, historical districts and areas targeted for redevelopment are all addressed within the plan. Also included are demographic trends such as population densities and information on age and quality of housing stock.

- **Zoning Ordinances** are for general purpose of promoting health, safety or general welfare of the public. Some consideration to the following is given within each zoning district, where applicable:
 - adequate light, air, convenience of access, and safety from fire, flood, crime and other dangers;
 - provision of adequate police and fire protection, disaster evacuation, water, sewerage, flood protection, and other public requirements; and
 - protection against loss of life, health, or property from fire, flood, panic or other dangers (§15.2-2283, *Code of Virginia*).
- **Land Subdivision and Development Ordinances** are prescribed by statute and provide restrictions for plats, utilities, and streets, and address flood control, drainage, and other regulations that control the density and use of the land. (§15.2-2241, *Code of Virginia*).
- **2006 Uniform Statewide Building Code** includes provisions related to wind hazards, snow loads, seismic risk flood hazards, and structural fire hazards. The Uniform Statewide Building Code, in partnership with the International Code Commission, incorporated the 2006 International Building Code into its May, 2008 adoption which supersedes previous building codes and regulations (§36-98, *Code of Virginia*). The code has been cross-walked with the National Flood Insurance Program regulations and is consistent with local floodplain ordinances. The State Building Code Official provides technical assistance and interpretation of regulations to local governments. Periodic revision of the statewide building code usually includes adoption of the current International Building Code along with other state-specific regulations. This most recent adoption, provided wind strengthening measures that will reduce damages from severe storms and hurricanes.
- **Floodplain Management**, The provisions for development within the regulated floodplain has typically been addressed by stand-alone ordinances adopted for voluntary participation in the National Flood Insurance Program. Revised floodplain ordinance provisions were recently incorporated into comprehensive zoning ordinances when localities adopt, revise or re-codify zoning ordinances. Flooding has always been problematic in the Commonwealth with many severe floods documented soon after European settlement. To complement the National Flood Insurance Program, created in 1968, Virginia's General Assembly enacted the Virginia Flood Damage Reduction Act of 1989. This legislation was the result of several disastrous floods or coastal storms that hit the state between 1969 and 1985. To improve Virginia's flood protection programs and place related programs in one agency, responsibility for coordination of all state floodplain programs was transferred in 1987 from the Water Control Board to the Department of Conservation and Recreation (DCR). DCR was named



manager of the state's floodplain program and designated coordinating agency of the National Flood Insurance Program under the act, §10.1-602, and a governor's memorandum released in July 1997. Floodplain Management Program staff work with localities to establish and enforce floodplain management regulations. Localities use the program's state model ordinances, in which minimum standards for local regulations are set, to write their own. Local governments can set more restrictive standards to ensure higher levels of protection for residents in flood hazard areas. Also, the state has used the Virginia Uniform Statewide Building Code to set construction standards for structures built in Federal Emergency Management Agency designated flood hazard areas. Floodplain zoning regulates development within floodplains. The program's main goal is to protect people and their property from unwise floodplain development practices. It also protects society from costs associated with the development of risk-prone floodplains. The provisions for development within the regulated floodplain have typically been addressed by stand-alone ordinances adopted for voluntary participation in the National Flood Insurance Program. Revised floodplain ordinance provisions were recently incorporated into comprehensive zoning ordinances when localities adopt, revise or re-codify zoning ordinances.

- **Stormwater Management**, (*Title 10.1, Chapter 6, Article 1.1 of the Code of Virginia*) These statutes specifically set forth regulations regarding land development activities to prevent water pollution, stream channel erosion, depletion of groundwater resources, and more frequent localized flooding to protect property value and natural resources. Stormwater management programs operated according to the law are intended to address these adverse impacts and comprehensively manage the quality and quantity of stormwater runoff on a watershed-wide basis.
- **CBLA and the Virginia Bay Act**, (*Title 10.1, Chapter 21 of the Code of Virginia*) The Bay Act Program is designed to improve water quality in the Chesapeake Bay and its tributaries by requiring the use of effective conservation planning and pollution prevention practices when using and developing environmentally sensitive lands. At the heart of the Bay Act is the concept that land can be used and developed in ways that minimize negative impacts on water quality. The first sentence of the Bay Act serves as a theme for the entire statute:

"Healthy state and local economies and a healthy Chesapeake Bay are integrally related; balanced economic development and water quality protection are not mutually exclusive."

Local Bay Act programs start by adopting or amending local land use plans and ordinances. Local governments must amend their zoning ordinances, subdivision ordinances, and comprehensive plans to incorporate water quality protection measures consistent with the Bay Act Regulations. The Regulations address non-point source pollution by identifying and protecting certain lands called Chesapeake Bay Preservation Areas. The Regulations use a resource-based approach that recognizes differences between various land forms and treats them differently.



4.8.1 Effectiveness of Local Mitigation Policies, Programs, and Capabilities

Since the majority of mitigation activities in the Commonwealth are carried out at the local level, it is important to determine the effectiveness of local policies, programs, and capabilities. Comprehensive planning throughout the state has required localities to look at future land use planning. This is very effective in conjunction with local floodplain ordinances in restricting the type of development within the floodplain. Hazard mitigation plans are beginning to be integrated into comprehensive plans; the cities of Chesapeake and Poquoson have integrated the two plans in their 5 year plan revisions. This integration will assist local decision makers in determining the risks of future development in certain areas. Both of these cities also require at least 1 foot of freeboard in their local floodplain ordinances. This provides additional risk reduction should a flood exceed the BFE or if the BFE changes over time due to changes in development and/or sea level rise for coastal communities.

4.8.2 Local Plan Capability Assessments

Capability assessments from each of the 27 local hazard mitigation plans were reviewed to determine the capabilities at the regional and local level. Table 4.2 is a display of the common plans, codes, and ordinances that were found in the local plans. This table isn't a true representation of each locality, but at least one locality within the plan had these capabilities in place. Comprehensive Land Use plans, subdivision ordinances, and building codes are represented throughout local capabilities as required through the codes referenced above.



Table 4.2 - Local Capability Matrix

Local Plans and Ordinances	Comprehensive Plan	Land Use Plan	Subdivision Ordinance	Zoning Ordinance	NFIP/Floodplain Ordinance	Building Code	Local EOP	Stormwater Management	Fire Codes	Capital Improvement	Hazard Mitigation Plan	Economic Development
Amelia	X	X	X	X	X	X	X				X	
Central Shenandoah	<i>No Capability Assessment Included</i>										X	
City of Chesapeake	X		X	X	X	X	X	X			X	
Commonwealth Regional Council	X	X	X	X	X	X	X	X	X	X	X	X
CRATER	X	X	X	X	X	X		X	X		X	
Cumberland Plateau	X	X	X		X	X	X	X			X	
City of Franklin	X	X	X	X	X	X	X	X	X	X	X	
George Washington RC	X	X	X	X	X	X	X	X			X	
LENOWISCO	X		X	X		X	X				X	
Middle Peninsula	X	X	X	X	X	X	X				X	
Mount Rogers	<i>No Capability Assessment Included</i>										X	
New River Valley	<i>No Capability Assessment Included</i>										X	
Northern Neck	X	X	X	X	X	X	X	X			X	X
Northern Shenandoah	X		X	X	X	X	X		X	X	X	
Northern Virginia	X		X	X	X	X	X	X	X	X	X	X
City of Poquoson	X	X	X	X	X	X	X	X			X	
Rappahannock-Rapidan	X	X	X	X	X	X	X	X	X	X	X	
Region 2000	X		X		X	X	X	X			X	
Richmond Regional	X	X	X	X	X	X	X	X	X		X	X
Roanoke Valley-Alleghany	<i>No Capability Assessment Included</i>										X	
Southampton County	X	X	X	X		X				X	X	
Southside	<i>No Capability Assessment Included</i>											
Southside Hampton Roads	X	X	X	X	X	X	X	X	X	X	X	X
Thomas Jefferson	X	X	X	X	X	X	X	X		X	X	
West Piedmont	X	X	X	X	X	X	X	X	X	X	X	X

