Westmoreland County

Hazard Mitigation Plan

January 2009

RESOLUTION #R-38-2006

WHEREAS, 44 CFR Part 201 Hazard Mitigation Planning, establishes criteria for hazard mitigation planning authorized by §322 of the Stafford Act, as amended by §104 of the Disaster Mitigation Act. Section 322 of the Disaster Mitigation Act of 2000, mandates that Westmoreland County; prepare, maintain and keep current a hazard mitigation plan for evaluating the County's hazards, identifying resources and capabilities, selecting appropriate actions, and developing and implementing mitigation measures to eliminate or reduce future damage from those hazards in order to protect the health and safety, and welfare of residents within this County; and

WHEREAS, in response to the mandate stated above, this County has prepared a hazard mitigation plan to identify any cost-effective action taken to eliminate or reduce the long-term risk to life and property from natural and technological hazards; and

WHEREAS, this County has also prepared a hazard mitigation plan in order to reduce the potential affects of a major emergency or disaster and to protect the health, safety and welfare of the residents of this County;

NOW, THEREFORE, we, the undersigned Commissioners of Westmoreland County do hereby approve, adopt and place into immediate effect the Hazard Mitigation Plan of Westmoreland County. This Plan shall be reviewed every five years to make certain that it conforms to the requirements of the provisions set forth by the Pennsylvania Emergency Management Agency's Guidelines.

THIS RESOLUTION approved and adopted by the Commissioners of Westmoreland County, Pennsylvania, this 12th day of October, 2006.

WESTMORELAND COUNTY BOARD OF COMMISSIONERS:

Chairman

Vice Chairman

Secretary

ATTEST:

Chief Clerk

October 12, 2006
Date

RECORD OF CHANGES AND REVIEWS

Date of Change	Description of Change	Signature of Person Making Change	Date Change Distributed
10/12/06	Adoption by Westmoreland County Board of Commissioners.	Christopher Tantlinger	11/06
7/2/07	Updated information regarding guidance from PEMA & FEMA. Italicized yellow highlighted script.	Christopher Tantlinger	7/07
9/10/07	Added Power Point Presentation for Municipality Leaders	Christopher Tantlinger	9/07
11/1/07	FEMA Milestone items prepared and added municipal data.	Christopher Tantlinger	11/07
6/16/08	Added Municipality folders to Annexes	Christopher Tantlinger	12/08
8/6/08	Added Annex K for NFIP Participants	Christopher Tantlinger	12/08
1/2/09	Added Annex L for Summits & Conferences	Christopher Tantlinger	1/09
3/25/09	Update of information in body of Plan and add new Table Templates	Christopher Tantlinger	6/09
6/29/09	Updated NFIP text for municipal measures and reference.	Christopher Tantlinger	6/09

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CERTIFICATION OF 5-YEAR REVIEW

SIGNATURE_____

Title_____ Date _____

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Some annexes and information are available as scanned .pdf files and are only reviewable through electronic media with permission of the Hazard Mitigation Officer of Westmoreland County.

Acronyms

CCAP – County Commissioners Association of Pennsylvania
CFR – Code of Federal Regulations
CRS – Community Rating System
DCED – Department of Community
DMA – Disaster Mitigation Act of 2000 PL 106-390
EOP – Emergency Operations Plan
FEMA – Federal Emergency Management Agency
FHBM – Flood Hazard Boundary Map
FIRM – Flood Insurance Rate Map
FMA – Flood Mitigation Assistance (FEMA/NFIP Program)
GCGLS – Governor's Center for Local Government Services
GIS – Geographic Information Systems
HAZUS – Hazards U.S. (FEMA disaster loss estimation tool)
HELM – Housing, Economic, Land Use, Mobility
HMA – Hazard Mitigation Assistance
HMP – Hazard Mitigation Plan
HMGP – Hazard Mitigation Grant Program
HMWG – Hazard Mitigation Working Group
IBHS – Institute for Business & Home Safety
LEPC – Local Emergency Planning Commission
MSC – Map Service Center
NFIP – National Flood Insurance Program
NLCD – National Land Cover Database
NOAA – National Oceanic and Atmospheric Administration
NRCS – Natural Resource Conservation Services (part of USDA)
NWS – National Weather Service
PEMA – Pennsylvania Emergency Management Agency
PHMC – Pennsylvania Historical and Museum Commission
PDM – Pre-Disaster Mitigation Program
PIE – Prioritization Implementation Evaluation
PIO – Public Information Officer
PLCM – Pennsylvania League of Cities and Municipalities
PMAA – Pennsylvania Municipal Authorities Association
PSAB – Pennsylvania State Association of Boroughs
PSATC – Pennsylvania State Association of Township Commissioners
PSATS – Pennsylvania State Association of Township Supervisors
SARA – Superfund Amendment Reauthorization Act
STAPLE/E – Social, Technical, Administrative, Political, Legal, Economic, and Environmental
STEPS – Social, Technical, Economic, Political, Service
TBD – To Be Determined
UBC – Uniform Building Code
USDA – United States Department of Agriculture
WCDPS – Westmoreland County Department of Homeland Security
WNV – West Nile Virus

Websites

CCAP: http://www.pacounties.org
PMAA: http://www.municipalauthorities.org
PSATS: http://www.psats.org
PSAB: http://www.boroughs.org
DCED: http://www.inventpa.com
IBHS: http://www.ibhs.org
Pennsylvania State Government http://papower.state.pa.us
DEP http://www.dep.state.pa.us
PEMA http://www.pema.gov
FEMA http://www.fema.gov
NFIP Newsletter http://www.fema.gov/business/nfip/wm.shtm
SmartGrowth http://www.smartgrowthpa.org
WCHMP
http://www.wcdps.org/publicsafety/lib/publicsafety/documents/westmoreland_county_hazard_mitigation_plan_-_final.pdf
WCGIS
http://www.co.westmoreland.pa.us/westmoreland/cwp/view.asp?a=1505&q=624494
Radon: http://www.wpb-radon.com/PA_radon_map.html#Westmoreland
NOAA: www.ncdc.noaa.gov

Westmoreland County Hazard Mitigation Plan

Introduction

Hazard Mitigation Officer's Summary

This plan is the ongoing effort of the Westmoreland County Department of Public Safety's hazard mitigation planning process. The plan originally followed FEMA's 10-Step Planning Process and was formally adopted by Westmoreland County Resolution and now forges ahead with new Disaster Mitigation Act Planning Regulations (44CFR 201.6) to achieve Region III approval.

Westmoreland County is very cognizant of applying an all hazards approach to emergency management and works closely with many county Planning agencies. The purpose of this plan is to meet the requirements of the Disaster Mitigation Act of 2000 (PL 106-390) and thereby maintain continued eligibility for certain Hazard Mitigation – or disaster loss reduction – programs from FEMA, the Federal Emergency Management Agency, now a part of the DHS, Department of Homeland Security. More importantly, this plan and planning process lays out the strategy that will enable Westmoreland County's municipalities to become less vulnerable to future disaster losses.

The process followed a methodology prescribed by FEMA and integration with a multitude of agencies that are stakeholders in planning. It began with the formation of a Hazard Mitigation Working Group comprised of key County and stakeholder representatives. The planning process examined the recorded history of losses resulting from all hazards and analyzed the future risks posed to the County by these hazards.

This plan was formally adopted by the Westmoreland County Commissioners on October 12, 2006 by resolution #R-38-2006. The plan outlines implementation and maintenance procedures that include an annual review process by the Hazard Mitigation Officer, Senior County Planning Official, and various members of the Hazard Mitigation Working Group. The plan will be updated every five years unless circumstances dictate a more frequent approach.

Why there is a mitigation plan

The purpose of a Hazard Mitigation Plan is to lessen and/or prevent the effects of natural and man-made disasters on the population, property and government of Westmoreland County. As part of the overall community planning effort for hazard mitigation, Westmoreland County Department of Public Safety (WCDPS) continuously forges this plan pursuant to the requirements of the Disaster Mitigation Act of 2000 (PL 106-390, hereafter referred to as DMA; see appendix A for a list of acronyms used in this document). This section of the

Plan describes the purpose and need for the Plan, the scope of this effort, and the plan organization.

Hazard Mitigation is defined as any sustained action taken to reduce or eliminate recognized empirical, factual, and sometimes anecdotal long-term risk to human life and property from hazards. Planning is the process of setting goals, developing strategies, and outlining tasks and schedules to accomplish the goals.

Hazard Mitigation Planning is the process through which hazards that threaten communities are identified, likely impacts of those hazards are determined, mitigation goals are set, and appropriate strategies that would lessen the impacts are determined, prioritized, and implemented.

Hazard Mitigation Planning is required for state and local governments to maintain their eligibility for certain federal disaster assistance and hazard mitigation funding programs. Communities at risk from disasters must realize that their understanding of mitigation of hazards is a component of and relative to federal disaster funding.

Purpose and Need

Every year, disasters in the United States of America tragically kill hundreds of people and injure thousands more, devastating families and the way of life of those affected. Throughout these United States of America hardworking taxpayers pay billions of dollars annually to help in the recovery efforts of communities, organizations, businesses, and individuals. These monies only partially reflect the true cost of disasters, because additional expenses to insurance companies and non-governmental organizations are not reimbursed by tax dollars. Additionally these same individuals give freely of their time and expertise as volunteers to insure that these efforts, in tandem with the federal government assistance, insure a stable return to the pursuit of life, liberty, safety, and the pursuit of happiness.

It is very important to note that many natural disasters are predictable and repetitive. The results of these disasters can be quantified and then efforts can be made to alleviate or even eliminate loss of life, tragic injury, and savings of dollars to enhance the local communities' economic vitality.

The Federal Emergency Management Agency (FEMA), now a part of the Department of Homeland Security (DHS), has targeted reducing losses from disasters as a primary goal. Hazard Mitigation planning and subsequent implementation of projects (HMPO), gained from surveys, measures, and education and recommendations to local municipalities developed through open communication is the primary venue for identifying and achieving these goals. Success will be measured by the reduction of disaster damages in those areas which are predictable, repetitive and identified through historical analysis and then implemented as a result of Hazard mitigation.

This plan follows and was developed by guidance through DMA regulations published in the **Federal Register** volume 67, Number 38, Tuesday, February 26, 2002. Section 104 of DMA revises the Robert T. Stafford Disaster Relief and Emergency Assistance Act by adding Section 322, which requires new and revitalized emphasis on hazard mitigation, including adding a new requirement for local mitigation plans. These new local mitigation planning regulations are implemented through 44CFR Part 201.6. This part of the planning process is known as a **Local Hazard Mitigation Plan Review Crosswalk** for the **FEMA Region III.**

DMA requires local governments to have a FEMA – approved Hazard Mitigation Plan in place. Compliance with these requirements will also maintain Westmoreland County's continued eligibility for certain Hazard Mitigation – or disaster loss reduction – programs from FEMA. Additionally PA Title 35 allows Pennsylvania Counties to step in for local municipalities in certain situations.

Proactive mitigation planning at the local level can help reduce the cost of disaster response and recovery to property owners and government by protecting critical community facilities, reducing liability exposure, and minimizing overall community impacts and disruption.

Scope

The Westmoreland County Hazard Mitigation Plan identifies goals, objectives, and measures for hazard mitigation and risk reduction to make the County less vulnerable and more disaster resistant and sustainable. This plan includes information for Westmoreland County of the Commonwealth of Pennsylvania. The actions of this plan attempt to answer a federal mandate that through guidance and coordination should help local municipalities make local policy decisions for future land use within the County. The County within the Commonwealth of Pennsylvania understands and facilitates the autonomy of local governments and hopes by request that its municipalities will address mitigation strategies for all hazards.

This plan follows DMA 2000 planning requirements and has used the FEMA 386-2 August 2001 guide, attendance of Public Safety officials to Pennsylvania State Association of Township Supervisors (PSATS) PEMA Disaster Prevention Workshop February 6, 2003 in association with the Governor's Center for Local Government Services (GCLGS) One Source Municipal Training Workshop.

Flood Mitigation Assistance Program

The Flood Mitigation Assistance Program (FMA) was created as part of the National Flood Insurance Reform Act (NFIRA) of 1994 (42 U.S.C. 4101) with the goal of reducing or eliminating claims under the National Flood Insurance Program (NFIP). Although the NFIRA created FMA, the regulations governing this program are found in 44 CFR Part 78. The overall goal of FMA is to fund cost-effective measures that reduce or eliminate the long-term risk of flood

damage to buildings, manufactured homes, and other National Flood Insurance Program (NFIP)-insurable structures.

The program's objectives are to:

- Reduce the number of repetitively or substantially damaged structures and the associated claims on the National Flood Insurance Fund.
- Encourage long-term, comprehensive mitigation planning.
- Respond to the needs of communities participating in the NFIP to expand their mitigation activities beyond floodplain development review and permitting.
- Complement other Federal and State mitigation programs with similar, long-term mitigation goals.

FMA provides grants to communities for projects that reduce the risk of flood damage to structures that have flood insurance coverage. This funding is available for mitigation planning and implementation of mitigation measures only. The Pennsylvania Emergency Management Agency (PEMA) is the State Administration Agency (SAA) of the FMA program and is responsible for selecting projects for funding from the applications submitted by all communities within the Commonwealth. PEMA then forwards selected applications to FEMA for an eligibility determination. Individuals cannot apply directly for FMA funds; however, their local government may submit an application on their behalf.

Additionally, the Director of the WCDPS adds hazard mitigation to WCDPS presentations, has made it a part of the County Emergency Operations Plan (EOP) [Chapter 3, Section C Hazard Vulnerability-Basic Plan] and continuously forges relationships with the following County agencies and private entities:

- Planning Commission
- Tax Assessment Office
- Emergency Management
- Board of County Commissioners
- Public Works and Recreation Department
- Local Emergency Planning Commission (LEPC)
- Institute for Business and Home Safety (IBHS)
- County Commissioners Association of Pennsylvania (CCAP)
- Pennsylvania Historical and Museum Commission (PHMC)
- Pennsylvania State Association of Boroughs (PSAB)
- Pennsylvania League of Cities of Municipalities (PLCM)
- Pennsylvania State Association of Township Commissioners (PSATC)
- Municipal Authority of Westmoreland County (MAWC)
- PA Cleanways
- Westmoreland Conservation District
- Department of Community and Economic Development (DCED)

This plan utilizes FEMA Region III Crosswalk Reference Document for review and Submission of Local Mitigation Plans.

How it was prepared.

The Director of WCDPS proactively approached all interests needed to bring hazard mitigation to the forefront and make it a vital part of all planning in Westmoreland County.

Every local municipality's Emergency Operations Plan updated in 2003 references hazard mitigation on page one of those plans. Additionally a comprehensive Hazard/Vulnerability Analysis with interactive discussions and power point presentations given to local emergency management coordinators, SARA facility emergency coordinators, mayors, supervisors, council members, public safety first responders at recorded and documented monthly quarterly meetings held throughout the county.

Some local response to the action steps regarding hazard mitigation was poor or lacked understanding of the FEMA law. The required intensive description of hazard mitigation was adeptly addressed by the county Public Information Officer (PIO) and Hazard Mitigation Officer (HMO). A document called "What is This Hazard Mitigation" was provided to all those inquiring more information from the HMO on the HMP. See Annex H for article.

Some local government officials engaged their public works directors in conjunction with their emergency management coordinators to identify HMPO's. Close attention was paid to the "Smart Growth Partnership of Westmoreland County" vision and mission statements that promote education to increase the understanding and use of sustainable concepts of community planning among elected officials, planners, lawyers, developers, students and the general public.

Summits, conferences, workshops and events held from September of 2005 through May of 2006 addressed vast land use issues across a multitude of agencies. (Official documentation of these meetings can be obtained by request from the Westmoreland County Department of Public Safety Deputy Emergency Management Coordinator on the entities listed on p. 13) See Annex H sign in sheets. These event steps included major universities, private stakeholders, commonwealth agencies, environmentalists, land trusts, and most importantly community leaders that are always active in addressing the needs of their localities with determined dedication and true public service. Annex L contains the information regarding these various summits and conferences.

It is important to understand that planning in Westmoreland County is an action step addressed consistently by its leaders.

In an effort to create strong validation for the municipalities to move forward in addressing specific hazard mitigation planning the decision was made by the

HMO to have the County adopt the present HMP activities. This process gave illumination to the local municipalities showing the County's HMPO's and create a formulation process. The preemptive adoption has proved to be successful in getting projects into a matrix for quantifiable results.

Documents Used

- Westmoreland County Hazard/Vulnerability Analysis (pp. 15-92)
- Hazard Mitigation Project Survey (see Annex B)
- Hazard Mitigation Opportunity Form (see Annex C)
- Emergency Operation Plans (available at each municipality)
- HAZUS information (see Annex F)
- "What is this Hazard Mitigation?" (see Annex H)
- Hazard Mitigation Planning Guide (see Annex H)
- Hazard Mitigation Planning Made Easy (see www.pema.gov)
- "Watermark" National Flood Insurance Program newsletter (see www.fema.gov/business/nfip/wm.shtm)
- Summits & Conferences (See Annex L for supporting document dates)

Process

- The Hazard Mitigation Working Group (HMWG) used the Hazard/Vulnerability Analysis to Identify the Disasters that pose the greatest threat to Westmoreland County.
- All-hazard mitigation measures developed at the county level were identified and outlined in the Hazard Mitigation Plan.
- For local measures, the HMWG developed the Hazard Mitigation Project Survey to identify problems and possible solutions to flooding disasters. Future surveys, due to new FEMA guidance will prepare an "open communication survey" to identify HMPO's. (This open communication survey will allow localities to discuss all hazard issues that their constituents have during the public comment of their regular meetings and then prepare a compendium to be submitted to the County HMO.
- The survey was distributed to all the municipalities within the county 3 times through the Local Emergency Management Coordinators.
- Results of the survey were collected and categorized by the following and were then further categorized by size of project.
    - Retrofit Homes in Floodplain
    - Storm Drain Construction / Repair
    - Construction or Repair to State Maintained Property (PennDOT)
    - Property Removal
    - Complete existing projects
- Municipalities with flooding problems (old PEMA guidance) are contacted to obtain further information about the problem and to discuss possible solutions. During this interview the Hazard Mitigation Process is explained and the Municipality is given the option of adopting their own mitigation plan or adopting the county plan as their own (see Annex A).

- If a municipality decides to adopt the county plan and pursue a solution to their problem, they are asked to complete the Hazard Mitigation Opportunity Form and submit it to the HMWG along with a Project Plan for their project(s). A Progress Evaluation Form will be followed to track the efforts of the mitigation action (see Annex G) process is the premise for which the WCDPS chose to move forward in the County adoption preemption to FEMA approval.
- The HMWG will review the information for content, adopt it as part of the county plan and submit a copy of the Hazard Mitigation Opportunity Form to PEMA's Hazard Mitigation Office in Harrisburg.

Involvement

Hazard Mitigation Working Group

• Michael J. Adametz	Hazard Mitigation Officer *05/03*
• Christopher Tantlinger	Hazard Mitigation Officer *09/06*
• Richard Matason	Westmoreland County DPS
• J. Robert Ceroni	Westmoreland County DPS
• Ted Kopas	Westmoreland County Commissioners (Tom Balya's Office)
• Lynn Showalter	Westmoreland County Planning Dept.
• Chris Bova	Senior Planner Westmoreland County
• Henry Fitz	Westmoreland County Public Works
• Jim Pillsbury	Westmoreland Conservation District
• Bob Zahorchak	Municipal Authority of Westmoreland Co.
• Ellen Keefe	PA Cleanways – Westmoreland Co.
• Barry Whoric	Scottdale Borough
• Randy Strong	GIS Director – Westmoreland Co.

Selection of Working Group

Letters of invitation were sent to a number of governmental, non-governmental agencies, local emergency management coordinators and recommended individuals within the county. The final group selection was representative of those individuals who provided input and responded to the invitation volunteering to participate in the working group. The working group is contacted from time to time to fuse any new ideas or concerns into the plan as frequently as these mutual participants meet in any capacity. (Public safety meetings, civic organization meetings, work sessions, public presentations, dedications, etc.)

Public Input

A copy of the Hazard Mitigation Plan was posted on the Westmoreland County Department of Public Safety Web Site for Public Comment on June of 2006 and an updated version December of 2008. Public comments can be made by email or in writing to the Director, Deputy Director of Emergency Preparedness or the

Hazard Mitigation Officer. After two years on the county website there has been no comment regarding the plan.

Public Involvement

The public participation aspect has and will be supported by the WCDPS and the Westmoreland County Planning Department. It is important to note that the level of public participation will be related to the proactive ability of the local municipalities elected officials. The County will offer every available information resource for mitigation actions through the WCDPS PIO and the LEPC.

The Westmoreland County website http://www.co.westmoreland.pa.us/ under the heading for Departments, Public Safety, Emergency Management, Hazard Mitigation Document (12/08 Plan) is the main port of dissemination. Any comments received by a local municipality or on the County website, will be read and discussed at the HMWG evaluation meetings held annually or as necessary.

Risk Analysis

Risk Assessment (Westmoreland County Hazard Vulnerability Analysis)

44 CFR 201.6(c)(2)(ii): "The Risk assessment shall include…A description of the jurisdiction's vulnerability to the hazards described in (c)(2)(i) of this section. This description shall include an overall summary of each hazard and its impact on the community.

Jeopardy abounds in our communities as they were formed through the layering of social, technical, economical, political, and service (STEPS). These steps inadvertently caused risks, risks that are modern day hazards and vulnerabilities. The risk assessment process measures the potential loss to a community, including loss of life, personal injury, property damage and economic injury resulting from a hazard event.

The risk assessment process reaffirmed the mostly known potential risks and vulnerabilities our County community has been addressing since the 1960's and had begun to strongly develop mitigation strategies in the 1970's with emergency responders, and local officials. Associations of civic organizations and fire chiefs, not to mention local elected officials always lead initiatives in flood control in the County seat and its major industrial arena's such as Latrobe, Jeannette, and the Mon Valley. Strategies to mitigate other hazards for fire and safety were created in education venues through the Intermediate Unit in the 1980's with an emphasis on family fire safety. The 1990's brought more public safety awareness and mitigation by developing the emergency management department into Public Safety initiatives that were not only preparedness based but were mitigation objectives for roadways, rivers, and railways identifying risks and comprehensive planning for sustainability and vitality of its citizens.

Fast forward to today and Westmoreland County is embracing the ideas of mitigation through sometimes national leading initiatives in interoperability, continuity of government, threat and risk assessment, local elected official seminars and exercising of plans with after action reports that create mitigation strategies, updated risk assessments and project opportunities. These actions fold into the FEMA methodology of (1.) Identifying Hazards; (2) Profile Hazard Events; (3) Inventory Assets; (4) Estimate Losses.

The basic plan risk assessment introduction outlines 5 action steps in its purpose and lays out specifics in the selection of hazards occurring in Westmoreland County. In the historical breakout, when available, the plan addresses the costs associated to such a hazard event. There is a matrix available of past and repetitive losses in the basic original plan pp. 84-86 and then a HMPO matrix in spreadsheet form to apply real time community mitigation projects as mitigation continues in the forefront of all hazard planning. (See basic matrix in Annex I HMPO HMP WCDPS 060309)

Each hazard was analyzed and rated and discussion from the HMWG developed general ideas that were stipulated as addressing the current compliance of meeting hazard mitigation goals and objectives.

Although flooding is the major focus of the risk assessment for the original HMP future requests for hazard assessments from municipalities will be driven by the continued education of local elected officials, reception of public input on all hazards that exist in their communities.

Introduction

Purposes

To develop a common awareness among emergency service agencies, public officials, and the public, of the major hazards existing in Westmoreland County.

To identify the locations, the number of persons and the major facilities that may be vulnerable to each type of hazard.

To encourage cooperative management of emergency situations based on a common understanding of hazards and their impact.

To enhance emergency disaster response and recovery capabilities for all hazards.

To encourage plans and actions for preventive measures and effective response to preserve life and property in areas vulnerable to effects of natural and man-made hazards.

Methods of Analysis

This area of the plan under new FEMA guidance will address comprehensive mitigation actions and projects for hazards in the future. The municipalities as they embrace the new FEMA mandates will need to combine initiatives and projects to follow mitigation strategies. (Annex D Mitigation Ideas).

Just as the Commonwealth has recommended building code adoption in all of its municipalities, some have opted out and decided to address building code concerns themselves, some have opted in and later decided to opt out because it didn't fit their constituency. The difficulty of educating municipalities that mitigation can reduce the effects of disaster continues to be a hurdle. The County, as regularly as possible, will move toward educating its municipalities about hazard mitigation and that a proactive approach must be adopted citing action steps towards those goals. As evident in the iteration of the original HMP, it was the position of the original HMWG that this County plan will take a broad overarching approach.

How often a disaster occurs (its frequency) and the effects or severity of the event are the basis for planning emergency response and mitigation. Natural hazards tend to reoccur over time whereas man-made events tend to change as technology changes and our way of doing things changes. This analysis is not specific to any one municipality as all hazards in this report are consistent and can occur anywhere within the county. There are no unique hazards or situations that would be specific to any particular area of the county.

Four criteria were selected to assure a systematic and comprehensive approach to analyzing all hazards:

History: a record of past events is particularly helpful in evaluating natural hazards. Both the frequency and severity of past events are useful in predicting the future. The past records of human-caused events offer valuable information, when tempered with the knowledge of preventive efforts and changes in technology that may reduce the frequency and severity of such an event. Other man-made hazards exist and must be analyzed without benefit of past experience. **(See Table HAZ 1)**

Table HAZ 1 - Bureau of Operations PEIRS Reports

Summary of Westmoreland County Incidents Reported to PEMA

Category	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Adverse Weather (inc Flood)	0	0	1	0	2	1	2	3	2	5	14
Civil Disorder	0	0	0	0	0	0	0	0	0	0	0
Evacuation / Shelter in Place	0	0	0	0	0	0	0	0	0	0	0
Exercise	1	2	0	1	1	0	0	2	0	5	4
Fire	13	8	9	10	7	7	19	23	20	55	69
Hazardous Materials	16	15	10	14	17	10	13	16	14	23	34
Medical Service Emergency	0	1	0	0	0	0	0	0	2	1	1
Nuclear / Radiological	3	0	2	0	0	0	0	0	0	0	1
Other	13	11	2	2	10	15	6	2	5	17	18
Petroleum Product	33	22	18	12	9	8	10	7	7	21	19
Search and Rescue	1	2	3	4	3	4	4	3	3	10	11
Terrorist Activity	16	28	20	85	12	8	4	10	6	11	12
Transportation Emergency	10	8	15	17	18	23	32	25	43	103	110
Utility Emergency	3	2	4	7	11	10	10	6	9	42	103
Total Incidents	109	99	84	152	90	86	100	97	111	293	396

Vulnerability: the susceptibility of a community to destruction, injury or death, the degree of which may be related to geographic location, as with floodplains, or to the type of structure. HAZUS was used to determine vulnerabilities and economic loss in a catastrophic event directly impacting Westmoreland County. Reference Annex F for HAZUS Information.

The maximum threat or worst-case disaster should be considered for each hazard. The maximum threat provides an upper boundary for the level of preparedness that may be necessary.

The probability of occurrence in the future is another important factor to be considered when determining priorities and the level of preparedness and planning appropriate for each hazard. An event which occurs annually, through relatively minor in impact, may deserve more emphasis than a major event which occurs once in 50 or 100 years.

Selection of Hazards

Specific information on hazards including date, time, and exact locations of each and every hazard is not addressed in the plan because of the limited response, and lack of data that municipality's record. Future discussions with municipalities and information put forward through the HMWG in continued public awareness initiatives will hopefully create a more conclusive picture of mitigation strategies relative to specific hazards.

A feature to be developed in the continued efforts to address mitigation strategies will be a matrix of each municipality with each hazard and action steps to be performed. The original plan reveals the all hazard approach and gives the basis for implementation but needs to be more proactive in the future on action steps.

A list of potential hazards, as contained in the National Fire Protection Association (NFPA) standard 1600, 2007 Edition Annex for Explanatory Material A.5.3.2 p.14, was used as a checklist of hazards that occur or might occur in Westmoreland County. This list was an update from the original list compiled in 2003 and each hazard was analyzed and rated with regard to the frequency of past occurrences in the county. Natural and man-made hazards were then reviewed to determine which were likely to reoccur in the county. The following hazards were selected and analyzed in this report:

Natural Hazards

- Floods
- Winter Storms
- Hurricanes, Tornadoes and Windstorms
- Drought and Water Supply Deficiencies
- Landslides
- Subsidence – Natural / Mine Related
- Earthquakes

Human-Caused or Technological Hazards

- Dam Failures
- Hazardous Materials
- Fire Hazards
- Transportation Accidents
- Energy Emergencies
- Fixed Nuclear Facility
- Nuclear Attack
- Terrorism

Recently virus pandemic issues have surfaced and are currently being addressed by the Westmoreland County Health Care Emergency Task Force and will be a consideration in future iterations of the plan. Other hazards are present and should be considered such as Radon which is a tasteless, odorless gas that results from the breakdown of uranium in soil and rock. Radon typically enters buildings through cracks and penetrations in foundations. According to the United States Environmental Protection Agency, Radon is the leading cause of lung cancer in non-smokers and is estimated to cause approximately 21,000 deaths per year in the United States. A map of Westmoreland County can be viewed at http://www.wpb-radon.com/PA_radon_map.html#Westmoreland . No action items have been identified at this time by the HMWG but it is recommended that this potential long term hazard be considered as a potential mitigation action item moving forward.

In light of the terrorist attack on the United States on September 11, 2001, it would be appropriate to include terrorist activities in the analysis of each of the man-caused hazards selected. However, because of its importance and for the sake of repetition, the analysis of terrorist attacks will only be included in its own section. The analysis of the other hazards is based on a non-terrorist environment.

Goals and Objectives

Westmoreland County reconfirmed their goals in 2006 under County Resolution #38. This resolution identified the County goals as the protection of the health safety and welfare of the County residents. All action taken by the County and many of the municipalities strive to achieve compliance with these goals. The pre-adoption of the Hazard Mitigation Plan is documentation of the efforts of the County to move forward in achieving these goals. The HMP identifies objectives that will reduce the long term risk to life and property from natural and technical hazards in keeping with our goals. The HMP also lays out specific objectives.

It was the decision of the HMWG to integrate the comprehensive plan of Westmoreland County at this juncture. Although the specifics of the original plan do not prioritize projects, implement, and administer HMPO's it will be addressed in later versions of the plan and use the STAPLEE prioritization form for social, technical, administrative, political, legal, economic, and environmental. This form will be available in Annex J.

The (HELM) or Housing, Economic, Land Use, and Mobility approach is the most fitting outline of goals and objectives relevant to Westmoreland County's HMP at this time and will be drawn together in the future with close interaction of the Westmoreland County Planning Department.

The HMWG has committed to "Acting on the Vision" that outlines the baseline of all hazard mitigation and is illustrated in this section.

Finally, the implementation of state facilitated actions will hopefully be a formulary for local municipalities. The adoption of this plan has been a positive step forward for Westmoreland County and hopefully local adoptions will follow the county lead and participate.

Goal

The goal of this plan is to preserve property and life and to assist in the recovery from the effects of natural and human-caused hazards in Westmoreland County

Objectives

- Provide the opportunity for all county municipalities to develop their own Hazard Mitigation Plan or to adopt the county plan.
- Coordinate Hazard Mitigation Opportunities for all county municipalities through the use of the Hazard Mitigation Opportunity Form located in Annex D of this plan.
- Be the liaison between the municipalities and PEMA throughout the mitigation process.

- Provide community outreach to county municipalities to assist them in the hazard mitigation process.

- Initiate county-wide mitigation project that will benefit all municipalities within the county

Assessing Future Vulnerabilities

Only flooding and subsidence hazard structural losses are identified in this iteration of the plan. Extrapolation of future data based on all hazards with compilation of all hazard critical facility and repetitive loss structures would be difficult. The direct reason is the failure of local municipalities to record those item areas. The county is not always made aware of loss in the local autonomous areas granted to them by their commonwealth status. The county requests this information whenever possible but it is not always received, quantified or qualified.

The addition of the County GIS Director to the planning process and discussions with the County Commissioners office has developed an agreement to embark on a plan to try to capture the vulnerability of the types and numbers of existing and future buildings, infrastructure, and other critical facilities information on the GIS layer of the county tax mapping system. Information will be available on the following website: http://www.co.westmoreland.pa.us/westmoreland/cwp/view.asp?a=1505&q=624494 This information will be available to the public to actually view their actual tax parcel and identify its location within the floodplain.

The measurement of estimating potential dollar losses to vulnerable structures and the methodology to prepare the estimate will be developed by using data from capturing tax assessment values from the GIS data. Until layering of this data is compiled with known hazard areas the estimates will be under review by the DPS and GIS.

Assessing Vulnerability: Analyzing Development Trends

The Hazard Mitigation Working Group and the County Commissioners staff collect newsworthy data (see Annex H) and discuss factors on community development regularly as a topic during regular business meetings in an effort to assure the county residents that budgetary and safety issues are being met. A current program for storm water management; Act 167, is being conducted by the planning arm of the county to address all new development. Surveys are currently being conducted of all 65 municipalities regarding that datum. Additionally the municipalities that have adopted the state wide building code hope to provide additional mitigation actions through that process and may

concurrently help in fire, flooding, building engineering & design, and life safety.

Future vulnerabilities are dependent on following best practices as present in codes and regulations and implementation of hazard mitigation projects.

Annex C contains project opportunities identified by municipalities in the county. These projects also identify the probable number of parcels and/or property that could reduce the effects of hazards. Annex D describes the specific project information for county based mitigation projects such as a street improvement project. Annex E includes 25 maps showing schools, churches, critical infrastructure, hospitals, and street overviews that can be affected by flooding and 7 Department of Environmental Protection Notices for Emergency Action Plan Flood Protection project reminders to specific municipalities.

Realizing that critical structures are vulnerable to flooding it is anticipated to produce hazard mitigation projects that, once implemented, will reduce vulnerability to those hazards.

Potential Maximum Economic Losses from a County-Wide Catastrophic Event

Table ML1 – Economic Loss by Building Occupancy

Occupancy	Building Damage	Content Loss	Business Interruption	Total
Residential	$98.92M	$56.40M	$10.34M	$165.66M
Commercial	$21.30M	$48.92M	$79.56M	$149.78M
Industrial	$3.55M	$8.11M	$2.27M	$13.93M
Agriculture	$0.00M	$0.00M	$0.00M	$0.00M
Religion	$0.38M	$1.09M	$2.40M	$3.87M
Government	$1.75M	$5.09M	$41.52M	$48.36M
Education	$0.79M	$2.92M	$12.01M	$15.73M
Total	**$126.68M**	**$122.54M**	**$148.10M**	**$397.32M**

Prepared by PEMA using HAZUS

Table ML2 – Utility System Inventory / Replacement Values

System	Component	# Locations / Length	Replacement Value*
Potable Water	Pipelines	0 km	$0.00M
	Facilities	6	$217.78M
	Sub-total		**$217.78M**
Waste Water	Pipelines	0 km	$0.00M
	Facilities	64	$4,646.02M
	Sub-total		**$4,646.02M**
Natural Gas	Pipelines	0 km	$0.00M
	Facilities	5	$5.94M
	Sub-total		**$5.94M**
Oil Systems	Pipelines	0 km	$0.00M
	Facilities	0	$0.00M
	Sub-total		**$0.00M**
Electrical Power	Facilities	3	$359.70M
	Sub-total		**$359.70M**
Communication	Facilities	8	$0.87M
	Sub-total		**$0.87M**
	Total		**$5,230.31M**

Prepared by PEMA using HAZUS

Table ML3 – Infrastructure Inventory / Replacement Value

System	Component	# Locations / Length	Replacement Value*
Highway	Roadways	959 km	$3,236.79M
	Bridges	542	$432.40M
	Tunnels	0	$0.00M
	Sub-Total		**$3,669.20M**
Railway	Tracks	318 km	$252.90M
	Bridges	0	$0.00M
	Tunnels	0	$0.00M
	Facilities	2	$4.75M
	Sub-Total		**$257.65M**
Light Rail	Tracks	0 km	$0.00M
	Bridges	0	$0.00M
	Tunnels	0	$0.00M
	Facilities	0	$0.00M
	Sub-Total		**$0.00M**
Bus	Facilities	6	$7.13M
	Sub-Total		**$7.13M**
Ferry	Facilities	0	$0.00M
	Sub-Total		**$0.00M**
Port	Facilities	4	$9.85M
	Sub-Total		**$9.85M**
Airport	Facilities	8	$47.52M
	Runways	9	$304.89M
	Sub-Total		**$352.42M**
	Total		**$4,296.25M**

Prepared by PEMA using HAZUS

Table ML4 – Essential Buildings Inventory / Replacement Value

Building Type	Number of Buildings	Replacement Value *
Hospitals	6	$76M
Fire Stations	84	$55M
Police Stations	30	$46M
EOCs	2	$2M
Schools	127	$69M
Total	**249**	**$248M**

Prepared by PEMA using HAZUS

Plan Maintenance & Municipal Measures

The Westmoreland County Hazard Mitigation Plan must be updated, adopted and approved WITHIN the 5 year cycle before the 5 year anniversary. The Hazard Mitigation Working Group will perform annual reviews and participate in the 5-year update.

The Westmoreland County Emergency Operations Plan and Hazard Vulnerability Analysis will incorporate the Mitigation Plan as part of their plans. The Hazard Mitigation Plan was offered to all county municipalities for adoption into their Emergency Operation Plans. (see EOP.doc in Annex H) Changes to the county Hazard Mitigation Plan, will be conveyed to the appropriate individuals, in writing, for inclusion in their version of the plan.

The evaluations and lead review for continuous updating of the HMP will be performed by the HMO. Then, the information will be disseminated to the HMWG at the annual reviews. Given the nearly all volunteer make up of the HMWG the reviews may take place informally from time to time considering that some issues may be minor and of low significance to the overall plan due to the sometimes slow and autonomic actions taken by the municipalities within the County. Those activities will include the real time updating of survey's and project opportunities arriving into the WCDPS then placed on a County Network folder called HMPO HMP WCDPS password protected file in the HMO's office. This single point of evaluation can be easily reviewed and shared with stakeholders electronically to keep abreast of the status of all projects. Progress evaluations of HMPO's will be available in Annex G to easily obtain jurisdictional information.

These progress evaluations are comprehensive and include: project parameters, milestones, plan goals with objectives with definitive status action and cost steps with correlating summary. Additionally it propels revisiting the risk assessments and planning stakeholders to insure future applicability and cost basis tracking. The most comprehensive part of the evaluation integrates 10 areas that attenuate the resources of DHS target capabilities for preparedness by using regional equipment and project request forms.

Municipal Measures

The Recommended Measures, for each identified problem, will be defined in the Hazard Mitigation Opportunity Form and accompanying Project Plan for each proposed project and for each municipality. The Hazard Mitigation Opportunity Forms are located in Annex D of this plan. The layout of the form is as follows:

- Description
- Objectives Supported
- Who is responsible
- When it must be done

- Who can help
- Budget

Potential mitigation measures by hazard type for communities to use as a planning tool for communities are listed in a draft available in Annex D along with actual project opportunity forms for easy comparison.

National Flood Insurance Program (NFIP) Compliance

The NFIP has several classes of mitigation that have been considered for their cost effectiveness and technical feasibility. **Westmoreland County Strategy for enhancing these measures is as follows:**

Preventative Measures
Property Protection Measures
Emergency Services Measures
Structural Projects
Natural Resource Protection
Public Awareness and Information Measures

Legislative Requirement 44 CFR §78.5(b): *Description of the existing flood hazard and identification of the flood risk, including* ***estimates of the number and type of structures at risk, repetitive loss properties****,….*

Westmoreland County has approximately 1200 structures that are impacted occasionally by flooding. According to the Flood Insurance Rate Map almost all of these structures lie within the 100 yr flood risk. The repetitive loss list dated 2/13/2009 indicates that 215 properties are a "Repetitive Loss Property". The repetitive loss list dated 11/04 indicates that no properties are "Severe Repetitive Loss Properties". According to the Validated Severe Repetitive Loss List dated February 11, 2008, there are no properties that FEMA has determined to be Severe Repetitive Loss (SRL) properties. The flooding impact from TS Francis and TS Ivan in 2004 indicated flooding of 819 structures throughout the county. 6 municipalities declared disasters. 75 critical facilities such as Bridges, Nursing Homes, Public Buildings, Roads, Schools, Sewage Plants, and Water Supply were affected or damaged due to flooding. The flooding had required the evacuation of 121 individuals and 28 sheltered. Out of the 819 structures, 76 were businesses, approximately 25 were mobile homes, and the remaining were predominately owner occupied single & multi family dwellings. (*Data provided from 9/18/2004 Individual Assistance and Public Assistance report PEMA.*)

Legislative Requirement 44 CFR §78.5(d): *Identification and evaluation of cost-effective and technically feasible mitigation actions considered; and*

Legislative Requirement 44 CFR §78.5(e): *Presentation of the strategy for reducing flood risks and continued compliance with the NFIP, and procedures for ensuring implementation, reviewing progress, and recommending revisions to the plan.*

Approximately 82% of Westmoreland County municipalities have participated in the National Flood Insurance Program since 1973. Westmoreland County continues to stress to its 65 municipalities the importance of compliance with the requirements of the NFIP. Westmoreland County maintains the strategy that continued participation in the NFIP is in the best interest of our communities and intends to provide information on the regulations of the NFIP to all its municipalities continuously.

Westmoreland County encourages municipalities to adopt the statewide building code that is a hazard based code. Enforcement of this building code and enforcement of Floodplain Regulations as related to construction is performed through municipality hired third parties and/or code enforcement officers.

Participation in the NFIP should be considered by each municipality to be a cost effective mitigation action. See Annex M Actions for specific projects. Westmoreland County will consider other types of mitigation actions and will consider implementation of those actions that are considered cost effective and technically feasible.

As mentioned above several classes of mitigation have been considered for their cost effectiveness and technical feasibility. These include **Preventative Measures, Property Protection Measures, Emergency Service Measures, Structural Measures, Natural Resource Protection Measures,** and **Public Information Measures** categorically listed below**.**

Preventative Measures that municipalities should consider implementing include, the Westmoreland County Comprehensive Plan, statewide building code, Storm water management and participate in the NFIP for cost effective and technically feasible mitigation actions. Some of these include open space preservation which is embodied as a valuable resource to the community to provide recreational access, wildlife habitat and flood damage avoidance. Enforcement of building codes, zoning ordinances, floodplain regulations and storm water management pertaining to erosion and sedimentation control monitored by the Westmoreland County Conservation District are also actions that are considered cost effective and technically feasible.

Westmoreland County has considered the use of such programs as the Hazard Mitigation Grant Program to implement community acceptable, cost-effective and technically feasible actions.

Property Protection Measures that municipalities should consider implementing for their cost effectiveness and technical feasibility include the following Measures such as relocation, building elevation, property acquisition, demolition, and insurance.

Relocation was examined as a potential cost-effective and technically feasible mitigation action. However, relocation of structures was not considered a viable cost-effective and technically feasible mitigation action due to the physical constraints of the lots that contain flood impacted houses and the topographic conditions of the properties.

Building elevation was examined as a potential cost-effective and technically feasible mitigation action. Several of the flood damaged houses examined as a potential mitigation action have employed these techniques with and without assistance from federal programs. Permit issuance and construction was undertaken in conformance with the NFIP regulations and Statewide Building Codes.

Property Acquisition and Demolition was examined as a potential cost-effective and technically feasible mitigation action. This was considered a cost-effective and technically feasible mitigation action for select properties and continues to be evaluated as a potential measure particularly applicable to the Pre-Firm developed areas of the County. Property Acquisition and Demolition is a voluntary program, and as such, personal desires, values, and economic viability often determine which properties can be acquired, and houses thereon, demolished and the property rendered flood damage resistant.

Insurance was examined as a potential cost-effective and technically feasible mitigation action. 82% of Westmoreland County municipalities participate in the National Flood Insurance Program since. Westmoreland County continues to encourage its municipalities to comply with the requirements of the NFIP. Westmoreland County maintains the strategy that continued participation in the NFIP is in the best interest of the community and intends to reach out and encourage compliance with the regulations of the NFIP for the foreseeable future.

Emergency Services Measures were examined as a potential cost-effective and technically feasible mitigation action. Currently, Westmoreland County has realized their historic vulnerability to flooding and has proceeded to implement a cost-effective and technically feasible community based flood warning system. Westmoreland County is a NOAA Stormready recognized county and the weather conditions and National Weather Service Advisories are monitored with assistance from the Westmoreland County Emergency Management by the Deputy Emergency Management Coordinator. The Deputy Emergency Manager coordinates with Fire Companies and local Emergency Management Coordinators in the County relative to alerting the public when possible, conditions that require evacuation. Westmoreland County Department of Public Safety mission statement and Emergency Operations Plan is intended to preserve health and safety of the citizens 24 hours a day every day. These plans include appropriate provisions for Disaster Response and Evacuation. During emergencies requiring evacuation, shelters, emergency services, and emergency management quickly enact provisions in their respective plans that are capable of handling the immediate needs of its citizens, if not affected by the event.

Municipal EOC activations and real time information sharing through multiple communication modes and designated storm mode activation provide quick response to multi-scenario situations.

Structural Projects specifically undertaken by the municipalities including DEP & USACE flood control projects in 16 municipalities listed in Annex D and monitored regularly and considered as cost effective for continued maintenance have provided historical protection when not overwhelmed.

Future structural projects will be evaluated as potential mitigation actions. However, it is realized by many municipalities, some of which may be economically depressed, that it may not be a cost-effective and technically feasible mitigation action. No major commercial navigation channels are maintained on the principal waterways of the County. However watersheds of the county do flow into our neighbor in Allegheny County and consideration of mitigation actions will be welcomed to enhance mitigation projects as they are made known to Westmoreland County.

Natural Resource Protection is addressed in the Comprehensive Land Use Plan that identifies areas of wetlands and storm water management. Administration of the Wetland Protection issues that arise as a result of construction activities are administered through the delegated authority that the County confers on the Westmoreland County Conservation District. Additionally, the previously mentioned erosion and sedimentation control measures are also administered for Westmoreland by the Westmoreland County Conservation District. Assurances that these permits have been appropriately issued and construction activities are in compliance is achieved by the DEP, a third party, and/or code enforcement official hired by the Municipalities separately. In addition, the County encourages regulatory compliance activities that the municipalities engage in and partner with the Westmoreland County Conservation District. The District provides outreach and technical assistance and discussion of Best Management Practices that could be implemented throughout the municipalities of the County.

Public Awareness and Information is available at the Westmoreland County Conservation District headquarters and demonstration facility located on 218 Donohoe Road, Greensburg, Hempfield Township PA, Westmoreland County. The mission statement of the Westmoreland Conservation District promotes, educates, and implements conservation principles through examples and programs. They encourage best management practices and voluntary compliance of laws. Their Board of Directors, professionals, and volunteers are committed to the leadership and service required in pursuing a better environment. They use their skills and talents, and the cooperation of many partners, to build a culture of responsible stewardship and sustainability. As such the County benefits from the efforts of the Conservation district in performing stream bank restoration projects, storm water mitigation projects and wetland mitigation projects specifically designed for storm water flow mitigation. Westmoreland County Conservation District Environmental Center has an Education Center that performs outreach, education and demonstration of

natural resource protection programs. The County promotes at many public events hazard avoidance literature placed in public venues for awareness to all its citizens. The County also will place information concerning the NFIP on their web site through the Hazard Mitigation Plan. Also a NFIP template for addressing suggested compliance measures (NFIP classes for mitigation template) will be available upon request from the Department of Public Safety.

The County is in the process of encouraging municipalities to identify properties from the repetitive loss lists those properties that have been flooded in the past and seek enrollment of these houses in the voluntary Pre-disaster Mitigation Program.

Summary of HMPO Forms Mailing to Local Municipalities

Hazard Mitigation Project Opportunity HMPO forms are provided in Annex C and provide the information necessary to identify areas that can be considered for mitigation by the local communities. This information will then be available for pursuit of action items that the HMP intends to address.

A second mailing of request and recommendation to local municipalities for adoption and review of hazard mitigation relevant to Commonwealth led mitigation actions was performed in September of 2006. Westmoreland County received additional guidance from PEMA and FEMA in early 2007 and is actively being implemented by County planning and the Department of Public Safety.

Additionally a quarterly training session of local emergency management coordinators received a Power Point Presentation that impressed the necessity of localities to formulate hazard mitigation strategies. The results of the second mailing are listed in italics to the right of the original results below.

Municipalities Receiving Forms	65	65
Municipalities Returning Forms	26	35
Municipalities With NO Flooding	13	13
Municipalities With Flooding	13	17
Municipalities Mitigation Projects Submitted	2	9

With the second mailing and the concerted effort of many agencies and broad notification to localities that a no action or no adoption stance regarding NIMS National Incident Management System and Hazard Mitigation will have a negative impact on the receipt of Federal Funding there is still only a 51% response to action regarding these mandates and specifically the hazard mitigation initiatives for state led mitigation strategies.

The rapid rate of technological advances have allowed for GIS data to provide greater understanding of our geographical and topographical areas and municipal based hazard boundaries may begin to merge into a regional approach for all hazard mitigation. Efforts will be applied to any opportunity to maximize benefit from this technology where applicable. Westmoreland County through its GIS office is positioning to

become a regional center to hold the information gathered for geospatial systems and will help capture this technology to address hazards.
These results will be reviewed by the HMWG and continued efforts to forge ahead with identification, implementation, and action steps with recordable results for localities to embrace hazard mitigation will continue.

Prioritization, Implementation and Evaluation (PIE)

The following information illustrates the PIE format for taking action on the project opportunities based on the FEMA guidance.

A matrix by jurisdiction listing the project, funding source, rank, cost, date to be completed and the hazard it mitigates is present in a priority matrix in tables in Annex M. This information was obtained through the efforts of the municipalities and the County.

A detailed description of the projects can be found in Annex I. A more comprehensive approach than a cost-benefit review will be the STAPLEE form prioritization found in Annex J which will be an integral part of the continued process of hazard mitigation strategies in Westmoreland County including compliance with NFIP programs and fostering multijurisdictional actions as well.

Implementation of the individual projects will be determined by the funding available either by the Unified Hazard Mitigation Assistance HMA Program or by alternative sources obtained by the municipalities themselves as related to HMA eligible projects. (See Table HMA 1)

Hazard Mitigation Assistance under FEMA's Mitigation Directorate unifies the pre-disaster grant programs to better support the overall goal of reducing the loss of life and property due to hazards.

The HMA programs: Pre-Disaster Mitigation (PDM), Flood Mitigation Assistance (FMA), Repetitive Flood Claims (RFC), and Severe Repetitive Loss (SRL), provide mitigation grants annually on an allocation and competitive basis to State, Territory, Tribal, and local entities. The new unified process achieves economies of scale and portfolio management for Federal, State, and local officials by aligning program requirements in a unified HMA guidance document. The intent of this alignment is to enhance the quality and efficiency of grant awards.

In addition, under the unified process, eligible subapplications submitted but not funded under a specific grant program may also be considered for another mitigation grant program(s).

Table HMA 1

HMA Eligible Projects

Mitigation Project	PDM	FMA	RFC	SRL
PROPERTY ACQUISITION AND DEMOLITION OR RELOCATION ACTIVITIES				
Property Acquisition and Demolition or Relocation	✔	✔	✔	✔
CONSTRUCTION ACTIVITIES				
Property Elevation	✔	✔	✔	✔
Mitigation Reconstruction[1]				✔
Localized Minor Flood Reduction Projects	✔*	✔	✔	✔
Dry Floodproofing of Residential Properties[2]		✔		✔
Dry Floodproofing of Non-Residential Structures		✔	✔	
Stormwater Management	✔	✔		
Infrastructure Protection Measures	✔			
Vegetative Management/Soil Stabilization	✔			
Retrofitting Existing Buildings and Facilities	✔			
Safe Room Construction	✔			
NON-CONSTRUCTION ACTIVITIES				
All Hazard/Flood Mitigation Planning	✔	✔		

Adoption

- Implementation Schedule will be determined by the acquisition of funding and in accordance to the Project Plan submitted for the project as determined by the municipalities Engineers, Planning Department, etc.

- Monitoring is the responsibility of the Municipality and the funding source(s) of the project.

The County HMO will be an additional monitor of these efforts and will insure multi-jurisdictional complimentary actions for favorable results for the constituents of the County.

- Evaluation and revision is the responsibility of the Municipality and the funding source(s) for the project.

County Profile

History

Westmoreland County lies in the southwestern part of the state. It embraces 1,033 square miles of which farm and forestland are a part. It has a population of 369,198 residents. Among the state's 67 counties, it ranks eighth in size and 10th in population. The City of Greensburg is the county seat.

Westmoreland County was formed by an Act of Assembly, and approved by Governor Richard Penn, on February 26, 1773. It was the 11th and last county established under the Penn proprietary government during the final years of British Rule. It is one of two counties in the United States named after Westmoreland County in the northwestern part of England. The other Westmoreland County is located in Virginia. The original Westmoreland County was created with land that was taken from Bedford County. Later, Westmoreland County was divided into Allegheny, Fayette, Greene, Washington, and parts of Beaver, Armstrong, and Indiana counties.

One of the most famous places in Westmoreland County is Hanna's Town. Hanna's Town was designated the 'temporary' county seat by the same Act of Assembly that created the county. It also served as the first court house of the county. Hanna's Town was instrumental in two events that established Westmoreland County's role in the American Revolutionary war. On May 16, 1775 a number of settlers gathered at Hanna's Town to sign their names to a document know has the Hanna's Town Resolves. In signing this document, they pledged to bond together and to take up arms if necessary to resist the tyrannical acts of Parliament. On July 4, 1776, the Declaration of Independence would be signed in Philadelphia.

On July 13, 1782, Hanna's Town was burned to the ground by members of the British Indian Department and their Seneca Indian allies. The act was in retaliation for the American atrocities against the Indians. After the fire, Newtown, which later became Greensburg, became the county seat. The new Court House was built from logs on the ground that to this day, still houses the County Court House.

Many of the early settlers of Westmoreland County were farmers. As the Industrial Revolution of the 19th century picked up steam, the county played an important role in America's industrial heritage. In the late 1800's, many glass manufacturers, coal mines, steel mills and metal processing plants opened their doors in Westmoreland County. The workers who walked through those doors

were immigrants who brought the ethnic diversity and traditions that are still evident throughout the county today.

Physiographic Features

The eastern end of the county is forested mountain land known as Chestnut Ridge and Laurel Hill and is part of the Appalachian Mountains. The county is drained primarily by 3 major creeks (Jacobs, Loyalhanna and Sewickley). Most of the county is composed of rolling hills, devoted largely to dairy and grain farming. The Allegheny, Youghiogheny and Monongahela Rivers form part of the western border of the county. The Monongahela and Allegheny are navigable rivers.

Demographics

The county is comprised of 65 political subdivisions, including 7 cities (third class), 37 boroughs and 21 townships. There are 17 school districts.

The cities of Arnold, Greensburg, Jeannette, Latrobe, Lower Burrell, Monessen and New Kensington are the county's principal population centers, with about 77,182 residents.

The townships of Derry, Hempfield, North Huntingdon, Penn and Unity with 125,298 residents are the most densely populated townships. The townships of Bell, Cook, Donegal, Fairfield, Loyalhanna, St Clair, and Upper Burrell, with an average of 2,254 residents, are the most sparsely populated townships in the county.

The 37 boroughs cover the county with the exception of the eastern end which is sparsely populated. Murrysville is the largest, with a population of 18,872 and Donegal is the smallest, with a population of 165.

Government

The county government is headed by an elected, three-member, Board of Commissioners. In addition to the Sheriff's, District Attorney's, Treasurer's, Coroner's and administrative offices, the county also operates a nursing home, a small highway and engineering department and a planning agency.

There are 3 first-class townships and 18 second-class townships in Westmoreland County. Murrysville and Latrobe are Home Rule municipalities. All townships have a highway department and general administrative offices. Essential public services are provided for largely through commercial contract.

There are 45 local police departments in the county. Additional police service is furnished by the Pennsylvania State Police, through a troop headquartered at Westmoreland Avenue, Greensburg. There are substations located in Rostraver

Township., on Route 201 (Southern End), along Route 66 in Apollo (Northern End) and on Northeast Drive in New Stanton (Turnpike and Toll-road 66). Additional police services are provided by the Westmoreland County Sheriff and Westmoreland County Park Police.

EMS service is provided for by 27 EMS, 3 Paramedic and 3 Air Medical units located throughout the county and are staffed by both paid and volunteer members. Service agreements are arranged with each of the county's municipalities.

Fire protection throughout the county, is provide primarily on a volunteer basis. There are 116 volunteer fire companies located in 65 of the county's political subdivisions. A few of the stations have paid supervisory firemen and/or paid daylight drivers to assist the volunteers. There is also a county Haz-Mat Team 800 stationed in Greensburg. Team 800 has vehicles equipped to handle hazardous material and/or terrorist incidents throughout the county. The county also has a MCCC – Mobile Command and Communications Center that is available to assist municipalities with incident communications during emergencies.

All emergency services are dispatched through the county's 9-1-1 center on 991 Public Safety Road, Greensburg PA, 15601. The Department of Public Safety (DPS) is a member of the Region 13 Counter Terrorism Task Force and serves as the 1st backup to Allegheny County for command. The DPS also serves as the host for the county's L.E.P.C. – Local Emergency Management Committee. The DPS is actively training county residents in CERT – Community Emergency Response Teams. Also, the DPS trains emergency service providers in WMD awareness and operations and in Incident Command in accordance to NIMS (National Incident Management System).

There are a number of military installations located in Westmoreland County. The Pennsylvania Army National Guard has 5 units assigned to bases located in Hempfield Twp., Latrobe, Ligonier and Mt Pleasant. The United States Army Reserve has 2 units stationed at a base located in Greensburg.

In addition to those governmental units cited above, a number of other state and some federal agencies also maintain field offices and installations within the county. The latter are required for the conduct of various highway, agricultural, public welfare, employment and other programs and activities.

Education

Westmoreland County is the home to the following institutions of higher learning; Westmoreland County Community College in Youngwood, St. Vincent College in Latrobe, Seton Hill College in Greensburg, University of Pittsburgh – Greensburg, Carlow College – Greensburg, and Penn State University – New Kensington.

Also located within the county are a number of business, technical and trade schools. There are 17 public school districts, 18 private schools, and a network of parochial schools, including 1 high school, operated by the Diocese of Greensburg located in the county.

Westmoreland County is the home to 26 public libraries.

Healthcare

The medical needs of the county are met by 5 hospitals with a total bed capacity of 967. In addition to those furnished by government agencies, a Visiting Nurse Association, 3 County Red Cross Chapters, Salvation Army, United Way and several other organizations provide essential services to the needy.

Westmoreland Manor is a county-operated, 420 bed nursing facility that provides quality medical, nursing and rehabilitative care to the residents of Westmoreland County.

Recreation

Special recreation areas are located both within and outside state forest lands in the Laurel Mountain area and the other three corners of the county. There are a number of state parks available for outdoor activities. The county owns and operates 5 parks: Mammoth, Loyalhanna Gorge, Twin Lakes, Northmoreland and Cedar Creek.

Westmoreland County is the home to Idlewild Park. Idlewild is an amusement and water park located just west of Ligonier on Route 30. There are a number of historical sites in the county such as; Bushy Run Battlefield and Fort Ligonier. Skiing is available in the county at Laurel Mountain State Park.

The county is also home to 3 auto racing facilities. Motordrome in Smithton and Latrobe Speedway in Unity Twp play host to Stock Car racing and Pittsburgh Raceway Park in New Alexandra offers drag racing to the motorcar enthusiast.

Business and Industry

In addition to its agriculture production and associated trading activities, the county is also the site of other significant business and industrial operations. Glass factories are located in Jeanette and Mt Pleasant, electric steel is produced in Latrobe, sheet steel and foundry materials in Vandergrift, aluminum research in New Kensington, thermostat controls in Youngwood, and television components in East Huntingdon.

In addition, the area along Route 30 is known as the Carbide Corridor of the United States for the number Carbide plants in this region.

There are a number of hotels and motels located throughout the county, the majority of which are located at the 2 turnpike exchanges located in Irwin and New Stanton and at the interchange of Route 51 and Interstate 70 in Belle Vernon.

There are a number of shopping centers and strip malls located throughout the county and an indoor mall located in Greensburg.

Transportation

The county has an extensive network of highways intersecting through it. They include; US Route 22 (east/west), US Route 30 (east/west), Interstate 70 (east/west), Pennsylvania Turnpike – Interstate 76 (east/west), Pennsylvania Turnpike Route 66 (north/south) and US Route 119 (north/south). There are 248 miles of railroads with the county. The largest owners on rail lines are Norfolk Southern – 122 miles (used by Amtrak), Southwest Pennsylvania Railroad 56 miles and CSX – 43 miles.

There are twelve truck terminals located in the Greensburg, Latrobe, Irwin and New Kensington area. In addition there is public transit available in the county. The Westmoreland County Transit Authority operates bus service throughout the county. Additional bus service is provided by Greyhound and Lincoln Coach to the major cities and a number of private bus lines offer chartered bus services.

Charter air service is provided to the Arnold Palmer Regional Airport by Northwest. Additional air service is provided by Air Midwest, Pace Airlines, Ryan International Airlines, Southeast Airlines, Spirit Airlines, and T.E.M. Enterprises. Other smaller airports within the county include; Bouquet Airport; Eyler Aire International Airport; Mt. Pleasant / Scottdale Airport, Greensburg / Jeanette Airport, Phil Cain Memorial Airport, and Rostraver Airport.

Communications

Local and long distance telephone service, throughout the county, is provided by Verizon / Verizon Wireless, Comcast, Alltel, Citizens Telephone Co of Kecksburg, GTE North, Laurel Highlands Telephone Co., and North Pittsburgh Telephone Co. There are 2 Western Union Telegraph offices located in Greensburg and 3 located in Hempfield Township. Eight radio stations and one cable station provide communications from dawn to midnight.

The county's Emergency Operations Center and 911 Center is located in off of Donahue Road in Hempfield Township. The Department of Public Safety has a mobile command post stationed at the Arnold Palmer Regional Airport. The mobile command post is the back up for the county 911 system, can be use on the scene of a disaster to coordinate communications and provides a link to PEMA.

The Pennsylvania Department of Transportation (PennDot) has Radio communications capabilities. The Department of Public Safety is in the process of developing a county-wide 800 MHz system, scheduled to be online in 2005.

There are 15 Police frequencies operating within the county. The Sheriff, District Attorney, County Park Police and Game Commission each have separate frequencies. The countywide ambulance service has a communications network. A fire association radio network serves all of the county's volunteer fire companies utilizing 12 frequencies. Six municipalities operate their own dispatch centers.

Other radio facilities are operated by industrial firms, radio amateurs, Citizen Band radio operators, and other business firms. There are 2 amateur radio operator organizations that are available for emergency communications. They are RACES and ARES.

There are 18 daily and weekly newspapers that originate from the county in addition to others coming in from other counties. The Tribune-Review, located in Greensburg, has the largest circulation of any of the county newspapers.

Utilities

The Municipal Authority of Westmoreland County, a legally recognized governmental agency, provides water throughout the most of the county. Eighteen smaller local authorities provide the remaining communities with their water needs. A countywide sewerage system has been planned and is in the process of becoming a reality. Currently, 26 municipalities or authorities provide sewage facilities throughout the county. The MAWC maintains a large reservoir in the Indian Hill area of Fayette County.

Most of the electric power is provided to residents, business and industry by Allegheny Power, GPU Electric, Duquesne Light, Southwest Central Rural Electric and Penelec. Natural gas service is furnished primarily by Columbia Gas, Dominion Peoples Gas Company and Equitable Gas. There are also a few small suppliers of electric and natural gas located throughout the county.

The 3 major suppliers of cable television are Adelphia Cable, Armstrong Cable, and Comcast. Sanitation services are provided for by Waste Management and a number of small, independent companies.

Natural Hazards

Floods

Flooding is the most prevalent type of natural disaster occurring in the Commonwealth of Pennsylvania and likewise in Westmoreland County.

In Pennsylvania, floods cause over $1 billion worth of property damage annually. It is, therefore, important for emergency management personnel to analyze floodplains **(refer to ANNEX E in this plan for County Flood Plans)** and other critical areas in the county and determine how vulnerable to flooding the community might be.

Westmoreland County is located in the Ohio Basin and includes watersheds in the Lower Allegheny River Basin, Subbasin 18 and the Monongahela River Basin, Subbasin 19 as designated by the State Water Plan. The following watershed encompasses parts of Westmoreland County; 18A – Lower Allegheny River, 18B – Kiskiminetas River, 18C – Loyalhanna Creek, 18D – Conemaugh River/Blacklick Creek, 19A – Turtle Creek, 19C – Middle Monongahela River, 19D – Lower Youghiogheny River, 19E – Upper Youghiogheny River.

History

Westmoreland County is prone to annual flooding and has 58 municipalities enrolled in the NFIP (Annex K). Stream, river, and urban flooding can occur at anytime during the year. Flooding may be in the form of flash floods caused by summer storms or rapid snow melt. It may also be in the form of river flooding caused by prolonged rain attributed to multiple storm systems crossing the area over a period of time, or to tropical disturbances.

During the past decade 1994 – 2004, there were 4 major flooding events that impacted Westmoreland County.

The entire Upper Ohio River basin experienced major flooding during the flood of January 19 – 21, 1996. Widespread rains over the region and rapid run-off from snow melt along the Allegheny Plateau caused record flooding along the Allegheny, Conemaugh, Youghiogheny, and Monongahela rivers in Westmoreland County. The county received up to 3 inches of rain over a two-day period. In addition, there were estimates of a snow run-off of 4.5 inches in the mountains caused by 25 inches of snow melting over a 24 hour period. Westmoreland County sustained over $1 million in damages as a result of this flooding.

Flooding occurred on the Monongahela River, on February 18, 2000. A severe rainstorm, over the headwaters of the Monongahela River in Southern Pennsylvania and Northern West Virginia, combined with rapid snow melt in the Laurel Highlands, caused localized flooding along the Monongahela River in Pennsylvania. In Belle Vernon, Fayette County, 29 single family homes, 1 mobile home and 3 apartments suffered minor damage. In the Webster area, Westmoreland County, there was some flooding, but no damage reported.

Torrential downpours associated with a line of severe thunderstorms fell on areas of Westmoreland County already saturated by heavy rains during the prior week caused severe flash flooding over a wide area of the county during August 6 – 7, 2000. Rostraver Township., Penn Township., the City of Monessen and the City of Jeanette, experienced the most extensive flooding. Up to 4 inches of rain fell over the area during the height of the storms. These storms caused extensive urban and basement flooding as storm drains and drainage basins could not handle the excessive amounts of rain. In Westmoreland County, 164 homes and businesses reported damage from the floods, with damage estimates over $375,000.

Remnants of Hurricane Ivan impacted Southwestern Pennsylvania with flash flooding on September 17, 2004. Up to 7 inches of rain fell over the region. Westmoreland County was sparred the brunt of the storm, but still received 3 – 4 inches of rain in parts of the county. The most severe damage was confined to the northern tier of the county with the majority of damage in and around the New Kensington area. The county had 882 business and homes impacted in someway by the flooding. Estimated Damage costs exceeded $3.5 million dollars. Southwestern Pennsylvania received a Presidential Disaster Declaration for this event. There was $1.1 million dollars in disaster assistance distributed in the affected areas of the county.

Vulnerability / Maximum Threat

All municipalities in Westmoreland County are vulnerable to flooding. Distribution of the flooding hazard can be approximated by the NFIP & FEMA MSC maps. Simplified versions of these maps for each municipality are located in Annex E. In the county, all but six municipalities participate in the Flood Insurance Program. Approximately 40,000 persons reside in identified floodplain areas. Annex F describes the HAZUS modeling determined vulnerability for both a 100 year and 500 year event.

Streams most prone to flooding in the county include: Jacobs Creek, Loyalhanna Creek, Little Sewickley Creek, Four Mile Run, Nine Mile Run, Jacks Run, Haymaker Run, Brush Run Creek and Brushy Run.

Probability

Based on past disaster declarations and emergency response records, Westmoreland County can expect to receive some type of flooding somewhere in the county on an annual basis. Major wide-spread flooding can be expected about every 4 or 5 years. Therefore, the frequency and severity of flooding in Westmoreland County should remain constant. The only exception would be in those areas where rapid residential and/or commercial development has occurred without proper storm drainage. It is expected that in these areas, there will be greater amounts of urban and flash flooding.

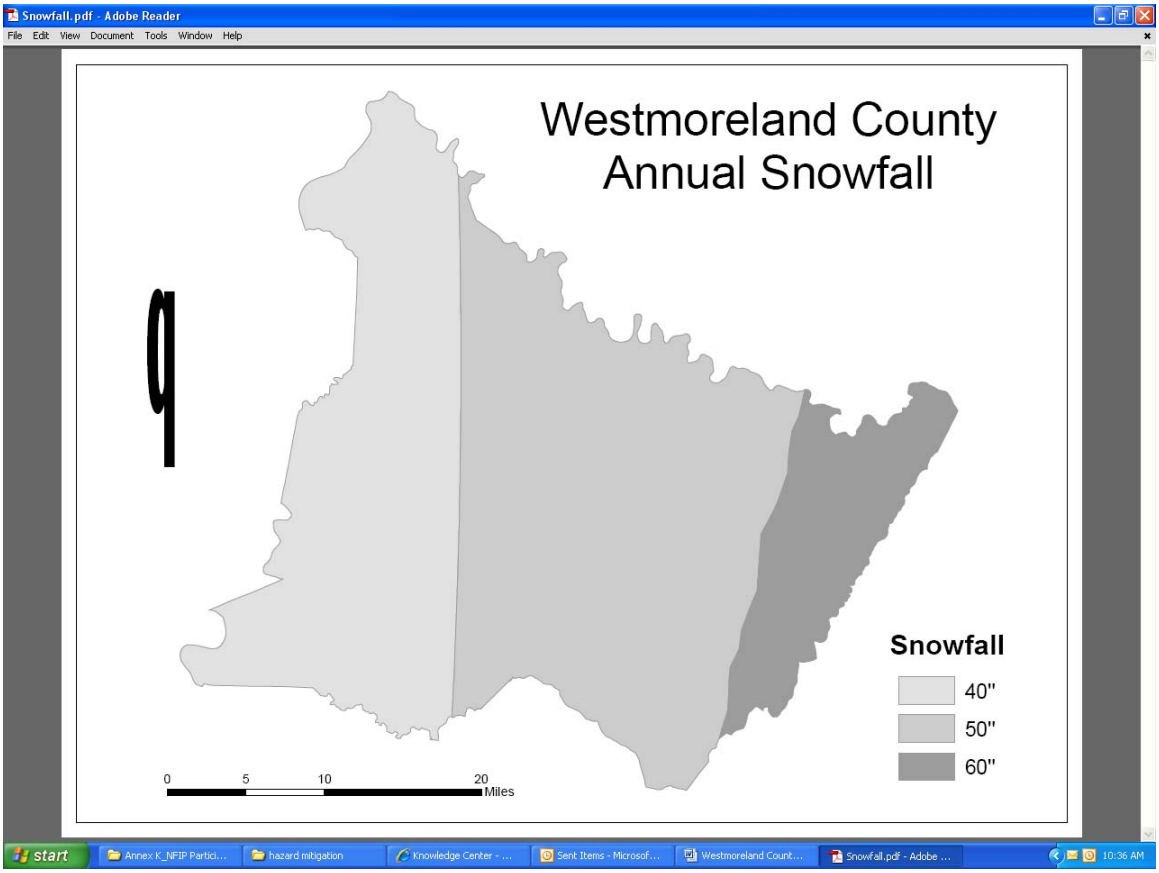
Winter Storms

Winter storms occur on the average of five times a year in Pennsylvania. Every county in the Commonwealth is subjected to severe winter storms, although the northern tier, western counties, and mountainous regions tend to experience these storms more frequently and with greater severity. Westmoreland County can expect to receive an average mean annual snowfall of 40 inches in the western part of the county to 60 inches in the eastern mountains. **(See Graph WS1 below)**

Winter Storms can adversely affect roadways, utilities, and business activities, while a rapid thaw often causes flooding.

GRAPH WS1

WESTMORELAND MEAN ANNUAL SNOWFALL



History

Westmoreland County experienced major winter storms in 1972, 1977, 1978, 1981, 1983, 1988, 1993, 1996, 1999 and 2003. The storm of 1977 was accompanied by a gas shortage. During the past decade 1990 – 2000, there have been 3 major winter storm events in Westmoreland County.

During the 2nd week of March in 1993, the Eastern 1/3 of the United States experienced what is now described at the "Storm of the Century". By the time the storm reached Westmoreland County it had already claimed many lives, spawned numerous tornados in Florida, shattered low pressure records along the eastern seaboard, created thundersnows, and dumped snowfall amounts in excess of 50 inches in the Appalachian Mountains. Snowfall amounts in Westmoreland County ranged from 18 – 36 inches. A snow emergency was declared to allow for snow removal. The National Guard was called into the county to aid with emergency operations. It took some areas of the county up to 2 weeks to get snow cleared off of their roads. The official snowfall total was 24 ½ inches, the record for a single snow event.

On January 7, 1996, the county was buried under the snowfall of the "Blizzard of 1996". Unlike the 93' storm, the main track of the storm was to the east of the Appalachian Mountains. Snowfall amounts from this storm averaged about 10 inches less than in 1993. But the 18 inches of snow that officially fell on the county was again enough to warrant a snow emergency. Like the 93' storm, the National Guard was called in to assist with emergency operations.

During the morning of January 14, 1999, Westmoreland County was greeted by a winter storm that dumped accumulations of ice around the county. A total of 20 municipalities declared Disaster Emergencies by 10:30 am, prompting the County to issue a county-wide Declaration of Disaster Emergency that expired on January, 15th. The accumulating ice caused power lines to snap and toppled trees around the county. About 2000 people were without power in Jeanette and Latrobe and a number of roads were closed throughout the day.

The President's Day Winter Storm on February 17, 2003 caused considerable damage, including a building collapse and 3 fatalities within the county. Schools and government offices were closed up to 2 days. The storm produced significant snowfall in the western part of the county and significant ice accumulations in the eastern mountains. Four municipalities declared disaster emergencies. The storm was given a Presidential Declaration.

Vulnerability / Maximum Threat

Because of Westmoreland County's location high in the Allegheny Mountains, winter storms are a common occurrence between the months of November and March. Every municipality in the county may be vulnerable to one or more severe winter storms in any given year.

The eastern half of the county is especially vulnerable to winter storms because of its higher elevation. The mountainous areas of the county can experience winter-like conditions while the rest of the county is having rain or nothing at all. This is especially true during the late fall and early winter months when moisture from the Great Lakes can be carried over the warmer air of the western part of the county, but when it rises up the front side of Chestnut Ridge, it mixes with colder air at the higher altitudes causing winter-like conditions in the mountains.

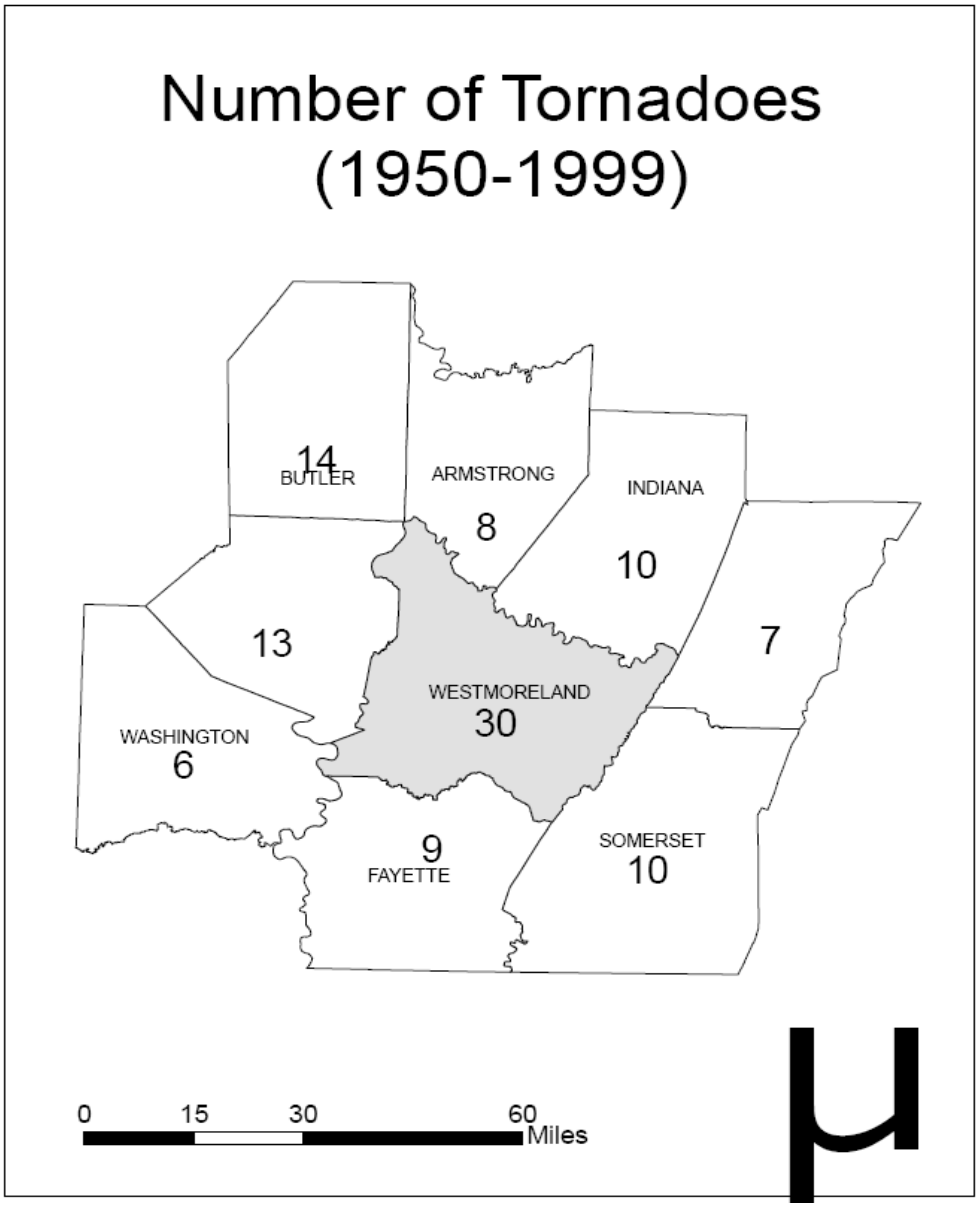
Probability

The severity and frequency of major winter storms is expected to remain fairly constant. However, due to increased dependence on various modes of transportation and use of public utilities for light, heat and power, the disruption by these storms is more significant today than in the past.

Tornadoes, Hurricanes, and Windstorms

The Commonwealth is vulnerable to all wind related hazards with Westmoreland County being the most tornado prone county in PA. Tornadoes and windstorms are common occurrences, especially during spring and summer months. State hazard analysis records show that over 637 tornadoes have struck the Commonwealth accounting for 77 fatalities and $615 million in damage during the 50 years between 1950 and 1999. Pennsylvania ranks 25th in frequency of tornadoes, 21st in fatalities and 13th in cost of damage. Areas of the Commonwealth's most prone to tornadoes / windstorms are the southeast, southwest and the northwest sectors. The following graph shows how prolific tornadoes are in a 9 county region of Southwestern PA. **(See Graph WS2)**

GRAPH WS2



Source for Graph: PEMA Safe Schools Presentation

In the case of hurricanes, by the time most storms reach Pennsylvania, they fail to satisfy the definition of a hurricane (75 mph sustained winds). However, in September 2003, Westmoreland County, as was most of Western Pennsylvania, was briefly under a Hurricane Warning as Hurricane Isabel approached the region from Maryland's Chesapeake Bay. However, the storm was reduced to Tropical Storm status as it crossed the border of Pennsylvania and West Virginia. Pennsylvania has been affected by the rains of nine hurricanes in the past 50 years.

History

Almost yearly the residents of Westmoreland County can expect to experience the unpleasant results of high winds or tornadoes. The county experienced 30 tornadoes between 1950 and 1999, resulting in 1 death and 44 injuries. The largest of these storms was a F4 on June 3, 1980. The tornado outbreak of June 2, 1998 produced 9 tornadoes in Southwestern Pennsylvania including 3 in Westmoreland County.

Recent wind storms in the county occurred on June 24, 1996, July 18, 1997, May 29, 1998, June 16, 1998, June 30, 1998, August 24, 1998, January 18, 1999, June 2, 1999, July 6, 1999, and May 12, 2002.

Winds associated with these storms can reach 100 mph and cause major damage **(see Table EFS1 below)**, as was the case during the June 30, 1998 storm. These winds, called a microburst, caused straight-line winds estimated to be in excess of 100 mph. A house in Greensburg had its roof torn off and a barn was destroyed in Latrobe. At least 10 other homes in county reported major damage and countless other buildings reported minor/moderate damage. There were numerous reports of downed trees and utility poles throughout the county. Damage throughout the county was in the millions and was a least $1 million in Murrysville alone. Similar damage occurred in the May 12, 2002 storm in addition to 1 individual being killed when a tree, hit by lightning, fell on the individual's car.

Generally, the damage associated with tornadoes and windstorms in Westmoreland County consist of uprooted vegetation, crop damage, downed utility lines and minor/moderate structural damage. Although total destruction of property is not out of the question and is a rare occurrence in the county, every storm capable of producing strong winds or tornadoes should be taken seriously.

The main damage caused by hurricanes results from unusually large amounts of precipitation, often resulting in flooding. Residents have required evacuation and the county has required state assistance during hurricane incidences. The last tropical system to seriously impact the county was Hurricane Agnes in 1972. Agnes became a deep low-pressure system that stalled over Eastern Pennsylvania. The county received heavy rains that resulted in serious flooding. Hurricane Isabel in 2003 caused wide-spread power outages throughout the county.

TABLE EFS1
Enhanced Fujita Scale

Enhanced F Scale for Tornado Damage

An update to the original F-scale by a team of meteorologists and wind engineers, to be implemented in the U.S. on 1 February 2007.

FUJITA SCALE			DERIVED EF SCALE		**OPERATIONAL EF SCALE**	
F Number	Fastest 1/4-mile (mph)	3 Second Gust (mph)	EF Number	3 Second Gust (mph)	**EF Number**	**3 Second Gust (mph)**
0	40-72	45-78	0	65-85	**0**	**65-85**
1	73-112	79-117	1	86-109	**1**	**86-110**
2	113-157	118-161	2	110-137	**2**	**111-135**
3	158-207	162-209	3	138-167	**3**	**136-165**
4	208-260	210-261	4	168-199	**4**	**166-200**
5	261-318	262-317	5	200-234	**5**	**Over 200**

***** IMPORTANT NOTE ABOUT ENHANCED F-SCALE WINDS:** *The Enhanced F-scale still is a set of wind estimates (not measurements) based on damage.* Its uses three-second gusts estimated at the point of damage based on a judgment of 8 levels of damage to the 28 indicators listed below. These estimates vary with height and exposure. **Important**: The 3 second gust is not the same wind as in standard surface observations. Standard measurements are taken by weather stations in open exposures, using a directly measured, "one minute mile" speed.

Vulnerability / Maximum Threat

There are 14 counties in the Commonwealth that are classified as areas experiencing a high frequency of tornadoes. Westmoreland County is included on that list. The county is vulnerable to the heavy rainfall associated with hurricanes, but not directly by their high winds. The county can expect to experience 5 – 10 wind events in any given year. Because of its higher elevation, the municipalities in the eastern part of county can expect to be on the higher end of that range.

Probability

According to the following charts, although not reaching a national ratio of 6 or more per 1000 sq. miles, Pennsylvania in general and Westmoreland County in particular, remain a High Risk area for tornados because of the flow of these types of storms in an easterly direction. **(See Graphs WS3 & WS4)** Late May and early June seems to be the most likely time to experience a wind event from a thunder storm. **(See Table WZ1)** Whereas the effects of hurricanes are more likely to occur in our area during the late summer and early fall months. Winter-related wind events can occur at any time during the winter months. But history indicates that the effects of Nor'easters are likely to occur in the late winter months.

GRAPH WS3

Westmoreland County

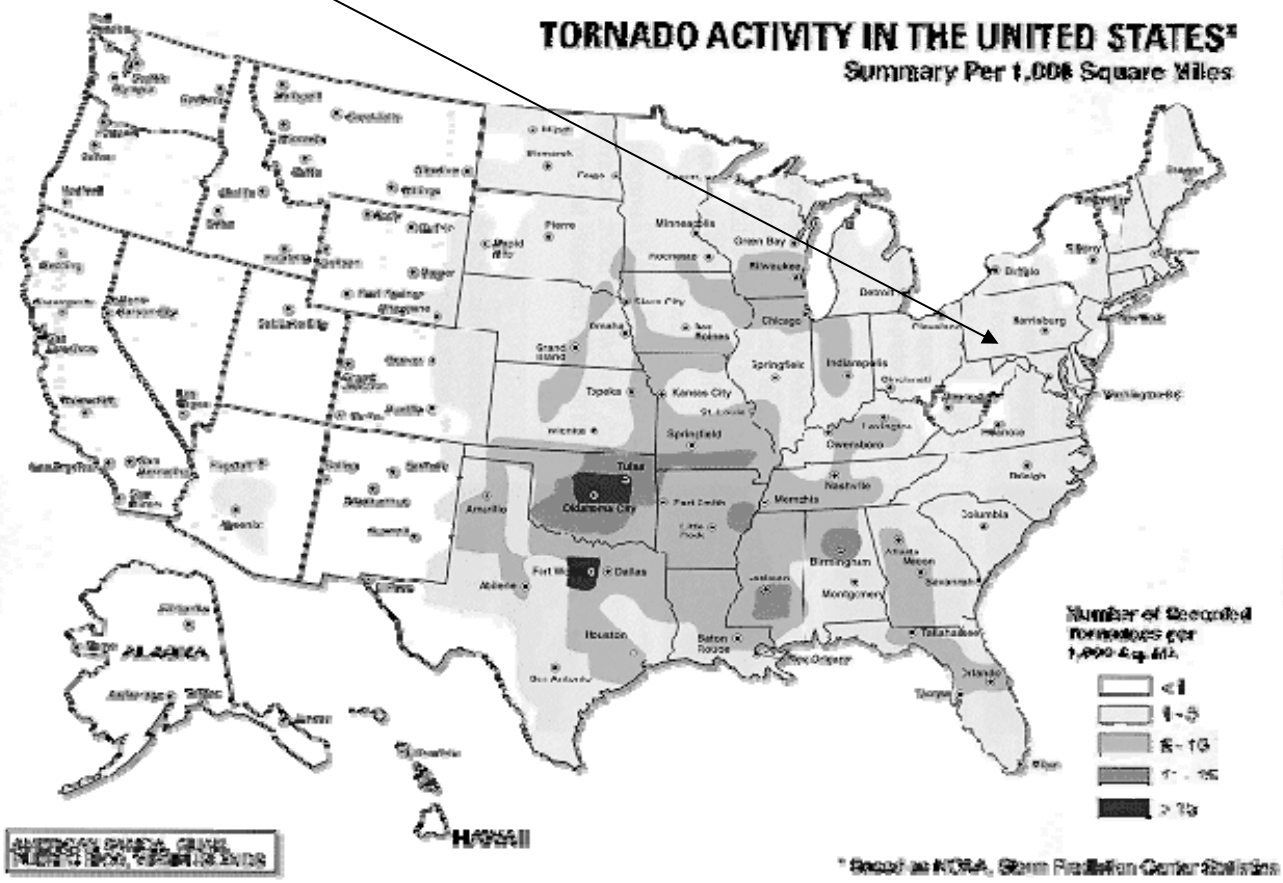


Figure 1.1 The number of tornadoes recorded per 1,000 square miles

Source: FEMA

GRAPH WS4

Westmoreland County

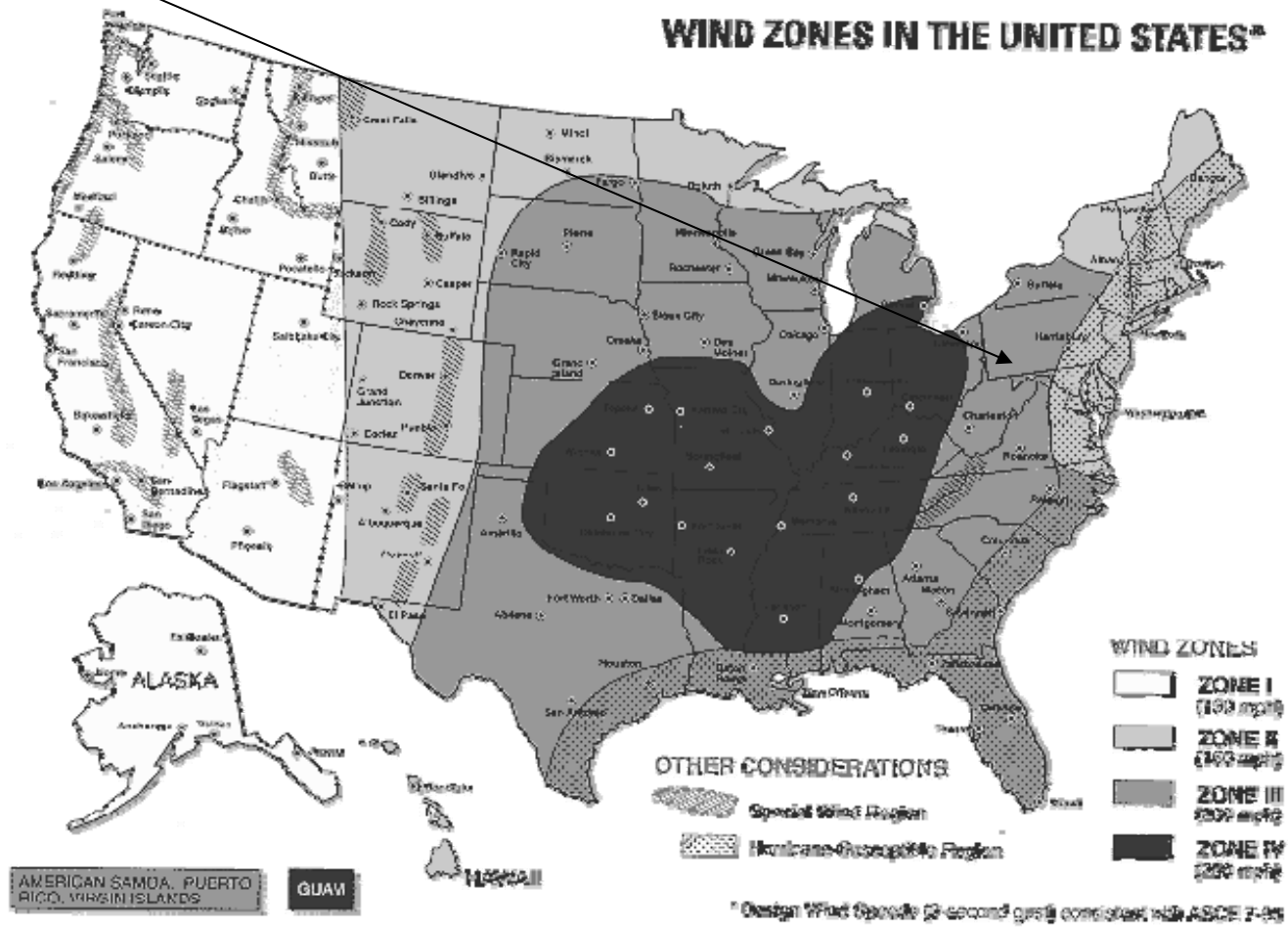


Figure 1.2 **Wind zones in the United States**

Source – FEMA

TABLE WZ1

NUMBER OF TORNADOES PER 1,000 SQUARE MILES (See Figure I.1)	WIND ZONE (See Figure I.2)			
	I	II	III	IV
<1	LOW RISK	LOW RISK ★	LOW RISK ★	MODERATE RISK
1 - 5	LOW RISK	MODERATE RISK ★	HIGH RISK	HIGH RISK
6 - 10	LOW RISK	MODERATE RISK ★	HIGH RISK	HIGH RISK
11 - 15	HIGH RISK	HIGH RISK	HIGH RISK	HIGH RISK
>15	HIGH RISK	HIGH RISK	HIGH RISK	HIGH RISK

LOW RISK	MODERATE RISK	HIGH RISK
Need for high-wind shelter is a matter of homeowner preference	Shelter should be considered for protection from high winds	Shelter is preferred method of protection from high winds

★ Shelter is preferred method of protection from high winds if house is in hurricane-susceptible region

Source – FEMA

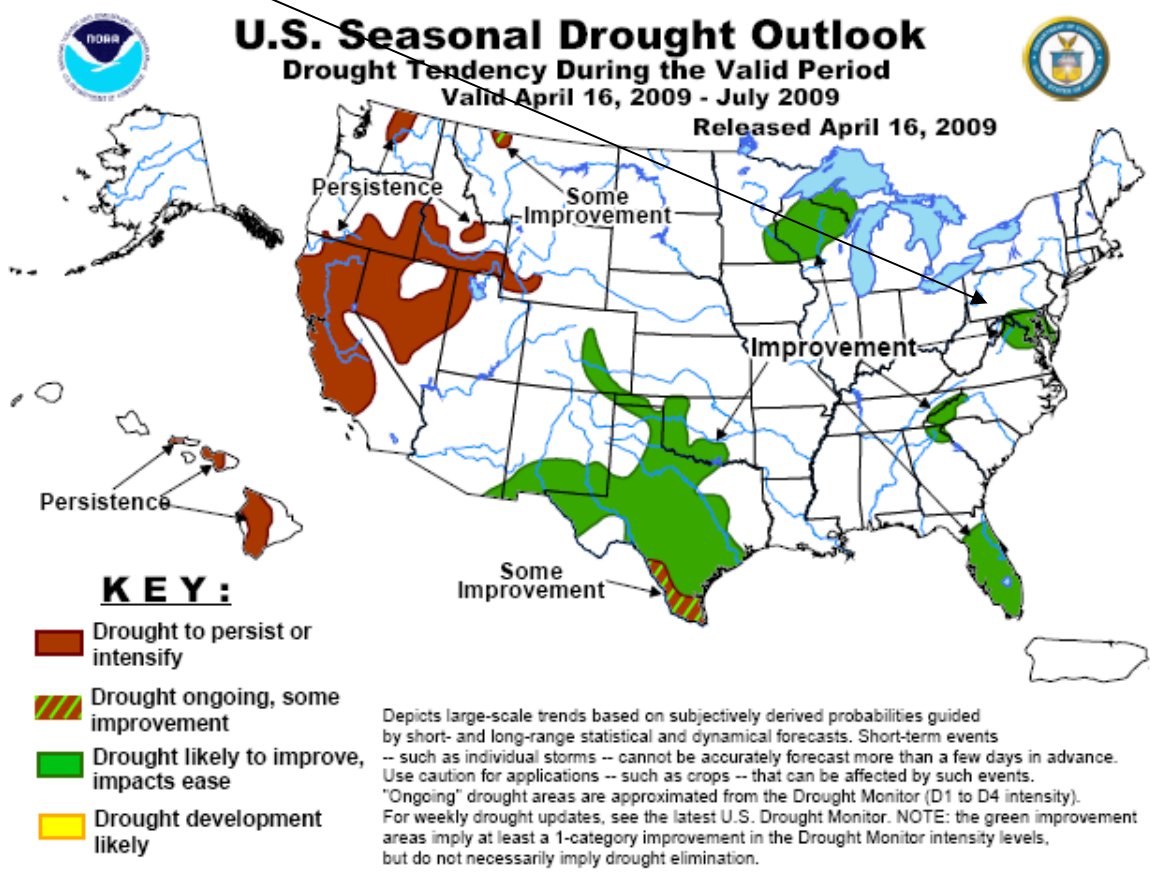
Droughts and Water Supply Deficiencies

The World Meteorological Organization categorizes and defines 6 types of drought. Of these, hydrologic and water management are of prime concern to emergency management.

Hydrologic droughts can be defined by the reduction of stream flow, reduction in lake or reservoir storage and of lowering groundwater levels. Water management drought is typed as a water deficiency that exists because of the failure of water management facilities to oversee normal or abnormal dry periods and to equalize the water supply throughout the year. Available for up to date drought information the NOAA website: http://www.cpc.noaa.gov/products/expert_assessment/sdo_archive/2009/sdo_mjj09.pdf and subsequent Seasonal Drought Outlook can be seen below. **(See Graph WS4)**

GRAPH WS4

Westmoreland County



Source – NCDC NOAA

History / Vulnerability

Westmoreland County experienced severe drought emergencies in 1988, 1991 and 1999. These situations resulted from reduced rainfall. They affected public and private water supplies significantly. Drought emergencies were declared and water restrictions were put into place. The farming community, especially in the eastern part of the county, is exceptionally vulnerable to drought that may cause crop damage. Estimates from drought related crop damage are not recorded at a public safety answering points PSAP and we must rely on our Natural Resources Conservation Service NRCS and County Cooperative Extension office for detailed damage estimates. Please view the NOAA National Climatic Data Center of the United States Department of Commerce and United States Department of Agriculture USDA NRCS information you can

review regional information. Up to date information is available through any and all of these venues.

Probability

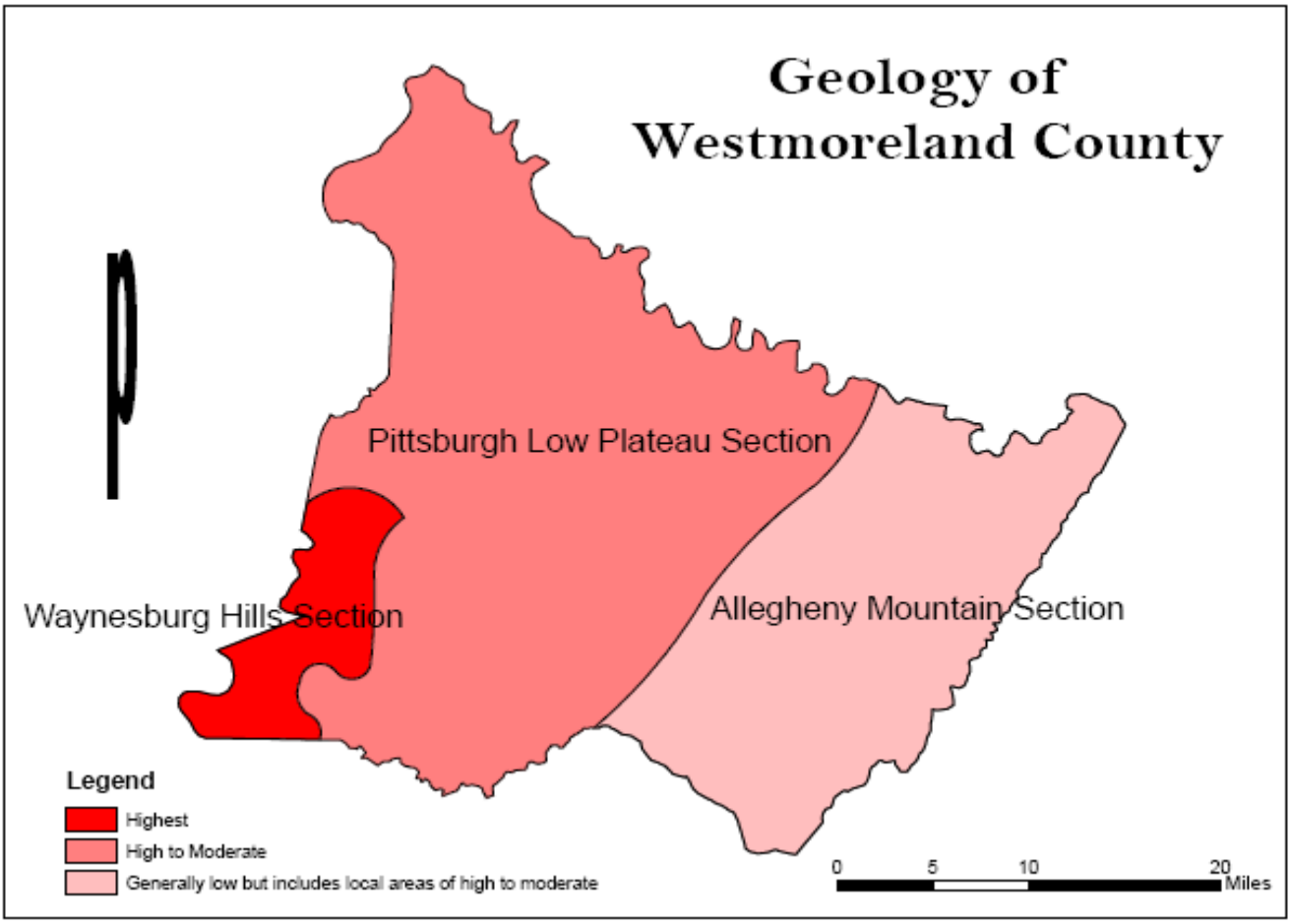
Droughts and water deficiencies are expected to increase within Westmoreland County. This is due to the increasing demand for water by residential, industrial, and agricultural consumers.

Landslides

A landslide is the downward and outward movement of slope-forming materials reacting to the force of gravity. Slide materials may be composed of natural rock, soil, artificial fill or combinations of these materials. The term landslide is generalized and includes rock falls, rockslides, block glide, debris slide, earth flow, mud flow, slump, and other such terms. Generally, landslides are slow to develop and can cause extensive damage. Only limited data is available and meetings with The Conservation District will promote the awareness of the hazard of such vulnerabilities. The HMWG is currently investigating ways to obtain quality data for geological information and find ways to meet the 386 standards and discussion has been initiated to pursue Pre-Disaster Mitigation Grant opportunities related to this and other hazards. Currently a county GIS website is available and the best source for geological data in a parcel review format. The detail is a reference only format but can provide valuable information for those who wish to investigate that hazard in their community.

The following graph illuminates a simplistic view of the hazard and is intended to be a tool for focusing hazard areas for the public at his time until detailed reviews and specific investigations can be implemented related to this plan. **(See Graph G1)** Also as data becomes available and specific archival reports are made updates will be addressed by the HMWG.

GRAPH G1 – Landslide Susceptibility



Source – DCNR Educational Series 9, Landslides in Pennsylvania

History / Vulnerability

Westmoreland County is split between the Pittsburgh Low Plateau Section in the western two-thirds of the county and the Allegheny Mountain Section in the eastern third of the county along the ridges. According to **(See Graph G2)**, Westmoreland County could expect to have a moderate to high risk of Landslides. The highest risk for landslides in the county is the southwestern corner of the county with sits in the Waynesburg Hills Section and has the highest probability of land slide occurrence in the state.

The county has experienced only minor landslides in the past. The areas of greatest vulnerability to landslides are usually associated with highway or road

cuts. However, housing units located at the base of steep hillsides or mine refuse piles also are vulnerable to landslides.

Areas in the county experiencing landslides are North Huntingdon Township, Bell Township, Webster and Monessen. No deaths, serious injury or property damages have resulted.

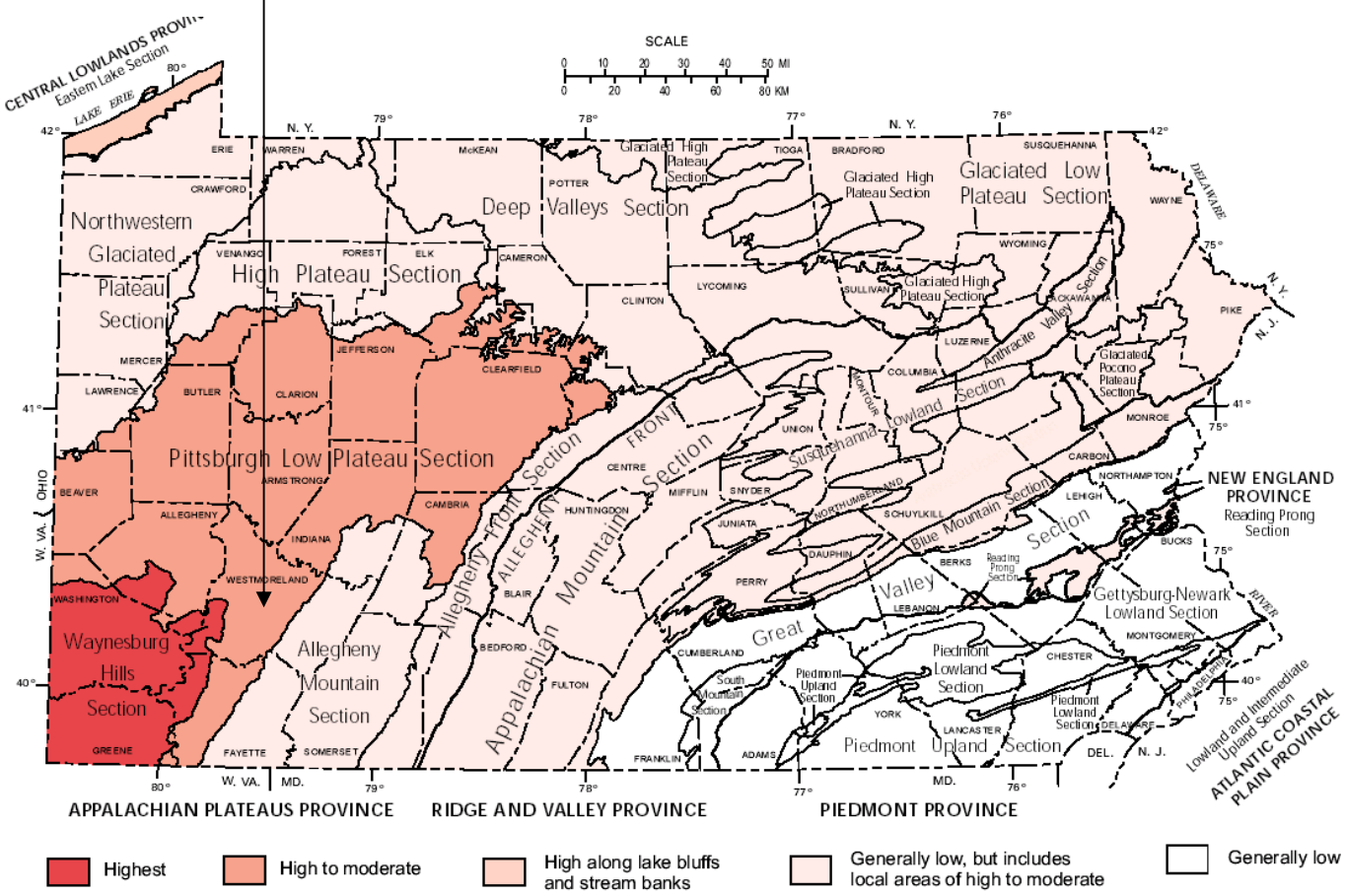
Probability

It is likely that Westmoreland County will experience increases in landslide occurrences. The Upshire-Gilpin soil prevalent in the county tends to slide when water saturated and on a slope of 12 percent. However, this increase in frequency cannot be determined.

GRAPH G2

Graph G2 – The Physiographic Providences and Sections of Pennsylvania and Landslide Susceptibility.

Westmoreland County



Source – DCNR Educational Series 9, Landslides in Pennsylvania

Subsidence – Natural / Mine Related

Subsidence is defined as a sinking movement of the earth's surface usually described as a sinkhole.

Subsidence may be natural or related to mining activities. Areas underlain by coal or other minerals, which use deep mining techniques, may become susceptible to subsidence.

Natural subsidence results from what are considered normal geological processes particular to certain landforms. In Pennsylvania, water movement through carbonate terrain, i.e., limestone and dolomite may result in topographic features such as swales, sinkholes, and forms of subsidence.

The subsidence caused by underground mining (the most prevalent cause of subsidence in Westmoreland County) is technically not a geologic hazard, but a man-made hazard; however, they will be treated as the same in this document.

According to the Pennsylvania DEP, there are 38,000 homes at risk to mine subsidence in Westmoreland County. Unfortunately, only about 4,000 households have Mine Subsidence Insurance.

History / Vulnerability

A number of major subsidence incidences that have occurred in Westmoreland County during the past decade. A housing development in the city of Arnold, built over an old landfill, sank endangering 4 homes. In March of 1998 and May of 2000, 2 sections of Rt. 981, in New Alexandria and within a mile of each other caved in. Both incidents closed the road for over a week and resulted in a 4 mile detour for local residents.

The Colonial Manor Apartments in North Huntingdon were condemned and 40 people had to be relocated when mine subsidence seriously damaged the 23 unit apartment complex in September 2000. In October 2000, 2 homes in West Leechburg suffered foundation damage and loss of utilities when subsidence affected their homes.

North Belle Vernon / Rostraver Township have suffered the most damage due to mine subsidence. Incidents have occurred within this 1 mile area of Westmoreland County in 1992, 1995, 1996 and 1998. There were 5 incidents in 1995 alone. The largest incident occurred involving a two-block area, including a number of homes, a supermarket and auto dealership. The other incidents have involved residential structures. This area of the county has had a long history of mine subsidence.

Since most, if not all of Westmoreland County, is honeycombed with inactive and active coalmines, the hazards of subsidence may occur at anytime in any location in the county. Areas of particular concern should be the West Leechburg and North Belle Vernon / Rostraver Township areas.

Probability

It is projected that as county development continues, the frequency and severity of subsidence incidents in the county will increase.

Earthquakes

Earthquakes are caused by a sudden slip of a fault caused by the dynamic pressure of the earth's plates pushing together on both sides of the fault over time. The strength of an earthquake is determined by the size of the slip and how close the slip occurred to the surface. The most active faults are along the Pacific Coast, although some smaller, less active, faults exist in the Eastern United States.

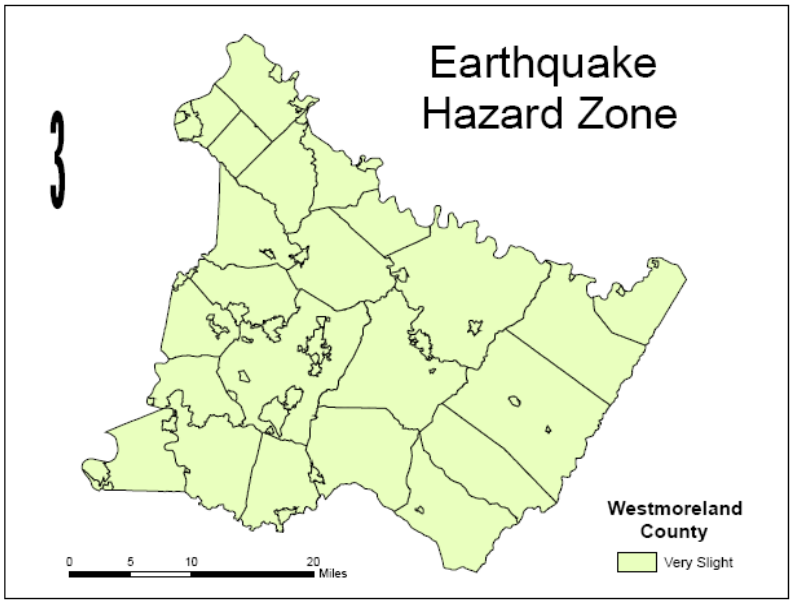
History / Vulnerability

There have been no recorded earthquakes in Westmoreland County, although parts of the county probably experienced some of the shock waves of some minor earthquakes that have occurred around the region. Westmoreland County has no earthquake building codes. Should the county experience a substantial earthquake, it would be reasonable to expect that there could be extensive property and infrastructure damage and a significant loss of life.

Probability

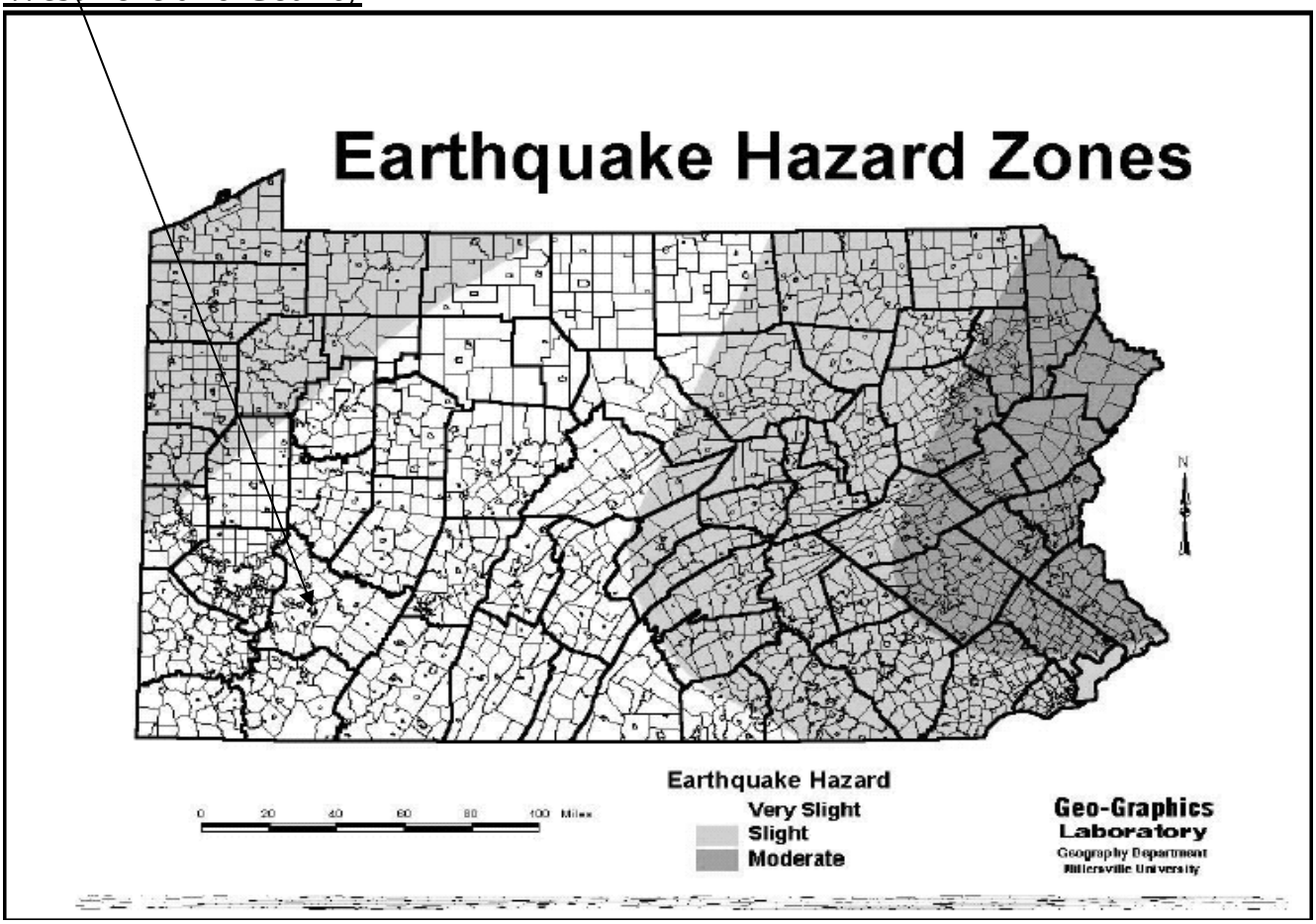
According to Graphs EQ1 & EQ2, the probability of such an event occurring is very slight. Westmoreland County does not sit on any fault lines. Therefore it is reasonable to believe that the county will not experience an earthquake anytime soon.

GRAPH EQ1



GRAPH EQ2 -Earthquake Hazard Zones in Pennsylvania

Westmoreland County



Source for Graph: Millersville University Geography Department

Human-Caused Accidents

Dam Failures

Pennsylvania has over 2,400 dams and reservoirs, many of which are potentially dangerous.

Dam failures have occurred on 16 occasions in the past century destroying several communities and permanently scarring others. The worst U.S. dam disaster on record occurred when the South Fork Dam above Johnstown collapsed.

The "Dam Safety Act" of 1978 provides for the regulation of dams and reservoirs in the Commonwealth. The Westmoreland County Department of Public Safety maintains a copy of the Warning and Evacuation Plan, generated in accordance with the Act, for each applicable dam in the county (and for those outside the county which could affect the county).

History

Westmoreland County has 50 existing dams. There have been no recorded dam failures in the county in the past 50 years.

Vulnerability / Maximum Threat

There are 19 dams listed here within the plan the county considers to pose a potential threat based on the PA DEP Bureau of Waterways Engineering.

(See Table HHD1)

Even though there are a large number of dams within Westmoreland County, vulnerability will continue to be minute due to the small size of many of the dams and of their location in areas of low population.

Probability

The possibility of a dam failure within Westmoreland County should remain low with continued maintenance of the dams. Additionally, the warning plans in place for the designated "high hazard" dams will continue to decrease the danger for those residents in the potential risk areas.

Table HHD1

PA DEP listing of Westmoreland County Dams

NAME	DEP #	NAME	DEP #
Acme (PA 657)	65-133	Little Sugar Run	65-144
Beaver Run	65-114	Lower Ridge	65-012
Berlin Road Detention Basin	65-186	Ligonier Boro	65-032
Big Springs	65-004	Ligonier Township	65-117
Breskin #1	65-141	Mountain Valley	65-009
Breskin #2	65-134	Northmoreland	65-164
Bridgeport Dam	65-171	Owen Reservoir	65-181
Bull Run	65-089	Ridilla Upper Pond A	65-158
Cortina Maria	65-182	Ridilla Lower Pond B	65-159
Derry Rod and Gun Club	65-143	Sugar Run	65-003
Donegal Dam	65-126	Upper Ridge	65-011
Eidermiller Lake Dam	65-163	Township Line	65-033
Ethel Springs	65-013	Trout Run	65-078
Greenwalt	65-052	Twin Lake #1	65-042
H.A. Stewart	65-066	Twin Lake #2	65-055
Howel Dam	65-049	Tub Mill	65-001
Kendra	65-118	Weaver Lake	65-183
Keystone	65-044	West Leechburg	65-108
Lake Avon	65-132	Whitney Ridge	65-024

"COE DAMS"

<u>Potential to Affect County</u>

Tionesta Lake Dam (Forest County)
Kinzua Dam (Warren County)
Conemaugh River Lake (Indiana County)
Mahoning Creek Lake (Armstrong County)
Crooked Creek (Armstrong County)
Youghiogheny River Lake (Somerset County)
Loyalhanna Lake (Indiana County)
Cheat Lake (Monongalia County, W.VA)

Hazardous Materials

Across the Commonwealth many municipalities are experiencing a tremendous increase in the number of chemical, oil, radioactive materials and other hazardous substance spills. These spills are the direct result from highway, rail, and waterway accidents, storage leakage, pipeline breaks, and numerous unspecified situations.

As a result of past mitigation actions, major spills are a rarity, however, spills in general are not. It has additionally been reported that there are daily occurrences of drum and tank rupture, of bottles, bags and boxes leaking into our water supply; as well as numerous clouds of hazardous materials forcing the evacuation of many citizens.

History

Westmoreland County has experienced numerous hazardous material incidents. These incidents ranged from truck to rail incidents to pipeline leaks. On a much smaller basis, major incidents occur in the county on the average of three times a year.

According to the United States Department of Transportation, hazardous materials accidents have increased nationwide by an annual rate or 8% during the past decade. Eighty-five percent of the incidents have been highway-related incidents. In a 10-year study from 1987 to 1996, the U.S. DOT reported the following for Pennsylvania: 7,480 incidents, 18 major injuries, 126 minor injuries, 4 deaths and $19,777,213 in damages

In regards to the storage of hazardous materials at a fixed-site location, as of February 2001, the Pennsylvania DEP does not have any Superfund Sites designated in Westmoreland County.

Vulnerability / Maximum Threat

There are currently (2004) 84 SARA reporting sites in Westmoreland County that manufacture, use, or store extremely hazardous substances. **(See Table SARA 1)** These facilities are required to maintain SARA Offsite Emergency Response Plans.

The Westmoreland County Department of Public Safety compiles a detailed record of all sources where hazardous materials are stored, manufactured, or transported. These locations are analyzed according to the potential harm to the surrounding populations if an accident were to occur.

A listing of most hazardous materials types by areas of concern and transportation modes that exist within the county are listed below.

- Industrial sites that manufacture hazardous substances and/or generate hazardous waste.
- Chemical distributors and/or users (including agricultural produce).
- Highways, Railroads and Navigable Waterways.
- Pipelines (130 miles).
- Airports.
- Gasoline, diesel, kerosene, heating oil, propane, service station and tanker fuel storage area
- Oil storage and terminals.
- Natural gas storage facilities
- Waste disposal sites.
- Water and Sewage Facilities
- Nuclear facility material/waste.
- Public Swimming Pools

One major concern involves transportation accidents, which may occur on State Routes 30, 981, 22, 70, 51, 201, 66 and the Pennsylvania Turnpike. Westmoreland County faces a high volume of truck traffic and an accident could occur anywhere in the county. There are routes in the county currently being utilized for the transportation of nuclear material and/or waste.

Probability

It is projected that with the increased use and production of hazardous materials in manufacturing operations, the number of accidents involving these materials will continue to increase in the future. A Hazardous Materials Response Team is supported by the County and manned by volunteers that meet the Pennsylvania certification of Hazardous Material Response Teams. For recent response history please review the following table. **(See Table SARA 2)**

Table SARA 1

Off-site Response Plan Facilities

AGA Gas, Inc. 4349 William Penn Highway Municipality – Murrysville Chemical – Anhydrous Ammonia Amount – 1,800 lbs CAS # 7664-41-7	***CLOSED* American Video Glass** 77 Technology Drive Municipality – Hempfield Township. Chemical – Sulfuric Acid Amount – 12,000 lbs CAS # 7664-93-9
Airo Die Casting, Inc. 450 New Latrobe/Derry Road Municipality – Derry Township. Chemical – Sulfuric Acid Amount – 1,000 lbs CAS # 7664-93-9 Chemical – Nitric Acid Amount – 600 lbs CAS # 7667-37-2	**AMI Doduco, Inc. – Export** 1003 Corporate Drive Municipality – Murrysville Boro Chemical – Ammonia Amount – 5,000 lbs CAS # 7664-41-7 Chemical – Sulfuric Acid Amount – 3,500 lbs CAS # 7664-93-9 Chemical – Cadmium Oxide Amount – 10,000 lbs CAS # 1306-19-0
Alcoa Technical Center Rt. 780, ½ mile off Rt. 380 Municipality – Upper Burrell Township. Chemical – Nitric Acid Amount – 50,000 lbs CAS # 7667-37-2 Chemical – Sulfuric Acid Amount – 50,000 lbs CAS # 7664-93-9 Chemical – Chlorine Amount – 500 lbs CAS # 7782-50-5	***REMOVED EHSAllegheny Ludlum Steel*** PO Box 565, Kiski Road Municipality – West Leechburg Boro Chemical – Nitric Acid Amount –346,750 lbs CAS # 7667-37-2 Chemical – Sulfuric Acid Amount –168,300 lbs CAS # 7664-93-9 Chemical – Hydrofluoric Acid Amount –189,525 lbs CAS # 7764-39-3
***CLOSED* Alfrey's Sausage Co.** Off old Rt. 119, ¼ mile North of Rt. 31 Municipality – Mt Pleasant Township. Chemical – Ammonia Amount – 700 lbs CAS # 7664-41-7	**AT&T – Greensburg MW Station** Shutt & Delmont Roads Municipality – Salem Township. Chemical – Sulfuric Acid Amount – 165,264 lbs CAS # 7664-93-9
Allegheny Ludlum Steel 130 Lincoln Avenue Municipality – Vandergrift Boro Chemical – Nitric Acid Amount –139,440 lbs CAS # 7667-37-2 Chemical – Sulfuric Acid Amount –165,264 lbs CAS # 7664-93-9 Chemical – Hydrofluoric Acid Amount – 93,180 lbs CAS # 7764-39-3 Chemical – Hydrogen Peroxide Amount – 5,600 lbs CAS # 7722-84-1	**Avonmore Sewage Treatment** First Street Ext. Municipality – Avonmore Boro Chemical – Chlorine Amount – 750 lbs CAS # 7782-50-5

SARA Off-site Response Plan Facilities

***CLOSED* Beckwith Machinery** PO Box 140, Route 66 South Municipality – Salem Township Amount – 7,500 lbs CAS # 7667-37-2 Chemical – Sulfuric Acid	**Derry Water Authority** 620 Chestnut Street Municipality – Derry Boro Chemical – Chlorine Amount – 1,500 lbs CAS # 7782-50-5
Blairsville Municipal Authority 1 Mile East on Rt. 217 Municipality – Derry Township Chemical – Chlorine Amount – 750 lbs CAS # 7782-50-5	**Dormont Manufacturing Company** 6015 Enterprise Drive Municipality – Penn Township Chemical – Ammonia Amount – 41,500 lbs CAS # 7664-41-7
C-K Composites, Inc. ½ South of Boro on Bridgeport Street. Municipality – Mt. Pleasant Township. Chemical – Formaldehyde Amount – 2,000 lbs CAS # 50-00-0 Chemical – Phenol Amount – 600 lbs CAS # 108-95-2	**East Huntingdon Township Wastewater** Treatment Plant Sewage Plant Road @ Iron Bridge. Municipality – East Huntingdon Township Chemical – Chlorine Amount – 300 lbs CAS # 7782-50-5
Cannon Boiler Works 510 Constitution Blvd. Municipality – New Kensington City Chemical – Ammonia Amount – 5,700 lbs CAS # 7664-41-7	***Solar Power Industries* Ebara Solar, Inc.** 13 Airport Road. Municipality – Rostraver Township Chemical – Hydrofluoric Acid Amount – 1,001 lbs CAS # 7664-39-3
Chestnut Ridge Foam RT. 981 North Municipality – Derry Township. Chemical – Toluene 2,4-Diisocyanate Amount – 48,000 lbs CAS # 584-84-9 Chemical – Toluene 2,6-Diisocyanate Amount – 12,000 lbs CAS # 91-08-7	***REMOVED EHS* Elliott Turbomachinery** 100 North 4th Street Municipality – Jeannette City Chemical – Ammonia Amount – 2,200 lbs CAS # 7664-41-7
Derry Boro Wastewater Treatment 1 Mile North of Boro @ Rt 217 & Reed Municipality – Derry Township. Chemical – Chlorine Amount – 1,350 lbs CAS # 7782-50-5	**Greater Greensburg Sewage Authority** Route 119 South Municipality – Hempfield Township Chemical – Chlorine Amount – 4,000 lbs CAS # 7782-50-5

SARA Off-site Response Plan Facilities

***CLOSED* Global Beverage Systems** 11 Lloyd Ave Municipality – Latrobe Chemical – Anhydrous Ammonia Amount – 2,000 lbs CAS # 7664-41-7	**High Ridge Water Supply Co**. Tub Mill Dam 2.5 Miles S. Route #711 Municipality – St Clair Township Chemical – Chlorine Amount – 900 lbs CAS # 7782-50-5
***CLOSED* H C Starck** Building B12 – Latrobe Industrial Park Municipality – Unity Twp. Chemical – Anhydrous Ammonia Amount – 600 lbs CAS # 7664-41-7 Chemical – Nitric Acid Amount – 600 lbs CAS # - 7697-37-2 Chemical – Sulfuric Acid Amount – 1,000 lbs CAS # - 7664-93-9	**High Ridge Water Supply Co.** Torrance Station Municipality – Derry Township Chemical – Chlorine Amount – 450 lbs CAS # 7782-50-5
***CLOSED* Hempfield Township Municipal Authority – Darragh** Route 136 Municipality – Hempfield Township Chemical – Chlorine Amount – 900 lbs CAS # 7782-50-5	**Kennametal World Headquarters** Route 981 South, P.O. Box 231 Municipality – Unity Township Chemical – Titanium Tetrachloride Amount – 1,800 lbs CAS # 7550-45-0 Chemical – Hydrogen Chloride Amount – 520 lbs CAS # 7647-01-0
***CLOSED* Hempfield Township Municipal Authority – Earl Lohr** Disposal Plant Road Municipality – Hempfield Township Chemical – Chlorine Amount – 300 lbs CAS # 7782-50-5	**Keystone Rustproofing** 1901 Dr. Thomas Blvd. Municipality – Arnold City Chemical – Nitric Acid Amount – 900 lbs CAS # 7697-37-2 Chemical – Potassium Cyanide Amount – 800 lbs CAS # 151-50-8 Chemical – Sodium Cyanide Amount – 1,000 lbs CAS # 143-33-9 Chemical – Sulfuric Acid Amount – 13,500 lbs CAS # 7664-93-9
High Ridge Water Supply Co. Sugar Run Bldg, ¼ Mile E. Route #711 Municipality – St Clair Township Chemical – Chlorine Amount – 400 lbs CAS # 7782-50-5	**Keystone State Park** E. ½ Miles South of Rt 22 Municipality – Derry Township Chemical – Chlorine Amount – 150 lbs CAS # 7782-50-5
High Ridge Water Supply Co. 10th Street and Chestnut Street Municipality – New Florence Boro Chemical – Chlorine Amount – 400 lbs CAS # 7782-50-5	**Koppers Industries, Inc.** 345 Donner Avenue Municipality – Monessen City Chemical – Sulfuric Acid Amount – 68,600 lbs CAS # 7664-93-9

SARA Off-site Response Plan Facilities

L.E. Smith Glass 1900 Liberty Street Municipality – Mt. Pleasant Township Chemical – Cadmium Oxide Amount – 100 lbs CAS # 1306-19-0	**Ligonier Municipal Authority Reservoir** Route 30 Municipality – Ligonier Township Chemical – Chlorine Amount – 300 lbs CAS # 7782-50-5
City Brewing Company **~~Latrobe Brewing Company~~** 119 Jefferson Street Municipality – Latrobe City Chemical – Anhydrous Ammonia Amount – 42,000 lbs CAS # 7664-41-7 Chemical – Sulfuric Acid Amount – 28,000 lbs CAS # 7664-93-9	**Lone Maple Crop Service** Lone Maple Road ½ Mile off Rt. 119 Municipality – Salem Township Chemical – Paraquat Amount – 2,200 lbs CAS # 1910-42-5 Chemical – Ammonia Amount – 80,000 lbs CAS # 7664-41-7
REMOVED EHS **Latrobe Municipal Authority – Kingston Plant** Waterworks Road Municipality – Derry Township Chemical – Chlorine Amount – 1,800 lbs CAS # - 7782505	**Max Environmental** SR 3059 Municipality – South Huntingdon Twp Chemical – Sulfuric Acid Amount – 1,500 lbs CAS # - 7664939
Latrobe Steel Company 2626 Ligonier Street Municipality – Latrobe City Chemical – Nitric Acid Amount – 3,900 lbs CAS # - 7697372 Chemical – Sulfuric Acid Amount – 2,600 lbs CAS # - 7664939	**Mt. Pleasant Wastewater Treatment** 340 Clay Avenue Municipality – Mt. Pleasant Boro Chemical – Chlorine Amount – 4,000 lbs CAS # 7782-50-5
Latronics Corporation 1001 Lloyd Avenue Municipality – Unity Township Chemical – Nitric Acid Amount – 1,000 lbs CAS # - 7697372 Chemical – Sulfuric Acid Amount – 1,500 lbs CAS # - 7664939 Chemical – Ammonia Amount – 8,214 lbs CAS # - 7664417	**Municipal Authority of Westmoreland County – Beaver Run** 679 Route 380 East Municipality – Bell Township Chemical – Chlorine Amount – 20,000 lbs CAS # 7782-50-5 Chemical – Ammonia Amount – 34,300 lbs CAS # 7664-41-7
Chlorine Removed **Ligonier Boro Wastewater Treatment** Route 30 Municipality – Ligonier Boro Chemical – Chlorine Amount – 900 lbs CAS # - 7782505	**Municipal Authority of New Kensington – Burns** 2200 Constitutional Blvd. Municipality – New Kensington City Chemical – Chlorine Amount – 8,000 lbs CAS # 7782-50-5

SARA Off-site Response Plan Facilities

Municipal Authority of New Kensington – Griffith Park 500 Camp Avenue Municipality – New Kensington City Chemical – Chlorine Amount – 900 lbs CAS # 7782-50-5	**North Huntingdon Municipal Authority – Yough** 4222 Valley Turner Road Municipality – North Huntingdon Township Chemical – Chlorine Amount – 2,500 lbs CAS # 7782-50-5
***BELOW TPQ* National Tire & Battery** 1001 E. Pittsburgh Street Municipality – Hempfield Township Chemical – Sulfuric Acid Amount – 1,565 lbs CAS # 7664-93-9	**North Side Foods** 2200 Rivers Edge Road Municipality – Arnold City Chemical – Ammonia Amount – 3,000 lbs CAS # 7664-41-7
***BELOW TPQ* National Tire & Battery** 20 Hillcrest Shopping Center Municipality – Lower Burrell City Chemical – Sulfuric Acid Amount – 1,015 lbs CAS # 7664-93-9	**OMNOVA Solutions, Inc.** Chambers and Lewis Avenues Municipality – Jeanette City Chemical – Phenoxarsine Amount – 2,800 lbs CAS # 58-36-6
New Florence Water Authority State Gamelands # 42 Municipality – St Clair Township Chemical – Chlorine Amount – 4,000 lbs CAS # 7782-50-5	**Powerex, Inc.** 200 Hillis Street Municipality – Hempfield Township Chemical – Chlorine Amount – 200 lbs CAS # 7782-50-5 Chemical – Hydrogen Fluoride Amount – 350 lbs CAS # 7664-39-3 Chemical – Nitric Acid Amount – 1,700 lbs CAS # 7697-37-2 Chemical – Sulfuric Acid Amount – 1,400 lbs CAS # 7664-93-9
New Kensington Municipal Authority Rt 99 & Industrial Road Municipality – New Kensington City Chemical – Chlorine Amount – 8,000 lbs CAS # 7782-50-5	**Rostraver Township. WPCP – Rehoboth Valley** Finley Road Municipality – Rostraver Township Chemical – Chlorine Amount – 900 lbs CAS # 7782-50-5
***Ceratizit*- Newcomer Products Inc.** Route 982 North Municipality – Derry Township Chemical – Titanium Tetrachloride Amount – 365 lbs CAS # 7550-45-0	**Rostraver Township. WPCP – Sweeny/Fellsburg** 1411 Coal Hollow Road Municipality – Rostraver Township Chemical – Chlorine Amount – 2,450 lbs CAS # 7782-50-5

SARA Off-site Response Plan Facilities

Ranbar Electric Materials RT 993 West of Rt 130. Municipality – Manor Boro Chemical – Toluene 2,4-Diisocyanate Amount – 36,000 lbs CAS # 584-84-9 Chemical – Toluene 2,6-Diisocyanate Amount – 9,000 lbs CAS # 91-08-7 Chemical – Phenol Amount – 46,000 lbs CAS # 108-95-2 Chemical – Formaldehyde Amount – 17,000 lbs CAS # 50-00-0	**Sony Electronics, Inc.** 1001 Technology Drive Municipality – East Huntingdon Township Chemical – Chlorine Amount – 360,000 lbs CAS # 7782-50-5 Chemical – Hydrogen Fluoride Amount – 2,630 lbs CAS # 7664-39-3 Chemical – Nitric Acid Amount – 17,170 lbs CAS # 7697-37-2 Chemical – Sulfuric Acid Amount – 122,000 lbs CAS # 7664-93-9
Reinhart Food Service 226 East View Drive Municipality – East Huntingdon Chemical – Anhydrous Ammonia Amount – 7,945 lbs CAS # 7664-41-7	**Super Valu Retail Support** Paintersville Road, Box 1000 Municipality – Hempfield Township Chemical – Sulfuric Acid Amount – 176,525 lbs CAS # 7664-93-9
***REMOVED EHS* S.H. Schmidt Co** Building LD3 – Latrobe Industrial Park Municipality – Unity Twp Chemical – Chlorine Amount – 2,250 lbs CAS # 7782-50-5	**Torrance State Hospital** LR 64053 Municipality – Derry Township Chemical – Chlorine Amount – 2,000 lbs CAS # 7782-50-5
***REMOVED* Sears Auto Center – Greensburg** Westmoreland Mall Municipality – Hempfield Township Chemical – Sulfuric Acid Amount – 3,171 lbs CAS # 7664-93-9	**US Food Service** 1044 Garden Street Municipality – Hempfield Township Chemical – Ammonia Amount – 7,600 lbs CAS # 7664-41-7
Seward/St Clair Township. Treatment Plant Stiles Road Municipality – St Clair Township Chemical – Chlorine Amount – 450 lbs CAS # 7782-50-5	**Verizon – Greensburg** 11 W. Pittsburgh Street Municipality – Greensburg City Chemical – Sulfuric Acid Amount – 5,000 lbs CAS # 7664-93-9

SARA Off-Site Response Plan Facilities

Verizon – Jeanette 3rd & Bullitt Municipality – Jeanette City Chemical – Sulfuric Acid Amount – 1,500 lbs CAS # 7664-93-9	***REMOVED EHS* Warek Manufacturing Company** Municipality – Unity Township Chemical – Potassium Cyanide Amount – 110 lbs CAS # 151-50-8 Chemical – Hydrofluoric Acid Amount – 220 lbs CAS # 7664-39-3
Verizon – Latrobe 1400 Ligonier Street Municipality – Latrobe City Chemical – Sulfuric Acid Amount – 2,880 lbs CAS # 7664-93-9	**West Newton Sewage Treatment Plant** Access Road off Robertson Municipality – West Newton Boro Chemical – Chlorine Amount – 600 lbs CAS # 7782-50-5
Verizon – Mt. Pleasant Washington & College Municipality – Mt. Pleasant Boro Chemical – Sulfuric Acid Amount – 1,500 lbs CAS # 7664-93-9	**Western Westmoreland Municipal Authority** 12441 Route 993 Municipality – North Huntingdon Township Chemical – Chlorine Amount – 2,000 lbs CAS # 7782-50-5
Verizon – New Kensington 1080 5th Avenue Municipality – New Kensington City Chemical – Sulfuric Acid Amount – 2,880 lbs CAS # 7664-93-9	**Westinghouse Electric Corp** R.D. #4, Westinghouse Road Municipality – Derry Township Chemical – Hydrogen Fluoride Amount – 72,800 lbs CAS # 7664-39-3 Chemical – Nitric Acid Amount – 106,000 lbs CAS # 7697-37-2 Chemical – Sulfuric Acid Amount – 26,500 lbs CAS # 7664-93-9
Verizon – New Stanton 318 – A Paintersville Road Municipality – Hempfield Township Chemical – Sulfuric Acid Amount – 1,500 lbs CAS # 7664-93-9	**Westmoreland – Fayette Municipal Authority** R.D. #1, Old Meadow Road Municipality – East Huntingdon Township Chemical – Chlorine Amount – 4,000 lbs CAS # 7782-50-5
Verizon – North Belle Vernon 722 Broad Street Municipality –North Belle Vernon Boro Chemical – Sulfuric Acid Amount – 2,200 lbs CAS # 7664-93-9	**Verizon – West Newton** 201 S. Fifth Street Municipality – West Newton Boro Chemical – Sulfuric Acid Amount – 1,224 lbs CAS # 7664-93-9

Table SARA 2

Westmoreland County

Hazard Material Response Team

Summary of County HMRT 800 Responses

Year	Haz-Mat Responses	Petroleum Responses	Airport Responses	Anthrax	Other Responses	Total Responses
1998	13	14	8	0	5	40
1999	6	4	3	0	2	15
2000	6	7	0	0	9	22
2001	9	7	5	89	11	121
2002	16	16	6	7	7	52
2003	10	8	0	1	9	28
Totals	**60**	**56**	**22**	**97**	**43**	**278**

Fire Hazards

As with floods of natural origin, fires are the most common hazard in the man-caused sector. Fires may be caused by any number of sources weather man-made or natural and can cause extensive loss of life and property. Fires can be triggered or exacerbated by other disaster events such as floods, storms, drought, transportation accidents and hazardous materials incidents. Thus, fire as a secondary event may result in a very complex situation.

History

There have been a number of major fires in the county during the past decade. Most of these incidents have resulted in one or more the following; extensive use of resources, loss of life, loss of jobs or impact to the community. Some of the more memorable fires of the past decade were the following:

- December 1994, Johnson's True Value Hardware, Norvelt. 225 firefighters from 25 departments, business destroyed, 5 firemen hurt.
- September 1995, George & Cunningham Hardware, Mt. Pleasant. 200 firefighters from 40 departments, 1 business destroyed, 1 business temporary closed because of damages, 27 firemen hurt, water to Frick Hospital reduced during the call resulting in tankers being stationed at the facility, community activities disrupted for 24 hours.
- April 1997, Serro Travel Trailer Co., Hempfield Township. Business destroyed 55 people unemployed.
- July 1998, New Stanton Elementary School, New Stanton. 100 firefighters from a dozen companies, 2 firemen injured, $100,000 damages
- August 1998, Levin Furniture Warehouse, Mt Pleasant. Over 200 firefighters from 60 companies, 2 blocks evacuated, heat damage to a number of homes. 1 firefighter injured.
- November 1998, Edna Hotel, City of Arnold. 18 people homeless, 4 firefighters injured.
- March 2000, Gas Explosion, Hempfield Township. 2 homes destroyed, 340 people from 157 homes evacuated, 85 residents without natural gas, 50 agencies responded, 3 people injured with burns.
- June 2001, Ridge Ave house and Quality Assisted Living Home, New Kensington. 23 people homeless, business destroyed, 3 homes destroyed, 12 fire companies responded.

Over the past seven years, 34 individuals have died from fires in the county. **(See Table FM1)**

The county annually experiences its share of wildland fires. Between 1998 and 2003, there were 36 such incidents reported by the DCNR involving over 217 acres with damages exceeding $43,000. (Specific Data available through DCNR public information requests, **See Table BF1**).

Vulnerability / Maximum Threat

The vulnerability of the citizens and property of Westmoreland County to fire and related incidents depends on many factors. A positive factor is the advance fire services within the county. On the negative side, there are many homes and business that have not been updated to current fire safety codes.

Each year that these structures go without safety updates, the more at risk they become for a fire incident. In Pennsylvania, the most vulnerable population group was the elderly, age 65 and over and the low income earners. The elderly had the highest number of deaths resulting from fire among all population groups. The elderly in the county represent a large portion of the population spectrum.

The county is not at a high risk for major wildland fires. Almost all of the wildland fires in the county occur in remote areas or areas away from residential structures. Unlike the wildland fires that occur in other parts of the county and affect vast areas of land and residential areas, most of the fires in the county are contained before they cause any damage or extensive property loss.

Probability

The number of fire incidents and fatalities is expected to remain at the same level for the foreseeable future. Although newer buildings are constructed with higher safety standards and with more fire resistant material, there are still a large number of older, highly vulnerable buildings throughout the county.

Table FM1
Westmoreland County
Fire Death Data

Year	Fatal Fires	Fire Fatalities
1997	4	4
1998	3	5
1999	2	3
2000	3	3
2001	1	1
2002	1	1
2003	7	9
Total	21	26

Data Provided by the Pennsylvania State Police Fire Marshal's Office

TABLE BF1

Westmorland County

Forest Fire Data

Year	Total Fire Incidents	Number Of Acres Burned	Cost Of Extinction	Estimate Timber & Property Loss
1998	6	19	$3,462	$1,293
1999	9	118.5	$8,971	$12,483
2000	5	16	$625	$1,177
2001	4	23	$919	N/A
2002	4	5.5	$0	$0
2003	8	35	$10,136	N/A
Total	36	217	$28,113.00	$14,953.00

Data Provided by the Pennsylvania DCNR – Bureau of Forestry

Transportation Accidents

For this analysis a transportation accident is defined as an incident involving highway, air and rail travel resulting in death or serious injury to five or more people per accident or extensive property loss or damage. Accidents related to hazardous materials are considered under the hazardous materials section of the analysis.

History / Vulnerability

Highway transportation is by far the greatest method of transportation in Westmoreland County. The county has the most miles of state-maintained highways in the state and the fifth most miles of local roads and streets. Westmoreland County is highly vulnerable to traffic accidents. In the past decade, Westmoreland County averaged over 4,000 traffic accidents and 40 fatalities annually. **(See Table MV1)** There are several transportation routes that have been highly vulnerable to accidents; these are U.S. Route 30, 22, and 119; and Interstates 70 and 76.

The county transportation network includes:

	Number of Miles
Turnpike and Interstate Highways	70.9
State and Federal Highways	1,292.4
Secondary and Municipal Roads	1,357.2
Total	2,720.5

Another form of transportation is railroads, of which the county has approximately 200 miles. No serious accidents or property losses have resulted in the county.

There are four airports in the county: Arnold Palmer Regional Airport, Rostraver, Bouquet and Mt Pleasant/Scottdale. Minor aircraft accidents have resulted in a number of deaths throughout the county. However, there have not been any major accidents like Flight 427 in Allegheny County of Flight 93 in Somerset County.

Aviation accidents are the third form of transportation accident relevant in Westmoreland County. Estimates of population located below air traffic patterns for each airport located in the county include:

Arnold Palmer Regional Airport	-	6,000
Rostraver Airport	-	750
Boquet	-	400
Mt Pleasant/Scottdale	-	250

Probability

Considering the transportation network within the county and the estimated 6% growth in vehicular traffic, it can be expected that the number of vehicle accidents and fatalities should increase at the same rate. Other forms of transportation accidents should remain constant.

Table MV1

Westmoreland County
Auto Fatality Data

Year	Auto Fatalities
1998	38
1999	26
2000	37
2001	30
2002	40
2003	41
Total	212

Data provided by the Westmoreland County Coroner's Office.

Energy Emergencies

Energy emergencies may be caused by nationwide shortages or more localized imbalances in supply due to weather, labor strikes, or oil embargos. Such emergencies can cause rapid price increases.

History

The nationwide oil embargo of 1973-74, the severe winter of 1976-77, and the national gasoline shortage of 1979 emphasized the vulnerability of all residents in Westmoreland County to energy emergencies. There has been no localized energy emergencies recorded in Westmoreland County.

Vulnerability / Maximum Threat

In the event of an Energy Emergency, the people most vulnerable would be the elderly population, the sick and low-income earners. In addition, special attention would need to be given to those facilities that house, support and/or provide services to these groups.

Probability

It is not anticipated that the county will face any localized energy emergencies and will remain susceptible to national emergencies.

Fixed Nuclear Facility

Westmoreland County is located within the ingestion exposure pathway (IEP) of the Beaver Valley Power Station. Approximately 25% of land area and approximately 60% of the county's population falls within the ingestion exposure pathway.

The IEP is the 50-mile radius around a nuclear facility. Should an accident occur at this facility, the area within the IEP, western Westmoreland County could receive some radioactive contamination. The amounts are of little concern in terms of external exposure. A bigger threat is internal exposure, thru the contamination of the food chain, particularly milk from local dairy cattle. Should an accident occur, state and federal agencies would sample and monitor milk, livestock feed, storage crops, and water supplies within the IEP. The Westmoreland County Department of Emergency Management may be asked to assist in gathering samples, and if requested by the state agencies, also participate in implementing control of foods, foodstuffs and water.

Nuclear Attack

When a nuclear bomb explodes, the main effects produced are: intense light brighter than the sun; heat in the thousands of degrees; shock blast and radiation. Explosions on or near the ground create large quantities of dangerous radioactive particles. The particles are created from irradiated dirt that is sucked into the fireball as it sweeps upward to form the mushroom cloud. These particles are referred to as fallout. They begin falling back to earth in 30 minutes and mostly within the first 24 hours. The fallout generates gamma rays, which can be deadly to humans.

In a national attack, weapon size would determine the extent of the damage area. People close to the explosions would be killed by the blast and heat. A few miles away, in the light damage area, most people would be endangered by the blast and heat to a lesser extent, but would be threatened by fires that the explosion may start and fallout. Outside the immediate danger area, radioactive fallout would be the main threat to life.

Vulnerability / Maximum Threat

Westmoreland County has been designated as a host/risk county due to the fact that risk areas exist within the boundaries of the county. The risk area includes Bolivar Borough, New Florence Borough, Seward Borough, Fairfield Township and St Clair Township. Refer to Annex 1 and Annex 5 of the County EOP Incident Specific Annexes for more information.

Probability

The probability of Westmoreland County being a direct target of a nuclear attack is a lot less than it was during the cold war when Pittsburgh was the Steel Capital of the world.

Terrorism

The FBI defines terrorism as "the unlawful use of force against persons or property to intimidate or coerce a government, the civilian population, or any segment thereof, in furtherance of political or social objectives".

Two types of terrorism identified by the FBI are Domestic Terrorism and International Terrorism.

Domestic terrorism involves groups or individuals whose terrorist activities are without foreign sponsorship and are directed at elements of our government. Examples would be the White Supremacist Groups, Neo Nazis, Black Supremacist Groups, extreme Pro-life or Pro-choice groups, extreme Animal Rights or Environmentalist.

International terrorism involves groups of individuals whose terrorist activities are foreign-based and/or directed by countries or groups outside the United States or whose activities transcend national boundaries. An example would be the Al Qaeda terrorist network and it's leader Usama bin Ladin. This group has been responsible for a number of attacks on US interests and the terrorist attacks of September 11, 2001.

Using the acronym 'B-NICE' we can describe the 5 types of terrorist attacks.

- **Biological** – Most likely to occur and like a nuclear attack, can have the greatest impact. Especially to human life. Hardest to detect because the symptoms don't show up right away and many individuals can become infected before they are detected.

  4 Types of Biological Agents and Common Examples

  - Bacteria – Anthrax and Cholera
  - Viruses – Small Pox and Ebola
  - Rickettsia – Q fever
  - Toxins – Botulism, SEB, and Ricin

- **Nuclear/Radiological –** Radiological dispersion is much more likely to occur than a nuclear incident. A nuclear incident can cause the most damage and have the greatest impact. Could be caused by a nuclear bomb attack or an attack on a nuclear facility.

- **Incendiary –** Fire Bombs, Liquid Fuel Bombs (Air Craft), Chemical reactions.

- **Chemical –** Generally used by government agencies. Can be spread in the form of liquid, vapor, aerosol, solids and gases.

5 Types of Chemical Agents:

- Riot Control Agents – Tear Gas or Pepper Spray. Affects the eyes and respiratory system.
- Choking Agents – Phosgene or Chlorine. Affects the respiratory system.
- Blood Agents – Hydrogen Cyanide. Affects the respiratory and circulatory systems.
- Nerve Agents – Tabun, Sarin, Soman, and VX. Affects the nervous system
- Blister Agents – Mustard Gas and Lewisite. Causes burns to the skin and internal organs.

- **Explosive** – Most common tool of terrorist. Weapons of choice; dynamite, pipe bombs and car/truck bombs.

History

Like just about every other county in the nation, Westmoreland County has had its share of domestic terrorism incidents. Whether it was a prison uprising, a hostage situation, a protest, civil unrest or bomb threats, the county has been able to respond and resolve the situation with minimal impact on the public as a whole. Prior to 09/11/2001, the threat of international terrorism was unheard of in the county.

On September 11, 2001, the way the citizens of Westmoreland County view terrorism changed forever. Westmoreland County nearly became a direct target of an international terrorist attack when high-jacked, Flight 93 reported trouble as it flew over the county and soon crash a few miles over the border in Somerset County.

A second wave of terror began a few weeks later when letters, tainted with Anthrax, began showing up in Florida, New York and Washington DC. Security in the county was heightened and reports of suspicious substances began to pop up all over the county. From October 12, 2001 to December 12, 2001 the Westmoreland County Hazardous Materials Response Team responded to 92 calls for suspicious substances. There were no confirmed cases of Anthrax in the county.

Vulnerability / Maximum Threat

Although terrorist will usually select their targets based on the impact that the event will make, the reality is that targets of terrorist can include anything, can target anyone and can occur anywhere.

In general, the following is list of potential targets that a terrorist may select:

- Government facilities including Military installations.
- Commercial facilities, particularly multinational or international firms.
- Communications Centers (9-1-1)
- Industrial facilities, particularly those storing large quantities of hazardous materials or those involved in military development.
- Abortion or Family Planning Clinics or any organization associated with a socially controversial issue.
- Utility facilities including power generation plants, dams and water treatment plants.
- Law enforcement facilities.
- Facilities housing important political or religious figures.
- Historical sites.
- Transportation infrastructure.
- High profile events attracting large amounts of people of VIPs.
- Educational facilities, especially colleges and universities.

The county has developed a list of HIGH RISK targets in Westmoreland County listed by Category. Due to the sensitivity of this subject, the following specific targets should remain confidential.

Events

- Mount Pleasant Glass and Ethnic Festival (Last weekend in September)
- Westmoreland County Fair (3rd week in August)
- PA Arts and Crafts Colonial Festival (Labor Day Weekend)
- Ligonier Highlands Games (Early September)
- Fort Ligonier Days (2nd full weekend in October)
- Pittsburgh Steelers Training Camp (mid July – early August)
- Greensburg Community Days (Memorial Day weekend)
- Westmoreland County Air Show (bi-annual, early summer)
- Westmoreland County Arts & Heritage Festival (4th of July weekend)
- Westmoreland County Rib, Wing and Music Festival (3rd weekend in July)
- Rolling Rock Town Fair (July-August)

Industrial Facilities

- Alcoa Technological Center – Upper Burrell Township
- Allegheny Ludlum Steel – West Leechburg
- Allegheny Ludlum Steel – Vandergrift
- Sony Electronics – East Huntingdon Township
- Kennametal Corporate Headquarters – Unity Township
- Westinghouse Electronic – Waltz Mills
- All other SARA reporting facilities listed in this report.

Commercial Facilities

- Westmoreland Mall
- Bulk Fuel Facilities (excess of 100,000 gal)
- UPS Distribution Center – New Stanton
- Super-Valu Distribution Center – New Stanton

County Government Facilities

- Westmoreland County Court House – Greensburg
- Public Safety and 9-1-1 Center- Hempfield Township
- Westmoreland Manor – Hempfield Township
- Westmoreland County Prison – Hempfield Township

State/Federal Government Facilities

- State Correctional Facility – Hempfield Township
- Pennsylvania State Police – Greensburg Barracks
- United States Postal Facilities

Utilities

- Any electric generation / sub-station located within the company
- Any of the Natural Gas provider's facilities
- Any of the water treatment / storage facilities

Transportation

- Any major bridge, highway or railroad in the county
- Arnold Palmer Regional Airport

Medical Facilities

- Excela Frick Hospital – Mt Pleasant
- Excela Jeannette District Memorial Hospital – Jeannette
- Excela Latrobe Area Hospital – Latrobe
- Excela Westmoreland Regional Hospital – Greensburg

Educational Facilities

- Westmoreland County Community College – Youngwood
- St Vincent College – Latrobe

- Seton Hill College – Greensburg
- University of Pittsburgh – Greensburg
- Penn State University – New Kensington
- Carlow Unversity – Greensburg
- Any of the Public, Private, or Parochial Schools

Historical Sites / Tourist Attractions

- Idlewild Park – Ligonier Township
- Fort Ligonier- Ligonier Borough
- Bushy Run – near City of Jeanette
- Hannas Town – Hannas Town

Military Facilities

- Pennsylvania Army National Guard – Greensburg, Latrobe, Ligonier and Mt Pleasant
- United States Army Reserve – Hempfield Township

Probability

Although the probability of Westmoreland County being the target of a direct Domestic Terrorist attack is greater than it being the direct target of an International Terrorist Attack, it should be equally prepared for both. It is hard to determine at this point what the actual probability of a terrorist attack occurring within the county is. However, it is safe to assume that it is much greater than before 09/11/2001. Westmoreland County stands a greater chance of being impacted indirectly from terrorist attacks in surrounding counties. Westmoreland County is within close proximity to the City of Pittsburgh and the Beaver Valley Nuclear Power Plant which are higher probable targets but close enough to the county to have some impact on it.

Hazard Selection & Impacts

Selection of Hazard

HVA Based on the 2004 HVA Matrix (see Table HMP-1), the following disasters were identified at having the greatest threat to Westmoreland County.

- Flooding – major & catastrophic
- Tornado – major & catastrophic
- Terrorism

Those disasters receiving the second greatest consideration:

- Snow – catastrophic
- Hazard Materials
- Fires – major
- Dam Failures

Hazard Selection

Due to the high frequency, repetitive loss (see Table HMP-2), and potential for widespread destruction, major / catastrophic flooding was chosen as the primary focus for this Hazard Mitigation Plan. Secondarily, we will focus on Tornados, Terrorism, Snow Storms, Hazard Materials, Major Fires, and Dam Failure

Table HMP1 – HAZARD VULNERABILITY ANALYSIS MATRIX

Source – WC 2004 HVA

EVENT	PROBABILITY				IMPACT ON COUNTY					READINESS			TOTAL
	HIGH	MED	LOW	NONE	**LIFE THREAT**	**HEALTH/ SAFETY**	**HIGH IMPACT**	*MOD* **IMPACT**	*LOW* **IMPACT**	POOR	FAIR	GOOD	
SCORE	**3**	**2**	**1**	**0**	**1**	**1**	**3**	**2**	**1**	**3**	**2**	**1**	
Aviation Disaster		2			1	1		2				1	7
Dam Failure - > major			1		1	1	3				2		8
Drought – severe			1			1		2				1	5
Earthquakes			1						1			1	3
Fire – major	3				1	1		2				1	8
Flooding – minor	3								1			1	5
Flooding – major	3				1	1		2			2		9
Flooding – catastrophic			1		1	1	3			3			9
Hazardous Material	3				1	1		2				1	8
Mine Subsidence / Landslides	3							2				1	6
Nuclear Power Plant Emergency			1			1			1			1	4
Radiological Emergencies		2			1	1		2				1	7
Winter Storms													
Ice Storm / Freezing Rain – severe		2				1		2				1	6
Snow – minor	3								1			1	5
Snow – major		2				1		2				1	6
Snow – catastrophic			1		1	1	3				2		8

Table HMP1 – HAZARD VULNERABILITY ANALYSIS MATRIX

Source – WC 2004 HVA

EVENT	PROBABILITY				IMPACT ON FACILITY					PREPAREDNESS			TOTAL
	HIGH	MED	LOW	NONE	LIFE THREAT	HEALTH/ SAFETY	HIGH IMPACT	MOD IMPACT	LOW IMPACT	POOR	FAIR	GOOD	
SCORE	3	2	1	0	1	1	3	2	1	3	2	1	
Wind Storms													
Microburst / Straight-line Winds		2				1		2				1	6
Tornado – minor		2			1	1		2				1	7
Tornado – major		2			1	1	3				2		9
Tornado – catastrophic			1		1	1	3			3			9
Tropical Storms			1			1			1			1	4
Hurricanes			1						1			1	3
Transportation Accident	3					1		2				1	7
Terrorism													
Biological		2			1	1	3				2		9
Nuclear		2			1	1	3				2		9
Incendiary		2			1	1	3				2		9
Chemical		2			1	1	3				2		9
Explosive		2			1	1	3				2		9
Utility Failure													
Electrical Failure		2				1			1			1	5
Natural Gas Failure		2				1			1			1	5
Water Failure		2				1			1			1	5

HVA Matrix provided by: American Red Cross SWPA – SPEPI

Table HMG2 – REPETATIVE LOSS FLOOD PROPERTIES IN WESTMORELAND COUNTY

Source – PEMA 2008RL & SRL DATA

Municipality	Number of Losses	Structure Types	Build Loss	Content Loss	Total Paid	APPL
ALLEGHENY, TOWNSHIP OF	3	SINGLE FMLY	$ 92,269.27	$ 56,349.32	$ 148,618.59	$ 49,539.53
ALLEGHENY, TOWNSHIP OF	2	SINGLE FMLY	$ 15,648.94	$ 3,566.18	$ 19,215.12	$ 9,607.56
ALLEGHENY, TOWNSHIP OF	2	SINGLE FMLY	$ 44,791.36	$ 2,979.77	$ 47,771.13	$ 23,885.57
DERRY, TOWNSHIP OF	2	SINGLE FMLY	$ 6,560.24	$ -	$ 6,560.24	$ 3,280.12
EAST HUNTINGDON,TOWNSHIP OF	3	ASSMD CONDO	$ -	$ 41,956.56	$ 41,956.56	$ 13,985.52
EXPORT, BOROUGH OF	2	SINGLE FMLY	$ 18,387.81	$ -	$ 18,387.81	$ 9,193.91
GREENSBURG, CITY OF	2	NON RESIDNT	$ 14,169.09	$ 51,259.81	$ 65,428.90	$ 32,714.45
GREENSBURG, CITY OF	3	SINGLE FMLY	$ 2,557.60	$ 9,576.02	$ 12,133.62	$ 4,044.54
GREENSBURG, CITY OF	2	SINGLE FMLY	$ 1,382.07	$ 3,307.42	$ 4,689.49	$ 2,344.75
GREENSBURG, CITY OF	4	SINGLE FMLY	$ 4,492.54	$ 10,726.04	$ 15,218.58	$ 3,804.65
HEMPFIELD, TOWNSHIP OF	4	SINGLE FMLY	$ 16,157.10	$ 10,208.25	$ 26,365.35	$ 6,591.34
HEMPFIELD, TOWNSHIP OF	2	SINGLE FMLY	$ 729.26	$ 2,094.65	$ 2,823.91	$ 1,411.96
HEMPFIELD, TOWNSHIP OF	3	ASSMD CONDO	$ 42,762.16	$ 11,172.45	$ 53,934.61	$ 17,978.20
HEMPFIELD, TOWNSHIP OF	3	ASSMD CONDO	$ 10,698.24	$ -	$ 10,698.24	$ 3,566.08
HEMPFIELD, TOWNSHIP OF	2	SINGLE FMLY	$ 1,135.00	$ 2,143.19	$ 3,278.19	$ 1,639.10
HEMPFIELD, TOWNSHIP OF	2	SINGLE FMLY	$ 8,828.66	$ 6,578.25	$ 15,406.91	$ 7,703.46
HEMPFIELD, TOWNSHIP OF	4	OTHER RESID	$ 18,687.29	$ -	$ 18,687.29	$ 4,671.82
HEMPFIELD, TOWNSHIP OF	2	NON RESIDNT	$ 13,102.68	$ 5,900.00	$ 19,002.68	$ 9,501.34
JEANNETTE, CITY OF	2	SINGLE FMLY	$ 7,395.63	$ 1,061.12	$ 8,456.75	$ 4,228.38
JEANNETTE, CITY OF	2	SINGLE FMLY	$ 11,098.66	$ -	$ 11,098.66	$ 5,549.33
LATROBE, BOROUGH OF	2	SINGLE FMLY	$ 3,567.53	$ -	$ 3,567.53	$ 1,783.77
LATROBE, BOROUGH OF	2	SINGLE FMLY	$ 7,726.91	$ 3,995.73	$ 11,722.64	$ 5,861.32
LIGONIER, BOROUGH OF	2	SINGLE FMLY	$ 17,242.78	$ -	$ 17,242.78	$ 8,621.39
LIGONIER, BOROUGH OF	2	SINGLE FMLY	$ 11,375.33	$ 725.92	$ 12,101.25	$ 6,050.63
LIGONIER, BOROUGH OF	2	SINGLE FMLY	$ 7,660.98	$ -	$ 7,660.98	$ 3,830.49
LIGONIER, BOROUGH OF	2	SINGLE FMLY	$ 20,126.11	$ 1,126.65	$ 21,252.76	$ 10,626.38
LIGONIER, BOROUGH OF	2	SINGLE FMLY	$ 55,010.88	$ 11,956.61	$ 66,967.49	$ 33,483.75
LIGONIER, TOWNSHIP OF	2	SINGLE FMLY	$ 12,701.61	$ -	$ 12,701.61	$ 6,350.81
LIGONIER, TOWNSHIP OF	2	NON RESIDNT	$ 43,428.80	$ -	$ 43,428.80	$ 21,714.40
LIGONIER, TOWNSHIP OF	3	SINGLE FMLY	$ 86,448.01	$ 7,916.86	$ 94,364.87	$ 31,454.96
LIGONIER, TOWNSHIP OF	3	SINGLE FMLY	$ 4,917.06	$ 10,613.66	$ 15,530.72	$ 5,176.91

Municipality	Number of Losses	Structure Types	Build Loss	Content Loss	Total Paid	APPL
LIGONIER, TOWNSHIP OF	3	SINGLE FMLY	$ 39,134.34	$ -	$ 39,134.34	$ 13,044.78
LIGONIER, TOWNSHIP OF	3	SINGLE FMLY	$ 31,965.36	$ -	$ 31,965.36	$ 10,655.12
LIGONIER, TOWNSHIP OF	3	NON RESIDNT	$ 11,008.09	$ 1,177.22	$ 12,185.31	$ 4,061.77
LIGONIER, TOWNSHIP OF	2	SINGLE FMLY	$ 13,455.85	$ -	$ 13,455.85	$ 6,727.93
LIGONIER, TOWNSHIP OF	2	2-4 FAMILY	$ 49,393.32	$ 11,380.20	$ 60,773.52	$ 30,386.76
LIGONIER, TOWNSHIP OF	3	SINGLE FMLY	$ 23,161.65	$ 5,023.27	$ 28,184.92	$ 9,394.97
LIGONIER, TOWNSHIP OF	2	SINGLE FMLY	$ 3,927.89	$ -	$ 3,927.89	$ 1,963.95
LIGONIER, TOWNSHIP OF	2	SINGLE FMLY	$ 24,119.23	$ -	$ 24,119.23	$ 12,059.62
LIGONIER, TOWNSHIP OF	3	SINGLE FMLY	$ 18,299.28	$ -	$ 18,299.28	$ 6,099.76
LIGONIER, TOWNSHIP OF	2	SINGLE FMLY	$ 5,108.88	$ 52.75	$ 5,161.63	$ 2,580.82
LIGONIER, TOWNSHIP OF	2	SINGLE FMLY	$ 2,536.00	$ 3,628.86	$ 6,164.86	$ 3,082.43
LIGONIER, TOWNSHIP OF	2	SINGLE FMLY	$ 5,564.30	$ 1,475.74	$ 7,040.04	$ 3,520.02
LIGONIER, TOWNSHIP OF	4	SINGLE FMLY	$ 9,289.77	$ -	$ 9,289.77	$ 2,322.44
LIGONIER, TOWNSHIP OF	3	SINGLE FMLY	$ 26,351.87	$ -	$ 26,351.87	$ 8,783.96
LIGONIER, TOWNSHIP OF	2	SINGLE FMLY	$ 29,735.75	$ -	$ 29,735.75	$ 14,867.88
LIGONIER, TOWNSHIP OF	5	ASSMD CONDO	$ 99,866.79	$ 17,628.16	$ 117,494.95	$ 23,498.99
LIGONIER, TOWNSHIP OF	2	SINGLE FMLY	$ 20,055.72	$ 7,010.21	$ 27,065.93	$ 13,532.97
LIGONIER, TOWNSHIP OF	4	SINGLE FMLY	$ 59,885.61	$ 22,694.10	$ 82,579.71	$ 20,644.93
LOWER BURRELL, CITY OF	3	SINGLE FMLY	$ 57,508.63	$ -	$ 57,508.63	$ 19,169.54
LOWER BURRELL, CITY OF	7	NON RESIDNT	$ 6,678.80	$ 29,765.70	$ 36,444.50	$ 5,206.36
MANOR, BOROUGH OF	2	NON RESIDNT	$ 160,069.86	$ 152,902.59	$ 312,972.45	$ 156,486.23
MONESSEN, CITY OF	2	2-4 FAMILY	$ 4,600.69	$ -	$ 4,600.69	$ 2,300.35
MT. PLEASANT, TOWNSHIP OF	2	SINGLE FMLY	$ 2,622.72	$ 8,278.90	$ 10,901.62	$ 5,450.81
MURRYSVILLE, CITY OF	3	SINGLE FMLY	$ 15,289.01	$ 81.98	$ 15,370.99	$ 5,123.66
MURRYSVILLE, CITY OF	2	NON RESIDNT	$ 190,705.51	$ 114,178.34	$ 304,883.85	$ 152,441.93
MURRYSVILLE, CITY OF	2	SINGLE FMLY	$ 3,500.78	$ 1,537.65	$ 5,038.43	$ 2,519.22
MURRYSVILLE, CITY OF	2	SINGLE FMLY	$ 23,116.66	$ 9,031.28	$ 32,147.94	$ 16,073.97
MURRYSVILLE, CITY OF	2	NON RESIDNT	$ 9,815.19	$ -	$ 9,815.19	$ 4,907.60
NEW KENSINGTON, CITY OF	2	SINGLE FMLY	$ 18,146.52	$ 7,946.75	$ 26,093.27	$ 13,046.64
NEW KENSINGTON, CITY OF	4	NON RESIDNT	$ 105,727.64	$ 40,131.42	$ 145,859.06	$ 36,464.77
NEW KENSINGTON, CITY OF	2	2-4 FAMILY	$ 16,639.96	$ 611.88	$ 17,251.84	$ 8,625.92

Municipality	Number of Losses	Structure Types	Build Loss	Content Loss	Total Paid	APPL
PENN, TOWNSHIP OF	2	SINGLE FMLY	$ 60.00	$ 8,169.07	$ 8,229.07	$ 4,114.54
ROSTRAVER, TOWNSHIP OF	3	SINGLE FMLY	$ 13,434.36	$ 23,375.02	$ 36,809.38	$ 12,269.79
ROSTRAVER, TOWNSHIP OF	2	SINGLE FMLY	$ 10,731.19	$ 309.00	$ 11,040.19	$ 5,520.10
SALEM, TOWNSHIP OF	2	SINGLE FMLY	$ 3,444.97	$ -	$ 3,444.97	$ 1,722.49
SCOTTDALE, BOROUGH OF	2	SINGLE FMLY	$ 1,570.02	$ 1,042.00	$ 2,612.02	$ 1,306.01
SEWICKLEY, TOWNSHIP OF	2	SINGLE FMLY	$ 25,340.84	$ 38.75	$ 25,379.59	$ 12,689.80
SEWICKLEY, TOWNSHIP OF	2	SINGLE FMLY	$ 2,965.31	$ -	$ 2,965.31	$ 1,482.66
SEWICKLEY, TOWNSHIP OF	2	SINGLE FMLY	$ 2,410.51	$ 103.47	$ 2,513.98	$ 1,256.99
SOUTH HUNTINGDON, TOWNSHIP OF	2	SINGLE FMLY	$ 11,952.73	$ -	$ 11,952.73	$ 5,976.37
SUTERSVILLE, BOROUGH OF	2	SINGLE FMLY	$ 16,803.20	$ -	$ 16,803.20	$ 8,401.60
UNITY, TOWNSHIP OF	3	SINGLE FMLY	$ 3,390.99	$ 1,828.19	$ 5,219.18	$ 1,739.73
UNITY, TOWNSHIP OF	2	2-4 FAMILY	$ 60,040.15	$ 14,800.00	$ 74,840.15	$ 37,420.08
UNITY, TOWNSHIP OF	2	2-4 FAMILY	$ 25,082.86	$ -	$ 25,082.86	$ 12,541.43
UNITY, TOWNSHIP OF	2	SINGLE FMLY	$ 7,192.18	$ -	$ 7,192.18	$ 3,596.09
UNITY, TOWNSHIP OF	2	SINGLE FMLY	$ 60,843.91	$ 40,994.85	$ 101,838.76	$ 50,919.38
UNITY, TOWNSHIP OF	2	2-4 FAMILY	$ 3,482.17	$ 4,973.79	$ 8,455.96	$ 4,227.98
UNITY, TOWNSHIP OF	2	SINGLE FMLY	$ 12,452.97	$ -	$ 12,452.97	$ 6,226.49
UNITY, TOWNSHIP OF	2	NON RESIDNT	$ 19,394.90	$ -	$ 19,394.90	$ 9,697.45
UNITY, TOWNSHIP OF	2	SINGLE FMLY	$ 10,063.30	$ 4,586.22	$ 14,649.52	$ 7,324.76
UNITY, TOWNSHIP OF	6	SINGLE FMLY	$ 34,598.86	$ 17,419.48	$ 52,018.34	$ 8,669.72
UNITY, TOWNSHIP OF	2	ASSMD CONDO	$ 7,566.34	$ 2,856.33	$ 10,422.67	$ 5,211.34
UNITY, TOWNSHIP OF	2	2-4 FAMILY	$ -	$ 7,500.59	$ 7,500.59	$ 3,750.30
UNITY, TOWNSHIP OF	2	2-4 FAMILY	$ 4,019.47	$ 2,108.72	$ 6,128.19	$ 3,064.10
UPPER BURRELL, TOWNSHIP OF	2	SINGLE FMLY	$ 4,093.00	$ 437.14	$ 4,530.14	$ 2,265.07
YOUNGWOOD, BOROUGH OF	2	NON RESIDNT	$ -	$ 366,204.24	$ 366,204.24	$ 183,102.12
AVERAGE PAID PER LOSS						**$ 15,629.18**
TOTALS	**215**		**$ 2,029,275.50**	**$ 1,186,498.32**	**$ 3,215,773.82**	

Table HMG2 – REPETATIVE LOSS FLOOD PROPERTIES IN WESTMORELAND COUNTY

Source – PEMA 2008RL & SRL DATA

Hazard Information

Flooding

Impact on property

- Flash Flooding - property, structure and infrastructure damage and/or destruction caused by fast-moving water. Rebuilding usually has to take place after major flash flooding events.

- River Flooding – property, structure and infrastructure damage caused by exposure to standing water. Cleaning and repairs are usually needed to structures and infrastructure. Replacement of property will occur when structures and/or objects are exposed to standing water for long periods of time.

Impact on safety and health

- Flash Flooding – Injuries and loss of life are common occurrences during flash floods. Individuals and families can become displaced. Damage to infrastructure can cause residual, long-term problems.

- River Flooding – Individuals and families can become displaced. Contamination to drinking water can cause wide-spread health problems to the population. Injuries and loss of life can occur, but are not common in river flooding.

Impact on county resources

- Major and/or catastrophic flooding could have a major impact on county. Major waterways separate the borders of the counties to the north and south of the county. There are also a number of significant waterways throughout the center of the county. The dispersion of these waterways would deplete county resources very quickly if major flooding were experienced simultaneously county-wide.

Tornado

Impact on property

- F0 Tornado – Some damage to chimneys; breaks branches off trees; pushes over shallow-rooted trees; damages sign boards.

- F1 Tornado – Peels surface off roofs; mobile homes pushed off foundations or overturned; moving autos pushed off the roads; attached garages may be destroyed.

- F2 Tornado – Considerable damage. Roofs torn off frame houses; mobile homes demolished; boxcars pushed over; large trees snapped or uprooted.

- F3 Tornado – Roof and some walls torn off well constructed houses; trains overturned; most trees in path uprooted.

- F4 Tornado – Well-constructed houses leveled; structures with weak foundations blown off some distance; cars thrown.

- F5 Tornado – Strong frame houses lifted off foundations and carried considerable distances to disintegrate; automobile sized missiles fly through the air in excess of 100 meters; trees debarked; steel re-enforced concrete structures badly damaged

Impact on safety and health

- Short-term – Injuries such as cuts and bruises, due to flying debris, are most common in tornados the strength of an F2 or less. In tornados F3 and above, there is a greater chance of loss of life due to individuals becoming trapped in collapsed buildings.

- Long-term – Individuals and families may be displaced. Damage to infrastructure can be extensive causing additional hardship to those victimized by the tornado. Psychological problems, caused by the trauma and destruction of the tornado, can take years to cure, if at all.

Impact on county resources

- The larger the tornado, the greater the impact will be on county resources. The greatest impact will be to county infrastructure. There is the potential for human resources to be depleted quickly in the wide-spread tornado event.

Terrorism

Impact on property

- Biological – None.
- Nuclear – If the result of a bomb, damage could be extensive over a large area. This could also include extensive damage to the infrastructure.
- Incendiary – Could be extensive but localized to the immediate area surrounding the attack.
- Chemical – Minimal or none.
- Explosive – Could be extensive but localized to the immediate area surrounding the attack.

Impact on safety and health

- Biological – Depending on the agent used and method of attack, the impact can range from anywhere from 1 to 1 million victims. The victims will range from severe illness to death. Biological attacks can be hard to discover, thus there is the potential for wide-spread epidemics.
- Nuclear – Depending on the type of attack the impact can be minimal affecting on those individuals caught in the impact zone or it could be wide-spread with individual being impacted many miles from the impact zone. The victims will range from mild radiological illness, to severe, long-term illness and death.

- Incendiary – Generally will be limited to those individual in the caught in the targeted attack. Injuries can range from minor in nature to death.

- Chemical – Can range from minor burns or irritations to more severe burns and internal organ damage, to long-term respiratory problems to death. Although there is the possibility of wide-spread impacts, in most cases, the injuries will be localized to the area in the attack zone.

- Explosive – Injuries will be contained to the impact area and can range from minor cuts and bruises to severed limbs to death.

Impact on county resources

- The impact on county resources will be determined by the type and severity of the terrorist event. In the worst case scenario of a major, wide-spread attack, county resources would be depleted rather quickly and the need for a regional / state-wide response would almost be immediate.

Winter Snow Storms

Impact on property

- During most winter storms, there is minimal or no impact to property. However, in rare events involving large accumulations of heavy, wet snow or ice accumulations, there could be roof collapses.

Impact on safety and health

- During most winter storms, there is a minimal impact on health and safety. However, during ice events, there is an increase in injuries due to falls and automobile accidents. In rare events involving large accumulations of heavy, wet snow or ice accumulations, there could be health and safety issues cause by the loss of electricity.

Impact on county resources

- During most winter storms, there is minimal or no impact on county resources. However, in rare events involving large accumulations of heavy, wet snow or ice accumulations, county resources can be exhausted if snow or ice removal is extensive and wide-spread.

Hazardous Material

Impact on property

- Most hazardous material incidents will be localized events with little or no long-term impact on property. The greatest impact in most cases will be the inability to use the property until clean-up of the site is complete. In cases where corrosive agents are the cause of the incident, there could be extensive property damage.

Impact on safety and health

- The impact on the safety and health of individuals will be confined to the area of the incident and could range from minor respiratory problems, to burns and even death. In incidents where there the hazardous material creates a cloud, there is the possibility that the plume could spread over a larger area, thus impacting a larger amount of individuals.

Impact on county resources

- Most hazardous material incidents will have a minor impact on county resources. The county hazardous material Team 800 is capable of handling most incidents they encounter with minimal long-term impact.

Fires

Impact on property

- The impact of property could be extensive but will be isolated to the structure where the fire originated and possibly to those adjoining it.

Impact on safety and health

- Impact of health and safety can range from none to catastrophic with mass casualties depending on the structure in question. Any impact will be confined to the event location.

Impact on county resources

Most fires will be handled at a local level and have little or no impact on county resources unless, the structure in question is a county facility.

Dam Failures

Impact on property

- Depending on the dam, a failure could have a catastrophic effect on property; as a dam failure would cause major flooding over an extensive area, impacting heavily populated areas.

Impact on safety and health

- Injuries and loss of life could be extensive during a dam failure. Individuals and families could become displaced. Damage to infrastructure could cause residual, long-term problems. Contamination to drinking water could cause wide-spread health problems to the population

Impact on county resources

- Major or catastrophic flooding caused by a dam failure, could have a major impact on county resources.

Recommended Measures

County Measures

Westmoreland County
Draft Comprehensive Plan
EXECUTIVE SUMMARY
Prepared By: Mullin & Lonergan Assoc Inc.

WHAT KIND OF PLACE SHOULD WESTMORELAND COUNTY BE?

The county's primary concerns and aspirations can be summarized in these basic guiding principles:

- Maintain the county's predominant rural character, conserve key natural resources, and preserve agricultural uses.
- Accommodate future development primarily within the urban/suburban growth triangle, but also preserve contiguous tracts of unimproved open space within this area. In terms of public policy and public investment, do not encourage upscale development outside of the designated urban/suburban development area.
- Prioritize transportation improvements that reduce travel time from key areas of the county, thus reducing congestion on local highways.
- Implement planning techniques and enforce development standards that produce clustered commercial development and discourage the proliferation of curb cuts on commercial highways.
- Provide more options and fewer roadblocks to varieties of housing types and residential neighborhoods, encourage mixed use development, utilize design techniques that instill a sense of place, and reduce travel time for everyday purchases.
- Revitalize cities, downtown areas, and urban neighborhoods and restore their status as attractive and convenient places to live.
- Promote new and enhance existing economic employment centers that are accessible to various areas of the county, thereby minimizing adverse traffic impacts on local neighborhoods and communities.
- Elevate architectural and landscaping standards to achieve a higher quality of land and building development that improves the visual appearance of the county.
- Preserve and expand the county's affordable housing stock.
- Maintain and enhance the basic attributes that make the county an attractive place to live, work, and play; i.e., low taxes, low crime rate, quality schools, career opportunities, housing and neighborhood variety, and abundant leisure and recreation opportunities.

THE PLAN

The overall plan for Westmoreland County is embodied in the 14 policy statements, 57 goal statements and 207 action steps outlined at the end of each functional plan in the technical document. We hope you will take the time to read the action steps. They constitute the essence of the county's game plan for the next ten years. At the risk of oversimplifying the policy direction provided in the technical document, we have summarized some of the key concepts of the plan in the paragraphs that follow.

Housing

The housing goal for suburban areas in the county is to create alternatives to large lot subdivisions and to create housing for people in various phases of life. The population forecast for fewer younger residents and more older residents signals a need for additional low maintenance housing alternatives such as patio homes, condominiums and independent living facilities. In addition to providing housing for more established families that prefer bigger houses and yards, suburban areas should provide housing for homebuyers on a budget and those who prefer easy access to services.

In urban areas, the goal is to reclaim residential neighborhoods through concentrated revitalization activities. In particular, there is a need to upgrade residential neighborhoods located contiguous to downtown areas. Statistics show that county residents continue to leave urban neighborhoods and move to the suburbs. Urban residential neighborhoods are worthy of preservation. New housing in urban areas would attract residents who seek to be less dependant on the automobile and who enjoy being able to live within walking distance of commercial, recreational, and cultural amenities.

The goal for rural areas is to preserve the integrity of existing housing in rural villages. In rural areas that lack public water and sewer service, density should be limited to that which can be supported by on site well and septic systems.

Builders and developers in the county are generally pleased with the level of housing growth. Their businesses have flourished. They struggle to understand and comply with local building code requirements, permitting requirements and inspection procedures. Each local unit of government has different requirements. Local

governments and builders alike could benefit from the standardization of the approval process. There is a need to establish an ongoing dialogue between local planning agencies and builders/developers. Affordable housing for non elderly households should be located within proximity to jobs. Another goal is to mix affordable housing together with market rate housing in new developments.

Economic Development

The goal is to stimulate job creation in economic sectors that offer above average wages, such as manufacturing, information, health care and education.
The business of attracting high wage employers and nurturing the growth of existing high wage employers is highly competitive. It is an industry unto itself.

Westmoreland County needs to be equipped with the tools that permit it to compete in this industry. The primary mechanism for job creation is the availability of ready to go sites and building space for prospective employers.

Based on the build out projections of existing development sites and the lag time needed to bring additional sites on line, we need to begin NOW to expand the inventory of planned business sites and real estate resources. In order for the county to maintain its competitiveness, these real estate assets must be located in high demand areas.

To insure our economic future, we intend to maintain a balance of job creation activities on both brownfield and Greenfield development sites.

Site selection procedures will focus primarily on areas already served by existing infrastructure. Our goal is to select locations and to provide transportation access to business sites in a manner that does not adversely impact existing residential neighborhoods.

Other economic development goals include:

- Linking education and jobs in an effort to retain the county's younger educated workforce.
- Increase focus on economic sectors capable of generating increased economic activity
- Tourism
- Agriculture
- Value added lumber products
- We view urban centers as economic development resources. Presently, there are many business districts in the county that are only marginally viable.
- Our goal is to create vibrant urban centers as resources for the development and expansion of smaller businesses. This goal is based on the recognition that not every business is well suited to locate in a strip plaza, in business parks or in highway commercial areas. Low overhead expenses in business districts make them particularly suitable for small businesses. Urban revitalization is

needed in order to improve the economic viability of business districts. The model for downtown revitalization in the county includes several key concepts:

- Revitalization planning to identify strengths, weaknesses and development opportunities
- Downsize the business district, as needed, to keep it in scale with market support
- Preservation of older buildings, especially historic buildings
- Introduce a mixture of business uses, including retail, services and "clean" manufacturing
- Re-introduce housing to the upper floors of commercial structures
- Revitalize the housing stock surrounding the business district; create an environment for residents to live within walking distance of their jobs
- Introduce new housing, preferably a mix of affordable housing and market rate units
- Undertake smaller scale redevelopment projects in support of blight removal, housing development and business expansion
- Construct water, sewer and street improvements
- Design and construct streetscape improvements to create a place where people want to be

A key policy is to create a downtown partnership that would include communities committed to downtown revitalization. The partnership would instill a multi-municipal approach to revitalization and would encourage standardized approaches to planning and fundraising.

Another key downtown related policy is to select at least one community for designation under Pennsylvania's Elm Street and Main Street programs.

Land Use

The changing use of land is an indicator of what the county's future holds in store. Absorption of land for development in the county has proceeded at a rate of approximately 700 acres per year on average. In everything we do, we need to be conscious of the fact that land is a precious resource. We need to recognize that the supply of land is finite and should therefore be used wisely.

Historically, development in the county has been concentrated in a triangular shaped area bounded roughly by New Kensington in the north, Latrobe in the east and Monessen in the south. Due to the availability of building sites and public water and sewer, it is expected that development will continue to be concentrated in this triangle.

Without using formal growth boundaries, our aim is to direct future development to the growth triangle while preserving the low density character of areas outside of the triangle.

Every land use decision determines the future character of our county. It is not the intent of the county to dictate or interfere in any way with the local government land use decision making process. It is our policy, however, to encourage both developers and local government planners to think more deliberately about how land is subdivided.

A key action step in the plan involves monitoring the utilization of land in the county through subdivision records, earth disturbance records and local government records. This thought process should include a consideration of the interrelationship between contiguous development tracts. Wherever possible, development sites should be linked by roadways, walkways, bicycle trails and contiguous tracts of unimproved open space.

Not every square foot of land within the development triangle should be developed. Value is added to development sites when land is preserved for unimproved open space. We should focus our preservation efforts not just on steep slope areas, floodplains, wetlands and other difficult to develop areas, but on wooded areas and other forms of open space as well.

Frequently, developers interpret the dedication of land for open space to mean formal playgrounds, basketball courts and other recreational amenities. Oftentimes, an unimproved walking trail through a wooded area can add more value than a formal playground or basketball court. These thought processes should be reflected in both county and local land use regulations.

The land use goal for urban areas is to provide for a wider variety of uses and sizing the retail district to the market. There are certain areas of the county outside of business districts that require remedial attention.

The land use goal for suburban areas is to encourage a higher quality of development that improves the visual environment and reduces traffic congestion. Towards this end, the number of curb cuts on commercial highways should be limited and contiguous development tracts should be linked. Mixed uses should be encouraged wherever possible. Shopping areas should be connected to residential areas in a way that reduces dependency on the automobile.

The land use goal for rural areas is to preserve the low density character of areas outside of the growth triangle. In rural villages, public water and sewer facilities should be improved in order to eliminate threats to environmental quality and public health. Public investment in water and sewer facilities outside of rural villages should be limited.

There is one issue on which nearly everyone in the planning process strongly agreed, and that involves the need to preserve key tracts of open space. Almost everyone in the county treasures our farms, mountains, forests, streams, gorges and views of the Chestnut Ridge. A key policy is to create a legal entity known as a land trust to accept donations of cash and property with the intent of preserving critical tracts of open space. The land trust would be empowered to acquire property and development easements.

Pennsylvania's policy is to encourage communities to engage in multi-municipal planning and zoning activities. We generally support this policy, but we also support communities that wish to "go it alone" by preparing their own plans and policies. We encourage the Smart Growth Partnership of Westmoreland County (SGPWC) to develop model ordinances and render land use technical assistance to local units of government.

We will provide support to SGPWC to carry out this function. Furthermore, we hope that intergovernmental cooperation in planning and zoning will lead to other forms of cost sharing and consolidation of public services.

Transportation

A critical step in the life of every transportation improvement project is to be included on the regional TIP, or Transportation Improvement Plan.

We have worked diligently to insure that many worthwhile projects in Westmoreland County have been included on the regional TIP. But only a fraction of the county's transportation projects that become included on the TIP are ever built. With the support of our legislative delegation and in light of our active participation in regional transportation planning, we will strive to achieve a 75% TIP implementation rate.

If we succeed in this undertaking, many of our major transportation needs will be addressed. Transportation and economic development

are closely linked. There are several types of “economic development highways” that are important to our future.

The Route 119 corridor between New Stanton and Mount Pleasant is an example of an “economic development highway” that provides access to jobs in a way that minimizes adverse traffic impacts on local roads. A new interchange is planned on Route 119 in the vicinity of the Sony plant.

One of our highest transportation priorities is to link the Route 119 corridor with a new PA Turnpike interchange near its intersection with Route 981. This “economic development highway” is part of the proposed Laurel Valley Improvement Project. This project also calls for the improvement of existing Route 981 between the PA Turnpike and its intersection with Route 30 near the Arnold Palmer Regional Airport.

Another type of “economic development highway” involves the provision of improved access from downtown areas to regional highways. One example of this type of highway is a proposed truck route from Route 30 to industrial sites in downtown Jeannette. This route would generally follow existing rights of way, but would eliminate difficult turning movements and shorten the driving time to the regional transportation network. This improvement will improve the marketability of industrial land in Jeannette.

As commercial development expands along major highways, through roadways often evolve into local service highways and become clogged with traffic. One of our goals is to preserve the function of major arterials by preventing their gradual transformation to service roads.

Sometimes, access to a limited access highway can be overly limited. A case in point is the PA Turnpike. New EZ Pass interchanges at Route 130 and Route 981 would alleviate traffic congestion on local roads.

Not all of our transportation goals are capital intensive. One of the causes of congestion on major highways involves the inappropriate timing of traffic signals. Once installed, signals are rarely timed with nearby signals to facilitate the flow of traffic. The re-timing of traffic signals is an example of a relatively easy and inexpensive measure to ease congestion.

Certain areas of the county could benefit from a “belt network” that involves upgrades to existing secondary roads. An example of this

type of improvement is an alternative route from the Delmont area of Route 66 north of Greensburg to the Westmoreland Mall area. Upgrades and signage improvements on secondary roads would reduce travel times and ease congestion on major highways.

One final element of the transportation game plan involves bicycle trails.
We need to think of bicycle trails not just as recreational amenities but also as alternatives to the use of automobiles. Our goal is to link residential areas to jobs and commercial amenities wherever possible via trail networks. A key action step in the transportation plan is to develop a master trail plan for the county.

Natural Resources, Open Space and Recreation

Open space and access to recreation areas is an important reason why many people are attracted to Westmoreland County and choose to remain in the county. The vast majority of survey respondents indicated their willingness to use county tax dollars for acquisition of land for open space and recreation. A key action step in the plan involves the formation of a land trust to acquire easements on properties that constitute open space, woodlands and other sensitive land areas. A related goal is to preserve prime farmland through acquisition of easements.

One way of expanding recreational facilities in the county is to introduce passive recreational opportunities at existing reservoirs and lakes. This type of project could be undertaken at the scenic Beaver Run Reservoir that forms the border between Washington and Bell Townships.

Other goals include:

- Creating a greenway system along major corridors
- Providing technical assistance to local governments during the site plan review process to minimize erosion and reduce storm-water runoff
- Increase the number of value added lumber industries in the county

Community Facilities and Community Services

This section of the plan deals with municipal buildings, schools and emergency services. The primary goal of this section is to encourage inter-municipal cooperation / consolidation with the ultimate objective of improving the quality and quantity of community services.

ACTING ON THE VISION

The sheer volume of policy, goals, and action steps in the plan seems overwhelming.

However, every complicated task is made more manageable by reducing it to a series of individual steps. Some action steps are relatively simple and can be implemented quickly and inexpensively. Others are more complicated and will require considerable resources and decades of concerted effort.

Seventeen Articles of Action will be the principles in which to perform action on the vision, so a confidence of the public can be made, that mitigation will be pursued in the following manner:

- First and foremost, it requires leadership at the very highest level of county government to understand and embrace the vision and to assemble the human and financial resources needed to implement the plan.
- Second, new public policies and adjustments to existing policies will be required to implement the plan.
- Third, the comprehensive plan must be used as a tool for decision making. Every major activity to be carried out by the county should be evaluated in terms of its consistency with the comprehensive plan. This will insure that today's decision will lead to tomorrow's goal.
- Fourth, The Director of the county's Department of Planning and Development or his appointee will serve as the central coordinator or "czar" of implementation and will prioritize multi-organizational municipal and county projects as found in Annex C&D.
- Fifth, establishing an organizational framework for implementation, i.e., assembling those agencies and organizations that agree to assist in implementing the plan.
- Sixth, delegating responsibility for individual action steps to the appropriate agencies and organizations
- Seventh, coordinating the activities of diverse groups and individuals without becoming bogged down in the day to day details of implementation.
- Eighth, convening "meetings of the whole" to insure communication between participating organizations so that the left hand always knows what the right hand is doing

- Ninth, maintaining a focus on the big picture, keeping the process on track and making incremental course corrections as necessary
- Tenth, monitoring progress and effectiveness of activities in meeting overall goals.
- Eleventh, review forms provided by municipalities for action items and collect recordations of public input from those forms and meetings.
- Twelfth, amending the plan from time to time in response to changing circumstances.
- Thirteenth, completed, deleted or deferred mitigation actions will be a benchmark for progress.
- Fourteenth, unchanged actions will be reviewed by the HMWG and steps will be followed to evaluate their status and recorded in Annex I.
- Fifteenth, actions will be identified in Annex G Progress Evaluation form, Annex H Meetings and Progress, Annex I Project Matrix Update, & Annex J STAPLEE Form.
- Sixteenth, Annex M Table Templates will be used manage all the data in spread sheets for review by the HMWG.
- Seventeenth, lastly and most importantly the overall effort will require management of an unprecedented collaboration of agencies to consistently follow the plan.

UPHOLDING EXISTING MITIGATION ACTIONS

Department of Labor and Industry

Urban fires have historically been a significant hazard threat to our communities. As a result of the Commonwealths activities, the Department of Labor and Industry regulates certain aspects of some types of construction activities via the **Fire and Panic Act**. Plumbing, electrical, fire safety or building codes are all enacted and enforced under the procedures prescribed by the individual municipal codes, each having been through a public adoption process. Pennsylvania has enacted a statewide building code with the adoption of the International Building Code. This has been implemented at either the local level or by default on a statewide basis. The state building code is hazard based and that it is by commonwealth law, the minimum standard that is in effect to protect citizens in occupied buildings. By upholding these minimum standards, Westmoreland County ensures the safety and protection of its residents.

Uniform Construction Code (Act 45 of 1999) "Building Codes"

The statewide building code entitled the Uniform Construction Code (Act 45) will become an important factor for nearly every resident within the state of Pennsylvania. This new, comprehensive building code establishes minimum regulations for most new construction, including additions and renovations to existing structures. Although the regulations and procedures may seem complex, this new code will have a positive impact on safety and building standards for future construction throughout the Commonwealth. Exempt from the UCC are new and renovated buildings contracted or permitted prior to the effective date of the law, certain utility and miscellaneous use structures, and agricultural buildings that do not house people.

The building codes adopted through Act 45 will consist of most of the International Code Council's 2000 code series. This series includes the International Building Code (IBC) and the International Residential Code (IRC) and replaces what are commonly know as the BOCA and CABO building codes respectively. The Pennsylvania Department of Labor & Industry (L&I) has been designated as the lead agency to facilitate implementation of the code and prepare the requirements regulating training, certification and administration.

Act 167 implementations "Storm Water Management Issues"**Act 167 implementations "Storm Water Management Issues"**

Erosion and sedimentation. A result of increased development in rural and suburban areas, erosion and sedimentation affect lower parts of all watersheds. Sedimentation causes the largest impact to streams by volume.

Stormwater management/flooding. As development continues throughout the county, infrastructure put in place to move stormwater quickly to creeks and tributaries often has a detrimental affect on communities downstream. Since the water moves to the creeks faster, the volume of the creek is higher earlier on in a storm. This moves the water to larger water bodies more quickly, often reaching rivers when they are still rising. This phenomenon results in regular flooding of low-lying areas.

Acid mine drainage (AMD). AMD has the biggest negative impact on water quality in the county. Treatment of AMD in the county primarily consists of passive treatment systems through engineered wetland treatment cells. Beyond the short-term need of locating land suitable for use in this process, long-term maintenance of passive treatment systems also is an issue.

Act 167 plans. Act 167 plans regulate land and water use for flood control and stormwater management purposes. The Sewickley Creek Watershed and the Pucketa-Chartiers Watershed were identified as two areas of the county that could benefit from Act 167 plans. The Sewickley Creek area has experienced increased development, with resultant sedimentation and erosion issues that impact the creek. The Pucketa-Chartiers Watershed, with large amounts of land developed over time, has regular flooding problems in the lower part of the watershed. Act 167 plans would help to mitigate these issues in each watershed."

As the Act 167 surveys are conducted and storm water management is mandated the HMWG will foster the municipalities to take the lead from Commonwealth facilitated actions such as Westmoreland County hired consultants that are familiar with the storm water mitigation activities necessary to consider environmental and public safety issues.

State & Local Mitigation Planning Coordination

The Commonwealth has coordinated the development of this hazard mitigation plan at the state level including the largest state governmental entities. The commonwealth has meet with, explored mutual hazard reduction strategies and specific projects with our federal government entities including but not limited to Department of Commerce, Department of Transportation, Department of Homeland Security, Department of Agriculture, Department of Interior, National Oceanographic and Atmospheric Administration, Department of Environmental Protection, US Army Corps of Engineers as well as federal legislative delegation. In some instances the Commonwealth has actually contracted with federal and interstate entities to help accomplish specific tasks.

The Commonwealth's effort in mitigating the greatest current natural hazard, as determined in the vulnerability analysis section of this document to be flooding, and the coordinated state and local mitigation effort is documented in the following hazard specific prioritization developed as part of the FEMA approved State Mitigation plan:

Commonwealth Flood Hazard Reduction & Vulnerability Reduction

As a result of a state- wide flood hazard analysis and capability assessment conducted by P.E.M.A. Pennsylvania Emergency

Management Agency, the following commonwealth facilitated actions have been identified. Each action is facilitated at the state level by the appropriate state agency under whose jurisdiction each of these actions fall. PEMA is the conduit for mitigation grants for damages resulting in natural and man made disasters. The Unified Hazard Mitigation Assistance Program highlighted in Table HMA 1 clearly illustrates this support by FEMA through PEMA. Westmoreland County will work with the appropriate state agencies and local municipalities to be a liaison when a local municipality submits a mitigation project applicable to one or more of the opportunities. Likewise if a countywide or regional project is proposed the county HMWG will assist wherever possible.

- Acquisition, Relocation, Flood proofing, Elevation of Structures (PEMA)
- Stormwater Conveyance Upgrade (PA Dept of Transportation)
- Streambank Stabilization (PA Dept Environmental Protection)
- Structural Alternatives to Flood Hazard Mitigation (PA DEP)
- Storm Water Management (PA DEP)

Department of Public Safety Measures for Mitigation and Preparedness

COUNTYWIDE 800 MHz TRUNKED RADIO COMMUNICATIONS INTEROPERABILITY PROJECT

Background

The Westmoreland County Department of Public Safety is responsible for providing a variety of services to the residents and municipalities of the County and to the emergency service organizations charged with protecting those residents. The mission of the Department is to support the direction, management, and employment of emergency services and resources in Westmoreland County to ensure the public safety of the County, 24 hours a day every day. The Department accomplishes this mission through its three primary programs: the Enhanced 9-1-1 program, the emergency management and hazardous materials program, and the County Park Police program.

The Department of Public Safety published a Six-Year plan in September 2000 that has been the guiding document for all of the

significant county public safety improvements and advancements over the past three years. The Six Year plan is driven by the Department's Vision: To become a Commonwealth of Pennsylvania leader in the development and execution of public safety policies and programs through teamwork and partnership with other agencies and organizations sharing a similar vision. In 2007, a similar, Six-Year Plan was guided by the Director of Public Safety.

This plan will carry through to 2012 under a complete and comprehensive all-hazards approach to public safety and relative connectivity to the Westmoreland County Planning Department.

Westmoreland County has determined this to be a cost effective action to accomplish. With out the ability to communicate, we risk the life, health, safety and property of the residents of the county. This vision has been especially evident in the significant improvements to its E9-1-1 system over the past three years, to include:

- A new totally secure Public Safety and 9-1-1 Center with built in redundancy on all major systems;
- A state-of-the-art E9-1-1 Communications center, built around an Intergraph computer assisted dispatch (CAD) system;
- A countywide re-addressing project that will be completed early next year with the most accurate map of Westmoreland County possible;
- A state-of-the art mobile command and communications center (MCCC), which serves a dual function of a field Incident Command Post and a remote seven position dispatch center with the same capabilities of the fixed center;
- A countywide 800 MHz trunked radio system to be completed in 2005, which will eliminate the one emergency management issue that plagues every major disaster: the inability of radios using different frequencies to interoperate with each other.

Current Situation

Westmoreland County, PA is in the process of implementing a new Countywide 800 MHz digital trunked radio system. This system represents an ideal platform for extending the inherent countywide interoperability into a regional interoperability demonstration project and for mitigating one of the most persistent problems facing first responders – the inability to communicate with each other using the same radio. The system and subscriber units already purchased are compliant with ANSI/TIA/EIAA-102 Phase 1 (Project 25) digital standards, now recognized as the enabling technology for

interoperability between agencies, particularly in the 800 MHz and new 700 MHz frequency bands.

Interoperability between all Westmoreland County agencies as well as surrounding jurisdictions is a key goal of the new system. During the system design phase, the County recognized that interoperability needed to be maintained between the new system and the existing conventional systems both during the transition, and on going for the surrounding users that choose to maintain their current radio system operation. With this understanding, the system was designed incorporating a multi-faceted solution to meet the County's need for interoperability between these disparate systems.

Project Vision, Goals and Objectives

Similar to our Vision for the Department of Public Safety above, the Department defines its Vision for this communications interoperability project as follows: To become a Commonwealth of Pennsylvania and national model for the development and implementation of a communications interoperability solution through teamwork and partnership with other agencies and organizations sharing a similar vision.

Our Primary Goal is to upgrade our "Mission Critical" County communications network with interoperable communications equipment for everyday use to ensure the safety and well being of first responders and the public they serve by mitigating the communications interoperability issue. This goal will be realized when the following objective is achieved.

Objective 1: Install, operate and maintain a countywide 800 MHz trunked radio system for all emergency first response organizations and agencies no later than July 31, 2005.

Our Secondary Goal is to improve interoperability among first responders of local, tribal, regional, and State public safety agencies, and other partnering agencies or organizations from local, tribal, regional, State, and Federal jurisdictions, particularly in times of natural disaster and major criminal and terrorist acts. This goal will be realized when the following three objectives are achieved.

Objective 2: Develop, install, operate and maintain a gateway interface between the county 800 MHz **Astro 25** Motorola trunked radio system and the Commonwealth 800 MHz MA/COM **Open Sky** trunked radio system no later than September 30, 2005.

Objective 3: Install, operate, and maintain an interagency conferencing device in the County Mobile Command and Communications Center (MCCC) no later than September 30, 2005 to provide interoperability between the 800Mhz **Astro 25** system and all legacy radio equipment and landline, cellular, and satellite telephones.

Objective 4: Install, operate, and maintain a remote 800 MHz repeater capability in the Mobile Command and Communications Center (MCCC) for use during major emergencies anywhere in the County, Region or Commonwealth no later than September 30, 2005.

By accomplishing the four Objectives outlined above, we will accomplish both our Primary and our Secondary Goal. By accomplishing our Goals, Westmoreland County will not only realize its vision for this communications interoperability project but also will move significantly forward in the realization of its Departmental Vision and the significant improvement of the emergency response posture of the first responder community in Westmoreland County and southwestern Pennsylvania.

Project as Part of Overall Effort to Improve Interoperability

When the County Board of Commissioners signed a $12.4 million contract with Motorola Corporation in December 2002 to build an 800 MHz **Astro 25** trunked radio system in the County, it was clear that the County was determined to improve communications interoperability among its emergency responders as quickly and as efficiently as possible. The new system is designed to eliminate the communications problems that are outlined in the following section of this proposal.

Westmoreland County's 800 MHz system, currently under construction, is the County's communications interoperability project. This project consists of three distinct parts: (1) the system infrastructure; (2) site development at the tower sites; and (3) subscriber mobile and portable radios for our emergency responders. Because of the significant expenditures involved with parts (1) and (2) of the project, approximately $14.2 million, the Board of Commissioners was not able to cover the funding for part (3), which includes approximately $7.5 million in funding necessary to purchase

subscriber portable and mobile radios for the various departments so that they could use the system as soon as the system becomes operational in 2005. Therefore, grant funding for part (3), the portable and mobile radios, was both an essential and a critical part of the overall effort to improve interoperability by providing emergency responders the communications tools necessary for them take full advantage of the interoperability features of the new system as soon as it becomes operational in 2005.
The Department of Public Safety has also developed a contingency plan to further enhance communications interoperability not only in the County but also in the southwestern Pennsylvania Region by developing three additional interoperability strategies that would be implemented as soon as funding is available.

The first strategy is to develop and implement an interface between our Motorola **Astro 25** 800 MHz system and the Commonwealth of Pennsylvania's MA/COM **OpenSky** 800 MHz system.

The second strategy is to enhance communications interoperability at an emergency scene anywhere in the County or Region where communications either is not available or where communications means are extremely varied. Using our new state-of-the-art Mobile Command and Communications Center as the base vehicle, the Department proposes to add an Interagency Conferencing Device on-board the MCCC. This device will allow all parties involved in an emergency to talk with each other regardless of their communications means – trunked radio, conventional radio, VHF or UHF, landline telephone, wireless telephone, or satellite telephone.

The third strategy is to purchase radio repeater equipment that will provide a remote radio repeater capability in the Mobile Command and Communications Center (MCCC) for use during major emergencies anywhere in the County, Region or Commonwealth Included with this purchase will be an allocation of portable radios that can operate in the trunked or conventional mode, and can provide instant, interoperable communications either in a stand-alone mode or as an extension of an existing network. Combining these strategies with our MCCC guarantees interoperability at any emergency site, regardless of complexity, anywhere, anytime.

Achieving Interoperability Through the Project

800 MHz Digital Trunked Radio System

The interoperability issue disappears with the implementation of the Motorola **Astro 25** 800 MHz digital trunked radio system down to the

individual emergency responder subscriber level. As designed, the new system provides for interoperability at a number of different levels - subscriber, network, regional and state.

Users on the new system will be members of "talk groups," that allow them to talk with other members of the same talk group at will. But they also will have access to other talk groups, so that, during an emergency involving several agencies, only one radio will be needed to achieve interagency interoperability. Users of the new 800 MHz system will also be able to interoperate with users who decide to keep their conventional legacy radios for a while before changing over, and visa versa.

In order to ensure that each emergency response department or agency can participate in the new 800 MHz system when it becomes operational , the County is using grant funding from a Department of homeland Security Communications Interoperability Grant, totaling nearly $6 million, to purchase a mobile radio for every piece of fire apparatus, every police squad car, and every EMS ambulance in the County. In addition, the County is using funding from this grant to allow each department and agency to purchase several portable radios, the exact number depending upon the radio model selected, in order to give every department and agency both mobile and portable interoperable communications, beginning in November 2004. In addition, the County has purchased and installed radio terminal equipment for the addition of two more 800 MHz channels to the county radio system. Finally the County has upgraded a tower that it recently purchased in the northern part of the County in order to significantly improve the quality of the system in that geographic area. This will essentially complete part (3) of our 800 MHz system.

Regional and State System Interface

MA/COM is building the **Open Sky** 800 MHz trunked radio system for the Commonwealth of Pennsylvania. Motorola Corporation is building the **Astro 25** 800 MHz radio system for Westmoreland County. Westmoreland County departments and agencies have a need to talk with Commonwealth departments and agencies, and visa versa. This can be accomplished by utilizing a SKYGATE, manufactured by MA/COM especially to interface with their network. This device does the required encoding/decoding to interface analog signals to the **Open Sky** network and allows the user console to interface directly into the system. Motorola would provide the necessary equipment on the Westmoreland end for each talk group. This arrangement would allow one to communicate on an **Open Sky** talk group selected on the control station. It would also allow a console crosspatch to be

implemented between that talk group and any console audio channel. Westmoreland County is using funding from this grant to have a SKYGATE interface installed in our new radio system at the 9-1-1 Communications Center.

Interagency Conferencing

There are off-the-shelf audio conferencing systems available to provide interoperability between the Motorola **Astro 25** 800 MHz trunked radio system, remaining legacy radio equipment, the wireless network, landline telephones, and satellite phones. The County has purchased several ACU-1000s and several ACU/Ts to accomplish this mission. Conferencing will also enhance the command and control environment as well as training, simulation, and debriefing scenarios. Finally, conferencing facilitates involving personnel (experts) from the local area, other states, or other countries, directly in the incident response scenario.

Mobile Command and Communications Center Remote Capability (MCCC)

The Mobile Command and Communications Center (MCCC), when supplied with remote radio repeater equipment, will provide mobile emergency and/or special events communications. The MCCC Remote will support properly programmed radios from Westmoreland County's **Astro 25** network. It is a rapidly deployable system. The MCCC Remote is designed as a self-sufficient radio communications site with five-channel digital trunked operation. The system utilizes the 821 or 806 MHz channels providing supplementary communications to Westmoreland County's existing communications infrastructure, and to any area in southwestern Pennsylvania (Region 13) where a stand-alone radio system could provide emergency communications to a multi-agency response to a major emergency or disaster, such as the crash of United Flight 93 in Somerset County on 9/11/2001. The MCCC Remote can also be configured for analog conventional radio use in the 821 MHz frequency range. The MCCC Remote provides a universal and cost-effective platform that is both flexible in configuration and robust in a mission-critical environment. The addition of a remote capability to the MCCC will provide Westmoreland County and all of Region 13 with an important and significant instantaneous interoperability solution during any major disaster or emergency.

Project Scope and Funding

When our new **Astro 25** 800 MHz digital trunked radio system was conceived, the County realized that it would not be able to bear the entire financial burden of designing and implementing a total replacement of the existing system. The project costs fell into three parts, as described above in this project narrative. The following figures reflect the costs associated with each part of the project.

Part 1 – System Infrastructure	- $12.4 million
Part 2 – Site Development	- $ 1.8 million
Part 3 – Subscriber Equipment	- $ 7.5 million
Total Project Cost	**$21.7 million**

The Board of Commissioners determined that the County could cover the costs of Part 1, System Infrastructure, and Part 2, Site Development, but not Part 3, the subscriber equipment. In other words, approximately 35% of the project was unfunded. In order to lessen the financial burden on the subscribers, the County has been seeking grant funding at every opportunity. The County had been successful in procuring approximately $1.3 million through a State and Local

Emergency Preparedness (SLEP) Grant through Congressman John P. Murtha, to help offset the costs of the subscriber equipment. But over $6.1 million in subscriber equipment still needed to be purchased in order for all emergency response agencies to take full advantage of the new system in July 2004. The $6 million DPS Communications Interoperability grant which the County received in 2003 provided 100% of the emergency responder mobile radio needs and a significant percentage of their portable radio needs, added two additional channels to the system to increase capacity and reduce the possibility of busy signals, and upgraded a recently purchased radio communications tower to enhance the radio coverage in the northern sector of the County.

Solutions to increase interoperability among the entire public safety community (fire, emergency medical, and law enforcement).

Westmoreland County implemented a multi-level approach to using the DHS grant funding to significantly improve interoperability between a wide range of users and jurisdictions in Western Pennsylvania. The funding was used to address interoperability improvements at the subscriber level, at the Network level and at the Regional level.

At the subscriber level, we believe that this innovative approach, leveraging our existing resources, has provided huge improvements in interoperability and interoperability for all the disciplines of our entire public safety community. Within Westmoreland County, there are 209 fire stations, police stations and EMS providers. Using the funding to provide these agencies with common multimode subscriber radios had an immediate and unprecedented impact on interoperability within Westmoreland County beginning when the system became operational.

At the Network and Regional Levels, use of the funding to enhance our connectivity into the statewide radio system, and to establish a transportable multi-frequency, multi-technology MATS put in place the tools needed to extend interoperability to any of our neighbors in Western Pennsylvania. The **Astro 25** network installed by Westmoreland County provided for a huge amount of capacity and can be easily expanded by adding RF sites (either simulcast subsystems or single sites called IntelliSites). These sites are brought together in a seamless network providing coverage and all of the Project 25 features.

In addition, interagency conferencing is an innovative approach that not only provides interoperability between radio and telephone assets, but also introduces a mission-critical communications infrastructure

currently used by NASA, the FAA, and various military and intelligence agencies for command and control operations, to incident response, incident command, and the first responder.

Westmoreland County is willing to promote interoperability throughout our region by allowing other entities to utilize this inherent network capacity. The expansion of the system into a regional network could even be done on a mix of frequency bands. Our new **Astro 25** system can support a mix of 800 MHz subsystems, UHF subsystems, and even subsystems using the new 700 MHz frequency band, or sites with a mix of 700/800 MHz. This could allow surrounding entities to utilize whatever frequencies are available to provide coverage in their jurisdiction, yet remain directly interoperable on a wide area or regional basis.

Partnerships

The conversion of the current county communications system to the new ASTRO 25 800 MHz system has required the partnership of many organizations for many years. In March 2000 the Department of Public Safety formed the Public Safety Communications Working Group to study the options available for a replacement system. The Working Group has 36 members who represent the fire, law enforcement, EMS, emergency management and public safety communities**.**

In September 2000 the Working group presented its recommendations to the Board of Commissioners and that started the process for the acquisition of a new system.

The Communications Working Group has provided the consistent leadership and management necessary to ensure that the planning, equipment procurement, training, and funding are in place as the current project moves toward completion. As representatives of their particular emergency services, the working Group members have been involved in every aspect of designing the system, producing and evaluating the requests for proposals, selecting the designated vendor, and, most currently, evaluating subscriber instruments and designing talk groups for the various services.

Membership on the Working Group is a long-term assignment. Key members of the Working group have been with the project since its inception and will continue to serve after project start-up, working on such issues as system upgrades, system growth requirements, etc. The Working Group is, and will continue to be, involved in improving the policies, processes and procedures that the project will continue to require by enhancing communication, coordination and cooperation,

by establishing guidelines and principles; and by reducing internal turf battles. The Working Group has made, and will continue to make, decisions, solicits funding, and oversees the implementation of the project.

Inter County Cooperation Agreement

On March 13, 2001, the elected officials of the thirteen counties of southwestern Pennsylvania and the City of Pittsburgh signed a Mutual Aid and inter-Government Cooperation Agreement and became known as the Southwestern Pennsylvania Emergency Response Group. Informally, the group is known as the Region 13 Counter Terrorism Task Force, or simply Region 13. Region 13 has been nationally recognized by the Federal Bureau of Investigation, the Federal Emergency Management Agency and the Department of Homeland Security as a model for how multi-county areas can work together regionally to achieve common objectives. One of Region 13's stated objectives is to establish an interoperable communications system in the region.

Reflect a multi-disciplinary and/or multi-jurisdictional approach towards achieving interoperability.

The new system has the full endorsement of the user community in Westmoreland County. The County Fire Chiefs Association, the County Police Chiefs Association, and the County EMS Council have all provided letters of support for the new system.

The Westmoreland County Fire Chief's Association stated in its letter: " The Fire Chiefs Association of Westmoreland County believes that the 800 MHz system for fire, police and ambulance communications would relieve many existing problems in communications among us. It would improve **public safety.** Hopefully all surrounding counties will do the same and alleviate radio communications problems, at emergencies, at, near, or across county lines."

The Department of Public Safety has received serious inquiries from the Westmoreland Transit Authority, the Westmoreland County Airport Authority, and the Municipal Authority of Westmoreland County (water authority) as to when they can become part of the network. County agencies – the Department of Public Works, the County Sheriff's Department, the County Detectives, and many others – will also join the network as soon as it is fully operational.

The Region 13 Counter Terrorism Task Force has stated as one of its major objectives to: "Establish an interoperable communications

system within the region and western Pennsylvania for all emergency response agencies." To implement this objective, Region 13 created a standing Communications Committee that has been examining various communications and interoperability solutions for the past several years.

Many of the Region 13 counties are currently examining various options that would enhance interoperability. Neighboring Fayette County is already using an 800 MHz system. Neighboring Allegheny County is currently examining a number of various 800 MHz solutions. The system that Westmoreland County is building will greatly enhance the interoperability posture of not only Westmoreland County but also the entire region, especially with the addition of the MATS, and the interagency conferencing device that we propose to install on the Mobile Command and Communications Center.

Operational plan

The operational costs associated with operating and maintaining our current E9-1-1 system, to include the current radios system equipment and tower leases and rentals, are included in the Department of Public Safety's E9-1-1 Program Budget for both eligible and non-eligible expenditures. This Program Budget receives operating funds form the monies collected from the 9-1-1 telephone line surcharge and from the County's general fund budget.

In the future, funding for the E9-1-1 Program Budget will continue to come from the 9-1-1-telephone surcharge and the County general fund. In addition, the Pennsylvania State Legislature is currently considering, and very near to approving, a bill that will post a surcharge to cellular and wireless telephones. Revenues collected from the 9-1-1 Wireless Bill will be apportioned out to the 65 counties of the Commonwealth and will provide additional operating expense monies that will be used, in conjunction with current revenue streams, to maintain the new radio system and purchase the necessary upgrades to both software and hardware as necessary.

Maintenance costs are always a major concern when purchasing new equipment. All of the infrastructure equipment associated with the new **Astro 25** 800 MHz radio system is under warrantee for a year after the system is accepted by the County. In addition, all of the radios are under a one-year warrantee, and the Department will be purchasing an extended warrantee for each radio that will cover the equipment for an additional two years.

Recommendations and documentation regarding the environmental review required by 44 Code of Federal Regulations (CFR) Part 10, Environmental Considerations (EP&R) or 28 CFR Part 61 (COPS), and other applicable laws and executive orders;

The County reviewed 44 CFR 10 and, in accordance with Section 10.8 (Determination of requirement for environmental review), determined that an environmental review was not required because the communication equipment has minimal or no effect on environmental quality; proposes no significant change to existing environmental conditions; and has no significant cumulative environmental impact.

Summary

Westmoreland County is committed to improving communications interoperability not only within the County but also within the southwestern Pennsylvania region as well and to mitigating the persistent and serious problem of the lack of communications interoperability among first responders. The County has committed over $14.2 million towards building Part 1 (system infrastructure) and Part 2 (site development) of a state-of-the-art countywide 800 MHz system for use by all of its emergency responders. Communications Interoperability grant funding for Part 3 of the system, subscriber mobile and portable radios, the addition of two channels to the system, and the upgrades to the recently acquired communications tower in the northern tier of the County, ensured that the system would succeed in bringing communications interoperability down to the individual emergency responder level.

RE-ADDRESSING IN WESTMORELAND COUNTY

In 1997 the Westmoreland County Commissioners and the Department of Public Safety (WCDPS) undertook the task to re-address and correct addressing in the county. The county had Rural Delivery and City style addresses mixed in each of the 65 municipalities. The County Commissioners had solicited each municipality to correct their own addresses in the early 90's, but they soon found out that the municipalities had always looked to the United States Postal Service (USPS) for their addressing needs, and did not have the time or funds to dedicate to this overwhelming task. This problem had lead to delayed response to residences in the county and the WCDPS Director and the Commissioners both felt that this was unacceptable. WCDPS could fund this project with use of Telephone ACT 78 monies.

In late 1997 L. Robert Kimball & Assoc. Ebensburg, PA (Kimball) was hired as the company to assist the county on this project. Kimball took aerial ortho-photographs of the entire county to establish the counties first Digital Street Centerline file with an accuracy of 3 meters. After the street centerline maps were complete, Kimball identified every structure with a mark in the map for future verification. In July of 1999 Kimball hired crews to go out into the field to verify every structure, some 160,000+, if they were an addressable structure and to capture each current address, telephone number and existing street name.

All streets with more than one addressable structure, business or residence, were recommended to be named and duplicate or similar sounding street names were recommended to be changed.

The municipalities play an important role in this process due to the fact that the County can only recommend and not force the municipality to change. The municipalities understood the need for their emergency services to be able to respond in a timely manner and worked together with WCDPS to reasonable solution.

After the streets were named it was time for the information to go back to Kimball for numbering of each addressable structure. The address were assigned to the street centerline file so that as new construction takes place in the county the need for re-addressing streets again would not be necessary. After reviewing the choices it was decided by WCDPS and Kimball to use 52.8 feet in between each address so that this would put 100 even numbers on the right side and 100 numbers on the odd side or 200 numbers per mile to make it even easier for the responders to find a structure when time is most important.

After each municipality reviewed and approved our recommendations the new information would be sent to the USPS Address Management Service (AMS) for their review and approval. USPS AMS would send a copy of the proposed changes to each of the affected Local Post Offices for their review and approval. Once the USPS AMS office gave their approval, the municipality would be contacted to set up a date for the affected properties to get their new approved 9-1-1 addresses. At this point the Computer Aided Dispatch System map, database and the Master Street Address Guide for the phone companies are updated.

As a result of this effort the call taking process at the 9-1-1 Center has improved, response times by emergency responders have taken a drop, and mail delivery has also improved, providing our neighbors with a faster and more efficient delivery of services.

This proves that addressing does work when done through a cooperative effort of the County, Public Safety, local municipalities and The USPS. This effort has and will enhance the citizens of Westmoreland County health, safety and welfare for many years to come.

Currently there are less that 15 municipalities awaiting approval, and we hope that by the end of 2005 this phase of the project is complete. This would appear to be the end of re-addressing in Westmoreland County, but we have only just begun, today there are over 1000 houses and businesses under construction and they all need address. Working with the municipalities WCDPS provides addresses when site plans are submitted for each new construction. This maintains the integrity of the information in the 9-1-1 Center's database and Map file for the Computer Aided Dispatch System used in Westmoreland County.

WESTMORELAND COUNTY CERT TRAINING

The CERT program is offered through the Westmoreland County Emergency Management department to teach volunteers about disaster preparedness, about hazards that could affect their area and are trained in basic disaster response.

Classes are taught by Bill Reese, president of RWJ Disaster Planning Consultant. Reese is subcontracted by the county and paid with grant money.

Program funding comes from the Department of Homeland Security's Citizens Corps program.

Each 16-hour course costs the county about $400 for training and materials,

Each CERT member receives a green duffel bag filled with emergency supplies, as well as the green vest and hard hat that have come to be the national uniform for CERT volunteers.

CERT Standards and Protocols

The best source of help in an emergency or disaster is the paid or volunteer professional responder. But, if they are not available to address immediate life-saving needs or to protect property, CERT members can help. CERTs are not intended to replace a community's response capability, but rather, to serve as an important supplement to it.

The agency sponsoring the CERT program is creating a volunteer resource that is part of the community's operational capability following a disaster. That agency should develop training standards for CERT personnel and protocols for their activation and use.

CERT members must keep their safety in mind as their first priority. CERT volunteers must know their capabilities and the limitations of their training and equipment and work within those limitations.

CERTs do NOT:

- Suppress large fires.
- Enter structures that they consider heavily damaged and dangerous (e.g., leaning or moved from foundation).
- Perform hazardous materials cleanup or respond to incidents involving radiological, chemical, or biological agents.
- Perform medical, fire, or search and rescue operations beyond their level of training.
- Activate or deploy unless called for in their procedures.

CERTs are considered "Good Samaritans" and covered under the Volunteer Protection Act. CERT volunteers do not have any authority beyond serving as "Good Samaritan" when helping others.

When deployed appropriately, however, CERTs can complement and enhance first-response capability in neighborhoods and workplaces by ensuring the safety of themselves and their families working outward to the neighborhood or office and beyond until first responders arrive. CERTs can then assist first-response personnel as directed.

The Role That CERTs Can Play to Augment Emergency Management and Response Capability Within Their Community

- Following a major disaster, first responders who provide fire and medical services will not be able to meet the demand for these services.

CERT Training: Preparing for Emergency Response

Using the basic CERT curriculum, CERT personnel train to prepare for a disaster or overwhelming event by:

- Identifying and mitigating potential hazards in the home and workplace.
- Initiating plans to prepare themselves and their loved ones for the hazards that they face.
- Learning skills to help themselves, loved ones, and neighbors or fellow employees until professional response resources arrive.
- Working cooperatively as a team within their neighborhoods or workplaces.
- Maintaining a relationship with the agency that sponsors the CERT program.
- Participating in continuing education and training.
- Volunteering for projects to enhance the public safety of their communities.
- Understanding their capabilities and limitations when deployed.

During training, CERTs learn to:

- Prepare for the hazards that threaten their communities.
- Apply size-up and safety principles.
- Locate and turn off utilities.
- Extinguish small fires.
- Identify hazardous materials situations.
- Triage and treat victims.
- Set up a medical treatment area.
- Conduct searches and rescues in lightly and moderately damaged structures.
- Understand the psychological impact of a disaster on themselves and others.
- Organize CERT members and spontaneous volunteers for an effective and safe response.
- Apply response skills in a disaster simulation.

Following initial training, the sponsoring agency has the challenge of helping CERT members maintain and improve their skills through a variety of training programs, exercises, and special projects, all tailored at the local level to meet local needs.

CERT Roles During Emergencies

When a disaster or overwhelming event occurs and responders are not immediately available, CERTs can assist by:

- Conducting an initial size-up in their homes or workplaces.
- Reducing immediate dangers by turning off utilities, suppressing small fires, evacuating the area, and helping others.
- Treating people in the immediate area.
- Working with CERT members and volunteers to establish a command post, staging area, and medical triage and treatment areas.
- Collecting damage information and developing a plan of operation based on life-saving priorities and available resources.
- Applying their training to situations where CERT members can make a difference.
- Establishing and maintaining communication with responders.

ANNEX A

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(Municipality Resolutions for Adoption of the County Hazard Mitigation Plan on following pages)

ANNEX B

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(Hazard Mitigation Letter and Survey Responses)

ANNEX C

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(Mitigation Opportunity Forms)

ANNEX D

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(Hazard Mitigation Opportunity Forms and accompanying Project Plans received from local municipalities)

ANNEX E

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(Flood Plain Maps for Westmoreland County Municipalities.
Maps provided by ESRI / FEMA)

ANNEX F
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(HAZUS Information)

ANNEX G
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(Progress Evaluation form)

ANNEX H
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(Meetings)

ANNEX I
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(Project Matrix Update)

ANNEX J
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(STAPLEE Form)

ANNEX K
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(NFIP Participants)

ANNEX L
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(Summits & Conferences)

ANNEX M
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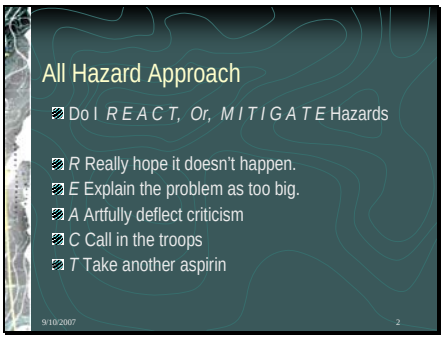
Table Templates

POWER POINT PRESENTATION
FOR
LOCAL ELECTED OFFICIALS AND EMERGENCY MANAGERS

Slide 1

Introductions

Slide 2

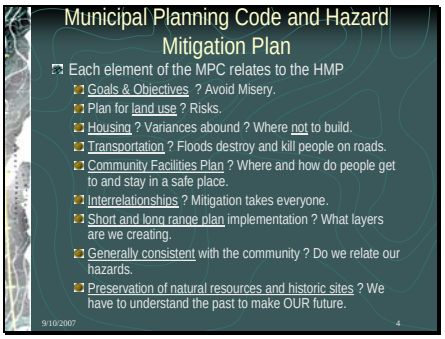


How do I act to hazards created by Disaster?

Slide 3

Mitigation requires action and proactive measures.

Slide 4



Combine the elements of your municipal plan to incorporate the Hazard Mitigation plan. You don't need to reinvent the wheel.

Slide 5

You need to take action and make this happen for your community.

Press Releases
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Correspondence
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FEMA Crosswalk
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