Appendix C – Meeting and Other Participation Documentation

KICKOFF MEETING
MARCH 14, 2011

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The following individuals were invited to participate in the 2012 Pike County HMP. Invitations for the first meeting were delivered by mail as paper invitations; subsequent meeting invitations were extended via email.

First	Middle Initial	Last	Title	Organization, Affiliation, or Jurisdiction
Fred		Hatton	Chairman	Blooming Grove Township Board of Supervisors
Steve		Mullin	Emergency Management Coordinator	Blooming Grove Township
Jon		Castimore		Blooming Grove Township
Thaddeus		Parsell	Chairman	Delaware Township Board of Supervisors
Kyle		Wright	Emergency Management Coordinator	Delaware Township
Tom		Mincer	Chairman	Dingman Township Board of Supervisors
William		Mikulak	Emergency Management Coordinator	Dingman Township
Mary Ann		Hubbard	Chairwoman	Greene Township Board of Supervisors
Brian	I.	Stuart	Chairman	Lackawaxen Township Board of Supervisors
Vincent		Albanese	Emergency Management Coordinator	Lackawaxen Township
John		Sivick	Chairman	Lehman Township Board of Supervisors
Stanley		Whittaker	Emergency Management Coordinator	Lehman Township
Dayne		Losee	President	Matamoras Borough Council
Gary		Babb	Emergency Management Coordinator	Matamoras Borough
Matthew		Osterberg	President	Milford Borough Council
Tony		Mann	Emergency Management Coordinator	Milford Borough and Milford Township
Donald		Quick	Chairman	Milford Township Board of Supervisors
Thomas	A.	Simons	Chairman	Palmyra Township Board of Supervisors
Doug		Carrick	Emergency Management Coordinator	Palmyra Township
William		Powell	Chairman	Porter Township Board of Supervisors
Robert		Hellyer	Emergency Management Coordinator	Porter Township
Eleanore	N.	Wall	Chairperson	Shohola Township Board of Supervisors
Robert		Myers	Emergency Management Coordinator	Shohola Township
James		Muir	Supervisor	Westfall Township Board of Supervisors
Bob		Ewbank	Emergency Management Coordinator	Westfall Township

Denise		Cooke-Bauer	Planner	Delaware Water Gap National Recreation Area
Pat		Lynch	Chief of Research and Resources Planning	Delaware Water Gap National Recreation Area
Nick		Spinelli	Executive Director	Lake Wallenpaupack Watershed Management District
Shirley		Masuo	President	Twin and Walker Creeks Conservancy
Susan		Beecher	Executive Director	Pike County Conservation District
Tim		Balch		PA DCNR
Bob		Pitcavage	Local Govt. Liason	PA DEP Northeast Liason
Timothy		Conway	Northeast Region	PA Game Commission
Michael		Silsby	Superintendent	Wallenpaupack Area School District
Candis		Finan	Superintendent	Delaware Valley School District
Sharon		Laverdure	Superintendent	East Stroudsburg Area School District
Nancy		Grotevant	Director	Penn State Extension
Paul		Caneveri	Regional Community Relations Director	Pennsylvania Power & Light
Thomas		Brizzolara	Director - Public Affairs	Orange & Rockland Utilities
Aileen		Kolvenbach	Public Affairs Manager	Pike Co Light & Power
Robert		Collins	District 4-4 Manager	PennDOT
Rich		Caridi	Chairman	Pike County Board of Commissioners
Harry		Forbes	Vice-Chairman	Pike County Board of Commissioners
Karl		Wagner	Commissioner	Pike County Board of Commissioners
Gary		Orben	Chief Clerk	Pike County Commissioners Office
Roger		Maltby	Emergency Management Coordinator	Pike County Emergency Management Agency
Brian	W.	Smith	Chairman, Wayne County Board of Commissioners	Wayne County
Suzanne	F.	McCool	Chairperson, Monroe County Board of Commissioners	Monroe County
Everett	A.	Chamberlain	Freeholder Director, Board of Chosen Freeholders of the County of Warren	Warren County
Richard	A.	Zeoli	Freeholder Director, Sussex County Board of Freeholders	Sussex County
Jonathan		Rouis	Chairman, Sullivan County Legislature	Sullivan County
Michael	R.	Pillmeier	Chairman, Orange County Legislature	Orange County

PIKE COUNTY OFFICE OF COMMUNITY PLANNING

February 22, 2011

Re: Invitation to Participate in Pike County's Hazard Mitigation Planning Process

Mr. Fred Hatton
Chairman, Blooming Grove Township Board of Supervisors
488 Route 739
Blooming Grove, Pennsylvania 18428

Dear Mr. Hatton:

I am writing to inform you of a very important initiative that is about to take place in our county. Pike County will soon begin the process of updating its Local Hazard Mitigation Plan. This Plan will serve as a blueprint for reducing property damage and saving lives from the effects of future natural and human-made disasters in our community. This Plan is also required in order for Pike County and your municipality to be eligible to receive certain types of state and federal disaster relief funds after a disaster occurs.

Our current Pike County Hazard Mitigation Plan was adopted by the County in November 2006. Subsequent to the County's adoption, ALL of our thirteen municipalities adopted the County Plan as their own. It will be critically important as we move forward with this Plan Update that each of our municipalities participate and provide input.

A meeting will be held to kick-off the Local Hazard Mitigation Planning process on March 14, 2011 at 6:30 PM at the Pike County Conservation District meeting room, 556 Route 402, Hawley, Pennsylvania 18428. In the case of inclement weather, please call 570-296-3500 to be informed of a rescheduled meeting date.

If you are unable to attend the kickoff meeting and still wish to participate in the planning process in order to ensure your community is eligible for applicable mitigation funding, please notify me. I will provide you with additional information regarding future meetings, draft documents for review, and other project milestones. If you have any additional questions, please do not hesitate to contact me at 570-296-3500 or mmrozinski@pikepa.org.

Sincerely,

Michael Mrozinski
Assistant Planning Director

cc: Mr. Steve Mullin, Blooming Grove Township EMC
Sally Corrigan, Pike County Office of Community Planning
Roger Maltby, Pike County Emergency Management Agency

SAMPLE

837 Route 6, Unit 4 • Shohola, PA 18458
Phone (570) 296-3500 • Fax (570) 296-3501

PIKE COUNTY OFFICE OF COMMUNITY PLANNING

February 22, 2011

Re: Invitation to Participate in Pike County's Hazard Mitigation Planning Process

Ms. Denise Cooke-Bauer
Planner, Delaware Water Gap National Recreation Area
294 Old Milford Rd.
Milford, PA 18337

Dear Ms. Cooke-Bauer:

I am writing to inform you of a very important initiative that is about to take place in our county. Pike County will soon begin the process of updating its Local Hazard Mitigation Plan. This Plan will serve as a blueprint for reducing property damage and saving lives from the effects of future natural and human-made disasters in our community.

A meeting will be held to kick-off the Local Hazard Mitigation Planning process on March 14, 2011 at 6:30 PM at the Pike County Conservation District meeting room, 556 Route 402, Hawley, Pennsylvania 18428. In an effort to include a broad range of stakeholders in the planning process, you along with any other applicable or interested parties from your organization, are invited to attend this meeting. In the case of inclement weather, please call 570-296-3500 to be informed of a rescheduled meeting date.

If you are unable to attend the kickoff meeting but still wish to participate in the planning process, please notify me. I will provide you with additional information regarding future meetings, draft documents for review, and other project milestones. If you have any additional questions, please do not hesitate to contact me at 570-296-3500 or mmrozinski@pikepa.org.

Sincerely,

Michael Mrozinski
Assistant Planning Director

cc: Sally Corrigan, Pike County Office of Community Planning
Roger Maltby, Pike County Emergency Management Agency

SAMPLE

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Phone (570) 296-3500 • Fax (570) 296-3501

PIKE COUNTY OFFICE OF COMMUNITY PLANNING

February 23, 2011

Re: Invitation to Participate in Pike County's Hazard Mitigation Planning Process

The Honorable Rich Caridi
Chairman, Pike County Board of Commissioners
506 Broad Street
Milford, Pennsylvania 18337

Dear Commissioner Caridi:

I am writing to inform you of a very important initiative that is about to take place in our county. Pike County will soon begin the process of updating its Local Hazard Mitigation Plan. This Plan will serve as a blueprint for reducing property damage and saving lives from the effects of future natural and human-made disasters in our community. This Plan is also required in order for Pike County to be eligible to receive certain types of state and federal disaster relief funds after a disaster occurs.

Our current Pike County Hazard Mitigation Plan was adopted by the County in November 2006. Subsequent to the County's adoption, all of our thirteen municipalities adopted the County Plan as their own. It will be critically important as we move forward with this Plan Update that each of our municipalities participate and provide input.

You are invited to attend a kick-off meeting for the Local Hazard Mitigation Planning process that will be held on March 14, 2011 at 6:30 PM at the Pike County Conservation District meeting room, 556 Route 402, Hawley, Pennsylvania 18428. In the case of inclement weather, you will be notified of a rescheduled meeting date.

If you are unable to attend the kickoff meeting and still wish to participate in the planning process, please notify me. I will provide you with additional information regarding future meetings, draft documents for review, and other project milestones. If you have any additional questions, please do not hesitate to contact me at 570-296-3500 or mmrozinski@pikepa.org.

Sincerely,

Michael Mrozinski
Assistant Planning Director

cc: Sally Corrigan, Pike County Office of Community Planning
Roger Maltby, Pike County Emergency Management Agency

SAMPLE

837 Route 6, Unit 4 • Shohola, PA 18458
Phone (570) 296-3500 • Fax (570) 296-3501

PIKE COUNTY OFFICE OF COMMUNITY PLANNING

February 22, 2011

Re: Invitation to Participate in Pike County's Hazard Mitigation Planning Process

The Honorable Brian W. Smith
Chairman, Wayne County Board of Commissioners
Wayne County Courthouse
925 Court Street
Honesdale, Pennsylvania 18431

Dear Commissioner Smith:

I am writing to inform you of a very important initiative that is about to take place in our county. Pike County will soon begin the process of updating its Local Hazard Mitigation Plan. This Plan will serve as a blueprint for reducing property damage and saving lives from the effects of future natural and human-made disasters in our community.

A meeting will be held to kick-off the Local Hazard Mitigation Planning process on March 14, 2011 at 6:30 PM at the Pike County Conservation District meeting room, 556 Route 402, Hawley, Pennsylvania 18428. In an effort to include surrounding communities in the planning process, you and other Wayne County, Pennsylvania representatives that may be directly involved in planning, hazard mitigation and emergency management are invited to attend this meeting. In the case of inclement weather, please call 570-296-3500 to be informed of a rescheduled meeting date.

If you are unable to attend the kickoff meeting but still wish to participate in the planning process, please notify me. I will provide you with additional information regarding future meetings, draft documents for review, and other project milestones. If you have any additional questions, please do not hesitate to contact me at 570-296-3500 or mmrozinski@pikepa.org.

Sincerely,

Michael Mrozinski
Assistant Planning Director

cc: Sally Corrigan, Pike County Office of Community Planning
Roger Maltby, Pike County Emergency Management Agency

SAMPLE

837 Route 6, Unit 4 • Shohola, PA 18458
Phone (570) 296-3500 • Fax (570) 296-3501

Pike County
All-Hazard Mitigation Plan Update
Kick-off Meeting

March 14, 2011
6:30 pm

1. ***Welcome and Introductions***

   Presenter: Alexis Melusky, Michael Baker Jr., Inc.

   County Representatives: Michael Mrozinski, Pike County Assistant Planning Director
   Sally Corrigan, Pike County Planning Director
   Roger Maltby, Pike County Emergency Management Coordinator

2. ***Project Overview***
   - What is Hazard Mitigation?
   - Primary Objectives
   - Local Requirements

3. ***Hazard Mitigation Planning Process***
   - 6 Step Planning Process
   - All-Hazard Mitigation Plan Components and Existing Plan Review:
     - Community Profile
     - Planning Process
     - Risk Assessment
     - Capability Assessment
     - Mitigation Strategy
     - Plan Maintenance
     - Plan Adoption

4. ***Stakeholder Participation***
   - *Exercise #1– Capability Assessment Survey*
   - *Exercise #2 – Evaluation of Identified Hazards and Risk*

5. ***Planning Timeline***

6. ***Question and Answer Session***

Pike County Hazard Mitigation Plan Update Project Website: www.PikeHMP.com

All-Hazard Mitigation Plan Update
Pike County, PA

Kick-off Meeting
March 14, 2011

Michael Baker Jr., Inc.

Baker

Agenda

- Welcome and Introductions
- Project Overview
- Hazard Mitigation Planning Process
  - 6 Step Planning Process
  - All-Hazard Mitigation Plan Components and Existing Plan Review
- Stakeholder Participation
  - Exercise #1: Capability Assessment Survey
  - Exercise #2: Evaluation of Identified Hazards and Risk
- Planning Timeline
- Question and Answer Session

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Project Overview

- **What is Hazard Mitigation?**
  Hazard mitigation is any sustained action taken to reduce or eliminate long-term risk to life and property resulting from natural and human-made hazards.
- **What is a Mitigation Plan?**
  A Mitigation Plan is a community-driven, living document that communities use to reduce their vulnerability to hazards.
- **Why have a Mitigation Plan?**
  Communities must have a plan to apply for and receive mitigation grants. These grants can augment local mitigation activities already being done. Ultimately, these actions reduce vulnerability, and communities are able to recover more quickly from disasters.

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Project Overview
Primary Objectives

- Reconvene the Planning Team and facilitate public involvement.
- Assess current conditions, risks, and capabilities that exist within the County.
- Generate and deliver county hazard mitigation plan with FEMA "approval pending community adoption."

4

Project Overview
Local Requirements

- Attend Meetings.
- Provide valuable local information.
- Actively participate in the planning process.

5

Update Process
The 6 Step Planning Process

1. Organize Resources & Reconvene the Planning Team (PT).
2. Update the Plan's Risk Assessment.
3. Assess Capabilities.
4. Update the Mitigation Strategy.
5. Determine Plan Maintenance Process.
6. Obtain Mitigation Plan Approval and Adoption.

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All-Hazard Mitigation Plan Components

- Community Profile
- Planning Process
- Risk Assessment
- Capability Assessment
- Mitigation Strategy
- Plan Maintenance

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All-Hazard Mitigation Plan Components
Community Profile

- Geography and Environment
- Community Facts
- Population and Demographics
- Land Use and Development

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Hazard Mitigation Plan Components
Planning Process

- Plan development and participation
- The Planning Team
- Public and other stakeholder participation
- Meetings
- Incorporating existing planning mechanisms
- Existing HMP *Planning Process* overview

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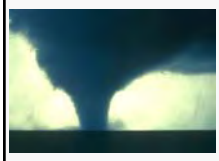
Hazard Mitigation Plan Components
Risk Assessment

- Identifying Hazards
- Profiling Hazards
- Vulnerability Assessment
- Existing HMP *Risk Assessment* overview



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All-Hazard Mitigation Plan Components
Capability Assessment

- Emergency Management
- Participation in the NFIP
- Planning and Regulatory Capability
- Administrative and Technical Capability
- Fiscal Capability
- Political Capability
- Existing HMP *Capability Assessment* overview

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All-Hazard Mitigation Plan Components
Mitigation Strategy

- Goals and Objectives
- Mitigation Techniques
- Mitigation Action Plan
- Mitigation Projects
- Existing HMP *Mitigation Strategy* overview

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All-Hazard Mitigation Plan Components
Plan Maintenance

- Monitoring, evaluating and updating the plan.
- Incorporation into other planning mechanisms.
- Continued public involvement.
- Existing HMP *Plan Maintenance* overview.

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All-Hazard Mitigation Plan Components
Plan Adoption

- Each jurisdiction and the county must adopt the County Hazard Mitigation Plan after receiving FEMA approval.
- The plan is to be updated 5 years after the first jurisdiction adopts.
- Existing HMP *Plan Adoption* overview.

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Stakeholder Participation
Exercise #1 – Capability Assessment

- Capability Assessment Survey.
- Information used to evaluate jurisdictional capabilities and plan development.
- One per jurisdiction.

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Stakeholder Participation
Exercise #2 – Evaluation of Existing Hazards and Risk

- This exercise allows you to evaluate previously profiled hazards and to identify any new hazards that may exist.
- PART I: Note any changes in frequency, magnitude or geographic extent by placing a "NC", "I" or "D" in the 2nd column.
- PART II: Evaluate list of hazards NOT profiled in existing HMP.

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Timeline

Date	Task Item
February 2011	Planning Proc ess began
March 14, 2011	Kick-off Meeting
March 15, 2001 → April 29, 2011	Risk Assessment
Week of March 28, 2011	Capability Assessment
May 5, 2011	Risk Assessment Summary and Mitigation Solutions Workshop
March 5, 2011→ June 13, 2011	Mitigation Strategy Update Production
June 16, 2011	Conduct Public Meeting
July 15, 2011	**Deliver to PEMA/FEMA for Review**
September 2011	Distribute to Municipalities for Adoption

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Question and Answer Session

Pike County Hazard Mitigation Plan Update Project Website:
www.PikeHMP.com

NEXT MEETING: Thursday, May 5, 2011 6:30 pm – Conservation District

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Contact Information

Alexis Melusky
amelusky@mbakercorp.com
(ph) 215-430-5512
(Fax) 215-568-1349

Michael Baker Jr., Inc.
1818 Market Street, Suite 3110
Philadelphia, PA 19103

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Pike County Hazard Mitigation Plan

Meeting Attendance

Date: Monday, March 14, 2011 (6:30pm)

Location: Pike County Conservation District – Blooming Grove

Attendee Name/Affiliation	Email/Address/Phone
Mark Moglia / DVHS	mmoglia@dvsd.org 256 Route 6+209 Milford PA 18337 570-296-4922
Chris Lordo DVSD	Clordo@dvsd.org 256 Rt. 6 & 209 Milford PA 18337 296-1897
Edward Bland	LehmanPK@ptd.net RR4 Box 4000 Bushkill PA 570 588-9365 18324
Stanley Whittaker	LehmanPK@PTD.NET RR4 Box 4000 Bushkill Pa 18324 570 588-9365
William Mikulak	billmik@ptd.net 1187 Fisher Ln Milford PA 296 8455
Matt Osterberg	CAROLOSTERBERG@YAHOO.COM 107 E HIGH ST Milford PA 296-8231
Vincent Accordino	111 West Catherine St Milford Boro.
Gene Reynolds Orange & Rockland Utilities	Reynoldsg@oru.com 845 577 3170
ROBERT MYERS	SHOHTWP@PTD.NET 159 TWIN LAKES RD. SHOHOLA PA. 18458
Lakewhillepaupack Nick Spinelli, Watershed Dist.	LWNMD@verizon.net. 570.226.3865
STEVE MULLIN BLOOMING GROVE MAST MULLIN BLOOMING GROVE	SPMJR12@YAHOO.COM
Roger Mallory / Pike EMA	emaa@pikepa.org.
Dominick Greene Orange Co. Emer. Mgmt Representing Chairman Michael Pillmeier Orange County Legislature Chairman	DGreene@co.orange.ny.us (845) 615-0469
Michael Mrozinski Pike Co Office of Community Planning	MMrozinski@PikePA.org 570-296-3500

Pike County Hazard Mitigation Plan

Meeting Attendance

Date: Monday, March 14, 2011 (6:30pm)

Location: Pike County Conservation District – Blooming Grove

Attendee Name/Affiliation	Email/Address/Phone
Shirley Manco	shinkym@ptd.net (570) 296-2240

Pike County
All-Hazard Mitigation Plan
Kickoff Meeting Minutes

DATE: Monday, March 14, 2011

TIME: 6:30 PM

LOCATION: Pike County Conservation District

The following people were in attendance:

Name	Organization/ Affiliation
Mark Moglia	Delaware Valley School District
Chris Lordi	Delaware Valley School District
Edward Bland	Lehman Township
Stanley Whittaker	Lehman Township
William Mikulak	Dingman Township
Matt Osterberg	Milford Borough
Vincent Accordino	Milford Borough
Gene Reynolds	Orange and Rockland Utilities
Robert Myers	Shohola Township
Nick Spinelli	Lake Wallenpaupack Watershed District
Steve Mullin	Blooming Grove Township
Marj Mullin	Blooming Grove Township
Dominick Greene	Orange County Emergency Management
Shirley Masuo	Twin and Walker Creeks Conservancy
Michael Mrozinski	Pike County Office of Community Planning
Sally Corrigan	Pike County Office of Community Planning
Roger Maltby	Pike County Emergency Management Agency
Alexis Melusky	Baker

MEETING HANDOUTS:

- Agenda
- Contact Information Sheet
- Capability Assessment Survey
- Hazard – Risk Evaluation Worksheet

MEETING OVERVIEW

- **Welcome and Introductions**

Michael Mrozinski welcomed everyone to the meeting. He explained that the County's existing 2006 Hazard Mitigation Plan (HMP) was created while the County was also

working on a Comprehensive Plan Update which recommended creation of an HMP. When the plan was completed, it made all of the municipalities eligible for PEMA and FEMA funding for a 5 year period. He explained that the plan expires 5 years from when it is first adopted and although the plan doesn't expire until 2012, PEMA would like the update completed this summer. Mr. Mrozinski said that in November of 2010 PEMA notified the County that money had become available to contract Michael Baker Jr. Inc. (Baker) to assist the Counties in the State whose plans were expiring. He then introduced Alexis Melusky from Baker, Sally Corrigan from the Pike County Office of Community Planning, and Roger Maltby from the Pike County EMA.

Everyone else in the room then introduced themselves. Ms. Melusky thanked everyone for coming and explained that her company is currently working on 17 county plan updates and prior to that had completed a series of other county plan updates as well as the state hazard mitigation plan. Next, Ms. Melusky reviewed the agenda for the meeting.

- **Project Overview**

Ms. Melusky then explained what hazard mitigation is: it is any sustained action taken to reduce or eliminate hazard risk and vulnerability. She then defined what a mitigation plan is – a community driven plan built with public input and used to reduce vulnerability to hazards. She said that the purpose of having a hazard mitigation plan is to not only be used by municipalities to reduce losses but also municipalities and Counties in Pennsylvania must have a plan in place in order to be eligible for certain PEMA and FEMA funding. She said that FEMA requires that municipalities participate in the planning process by attending meetings and filling out required forms and by finally adopting the plan via resolution once it is approved by FEMA.

Ms. Melusky next described the primary objectives for the plan update. The first objective is to reconvene the planning team which includes municipalities and other stakeholders. She also explained that there is a steering committee which includes herself and the three County representatives who would be working behind the scenes to do the update. The next objective is to assess current conditions, risk, and capabilities that exist within the County. This would involve looking at how things have changed in the five years since the plan was adopted. The third objective is to deliver and generate a FEMA approvable hazard mitigation plan.

Ms. Melusky also discussed local requirements which include attending meetings, provide information via forms and surveys, and actively participating in the planning process. She said municipalities could also submit any past occurrence data that they would like included in the plan to her and provide comments on a draft of the plan once it is complete.

- **Hazard Mitigation Planning Process**

Ms. Melusky next explained that updating a hazard mitigation plan is a six step process. The first step involves reconvening the planning team. This is followed by updating the plan's risk assessment which involves looking at hazards and vulnerability. The third step involves assessing capabilities. The fourth step involves updating the mitigation strategy which includes goals, objectives, and actions/projects. Finally a maintenance

process for the plan would be determined and then plan would be submitted for approval and adoption.

Ms. Melusky explained that PEMA has recently tried to streamline hazard mitigation planning for all the counties in the state. This would enable PEMA and FEMA to review the plans so they could be compared on an apples-to-apples basis so that all plans contained essential components. She explained that the plan update would have a Community Profile chapter with demographic, history, land use and other background information. A Planning Process chapter would contain information on meetings, participation and existing mechanisms such as other county plans. The Risk Assessment would contain hazard profiles and vulnerability assessments. The next component is the Capability Assessment which summarizes results of the capability assessment surveys that all municipalities would fill out during the planning process to get an idea of a municipality's strengths and weaknesses relating to hazard mitigation planning. The Mitigation Strategy of the plan will contain the plans goals, objectives, and actions/projects. There will be a chapter on Plan Maintenance which is how the County will maintain and update the plan over the next five years and how there will be continued public involvement. Finally, Ms. Melusky explained that the final step in the plan update process is plan adoption. She said once FEMA approves the plan pending adoption, municipalities would have to pass resolutions to adopt it. She further explained that municipalities would have one year from the date that the first municipality adopts it.

- **Stakeholder Participation**

Exercise #1 – Capability Assessment Survey

Ms. Melusky then handed out a Capability Assessment Survey to a representative from each municipality present at the meeting. She explained how to fill out each page of the survey and said it is important for evaluating jurisdictional capabilities for plan development. She said that representatives could take the forms back to their municipal manager to fill out and fax back to her or Mr. Mrozinski. She explained that no Pike County municipalities were members of the NFIP-CRS program but briefly explained the program and recommended that municipalities look into it. Ms. Corrigan suggested that the other stakeholders at the meeting fill out a survey to describe what staff and resources they have for hazard mitigation and Ms. Melusky agreed.

On the second page of the worksheet Ms. Melusky discussed some of the other plans/programs listed, including the Firewise program and Mr. Maltby pointed out that several municipalities in Pike County are part of the Firewise program. Ms. Corrigan informed everyone that historic preservation is handled at the County level. Ms. Melusky asked her about Act 167 planning and she said that the County has a draft countywide Act 167 plan. There was a question as to what "community resiliency capability" meant and Ms. Melusky said that this had to do with how quickly a community can "bounce back" after a disaster.

Ms. Melusky finished explaining the directions for the survey and asked that municipalities return the forms to Mr. Mrozinski. Ms. Corrigan reminded the municipalities that the County's existing hazard mitigation plan looked at hazards other than floods and Ms. Melusky explained that the next exercise would go over the hazards covered in the existing plan.

Exercise #2 – Hazard / Risk Assessment Survey

Ms. Melusky handed out a Hazard / Risk Assessment Survey to meeting participants. She explained that the hazards covered in the County's existing HMP were listed on the first page of the worksheet and are divided into natural and human-made hazards. She asked everyone to add "wildfire" under the natural hazards category as it was accidentally left off the worksheet. Ms. Melusky explained that PEMA created a standard list of hazards and that some of the names of the hazards from the existing HMP may have changed in order to be consistent with PEMA's standard list of hazards. She asked that everyone look over the hazards from the existing HMP and mark whether they have increased, decreased, or not changed in frequency, magnitude, and risk since 2006. She pointed out that the category "environmental hazards" has to do with hazardous material releases.

Once everyone had finished the first part of the worksheet, Ms. Melusky then asked everyone to turn their worksheet over to part II. This page listed the remaining hazards identified on the "standard list of hazards" and asked participants to mark hazards that they would like included in the plan update. She asked everyone to focus on hazards that posed a significant risk.

Mr. Mrozinski asked what disorientation was and Ms. Melusky explained that the hazard had to do with people getting lost in the woods and often resulted in search and rescue operations. Someone asked what could be included under "invasive species" and someone mentioned gypsy moths. Ms. Melusky mentioned that emerald ash borer was an invasive species in some counties. Ms. Corrigan added that there are some plants that are invasive species. Ms. Corrigan asked if pandemics coming from metropolitan areas would be significant enough to impact the County. Another meeting participant mentioned that Pike County receives a large tourist population which could bring pandemics into the County. Ms. Melusky said to mark it down and put comments in the comment box and that after the meeting, the steering committee would evaluate the hazards marked to determine whether to include them in the update. Ms. Melusky mentioned that for any hazard added to the plan, it would have to have an action/project that pertained to it. For example, she said that an action for pandemic could be to have the County Health Agency develop a County pandemic plan. Someone asked what expansive soils were and Ms. Melusky said that it had to do with clay soils expanding and damaging supply lines, roads, foundations, etc. Someone else asked about lightning strike and Ms. Melusky said that many county plans looked at "thunderstorms" as a hazard but PEMA decided to break the components of thunderstorms up into separate hazards such as flooding, tornados etc.

Everyone completed their worksheets and turned them in.

- **Planning Timeline**

Next, Ms. Melusky went over the timeline for the plan. She said that the next meeting would take place on May 5th at 6:30 pm and would focus on the results of the risk assessment and discuss the mitigation strategy for the plan. The final public meeting would take place on June 16th at 6:30 pm and a newspaper notice would be done to let the general public know about the plan.

Ms. Melusky then gave everyone the website address www.PikeHMP.com and said that is where meeting and project info would be posted. She also reminded everyone to return their capability assessment surveys to Mr. Mrozinski within a week. Ms. Corrigan pointed out that the County's existing HMP is on the County's website and participants should refer to that if they want to see what is covered in the existing plan and projects that their municipality listed in the plan. Ms. Melusky said that the projects were likely not listed on the website (for confidentiality purposes) but municipalities could contact Mr. Mrozinski if they wanted to see their old projects. Ms. Melusky said that at the next meeting, municipalities would also be evaluating their old projects to determine whether they should be continued into the plan update.

- **Question and Answer Session**

Ms. Melusky asked if there were any questions. There were none. Mr. Mrozinski pointed out that the timeline displayed is very aggressive even though the plan does not expire until 2012 and that it is important that everyone turns their forms in quickly.
The meeting adjourned at 7:30 PM.

Minutes prepared by Alexis Melusky.
A recording of this meeting may be obtained by contacting Michael Baker Jr., Inc.

CONTACT INFORMATION SHEET

Date: _____

Municipality/Organization: _____

County: _____

Community/Organization contact (s) for Hazard Mitigation Planning *(please list at least one)*:

****This individual(s) will receive correspondence such as meeting notifications and other updates and may be asked to provide additional information during the hazard mitigation planning process.****

Contact #1

Name: _____

Title: _____

Address: _____

Telephone: _____

Fax: _____

E-mail: _____

Contact #2 *(optional)*

Name: _____

Title: _____

Address: _____

Telephone: _____

Fax: _____

E-mail: _____

What is the best way to provide the designated contact with notifications of upcoming meetings and other important information?

____E-mail ____Regular Mail ____Telephone

Capability Assessment Survey

Jurisdiction: _____ ***Name/Title:*** _____

1. Planning and Regulatory Capability: Please indicate whether the following planning or regulatory tools and programs are currently in place or under development for your jurisdiction by placing an "X" in the appropriate box, followed by the date of adoption/update. Then, for each particular item in place, identify the department or agency responsible for its implementation and indicate its estimated or anticipated effect on hazard loss reduction (Supports, Neutral or Hinders) with the appropriate symbol and also indicate if there has been a change in the ability of the tool/program to result in loss reduction. Finally, please provide additional comments or explanations in the space provided.

Tool/Program	***Status***			***Dept. / Agency Respon-sible***	***Effect on Loss Reduction: + Support O Neutral -- Hinder***	***Change Since Last Plan: + Positive -- Negative***	***Comments:***
	In Place	***Date Adopted or Updated***	***Under Develop-ment***				
EXAMPLE: Hazard Mitigation Plan	*X*	*1/1/2006*		*Hazard County EMA*	+	+	*Interim update in 2008 revised mitigation strategy; completed one action.*
Hazard Mitigation Plan							
Emergency Operations Plan							
Disaster Recovery Plan							
Evacuation Plan							
Continuity of Operations Plan							
NFIP							
NFIP-CRS							
Floodplain Regulations							
Floodplain Management Plan							
Zoning Regulations							
Subdivision Regulations							

Tool/Program	Status			Dept. / Agency Respon-sible	Effect on Loss Reduction: + Support O Neutral -- Hinder	Change Since Last Plan: + Positive -- Negative	Comments:
	In Place	Date Adopted or Updated	Under Develop-ment				
Comprehensive Land Use Plan (or General, Master or Growth Mgmt. Plan)							
Open Space Management Plan (or Parks/Rec or Greenways Plan)							
Stormwater Management Plan / Ordinance							
Natural Resource Protection Plan							
Capital Improvement Plan							
Economic Development Plan							
Historic Preservation Plan							
Farmland Preservation							
Building Code							
Fire Code							
Firewise							
Storm Ready							
Other							

2. Administrative and Technical Capability: Please indicate whether your jurisdiction maintains the following staff members within its current personnel resources by placing an "X" in the appropriate box. Then, if YES, please identify the department or agency they work under and provide any other comments you may have in the space provided or with attachments.

Staff/Personnel Resources	***Yes***	***No***	***Department / Agency***	***Comments***
Planners (with land use / land development knowledge)				
Planners or engineers (with natural and/or human caused hazards knowledge)				
Engineers or professionals trained in building and/or infrastructure construction practices (includes building inspectors)				
Emergency manager				
Floodplain manager				
Land surveyors				
Scientists or staff familiar with the hazards of the community				
Personnel skilled in Geographic Information Systems (GIS) and/or FEMA's HAZUS program				
Grant writers or fiscal staff to handle large/complex grants				
Other				

3. Fiscal Capability: Please indicate whether your jurisdiction has access to or is eligible to use the following local financial resources ***for hazard mitigation purposes*** (including as match funds for State of Federal mitigation grant funds). Then, identify the primary department or agency responsible for its administration or allocation and provide any other comments you may have in the space provided or with attachments.

Financial Resources	***Yes***	***No***	***Department / Agency***	***Comments***
Capital improvement programming				
Community Development Block Grants (CDBG)				
Special purpose taxes				
Gas / electric utility fees				
Water / sewer fees				
Stormwater utility fees				
Development impact fees				
General obligation, revenue, and/or special tax bonds				
Partnering arrangements or intergovernmental agreements				
Other				

4. Community Political Capability: Political capability in this instance is being measured by the degree to which local political leadership (including appointed boards) is willing to enact policies and programs that reduce hazard vulnerabilities in your community, even if met with some opposition. Examples may include guiding development away from identified hazard areas, restricting public investments or capital improvements within hazard areas, or enforcing local development standards that go beyond minimum State or Federal requirements (e.g., building codes, floodplain management, etc.). Rate the jurisdiction's political capability to enact policies and programs that reduce hazard vulnerabilities on a scale from 0 to 5. Generally, a higher the score corresponds to a higher degree of community political capability.

5-Very Willing ***3-Moderately Willing*** ***0-Unwilling to Adopt Policies/Programs*** ***Score: _____***

5. Self-Assessment of Capability: Please provide an approximate measure of your jurisdiction's capability to effectively implement hazard mitigation strategies to reduce hazard vulnerabilities. Using the following table, please place an "**X**" in the box marking the most appropriate degree of capability (Limited, Moderate or High) based upon best available information and the responses provided in Sections 1-5 of this survey. For multi-jurisdictional plans, record the results of this section into the Self Assessment Capability Matrix in **Appendix 4**.

Area	***Degree of Capability***		
	Limited	***Moderate***	***High***
Planning and Regulatory Capability			
Administrative and Technical Capability			
Fiscal Capability			
Community Political Capability			
Community Resiliency Capability			

Name:**_____** ***Title:*****_____**

Jurisdiction:**_____**

PART 1

Identified Hazards *2006 HMP*	***How has the frequency of occurrence, magnitude of impact, and/or geographic extent changed in your community?*** **NC**=No Change**,** **I**=Increase, **D**=Decrease *(Please provide an explanation for any hazards marked* **I** *or* **D** *in the "Additional Comments" column)*	***Additional Comments***
Natural Hazards		
Drought		
Earthquake		
Flood, Flash Flood, Ice Jam		
Tornado, Wind Storm		
Winter Storm		
Wildfire		
Human-made Hazards		
Dam Failure		
Environmental Hazards		
Nuclear Incidents		
Terrorism		

Identified Hazards *2006 HMP*	***How has the frequency of occurrence, magnitude of impact, and/or geographic extent changed in your community?*** **NC**=No Change**,** **I**=Increase, **D**=Decrease *(Please provide an explanation for any hazards marked* **I** *or* **D** *in the "Additional Comments" column)*	***Additional Comments***
Transportation Accidents		
Urban Fire and Explosion		
Utility Interruption		

PART II

Other Hazards:

Do any of these hazards, not previously profiled in the County's hazard mitigation plan, have the potential to affect your municipality significantly? *(If so, check box)*

Natural

- ☐ ***Avalanche/Glacier***
- ☐ ***Coastal Erosion***
- ☐ ***Dust, Sand Storm***
- ☐ ***Expansive Soils***
- ☐ ***Extreme Temperature***
- ☐ ***Hailstorm***
- ☐ ***Hurricane, Tropical Storm, Nor'easter***
- ☐ ***Invasive Species***
- ☐ ***Landslide***
- ☐ ***Lightning Strike***
- ☐ ***Pandemic***
- ☐ ***Radon Exposure***
- ☐ ***Subsidence, Sinkhole***
- ☐ ***Tsunami***
- ☐ ***Volcano***

Human-made

- ☐ ***Building or Structure Collapse***
- ☐ ***Civil Disturbance***
- ☐ ***Disorientation***
- ☐ ***Drowning***
- ☐ ***Levee Failure***
- ☐ ***War and Criminal Activity***

Other Comments

Natural Hazards

Hazard	Hazard Description
Avalanche/ Glacier	An avalanche is a mass of snow sliding down a mountainside. It occurs when the stress (from gravity) trying to pull the snow downhill exceeds the strength of bonds that form between snow grains within the snow cover. Temperature, precipitation, wind, depth of snow cover, slope, and vegetation density all influences the frequency and intensity of avalanches. **Conditions do not exist for avalanches to occur within Pennsylvania.** (FEMA, 1997). A glacier is a very large mass of ice which may or may not be moving slowly over a land mass, formed from compacted snow in an area where snow accumulation exceeds melting and sublimation. Glaciers exist where, over a period of years, snow remains after summer's end. **They are present in North America, but have not existed in Pennsylvania for approximately 17,000 years** (DCNR, 1999).
Coastal Erosion	Coastal erosion is a natural coastal process in which sediment outflow exceeds sediment inflow at a particular location. These sediments are typically transported from one location to another by wind, waves, currents, tides, wind-driven water, waterborne ice, runoff of surface waters, or groundwater seepage. Depending on the location and processes in place, coastal erosion can take place very slowly, whereby the shoreline shifts only inches to a foot per year; or more rapidly, whereby changes can exceed ten feet per year. Intense storms and human interference can result in avulsive events where large portions of a beach or dune are washed away by strong currents and large waves. **With the exception of portions of Erie County, coastal erosion is not a hazard for communities in Pennsylvania.** (FEMA, 1997).
Drought	Drought is a natural climatic condition which occurs in virtually all climates, the consequence of a natural reduction in the amount of precipitation experienced over a long period of time, usually a season or more in length. High temperatures, prolonged winds, and low relative humidity can exacerbate the severity of drought. This hazard is of particular concern in Pennsylvania due to the presence of farms as well as water-dependent industries and recreation areas across the Commonwealth. A prolonged drought could severely impact these sectors of the local economy, as well as residents who depend on wells for drinking water and other personal uses. (National Drought Mitigation Center, 2006).
Dust, Sand Storm	A dust or sand storm is a severe windstorm that sweeps clouds of dust across an arid region. Drought and wind contribute to the emergence of dust storms, as do poor farming and grazing practices by exposing dust and sand to the wind. Dust and sand storm events can be hazardous to transportation, navigation, and human health. Severe or prolonged dust and sand storms can result in disaster causing extensive economic damage over a wide area and personal injury or death in some cases. **Dust and sand storm events occur in the dry regions of the United States (e.g. Texas, New Mexico, and Arizona) and historically have not been considered a significant hazard in Pennsylvania.** (NOAA, 2009).
Earthquake	An earthquake is the motion or trembling of the ground produced by sudden displacement of rock usually within the upper 10-20 miles of the Earth's crust. Earthquakes result from crustal strain, volcanism, landslides, or the collapse of underground caverns. Earthquakes can affect hundreds of thousands of square miles, cause damage to property measured in the tens of billions of dollars, result in loss of life and injury to hundreds of thousands of persons, and disrupt the social and economic functioning of the affected area. Most property damage and earthquake-related deaths are caused by the failure and collapse of structures due to ground shaking which is dependent upon amplitude and duration of the earthquake. (FEMA, 1997).
Expansive Soils	Clay soils have the potential to shrink and swell when they become wetted or dried. Expansive soils do not change size quickly, but over time can result in significant movement that can damage supply lines (e.g. roads, power lines, railways, bridges, etc…) and structures that lack proper design. (Olive et al, 1989).

Extreme Temperature	Extreme cold temperatures drop well below what is considered normal for an area during the winter months and often accompany winter storm events. Combined with increases in wind speed, such temperatures in Pennsylvania can be life threatening to those exposed for extended periods of time. Extreme heat can be described as temperatures that hover 10°F or more above the average high temperature for a region during the summer months. Extreme heat is responsible for more deaths in Pennsylvania than all other natural disasters combined (Lawrence County, PA HMP, 2004).
Flood, Flash Flood, Ice Jam	Flooding is the temporary condition of partial or complete inundation on normally dry land and it is the most frequent and costly of all hazards in Pennsylvania. Flooding events are generally the result of excessive precipitation. General flooding is typically experienced when precipitation occurs over a given river basin for an extended period of time. Flash flooding is usually a result of heavy localized precipitation falling in a short time period over a given location, often along mountain streams and in urban areas where much of the ground is covered by impervious surfaces. The severity of a flood event is dependent upon a combination of stream and river basin topography and physiography, hydrology, precipitation and weather patterns, present soil moisture conditions, the degree of vegetative clearing as well as the presence of impervious surfaces in and around flood-prone areas. (NOAA, 2009). Winter flooding can include ice jams which occur when warm temperatures and heavy rain cause snow to melt rapidly. Snow melt combined with heavy rains can cause frozen rivers to swell, which breaks the ice layer on top of a river. The ice layer often breaks into large chunks, which float downstream, piling up in narrow passages and near other obstructions such as bridges and dams. All forms of flooding can damage infrastructure (USACE, 2007).
Hailstorm	In addition to flooding and severe winds, hail is another potential damaging product of severe thunderstorms. Hailstorms occur when ice crystals form within a low pressure front due to the rapid rise of warm air into the upper atmosphere and the subsequent cooling of the air mass. Frozen droplets gradually accumulate on the ice crystals until, having developed sufficient weight, they fall as precipitation in the form of balls or irregularly shaped masses of ice greater than 0.75 inches in diameter (FEMA, 1997). The size of hailstones is a direct function of the size and severity of the storm. High velocity updraft winds are required to keep hail in suspension in thunderclouds. The strength of the updraft is a function of the intensity of heating at the Earth's surface. Damage to crops and vehicles are typically the most significant impacts of hailstorms. Areas in eastern and central Pennsylvania typically experience less than 2 hailstorms per year while areas in western Pennsylvania experience 2-3 annually. (FEMA, 1997).
Hurricane, Tropical Storm, Nor'easter	Hurricanes, tropical storms, and nor'easters are classified as cyclones and are any closed circulation developing around a low-pressure center in which the winds rotate counter-clockwise (in the Northern Hemisphere) and whose diameter averages 10-30 miles across. While most of Pennsylvania is not directly affected by the devastating impacts cyclonic systems can have on coastal regions, many areas in the state are subject to the primary damaging forces associated with these storms including high-level sustained winds, heavy precipitation, and tornadoes. Areas in southeastern Pennsylvania could be susceptible to storm surge and tidal flooding. The majority of hurricanes and tropical storms form in the Atlantic Ocean, Caribbean Sea, and Gulf of Mexico during the official Atlantic hurricane season (June through November). (FEMA, 1997).
Invasive Species	An invasive species is a species that is not indigenous to the ecosystem under consideration and whose introduction causes or is likely to cause economic or environmental harm or harm to human health. These species can be any type of organism: plant, fish, invertebrate, mammal, bird, disease, or pathogen. Infestations may not necessarily impact human health, but can create a nuisance or agricultural hardships by destroying crops, defoliating populations of native plant and tree species, or interfering with ecological systems (Governor’s Invasive Species Council of Pennsylvania, 2009).

Landslide	A landslide is the downward and outward movement of slope-forming soil, rock, and vegetation reacting to the force of gravity. Landslides may be triggered by both natural and human-caused changes in the environment, including heavy rain, rapid snow melt, steepening of slopes due to construction or erosion, earthquakes, and changes in groundwater levels. Mudflows, mudslides, rockfalls, rockslides, and rock topples are all forms of a landslide. Areas that are generally prone to landslide hazards include previous landslide areas, the bases of steep slopes, the bases of drainage channels, developed hillsides, and areas recently burned by forest and brush fires. (Delano & Wilshusen, 2001).
Lightning Strike	Lightning is a discharge of electrical energy resulting from the build-up of positive and negative charges within a thunderstorm. The flash or "bolt" of light usually occurs within clouds or between clouds and the ground. A bolt of lightning can reach temperatures approaching 50,000°F. On average, 89 people are killed each year by lightning strikes in the United States. Within Pennsylvania, the annual average number of thunder and lightning events a given area can expect ranges between 40-70 events per year (FEMA, 1997).
Pandemic	A pandemic occurs when infection from of a new strain of a certain disease, to which most humans have no immunity, substantially exceeds the number of expected cases over a given period of time. Such a disease may or may not be transferable between humans and animals. (Martin & Martin-Granel, 2006).
Radon Exposure	Radon is a cancer-causing natural radioactive gas that you can't see, smell, or taste. It is a large component of the natural radiation that humans are exposed to and can pose a serious threat to public health when it accumulates in poorly ventilated residential and occupation settings. According to the USEPA, radon is estimated to cause about 21,000 lung cancer deaths per year, second only to smoking as the leading cause of lung cancer (EPA 402-R-03-003: EPA Assessment…, 2003). An estimated 40% of the homes in Pennsylvania are believed to have elevated radon levels (Pennsylvania Department of Environmental Protection, 2009).
Subsidence, Sinkhole	Subsidence is a natural geologic process that commonly occurs in areas with underlying limestone bedrock and other rock types that are soluble in water. Water passing through naturally occurring fractures dissolves these materials leaving underground voids. Eventually, overburden on top of the voids causes a collapse which can damage structures with low strain tolerances. This collapse can take place slowly over time or quickly in a single event, but in either case. Karst topography describes a landscape that contains characteristic structures such as sinkholes, linear depressions, and caves. In addition to natural processes, human activity such as water, natural gas, and oil extraction can cause subsidence and sinkhole formations. (FEMA, 1997).
Tornado, Wind Storm	A wind storm can occur during severe thunderstorms, winter storms, coastal storms, or tornadoes. Straight-line winds such as a downburst have the potential to cause wind gusts that exceed 100 miles per hour. Based on 40 years of tornado history and over 100 years of hurricane history, FEMA identifies western and central Pennsylvania as being more susceptible to higher winds than eastern Pennsylvania. (FEMA, 1997). A tornado is a violent windstorm characterized by a twisting, funnel-shaped cloud extending to the ground. Tornadoes are most often generated by thunderstorm activity (but sometimes result from hurricanes or tropical storms) when cool, dry air intersects and overrides a layer of warm, moist air forcing the warm air to rise rapidly. The damage caused by a tornado is a result of high wind velocities and wind-blown debris. According to the National Weather Service, tornado wind speeds can range between 30 to more than 300 miles per hour. They are more likely to occur during the spring and early summer months of March through June and are most likely to form in the late afternoon and early evening. Most tornadoes are a few dozen yards wide and touch down briefly, but even small, short-lived tornadoes can inflict tremendous damage. Destruction ranges from minor to catastrophic depending on the intensity, size, and duration of the storm. Structures made of light materials such as mobile homes are most susceptible to damage. Waterspouts are weak tornadoes that form over warm water and are relatively uncommon in Pennsylvania. Each year, an average of over 800 tornadoes is reported nationwide, resulting in an average of 80 deaths and 1,500 injuries (NOAA, 2002). Based on NOAA Storm Prediction

	Center Statistics, the number of recorded F3, F4, & F5 tornadoes between 1950-1998 ranges from <1 to 15 per 3,700 square mile area across Pennsylvania (FEMA, 2009). A water spout is a tornado over a body of water (American Meteorological Society, 2009).
Tsunami	A tsunami is a series of ocean waves generated by sudden displacements in the sea floor, landslides, or volcanic activity. In the deep ocean, the tsunami wave may only be a few inches high. The tsunami wave may come gently ashore or may increase in height to become a fast moving wall of turbulent water several meters high. Worldwide, unusual wave heights have been known to be over 100 feet high and depending on a number of factors, some low-lying areas could experience severe inland inundation of water and debris of more than 1,000 feet. **No known tsunami events have been documented in Pennsylvania over the past 200 years** (Dunbar & Weaver, 2007).
Wildfire	A wildfire is a raging, uncontrolled fire that spreads rapidly through vegetative fuels, exposing and possibly consuming structures. Wildfires often begin unnoticed and can spread quickly, creating dense smoke that can be seen for miles. Wildfires can occur at any time of the year, but mostly occur during long, dry hot spells. Any small fire in a wooded area, if not quickly detected and suppressed, can get out of control. Most wildfires are caused by human carelessness, negligence, and ignorance. However, some are precipitated by lightning strikes and in rare instances, spontaneous combustion. Wildfires in Pennsylvania can occur in fields, grass, brush, and forests. 98% of wildfires in Pennsylvania are a direct result of people, often caused by debris burns (PA DCNR, 1999).
Winter Storm	Winter storms may include snow, sleet, freezing rain, or a mix of these wintry forms of precipitation. A winter storm can range from a moderate snowfall or ice event over a period of a few hours to blizzard conditions with wind-driven snow that lasts for several days. Many winter storms are accompanied by low temperatures and heavy and/or blowing snow, which can severely impair visibility and disrupt transportation. The Commonwealth of Pennsylvania has a long history of severe winter weather. (NOAA, 2009).
Volcano	A volcano is a vent in the earth's crust through which magma, rock fragments, gases, and ash are ejected from the earth's interior. Over time, accumulation of these erupted materials on the earth's surface creates a volcanic mountain. Hazards associated with the eruption of volcanoes endanger people, buildings, and infrastructure. Volcanoes can lie dormant for centuries between eruptions and the risk posed by volcanic activity is not always apparent. **There are no active or dormant volcanoes in Pennsylvania.** (FEMA, 1997).

Human-Made Hazards

Building or Structure Collapse	Collapse of a building or structure refers to the loss of the load-carrying capacity of a component of the structure or the entire structure itself. The loss of a structure's load-carrying capacity occurs when the loads applied to the structure exceed the structure's load-carrying capacity. This can be a result of improper design, lack of maintenance, events from a structure's load history that have gradually reduced its load-carrying capacity, or sudden and severe hazard events such as severe weather or terrorism. (Ratay, 2000).
Civil Disturbance	Civil disturbance hazards encompass a set of hazards emanating from a wide range of possible events that cause civil disorder, confusion, strife, and economic hardship. Civil disturbance hazards include the following: • **Famine**; involving a widespread scarcity of food leading to malnutrition and increased mortality (Robson, 1981). • **Economic Collapse, Recession**; Very slow or negative growth, for example (Economist, 2009). • **Misinformation**; erroneous information spread unintentionally (Makkai, 1970). • **Civil Disturbance, Public Unrest, Mass Hysteria, Riot**; group acts of violence against property and individuals, for example (18 U.S.C. § 232, 2008). • **Strike, Labor Dispute**; controversies related to the terms and conditions of employment, for example (29 U.S.C. § 113, 2008).
Dam Failure	A dam is a barrier across flowing water that obstructs, directs, or slows down water flow. Dams provide benefits such as flood protection, power generation, drinking water, irrigation, and recreation. Failure of these structures results in an uncontrolled release of impounded water. Failures are relatively rare, but immense damage and loss of life is possible in downstream communities when such events occur. Aging infrastructure, hydrologic, hydraulic and geologic characteristics, population growth, and design and maintenance practices should be considered when assessing dam failure hazards. The failure of the South Fork Dam, located in Johnstown, PA, was the deadliest dam failure ever experienced in the United States. It took place in 1889 and resulted in the Johnstown Flood which claimed 2,209 lives (FEMA, 1997). Today there are approximately 3,200 dams and reservoirs throughout Pennsylvania (Pennsylvania Department of Environmental Protection, 2009).
Disorientation	Large numbers of people are attracted to Pennsylvania's rural areas for recreational purposes such as hiking, camping, hunting, and fishing. As a result, people can become lost or trapped in remote and rugged wilderness areas. Search and rescue may be required for people who suffer from medical problems or injuries and those who become accidentally or intentionally disoriented. Search and rescue efforts are focused in and around state forest and state park lands (DCNR, 2009).
Drowning	Drowning is death from suffocation, typically associated with swimming, fishing, boating or bridge accidents, or suicide. It can be a significant hazard in communities with numerous residential pools or water bodies (e.g. ponds, lakes, rivers, etc...) and extensive outdoor recreational activity. Drowning rates are particularly high for children ages 1-14. The Centers for Disease Control and Prevention estimates that drowning is the second leading cause of injury death (after motor vehicle crashes) among children ages 1-14. (CDC, 2008).

Environmental Hazards	Environmental hazards are hazards that pose threats to the natural environment, the built environment, and public safety through the diffusion of harmful substances, materials, or products. Environmental hazards include the following: • **Hazardous material releases**; at fixed facilities or as such materials are in transit and including toxic chemicals, infectious substances, biohazardous waste, and any materials that are explosive, corrosive, flammable, or radioactive (PL 1990-165, § 207(e)). • **Air or Water Pollution**; the release of harmful chemical and waste materials into water bodies or the atmosphere, for example (National Institute of Health Sciences, July 2009; Environmental Protection Agency, Natural Disaster PSAs, 2009). • **Superfund Facilities**; hazards originating from abandoned hazardous waste sites listed on the National Priorities List (Environmental Protection Agency, National Priorities List, 2009). • **Manure Spills**; involving the release of stored or transported agricultural waste, for example (Environmental Protection Agency, Environmental Impacts of…, 1998). • **Product Defect or Contamination**; highly flammable or otherwise unsafe consumer products and dangerous foods (Consumer Product Safety Commission, 2003).
Levee Failure	A levee is a human-made structure, usually an earthen embankment, designed and constructed in accordance with sound engineering practices to contain, control, or divert the flow of water so as to provide protection from temporary flooding (Interagency Levee Policy Review Committee, 2006). Levee failures or breaches occur when a levee fails to contain the floodwaters for which it is designed to control or floodwaters exceed the height of the constructed levee. 51 of Pennsylvania's 67 counties have been identified as having at least one levee (FEMA Region III, 2009).
Nuclear Incidents	Nuclear accidents generally refer to events involving the release of significant levels of radioactivity or exposure of workers or the general public to radiation (FEMA, 1997). Nuclear accidents/incidents can be placed into three categories: 1) Criticality accidents which involve loss of control of nuclear assemblies or power reactors, 2) Loss-of-coolant accidents which result whenever a reactor coolant system experiences a break or opening large enough so that the coolant inventory in the system cannot be maintained by the normally operating make-up system, and 3) Loss-of-containment accidents which involve the release of radioactivity. The primary concern following such an incident or accident is the extent of radiation, inhalation, and ingestion of radioactive isotopes which can cause acute health effects (e.g. death, burns, severe impairment), chronic health effects (e.g. cancer), and psychological effects. (FEMA, 1997).
Terrorism	Terrorism is use of force or violence against persons or property with the intent to intimidate or coerce. Acts of terrorism include threats of terrorism; assassinations; kidnappings; hijackings; bomb scares and bombings; cyber attacks (computer-based); and the use of chemical, biological, nuclear and radiological weapons. (FEMA, 2009).
Transportation Accidents	Transportation accidents can result from any form of air, rail, water, or road travel. It is unlikely that small accidents would significantly impact the larger community. However, certain accidents could have secondary regional impacts such as a hazardous materials release or disruption in critical supply/access routes, especially if vital transportation corridors or junctions are present. (Research and Innovative Technology Administration, 2009). Traffic congestion in certain circumstances can also be hazardous. Traffic congestion is a condition that occurs when traffic demand approaches or exceeds the available capacity of the road network. This hazard should be carefully evaluated during emergency planning since it is a key factor in timely disaster or hazard response, especially in areas with high population density. (Federal Highway Administration, 2009).

Urban Fire and Explosion	An urban fire involves a structure or property within an urban or developed area. For hazard mitigation purposes, major urban fires involving large buildings and/or multiple properties are of primary concern. The effects of a major urban fire include minor to significant property damage, loss of life, and residential or business displacement. Explosions are extremely rapid releases of energy that usually generate high temperatures and often lead to fires. The risk of severe explosions can be reduced through careful management of flammable and explosive hazardous materials. (FEMA, 1997).
Utility Interruption	Utility interruption hazards are hazards that impair the functioning of important utilities in the energy, telecommunications, public works, and information network sectors. Utility interruption hazards include the following: • **Geomagnetic Storms**; including temporary disturbances of the Earth's magnetic field resulting in disruptions of communication, navigation, and satellite systems (National Research Council et al., 1986). • **Fuel or Resource Shortage**; resulting from supply chain breaks or secondary to other hazard events, for example (Mercer County, PA, 2005). • **Electromagnetic Pulse**; originating from an explosion or fluctuating magnetic field and causing damaging current surges in electrical and electronic systems (Institute for Telecommunications Sciences, 1996). • **Information Technology Failure**; due to software bugs, viruses, or improper use (Rainer Jr., et al, 1991). • **Ancillary Support Equipment**; electrical generating, transmission, system-control, and distribution-system equipment for the energy industry (Hirst & Kirby, 1996). • **Public Works Failure**; damage to or failure of highways, flood control systems, deepwater ports and harbors, public buildings, bridges, dams, for example (United States Senate Committee on Environment and Public Works, 2009). • **Telecommunications System Failure**; Damage to data transfer, communications, and processing equipment, for example (FEMA, 1997) • **Transmission Facility or Linear Utility Accident**; liquefied natural gas leakages, explosions, facility problems, for example (United States Department of Energy, 2005) • **Major Energy, Power, Utility Failure**; interruptions of generation and distribution, power outages, for example (United States Department of Energy, 2000).
War and Criminal Activity	War and criminal activity hazards are intentional acts of violence, damage to property, and other criminal activities. This category specifically includes the following hazards: • **War, Enemy Attack**; foreign attack on territory of the United States (50 U.S.C., 2008). • **Disinformation, Sabotage**; intentionally spread inaccurate information, for example; interfering or impairing an operator's management or control of an organization (USLegal, Inc., 2008). • **Criminal Activity**; lawlessness, acts committed for which punishment is imposed upon conviction after due process (USLegal, Inc., 2008). • **Physical or Information Security Breach**; contravening security and confidentiality laws and procedures; burglary, unreasonable search and seizure, for example (73 Pa. C.S. § 2303, 2006; Network Associates, Inc., 1998). • **Workplace, School Violence**; some environments are more likely than others to experience violence including occupations involving contact with the public (National Institute for Occupational Safety and Health, 1996). • **Harassment**; a pattern of conduct that causes substantial emotional distress with no legal purpose (18 U.S.C. § 1514, 2008). • **Discrimination**; widespread treatment based on class, category, or prejudice rather than merit, applies extensively to civil and labor law (26 U.S.C. § 62, 2008).

From:	Mike Mrozinski
To:	Dingman Township; Greene Township (secretary@greenetownship.org); IleanaH@delawaretownshippa.gov; joanna.donahue@bloominggrovetownship.com; lehmanpk@ptd.net; mataboro@optonline.net; milfrdtp@ptd.net; palpikea@ptd.net; Porter Twp (sec@portertownship.net); shohtwp@ptd.net; town@ptd.net; westfallsec@optonline.net; Gary Orben; Karl Wagner; Rich Caridi
Cc:	Sally Corrigan; Melusky, Alexis A; Roger Maltby
Subject:	Pike County Hazard Mitigation Plan Update
Date:	Tuesday, March 22, 2011 1:46:14 PM
Attachments:	Pike Kickoff Meeting Minutes.doc Exercise 1 Capability Assessment Survey.pdf Exercise 2 Hazard-Risk Evaluation Worksheet.pdf
Importance:	High

Dear Municipal Representatives,
Attached are the meeting minutes from our Pike County Hazard Mitigation Plan Kickoff Meeting that was held on Monday, March 14th.
Also attached are the required survey and worksheet that needs to be completed by your municipality. Please return these forms to me by Wednesday March 30th. These forms and other plan update information is available on our project-specific website – www.PikeHMP.com

Finally, the next meeting date is scheduled for May 5th at 6:30pm at the Pike County Conservation District Offices. Please remember that participation in the planning process is mandatory for municipalities if they want to be eligible for certain FEMA funding. Please make every effort to have your municipal representative attend these meetings.

Again, please return the survey and worksheet to me at your earliest convenience. If you require our assistance, please feel free to reply or call. Also, please review the minutes and get back to me with any questions that you may have on the project.

Sincerely,

Michael Mrozinski
Pike County Community Planning
837 Route 6, Unit 4
Shohola, PA 18458
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From:	Mike Mrozinski
To:	Bob Ewbank - Wfall; Doug Carrick - Palm; Gary Babb - MatB; Jim Ellison - Wfall; Kyle Wright - Del; Mary Ann Hubbard - Gre; Rob Hellyer - Port; Robert Myers - Shoh; Stanley Whittaker - Leh; Steve Mullin - BlGr; Thomas Olver - MatB; Tony Mann - Milf; Vincent Albanese - Lack; William Mikulak - Ding
Cc:	Sally Corrigan; Roger Maltby; Melusky, Alexis A
Subject:	FW: Pike County Hazard Mitigation Plan Update
Date:	Tuesday, March 22, 2011 2:43:54 PM
Attachments:	Pike Kickoff Meeting Minutes.doc Exercise 1 Capability Assessment Survey.pdf Exercise 2 Hazard-Risk Evaluation Worksheet.pdf
Importance:	High

Dear Municipal Emergency Management Coordinators,
I am forwarding you the below email that I sent to your municipality. It represents the required Hazard Mitigation forms that we need completed for the plan.

Please coordinate with your municipal office/secretary to complete these forms by March 30th. See below.

Thank You.

Michael Mrozinski
Pike County Community Planning
837 Route 6, Unit 4
Shohola, PA 18458
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mmrozinski@pikepa.org
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From: Mike Mrozinski
Sent: Tuesday, March 22, 2011 1:46 PM
To: Dingman Township; Greene Township (secretary@greenetownship.org); IleanaH@delawaretownshippa.gov; joanna.donahue@bloominggrovetownship.com; lehmanpk@ptd.net; mataboro@optonline.net; milfrdtp@ptd.net; palpikea@ptd.net; Porter Twp (sec@portertownship.net); shohtwp@ptd.net; town@ptd.net; westfallsec@optonline.net; Gary Orben; Karl Wagner; Rich Caridi
Cc: Sally Corrigan; Melusky, Alexis A; Roger Maltby
Subject: Pike County Hazard Mitigation Plan Update
Importance: High

Dear Municipal Representatives,
Attached are the meeting minutes from our Pike County Hazard Mitigation Plan Kickoff Meeting that was held on Monday, March 14th.
Also attached are the required survey and worksheet that needs to be completed by your municipality. Please return these forms to me by Wednesday March 30th. These forms and other plan update information is available on our project-specific website – www.PikeHMP.com

Finally, the next meeting date is scheduled for May 5th at 6:30pm at the Pike

County Conservation District Offices. Please remember that participation in the planning process is mandatory for municipalities if they want to be eligible for certain FEMA funding. Please make every effort to have your municipal representative attend these meetings.

Again, please return the survey and worksheet to me at your earliest convenience. If you require our assistance, please feel free to reply or call. Also, please review the minutes and get back to me with any questions that you may have on the project.

Sincerely,

Michael Mrozinski
Pike County Community Planning
837 Route 6, Unit 4
Shohola, PA 18458
T: 570.296.3500 **F:** 570.296.3501
mmrozinski@pikepa.org
www.pikepa.org

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RISK ASSESSMENT SUMMARY AND MITIGATION STRATEGY WORKSHOP MEETING

MAY 5, 2011

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From:	Mike Mrozinski
To:	Dingman Township; Greene Township (secretary@greenetownship.org); IleanaH@delawaretownshippa.gov; joanna.donahue@bloominggrovetownship.com; lehmanpk@ptd.net; mataboro@optonline.net; milfrdtp@ptd.net; Porter Twp (sec@portertownship.net); shohtwp@ptd.net; town@ptd.net; westfallsec@optonline.net; Gary Orben; Karl Wagner; Kathy Hummel; Rich Caridi; Bob Ewbank - Wfall; Doug Carrick - Palm; Gary Babb - MatB; Jim Ellison - Wfall; Kyle Wright - Del; Mary Ann Hubbard - Gre; Rob Hellyer - Port; Robert Myers - Shoh; Stanley Whittaker - Leh; Steve Mullin - BlGr; Thomas Olver - MatB; Tony Mann - Milf; Vincent Albanese - Lack; William Mikulak - Ding; carolosterberg@yahoo.com; reynoldsg@oru.com; lwwmd@verizon.net; dgreene@co.orange.ny.us; shirleym@ptd.net; Denise_cooke-bauer@nps.gov; patrick_lynch@nps.gov; Susan Beecher; ddemara@state.pa.us; rpitcavage@state.pa.us; tconway@state.pa.us; silsbymi@wallenpaupack.org; cfinan@dvsd.org; sharon-laverdure@esasd.net; neg2@psu.edu; pjcanevari@pplweb.com; brizzolarat@oru.com; kolvenbacha@oru.com; rcollins@state.pa.us; tbalch@state.pa.us
Cc:	Sally Corrigan; Roger Maltby; Melusky, Alexis A
Subject:	Pike Co All-Hazard Mitigation Plan Meeting - May 5th
Date:	Wednesday, April 27, 2011 3:34:21 PM
Attachments:	Pike_County_Municipal_Projects_Review.pdf

Reminder…

The next meeting date for the Pike County All-Hazard Mitigation Plan is scheduled for next Thursday, May 5th at 6:30pm at the Pike County Conservation District Offices.

Please make every effort to attend as this is the main meeting to discuss the projects that may be eligible for listing in the plan. As homework prior to the meeting, please review the attached entries that were from the 2006 plan. Print and make note of the status of as many as you are aware.

Remember…participation in the planning process is mandatory for municipalities that wish to be eligible for certain FEMA funding and to adopt the plan as your own. Please make sure that an appropriate municipal representative attends these meetings. Also, please make note that the final meeting is scheduled for June 16th at 6:30pm at the Pike County Conservation District Offices.

If you have any questions, comments or concerns, please feel free to reply or call.

Sincerely,

Michael Mrozinski
Pike County Community Planning
837 Route 6, Unit 4
Shohola, PA 18458
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mmrozinski@pikepa.org
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Pike County
All-Hazard Mitigation Plan
Risk Assessment Summary and Mitigation Solutions Workshop

May 5, 2011

6:30 PM

1. ***Welcome and Introductions***

   Presenter: Alexis Melusky, Michael Baker Jr., Inc.

   County Representatives: Michael Mrozinski, Pike County Assistant Planning Director
   Sally Corrigan, Pike County Planning Director
   Roger Maltby, Pike County Emergency Management Coordinator

2. ***Project Overview and Kick-off Meeting Summary***

2. ***Risk Assessment***
   - Hazard Identification and Evaluation
   - Risk Assessment Summary by Hazard
   - Hazard Ranking and Risk Factor (RF)
     - Exercise #1: Countywide and Jurisdictional Risk Evaluation

3. ***Mitigation Strategy***
   - What is a Mitigation Strategy?
   - Goals and Objectives
     - Exercise #2: Goals and Objectives Evaluation
   - Mitigation Action Techniques
   - Mitigation Action Plan Development
     - Exercise #3: Mitigation Action Selection and Development

4. ***Planning Timeline***

5. ***Question and Answer Session***

Next Meeting: *Final Public Meeting*
June 16, 2011 – 6:30 PM

Pike County Hazard Mitigation Plan Update Project Website:
www.PikeHMP.com

Baker

All-Hazard Mitigation Plan Update
Pike County, PA

Risk Assessment Summary and Mitigation Solutions Workshop
May 5, 2011

Michael Baker Jr., Inc.

Baker

Agenda

- Welcome and Introductions
- Project Overview and Kick-off Meeting Summary
- Risk Assessment
  - Hazard Identification
  - Risk Assessment Summary by Hazard
  - Hazard Ranking and Risk Factor (RF)
- Mitigation Strategy
  - What is a Mitigation Strategy?
  - Goals and Objectives
  - Mitigation Action Techniques
  - Mitigation Action Plan Development
- Planning Timeline
- Question and Answer Session

Project Overview

- **What is Hazard Mitigation?**

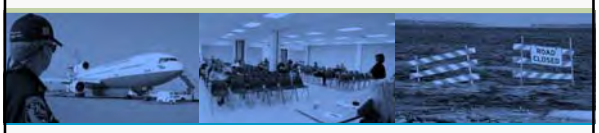
  Hazard mitigation is any sustained action taken to reduce or eliminate long-term risk to life and property resulting from natural and man-made hazards.
- **What is a Hazard Mitigation Plan and why have one?**
  - A Mitigation Plan is a community-driven, living document that communities use to reduce their vulnerability to hazards.
  - Communities must have a plan to apply for and receive mitigation grants in order to reduce vulnerability, and communities are able to recover more quickly from disasters.
- **Local Participation Requirements**
  - Attend Meetings.
  - Provide valuable local information.
  - Actively participate in the planning process.

Project Overview
Primary Objectives

- Reconvene the Planning Team and facilitate public involvement.
- Assess current conditions, risks, and capabilities that exist within the County.
- Generate and deliver county hazard mitigation plan with FEMA "approval pending community adoption."

Update Process
The 6 Step Planning Process

1. Organize Resources & Reconvene the Planning Team (PT).
2. Update the Plan's Risk Assessment.
3. Assess Capabilities.
4. Update the Mitigation Strategy.
5. Determine Plan Maintenance Process.
6. Obtain Mitigation Plan Approval and Adoption.



All-Hazard Mitigation Plan Components

- Community Profile
- Planning Process
- Risk Assessment
- Capability Assessment
- Mitigation Strategy
- Plan Maintenance

Kick-off Meeting Summary

- Discussed Planning Process and Local Requirements
- Evaluated Hazards

7

Risk Assessment
Hazard Identification

- Hazard Identification Exercise
- State Plan evaluation
- PA Standard List of Hazards

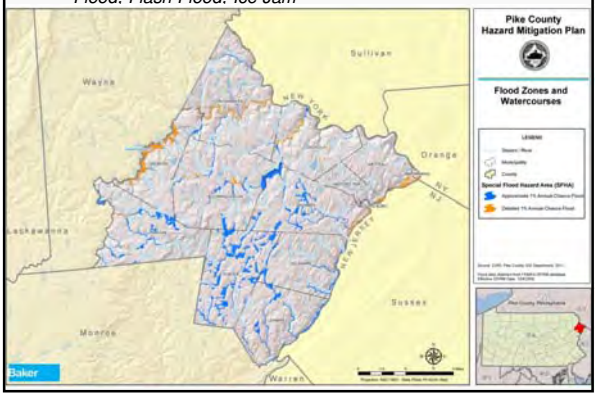
8

Risk Assessment
Hazard Identification

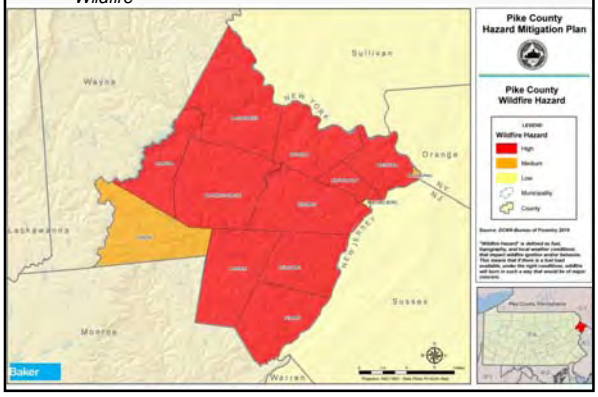
- **Natural Hazards**
  - Drought
  - Earthquake
  - Flood, Flash flood, Ice jam
  - Hurricane, Tropical Storm, Nor'easter
  - Pandemic
  - Tornado and Windstorm
  - Wildfire
  - Winter Storm
- **Human-made Hazards**
  - Dam Failure
  - Drowning
  - Hazardous Material Release
  - Nuclear Incidents
  - Terrorism
  - Transportation Accidents
  - Urban Fire and Explosion
  - Utility Interruption

9

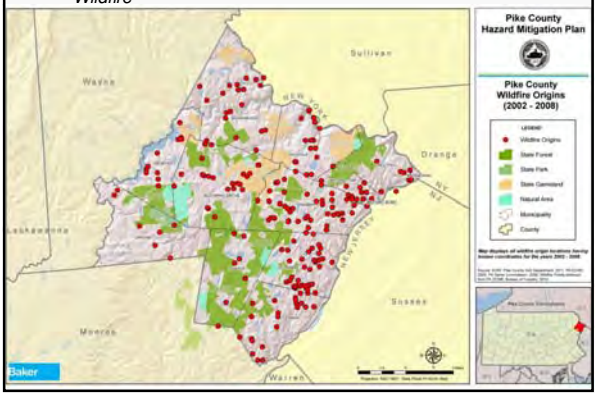
Risk Assessment
Flood, Flash Flood, Ice Jam

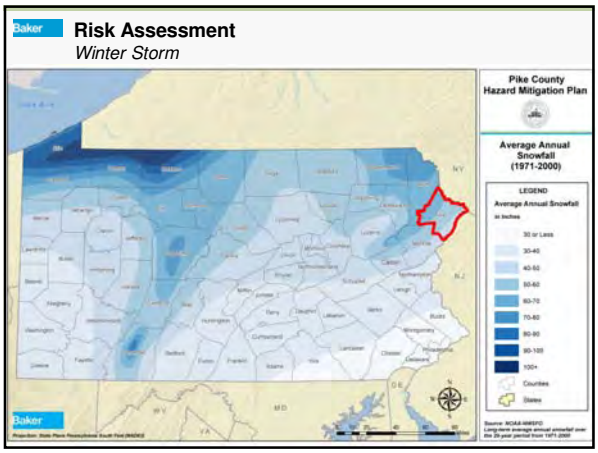


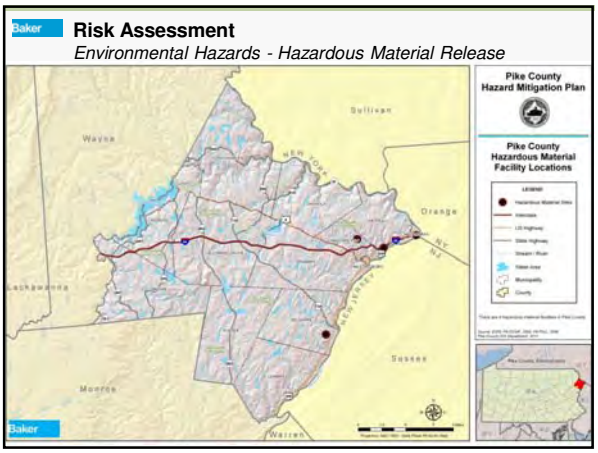
Risk Assessment
Wildfire



Risk Assessment
Wildfire




Baker
Risk Assessment
Winter Storm
Pike County Hazard Mitigation Plan
Average Annual Snowfall (1971-2000)
LEGEND
Average Annual Snowfall in Inches
30 or Less
30-40
40-50
50-60
60-70
70-80
80-90
90-100
100+
Counties
States
Baker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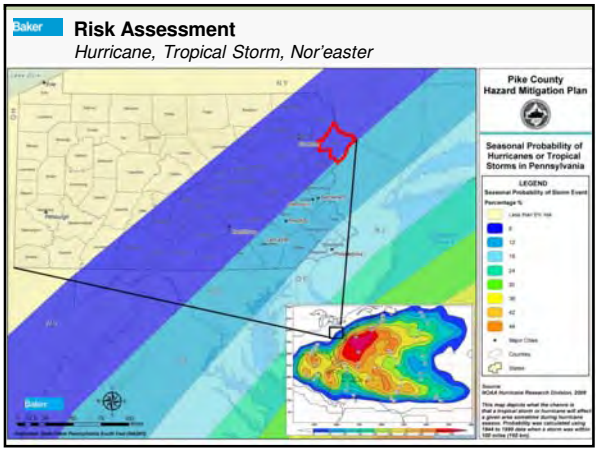
Risk Assessment
Environmental Hazards - Hazardous Material Release
Pike County Hazard Mitigation Plan
Pike County Hazardous Material Facility Locations
Sullivan
Wayne
Orange
Lackawanna
Sussex
Monroe
Warren
Baker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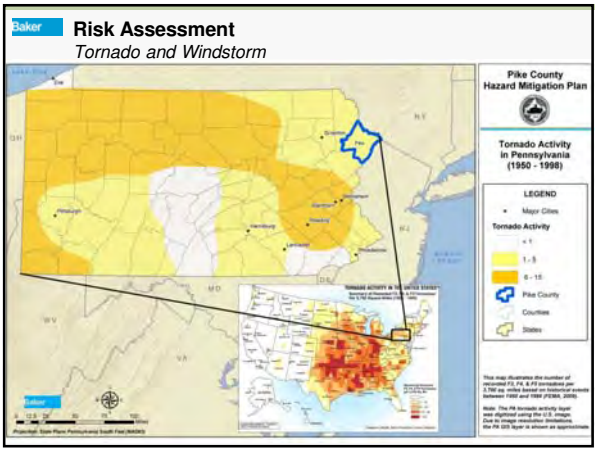
Risk Assessment
Hurricane, Tropical Storm, Nor'easter
Pike County Hazard Mitigation Plan
Seasonal Probability of Hurricanes or Tropical Storms in Pennsylvania
LEGEND
Baker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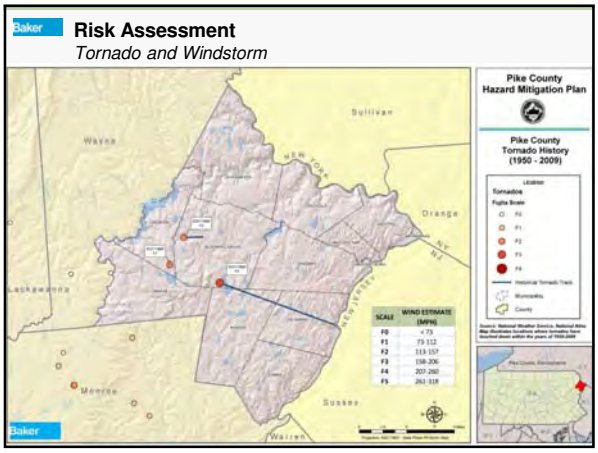
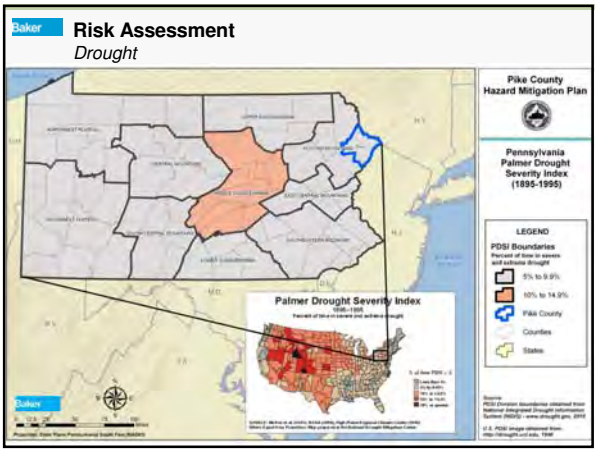
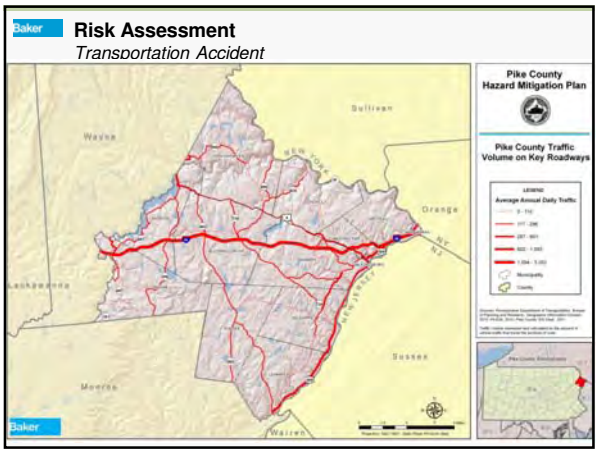
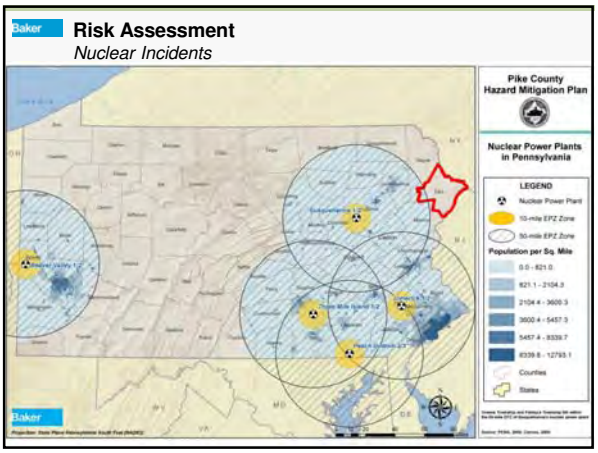
Risk Assessment
Tornado and Windstorm
Pike County Hazard Mitigation Plan
Tornado Activity in Pennsylvania (1950 - 1998)
LEGEND
Tornado Activity
Pike County
Counties
States
Baker


Baker
Risk Assessment
Tornado and Windstorm
Pike County Hazard Mitigation Plan
Pike County Tornado History (1950 - 2009)
Sullivan
Wayne
Orange
Lackawanna
Monroe
Sussex
Warren
Baker


Baker
Risk Assessment
Drought
Pike County Hazard Mitigation Plan
Pennsylvania Palmer Drought Severity Index (1895-1995)
LEGEND
PDSI Boundaries
5% to 9.9%
10% to 14.9%
Pike County
Counties
States
Palmer Drought Severity Index
Baker


Baker
Risk Assessment
Transportation Accident
Pike County Hazard Mitigation Plan
Pike County Traffic Volume on Key Roadways
Sullivan
Wayne
Orange
Lackawanna
Sussex
Monroe
Warren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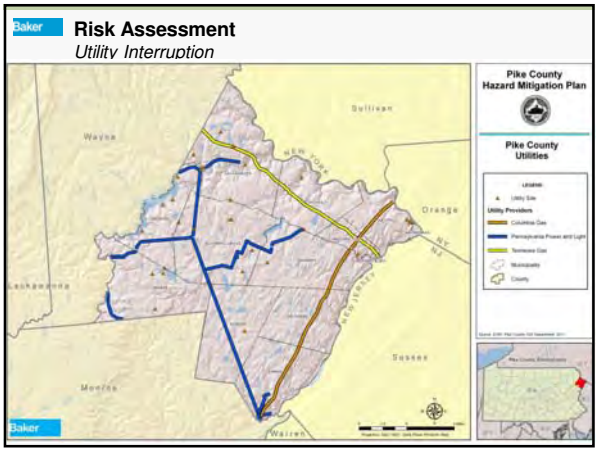
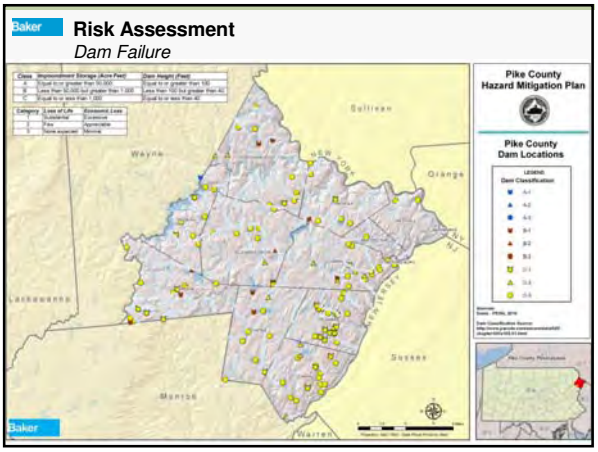
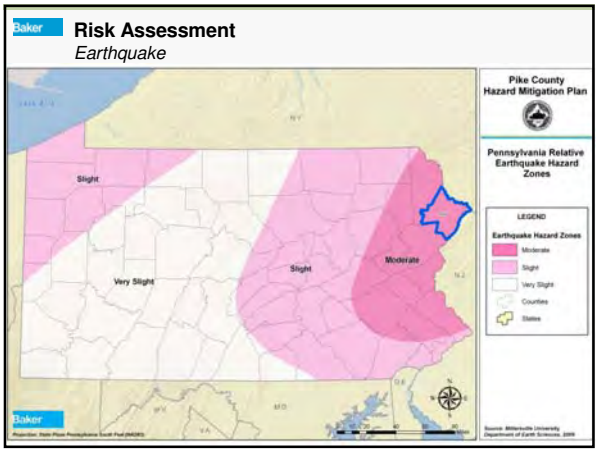
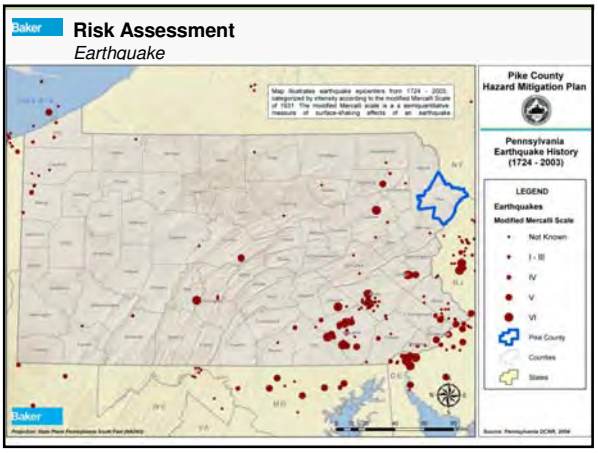
Risk Assessment
Nuclear Incidents
Pike County Hazard Mitigation Plan
Nuclear Power Plants in Pennsylvania
LEGEND
Nuclear Power Plant
10-mile EPZ Zone
50-mile EPZ Zone
Population per Sq. Mile
Counties
States


Baker
Risk Assessment
Utility Interruption
Pike County Hazard Mitigation Plan
Pike County Utilities
Sullivan
Wayne
Orange
Lackawanna
Sussex
Monroe
Warren


Baker
Risk Assessment
Dam Failure
Pike County Hazard Mitigation Plan
Pike County Dam Locations
Sullivan
Wayne
Orange
Lackawanna
Sussex
Monroe
Warren


Baker
Risk Assessment
Earthquake
Pike County Hazard Mitigation Plan
Pennsylvania Relative Earthquake Hazard Zones
Slight
Very Slight
Slight
Moderate
LEGEND
Earthquake Hazard Zones
Moderate
Slight
Very Slight
Counties
States


Baker
Risk Assessment
Earthquake
Pike County Hazard Mitigation Plan
Pennsylvania Earthquake History (1724 - 2003)
LEGEND
Earthquakes
Modified Mercalli Scale
Not Known
I - III
IV
V
VI
Pike County
Counties
States

Risk Assessment
Countywide Hazard Ranking and Risk Factor (RF)

Pike County - Ranking of hazard types based on Risk Factor (RF) methodology.

HAZARD RISK	HAZARD NATURAL (N) or MAN-MADE (M)	RISK ASSESSMENT CATEGORY					RISK FACTOR
		PROBABILITY	IMPACT	SPATIAL EXTENT	WARNING TIME	DURATION	
HIGH	Flood, Flash flood, Ice jam (N)	4	3	3	2	3	3.2
	Wildfires (N)	4	2	3	4	3	3.1
	Winter Storm (N)	4	2	4	1	3	3.0
MODERATE	Drought (N)	2	1	4	1	4	2.2
	Transportation accidents (M)	4	1	1	4	1	2.2
	Hurricane, Tropical Storm, Nor'easter (N)	2	2	3	1	3	2.2
	Environmental Hazards - (Hazardous Material Release) (M)	2	2	2	3	2	2.1
	Tornados and Windstorms (N)	2	2	2	4	1	2.1
	Pandemic (N)	1	2	3	1	4	2.0
	Utility Interruption (M)	2	1	2	4	3	2.0
	Urban Fire and Explosion (M)	2	2	1	4	2	2.0
LOW	Nuclear Incidents (M)	1	2	2	3	3	1.9
	Terrorism (M)	2	2	1	4	1	1.9
	Dam Failure (M)	1	2	1	4	2	1.7
	Drowning (M)	2	1	1	4	1	1.6
	Earthquake (N)	1	1	2	4	1	1.5

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Risk Assessment
Countywide Hazard Ranking and Risk Factor (RF)

Summary of Risk Factor (RF) Approach

Risk Assessment Category	Degree of Risk: Level	Criteria	Index	Weight Value
PROBABILITY *What is the likelihood of a hazard event occurring in a given year?*	**UNLIKELY**	LESS THAN 1% ANNUAL PROBABILITY	1	30%
	POSSIBLE	BETWEEN 1% & 49.9% ANNUAL PROBABILITY	2	
	LIKELY	BETWEEN 50% & 90% ANNUAL PROBABILITY	3	
	HIGHLY LIKELY	GREATER THAN 90% ANNUAL PROBABILITY	4	
IMPACT *In terms of injuries, damage, or death, would you anticipate impacts to be minor, limited, critical, or catastrophic when a significant hazard event occurs?*	**MINOR**	VERY FEW INJURIES, IF ANY. ONLY MINOR PROPERTY DAMAGE & MINIMAL DISRUPTION ON QUALITY OF LIFE. TEMPORARY SHUTDOWN OF CRITICAL FACILITIES.	1	30%
	LIMITED	MINOR INJURIES ONLY. MORE THAN 10% OF PROPERTY IN AFFECTED AREA DAMAGED OR DESTROYED. COMPLETE SHUTDOWN OF CRITICAL FACILITIES FOR MORE THAN ONE DAY.	2	
	CRITICAL	MULTIPLE DEATHS/INJURIES POSSIBLE. MORE THAN 25% OF PROPERTY IN AFFECTED AREA DAMAGED OR DESTROYED. COMPLETE SHUTDOWN OF CRITICAL FACILITIES FOR MORE THAN ONE WEEK.	3	
	CATASTROPHIC	HIGH NUMBER OF DEATHS/INJURIES POSSIBLE. MORE THAN 50% OF PROPERTY IN AFFECTED AREA DAMAGED OR DESTROYED. COMPLETE SHUTDOWN OF CRITICAL FACILITIES FOR 30 DAYS OR MORE.	4	
SPATIAL EXTENT *How large of an area could be impacted by a hazard event? Are impacts localized or regional?*	**NEGLIGIBLE**	LESS THAN 1% OF AREA AFFECTED	1	20%
	SMALL	BETWEEN 1 & 10.9% OF AREA AFFECTED	2	
	MODERATE	BETWEEN 11 & 25% OF AREA AFFECTED	3	
	LARGE	GREATER THAN 25% OF AREA AFFECTED	4	
WARNING TIME *Is there usually some lead time associated with the hazard event? Have warning measures been implemented?*	**MORE THAN 24 HRS**	SELF-DEFINED *(NOTE: Levels of warning time and criteria that define them may be adjusted based on hazard addressed.)*	1	10%
	12 TO 24 HRS	SELF-DEFINED	2	
	6 TO 12 HRS	SELF-DEFINED	3	
	LESS THAN 6 HRS	SELF-DEFINED	4	
DURATION *How long does the hazard event usually last?*	**LESS THAN 6 HRS**	SELF-DEFINED *(NOTE: Levels of warning time and criteria that define them may be adjusted based on hazard addressed.)*	1	10%
	LESS THAN 24 HRS	SELF-DEFINED	2	
	LESS THAN 1 WEEK	SELF-DEFINED	3	
	MORE THAN 1 WEEK	SELF-DEFINED	4	

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Risk Assessment
Exercise 1: Countywide and Jurisdictional Risk Evaluation

- **Handout:** Risk Factor and Jurisdictional Risk Matrix.
- Part I-Provide comments on the countywide hazard-risk rankings and Risk Factor.
- Part II-Provide comments on your jurisdictional risk and how it compares to the County.

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Mitigation Strategy
What is a Mitigation Strategy?

- The approach you take to reduce or avoid long-term vulnerabilities to the identified hazards
- Includes:
  - Goals
  - Objectives
  - Actions and Projects

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Mitigation Strategy
Goals and Objectives

- **Goals:** General guidelines that describe what your community would like to achieve.
- **Objectives:** Define strategies that must be implemented to achieve the identified goal. Objectives are more specific and measureable.

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Mitigation Strategy
Goals and Objectives

Example:

- ***Goal:*** Increase public awareness and support for hazard mitigation.
- ***Objective:*** Publicize the hazard mitigation plan and encourage the implementation of mitigation actions.

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Mitigation Strategy
Exercise #2: Goals and Objectives Evaluation

- **Handout:** Proposed *Goals* with corresponding *Objectives*.
- Provide comments on any Goals or Objectives that you feel need to be revised, eliminated or replaced.
- Suggest other *Goals* and *Objectives* based on perceived need.

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Mitigation Strategy
Mitigation Action Techniques

Six Categories of Mitigation Techniques:

- Prevention
- Property Protection
- Public Education and Awareness
- Natural Resource Protection
- Structural Project Implementation
- Emergency Services

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Mitigation Strategy
Mitigation Action Plan

- Identifies a comprehensive range of specific mitigation actions and projects being considered to reduce the effects of each hazard.
- Example:
  - ***Goal:*** Increase public awareness and support for hazard mitigation.
  - ***Objective:*** Publicize the hazard mitigation plan and encourage the implementation of mitigation actions.
  - ***Action:*** Set up a booth at the County Fair and distribute hazard mitigation information.

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Mitigation Strategy
Exercise #3: Mitigation Action Selection and Development

- **Handout:** Mitigation Action Form.
- A Mitigation Action should include the following information:
  - Action title
  - Jurisdiction(s) involved
  - Mitigation Technique category (see handout)
  - Hazard(s) addressed
  - Estimated Cost
  - Potential funding source(s)
  - Lead agency or department
  - Implementation schedule

34

FEMA Funding Sources

- Hazard Mitigation Grant Program (HMGP)
- Flood Mitigation Assistance (FMA) Program
- Pre-Disaster Mitigation (PDM) Program
- Repetitive Flood Claims (RFC) Program
- Severe Repetitive Loss (SRL) Program

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Timeline

Date	Task Item
February 2011	Planning Process began
March 14, 2011	Kick-off Meeting
March 15, 2001 → April 29, 2011	Risk Assessment
Week of March 28, 2011	Capability Assessment
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March 5, 2011→ June 13, 2011	Mitigation Strategy Update Production
June 16, 2011	Conduct Public Meeting
July 2011	Deliver to PEMA/FEMA for Review
Fall 2011	Distribute to Municipalities for Adoption

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Question and Answer Session

Pike County Hazard Mitigation Plan Update Project Website
www.PikeHMP.com

NEXT MEETING: PUBLIC MEETING, THURSDAY, JUNE 16TH, 6:30 PM, PIKE COUNTY CONSERVATION DISTRICT BUILDING

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Pike County Hazard Mitigation Plan Update
Risk Assessment Summary and Mitigation Solutions Workshop

May 5, 2011

Name	Title	Jurisdiction/ Organization	Telephone	E-Mail Address
BOB HELLYER	TWP SUPERVISOR	PORTER TWP	570-766-1140	HELMAN2399@AOL.com
Michael Mrozinski	Asst. Planning Dir.	Pike County	570-296-7500	MMROZINSKI@PikePA.org
BOB MYERS	EM. MANAGE.	SHOHOLA TWP	570 559-7394	SHOHTWP@PTD.NET
Ed Bland	Asst EM management	Lehman Twp	570-588-9365	LehmanPK@PTD.Net
Stanley Whittaker	E.M	Lehman Township	570 588 9365	" " "
Gary L. Babb	EM.C	MATAMORAS	914-443-7254	matamorasema@yahoo.com
Robert Ewbank	Twp Supervisor /EMC	Westfall	570-491-2897	robertewbank@g.mail.com
Mark Moglia	Chief of School Police	Delaware Valley Schools	570-296-4922	MMoglia@dvsd.org
William Milkulak	Dingman Twp EMA	Dingman Twp	570 2860493	billmik@ptd.net
Gene Reynolds	Sr. Specialist Emerg. Mgmt.	O&R	845 577 3170	reynoldsg@oru.com
MARYANN HUBBARD	EMA & Twp Supv.	Greene Twp	570 840 7099	DEACONHUBBARD@YAHOO.com
Kyle Wright	Delaware Twp EMA	Delaware Twp	570 828 4282	Kwright@pikeals.org
Vincent Albanese	Fire Chief	Lackawaxen Twp	570-685-5605	njfirechief@ltis.net

Name	Title	Jurisdiction/ Organization	Telephone	E-Mail Address
Roger Mallory	Coordinator	Pike Co EMA	570-296-6714	ema@pikepa.org
Bill Delling	Forest Fire Spec Supr.	DCNR Forestry	570 226 3616	wdelling@state.pa.us

Pike County
All-Hazard Mitigation Plan
Risk Assessment / Mitigation Solutions Workshop Minutes

DATE: Thursday, May 5, 2011

TIME: 6:30 p.m.

LOCATION: Pike County Conservation District

The following people were in attendance:

Name	Organization/ Affiliation
Rob Hellyer	Porter Township
Ed Bland	Lehman Township
Stanley Whittaker	Lehman Township
Gary Babb	Matamoras Borough
Robert Ewbank	Westfall Township
Mark Moglia	Delaware Valley School District
William Mikulak	Dingman Township
Gene Reynolds	Orange & Rockland Pike County Light & Power Company
Maryann Hubbard	Greene Township
Kyle Wright	Delaware Township
Vincent Albanese	Lackawaxen Township
Bill Delling	DCNR Forestry
Roger Maltby	Pike County EMA
Michael Mrozinski	Pike County Office of Community Planning
Alexis Melusky	Baker

MEETING HANDOUTS:

- Agenda
- Countywide Risk Factor Evaluation
- Jurisdictional Risk Factor Evaluation
- Proposed Goals and Objectives Evaluation
- Review of 2006 Mitigation Projects (if applicable)
- Mitigation Action Form

MEETING OVERVIEW

- **Welcome and Introductions**

Mr. Mrozinski welcomed everyone and explained that it was the second meeting of the HMP update process. He explained that FEMA requires that County HMPs be updated every 5 years. Everyone in the room introduced themselves.

Mr. Mrozinski introduced Ms. Melusky and she explained that Baker is working with 17 PA Counties to update their hazard mitigation plans. She discussed the evening's agenda.

- **Project Overview and Kick-Off Meeting Summary**

Ms. Melusky gave the definition of hazard mitigation which is any sustained action taken to reduce or eliminate long-term risk to life and property resulting from natural and human-made hazards. She explained that they are updating the County 2006 HMP. She explained why HMPs are important and said that counties have to have a HMP in place and municipalities must participate in the planning process in order to be eligible for certain FEMA disaster mitigation funds. In addition, municipalities must adopt the plan once approved.

Ms. Melusky next discussed objectives for the plan update process. The first objective is to reconvene the planning team and facilitate public involvement. She asked if any municipal representatives participated in the planning process for the 2006 Pike County HMP. Mr. Mrozinski said that the 2006 plan was completed on an accelerated timeline and municipalities were primarily contacted via phone and email. Ms. Melusky said the plan would be looking at what has changed in the last five years.

Ms. Melusky next discussed the 6 steps of the planning process:

- Organize resources and reconvene the planning team
- Update the plan's risk assessment (includes the hazard information)
- Update the capability assessment (Ms. Melusky mentioned the capability assessment survey)
- Update the mitigation strategy (includes goals, objectives, and actions)
- Update the plan maintenance process (includes what the County will do over the next five years to continually update it and assess things after a major disaster occurs)
- Obtain mitigation plan approval and adoption

Ms. Melusky explained that Baker was contracted by PEMA to work on the Pike County HMP update. PEMA recently standardized the way that county hazard mitigation plans would be done in the state. She said that PEMA would like County HMPs to have the following components: a community profile, a planning process section, a risk assessment, a capability assessment, a mitigation strategy, and plan maintenance component. The community profile should contain information about the geography, environment, population, demographics, and land use of the County. The planning process chapter would contain information about plan meetings; the planning team, public and stakeholder participation, and how existing planning mechanisms were incorporated. The risk assessment section would include hazard profiles with information on each hazard's location and extent, past occurrences, the range of magnitude, probability of future occurrences, and a vulnerability assessment. The capability assessment would include information on county and municipal capabilities associated with hazard mitigation. The mitigation strategy contains the plan's goals, objectives, and actions. The plan maintenance section describes how the County will monitor and update the plan over the next 5 years until the plan expires and continue to involve the public.

Ms. Melusky then discussed the kickoff meeting that took place on March 14th. She said that at that meeting, capability assessment surveys were passed out and hazards were evaluated using a worksheet. She said hazards from the 2006 plan were evaluated and several new hazards were selected from PEMA's Standard List of Hazards. She said drowning, pandemic, and hurricane, tropical storm, and nor'easter would be included in the plan update.

- **Risk Assessment**

Ms. Melusky displayed a list of the natural and human-made hazards that would be profiled in the plan. She first showed a map of special flood hazard areas. She explained that the plan also have maps showing what critical facilities of each municipality (such as hospitals, municipal buildings etc) are located in floodplains and thus vulnerable to flood, flash flood, and ice jams. Next Ms. Melusky showed a map of wildfire vulnerability which is based on DCNR data. She pointed out that all but a few municipalities were considered high risk to wildfires. She showed a map of past occurrences of wildfires. Mr. Mrozinski noted that the map covered only a six year period but showed an immense number of past wildfire occurrences. Ms. Melusky then showed a map of average annual snowfall in the County. The southern portion of the County receives less snowfall than the northern portion.

She then talked about hazardous material releases (environmental hazards). She showed a map of hazardous material facilities obtained from an EPA database which include SARA facilities, TRI sites, superfund sites and other facilities. Ms. Melusky pointed out that there are only 4 EPA-identified hazardous material facilities in the County. Someone pointed out that train accidents can also release in hazardous material releases and Ms. Melusky said that they will be discussed in the plan as well as highway accidents that result in releases.

Next Ms. Melusky discussed hurricanes, tropical storms, and nor'easters. She pointed out that the seasonal probability of hurricanes in Pike County is approximately 6 percent. Next Ms. Melusky showed a map of tornado and windstorm probability. Pike County is displayed as having a 1-5% chance of tornados or windstorms. She also showed a map of past occurrences of three tornados. Someone pointed out that there are likely more tornados that have taken place in the County than are showed on the map. In particular there should be two shown in Greene Township, one of which occurred in 1998. In addition, there was a tornado that occurred on July 20, 2010 that originated in Wayne County and tracked into Lackawaxen Township.

Ms. Melusky then showed a drought map and a map for transportation volumes. She showed a map of nuclear facilities with 50 mile EPZs that affect Pike County. She pointed out that she did not have a chance to add the Indian Point facility (located in NY state) to the map yet but would do so for the final plan. Mr. Maltby pointed out that Matamoras and a little bit of Westfall would fall within the 50-mile EPZ.

She showed a map of gas lines and PPL lines. She pointed out that there are points for "utility sites" and Mr. Mrozinski said they likely were transformers or substations. The blue points are substations and the gold points are gate stations. Mr. Mrozinski said an issue in Pike County has been to add pressure for the gas lines to increase capacity.

Mr. Mrozinski said there are several leases for Marcellus shale drilling but not any permits yet.

Ms. Melusky showed a map of dams in the County. There are quite a few high hazard dams which require emergency action plans. Mr. Maltby said that in 1955 there was a dam failure of the Egypt Meadow dam in Blooming Grove and Palmyra. He said it triggered the failure of other small dams too. Someone else pointed out that the map was missing the dam on the East Branch of the Wallenpaupack. A dam failure also occurred at this dam in 1955. Mr. Maltby pointed out that there are also threats of dam failures that could occur outside of the County such as the New York City Reservoir. Also the Mongaup Reservoir system in Sullivan County New York poses a threat to Pike County. He said if that dam failed the water level of the Delaware River would go up by 18 feet and they would have approximately 90 minutes to evacuate the area. If the County was already in a flood, the flood stage would be even higher. The dams in Wayne County are flood control dams.

Ms. Melusky showed a map of earthquake risk. Pike County is in a moderate risk zone although there have been no earthquake epicenters in the County.

Ms. Melusky showed the risk factor table and explained that hazards were then ranked according to risk using a methodology. She said there are 5 categories used for the ranking to determine a risk factor score: probability, impact, spatial extent, warning time, and duration. Each hazard is assigned a score for each of those risk assessment categories which is used to determine a risk factor for each hazard. Hazards with a score above 2.5 are considered high risk hazards. Hazards with a score from 2 to 2.4 are considered moderate hazards. Anything under 2 is considered a low risk hazard. She handed out a worksheet with the countywide risk factor table and asked that everyone look it over and provide comments. She showed a slide with the detailed methodology for each risk factor category. She pointed out that the table is for risk factors county-wide and that the next exercise would discuss jurisdictional risk to hazards. Someone pointed out that for drowning, the number for probability should be higher since there is more than one drowning that occurs each year in the County.

Ms. Melusky then asked everyone to flip over their worksheet. The back contained a table of jurisdictional risk to hazards. For each municipality, it was determined if it has the same risk as the county for each hazard, a greater risk, or a less risk. Ms. Melusky asked participants to look only at the row for their municipality and mark whether they agree or disagree with their risk compared to the county risk for each hazard. Someone pointed out that some jurisdictions are more at risk to winter storms because of their altitude. Mr. Mrozinski asked if Milford Beach was the only swimming beach that Pike County has on the Delaware River and someone said that there is one in Westfall Township. There is a boat launch there and people swim there.

- **Mitigation Strategy**

Ms. Melusky then talked about the mitigation strategy which is the approach you take to reduce or avoid long-term vulnerabilities to the identified hazards. She said it includes goals, objectives, actions, and projects. She then explained the difference between goals and objectives. Goals are overarching, general guidelines for what a community would like to achieve. An objective is something more specific and measureable that is

implemented to achieve the identified goal. She gave an example of a goal and objective.

Ms. Melusky explained that she had a conference call with the County to discuss the goals and objectives from the 2006 plan. The goals and objectives from the 2006 HMP focused on the Comp Plan so they were reworded to focus more on hazard mitigation planning.

Ms. Melusky then handed out form listing proposed goals and objectives for the County HMP. She asked that everyone look over the goals and objectives and make comments if they would like. Participants can also add their own goals and objectives. She said that in the next exercise, communities would have the opportunity to discuss projects/actions.

Ms. Melusky then discussed six mitigation strategies. FEMA has six mitigation techniques: prevention, property protection, public education and awareness, natural resource protection, structural project implementation, and emergency services. She gave examples for each strategy.

Ms. Melusky gave an example of an action and explained how it is very specific. She explained that Mr. Mrozinski emailed a pdf of municipal projects that were included in the 2006 HMP. She asked that everyone mark on the worksheet whether each project was continuous, completed, in progress, discontinued, or progress was unknown. She also passed out mitigation action forms and explained that municipalities should use that form to record new actions or projects that they would like to include in the plan update. She said that they were looking for projects that could realistically be completed within 5 years. She also handed out a worksheet with mitigation project ideas.

Ms. Melusky then discussed several of the FEMA funding sources. She said when a municipality would like to apply for funding, the County and Tom Hughes (State Hazard Mitigation Officer) would be good resources to assist with the grant applications.

- **Planning Timeline**

Ms. Melusky then went over the below timeline for the plan. She said that the next meeting would be on June 16, 2011 at 6:30 PM at the Pike County Conservation District and would be a public meeting. She said there would be a newspaper notice advertising the next meeting. There would be a 30-day comment period to review a draft of the plan. She said that municipalities would have to have their municipality pass a resolution and adopt the plan once approved by FEMA. She pointed out that once the first municipality adopts the plan, the other municipalities have one year to adopt it. There was discussion regarding what size room would be needed for the public meeting and the meeting attendees were told to assume that the meeting would be in the same location unless the attendees hear otherwise.

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- **Question and Answer Session**

  Ms. Melusky reminded everyone to visit the project website www.PikeHMP.com and said that attendees should check the website to obtain copies of the forms from the meetings. There were no additional comments or questions.

  The meeting concluded at 8:00 pm.
  A recording of this meeting may be obtained by contacting Michael Baker Jr., Inc.

Part I: Countywide Risk Factor Evaluation

Name/Title_____ Jurisdiction/Organization_____

Pike County - Ranking of hazard types based on Risk Factor (RF) methodology.

HAZARD RISK	HAZARD NATURAL (N) or MAN-MADE (M)	RISK ASSESSMENT CATEGORY					RISK FACTOR	COMMENTS
		PROBABILITY	IMPACT	SPATIAL EXTENT	WARNING TIME	DURATION		
HIGH	Flood, Flash flood, Ice jam (N)	4	3	3	2	3	**3.2**	
	Wildfires (N)	4	2	3	4	3	**3.1**	
	Winter Storm (N)	4	2	4	1	3	**3.0**	
MODERATE	Drought (N)	2	1	4	1	4	**2.2**	
	Transportation accidents (M)	4	1	1	4	1	**2.2**	
	Hurricane, Tropical Storm, Nor'easter (N)	2	2	3	1	3	**2.2**	
	Environmental Hazards - (Hazardous Material Release) (M)	2	2	2	3	2	**2.1**	
	Tornados and Windstorms (N)	2	2	2	4	1	**2.1**	
	Pandemic (N)	1	2	3	1	4	**2.0**	
	Utility Interruption (M)	2	1	2	4	3	**2.0**	
	Urban Fire and Explosion (M)	2	2	1	4	2	**2.0**	
LOW	Nuclear Incidents (M)	1	2	2	3	3	**1.9**	
	Terrorism (M)	2	2	1	4	1	**1.9**	
	Dam Failure (M)	1	2	1	4	2	**1.7**	
	Drowning (M)	2	1	1	4	1	**1.6**	
	Earthquake (N)	1	1	2	4	1	**1.5**	

Part II: Jurisdictional Risk Factor Evaluation

JURISDICTION	Calculated Countywide Risk Factor by Hazard and Comparative Jurisdictional Risk																
	IDENTIFIED HAZARD AND CORRESPONDING COUNTYWIDE RISK FACTOR																COMMENTS
	Flood, Flash Flood, Ice Jam	*Wildfire*	*Winter Storm*	*Drought*	*Transportation Accident*	*Hurricane, Tropical Storm, Nor'easter*	*Environmental Hazards (Hazardous Material Release)*	*Tornado and Windstorm*	*Pandemic*	*Utility Interruption*	*Urban Fire and Explosion*	*Nuclear Incidents*	*Terrorism*	*Dam Failure*	*Drowning*	*Earthquake*	
	3.2	***3.1***	***3.0***	***2.2***	***2.2***	***2.2***	***2.1***	***2.1***	***2.0***	***2.0***	**2.0**	**1.9**	**1.9**	**1.7**	**1.6**	**1.5**	
Blooming Grove Township	=	=	=	=	>	=	=	=	=	=	=	=	=	=	=	=	
Delaware Township	=	=	=	=	=	=	>	=	=	=	=	=	=	=	=	=	
Dingman Township	=	=	=	=	>	=	=	=	=	=	=	=	=	=	=	=	
Greene Township	=	<	=	=	>	=	=	=	=	=	=	>	=	=	=	=	
Lackawaxen Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
Lehman Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
Matamoras Borough	=	=	=	=	>	=	>	=	=	=	>	=	=	<	=	=	
Milford Borough	=	=	=	=	=	=	=	=	=	=	>	=	=	=	=	=	
Milford Township	=	=	=	=	>	=	>	=	=	=	=	=	=	=	=	=	
Palmyra Township	=	=	=	=	>	=	=	=	=	=	=	=	=	=	>	=	
Porter Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
Shohola Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
Westfall Township	=	=	=	=	>	=	>	=	=	=	=	=	=	=	=	=	

< Means LESS than the County Risk Factor **>** Means GREATER than the County Risk Factor **=** Means equal to the County Risk Factor

Name_____ **Jurisdiction**_____

Instructions: Please review the following proposed mitigation Goals and Objectives which are to be included in the Mitigation Strategy section of the County Hazard Mitigation Plan. Use the comment boxes to provide feedback or to suggest modification of any of the proposed goals or objectives. You may suggest additional objectives below each goal, or new goals and objectives on the last page of this exercise.

Proposed Goals and Objectives		Comments
GOAL 1	*Provide for properly managed and environmentally sound growth and disaster-resistant development.*	
Objective A	*Provide for better stormwater and floodplain management planning and implementation.*	
Objective B	*Encourage and facilitate the development or revision of comprehensive plans and zoning/land-use ordinances to consider limiting development in high-hazard areas and reducing its impact.*	
Objective C	*Encourage and help to facilitate Multi-Municipal Planning in Pike County.*	
Objective (New)		

GOAL 2	*Reduce the potential impact of natural and human made hazards on property.*	
Objective A	*Identify and implement structural and property protection projects to reduce the impacts from flooding including acquisition, elevation and relocation projects.*	
Objective (New)		

Proposed Goals and Objectives		Comments
GOAL 3	*Enhance and improve emergency services provided to the growing population of Pike County.*	
Objective A	*Provide residents with adequate warning of potential floods and other weather related events.*	
Objective B	*Ensure that emergency response services and critical facilities are adequate and are not interrupted by hazards.*	

Proposed Goals and Objectives		Comments
Objective (New)		

GOAL 4	*Reduce vulnerability including loss of life and damage to assets from natural hazards.*	
Objective A	*Identify and implement mitigation projects to reduce flooding, reduce/eliminate sewage leakage and inflow/infiltration problems.*	
Objective (New)		

GOAL 5	*Conserve, protect and enhance existing natural and water resources.*	
Objective A	*Provide appropriate safeguards for the preservation of the quality of stream corridors, watershed areas, and floodplains.*	
Objective B	*Ensure that streams and rivers are functioning properly to reduce flooding.*	
Objective (New)		

GOAL 6	*Increase awareness, understanding, and preparedness across all sectors by encouraging hazard risk, preparedness, and mitigation related education and outreach activities.*	
Objective A	*Develop partnerships both at the local, state and federal government level as well as with local business, private communities, civic and volunteer organizations and other appropriate non-traditional partners to continue to develop a County-wide approach to identifying and implementing mitigation actions.*	
Objective (New)		

Suggested Additional Goals and/or Objectives		Comments
GOAL		
Objective		
Objective		
Objective		
Objective		

GOAL		
Objective		
Objective		
Objective		
Objective		

GOAL		
Objective		
Objective		
Objective		
Objective		

Mitigation Action Form

Instructions: Complete an action form for each action.

Community Name:	***Action Title/Description:***
Technique (Category)	
Hazard(s) Addressed	
Priority (High, Medium, Low)	
Estimated Cost	
Potential Funding Source(s)	
Lead Agency/Department	
Implementation Schedule	

Mitigation Techniques

Prevention
Government administrative or regulatory actions or processes that influence the way land and buildings are developed and built. These actions also include public activities to reduce hazard losses. Examples include planning, zoning, building codes, subdivision regulations, hazard specific regulations (such as floodplain regulations), capital improvement programs, and open space preservation and stormwater regulations.

Property Protection
Actions that involve the modification of existing buildings or infrastructure to protect them from a hazard, or removal from the hazard area. Examples include acquisition, elevation, relocation, structural retrofits, flood proofing, storm shutters, and shatter resistant glass. Most of these techniques are considered “sticks and bricks”; however, this category also includes insurance.

Public Education and Awareness
Actions to inform and educate citizens, elected officials, and property owners about potential risks from hazards and potential ways to mitigate them. Such actions include hazard mapping, outreach projects, library materials, real estate disclosures, hazard information centers, and school age / adult education programs.

Natural Resource Protection
Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. These actions include sediment and erosion control, stream corridor restoration, forest and vegetation management, wetlands restoration/preservation, slope stabilization, and historic properties and archeological site preservation.

Structural Projects
These mitigation projects are intended to lessen the impact of a hazard by modifying the environment using structures. Such structures include stormwater controls (culvert), dams/dikes/levees, beach nourishment, and safe rooms.

Emergency Services
These projects may not typically be considered mitigation techniques, but serve to reduce the impacts of a hazard event on people and property. These actions are often taken prior to, during, or in response to an emergency or disaster. Examples include warning systems, evacuation planning and management, emergency response training and exercises, and emergency flood protection procedures.

Mitigation Action Ideas by Hazard

Flood

Ninety percent of federal disaster declarations are for flood events. Response and recovery costs can be extremely high, so where risks are apparent it makes sense to take actions that prevent damage from occurring. If flood damage cannot be fully prevented, there may be mitigation techniques that lessen the damage. Flooding addressed in this section can be from high ground water, overland flooding from rivers or streams, or from a dam failure.

Mitigation Measure	Explanation	Category
Acquisition	Land with structures may be purchased by and titled in the name of a local governing body that can remove structures and enforce permanent restrictions on development.	Property Protection
Relocation	A structure may be moved to a less hazardous location.	Property Protection
Elevation	A structure may be mechanically lifted so that the lowest floor, including the basement, is raised above the base flood elevation. Utilities or other mechanical devices should also be raised above expected flood levels.	Property Protection
Dry-Floodproofing	It may be possible to keep water out by strengthening walls, sealing openings, or using waterproof compounds or plastic sheeting on walls. Dry-floodproofing is not recommended for residential construction but may be a reasonable alternative for non-residential structures-either in new construction, while making a substantial improvement, or while repairing a substantially damaged structure.	Property Protection
Wet-Floodproofing	Using water resistant paints or other materials can allow for easy cleanup after floodwater exposure in accessory structures or in a garage area below an elevated residential structure. In a basement, wet-floodproofing may be preferable to attempting to keep water out completely, because it allows for controlled flooding to balance exterior and interior water forces and discourage structural collapse. Wet-floodproofing may not be used for basements in cases of new construction, substantial improvement, or substantial damage.	Property Protection
Floodplain/Coastal Zone Management	Determining and enforcing acceptable land uses through planning and regulation may not prevent inevitable flooding in flood-prone areas, but planning and regulation can alleviate the risk of damage by limiting exposure in such hazard areas. Floodplain and coastal zone management can be included in comprehensive planning.	Prevention
Capital Improvement Plans	Infrastructure planning decisions can affect flood hazard mitigation. For example, decisions to extend roads or utilities to an area may increase exposure. Some communities may consider structural flood protection such as levees or floodwalls.	Prevention
Zoning Ordinance Adoption or Amendments	Examples of zoning methods that affect flood hazard mitigation include: I) adopting ordinances that limit development in the floodplain; 2) limiting the density of developments in the floodplain; and 3) requiring that floodplains be kept as open space.	Prevention
Subdivision Ordinances	Subdivision design standards can require elevation data	Prevention

Mitigation Measure	Explanation	Category
or Amendments	collection during the platting process. Lots may be required to have buildable space above the base flood elevation.	
Building Code Adoption or Amendments	Requirements for building design standards and enforcement include the following possibilities: I) that a residential structure be elevated; and 2) that a nonresidential structure be elevated or floodproofed.	Prevention
Conservation Easements	Conservation easements may be used to protect environmentally significant portions of parcels from development. They do not restrict all use of the land. Rather, they direct development to areas of land that are not environmentally significant.	Natural Resource Protection
Transfer of Development Rights	In return for keeping floodplain areas in open space, a community may agree to allow a developer to increase densities on another parcel that is not at risk. This allows a developer to recoup potential losses from non-use of a floodplain site with gains from development of a non-floodplain site.	Prevention
Purchase of Easement/Development Rights	Compensating an owner for partial rights, such as easement or development rights, can prevent a property from being developed contrary to a community's plan to maintain open space. This may apply to undeveloped land generally or to farmland in particular.	Prevention
Stormwater Management Ordinances or Amendments	Stormwater ordinances may regulate development in upland areas in order to reduce stormwater run-off. Examples of erosion control techniques that may be employed within a watershed area include proper bank stabilization with sloping or grading techniques, planting vegetation on slopes, terracing hillsides, or installing riprap boulders or geotextile fabric.	Prevention
Multi-Jurisdiction Cooperation Within Watershed	Forming a regional watershed council helps bring together resources for comprehensive analysis, planning, decision-making, and cooperation.	Prevention
Comprehensive Watershed Tax	A tax can be used as a mitigation action in several ways: 1) tax funds may be used to finance maintenance of drainage systems or to construct reservoirs; 2) tax assessments may discourage builders from constructing in a given area; or 3) taxes may be used to support a regulatory system.	Prevention
Post-Disaster Recovery Ordinance	A post-disaster recovery ordinance regulates repair activity, generally depending on property location. It prepares a community to respond to a disaster event in an orderly fashion by requiring citizens to: I) obtain permits for repairs, 2) refrain from making repairs, or 3) make repairs using standard methods.	Prevention
Floodplain Ordinances or Amendments	Communities that choose to participate in the NFIP Amendments must adopt ordinances that meet minimum federal and state requirements. Communities may pass more stringent ordinances to reduce risk even further.	Prevention
Flood Insurance	Purchasing flood insurance does not prevent a flood from occurring, but it does mitigate a property owner's financial exposure to loss from flood damage. National Flood	Prevention

Mitigation Measure	Explanation	Category
	Insurance Program (NFIP) policies are only available in communities that participate in the program, which is administered by FEMA.	
Community Rating System	Also administered by FEMA, the Community Rating System (CRS) is a companion program to the NFIP. It rewards a community for taking actions over and above minimum NFIP requirements with the goal of further reducing flood damages in the community. The more actions a community takes, the lower the premiums for flood insurance within that community.	Prevention
Updated Floodplain Mapping	By taking the initiative locally to more accurately map problem areas with information not already on FEMA maps, a community can warn residents about potential risks that may not have been anticipated. Upgrading maps provides a truer measure of risks to a community.	Public Education and Awareness
Storm Drainage Systems	Flood mitigation can involve installing, re-routing, or increasing the capacity of a storm drainage system that may involve detention and retention ponds, drainage easements, or creeks and streams. It can 'include separation of storm' and sanitary sewerage systems as well as higher engineering standards for drain and sewer capacity.	Structural Projects
Drainage System Maintenance	At most times, a drainage system will do its job and move water to intended areas. However, if a system is not maintained, erosion, material dumping, or deterioration of man-made reinforcement materials may reduce the carrying capacity of a stream. Therefore, regular maintenance, such as sediment and debris clearance, is needed so that the stream may carry out its design function. Also important is detection and prevention/discouragement of discharges into stormwater/ sewer systems from home footing drains, downspouts or sump pumps.	Structural Projects
Drainage Easements	Communities may consider obtaining easements for planned and regulated public use of privately owned land for temporary water retention and drainage.	Prevention
Wetland Protection	With special soils and hydrology, wetlands serve as natural collection basins for floodwaters. Acting like sponges, wetlands collect water, filter it, and release it slowly into rivers and streams. Protecting and preserving wetlands can go a long way toward preventing flooding in other areas.	Natural Resource Protection
Roads	Roads are needed to get people and goods from place to place. In addition to planning for traffic control during floods, there are various construction and placement factors to consider when building roads. To maintain dry access, roads should be elevated above the base flood elevation. However, if a road creates a barrier it can cause water to pond. Where ponding is problematic, drainage and flow may be addressed by making changes to culvert size and placement. In situations where flood waters tend to wash roads out, construction, reconstruction, or repair can include not only attention to drainage but also stabilization or armoring of vulnerable shoulders or embankments.	Property Protection
Structural Flood Control	Structural flood control measures (e.g., levees, dams, or	Structural Projects

Mitigation Measure	Explanation	Category
Measures	floodwalls) channel water away from people and property. Structural measures may also increase drainage or absorption capacities (e.g., detention and retention basins, relief drains, spillways, drain widening/dredging or rerouting, logjam and debris removal, extra culverts, bridge modification, dike setbacks, flood gates and pumps, or channel redirection). However, structural measures may cause an increase in the base flood elevation. History has shown that structures that channel water may create a false sense of security and result in greater damage to nearby properties if the structures fail.	
Minor Structural Projects	A minor structural project is similar to, but smaller and more localized than a structural project, in that the measures used to reduce flooding may include levees, floodwalls, dams or other activities that channel water away from people or property. However, a minor structural project should only be constructed in areas that cannot be mitigated through nonstructural activities, or where structural activities are not feasible due to low densities.	Structural Projects
Dam and Levee Maintenance	Although dams and levees may have been constructed properly, failure to maintain them can lead to significant loss of life and property if they are stressed and broken or breached during a flood event. An inspection, maintenance and enforcement program helps to ensure continued structural integrity. Dams or levees need to be kept in good repair. Unnecessary or old and structurally unsound dams should be removed. Planning for dam breaks can include constructing emergency access roads as well as automating pump and flood gate operation. And it never hurts to regulate development in a dam's hydraulic shadow, where flooding would occur if there were a severe dam failure.	Structural Projects
Community Outreach and Education	Communities may use outreach programs to: I) advise homeowners of risks to life, health and safety; 2) facilitate technical assistance programs that address measures that citizens can take; or 3) facilitate funding for mitigation measures. Driver safety strategies for flooded areas can be addressed through driver safety/education classes and by the media. Local officials can be trained on flood fighting, floodplain management, flood proofing, and traffic control during flooding, and other measures.	Public Education and Awareness
Debris Control	Community members can participate in debris control by securing debris, yard items, or stored objects that may otherwise be swept away, damaged, or pose a hazard if floodwaters would pick them up and carry them away. Additionally, a community can pass and enforce an ordinance that regulates dumping.	Property Protection/Prevention
Hazardous and Buoyant Material Protection	Containers of hazardous materials such as petroleum or chemicals should not be located in a flood hazard area. If such a location is necessary, hazardous material containers need to be anchored, because the contents can contaminate water and multiply the damaging effects of flooding by causing fires or explosions, or by otherwise making structures unusable. Also, buoyant materials should be anchored, because if they float downstream, they may cause additional damage to buildings or bridges or may plug a stream resulting in higher flood heights.	Property Protection

Mitigation Measure	Explanation	Category
Flood Warning	In addition to a communication strategy, a flood warning system may consist of people or machines monitoring water level with stream gauges. Although a flood warning system generally does not provide long-term damage reduction, it can alleviate health and safety risk by providing citizens time to escape and possibly remove belongings that could be damaged. NOAA weather radio and EAS broadcasts can be incorporated into a community's flood warning system.	Emergency Services
Manufactured Homes	Manufactured or mobile homes should be elevated above the base flood elevation and anchored, or more preferably, kept out of the floodplain.	Property Protection

Landslide and Debris Flow

Landslides or debris flow can be caused by the same high water levels or rain that results in flooding. Landslides can also be caused by earthquakes and are typically present in areas of high topographic relief. Although many mitigation measures resemble those for flooding, landslides pose unique considerations.

Mitigation Measure	Explanation	Category
Mapping	Local governments, developers, and residents can make better decisions using maps. Soil types, slope percentage, drainage, or other critical factors are used to identify landslide prone areas.	Public Education and Awareness
Building Codes	Building codes can set construction standards, including minimum foundation requirements, in landslide-prone areas.	Prevention
Zoning Ordinances	Zoning ordinances may be used to create buffers between structures and high-risk areas.	Prevention
Slide-Prone Area Ordinance	A special purpose ordinance for slide-prone areas may be used to limit fill or dumping, as well as address drainage and other landslide related problems.	Prevention
Code Enforcement	A strong community commitment to code enforcement is necessary to ensure compliance with building codes and zoning ordinances.	Prevention
Drainage Control Regulations	Drainage regulations are similar to storm water management regulations. By controlling drainage, a community can reduce the risk of landslides resulting from saturated soils.	Prevention
Grading Ordinances	Grading ordinances require developers and landowners to obtain permits prior to filling or regrading. Such ordinances may also provide specific design standards.	Prevention
Hillside Development Ordinances	Hillside development ordinances are special purpose Ordinances ordinances that set specific standards for construction on hillsides.	Prevention
Subdivision Ordinances	Subdivision ordinances set guidelines on how land will be divided, the placement and size of roads, and the location of infrastructure. Such ordinances can also be used to regulate	Prevention

Mitigation Measure	Explanation	Category
	open space and buildable areas.	
Geological Hazard Overlay Zone	A geological hazard overlay zone requires a detailed geo-technical analysis prior to any construction activity. Used in association with building codes, this may reduce damage potential by providing clear information about risk.	Prevention
Sanitary System Codes	Sanitary system codes can reduce the effect of drainage on landslides by limiting the type and location of sanitary systems.	Prevention
Open Space Designation	Open space designations keep landslide prone areas undeveloped.	Prevention
Relocation	Structures may be moved to less hazardous locations.	Property Protection
Acquisition	Land and structures may be purchased by and titled in the name of a local governing body that can remove structures and enforce permanent restrictions on development.	Property Protection
Restraining Structures	Restraining structures may be designed and used to hold soil in place.	Structural Projects
Debris-Flow Measures	Debris-flow measures may include stabilization, energy dissipation, and flow control measures, all of which may reduce damage in-sloping areas.	Structural Projects
Grading	Grading can be used to increase slope stability, depending on types of soils, height of fill or cut, and compaction.	Property Protection
Vegetation Placement and Management Plans	Various types of vegetation increase soil stability through root length and strength and by absorbing precipitation. Management plans are aimed at ensuring long-term maintenance of vegetation appropriate for an area.	Prevention
Utility Location	Placing utilities outside of landslide areas decreases the risk of service disruption.	Property Protection
Abatement Districts	A special taxing district, such as an abatement district, can be used to pool resources to mitigate common hazards.	Prevention
Restrictive Covenants	A legally binding agreement in a private development can be used to impose restrictions on land use.	Prevention

Thunderstorm/Lightning

Damage from thunderstorms and lightning is often underestimated. Everyone should have an appreciation for the dangers of lightning. Although not entirely preventable, damage and life safety risk from these events can be minimized.

Mitigation Measure	Explanation	Category
Community Outreach and Education	Communities may use outreach programs to promote awareness of thunderstorm dangers. Driver safety strategies for severe weather events can be addressed by driver safety/education classes and by the media.	Public Education and Awareness

Mitigation Measure	Explanation	Category
Early Warning Systems	Local and state governments can invest in public early warning systems/networks, as well as train people to serve as weather spotters.	Emergency Services
Surge Protectors and Lightning Protection	Surge protection can be installed on critical electronic Lightning Protection equipment. Lightning protection devices and methods such as lightning rods and grounding, can be installed on a community's communications infrastructure and other critical facilities.	Property Protection
Building Construction	Public and private buildings can be designed with structural bracing, shutters, laminated glass in window panes, and hail-resistant roof shingles or flashing to minimize damage.	Structural Projects
Burying Power Lines	Buried power lines offer the security of uninterrupted power during and after storms. However, consideration needs to be made for maintenance and repair, particularly in cold climates where soil freezes more readily.	Property Protection

Tornado

Tornadoes can strike anywhere and cause extensive damage. Damage and life safety risk may not be entirely preventable, but it can be minimized.

Mitigation Measure	Explanation	Category
Construction Standards and Techniques	To strengthen public and private structures against severe wind damage, communities can require or encourage wind engineering measures and construction techniques that may include structural bracing, straps and clips, anchor bolts, laminated or impact-resistant glass, reinforced pedestrian and garage doors, window shutters, waterproof adhesive sealing strips, or interlocking roof shingles. Also, architectural design can make roofs less susceptible to uplift.	Prevention
Safe Rooms	Risk to lives can be improved through construction and use of concrete safe rooms in homes and shelter areas of mobile home parks, fairgrounds, shopping malls, or other vulnerable public areas.	Structural Projects
Anchoring Manufactured Homes	Damage and injury can be prevented by anchoring manufactured homes and exterior attachments such as carports and porches.	Property Protection

Severe Wind

Severe wind can be as destructive as tornadoes. Damage and life safety risk may not be entirely preventable, but it can be minimized.

Mitigation Measure	Explanation	Category
Roofing Shingles	Requiring the use of special roofing shingles designed to interlock and resist uplift forces in extreme wind conditions can reduce damage to a roof or to other structures.	Property Protection

Mitigation Measure	Explanation	Category
Building Construction Standards	Engineered construction can accommodate foundation design, braced elevated platforms, and the ability of a structure to withstand the lateral forces of winds and waves.	Prevention
Manufactured Home Tie-Downs	The risk of manufactured home damage can be reduced by using tie-downs with anchors and ground anchors appropriate for the soil type.	Property Protection
Designed-Failure Mode	Designed-failure mode refers to power line design that allows for lines to fall or fail in small sections rather than as a complete system, so restoration can be done more quickly.	Property Protection/Prevention

Extreme Temperature

When temperatures reach levels that are extremely high or extremely low, they pose dangers that can be alleviated by planning for how to handle such situations.

Mitigation Measure	Explanation	Category
Outreach/Public Awareness	A local government can organize outreach to vulnerable populations during periods of extreme temperature, including establishing and promoting accessible heating or cooling centers in the community.	Public Education and Awareness
Heating Requirements	Housing/landlord codes can require minimum temperatures.	Prevention

Winter Weather/Snowstorms

Proper preparation can decrease the risks of injury that can occur during cold weather, and snowstorms in particular.

Mitigation Measure	Explanation	Category
Burying Power Lines	Burying or otherwise protecting electric and other utility lines can prevent utility disruption by protecting lines from ice, wind or snow damage. Nevertheless, lines buried in frozen soil may be difficult to reach if repair is necessary.	Property Protection
Code Enforcement and Building Maintenance	Local governments can impact building/site design through building code enforcement of snow-related ordinances such as snow loads, roof slope, snow removal, and storage. Communities can also monitor snow amounts to provide site specific snow load data.	Prevention

Earthquake

Some regions are particularly susceptible to earthquake damage. Risks of injury and damage from earthquake events can be determined and managed.

Mitigation Measure	Explanation	Category
Seismic Hazard Mapping	Information gained from seismic hazard mapping can be used to assess risk. The first step is collection of geologic information on seismic sources, soil conditions, and related potential	Public Education and Awareness

Mitigation Measure	Explanation	Category
	hazards. The second step is to prepare a map showing the approximate locations of various hazards.	
Related Hazard Mapping	Other earthquake related hazards include liquefaction and landslides. Maps of these related hazards may be used for vulnerability analysis and risk assessment.	Public Education and Awareness
HAZUS	FEMA's HAZUS is a computer-based tool that can be used to quantitatively estimate losses from an earthquake.	Public Education and Awareness
Loss Estimation Studies	After seismic hazards have been identified, planners can create an earthquake scenario to estimate potential loss of life and injuries, the types of potential damage, and existing vulnerabilities within a community. Scenarios can be particularly useful in predicting lifeline performance, i.e., the sustainability of critical public services or systems such as electricity, water, or roadways. This knowledge can be used to develop earthquake mitigation priorities.	Public Education and Awareness
Capital Improvement Planning	School districts, local governments, corporations, and others have developed capital improvement plans to ensure that facilities remain operational for years down the road. It is more efficient and cost effective to incorporate structural and non-structural seismic strengthening actions into on-going building plans and activities, rather than to rehab later.	Prevention
Guidelines and Model Ordinances	Earthquake hazards can be mitigated through land use planning. Communities can develop and distribute guidelines or pass ordinances that require developers/building owners to locate lifelines, buildings, critical facilities, and hazardous materials out of areas subject to significant seismic hazards. Particular consideration should be given to enforcing such ordinances in areas with steep slopes or subject to ground displacement, severe ground shaking, or liquefaction.	Prevention
Building Codes	Although land use management that avoids building on hazardous sites is an effective way to reduce earthquake risk, there may be times when it is necessary to build on such sites. Engineers and architects have designed buildings in ways that reduce the impact of ground shaking. Encouraging all local governments to adopt and enforce updated building code provisions is one effective way to reduce earthquake damage risk.	Prevention
Retrofitting – Securing Building Components and Contents	Many injuries in earthquakes are caused by nonstructural hazards, such as attachments to buildings. These include lighting fixtures, windows (glass), pictures, tall bookcases, computers, ornamental decorations on the outside of: the buildings (like parapets), gas lines, etc. Activities that can reduce the risk of injury and damage include: anchoring tall bookcases and file cabinets, installing latches on drawers and cabinet doors, restraining desktop computers and appliances, using flexible connections on gas and water lines, mounting framed pictures and mirrors securely, and anchoring and bracing propane tanks and gas cylinders.	Property Protection
Infrastructure Hardening	Identification and hardening of critical lifeline systems, i.e., critical public services such as utilities and roads, to meet "Seismic Design Guidelines and Standards for Lifelines," or	Property Protection

Mitigation Measure	Explanation	Category
	equivalent standards, may distinguish a manageable earthquake from a social and economic catastrophe.	
Bridge Strengthening	State and local highway departments should review construction plans for all bridges to determine their susceptibility to collapse. Problem bridges should be retrofitted.	Property Protection

Drought

Periods of time with little or no precipitation can pose risks that can be managed with conservation and preparation.

Mitigation Measure	Explanation	Category
Water Use Ordinances	Communities can pass ordinances to prioritize or control water use, particularly for emergency situations like fire fighting.	Prevention
Contingency Plans	Drought contingency plans can help anticipate needs and actions to take during a drought.	Prevention

Wildfire

Wildfires typically start in woodland or prairie areas. They can occur naturally though they are often exacerbated by human activities. Wildfires can be hard to control as they threaten homes and communities located nearby. Although preventing or controlling wildfires is preferable, there are many mitigation efforts we can take to prevent or alleviate damage to our homes and communities when fires inevitably occur.

Mitigation Measure	Explanation	Category
Public Education	Outreach efforts can promote such items as noncombustible roof covering, fire safe construction, and the importance of clearing brush and grass away from buildings. It is important to promote public education on smoking hazards and the risks of recreational fires.	Public Education and Awareness
Zoning Regulations	Zoning can be used to cluster development into defensible areas and keep development away from fire hazards such as steep slopes, where fires are difficult to contain.	Prevention
Defensible Space	Damage potential can be reduced by ensuring that structures are surrounded by defensible space or buffer zones. Buffer zones are manageable areas, generally 30 to 100 feet and cleared of combustible materials.	Property Protection/Prevention (if in code)
GIS Mapping	GIS mapping of vegetative coverage can facilitate analysis and planning decisions through comparison with topography, zoning, developments, infrastructure, or other markers.	Public Education and Awareness
Building Codes	Building codes can be used to require upgrades to existing as well as new structures.	Prevention
Burning Restriction	Local ordinances can require burn permits and restrict campfires and outdoor burning.	Prevention

Mitigation Measure	Explanation	Category
Hillside Construction	It is important to note that hillsides facing south or west are more vulnerable to increased dryness and heat from sun exposure.-Structures should be set back from slopes outside of the "convection cone" of intense heat that is projected up the slope of a hill as a wildfire "climbs" it.	Property Protection
Building Foundations	In wildfire prone areas, risk may be decreased by enclosing the foundations of homes and other buildings, rather than leaving them open where undersides can be exposed to blown embers or other materials.	Property Protection
Smoke/Fire Detectors and Sprinklers	Citizens can install and maintain smoke detectors and fire extinguishers on each floor of their homes or other buildings. This equipment should be tested and/or inspected regularly, and smoke detector batteries should be changed twice a year. Everyone in a household or building can be taught how to use a fire extinguisher. Other valuable fire mitigation systems include interior and exterior sprinkler systems.	Property Protection

Hazardous Materials

Various government agencies regulate the use, storage, release, and disposal of hazardous substances, because exposure to these substances can result in imminent injury, illness, or damage to property. Mitigation begins with regulatory compliance.

Mitigation Measure	Explanation	Category
Safety Procedures and Policies	Regulations require training in and compliance with all and Policies safety procedures and systems related to the manufacture, storage, transport, use, and disposal of hazardous materials.	Prevention/Public Education and Awareness
Public Awareness and Worker Education	The Emergency Planning and Community Right-to-Know Act (EPCRA), also known as SARA Title III, provides an infrastructure at the state and local levels to plan for chemical emergencies. Facilities that store, use, or release certain chemicals may be subject to reporting requirements. Reported information is publicly available so that interested parties may become informed about potentially dangerous chemicals in their community. Employers must also communicate the hazards of workplace chemicals and ensure that workers receive education and training.	Public Education and Awareness
Emergency Plans	The community's emergency plan must include the following: identification of local facilities and-transportation routes where hazardous materials are present; procedures for immediate response in case of an accident, including a community-wide evacuation plan; a plan for notifying the public that an incident has occurred; names of response coordinators at local facilities; and a plan for conducting simulation exercises that test the plan.	Prevention
Risk Management Plans	U.S. Environmental Protection Agency (EPA) regulations require development of Risk Management Plans for sites that manufacture, store, or handle hazardous materials. The details of Chemical Accident Prevention and Risk Management Programs are managed by EPA's Chemical Emergency	Prevention

Mitigation Measure	Explanation	Category
	Preparedness and Prevention Office (CEPPO).	
Local Emergency Planning Committee Education	To address the possibility of hazardous material incidents, communities are required under Federal law (SARA Title III) to maintain an active and viable Local Emergency Planning Committee (LEPC) to develop an emergency plan for preparing for and-responding to chemical emergencies, such as spills, leaks, explosions, or other releases. The LEPC is required to review, test, and update the plan each year.	Public Education and Awareness
Industrial Site Buffering	Hazardous material exposure can be prevented or reduced by separation and buffering between industrial areas and other land uses. Industrial areas should be located away from schools, nursing homes, hospitals, and other facilities with large or vulnerable populations.	Prevention

Sabotage / Terrorism / Weapons of Mass Destruction

Sabotage, terrorism, and the potential for exposure to weapons of mass destruction (WMD) have become part of our social conscious and should be considered in mitigation planning.

Mitigation Measure	Explanation	Category
Threat Assessment	Local governments can start with development of a thorough community risk and threat assessment that identifies potential vulnerabilities and targets for a sabotage/terrorism/WMD attack.	Prevention
Critical Infrastructure Protection	Critical Infrastructure Protection (CIP) is extremely important. The federal government has begun a systematic effort to define, prioritize, and develop effective strategies for protecting the Nation's critical infrastructure. Local governments are an integral part of the effort with regard to critical local services, such as water, electricity, telephones, roads and bridges. CIP should be a prominent part of community risk and threat assessment.	Prevention
Hazard Resistant Building Materials	Public buildings and critical facilities can be constructed or retrofitted using laminated glass, metal shutters, structural bracing, and other hazard-resistant, durable construction techniques.	Property Protection
COOP Planning	Communities can encourage private sector development and testing of internal emergency plans and procedures including Continuity of Operations (COOP) planning.	Prevention

Public Health Emergencies

If left unchecked, various diseases or environmental conditions can result in widespread illness and threats to life.

Mitigation Measure	Explanation	Category
Immunization	Immunization against communicable diseases can be encouraged among residents of a community.	Prevention/Public Education and Awareness
Ventilation Retrofits	The spread of communicable diseases can be thwarted by	Property Protection

Mitigation Measure	Explanation	Category
	compartmentalizing ventilation systems in areas/facilities prone to crowding, or areas that may involve exposure to contagions or noxious atmospheres.	
Water and Sewer Maintenance	Communities need to maintain water and sewer infrastructure at acceptable operating standards. Back-up generators for water and wastewater treatment facilities can help maintain acceptable operating levels during power failures. Separation of storm and sanitary sewer systems can also prevent release of untreated sanitary waste when stormwater might otherwise overfill a sewer system.	Structural Projects
Public Health Systems and Public Awareness	Communities can maintain public health systems with sufficient disease monitoring and surveillance capabilities to protect the population from large-scale outbreaks; they can also support free or reduced-cost clinics and school health services. Public awareness campaigns can emphasize the causes, symptoms, and protective actions for disease outbreaks or other potential public health emergencies.	Public Education and Awareness

Radiological Emergencies

People receive radiation exposure each day from the sun, radioactive elements in soil and rocks, household appliances like television sets and microwave ovens, and medical and dental x-rays. These exposures may prompt controversy, but they do not pose the risk of imminent danger from radiation release that might occur if a nuclear power plant had a meltdown. Serious radiological accidents can occur anywhere radioactive materials are used, stored, or transported. A nuclear power plant, hospital, university, research laboratory, industrial plant, major highway, railroad line, or shipping yard could be the site of a radiological emergency.

Mitigation Measure	Explanation	Category
Users of Radiological Materials	Users, transporters, and disposers of radiological materials are required to follow strict procedures that prevent or minimize radiation release.	Prevention
Emergency Planning for Transportation Routes	Communities located along major transportation routes should develop and practice an emergency plan for handling transportation accidents involving radiological materials.	Prevention
Radiological Emergency Preparedness for Nuclear Plants	Radiological Emergency Preparedness (REP) for communities surrounding nuclear power plants requires proper awareness of, training on, and implementation of radiological emergency procedures. Specific planning requirements for communities within primary and secondary Emergency Planning Zones are found in the Code of Federal Regulations (44 CFR § 350, 351, 352) and in a Nuclear Regulatory Commission guidance document (NUREG-0654).	Prevention
Shelters and Warning Systems	Communities can promote awareness of designated shelters and accident warning systems. They also may develop and promote workable population protection plans, i.e., evacuation and in-place sheltering plans.	Emergency Services
Safe Rooms	Concrete safe rooms or shelters can be constructed in houses, trailer parks, community facilities, and business districts.	Emergency Services

Mitigation Measure	Explanation	Category
Hazard Resistant Building Materials	Public buildings and critical facilities can be constructed using laminated glass, metal shutters, structural bracing, and other hazard-resistant, durable construction techniques.	Property Protection

FINAL PUBLIC MEETING
JUNE 16, 2011

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Melusky, Alexis A

From: Mike Mrozinski [mmrozinski@pikepa.org]
Sent: Wednesday, June 15, 2011 3:49 PM
To: Dingman Township; Greene Township (secretary@greenetownship.org); IleanaH@delawaretownshippa.gov; joanna.donahue@bloominggrovetownship.com; lehmanpk@ptd.net; mataboro@optonline.net; milfrdtp@ptd.net; Porter Twp (sec@portertownship.net); shohtwp@ptd.net; town@ptd.net; westfallsec@optonline.net; Gary Orben; Karl Wagner; Kathy Hummel; Rich Caridi; Bob Ewbank - Wfall; 'Doug Carrick - Palm'; Gary Babb - MatB; Jim Ellison - Wfall; Kyle Wright - Del; 'Mary Ann Hubbard - Gre'; Rob Hellyer - Port; Robert Myers - Shoh; 'Stanley Whittaker - Leh'; Steve Mullin - BlGr; Thomas Olver - MatB; Tony Mann - Milf; Vincent Albanese - Lack; William Mikulak - Ding; 'carolosterberg@yahoo.com'; 'reynoldsg@oru.com'; 'lwwmd@verizon.net'; 'dgreene@co.orange.ny.us'; 'shirleym@ptd.net'; 'Denise_cooke-bauer@nps.gov'; 'patrick_lynch@nps.gov'; Susan Beecher; 'ddemara@state.pa.us'; 'rpitcavage@state.pa.us'; 'tconway@state.pa.us'; 'silsbymi@wallenpaupack.org'; 'cfinan@dvsd.org'; 'sharon-laverdure@esasd.net'; 'neg2@psu.edu'; 'pjcanevari@pplweb.com'; 'brizzolarat@oru.com'; 'kolvenbacha@oru.com'; 'rcollins@state.pa.us'; 'tbalch@state.pa.us'; 'kwright@pikeals.org'; 'billmik@ptd.net'; Gary Orben; Karl Wagner; Kathy Hummel; Rich Caridi
Cc: Sally Corrigan; Roger Maltby; Melusky, Alexis A
Subject: Hazard Mitigation Public Meeting

Importance: High

Reminder…the Final Hazard Mitigation Meeting will be Thursday June 16th at 6:30pm at the Pike County Conservation District Offices.

We are also still seeking some worksheets and forms from some municipalities and attendance is required for some to be eligible for plan adoption and grant eligibility. Please review the below table and log on to www.pikehmp.com for the forms or call/email me.

Table 3.1-1: Summary of participation from local municipalities during the 2011 HMPU.

MUNICIPALITY	MEETING			WORKSHEETS/SURVEYS/FORMS				
	KICK-OFF MEETING March 14, 2011	RISK ASSESSMENT / MITIGATION SOULTIONS WORKSHOP May 5, 2011	PUBLIC MEETING June 16, 2011	CAPABILITY ASSESSMENT SURVEY	EVAL. OF HAZARDS AND RISK FORM	COUNTYWIDE OR JURISDICTIONAL RISK FACTOR EVALUATION	GOALS AND OBJECTIVES EVAL. FORM	MITIGATIO ACTION FORM OF PROJECT EVALUATIO FORM
Blooming Grove Township	✓			✓	✓			
Delaware Township		✓		✓	✓	✓	✓	✓
Dingman Township	✓	✓		✓	✓	✓	✓	✓
Greene Township		✓		✓	✓	✓	✓	✓
Lackawaxen Township		✓		✓	✓	✓	✓	✓
Lehman Township	✓	✓		✓	✓	✓	✓	
Matamoras Borough		✓		✓	✓	✓	✓	✓
Milford Borough	✓			✓	✓			
Milford Township				✓	✓			
Palmyra Township				✓	✓			
Porter Township		✓		✓	✓	✓	✓	✓
Shohola Township	✓	✓		✓	✓	✓	✓	✓

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Westfall Township		✓		✓	✓	✓	✓	✓

Sincerely,
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INTERESTED IN PREPARING FOR AND REDUCING THE EFFECTS OF HAZARDS IN YOUR COMMUNITY?

You are invited to attend the Pike County All-Hazard Mitigation Plan Update Public Meeting!

Pike County is in the process of updating its Hazard Mitigation Plan. Hazard mitigation is any sustained action taken to reduce or eliminate long-term risk to life and property resulting from natural and human-made hazards. Effective mitigation efforts can break the cycle of disaster damage, reconstruction, and repetitive loss. The Public Meeting will provide the opportunity for you to give input on the draft plan. Residents, local officials, industry, academia, and others are encouraged to attend the meeting.

Meeting Details:

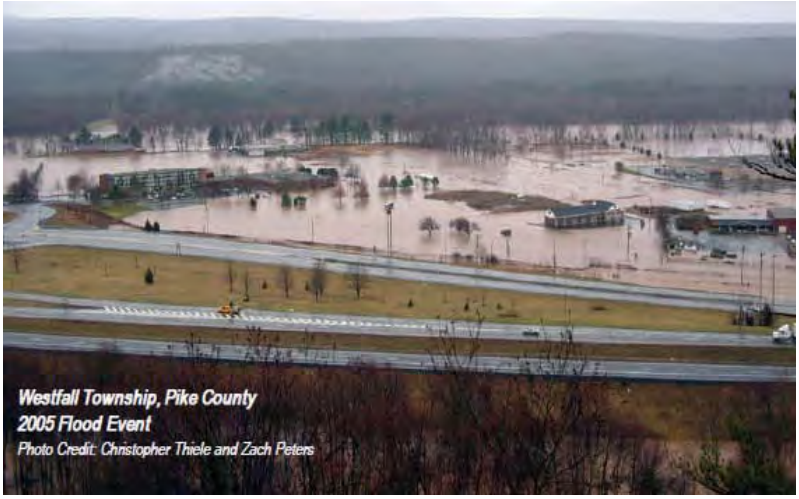
Date: Thursday, June 16, 2011

Time: 6:30 p.m.

Location: Pike County Conservation District

556 Route 402

Hawley, PA 18428



Questions? Contact:

Mike Mrozinski, Assistant Director of the Pike County Office of Community Planning at 570-296-3500 or mmrozinski@pikepa.org; or

Alexis Melusky, Planner at Michael Baker Jr., at 215-430-5512 or amelusky@mbakercorp.com.

Commonwealth of Pennsylvania
County of Pike } *ss.*

PUBLIC NOTICE

Notice is hereby given that the Pike County Board of Commissioners will hold the final public meeting for the update of the Pike County All-Hazard Mitigation Plan. The Plan is a blueprint for reducing property damage and saving lives from the effects of future natural and human-made disasters. The public meeting is scheduled for Thursday, June 16 at 6:30PM at the Pike County Conservation District, 556 Route 402, Blooming Grove, PA.

For questions or if you require special accommodations to permit attendance, contact Michael Mrozinski, Pike County Planning Office at 570-296-3500 or email mmrozinski@pikepa.org An electronic copy of the draft Plan can be reviewed at: www.PikeHMP.com beginning June 17. **Comments on the draft Hazard Mitigation Plan should be submitted in writing no later than July 17, 2011** to Alexis Melusky at amelusky@mbakercorp.com or 1818 Market Street, Suite 3110, Philadelphia PA 19103.

44B(38)

Sue Doty-Lloyd

being duly sworn, according to law, deposes and says that she is the Publisher of the "Pike County Dispatch," a weekly newspaper of general circulation established in the year 1826 and published at No. 105 West Catharine Street, in the Borough of Milford, County and State aforesaid; and that a printed notice, an exact copy of which is hereto annexed, was published in said newspaper One *time(s), to wit, in its issues of*

June 9

A.D. 2011 and the affidavit further states that she is not interested in the subject matter of this notice or advertisement and that all of the allegations of the statement as to time, place and character of publication are true.

Pike County Dispatch

Judith M. Craven

Judith M. Craven, Attorney-In-Fact
Sue Doty-Lloyd, Principal

Sworn to and subscribed to before me this 9th *day*

of June *A.D. 2011*

Toni M. Stenger

Commission Expires

COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Toni M. Stenger, Notary Public
Milford Boro, Pike County
My Commission Expires June 6, 2014
Member, Pennsylvania Association of Notaries

The News Eagle

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MICHELLE HESSLING
being duly sworn, according to law, deposes and says that **SHE** is **PUBLISHER** of THE NEWS EAGLE, a newspaper of general circulation, established in 1956, and published twice weekly in the Borough of Hawley, Wayne County, Pennsylvania; and that the advertising notice hereto annexed was published in said newspaper on the following dates:

06/08/2011

And the affiant further declares that he is not interested in the subject matter of the notice, and that all of the allegations as to the time, place and character of publications are true and correct.

Michelle Hessling

Sworn to and subscribed before me this 13th day of June, 2011.

Jeannie Torrick

COMMONWEALTH OF PENNSYLVANIA
NOTARIAL SEAL
JEANNIE TORRICK, NOTARY PUBLIC
TEXAS TWP, WAYNE COUNTY
MY COMMISSION EXPIRES SEP 22, 2013

PUBLIC NOTICE

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570-296-3500 or email HYPERLINK "mailto:mmrozinski@pikepa.org" mmrozinski@pikepa.org

An electronic copy of the draft Plan can be reviewed at:
"http://www.PikeHMP.com" www.PikeHMP.com beginning June 17. **Comments on the draft Hazard Mitigation Plan should be submitted in writing no later than July 17, 2011** to Alexis Melusky at "mailto:amelusky@mbakercorp.com"mamelusky@mbakercorp.com or 1818 Market Street, Suite 3110, Philadelphia PA 19103.

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ACCOUNT# 589399

Proof of Publication Notice in the Pocono Record

Commonwealth of Pennsylvania
County of Monroe

Kelli McFall, Classified Manager of the Pocono Record having been duly sworn according to law, deposes and says the Pocono Record is a Newspaper of general circulation published at 511 Lenox Street, Stroudsburg, Monroe County, Pa. The Pocono Record was established on April 2, 1894 and has been regularly published and issued in Monroe County since that time. The printed notice attached to this affidavit is exactly the same as was printed and published in the regular editions and issues of the Pocono Record on the dates listed below the bottom of this notice. I certify that I am duly authorized to verify this statement under oath and am not interested in the subject matter of the attached notice or advertisement. All allegations in this affidavit as to time, place, and character of publication are true.

PUBLIC NOTICE

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P - June 8, 2011

Kelli McFall

Sworn to and subscribed to before me this day 9th of June, 2011

Janene L. Fischer-Snyder

COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Janene L. Fischer-Snyder, Notary Public
Stroudsburg Boro, Monroe County
My Commission Expires March 26, 2014
Member, Pennsylvania Association of Notaries

PUBLICATION	EXPIRE DATE	AD CAPTION	#TIMES	AMOUNT
POCONO RECORD	6/8/2011	PUBLIC NOTICE	1	$49.48

START DATE 6/8/2011 END DATE 6/8/2011

News for Immediate Release

June 3, 2011

Pike County to Hold Public Meeting for All-Hazard Mitigation Plan Update Process

SHOHOLA – The Pike County Office of Community Planning and the Pike County Emergency Management Agency, together with Michael Baker Jr., Inc., are in the process of updating the **Pike County All-Hazard Mitigation Plan**. The updated Hazard Mitigation Plan will be the blueprint for further reducing property damage and saving lives from the effects of future natural and man-made disasters within the County. This update is also required in order for all jurisdictions within the County to be eligible to receive certain types of state and federal funding both before and after a disaster occurs.

The public is invited to comment in person and participate in the planning process at a public meeting scheduled for Thursday, June 16 at 6:30PM at the Pike County Conservation District, 556 Route 402, Hawley, PA 17815.

The Draft Pike County All-Hazard Mitigation Plan Update will be available for review and comment on the Pike County Hazard Mitigation Plan Update Project Website at www.PikeHMP.com beginning on June 17, 2011. This website also features general information on hazard mitigation and specific information about the County planning process.

If you have any questions regarding the Hazard Mitigation Plan or how you can get involved in the planning process, please contact one of the following:

Michael Mrozinski
Assistant Planning Director
Pike County Office of Community Planning
570-296-3500
mmrozinski@pikepa.org

Alexis Melusky
Planner
Michael Baker Jr., Inc.
215-430-5512
amelusky@mbakercorp.com

Media contact:
Alexis Melusky, Planner at Michael Baker Jr., Inc., at 215-430-5512 or amelusky@mbakercorp.com.

Pike County
All-Hazard Mitigation Plan
Final Public Meeting

June 16, 2011

6:30 PM

1. ***Welcome and Introductions***

   Presenter: Alexis Melusky, Michael Baker Jr., Inc.

   County Representatives: Michael Mrozinski, Pike County Assistant Planning Director
   Sally Corrigan, Pike County Planning Director
   Roger Maltby, Pike County Emergency Management Coordinator

2. ***Project Overview***

3. ***Draft Plan Findings Review***
   - Planning Process
     - Participation
     - Planning Team
     - Meetings
   - Risk Assessment
     - List of Hazards and Risk Factor
     - Hazard Profile Description
     - Risk and Vulnerability Overview
   - Capability Assessment
   - Mitigation Strategy
     - Mitigation Techniques
     - Mitigation Action Plan
   - Plan Maintenance

4. ***Planning Timeline***

5. ***Draft Plan Review and Comment Period***

6. ***Question and Comment Session***

To review the entire Draft Pike County 2011 All-Hazard Mitigation Plan and provide additional comments please visit the Pike County Hazard Mitigation Plan Update site beginning June 17, 2011:

www.PikeHMP.com

Baker

All-Hazard Mitigation Plan
Pike County, PA

Final Public Meeting
June 16, 2011

Michael Baker Jr., Inc.

Baker

Agenda

- Welcome and Introductions
- Project Overview
- Draft Plan Review
  - Planning Process
  - Risk Assessment
  - Capability Assessment
  - Mitigation Strategy
  - Plan Maintenance
- Planning Timeline
- Question and Comment Session

2

Project Overview

- **What is Hazard Mitigation?**
  Hazard mitigation is any sustained action taken to reduce or eliminate long-term risk to life and property resulting from natural and man-made hazards.
- **What is a Hazard Mitigation Plan?**
  - A Hazard Mitigation Plan is a community-driven, living document that communities use to reduce their vulnerability to hazards.
- **What is the purpose of a Hazard Mitigation Plan?**
  - Communities must have a plan to apply for and receive mitigation grants for mitigation projects.
  - Ultimately these actions reduce vulnerability, and communities are able to recover more quickly from disasters.

3

Draft Plan Findings Review

- Planning Process
- Risk Assessment
- Capability Assessment
- Mitigation Strategy
- Plan Maintenance

4

Planning Process

- **Participation**
- **Planning Team**
- **Meetings**

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Risk Assessment
Hazard Profiles

- **Location and Extent**
- **Range of Magnitude**
- **Past Occurrence**
- **Future Occurrence**
- **Vulnerability**

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Risk Assessment

Pike County Risk Factor Results							
HAZARD RISK	HAZARD NATURAL (N) or MAN-MADE (M)	RISK ASSESSMENT CATEGORY					RISK FACTOR
		PROBABILITY	IMPACT	SPATIAL EXTENT	WARNING TIME	DURATION	
HIGH	Flood, Flash flood, Ice jam (N)	4	3	3	2	3	3.2
	Winter Storm (N)	4	2	3	4	3	3.1
	Wildfire (N)	4	2	4	2	3	3.1
MODERATE	Drought (N)	2	2	4	1	4	2.5
	Transportation Accident (M)	4	2	1	4	1	2.5
	Utility Interruption (M)	3	1	2	4	4	2.3
	Hurricane, Tropical Storm, Nor'easter (N)	2	2	3	1	4	2.2
	Drowning (M)	4	1	1	4	1	2.2
	Environmental Hazards (M)	2	2	2	3	2	2.1
	Tornado and Windstorm (N)	2	2	2	4	1	2.1
	Pandemic (N)	1	2	3	1	4	2.0
	Urban Fire and Explosion (M)	2	2	1	4	2	2.0
LOW	Nuclear Incidents (M)	1	2	2	3	3	1.9
	Terrorism (M)	2	2	1	4	1	1.9
	Dam Failure (M)	1	3	1	4	1	1.9
	Earthquake (N)	1	1	2	4	1	1.5

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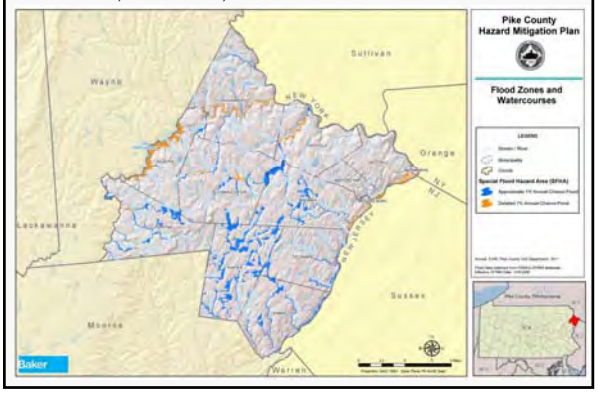
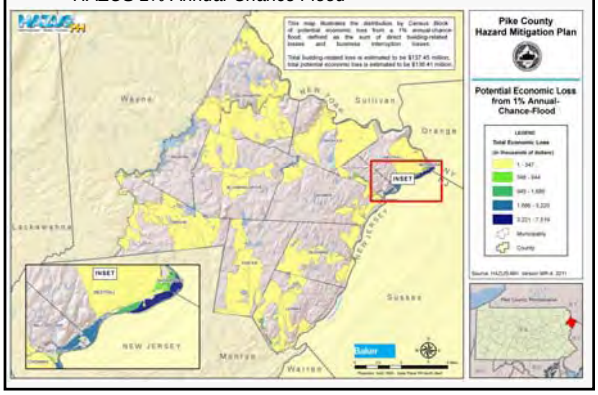
Risk Assessment
Flood, Flash Flood, Ice Jam



Risk Assessment
HAZUS 1% Annual-Chance Flood



Risk Assessment
Flood, Flash Flood, Ice Jam Vulnerability

Structure and critical facility vulnerability summary for flood hazards.				
MUNICIPALITY	TOTAL ADDRESSABLE STRUCTURES	TOTAL ADDRESSABLE STRUCTURES IN SFHA	TOTAL CRITICAL FACILITIES	TOTAL CRITICAL FACILITIES IN SFHA
Blooming Grove Township	4,269	24	19	0
Delaware Township	4,501	15	10	0
Dingman Township	7,149	45	11	0
Greene Township	3,363	55	8	0
Lackawaxen Township	5,076	95	9	0
Lehman Township	5,051	97	10	1
Matamoras Borough	1,007	7	3	0
Milford Borough	591	28	10	0
Milford Township	837	14	6	0
Palmyra Township	4,457	17	12	0
Porter Township	1,066	117	1	0
Shohola Township	3,472	39	4	0
Westfall Township	1,205	142	6	1
TOTAL	**42,044**	**695**	**109**	**2**

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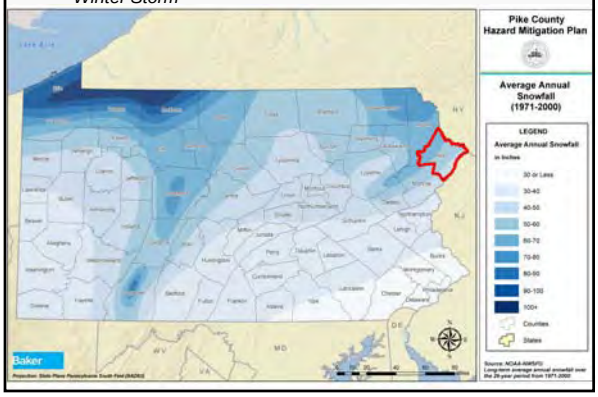
Risk Assessment
Winter Storm



Risk Assessment
Winter Storm Vulnerability

- Higher structure vulnerability for aging and older buildings
- Health concerns, safety concerns, issues for stranded residents, tourists and motorists

Age of housing units in Pike County (ACS, 2005-2009).		
Municipality	Number of Housing Units Built Prior to 1940	Percent of Total Housing Units
Blooming Grove township	239	6%
Delaware township	147	3%
Dingman township	252	4%
Greene township	344	12%
Lackawaxen township	595	13%
Lehman township	85	1%
Matamoras borough	586	45%
Milford borough	358	67%
Milford township	92	11%
Palmyra township	406	10%
Porter township	317	24%
Shohola township	103	5%
Westfall township	246	17%
Total	**3770**	**17%**

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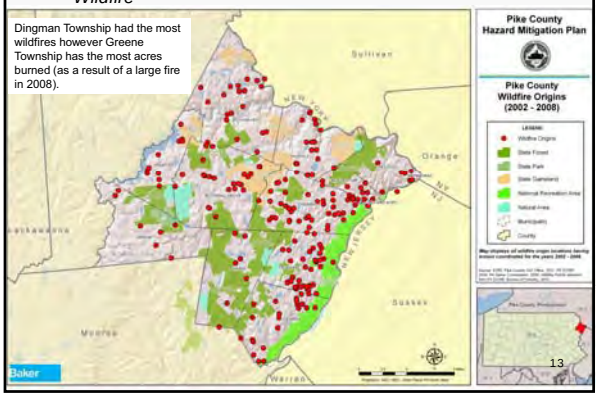
Risk Assessment
Wildfire

Dingman Township had the most wildfires however Greene Township has the most acres burned (as a result of a large fire in 2008).



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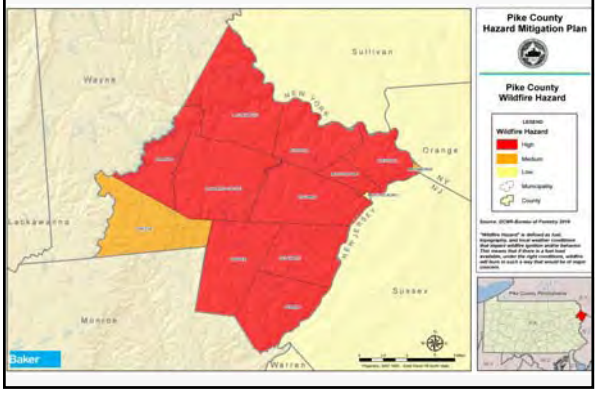
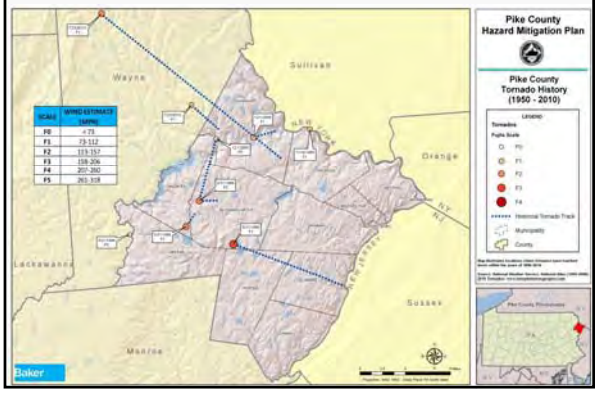
Risk Assessment
Wildfire Vulnerability



Risk Assessment
Tornado and Windstorm



Risk Assessment
Tornado and Windstorm

Previous windstorm events greater than 50 knots in Pike County between 1950 and 2011 (NCDC, 2011).			
LOCATION	**DATE**	**ESTIMATED WIND SPEED (knots)**	**ESTIMATED PROPERTY DAMAGE ($)**
Countywide	09/02/1990	53	NP
Countywide	02/17/1998	55	30,000
Countywide	05/18/2000	60	NP
Tafton	06/02/2000	55	NP
Countywide	12/12/2000	52	450,000
Tamiment	04/09/2001	52	NP
Rowland	08/03/2001	60	NP
Lackawaxen	03/10/2002	60	NP
Lackawaxen	06/26/2002	60	50,000
Milford	07/21/2003	55	20,000
Countywide	10/15/2003	60	700,000
Countywide	11/13/2003	58	190,000
Milford	05/27/2005	60	5,000
Dingmans Ferry	08/03/2006	60	6,000
Milford	08/03/2006	60	5,000
Paupack	06/21/2007	83	NP
Lackawaxen	07/23/2010	70	50,000

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Risk Assessment
Tornado and Windstorm Vulnerability

Manufactured housing units per municipality in Pike County.	
MUNICIPALITY	**NUMBER OF MOBILE HOMES**
Blooming Grove Township	76
Delaware Township	0
Dingman Township	1,574
Greene Township	67
Lackawaxen Township	7
Lehman Township	0
Matamoras Borough	0
Milford Borough	0
Milford Township	7
Palmyra Township	102
Porter Township	0
Shohola Township	1,833
Westfall Township	65
TOTAL	**3,731**

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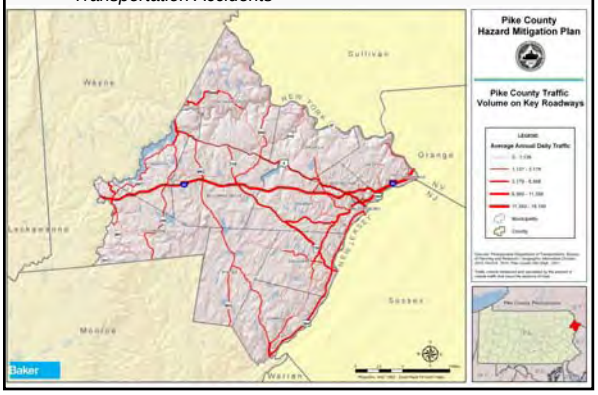
Risk Assessment
Transportation Accidents



Risk Assessment
Transportation Accidents

Total number of crashes, traffic deaths, and pedestrian deaths for Pike County from 2005-2009 (PennDOT, 2009).

YEAR	TOTAL CRASHES	TOTAL TRAFFIC DEATHS	TOTAL PEDESTRIAN DEATHS
2005	675	12	0
2006	641	9	0
2007	684	9	0
2008	735	13	1
2009	595	5	1

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Risk Assessment
Transportation Accidents Vulnerability

Addressable structures and critical facilities vulnerable to railroad, highway, and airport accidents.

MUNICIPALITY	TOTAL ADDRESSABLE STRUCTURES	ADDRESSABLE STRUCTURES WITHIN 1/4 MILE OF RAILROAD	CRITICAL FACILITIES WITHIN 1/4 MILE OF RAILROAD	ADDRESSABLE STRUCTURES WITHIN 1/4 MILE OF *MAJOR HIGHWAYS	CRITICAL FACILITIES WITHIN 1/4 MILE OF *MAJOR HIGHWAYS	ADDRESSABLE STRUCTURES WITHIN 5 MILE RADIUS OF AIRPORT	CRITICAL FACILITIES WITHIN 5 MILE RADIUS OF AIRPORT
Blooming Grove Township	4,269	0	0	647	6	0	0
Delaware Township	4,501	0	0	335	3	0	0
Dingman Township	7,149	0	0	809	3	0	0
Greene Township	3,363	0	0	1,059	5	401	0
Lackawaxen Township	5,076	552	2	1,007	7	0	0
Lehman Township	5,051	0	0	16	1	0	0
Matamoras Borough	1,007	0	0	713	2	0	0
Milford Borough	591	0	0	558	10	0	0
Milford Township	837	0	0	493	5	0	0
Palmyra Township	4,457	38	0	2,371	4	0	0
Porter Township	1,066	0	0	224	0	0	0
Shohola Township	3,472	155	0	921	2	0	0
Westfall Township	1,205	87	1	559	3	0	0
TOTAL	**42,044**	**832**	**3**	**9,712**	**51**	**401**	**0**

*Major Highways include Interstates, US Highways and State Highways.

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Capability Assessment

- Capability Assessment Surveys were completed by municipal representatives to assess:
  - Planning and regulatory capability
    - All municipalities have comprehensive plans. Six municipalities have multi-municipal plans.
    - All municipalities participate in the NFIP.
    - All municipalities have subdivision and land development ordinances and all but one has zoning.
  - Administrative and technical capability
    - Found that municipalities have **limited-to-moderate** administrative and technical staff needed to conduct hazard mitigation activities.
  - Fiscal capability
    - Found that most municipalities within the County perceive fiscal capability to be **limited** although four indicated that they had moderate to high fiscal capability.
  - Political capability
    - The average rating for political willingness to adopt policies and programs that reduce hazard vulnerabilities was **4.09** with "0" being "unwilling" and "5" being "very willing."

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Mitigation Strategy

- The approach you take to reduce or avoid long-term vulnerabilities to the identified hazards
- Includes:
  - Goals
  - Objectives
  - Actions and Projects

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Mitigation Strategy

- Identifies a comprehensive range of specific mitigation actions and projects being considered to reduce the effects of each hazard.
- Example:
  - **Goal:** Reduce vulnerability including loss of life and damage to assets from natural hazards and human-made hazards.
  - **Objective:** Identify and evaluate the need for warning systems and storm shelters.
  - **Action:** Install two additional warning sirens on the Lackawaxen River

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Mitigation Strategy
Mitigation Goals

- **Goal 1:** Provide for properly managed and environmentally sound growth and disaster-resistant development.
- **Goal 2:** Reduce the potential impact of natural and human made hazards on property.
- **Goal 3:** Enhance and improve emergency services provided to the growing population of Pike County.
- **Goal 4:** Reduce vulnerability including loss of life and damage to assets from natural and human-made hazards.
- **Goal 5:** Conserve, protect and enhance existing natural and water resources.
- **Goal 6:** Increase awareness, understanding, and preparedness across all sectors by encouraging hazard risk, preparedness, and mitigation related education and outreach activities.

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Mitigation Strategy
Mitigation Techniques

- **Prevention**
- **Property Protection**
- **Public Education and Awareness**
- **Natural Resource Protection**
- **Structural Projects**
- **Emergency Services**

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Mitigation Strategy
Mitigation Actions and Projects

Mitigation Action Title/Description	Jurisdiction	Technique	Hazard Addressed
Implement groundwater level wells monitoring to assess potable groundwater levels in drought periods.	Pike County	Prevention	Drought
Clean up debris in Blooming Grove Creek and Shohola Creek	Blooming Grove Township	Natural Resource Protection	Flood, Flash Flood, and Ice Jam
Install a french mattress on Sawmill Road to reduce flooding.	Greene Township	Structural Project Implementation	Flood, Flash Flood, and Ice Jam
Mitigate repetitive loss properties within the municipality.	Greene Township, Milford Borough, Westfall Township	Property Protection	Flood, Flash Flood, and Ice Jam
Secure evacuation shelters to provide locations for the safety of Township residents during hazard events	Matamoras Borough	Emergency Services	All

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Plan Maintenance

- Process for monitoring, evaluating, and updating the plan during the next five years.
- The Plan will be updated every 5 years or following a disaster event.
- Pike County Hazard Mitigation Steering Committee will meet annually or within 30 days after any disaster declaration to specifically discuss the effectiveness of the plan and provide for any needed updates.
- Contact will be maintained with the municipalities to monitor the progress of the mitigation actions during the year and consider whether applications should be submitted for existing mitigation grant programs.

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Timeline

Date	Task Item
February 2011	Planning Proc ess began
March 14, 2011	Kick-off Meeting
March 15, 2001 → April 29, 2011	Risk Assessment
Week of March 28, 2011	Capability Assessment
May 5, 2011	Risk Assessment Summary and Mitigation Solutions Workshop
March 5, 2011→ June 13, 2011	Mitigation Strategy Update Production
June 16, 2011	Public Meeting
July 2011	**Deliver to PEMA/FEMA for Review**
Fall 2011	Distribute to Municipalities for Adoption

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Draft Plan Review and Comment Period

- Draft HMP will be available for review and comment beginning June 17th and ending July 17th.
- During that time, the HMP will be available for download at www.PikeHMP.com.
- Submit all comments in writing

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Question and Comment Session

Pike County Hazard Mitigation Plan Update Project Website
www.PikeHMP.com

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All-Hazard Mitigation Plan Update
Pike County Final Public Meeting

June 16, 2011

Name	Title	Jurisdiction/ Organization	Telephone	E-Mail Address
DeNise Cocke-Baver	Natural Resource Spec	NPS-DEWA	570-296-6952 x16	denise_cocke-baver@nps.gov
ROB HELLYER	SUPERVISOR	POCONO TWP	570-746-1110	HELMAN2399@AOL.com
BOB MYERS	EMC	SHOHOLA	570 559 7394	SHOHTWP@PTD.NET
Bob Ewbank	Supervisor/EMC	Westfall Township	570-491-2897	robertewbank@gmail.com
Mary Ann Hubbard	" "	Greene	570 840 7099	DEACONHUBBARD@Yahoo.com
William Mikulak	EMA	Dingman	570 656 0493	billmik@ptd.net
Vincent Accordino	Councilman	Milford Boro	(570) 296-7140	(none)
Tom Simons	Twp Supervisor	Palmyra Twp	570-226-2230	(None)
Gary L. Babb	coordinator	MATAMORAS / EMA	914-443-7254	matamorasema@yahoo.com
Roger Mattioy	Coordinator	Pike Co EMA	570-296-6714	ema@pikepa.org
Sally Corrigan	PLANNING DIRECTOR	PIKE COUNTY PLANNING	570-296-3500	scorrigan@pikepa.org
Gene Reynolds	SR. Specialist	PikeCo. L&P	845 590 2875	reynoldsg@orru.com
Scott Meyer	Twp Maintenance	Blooming Grove Twp		

Name	Title	Jurisdiction/ Organization	Telephone	E-Mail Address
Mark Moslk	Chief of School Police	Delaware Valley SD	570-296-4922	MMoslk@dvsd.org

Pike County
All-Hazard Mitigation Plan
Final Public Meeting Minutes

DATE: June 16, 2011

TIME: 6:30 p.m.

LOCATION: Pike County Conservation District - Hawley, PA

The following people were in attendance:

Name	Organization/ Affiliation
Denise Codse-Baver	National Park Service
Rob Hellyer	Porter Township
Bob Myers	Shohola Township
Bob Ewbauk	Westfall Township
Mary Ann Hubbard	Greene Township
William Mikulak	Dingman Township
Vincent Accordino	Milford Borough
Tom Simons	Palmyra Township
Gary Babb	Matamoras Borough
Gene Reynolds	Pike County L & P
Scott Meyer	Blooming Grove Township
Mark Moglia	Delaware Valley School District
Michael Mrozinski	Pike County Office of Community Planning
Roger Maltby	Pike County EMA
Sally Corrigan	Pike County Office of Community Planning
Alexis Melusky	Michael Baker Jr., Inc.

MEETING HANDOUTS:

- Agenda
- Draft HMP Comment Form

MEETING OVERVIEW

- **Welcome and Introductions**

Michael Mrozinski welcome welcomed the participants to the Final Public Meeting for the Pike Hazard Mitigation Plan Update (HMPU) and reminded everyone to turn in mitigation projects for the plan if they haven't done so already. He introduced Alexis Melusky and she explained that the HMPU process began in March and there have been two meeting so far. She stated that the night's meeting was a public meeting and the final meeting of the planning process. She said that the public was invited to the meeting via a public notice in the three newspapers: The

Pocono Record, the Pike County Dispatch, and the News Eagle. She asked everyone to pick up a Comment Form and use it to record any comments from the meeting or about the plan in general.

- **Project Overview**

Ms. Melusky then explained the difference between hazard mitigation and hazard response and recovery. She said that County's are required to update their HMP every five years. She explained how communities and stakeholders have been involved in the planning process and the local requirements. Ms. Melusky said that municipalities who participate in the planning process and adopt the plan would be eligible to apply for and receive certain hazard mitigation funds from FEMA.

- **Draft Plan Findings Review**

Ms. Melusky gave an overview of several components of the draft HMP. The planning process chapter contains information on each of the previous planning team meetings, forms, and the planning team.

Ms. Melusky said that sixteen hazards (both natural and human made) were profiled in the plan. Each profile contains information on: location and extent (where the hazard occurs), range of magnitude (how severe is the hazard), past occurrence, future occurrence, and vulnerability.

Ms. Melusky displayed the risk factor table. She said at the last meeting, attendees had an opportunity to review the risk factors for the hazards and submit comments. She explained to the new participants that the hazards were ranked according to five criteria. She said at the risk assessment meeting, there was feedback that drowning should be a moderate risk hazard and not a low risk hazard. The risk factor was adjusted for drowning as well as several other hazards.

Ms. Melusky then presented findings from several hazards:

- **Flood hazards**: Ms. Melusky showed a map of special flood hazard areas in Pike County. She said that all communities in Pike County had floodplains and were floodprone. She showed a map of HAZUS losses and explained how the HAZUS software works. She pointed out that Matamoras and Westfall would have the highest losses. Total building related losses for the County would be $137 million. Total economic losses (includes lost wages etc) would be $138 million. Ms. Melusky showed a table of structures per municipality and the total number of structures in the floodplain. She pointed out that Westfall has 142 structures in the floodplain. Porter has over 117 structures in the floodplain. She explained that critical facilities include municipal buildings, fire departments etc. The table showed number of critical facilities per municipality in the floodplain. Only Lehman and Westfall have critical facilities in the floodplain. Matamoras thought that their number of structures in the floodplain seemed low. Ms. Melusky asked if their mapped FEMA 1%-annual-chance-floodplain was smaller on their current DFIRMS than on previous DFIRMS. Ms. Corrigan pointed out that their mapped floodplain did shrink on the new DFIRMS. Mr. Mrozinski said that Matamora's former 1%-annual-chance-floodplain became 0.2%-annual-chance-

floodplain. Ms. Melusky said she would take a look at the FEMA flood data to see if more homes are in the 0.2%-annual-chance-floodplain for Matamoras. Ms. Corrigan asked everyone to take a look at the draft plan once posted on the website to check their number of structures in the floodplain. Ms. Melusky said there would also be community flood vulnerability maps for each community.

- **Winter Storms**: Ms. Melusky showed a map of average annual snowfall in Pike County. The County's average annual snowfall increased as you move northwest in the County. She that the plan lists numbers of homes built before 1940 in each municipality which might be more vulnerable to roof collapse from snow. Seventeen percent of housing units in the County were built before 1940. She pointed out that Milford Borough has many homes built before 1940. Mr. Mrozinski asked Ms. Melusky to use the 2000 Census instead of the ACS Census data. She said winter storms also caused health and safety concerns and stranded motorists.
- **Wildfires**: Ms. Melusky showed a map of previous wildfires in Pike County between 2002 and 2008. She pointed out that Greene Township had the most acres burned during that period due to a large wildfire in 2008. She showed a map of wildfire vulnerability and pointed out that most municipalities were at high risk to the hazard.
- **Tornadoes**: Ms. Melusky showed a map of past occurrences of tornadoes and said that the map was corrected based on feedback from the last meeting. She then showed a table of windstorm events greater than 50 knots. She showed a table of number of manufactured housing units per municipality and explained that they would be vulnerable to tornadoes. Mr. Mrozinski asked Ms. Melusky to use the Census mobile home numbers for the plan and not the HAZUS numbers. A representative from Dingman Township said that in his township, they have seasonal trailers and they are not mobile homes. She explained that the Census includes trailers as "manufactured housing units." Ms. Melusky said she will include a manufactured housing units definition from the Census in the plan.
- **Transportation Accidents**: Ms. Melusky showed a map of average annual traffic on the roads in the County. She showed a table of number of vehicle crashes in the County. She pointed out that the plan also included data about plane and rail accidents. Ms. Melusky then showed a table of buffers of highways, rail lines, and airports and how many structures and critical facilities per each municipality fall within the buffers. She pointed out municipalities with a high number of structures in each buffer. Mr. Mrozinski asked what airport was within 5 miles of Greene Township and Ms. Melusky said that it was likely an airport in Wayne County.

Ms. Melusky next talked about Capability Assessment. She said all 13 municipalities completed a Capability Assessment Survey. All municipalities have a comprehensive plan and several have multi-municipal plans. All municipalities have a zoning ordinance and subdivision and land development ordinance. All municipalities participate in the NFIP. Most municipalities said they had limited to moderate capability for administrative and technical capability. Most municipalities who turned the survey also said that they had limited fiscal capability; although four municipalities said they had moderate to high capability. Regarding, political capability the average score was a 4.09 which is good.

Ms. Melusky then spoke about the mitigation strategy. She said it had to do with goals, objectives, and actions. She asked the few municipalities who hadn't turned in a mitigation action form or a 2006 project review form to turn one in before the end of the meeting.

She gave an example of a goal, objective, and action in the plan to show the difference between goals, objectives, and actions. She displayed a slide with the six goals from the plan.

She said that the actions and projects fall under one of six categories/techniques:

- Prevention: planning tools and regulations, like zoning ordinances
- Property protection: modification of existing buildings and structures, such as through acquisition or elevation
- Public education and awareness: This is a way to have a big effect with smaller costs.
- Natural resource protection techniques: includes stream restoration and wetland creation
- Structural project implementation: is putting in culverts, sluice pipes, dams, and levees. It is generally new construction of structures, not modification of existing ones
- Emergency services: this technique focuses on response capabilities and can include early warning systems

Ms. Melusky then provided examples of mitigation actions from the action plan.

Next, Ms. Melusky then explained the plan maintenance procedures which involve how the plan will be updated over the next 5 years. The County will meet annually or following a major disaster event. The County will also work with the municipalities to keep track of projects that have been completed. The County will also recommend projects for grant funding.

- **Planning Timeline**

Ms. Melusky went through the planning process timeline and said that a draft of the plan would be posted to the website the following day (www.pikehmp.com). People could submit written comments on it for 30 days. She said comments must be submitted in writing. The plan would then be submitted as a formal submission to FEMA after the 30 day comment period in July. Once the plan is approved pending adoption, municipalities should pass a resolution to adopt it. Once the first municipality adopts it, everyone else would have one year to adopt it. There will be a sample resolution included in the plan.

- **Question and Answer Session**

Ms. Melusky thanked everyone for coming to the meeting and reminded everyone to check the website for the draft plan. There were no additional questions.

The meeting adjourned at 7:30 p.m.
A recording of this meeting may be obtained by contacting Michael Baker Jr., Inc.

Name_____ Jurisdiction/Organization_____

Pike County All-Hazard Mitigation Plan Update
Comment Form

Please use this form to provide comments on the topics below.

Hazard Identification and Risk Assessment

_____
_____
_____
_____
_____

Mitigation Strategy (Goals, Objectives, Actions)

_____
_____
_____
_____
_____

Other Topics

_____
_____
_____
_____
_____
_____

For questions or comments about today's meeting please contact:

Alexis Melusky, 215-430-5512, amelusky@mbakercorp.com

To review the entire Draft Pike County 2011 All-Hazard Mitigation Plan and provide additional comments please visit the Pike County Hazard Mitigation Plan Update site starting June 17, 2011:

www.PikeHMP.com

Baker

PLANNING TEAM TELECONFERENCE
JUNE 24, 2011

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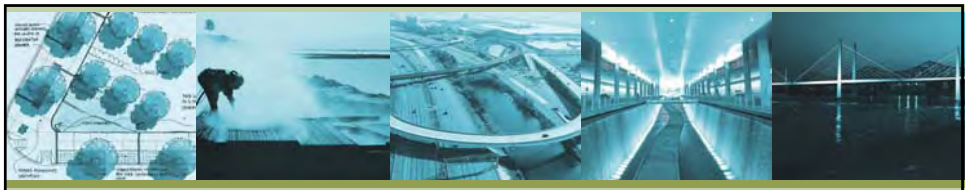


All-Hazard Mitigation Plan
Pike County, PA

Participation Teleconference
June 24, 2011

Michael Baker Jr., Inc.

Baker

Project Overview

- **What is Hazard Mitigation?**

  Hazard mitigation is any sustained action taken to reduce or eliminate long-term risk to life and property resulting from natural and man-made hazards.
- **What is a Hazard Mitigation Plan?**
  - A Hazard Mitigation Plan is a community-driven, living document that communities use to reduce their vulnerability to hazards.
- **What is the purpose of a Hazard Mitigation Plan?**
  - Communities must have a plan to apply for and receive mitigation grants for mitigation projects.
  - Ultimately these actions reduce vulnerability, and communities are able to recover more quickly from disasters.

2

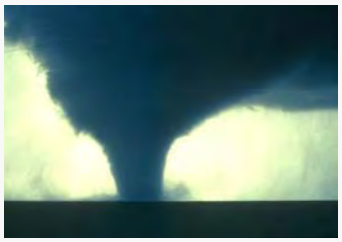
Planning Process

- Participation
- Planning Team
- Meetings

3

Risk Assessment
Hazard Profiles

- Location and Extent
- Range of Magnitude
- Past Occurrence
- Future Occurrence
- Vulnerability



4

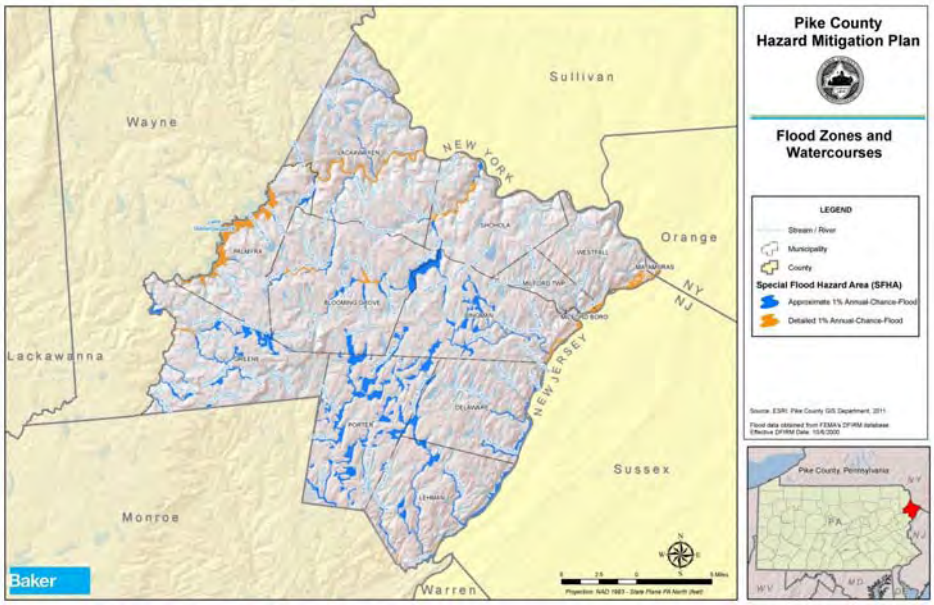
Risk Assessment

Pike County Risk Factor Results							
HAZARD RISK	HAZARD NATURAL (N) or MAN-MADE (M)	RISK ASSESSMENT CATEGORY					RISK FACTOR
		PROBABILITY	IMPACT	SPATIAL EXTENT	WARNING TIME	DURATION	
HIGH	Flood, Flash flood, Ice jam (N)	4	3	3	2	3	3.2
	Winter Storm (N)	4	2	3	4	3	3.1
	Wildfire (N)	4	2	4	2	3	3.1
MODERATE	Drought (N)	2	2	4	1	4	2.5
	Transportation Accident (M)	4	2	1	4	1	2.5
	Utility Interruption (M)	3	1	2	4	4	2.3
	Hurricane, Tropical Storm, Nor'easter (N)	2	2	3	1	4	2.2
	Drowning (M)	4	1	1	4	1	2.2
	Environmental Hazards (M)	2	2	2	3	2	2.1
	Tornado and Windstorm (N)	2	2	2	4	1	2.1
	Pandemic (N)	1	2	3	1	4	2.0
	Urban Fire and Explosion (M)	2	2	1	4	2	2.0
LOW	Nuclear Incidents (M)	1	2	2	3	3	1.9
	Terrorism (M)	2	2	1	4	1	1.9
	Dam Failure (M)	1	3	1	4	1	1.9
	Earthquake (N)	1	1	2	4	1	1.5

5

Risk Assessment

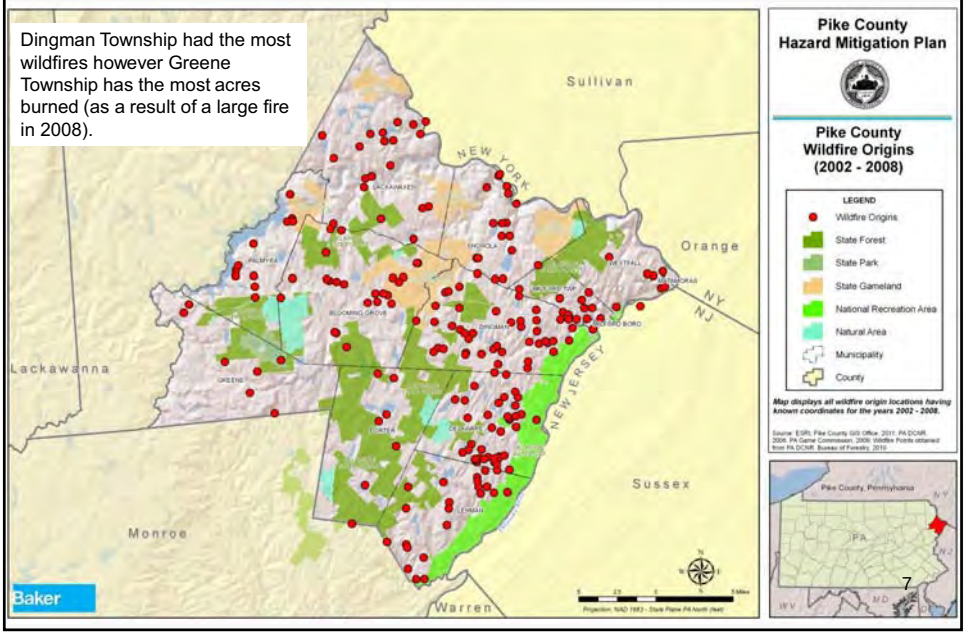
Flood, Flash Flood, Ice Jam



Baker

Risk Assessment
Wildfire

Dingman Township had the most wildfires however Greene Township has the most acres burned (as a result of a large fire in 2008).



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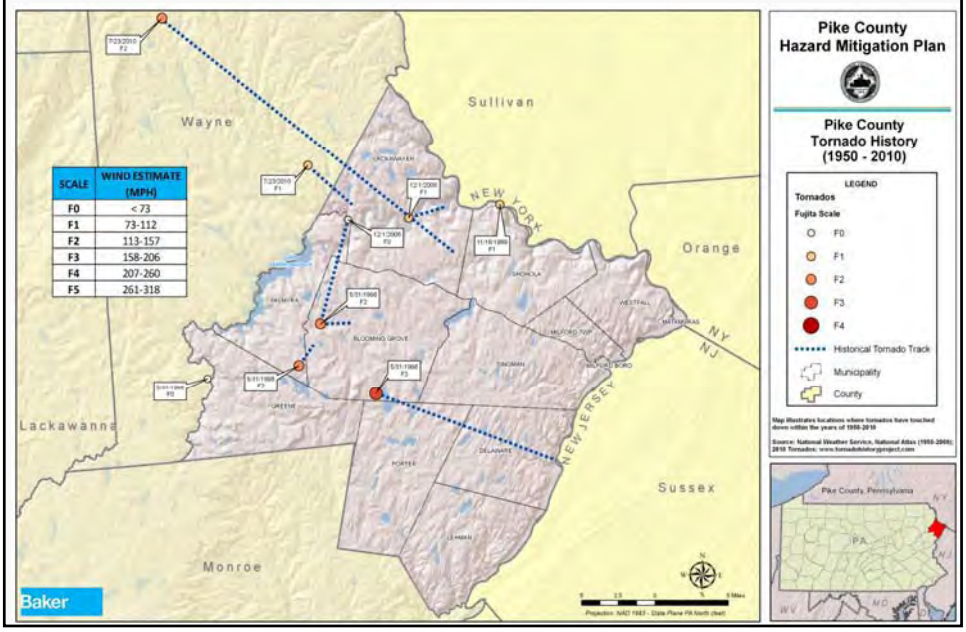
Risk Assessment
Tornado and Windstorm



Capability Assessment

- Capability Assessment Surveys were completed by municipal representatives to assess:
  - Planning and regulatory capability
    - All municipalities have comprehensive plans. Six municipalities have multi-municipal plans.
    - All municipalities participate in the NFIP.
    - All municipalities have subdivision and land development ordinances and all but one has zoning.
  - Administrative and technical capability
    - Found that municipalities have **limited-to-moderate** administrative and technical staff needed to conduct hazard mitigation activities.
  - Fiscal capability
    - Found that most municipalities within the County perceive fiscal capability to be **limited** although four indicated that they had moderate to high fiscal capability.
  - Political capability
    - The average rating for political willingness to adopt policies and programs that reduce hazard vulnerabilities was **4.09** with "0" being "unwilling" and "5" being "very willing."

9

Mitigation Strategy

- The approach you take to reduce or avoid long-term vulnerabilities to the identified hazards
- Includes:
  - Goals
  - Objectives
  - Actions and Projects

10

Mitigation Strategy

- Identifies a comprehensive range of specific mitigation actions and projects being considered to reduce the effects of each hazard.
- Example:
  - **Goal***:* **Reduce vulnerability including loss of life and damage to assets from natural hazards and human-made hazards.**
  - **Objective: Identify and evaluate the need for warning systems and storm shelters.**
  - **Action: Install two additional warning sirens on the Lackawaxen River**

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Mitigation Strategy
Mitigation Goals

- **Goal 1:** Provide for properly managed and environmentally sound growth and disaster-resistant development.
- **Goal 2:** Reduce the potential impact of natural and human made hazards on property.
- **Goal 3:** Enhance and improve emergency services provided to the growing population of Pike County.
- **Goal 4:** Reduce vulnerability including loss of life and damage to assets from natural and human-made hazards.
- **Goal 5:** Conserve, protect and enhance existing natural and water resources.
- **Goal 6:** Increase awareness, understanding, and preparedness across all sectors by encouraging hazard risk, preparedness, and mitigation related education and outreach activities.

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Mitigation Strategy
Mitigation Techniques

- **Prevention**
- **Property Protection**
- **Public Education and Awareness**
- **Natural Resource Protection**
- **Structural Projects**
- **Emergency Services**

13

Mitigation Strategy
Mitigation Actions and Projects

Mitigation Action Title/Description	*Jurisdiction*	*Technique*	*Hazard Addressed*
Implement groundwater level wells monitoring to assess potable groundwater levels in drought periods.	Pike County	Prevention	Drought
Clean up debris in Blooming Grove Creek and Shohola Creek	Blooming Grove Township	Natural Resource Protection	Flood, Flash Flood, and Ice Jam
Install a french mattress on Sawmill Road to reduce flooding.	Greene Township	Structural Project Implementation	Flood, Flash Flood, and Ice Jam
Mitigate repetitive loss properties within the municipality.	Greene Township, Milford Borough, Westfall Township	Property Protection	Flood, Flash Flood, and Ice Jam
Secure evacuation shelters to provide locations for the safety of Township residents during hazard events	Matamoras Borough	Emergency Services	All

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Plan Maintenance

- Process for monitoring, evaluating, and updating the plan during the next five years.
- The Plan will be updated every 5 years or following a disaster event.
- Pike County Hazard Mitigation Steering Committee will meet annually or within 30 days after any disaster declaration to specifically discuss the effectiveness of the plan and provide for any needed updates.
- Contact will be maintained with the municipalities to monitor the progress of the mitigation actions during the year and consider whether applications should be submitted for existing mitigation grant programs.

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Timeline

Date	Task Item
February 2011	Planning Process began
March 14, 2011	Kick-off Meeting
March 15, 2001 → April 29, 2011	Risk Assessment
Week of March 28, 2011	Capability Assessment
May 5, 2011	Risk Assessment Summary and Mitigation Solutions Workshop
March 5, 2011→ June 13, 2011	Mitigation Strategy Update Production
June 16, 2011	Public Meeting
July 2011	**Deliver to PEMA/FEMA for Review**
Fall 2011	Distribute to Municipalities for Adoption

16

Draft Plan Review and Comment Period

- Draft HMP will be available for review and comment beginning June 17th and ending July 17th.
- During that time, the HMP will be available for download at www.PikeHMP.com.
- Submit all comments in writing

17

Questions?

Pike County Hazard Mitigation Plan Update Project Website
www.PikeHMP.com

18

Pike County
All-Hazard Mitigation Plan
Planning Team Teleconference

DATE: June 24, 2011

TIME: 10:00 a.m. – 11:00 a.m.

LOCATION: via conference call

The following people were in attendance:

Name	Organization/ Affiliation
Viola Canouse	Milford Township
Michael Mrozinski	Pike County Office of Community Planning
Alexis Melusky	Michael Baker Jr., Inc.

- **Welcome and Introductions**

  Ms. Melusky welcomed the representative from Milford Township. She thanked her for calling in and explained that it was important for her municipality's participation in the Pike County HMP and eligibility for certain grant funding.

- **Project Overview**

  Ms. Melusky explained that she was working with Pike County on an update to its hazard mitigation plan. She said once the plan has been submitted to FEMA and approved, Milford Township will need to pass a resolution and adopt it. She said the municipalities would be covered under the hazard mitigation plan for five years until the next plan update. She said that FEMA requires that municipalities participate in and adopt the County HMP in order to be eligible for certain disaster mitigation funds.

  Ms. Melusky next defined hazard mitigation which is any sustained action taken to reduce or eliminate long-term risk to life and property resulting from natural and man-made hazards. She gave examples of natural and human made hazards to show the difference.

  Ms. explained that hazard mitigation plans are community-driven documents that communities use to reduce their vulnerability to hazards. Ms. Melusky explained that municipalities are required to participate in the planning process in order to be eligible for certain FEMA funds.

  She said the Pike County Office of Community Planning and the County EMA began the hazard mitigation plan update process back in January. Municipalities and stakeholders that participated in the planning process were considered the planning team. Ms. Melusky said there were a total of 3 meetings that took place.

- **All-Hazard Mitigation Plan Components**

Ms. Melusky said that at the first meeting, the planning team identified 16 hazards for inclusion in the plan. Several of the hazards were included in the County's 2006 plan. Ms. Melusky said that there is a profile for each hazard and it includes information on location and extent (whether the hazard occurs across the entire county or only in certain areas), past occurrences, the range of magnitude (which includes a worst case scenario), probability of future occurrences, and a vulnerability assessment (in which vulnerable assets, critical facilities, and potential dollar losses are identified).

Ms. Melusky then showed the risk factor table with the 16 hazards and their rankings. She explained that hazards are grouped into high, medium, or low risk hazards based on the risk factor they received. She explained the various categories for which each hazard received a score. Mr. Mrozinski asked Ms. Melusky to read aloud the hazards and their rankings since the faxed copy of the table came out a bit difficult to read. Ms. Melusky read the hazards and explained that the table was presented to the hazard mitigation team at a meeting and the risk factors were adjusted based on input.

Ms. Melusky then showed a map of floodplains in the County and explained that there were maps for almost every hazard in the plan. The maps show what municipalities could be more vulnerable to certain hazards. She showed a map of wildfire past occurrences and explained there is a table in the plan with the details about each wildfire event. She showed a map of tornado past occurrences. She encouraged Ms. Canouse to review the hazard profiles in the draft plan at her convenience.

Ms. Melusky then explained that municipalities each completed a capability assessment survey. She said the purpose of the worksheet was to assess municipal capabilities to address hazard mitigation. The survey asks for information on planning and regulatory capability, technical capability, fiscal capability, and political capability. Ms. Melusky talked about some of the results of the survey.

Ms. Melusky then discussed the mitigation strategy. She said it includes goals, objectives, and actions/projects. She said that the County reviewed the goals and objectives from its 2006 HMP and modified a few to make them more specific to hazard mitigation. She explained that actions and projects were submitted by the County and the municipalities. She asked Ms. Canouse to send in a completed mitigation action form for a project for her municipality.

Ms. Melusky then talked about the mitigation action plan. She showed an example of a goal, objective, and action in the plan. She showed a slide of the six goals in the plan.

She then discussed the six FEMA mitigation techniques: prevention, property protection, public education and awareness, natural resource protection, structural project implementation, and emergency services. She gave examples for each strategy. Ms. Melusky discussed mitigation actions/projects and gave several examples for different types of actions/projects that were submitted for the plan update by the County or municipalities. Mr. Mrozinski said that Ms. Canouse may want to consider signing on to one of the mitigation actions submitted by another neighboring municipality such as Matamoras Borough.

Ms. Melusky then discussed plan maintenance which is what the County will do over the next five years to keep the plan up to date. She said the county would update the plan every five years or after a major disaster. They will also meet routinely to monitor projects the municipalities are doing.

- **Planning Timeline**

Ms. Melusky then discussed the timeline for the plan. She said that three meetings had been held with the final public meeting being held on June 16th. She said three newspaper notices were also published to advertise the public meeting. Also a flyer was sent around to be posted in municipal buildings. She explained that a draft of the plan was posted to the plan website the following day and it began a 30 day comment period. The plan would be submitted for a final review in July and it is anticipated that the plan would be approved by the fall. The Office of Community Planning will reach out to the municipalities to let them know once the plan is approved and then the municipalities should adopt it via resolution. Ms. Melusky explained that once the first municipality adopts the plan, the other municipalities would have one year to adopt it.

Ms. Melusky showed a slide with the plan website www.PikeHMP.com and asked that is Ms. Canouse had any comments, to please submit them in writing.

- **Question and Comment Session**

Ms. Melusky asked if there were any questions. Mr. Mrozinski asked if the capability assessment survey that Ms. Canouse sent was in high enough resolution and Ms. Melusky said that she could read it ok. She said that she would need a mitigation action form from Milford Township. Mr. Mrozinski asked if she could recommend some projects and Ms. Melusky read a few examples of projects received from other Pike County municipalities. Mr. Mrozinski suggested a potential partnership with Matamoras Borough regarding using their new radio station for public service announcements. Ms. Canouse will think about the suggested projects and send in a mitigation action form. Ms. Melusky asked if there were any other questions and Ms. Canouse did not have any more. Ms. Melusky thanked her and Mr. Mrozinski again for attending the call.

The meeting concluded at 11:00 am.

A recording of this meeting may be obtained by contacting Michael Baker Jr., Inc.

COMPLETED EVALUATION OF IDENTIFIED HAZARD AND RISK FORMS

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Name: Jon M. Castimore Title:

Jurisdiction: Blooming Grove Township

PART 1

Identified Hazards 2006 HMP	How has the frequency of occurrence, magnitude of impact, and/or geographic extent changed in your community? NC=No Change, I=Increase, D=Decrease (Please provide an explanation for any hazards marked I or D in the "Additional Comments" column)	Additional Comments
Natural Hazards		
Drought / well water	Increase	weather extremes long periods of no rain (summer)
Earthquake	N. C	
Flood, Flash Flood, Ice Jam	Increase	Rain amount measured in inches
Tornado, Wind Storm	Increase	Heavy wind (storm)
Winter Storm / Ice	Increase	Less snow more ice
Wildfire	N. C	Fire may increase with drought
Human-made Hazards		
Dam Failure	N. C	Master Dams and plans
Environmental Hazards	N. C	more erosion
Nuclear Incidents	N. C	Indian Point Berwick
Terrorism	N. C	

Identified Hazards 2006 HMP	***How has the frequency of occurrence, magnitude of impact, and/or geographic extent changed in your community?*** **NC**=No Change, **I**=Increase, **D**=Decrease *(Please provide an explanation for any hazards marked* **I** *or* **D** *in the "Additional Comments" column)*	***Additional Comments***
Transportation Accidents	D	Less accidents with Haz-Mat
Urban Fire and Explosion	D	Less house Fire
Utility Interruption	Increase	Winter Ice Storms Summer Wind Storms

PART II

Other Hazards:
Do any of these hazards, not previously profiled in the County's hazard mitigation plan, have the potential to affect your municipality significantly? *(If so, check box)*

Natural

None

- ☐ *Avalanche/Glacier*
- ☐ *Coastal Erosion*
- ☐ *Dust, Sand Storm*
- ☐ *Expansive Soils*
- ☐ *Extreme Temperature*
- ☐ *Hailstorm*
- ☐ *Hurricane, Tropical Storm, Nor'easter*
- ☐ *Invasive Species*
- ☐ *Landslide*
- ☐ *Lightning Strike*
- ☐ *Pandemic*
- ☐ *Radon Exposure*
- ☐ *Subsidence, Sinkhole*
- ☐ *Tsunami*
- ☐ *Volcano*

Human-made

None

- ☐ *Building or Structure Collapse*
- ☐ *Civil Disturbance*
- ☐ *Disorientation*
- ☐ *Drowning*
- ☐ *Levee Failure*
- ☐ *War and Criminal Activity*

Other Comments

Name: Kyle Wright Title: Emergency Mgmt Coordinator

Jurisdiction: Delaware Township

PART 1

Identified Hazards 2006 HMP	*How has the frequency of occurrence, magnitude of impact, and/or geographic extent changed in your community?* **NC**=No Change, **I**=Increase, **D**=Decrease *(Please provide an explanation for any hazards marked* **I** *or* **D** *in the "Additional Comments" column)*	*Additional Comments*
Natural Hazards		
Drought	NC	
Earthquake	NC	
Flood, Flash Flood, Ice Jam	NC	
Tornado, Wind Storm	NC	
Winter Storm	NC	
Wildfire	NC	
Human-made Hazards		
Dam Failure	NC	
Environmental Hazards	NC	
Nuclear Incidents	NC	
Terrorism	NC	

Identified Hazards *2006 HMP*	***How has the frequency of occurrence, magnitude of impact, and/or geographic extent changed in your community?*** **NC**=No Change, **I**=Increase, **D**=Decrease *(Please provide an explanation for any hazards marked* **I** *or* **D** *in the "Additional Comments" column)*	***Additional Comments***
Transportation Accidents	NC	
Urban Fire and Explosion	NC	
Utility Interruption	NC	

PART II

Other Hazards:
Do any of these hazards, not previously profiled in the County's hazard mitigation plan, have the potential to affect your municipality significantly? *(If so, check box)*

Natural

- ☐ *Avalanche/Glacier*
- ☐ *Coastal Erosion*
- ☐ *Dust, Sand Storm*
- ☐ *Expansive Soils*
- ☐ *Extreme Temperature*
- ☐ *Hailstorm*
- ☐ *Hurricane, Tropical Storm, Nor'easter*
- ☐ *Invasive Species*
- ☐ *Landslide*
- ☐ *Lightning Strike*
- ☐ *Pandemic*
- ☐ *Radon Exposure*
- ☐ *Subsidence, Sinkhole*
- ☐ *Tsunami*
- ☐ *Volcano*

Human-made

- ☐ *Building or Structure Collapse*
- ☐ *Civil Disturbance*
- ☐ *Disorientation*
- ☐ *Drowning*
- ☐ *Levee Failure*
- ☐ *War and Criminal Activity*

Other Comments

No additional hazards

Name: Mary Ann Hubbard Title: Chairperson

Jurisdiction: Greene Twp., Pike County

PART 1

Identified Hazards 2006 HMP	How has the frequency of occurrence, magnitude of impact, and/or geographic extent changed in your community? NC=No Change, I=Increase, D=Decrease (Please provide an explanation for any hazards marked I or D in the "Additional Comments" column)	Additional Comments
Natural Hazards		
Drought	NC	
Earthquake	NC	
Flood, Flash Flood, Ice Jam	I	
Tornado, Wind Storm	I	
Winter Storm	I	
Wildfire	I	
Human-made Hazards		
Dam Failure	NC	
Environmental Hazards	NC	
Nuclear Incidents	NC	
Terrorism	NC	

Identified Hazards 2006 HMP	*How has the frequency of occurrence, magnitude of impact, and/or geographic extent changed in your community?* **NC**=No Change, **I**=Increase, **D**=Decrease *(Please provide an explanation for any hazards marked* **I** *or* **D** *in the "Additional Comments" column)*	*Additional Comments*
Transportation Accidents	I	
Urban Fire and Explosion	NC	
Utility Interruption	NC	

PART II

Other Hazards:
Do any of these hazards, not previously profiled in the County's hazard mitigation plan, have the potential to affect your municipality significantly? *(If so, check box)*

Natural

- ☐ *Avalanche/Glacier*
- ☑ *Dust, Sand Storm*
- ☐ *Extreme Temperature*
- ☑ *Hurricane, Tropical Storm, Nor'easter*
- ☐ *Landslide*
- ☐ *Pandemic*
- ☑ *Subsidence, Sinkhole*
- ☐ *Volcano*
- ☐ *Coastal Erosion*
- ☐ *Expansive Soils*
- ☑ *Hailstorm*
- ☑ *Invasive Species*
- ☐ *Lightning Strike*
- ☐ *Radon Exposure*
- ☐ *Tsunami*

Human-made

- ☑ *Building or Structure Collapse*
- ☐ *Disorientation*
- ☐ *Levee Failure*
- ☐ *Civil Disturbance*
- ☑ *Drowning*
- ☐ *War and Criminal Activity*

Other Comments

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By

Name: Shawn Roe Title: Secretary

Jurisdiction: Lackawaxen Township. Pike Cty.

PART 1

Identified Hazards 2006 HMP	How has the frequency of occurrence, magnitude of impact, and/or geographic extent changed in your community? NC=No Change, I=Increase, D=Decrease (Please provide an explanation for any hazards marked I or D in the "Additional Comments" column)	Additional Comments
Natural Hazards		
Drought	NC	
Earthquake	NC	
Flood, Flash Flood, Ice Jam	NC	
Tornado, Wind Storm	NC	
Winter Storm	NC	
Wildfire	NC	
Human-made Hazards		
Dam Failure	NC	
Environmental Hazards	NC	
Nuclear Incidents	NC	
Terrorism	NC	

Identified Hazards *2006 HMP*	***How has the frequency of occurrence, magnitude of impact, and/or geographic extent changed in your community?*** **NC**=No Change, **I**=Increase, **D**=Decrease *(Please provide an explanation for any hazards marked* **I** *or* **D** *in the "Additional Comments" column)*	***Additional Comments***
Transportation Accidents	NC	
Urban Fire and Explosion	NC	
Utility Interruption	NC	

PART II

Other Hazards:

Do any of these hazards, not previously profiled in the County's hazard mitigation plan, have the potential to affect your municipality significantly? *(If so, check box)*

Natural

- ☐ *Avalanche/Glacier*
- ☐ *Coastal Erosion*
- ☐ *Dust, Sand Storm*
- ☐ *Expansive Soils*
- ☐ *Extreme Temperature*
- ☐ *Hailstorm*
- ☐ *Hurricane, Tropical Storm, Nor'easter*
- ☐ *Invasive Species*
- ☐ *Landslide*
- ☐ *Lightning Strike*
- ☐ *Pandemic*
- ☐ *Radon Exposure*
- ☐ *Subsidence, Sinkhole*
- ☐ *Tsunami*
- ☐ *Volcano*

Human-made

- ☐ *Building or Structure Collapse*
- ☐ *Civil Disturbance*
- ☐ *Disorientation*
- ☐ *Drowning*
- ☐ *Levee Failure*
- ☐ *War and Criminal Activity*

Other Comments

Name: LIZANNE JAMUELSON MILFORD BOROUGH Title: SECRETARY

Jurisdiction: MILFORD BOROUGH

PART 1

Identified Hazards 2006 HMP	How has the frequency of occurrence, magnitude of impact, and/or geographic extent changed in your community? NC=No Change, I=Increase, D=Decrease (Please provide an explanation for any hazards marked I or D in the "Additional Comments" column)	Additional Comments
Natural Hazards		
Drought	N/C	
Earthquake	N/C	
Flood, Flash Flood, Ice Jam	I	We only have a few homes impacted by river overflow but during heavy rains our storm water drains are effected
Tornado, Wind Storm	N/C	
Winter Storm	N/C	
Human-made Hazards		
Dam Failure	N/C	
Environmental Hazards	N/C	
Nuclear Incidents	N/C	
Terrorism	N/C	
Transportation Accidents	N/C	

PART II

Other Hazards:
Do any of these hazards, not previously profiled in the County's hazard mitigation plan, have the potential to affect your municipality significantly? *(If so, check box)*

not really

Natural

- ☐ *Avalanche/Glacier*
- ☐ *Dust, Sand Storm*
- ☐ *Extreme Temperature*
- ☐ *Hurricane, Tropical Storm, Nor'easter*
- ☐ *Landslide*
- ☐ *Pandemic*
- ☐ *Subsidence, Sinkhole*
- ☐ *Wildfire*
- ☐ *Coastal Erosion*
- ☐ *Expansive Soils*
- ☐ *Hailstorm*
- ☐ *Invasive Species*
- ☐ *Lightning Strike*
- ☐ *Radon Exposure*
- ☐ *Tsunami*
- ☐ *Volcano*

Human-made

- ☐ *Building or Structure Collapse*
- ☐ *Disorientation*
- ☐ *Levee Failure*
- ☐ *Civil Disturbance*
- ☐ *Drowning*
- ☐ *War and Criminal Activity*

Other Comments

Name: VIOLA K. CANONSE Title: Secy.

Jurisdiction: MILFORD TWP.

PART 1

Identified Hazards 2006 HMP	How has the frequency of occurrence, magnitude of impact, and/or geographic extent changed in your community? NC=No Change, I=Increase, D=Decrease (Please provide an explanation for any hazards marked I or D in the "Additional Comments" column)	Additional Comments
Natural Hazards		
Drought	NC	
Earthquake	NC	
Flood, Flash Flood, Ice Jam	NC	
Tornado, Wind Storm	NC	
Winter Storm	NC	
Wildfire	NC	
Human-made Hazards		
Dam Failure	NC	
Environmental Hazards	NC	
Nuclear Incidents	NC	
Terrorism	NC	

PART II

Other Hazards:
Do any of these hazards, not previously profiled in the County's hazard mitigation plan, have the potential to affect your municipality significantly? *(If so, check box)*

Natural

- ☐ *Avalanche/Glacier*
- ☐ *Coastal Erosion*
- ☐ *Dust, Sand Storm*
- ☐ *Expansive Soils*
- ☐ *Extreme Temperature*
- ☐ *Hailstorm*
- ☐ *Hurricane, Tropical Storm, Nor'easter*
- ☐ *Invasive Species*
- ☐ *Landslide*
- ☐ *Lightning Strike*
- ☐ *Pandemic*
- ☐ *Radon Exposure*
- ☐ *Subsidence, Sinkhole*
- ☐ *Tsunami*
- ☐ *Volcano*

Human-made

- ☐ *Building or Structure Collapse*
- ☐ *Civil Disturbance*
- ☐ *Disorientation*
- ☐ *Drowning*
- ☐ *Levee Failure*
- ☐ *War and Criminal Activity*

Other Comments

Identified Hazards 2006 HMP	***How has the frequency of occurrence, magnitude of impact, and/or geographic extent changed in your community?*** **NC**=No Change, **I**=Increase, **D**=Decrease *(Please provide an explanation for any hazards marked* **I** *or* **D** *in the "Additional Comments" column)*	***Additional Comments***
Transportation Accidents	NC	
Urban Fire and Explosion	NC	
Utility Interruption	NC	

Name: Rob Hellyer Title: EMC

Jurisdiction: Porter Township

PART 1

Identified Hazards 2006 HMP	How has the frequency of occurrence, magnitude of impact, and/or geographic extent changed in your community? NC=No Change, I=Increase, D=Decrease (Please provide an explanation for any hazards marked I or D in the "Additional Comments" column)	Additional Comments
Natural Hazards		
Drought	NC	
Earthquake	NC	
Flood, Flash Flood, Ice Jam	NC	
Tornado, Wind Storm	NC	
Winter Storm	NC	
Human-made Hazards		
Dam Failure	I	Aging dams
Environmental Hazards	I	Larger population
Nuclear Incidents	NC	
Terrorism	NC	
Transportation Accidents	I	More volume

Identified Hazards 2006 HMP	*How has the frequency of occurrence, magnitude of impact, and/or geographic extent changed in your community?* **NC**=No Change, **I**=Increase, **D**=Decrease *(Please provide an explanation for any hazards marked* **I** *or* **D** *in the "Additional Comments" column)*	*Additional Comments*
Urban Fire and Explosion	I	Larger Population
Utility Interruption	NC	

PART II

Other Hazards:
Do any of these hazards, not previously profiled in the County's hazard mitigation plan, have the potential to affect your municipality significantly? *(If so, check box)*

Natural

- ☐ *Avalanche/Glacier*
- ☐ *Dust, Sand Storm*
- ☐ *Extreme Temperature*
- ☑ *Hurricane, Tropical Storm, Nor'easter*
- ☐ *Landslide*
- ☐ *Pandemic*
- ☐ *Subsidence, Sinkhole*
- ☑ *Wildfire*
- ☐ *Coastal Erosion*
- ☐ *Expansive Soils*
- ☐ *Hailstorm*
- ☑ *Invasive Species*
- ☑ *Lightning Strike*
- ☐ *Radon Exposure*
- ☐ *Tsunami*
- ☐ *Volcano*

Human-made

- ☐ *Building or Structure Collapse*
- ☐ *Disorientation*
- ☐ *Levee Failure*
- ☐ *Civil Disturbance*
- ☑ *Drowning*
- ☑ *War and Criminal Activity*

Other Comments

Name: Rolin Edwards Title: Zoning/Assist. Adm.

Jurisdiction: Palmyra Twp., Pike

PART 1

Identified Hazards 2006 HMP	How has the frequency of occurrence, magnitude of impact, and/or geographic extent changed in your community? STARTING FROM WHAT DATE? NC=No Change, I=Increase, D=Decrease (Please provide an explanation for any hazards marked I or D in the "Additional Comments" column)	Additional Comments
Natural Hazards		
Drought	NC	
Earthquake	NC	
Flood, Flash Flood, Ice Jam	D	PPL control of Spring levels
Tornado, Wind Storm	NC	
Winter Storm	NC	
Wildfire	NC	
Human-made Hazards		
Dam Failure	I	PPL
Environmental Hazards	I	I-84 hazard cargo
Nuclear Incidents	NC	
Terrorism	I	PPL Pwr Gen & Satelite Station

Identified Hazards 2006 HMP	*How has the frequency of occurrence, magnitude of impact, and/or geographic extent changed in your community?* STARTING FROM WHAT DATE? **NC**=No Change, **I**=Increase, **D**=Decrease *(Please provide an explanation for any hazards marked* **I** *or* **D** *in the "Additional Comments" column)*	*Additional Comments*
Transportation Accidents	I	I-84
Urban Fire and Explosion	NC	
Utility Interruption	I	NOT SURE WHY

PART II

Other Hazards:
Do any of these hazards, not previously profiled in the County's hazard mitigation plan, have the potential to affect your municipality significantly? *(If so, check box)*

Natural

- ☐ *Avalanche/Glacier*
- ☐ *Dust, Sand Storm*
- ☐ *Extreme Temperature*
- ☒ *Hurricane, Tropical Storm, Nor'easter*
- ☐ *Landslide*
- ☐ *Pandemic*
- ☐ *Subsidence, Sinkhole*
- ☐ *Volcano*
- ☐ *Coastal Erosion*
- ☐ *Expansive Soils*
- ☒ *Hailstorm*
- ☒ *Invasive Species*
- ☒ *Lightning Strike*
- ☒ *Radon Exposure*
- ☐ *Tsunami*

Human-made

- ☒ *Building or Structure Collapse*
- ☒ *Disorientation*
- ☒ *Levee Failure*
- ☐ *Civil Disturbance*
- ☒ *Drowning*
- ☐ *War and Criminal Activity*

Other Comments

Name: Robert Ewbank *Title:* Emergency Management Coordinator

Jurisdiction: Westfall Township

PART 1

Identified Hazards 2006 HMP	*How has the frequency of occurrence, magnitude of impact, and/or geographic extent changed in your community?* **NC**=No Change, **I**=Increase, **D**=Decrease *(Please provide an explanation for any hazards marked **I** or **D** in the "Additional Comments" column)*	*Additional Comments*
Natural Hazards		
Drought	NC	
Earthquake	NC	
Flood, Flash Flood, Ice Jam	NC	
Tornado, Wind Storm	NC	
Winter Storm	I	
Wildfire	NC	
Human-made Hazards		
Dam Failure	NC	
Environmental Hazards	NC	
Nuclear Incidents	NC	
Terrorism	NC	

Identified Hazards 2006 HMP	*How has the frequency of occurrence, magnitude of impact, and/or geographic extent changed in your community?* **NC**=No Change, **I**=Increase, **D**=Decrease *(Please provide an explanation for any hazards marked* **I** *or* **D** *in the "Additional Comments" column)*	*Additional Comments*
Transportation Accidents	NC	
Urban Fire and Explosion	NC	
Utility Interruption	NC	

PART II

Other Hazards:
Do any of these hazards, not previously profiled in the County's hazard mitigation plan, have the potential to affect your municipality significantly? *(If so, check box)*

Natural

- [ ] *Avalanche/Glacier*
- [ ] *Dust, Sand Storm*
- [ ] *Extreme Temperature*
- [X] *Hurricane, Tropical Storm, Nor'easter*
- [ ] *Landslide*
- [X] *Pandemic*
- [ ] *Subsidence, Sinkhole*
- [ ] *Volcano*
- [ ] *Coastal Erosion*
- [ ] *Expansive Soils*
- [X] *Hailstorm*
- [ ] *Invasive Species*
- [X] *Lightning Strike*
- [X] *Radon Exposure*
- [ ] *Tsunami*

Human-made

- [X] *Building or Structure Collapse*
- [X] *Disorientation*
- [ ] *Levee Failure*
- [X] *Civil Disturbance*
- [X] *Drowning*
- [X] *War and Criminal Activity*

Other Comments

If Dams or New York city reservoirs were to fail we would have only minutes to evacuate people here.

COMPLETED CAPABILITY ASSESSMENTS

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Capability Assessment Survey

Jurisdiction: Blooming Grove Township *Name/Title:* Jon M. Castimore

1. Planning and Regulatory Capability: Please indicate whether the following planning or regulatory tools and programs are currently in place or under development for your jurisdiction by placing an "X" in the appropriate box, followed by the date of adoption/update. Then, for each particular item in place, identify the department or agency responsible for its implementation and indicate its estimated or anticipated effect on hazard loss reduction (Supports, Neutral or Hinders) with the appropriate symbol and also indicate if there has been a change in the ability of the tool/program to result in loss reduction. Finally, please provide additional comments or explanations in the space provided.

Tool/Program	Status			Dept. / Agency Responsible	Effect on Loss Reduction: + Support O Neutral -- Hinder	Change Since Last Plan: + Positive -- Negative	Comments:
	In Place	Date Adopted or Updated	Under Development				
EXAMPLE: Hazard Mitigation Plan	X	1/1/2006		Hazard County EMA	+	+	Interim update in 2008 revised mitigation strategy; completed one action.
Hazard Mitigation Plan	X	2006	X	County EMA		X	
Emergency Operations Plan	X	May 2007					
Disaster Recovery Plan	X	May 2007					
Evacuation Plan	X	May 2007					
Continuity of Operations Plan	X	May 2007					
NFIP							
NFIP-CRS							
Floodplain Regulations	X	2000					Flood Plan Maps
Floodplain Management Plan	X	2000					Zoning No New House
Zoning Regulations	X	Dec. 4 2006	Update	Zoning Dept.			under review
Subdivision Regulations	X	1977 Ongoing	Update				under review

Capability Assessment Survey

Tool/Program	Status: In Place	Status: Date Adopted or Updated	Status: Under Development	Dept. / Agency Responsible	Effect on Loss Reduction: + Support O Neutral -- Hinder	Change Since Last Plan: + Positive -- Negative	Comments:
Comprehensive Land Use Plan (or General, Master or Growth Mgmt. Plan)	X	Oct 2008		Twp	+	+	
Open Space Management Plan (or Parks/Rec or Greenways Plan)	N/A			County			
Stormwater Management Plan / Ordinance	X			Twp County			SALDO
Natural Resource Protection Plan	N/A						
Capital Improvement Plan	N/A						
Economic Development Plan	N/A			County			
Historic Preservation Plan				County			
Farmland Preservation				County			International
Building Code	X			Building Dept			National Building
Fire Code	X			Building Dept.			National Building
Firewise	X			Private			Hemlock Farms Community Assoc.
Storm Ready	N/A						Not storm ready
Other							

2. Administrative and Technical Capability: Please indicate whether your jurisdiction maintains the following staff members within its current personnel resources by placing an "X" in the appropriate box. Then, if YES, please identify the department or agency they work under and provide any other comments you may have in the space provided or with attachments.

Staff/Personnel Resources	***Yes***	***No***	***Department / Agency***	***Comments***
Planners (with land use / land development knowledge)	X			Paid Consultants
Planners or engineers (with natural and/or human caused hazards knowledge)				
Engineers or professionals trained in building and/or infrastructure construction practices (includes building inspectors)	X		Building Dept.	Twp Engineer Building Inspector
Emergency manager	X		Blooming Grove Twp EMA	
Floodplain manager	X			Zoning Officer
Land surveyors		X		
Scientists or staff familiar with the hazards of the community	X			Staff can help with Local Hazards
Personnel skilled in Geographic Information Systems (GIS) and/or FEMA's HAZUS program	X		Zoning Dept.	
Grant writers or fiscal staff to handle large/complex grants		X		
Other				

3. Fiscal Capability: Please indicate whether your jurisdiction has access to or is eligible to use the following local financial resources ***for hazard mitigation purposes*** (including as match funds for State of Federal mitigation grant funds). Then, identify the primary department or agency responsible for its administration or allocation and provide any other comments you may have in the space provided or with attachments.

Financial Resources	*Yes*	*No*	*Department / Agency*	*Comments*
Capital improvement programming		X		
Community Development Block Grants (CDBG)		X		Don't Apply
Special purpose taxes	X			Fire Tax
Gas / electric utility fees				N/A
Water / sewer fees				N/A
Stormwater utility fees				N/A
Development impact fees	X		Zoning Dept SALDO	Major sub } Sub and land develop Minor sub } review cost
General obligation, revenue, and/or special tax bonds		X		
Partnering arrangements or intergovernmental agreements	X			EMA with Porter Supervisors with county
Other				

4. Community Political Capability: Political capability in this instance is being measured by the degree to which local political leadership (including appointed boards) is willing to enact policies and programs that reduce hazard vulnerabilities in your community, even if met with some opposition. Examples may include guiding development away from identified hazard areas, restricting public investments or capital improvements within hazard areas, or enforcing local development standards that go beyond minimum State or Federal requirements (e.g., building codes, floodplain management, etc.). Rate the jurisdiction's political capability to enact policies and programs that reduce hazard vulnerabilities on a scale from 0 to 5. Generally, a higher the score corresponds to a higher degree of community political capability.

5-Very Willing ←——————————→ *3-Moderately Willing* *0-Unwilling to Adopt Policies/Programs*

Score: 4

5. Self-Assessment of Capability: Please provide an approximate measure of your jurisdiction's capability to effectively implement hazard mitigation strategies to reduce hazard vulnerabilities. Using the following table, please place an "**X**" in the box marking the most appropriate degree of capability (Limited, Moderate or High) based upon best available information and the responses provided in Sections 1-5 of this survey. For multi-jurisdictional plans, record the results of this section into the Self Assessment Capability Matrix in **Appendix 4.**

Area	***Degree of Capability***		
	Limited	***Moderate***	***High***
Planning and Regulatory Capability		X	
Administrative and Technical Capability		X	
Fiscal Capability		X	
Community Political Capability		X	
Community Resiliency Capability		X	

Capability Assessment Survey

Jurisdiction: Delaware Township Name/Title: Kyle Weight, Emergency Mgmt. Coordinator

1. ***Planning and Regulatory Capability***: Please indicate whether the following planning or regulatory tools and programs are currently in place or under development for your jurisdiction by placing an "X" in the appropriate box, followed by the date of adoption/update. Then, for each particular item in place, identify the department or agency responsible for its implementation and indicate its estimated or anticipated effect on hazard loss reduction (Supports, Neutral or Hinders) with the appropriate symbol and also indicate if there has been a change in the ability of the tool/program to result in loss reduction. Finally, please provide additional comments or explanations in the space provided.

Tool/Program	Status			Dept. / Agency Respon-sible	Effect on Loss Reduction: + Support 0 Neutral -- Hinder	Change Since Last Plan: + Positive -- Negative	Comments:
	In Place	Date Adopted or Updated	Under Develop-ment				
EXAMPLE: Hazard Mitigation Plan	X	1/1/2006		Hazard County EMA	+	+	Interim update in 2008 revised mitigation strategy; completed one action.
Hazard Mitigation Plan							
Emergency Operations Plan	X	11/28/07		Delaware Twp EMA/BOS		+	
Disaster Recovery Plan							
Evacuation Plan							
Continuity of Operations Plan							
NFIP							
NFIP-CRS							
Floodplain Regulations	X			Delaware Twp BOS			
Floodplain Management Plan	X						
Zoning Regulations	X						
Subdivision Regulations	X						

Capability Assessment Survey

Tool/Program	Status: In Place	Status: Date Adopted or Updated	Status: Under Development	Dept. / Agency Responsible	Effect on Loss Reduction: + Support O Neutral -- Hinder	Change Since Last Plan: + Positive -- Negative	Comments:
Comprehensive Land Use Plan (or General, Master or Growth Mgmt. Plan)	X	2006				+	
Open Space Management Plan (or Parks/Rec or Greenways Plan)	X		X	Delcam TWP BOS	O		being reviewed
Stormwater Management Plan / Ordinance			X				-
Natural Resource Protection Plan			X				-
Capital Improvement Plan			X				working on it this year
Economic Development Plan							
Historic Preservation Plan			X		O		
Farmland Preservation							
Building Code	X	1994/CABO					
Fire Code							
Firewise							
Storm Ready							
Other							

Capability Assessment Survey

2. ***Administrative and Technical Capability:*** Please indicate whether your jurisdiction maintains the following staff members within its current personnel resources by placing an "X" in the appropriate box. Then, if YES, please identify the department or agency they work under and provide any other comments you may have in the space provided or with attachments.

Staff/Personnel Resources	*Yes*	*No*	*Department / Agency*	*Comments*
Planners (with land use / land development knowledge)	X			contracted
Planners or engineers (with natural and/or human caused hazards knowledge)				contracted
Engineers or professionals trained in building and/or infrastructure construction practices (includes building inspectors)				contracted
Emergency manager	X		Delaware Twp BOS	Volunteer
Floodplain manager		X		
Land surveyors		X		
Scientists or staff familiar with the hazards of the community		X		
Personnel skilled in Geographic Information Systems (GIS) and/or FEMA's HAZUS program		X		
Grant writers or fiscal staff to handle large/complex grants		X		
Other				

Capability Assessment Survey

3. Fiscal Capability: Please indicate whether your jurisdiction has access to or is eligible to use the following local financial resources ***for hazard mitigation purposes*** (including as match funds for State of Federal mitigation grant funds). Then, identify the primary department or agency responsible for its administration or allocation and provide any other comments you may have in the space provided or with attachments.

Financial Resources	*Yes*	*No*	*Department / Agency*	*Comments*
Capital improvement programming		X		
Community Development Block Grants (CDBG)			County	
Special purpose taxes	X			Fire Department; parks + recreation
Gas / electric utility fees		X		
Water / sewer fees		X		
Stormwater utility fees		X		
Development impact fees		X		
General obligation, revenue, and/or special tax bonds		X		
Partnering arrangements or intergovernmental agreements	X			Plowing + mowing w NPS gardening maintenance Lehman Twsp + NPS
Other				

Capability Assessment Survey

4. Community Political Capability: Political capability in this instance is being measured by the degree to which local political leadership (including appointed boards) is willing to enact policies and programs that reduce hazard vulnerabilities in your community, even if met with some opposition. Examples may include guiding development away from identified hazard areas, restricting public investments or capital improvements within hazard areas, or enforcing local development standards that go beyond minimum State or Federal requirements (e.g., building codes, floodplain management, etc.). Rate the jurisdiction's political capability to enact policies and programs that reduce hazard vulnerabilities on a scale from 0 to 5. Generally, a higher the score corresponds to a higher degree of community political capability.

5-Very Willing ← → *3-Moderately Willing* *0-Unwilling to Adopt Policies/Programs*

Score: 5

5. ***Self-Assessment of Capability:*** Please provide an approximate measure of your jurisdiction's capability to effectively implement hazard mitigation strategies to reduce hazard vulnerabilities. Using the following table, please place an "X" in the box marking the most appropriate degree of capability (Limited, Moderate or High) based upon best available information and the responses provided in Sections 1-5 of this survey. For multi-jurisdictional plans, record the results of this section into the Self Assessment Capability Matrix in **Appendix 4.**

Area	*Degree of Capability*		
	Limited	*Moderate*	*High*
Planning and Regulatory Capability	X		
Administrative and Technical Capability		X	
Fiscal Capability	X		
Community Political Capability		X	
Community Resiliency Capability		X	

Capability Assessment Survey

Jurisdiction: DINGMAN TOWNSHIP Name/Title: William Mikulak, Emergency Mngt.

1. *Planning and Regulatory Capability:* Please indicate whether the following planning or regulatory tools and programs are currently in place or under development for your jurisdiction by placing an "X" in the appropriate box, followed by the date of adoption/update. Then, for each particular item in place, identify the department or agency responsible for its implementation and indicate its estimated or anticipated effect on hazard loss reduction (Supports, Neutral or Hinders) with the appropriate symbol and also indicate if there has been a change in the ability of the tool/program to result in loss reduction. Finally, please provide additional comments or explanations in the space provided.

Tool/Program	Status			Dept. / Agency Responsible	Effect on Loss Reduction: + Support O Neutral -- Hinder	Change Since Last Plan: + Positive -- Negative	Comments:
	In Place	Date Adopted or Updated	Under Development				
EXAMPLE: Hazard Mitigation Plan	X	1/1/2006		Hazard County EMA	+	+	Interim update in 2008 revised mitigation strategy; completed one action
Hazard Mitigation Plan	X	4-17-07		County			
Emergency Operations Plan	X	5/03		County			
Disaster Recovery Plan							
Evacuation Plan	X	5/03		County/Twp			IN THE EOP
Continuity of Operations Plan							
NFIP							
NFIP-CRS							
Floodplain Regulations	X	1/19/10		TWP			UPDATED
Floodplain Management Plan							
Zoning Regulations	X	3/15/11		TWP			UPDATED
Subdivision Regulations	X	1/19/10		TWP			UPDATED

Capability Assessment Survey

Tool/Program	Status			Dept. / Agency Respon-sible	Effect on Loss Reduction: + Support O Neutral -- Hinder	Change Since Last Plan: + Positive -- Negative	Comments:
	In Place	Date Adopted or Updated	Under Develop-ment				
Comprehensive Land Use Plan (or General, Master or Growth Mgmt. Plan)	X	1999		TWP			updated
Open Space Management Plan (or Parks/Rec or Greenways Plan)							
Stormwater Management Plan / Ordinance	X	12/19/06		County Township			updated
Natural Resource Protection Plan							
Capital Improvement Plan							
Economic Development Plan							
Historic Preservation Plan							
Farmland Preservation							
Building Code	X	10/19/04		State Township			updated
Fire Code	X	10/19/04		State Township			
Firewise							
Storm Ready							
Other Fire Protection ORD	X	4/5/11		TWP			Outdoor burning water supply requirements for new developments

2. Administrative and Technical Capability: Please indicate whether your jurisdiction maintains the following staff members within its current personnel resources by placing an "X" in the appropriate box. Then, if YES, please identify the department or agency they work under and provide any other comments you may have in the space provided or with attachments.

Staff/Personnel Resources	*Yes*	*No*	*Department / Agency*	*Comments*
Planners (with land use / land development knowledge)		X		
Planners or engineers (with natural and/or human caused hazards knowledge)		X		
Engineers or professionals trained in building and/or infrastructure construction practices (includes building inspectors)		X		
Emergency manager	X		Board of Supervisors	William Mikulak
Floodplain manager	X		Board of Supervisors	
Land surveyors		X		
Scientists or staff familiar with the hazards of the community		X		
Personnel skilled in Geographic Information Systems (GIS) and/or FEMA's HAZUS program		X		
Grant writers or fiscal staff to handle large/complex grants	X			
Other				

3. Fiscal Capability: Please indicate whether your jurisdiction has access to or is eligible to use the following local financial resources ***for hazard mitigation purposes*** (including as match funds for State of Federal mitigation grant funds). Then, identify the primary department or agency responsible for its administration or allocation and provide any other comments you may have in the space provided or with attachments.

Financial Resources	*Yes*	*No*	*Department / Agency*	*Comments*
Capital improvement programming	X		Board of Supervisors	
Community Development Block Grants (CDBG)		X		Township exceeds the Low/Mod Income Limits
Special purpose taxes	X		Board of Supervisors	
Gas / electric utility fees		X		NO MUNICIPAL Gas/electric
Water / sewer fees		X		NO MUNICIPAL Water/Sewer
Stormwater utility fees		X		
Development impact fees		X		
General obligation, revenue, and/or special tax bonds	X		Board of Supervisors	
Partnering arrangements or intergovernmental agreements	X		Board of Supervisors	
Other				

4. Community Political Capability: Political capability in this instance is being measured by the degree to which local political leadership (including appointed boards) is willing to enact policies and programs that reduce hazard vulnerabilities in your community, even if met with some opposition. Examples may include guiding development away from identified hazard areas, restricting public investments or capital improvements within hazard areas, or enforcing local development standards that go beyond minimum State or Federal requirements (e.g., building codes, floodplain management, etc.). Rate the jurisdiction's political capability to enact policies and programs that reduce hazard vulnerabilities on a scale from 0 to 5. Generally, a higher the score corresponds to a higher degree of community political capability.

5-Very Willing ←——————————→ *3-Moderately Willing* *0-Unwilling to Adopt Policies/Programs*

Score: 5

Dingman Township Has Always been willing to ensure the safety and well being of the residents are maintained to the highest standards

5. Self-Assessment of Capability: Please provide an approximate measure of your jurisdiction's capability to effectively implement hazard mitigation strategies to reduce hazard vulnerabilities. Using the following table, please place an "**X**" in the box marking the most appropriate degree of capability (Limited, Moderate or High) based upon best available information and the responses provided in Sections 1-5 of this survey. For multi-jurisdictional plans, record the results of this section into the Self Assessment Capability Matrix in **Appendix 4**.

Area	*Degree of Capability*		
	Limited	*Moderate*	*High*
Planning and Regulatory Capability			X
Administrative and Technical Capability			X
Fiscal Capability			X
Community Political Capability			X
Community Resiliency Capability			X

Capability Assessment Survey

Jurisdiction: Greene Township Pike County Name/Title: MaryAnn Hubbard, Chairperson

1. *Planning and Regulatory Capability:* Please indicate whether the following planning or regulatory tools and programs are currently in place or under development for your jurisdiction by placing an "X" in the appropriate box, followed by the date of adoption/update. Then, for each particular item in place, identify the department or agency responsible for its implementation and indicate its estimated or anticipated effect on hazard loss reduction (Supports, Neutral or Hinders) with the appropriate symbol and also indicate if there has been a change in the ability of the tool/program to result in loss reduction. Finally, please provide additional comments or explanations in the space provided.

Tool/Program	Status			Dept. / Agency Responsible	Effect on Loss Reduction: + Support O Neutral – Hinder	Change Since Last Plan: + Positive – Negative	Comments:
	In Place	Date Adopted or Updated	Under Development				
EXAMPLE: Hazard Mitigation Plan	X	1/1/2006		Hazard County EMA	+	+	Interim update in 2008 revised mitigation strategy; completed one action.
Hazard Mitigation Plan							
Emergency Operations Plan	X	5/7/03		Greene Twp. EMA	O		
Disaster Recovery Plan	X						Part of emergency operations plan
Evacuation Plan	X						Part of Emergency Operations Plan
Continuity of Operations Plan							
NFIP							
NFIP-CRS							
Floodplain Regulations							
Floodplain Management Plan	X	10/5/88 11/1/89 5/6/92					2/1/01
Zoning Regulations							
Subdivision Regulations	X	12/13/00					

Capability Assessment Survey

Tool/Program	Status			Dept. / Agency Respon-sible	Effect on Loss Reduction: + Support O Neutral -- Hinder	Change Since Last Plan: + Positive – Negative	Comments:
	In Place	Date Adopted or Updated	Under Develop-ment				
Comprehensive Land Use Plan (or General, Master or Growth Mgmt. Plan)	X	4/7/10					
Open Space Management Plan (or Parks/Rec or Greenways Plan)							
Stormwater Management Plan / Ordinance	X	7/91					
Natural Resource Protection Plan							
Capital Improvement Plan							
Economic Development Plan							
Historic Preservation Plan							
Farmland Preservation							~~Ag. Secu~~ Ag Security Area
Building Code	X	5/7/03					
Fire Code							
Firewise							
Storm Ready							
Other							

2. *Administrative and Technical Capability:* Please indicate whether your jurisdiction maintains the following staff members within its current personnel resources by placing an "X" in the appropriate box. Then, if YES, please identify the department or agency they work under and provide any other comments you may have in the space provided or with attachments.

Staff/Personnel Resources	*Yes*	*No*	*Department / Agency*	*Comments*
Planners (with land use / land development knowledge)	X		F.X. Browne Inc.	
Planners or engineers (with natural and/or human caused hazards knowledge)				
Engineers or professionals trained in building and/or infrastructure construction practices (includes building inspectors)	X		Fx Browne Inc B.I.U.	
Emergency manager	X		Mary Ann Hubbard	
Floodplain manager	X		Fx Browne, Inc.	
Land surveyors	X		Fx Browne, Inc	
Scientists or staff familiar with the hazards of the community	X		Fx Browne Inc	
Personnel skilled in Geographic Information Systems (GIS) and/or FEMA's HAZUS program	X		Fx Browne Inc	
Grant writers or fiscal staff to handle large/complex grants	X		Fx Browne Inc	
Other				

3. Fiscal Capability: Please indicate whether your jurisdiction has access to or is eligible to use the following local financial resources ***for hazard mitigation purposes*** (including as match funds for State of Federal mitigation grant funds). Then, identify the primary department or agency responsible for its administration or allocation and provide any other comments you may have in the space provided or with attachments.

Financial Resources	*Yes*	*No*	*Department / Agency*	*Comments*
Capital improvement programming		X		
Community Development Block Grants (CDBG)	X			
Special purpose taxes	X			Fire Tax
Gas / electric utility fees		X		
Water / sewer fees		X		
Stormwater utility fees		X		
Development impact fees		X		
General obligation, revenue, and/or special tax bonds		X		
Partnering arrangements or intergovernmental agreements		X		
Other				

4. Community Political Capability: Political capability in this instance is being measured by the degree to which local political leadership (including appointed boards) is willing to enact policies and programs that reduce hazard vulnerabilities in your community, even if met with some opposition. Examples may include guiding development away from identified hazard areas, restricting public investments or capital improvements within hazard areas, or enforcing local development standards that go beyond minimum State or Federal requirements (e.g., building codes, floodplain management, etc.). Rate the jurisdiction's political capability to enact policies and programs that reduce hazard vulnerabilities on a scale from 0 to 5. Generally, a higher the score corresponds to a higher degree of community political capability.

5-Very Willing ← *3-Moderately Willing* → *0-Unwilling to Adopt Policies/Programs*

Score: 3

5. *Self-Assessment of Capability:* Please provide an approximate measure of your jurisdiction's capability to effectively implement hazard mitigation strategies to reduce hazard vulnerabilities. Using the following table, please place an "**X**" in the box marking the most appropriate degree of capability (Limited, Moderate or High) based upon best available information and the responses provided in Sections 1-5 of this survey. For multi-jurisdictional plans, record the results of this section into the Self Assessment Capability Matrix in **Appendix 4**.

Area	*Degree of Capability*		
	Limited	*Moderate*	*High*
Planning and Regulatory Capability		X	
Administrative and Technical Capability		X	
Fiscal Capability	X		
Community Political Capability		X	
Community Resiliency Capability		X	

Capability Assessment Survey

Jurisdiction: Lackawaxen Township *Name/Title:* Shawn Rose / Secretary

1. Planning and Regulatory Capability: Please indicate whether the following planning or regulatory tools and programs are currently in place or under development for your jurisdiction by placing an "X" in the appropriate box, followed by the date of adoption/update. Then, for each particular item in place, identify the department or agency responsible for its implementation and indicate its estimated or anticipated effect on hazard loss reduction (Supports, Neutral or Hinders) with the appropriate symbol and also indicate if there has been a change in the ability of the tool/program to result in loss reduction. Finally, please provide additional comments or explanations in the space provided.

Tool/Program	Status			Dept. / Agency Responsible	Effect on Loss Reduction: + Support O Neutral – Hinder	Change Since Last Plan: + Positive – Negative	Comments:
	In Place	Date Adopted or Updated	Under Development				
EXAMPLE: Hazard Mitigation Plan	X	1/1/2006		Hazard County EMA	+	+	Interim update in 2008 revised mitigation strategy; completed one action.
Hazard Mitigation Plan	X	7/10/08		township ema	+	+	
Emergency Operations Plan	X	7/10/08		township ema	+	+	
Disaster Recovery Plan	X	7/10/08		township ema	+	+	
Evacuation Plan	X	7/10/08		township ema	+	+	
Continuity of Operations Plan	X	7/10/08		township ema	+	+	
NFIP							
NFIP-CRS							
Floodplain Regulations							
Floodplain Management Plan							
Zoning Regulations	X	2/19/92		township	+	+	
Subdivision Regulations	X	7/15/92		township	+	+	

By APR 25 2011

Capability Assessment Survey

Tool/Program	Status			Dept. / Agency Respon-sible	Effect on Loss Reduction: + Support O Neutral -- Hinder	Change Since Last Plan: + Positive -- Negative	Comments:
	In Place	Date Adopted or Updated	Under Develop-ment				
Comprehensive Land Use Plan (or General, Master or Growth Mgmt. Plan)	X	10/21/09		township	+	+	
Open Space Management Plan (or Parks/Rec or Greenways Plan)	X	10/21/09		township	+	+	
Stormwater Management Plan / Ordinance							
Natural Resource Protection Plan	X	10/21/09		township	+	+	
Capital Improvement Plan	X	10/21/09		township	+	+	
Economic Development Plan	X	10/21/09		township	+	+	
Historic Preservation Plan	X	10/21/09		township	+	+	
Farmland Preservation	X	10/21/09		township	+	+	
Building Code	X	6/16/04		township	+	+	
Fire Code							
Firewise							
Storm Ready							
Other							

2. Administrative and Technical Capability: Please indicate whether your jurisdiction maintains the following staff members within its current personnel resources by placing an "X" in the appropriate box. Then, if YES, please identify the department or agency they work under and provide any other comments you may have in the space provided or with attachments.

Staff/Personnel Resources	***Yes***	***No***	***Department / Agency***	***Comments***
Planners (with land use / land development knowledge)	X		Kiley Assoc.	
Planners or engineers (with natural and/or human caused hazards knowledge)	X		Kiley Assoc	
Engineers or professionals trained in building and/or infrastructure construction practices (includes building inspectors)	X		Kiley Assoc.	
Emergency manager	X		Vincent Albanese	
Floodplain manager		X		
Land surveyors		X		
Scientists or staff familiar with the hazards of the community		X		
Personnel skilled in Geographic Information Systems (GIS) and/or FEMA's HAZUS program		X		
Grant writers or fiscal staff to handle large/complex grants	X		James Martin	
Other				

3. Fiscal Capability: Please indicate whether your jurisdiction has access to or is eligible to use the following local financial resources ***for hazard mitigation purposes*** (including as match funds for State of Federal mitigation grant funds). Then, identify the primary department or agency responsible for its administration or allocation and provide any other comments you may have in the space provided or with attachments.

Financial Resources	***Yes***	***No***	***Department / Agency***	***Comments***
Capital improvement programming	x		township	
Community Development Block Grants (CDBG)	x		township	
Special purpose taxes	x		township	
Gas / electric utility fees		x		
Water / sewer fees		x		
Stormwater utility fees		x		
Development impact fees		x		
General obligation, revenue, and/or special tax bonds	x		township	
Partnering arrangements or intergovernmental agreements		x		
Other				

4. Community Political Capability: Political capability in this instance is being measured by the degree to which local political leadership (including appointed boards) is willing to enact policies and programs that reduce hazard vulnerabilities in your community, even if met with some opposition. Examples may include guiding development away from identified hazard areas, restricting public investments or capital improvements within hazard areas, or enforcing local development standards that go beyond minimum State or Federal requirements (e.g., building codes, floodplain management, etc.). Rate the jurisdiction's political capability to enact policies and programs that reduce hazard vulnerabilities on a scale from 0 to 5. Generally, a higher the score corresponds to a higher degree of community political capability.

5-Very Willing ***3-Moderately Willing*** ***0-Unwilling to Adopt Policies/Programs***

Score: 5

5. Self-Assessment of Capability: Please provide an approximate measure of your jurisdiction's capability to effectively implement hazard mitigation strategies to reduce hazard vulnerabilities. Using the following table, please place an "**X**" in the box marking the most appropriate degree of capability (Limited, Moderate or High) based upon best available information and the responses provided in Sections 1-5 of this survey. For multi-jurisdictional plans, record the results of this section into the Self Assessment Capability Matrix in **Appendix 4**.

Area	***Degree of Capability***		
	Limited	***Moderate***	***High***
Planning and Regulatory Capability			X
Administrative and Technical Capability			X
Fiscal Capability			X
Community Political Capability		X	
Community Resiliency Capability		X	

Capability Assessment Survey

Jurisdiction: Lehman Township *Name/Title:* Stanley Whittaker EMA Coordinator

1. Planning and Regulatory Capability: Please indicate whether the following planning or regulatory tools and programs are currently in place or under development for your jurisdiction by placing an "X" in the appropriate box, followed by the date of adoption/update. Then, for each particular item in place, identify the department or agency responsible for its implementation and indicate its estimated or anticipated effect on hazard loss reduction (Supports, Neutral or Hinders) with the appropriate symbol and also indicate if there has been a change in the ability of the tool/program to result in loss reduction. Finally, please provide additional comments or explanations in the space provided.

Tool/Program	Status: In Place	Date Adopted or Updated	Under Development	Dept. Agency Responsible	Effect on Loss Reduction: + Support 0 Neutral - Hinder	Change Since Last Plan: + Positive - Negative	Comments
EXAMPLE: Hazard Mitigation Plan	X	1/1/2006		Hazard County EMA	+	+	*Interim update in 2008 revised mitigation strategy; completed one action.*
Hazard Mitigation Plan	X	12/30/06					
Emergency Operations Plan	X						
Disaster Recovery Plan							
Evacuation Plan	X						
Continuity of Operations Plan							
NFIP							
NFIP-CRS							
Floodplain Regulations	X	2/7/01		Zoning			
Floodplain Management Plan							
Zoning Regulations	X	6/17/04		Zoning			Completely revised ordinance and map update
Subdivision Regulations	X	10/6/05		Planning Comm Supervisors			

Capability Assessment Survey

Tool/Program	Status: In Place	Status: Date Adopted or Updated	Status: Under Development	Dept./Agency Responsible	Effect on Loss Reduction: + Support, 0 Neutral, - Hinder	Change Since Last Plan: + Positive, - Negative	Comments
Comprehensive Land Use Plan (or General, Master or Growth Mgmt. Plan)	X	10/03/01					
Open Space Management Plan (or Parks/Rec or Greenways Plan)							
Stormwater Management Plan / Ordinance	X	10/6/05		Engineer			
Natural Resource Protection Plan							
Capital Improvement Plan							
Economic Development Plan							
Historic Preservation Plan							
Farmland Preservation							
Building Code	X						
Fire Code							
Firewise							
Storm Ready	X			Public Works			
Other							

Capability Assessment Survey

2. Administrative and Technical Capability: Please indicate whether your jurisdiction maintains the following staff members within its current personnel resources by placing an "X" in the appropriate box. Then, if YES, please identify the department or agency they work under and provide any other comments you may have in the space provided or with attachments.

Staff/Personnel Resources	Yes	No	Department/Agency	Comments
Planners (with land use / land development knowledge)	✓		Engineer & Planning Comm.	
Planners or engineers (with natural and/or human caused hazards knowledge)				
Engineers or professionals trained in building and/or infrastructure construction practices (includes building inspectors)	✓		Engineer & Building Insp.	
Emergency manager	✓			
Floodplain manager	✓			
Land surveyors		✓		
Scientists or staff familiar with the hazards of the community		✓		
Personnel skilled in Geographic Information Systems (GIS) and/or FEMA's HAZUS program	✓		office & codes staff	
Grant writers or fiscal staff to handle large/complex grants	✓		Sec./Treasurer	
Other				

Capability Assessment Survey

3. Fiscal Capability: Please indicate whether your jurisdiction has access to or is eligible to use the following local financial resources ***for hazard mitigation purposes*** (including as match funds for State of Federal mitigation grant funds). Then, identify the primary department or agency responsible for its administration or allocation and provide any other comments you may have in the space provided or with attachments.

Financial Resources	Yes	No	Department/Agency	Comments
Capital improvement programming		X		
Community Development Block Grants (CDBG)		X		
Special purpose taxes	X		Fire Co.	1 mill
Gas / electric utility fees		X		
Water / sewer fees		X		
Stormwater utility fees		X		
Development impact fees		X		
General obligation, revenue, and/or special tax bonds		X		
Partnering arrangements or intergovernmental agreements		X		
Other				

Capability Assessment Survey

4. Community Political Capability: Political capability in this instance is being measured by the degree to which local political leadership (including appointed boards) is willing to enact policies and programs that reduce hazard vulnerabilities in your community, even if met with some opposition. Examples may include guiding development away from identified hazard areas, restricting public investments or capital improvements within hazard areas, or enforcing local development standards that go beyond minimum State or Federal requirements (e.g., building codes, floodplain management, etc.). Rate the jurisdiction's political capability to enact policies and programs that reduce hazard vulnerabilities on a scale from 0 to 5. Generally, a higher the score corresponds to a higher degree of community political capability.

5-Very Willing ← → *0-Unwilling to Adopt Policies/Programs*

3-Moderately Willing

Score: 4

5. Self-Assessment of Capability: Please provide an approximate measure of your jurisdiction's capability to effectively implement hazard mitigation strategies to reduce hazard vulnerabilities. Using the following table, please place an "X" in the box marking the most appropriate degree of capability (Limited, Moderate or High) based upon best available information and the responses provided in Sections 1-5 of this survey. For multi-jurisdictional plans, record the results of this section into the Self Assessment Capability Matrix in **Appendix 4**.

Area	Degree of Capability		
	Limited	Moderate	High
Planning and Regulatory Capability			X
Administrative and Technical Capability		X	
Fiscal Capability		X	
Community Political Capability			X
Community Resiliency Capability		X	

Capability Assessment Survey

Jurisdiction: MILFORD BOROUGH *Name/Title:* LIZANNE JAMUELSON

1. *Planning and Regulatory Capability:* Please indicate whether the following planning or regulatory tools and programs are currently in place or under development for your jurisdiction by placing an "X" in the appropriate box, followed by the date of adoption/update. Then, for each particular item in place, identify the department or agency responsible for its implementation and indicate its estimated or anticipated effect on hazard loss reduction (Supports, Neutral or Hinders) with the appropriate symbol and also indicate if there has been a change in the ability of the tool/program to result in loss reduction. Finally, please provide additional comments or explanations in the space provided.

Tool/Program	Status: In Place	Date Adopted	Under Development	Dept/Agency Responsible	Effect on Loss Reduction: ↑ Supports, ○ Neutral, ↓ Hinders	Change Since Last Plan: ↑ Increase	
EXAMPLE: Hazard Mitigation Plan	X	1/1/2006		Hazard County EMA	+	+	*Interim update in 2008 revised mitigation strategy; completed one action.*
Hazard Mitigation Plan	X	11/2006					
Emergency Operations Plan	X	6/2/03		COUNTY BOEO			
Disaster Recovery Plan							
Evacuation Plan							
Continuity of Operations Plan							
NFIP							
NFIP-CRS							
Floodplain Regulations	X	2/12/01		BOEO			
Floodplain Management Plan							
Zoning Regulations	X	2/4/05		BOEO			
Subdivision Regulations	X	6/5/00		BOEO			

COUNTY BOEO EMA MITIG MAN PLAN

Capability Assessment Survey

Tool/Program	Status: In Place	Status: Date Adopted or Updated	Status: Under Development	Dept./Agency Responsible	Effect On Loss Reduction: Support, Neutral, Hinder	Change Since Last Plan: Positive, Negative	Comments
Comprehensive Land Use Plan (or General, Master or Growth Mgmt. Plan)	X	11/6/2006		Bwo/ Milford Twp/MA			
Open Space Management Plan (or Parks/Rec or Greenways Plan)							
Stormwater Management Plan / Ordinance							
Natural Resource Protection Plan							
Capital Improvement Plan							
Economic Development Plan							
Historic Preservation Plan Historic District UCD	X	12/6/99					
Farmland Preservation							
Building Code	X	7/7/04		State Bwo			
Fire Code							
Firewise							
Storm Ready							
Other							

Capability Assessment Survey

2. Administrative and Technical Capability: Please indicate whether your jurisdiction maintains the following staff members within its current personnel resources by placing an "X" in the appropriate box. Then, if YES, please identify the department or agency they work under and provide any other comments you may have in the space provided or with attachments.

Staff/Personnel Resources	Yes	No	Department/Agency	Comments
Planners (with land use / land development knowledge) VOLUNTEERS	X		PLANNING COMMISSION	
Planners or engineers (with natural and/or human caused hazards knowledge)			MHE - BORO ENGINEER	
Engineers or professionals trained in building and/or infrastructure construction practices (includes building inspectors)				
Emergency manager	X		FIRE/EMS OFFICIAL + BORO OFFICIAL	
Floodplain manager				
Land surveyors				
Scientists or staff familiar with the hazards of the community				
Personnel skilled in Geographic Information Systems (GIS) and/or FEMA's HAZUS program				
Grant writers or fiscal staff to handle large/complex grants				
Other				

Capability Assessment Survey

3. Fiscal Capability: Please indicate whether your jurisdiction has access to or is eligible to use the following local financial resources ***for hazard mitigation purposes*** (including as match funds for State of Federal mitigation grant funds). Then, identify the primary department or agency responsible for its administration or allocation and provide any other comments you may have in the space provided or with attachments.

Financial Resources	Yes	No	Department / Agency	Comments
Capital improvement programming				
Community Development Block Grant funding	X		CDBG	
Special purpose taxes	X			
Gas / electric utility fees				
Water / sewer fees				
Stormwater utility fees				
Development impact fees				
General obligation, revenue, and/or special tax bonds				
Partnering arrangements or intergovernmental agreements				
Other				

Capability Assessment Survey

4. Community Political Capability: Political capability in this instance is being measured by the degree to which local political leadership (including appointed boards) is willing to enact policies and programs that reduce hazard vulnerabilities in your community, even if met with some opposition. Examples may include guiding development away from identified hazard areas, restricting public investments or capital improvements within hazard areas, or enforcing local development standards that go beyond minimum State or Federal requirements (e.g., building codes, floodplain management, etc.). Rate the jurisdiction's political capability to enact policies and programs that reduce hazard vulnerabilities on a scale from 0 to 5. Generally, a higher the score corresponds to a higher degree of community political capability.

5-Very Willing ← → *0-Unwilling to Adopt Policies/Programs*

3-Moderately Willing

Score: 3

Capability Assessment Survey

5. Self-Assessment of Capability: Please provide an approximate measure of your jurisdiction's capability to effectively implement hazard mitigation strategies to reduce hazard vulnerabilities. Using the following table, please place an "X" in the box marking the most appropriate degree of capability (Limited, Moderate or High) based upon best available information and the responses provided in Sections 1-5 of this survey. For multi-jurisdictional plans, record the results of this section into the Self Assessment Capability Matrix in Appendix 4.

	Degree of Capability		
	Limited	Moderate	
Planning and Regulatory Capability			
Administrative and Technical Capability			
Fiscal Capability			
Community Political Capability			
Community Resiliency Capability			

Capability Assessment Survey

Jurisdiction: Milford Township *Name/Title:* Curtis K Chrisman, Atty.

1. *Planning and Regulatory Capability:* Please indicate whether the following planning or regulatory tools and programs are currently in place or under development for your jurisdiction by placing an "X" in the appropriate box, followed by the date of adoption/update. Then, for each particular item in place, identify the department or agency responsible for its implementation and indicate its estimated or anticipated effect on hazard loss reduction (Supports, Neutral or Hinders) with the appropriate symbol and also indicate if there has been a change in the ability of the tool/program to result in loss reduction. Finally, please provide additional comments or explanations in the space provided.

Tool/Program	Status: In Place	Status: Date Adopted or Updated	Status: Under Development	Dept./ Agency Responsible	Effect on Loss Reduction: + Support 0 Neutral – Hinder	Change Since Last Plan: + Positive – Negative	Comments:
EXAMPLE: Hazard Mitigation Plan	X	1/1/2006		Hazard County EMA	+	+	Interim update in 2008 revised mitigation strategy: completed one action.
Hazard Mitigation Plan	X	2008			0		Related Op. Plan
Emergency Operations Plan							
Disaster Recovery Plan							
Evacuation Plan							
Continuity of Operations Plan							
NFIP							
NFIP-CRS							
Floodplain Regulations	X	11/18/85			0		
Floodplain Management Plan	X	02/05/01			0	+	latest amendments
Zoning Regulations	X	7/06/09			0	+	latest amendments
Subdivision Regulations	X	11/02/87 5/01/06			0	+	latest amendments

Capability Assessment Survey

Tool/Program	Status: In Place	Status: Date Adopted or Updated	Status: Under Development	Dept / Agency Responsible	Effect on Land Reduction: + Support 0 Neutral − Hinder	Change Since Last Plan: + Positive − Negative	Comments
Comprehensive Land Use Plan (or General, Master or Growth Mgmt. Plan)	X	11/6/06					w/ Milford Borough
Open Space Management Plan (or Parks/Rec or Greenways Plan)							
Stormwater Management Plan / Ordinance	X	7/06/03			0	+	part of zoning Ord.
Natural Resource Protection Plan							
Capital Improvement Plan							
Economic Development Plan	X	11/4/06					part of joint comprehensive plan
Historic Preservation Plan							
Farmland Preservation							
Building Code	X	12/15/03 3/15/09					Bldg code TA construction Code
Fire Code							
Firewise							
Storm Ready							
Other							

Capability Assessment Survey

2. *Administrative and Technical Capability:* Please indicate whether your jurisdiction maintains the following staff members within its current personnel resources by placing an "X" in the appropriate box. Then, if YES, please identify the department or agency they work under and provide any other comments you may have in the space provided or with attachments.

Staff/Personnel Resources	Yes	No	Department / Agency	Comments
Planners (with land use / land development knowledge)				
Planners or engineers (with natural and/or human caused hazards knowledge)	X			
Engineers or professionals trained in building and/or infrastructure construction practices (includes building inspectors)	X			
Emergency manager	X			
Floodplain manager	X			
Land surveyors				
Scientists or staff familiar with the hazards of the community				
Personnel skilled in Geographic Information Systems (GIS) and/or FEMA's HAZUS program				
Grant writers or fiscal staff to handle large/complex grants				
Other				

Capability Assessment Survey

3. Fiscal Capability: Please indicate whether your jurisdiction has access to or is eligible to use the following local financial resources ***for hazard mitigation purposes*** (including as match funds for State of Federal mitigation grant funds). Then, identify the primary department or agency responsible for its administration or allocation and provide any other comments you may have in the space provided or with attachments.

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Capital improvement programming				
Community Development Block Grants (CDBG)				
Special purpose taxes				
Gas / electric utility fees				
Water / sewer fees				
Stormwater utility fees				
Development impact fees				
General obligation, revenue, and/or special tax bonds				
Partnering arrangements or intergovernmental agreements				
Other				

Unknown

Capability Assessment Survey

4. Community Political Capability: Political capability in this instance is being measured by the degree to which local political leadership (including appointed boards) is willing to enact policies and programs that reduce hazard vulnerabilities in your community, even if met with some opposition. Examples may include guiding development away from identified hazard areas, restricting public investments or capital improvements within hazard areas, or enforcing local development standards that go beyond minimum State or Federal requirements (e.g., building codes, floodplain management, etc.). Rate the jurisdiction's political capability to enact policies and programs that reduce hazard vulnerabilities on a scale from 0 to 5. Generally, a higher the score corresponds to a higher degree of community political capability.

5-Very Willing ←——————→ *3-Moderately Willing* *0-Unwilling to Adopt Policies/Programs*

Score: 3

Capability Assessment Survey

5. Self-Assessment of Capability: Please provide an approximate measure of your jurisdiction's capability to effectively implement hazard mitigation strategies to reduce hazard vulnerabilities. Using the following table, please place an "X" in the box marking the most appropriate degree of capability (Limited, Moderate or High) based upon best available information and the responses provided in Sections 1-5 of this survey. For multi-jurisdictional plans, record the results of this section into the Self Assessment Capability Matrix in Appendix 4.

Area	Degree of Capability		
	Limited	Moderate	High
Planning and Regulatory Capability		X	
Administrative and Technical Capability		X	
Fiscal Capability	X		
Community Political Capability		X	
Community Resiliency Capability		X	

Capability Assessment Survey

Jurisdiction: Palmyra Township, Pike Name/Title: Rolin Edwards, Zoning

1. Planning and Regulatory Capability: Please indicate whether the following planning or regulatory tools and programs are currently in place or under development for your jurisdiction by placing an "X" in the appropriate box, followed by the date of adoption/update. Then, for each particular item in place, identify the department or agency responsible for its implementation and indicate its estimated or anticipated effect on hazard loss reduction (Supports, Neutral or Hinders) with the appropriate symbol and also indicate if there has been a change in the ability of the tool/program to result in loss reduction. Finally, please provide additional comments or explanations in the space provided.

Tool/Program	Status			Dept. / Agency Responsible	Effect on Loss Reduction: + Support O Neutral -- Hinder	Change Since Last Plan: + Positive -- Negative	Comments:
	In Place	Date Adopted or Updated	Under Development				
EXAMPLE: Hazard Mitigation Plan	X	1/1/2006		Hazard County EMA	+	+	Interim update in 2008 revised mitigation strategy; completed one action.
Hazard Mitigation Plan							
Emergency Operations Plan	X	9/08	X				currently being updated
Disaster Recovery Plan							
Evacuation Plan							
Continuity of Operations Plan							
NFIP							
NFIP-CRS							
Floodplain Regulations							
Floodplain Management Plan							
Zoning Regulations	X	2009 1971		ZHB BoS	+		
Subdivision Regulations	X	2005 1969		PC BoS	+		

BoS - Board of Supervisors
ZHB - Zoning Hearing Board
PC - Planning Com.

Capability Assessment Survey

Tool/Program	Status			Dept. / Agency Respon-sible	Effect on Loss Reduction: + Support O Neutral -- Hinder	Change Since Last Plan: + Positive -- Negative	Comments:
	In Place	Date Adopted or Updated	Under Develop-ment				
Comprehensive Land Use Plan (or General, Master or Growth Mgmt. Plan)	+	APRIL 2010					
Open Space Management Plan (or Parks/Rec or Greenways Plan)	X	2007			+		Reduces Development/ Lot coverage
Stormwater Management Plan / Ordinance	X	1991 1998			+		
Natural Resource Protection Plan							
Capital Improvement Plan							
Economic Development Plan							
Historic Preservation Plan							
Farmland Preservation							
Building Code	X	2005					PA - UCC
Fire Code							
Firewise							Burning Ord.
Storm Ready							
Other							

BoS - Board of Supervisors

2. Administrative and Technical Capability: Please indicate whether your jurisdiction maintains the following staff members within its current personnel resources by placing an "X" in the appropriate box. Then, if YES, please identify the department or agency they work under and provide any other comments you may have in the space provided or with attachments.

Staff/Personnel Resources	*Yes*	*No*	*Department / Agency*	*Comments*
Planners (with land use / land development knowledge)	X		Planning Comm. & Zoning Office & ZHB	
Planners or engineers (with natural and/or human caused hazards knowledge)	X		Zoning Officer	Radioactive Matl.
Engineers or professionals trained in building and/or infrastructure construction practices (includes building inspectors)	X		Contractor - BIU	
Emergency manager	X		Fire Co. Doug Carrick	
Floodplain manager		X		
Land surveyors		X		
Scientists or staff familiar with the hazards of the community		X		
Personnel skilled in Geographic Information Systems (GIS) and/or FEMA's HAZUS program	X		Jon Tandy	
Grant writers or fiscal staff to handle large/complex grants		X		
Other		X		

3. Fiscal Capability: Please indicate whether your jurisdiction has access to or is eligible to use the following local financial resources ***for hazard mitigation purposes*** (including as match funds for State of Federal mitigation grant funds). Then, identify the primary department or agency responsible for its administration or allocation and provide any other comments you may have in the space provided or with attachments.

Financial Resources	*Yes*	*No*	*Department / Agency*	*Comments*
Capital improvement programming		X		
Community Development Block Grants (CDBG)		X		
Special purpose taxes		X		
Gas / electric utility fees		X		
Water / sewer fees		X		
Stormwater utility fees		X		
Development impact fees		X		
General obligation, revenue, and/or special tax bonds		X		
Partnering arrangements or intergovernmental agreements		X		
Other				

4. Community Political Capability: Political capability in this instance is being measured by the degree to which local political leadership (including appointed boards) is willing to enact policies and programs that reduce hazard vulnerabilities in your community, even if met with some opposition. Examples may include guiding development away from identified hazard areas, restricting public investments or capital improvements within hazard areas, or enforcing local development standards that go beyond minimum State or Federal requirements (e.g., building codes, floodplain management, etc.). Rate the jurisdiction's political capability to enact policies and programs that reduce hazard vulnerabilities on a scale from 0 to 5. Generally, a higher the score corresponds to a higher degree of community political capability.

5-Very Willing *3-Moderately Willing* *0-Unwilling to Adopt Policies/Programs* *Score:* _____

Capability Assessment Survey

Jurisdiction: Porter Township Name/Title: Rob Hellyer, EMC

1. Planning and Regulatory Capability: Please indicate whether the following planning or regulatory tools and programs are currently in place or under development for your jurisdiction by placing an "X" in the appropriate box, followed by the date of adoption/update. Then, for each particular item in place, identify the department or agency responsible for its implementation and indicate its estimated or anticipated effect on hazard loss reduction (Supports, Neutral or Hinders) with the appropriate symbol and also indicate if there has been a change in the ability of the tool/program to result in loss reduction. Finally, please provide additional comments or explanations in the space provided.

Tool/Program	Status			Dept. / Agency Respon-sible	Effect on Loss Reduction: + Support O Neutral -- Hinder	Change Since Last Plan: + Positive -- Negative	Comments:
	In Place	Date Adopted or Updated	Under Develop-ment				
EXAMPLE: Hazard Mitigation Plan	X	1/1/2006		Hazard County EMA	+	+	Interim update in 2008 revised mitigation strategy; completed one action.
Hazard Mitigation Plan	X	4/2007		County	O		
Emergency Operations Plan	X	5/2011		County.	O		
Disaster Recovery Plan	N/A						
Evacuation Plan	X	5/2011		Township	O		
Continuity of Operations Plan	N/A						
NFIP	X	2000		County	O		
NFIP-CRS							
Floodplain Regulations	X	2001		Township	O		
Floodplain Management Plan	X	2001		Township	O		
Zoning Regulations	X	6/2011		Township	O		
Subdivision Regulations	X	6/2011		Township	O		

Tool/Program	Status			Dept. / Agency Respon-sible	Effect on Loss Reduction: + Support O Neutral -- Hinder	Change Since Last Plan: + Positive -- Negative	Comments:
	In Place	Date Adopted or Updated	Under Develop-ment				
Comprehensive Land Use Plan (or General, Master or Growth Mgmt. Plan)	X	2010		Township	0		
Open Space Management Plan (or Parks/Rec or Greenways Plan)	N/A						
Stormwater Management Plan / Ordinance	X	2010		County	0		
Natural Resource Protection Plan	N/A						
Capital Improvement Plan	N/A						
Economic Development Plan	N/A						
Historic Preservation Plan	N/A						
Farmland Preservation	N/A						
Building Code	X	2005		Township BOCA	0		
Fire Code	N/A						
Firewise	N/A						
Storm Ready	N/A						
Other							

2. Administrative and Technical Capability: Please indicate whether your jurisdiction maintains the following staff members within its current personnel resources by placing an "X" in the appropriate box. Then, if YES, please identify the department or agency they work under and provide any other comments you may have in the space provided or with attachments.

Staff/Personnel Resources	*Yes*	*No*	*Department / Agency*	*Comments*
Planners (with land use / land development knowledge)		X		
Planners or engineers (with natural and/or human caused hazards knowledge)		X		
Engineers or professionals trained in building and/or infrastructure construction practices (includes building inspectors)		X		
Emergency manager	X		Township	
Floodplain manager		X		
Land surveyors		X		
Scientists or staff familiar with the hazards of the community		X		
Personnel skilled in Geographic Information Systems (GIS) and/or FEMA's HAZUS program		X		
Grant writers or fiscal staff to handle large/complex grants		X		
Other				

3. Fiscal Capability: Please indicate whether your jurisdiction has access to or is eligible to use the following local financial resources ***for hazard mitigation purposes*** (including as match funds for State of Federal mitigation grant funds). Then, identify the primary department or agency responsible for its administration or allocation and provide any other comments you may have in the space provided or with attachments.

Financial Resources	*Yes*	*No*	*Department / Agency*	*Comments*
Capital improvement programming		X		
Community Development Block Grants (CDBG)		X		
Special purpose taxes		X		
Gas / electric utility fees		X		
Water / sewer fees		X		
Stormwater utility fees		X		
Development impact fees		X		
General obligation, revenue, and/or special tax bonds		X		
Partnering arrangements or intergovernmental agreements		X		
Other				

4. Community Political Capability: Political capability in this instance is being measured by the degree to which local political leadership (including appointed boards) is willing to enact policies and programs that reduce hazard vulnerabilities in your community, even if met with some opposition. Examples may include guiding development away from identified hazard areas, restricting public investments or capital improvements within hazard areas, or enforcing local development standards that go beyond minimum State or Federal requirements (e.g., building codes, floodplain management, etc.). Rate the jurisdiction's political capability to enact policies and programs that reduce hazard vulnerabilities on a scale from 0 to 5. Generally, a higher the score corresponds to a higher degree of community political capability.

5-Very Willing ←——————→ *3-Moderately Willing* ←——————→ *0-Unwilling to Adopt Policies/Programs*

Score: 4

5. Self-Assessment of Capability: Please provide an approximate measure of your jurisdiction's capability to effectively implement hazard mitigation strategies to reduce hazard vulnerabilities. Using the following table, please place an "X" in the box marking the most appropriate degree of capability (Limited, Moderate or High) based upon best available information and the responses provided in Sections 1-5 of this survey. For multi-jurisdictional plans, record the results of this section into the Self Assessment Capability Matrix in **Appendix 4**.

Area	*Degree of Capability*		
	Limited	*Moderate*	*High*
Planning and Regulatory Capability			X
Administrative and Technical Capability	X		
Fiscal Capability	X		
Community Political Capability		X	
Community Resiliency Capability		X	

Capability Assessment Survey

Jurisdiction: Shohola Township *Name/Title:* Robert Myers - EMA

1. Planning and Regulatory Capability: Please indicate whether the following planning or regulatory tools and programs are currently in place or under development for your jurisdiction by placing an "X" in the appropriate box, followed by the date of adoption/update. Then, for each particular item in place, identify the department or agency responsible for its implementation and indicate its estimated or anticipated effect on hazard loss reduction (Supports, Neutral or Hinders) with the appropriate symbol and also indicate if there has been a change in the ability of the tool/program to result in loss reduction. Finally, please provide additional comments or explanations in the space provided.

Tool/Program	Status: In Place	Status: Date Adopted or Updated	Status: Under Development	Dept./Agency Responsible	Effect on Loss Reduction + Support O Neutral – Hinder	Change Since Last Plan + Positive – Negative	Comments
EXAMPLE: Hazard Mitigation Plan	X	1/1/2006		Hazard County EMA	+	+	Interim update in 2008 revised mitigation strategy; completed one action.
Hazard Mitigation Plan	X	12/30/06					
Emergency Operations Plan	X	12/14/2000		Twp EMA			
Disaster Recovery Plan							
Evacuation Plan							
Continuity of Operations Plan							
NFIP							
NFIP-CRS							
Floodplain Regulations	X	12/14/2000		Twp.			
Floodplain Management Plan	X	5/16/2000		Twp.			
Zoning Regulations	X	11/13/08		Twp.			
Subdivision Regulations	X	12/26/91		Twp.			

Capability Assessment Survey

Tool/Program	Status: In Place	Status: Date Adopted or Updated	Status: Under Development	Dept / Agency Responsible	Effect on Loss Reduction: + Support, 0 Neutral, – Hinder	Change Since Last Plan: + Positive, – Negative	Comments
Comprehensive Land Use Plan (or General, Master or Growth Mgmt. Plan)	x	1/2/07		Twp.		+	
Open Space Management Plan (or Parks/Rec or Greenways Plan)	x	9/13/07		Twp.			
Stormwater Management Plan / Ordinance	x	11/9/06		Twp.	+		New Plan under development.
Natural Resource Protection Plan							
Capital Improvement Plan							
Economic Development Plan							
Historic Preservation Plan							
Farmland Preservation							
Building Code	x	5/10/04		Twp.	+	+	
Fire Code	x	5/10/04		Twp.	+	+	
Firewise							
Storm Ready							
Other							

2. Administrative and Technical Capability: Please indicate whether your jurisdiction maintains the following staff members within its current personnel resources by placing an "X" in the appropriate box. Then, if YES, please identify the department or agency they work under and provide any other comments you may have in the space provided or with attachments.

Staff/Personnel Resources	Yes	No	Department / Agency	Comments
Planners (with land use / land development knowledge)	✓		Shohola Twp. Planning Commission	
Planners or engineers (with natural and/or human caused hazards knowledge)	✓		F.X. Browne, Inc.	
Engineers or professionals trained in building and/or infrastructure construction practices (includes building inspectors)	✓		Code Inspections, Inc. F.X. Browne, Inc.	
Emergency manager	✓		Robert Myers	
Floodplain manager				
Land surveyors	✓		F.X. Browne, Inc.	
Scientists or staff familiar with the hazards of the community	✓		F.X. Browne, Inc.	
Personnel skilled in Geographic Information Systems (GIS) and/or FEMA's HAZUS program	✓		Twp.	
Grant writers or fiscal staff to handle large/complex grants	✓		Twp.	
Other				

3. Fiscal Capability: Please indicate whether your jurisdiction has access to or is eligible to use the following local financial resources ***for hazard mitigation purposes*** (including as match funds for State of Federal mitigation grant funds). Then, identify the primary department or agency responsible for its administration or allocation and provide any other comments you may have in the space provided or with attachments.

Financial Resources	Yes	No	Department / Agency	Comments
Capital improvement programming	✓		ARRA	Improvements on River Bank to stop road washout.
Community Development Block Grants (CDBG)	✓		Pike County	Park and Road Grants
Special purpose taxes		✓		
Gas / electric utility fees		✓		
Water / sewer fees		✓		
Stormwater utility fees		✓		
Development impact fees		✓		
General obligation, revenue, and/or special tax bonds				
Partnering arrangements or intergovernmental agreements	✓		Lackawaxen	Comprehensive Plan - Multi Municipal
Other				

4. Community Political Capability: Political capability in this instance is being measured by the degree to which local political leadership (including appointed boards) is willing to enact policies and programs that reduce hazard vulnerabilities in your community, even if met with some opposition. Examples may include guiding development away from identified hazard areas, restricting public investments or capital improvements within hazard areas, or enforcing local development standards that go beyond minimum State or Federal requirements (e.g., building codes, floodplain management, etc.). Rate the jurisdiction's political capability to enact policies and programs that reduce hazard vulnerabilities on a scale from 0 to 5. Generally, a higher the score corresponds to a higher degree of community political capability.

5-Very Willing ←——————→ *3-Moderately Willing* *0-Unwilling to Adopt Policies/Programs*

Score: 4

Apr. 11. 2011 3:22PM shohola twp No. 2403 P. 7

5. Self-Assessment of Capability: Please provide an approximate measure of your jurisdiction's capability to effectively implement hazard mitigation strategies to reduce hazard vulnerabilities. Using the following table, please place an "X" in the box marking the most appropriate degree of capability (Limited, Moderate or High) based upon best available information and the responses provided in Sections 1-5 of this survey. For multi-jurisdictional plans, record the results of this section into the Self Assessment Capability Matrix in **Appendix 4**.

Area	Degree of Capability		
	Limited	Moderate	High
Planning and Regulatory Capability			
Administrative and Technical Capability			
Fiscal Capability			
Community Political Capability			
Community Resiliency Capability			

Capability Assessment Survey

Jurisdiction: Westfall Township *Name/Title:* Robert Ewbank / Emergency Management Coordinator

1. *Planning and Regulatory Capability:* Please indicate whether the following planning or regulatory tools and programs are currently in place or under development for your jurisdiction by placing an "X" in the appropriate box, followed by the date of adoption/update. Then, for each particular item in place, identify the department or agency responsible for its implementation and indicate its estimated or anticipated effect on hazard loss reduction (Supports, Neutral or Hinders) with the appropriate symbol and also indicate if there has been a change in the ability of the tool/program to result in loss reduction. Finally, please provide additional comments or explanations in the space provided.

Tool/Program	Status			Dept. / Agency Respon-sible	Effect on Loss Reduction: + Support O Neutral – Hinder	Change Since Last Plan: + Positive – Negative	Comments:
	In Place	Date Adopted or Updated	Under Develop-ment				
EXAMPLE: Hazard Mitigation Plan	X	1/1/2006		Hazard County EMA	+	+	Interim update in 2008 revised mitigation strategy; completed one action.
Hazard Mitigation Plan	x	1/1/06		Hazard County Ema	+	+	Interim Update 08 Revised
Emergency Operations Plan	x	6/2003		Westfall EMA	+	+	Being Updated
Disaster Recovery Plan							
Evacuation Plan	x	6/2003		Westfall Township	+	+	Being Updated
Continuity of Operations Plan							
NFIP							
NFIP-CRS							
Floodplain Regulations	X	1/2/01		Westfall Township	+	+	
Floodplain Management Plan	x	1/2/01		Westfall Township	+	+	
Zoning Regulations	x	9/6/05		Westfall Township	+	+	
Subdivision Regulations	x	11/1/07		Westfall Township	+	+	

Capability Assessment Survey

Tool/Program	Status			Dept. / Agency Respon-sible	Effect on Loss Reduction: + Support O Neutral – Hinder	Change Since Last Plan: + Positive – Negative	Comments:
	In Place	Date Adopted or Updated	Under Develop-ment				
Comprehensive Land Use Plan (or General, Master or Growth Mgmt. Plan)	x	2/28/11		Westfall Township	+	+	
Open Space Management Plan (or Parks/Rec or Greenways Plan)	x	2/28/11		Westfall Township	+	+	
Stormwater Management Plan / Ordinance			x				
Natural Resource Protection Plan							
Capital Improvement Plan							
Economic Development Plan							
Historic Preservation Plan							
Farmland Preservation							
Building Code	x	7/6/04		Westfall Township	+	+	
Fire Code	x	7/6/04		Westfall Township	+	+	
Firewise							
Storm Ready							
Other							

2. *Administrative and Technical Capability:* Please indicate whether your jurisdiction maintains the following staff members within its current personnel resources by placing an "X" in the appropriate box. Then, if YES, please identify the department or agency they work under and provide any other comments you may have in the space provided or with attachments.

Staff/Personnel Resources	*Yes*	*No*	*Department / Agency*	*Comments*
Planners (with land use / land development knowledge)	x		Herbert, Rowland, & Grubic, Inc.	
Planners or engineers (with natural and/or human caused hazards knowledge)	x		Herbert, Rowland, & Grubic, Inc	
Engineers or professionals trained in building and/or infrastructure construction practices (includes building inspectors)	x		HRG, Inc. Shawn Bolles, BCO Michael Rendleman, ZO	
Emergency manager	x		Robert Ewbank	
Floodplain manager		x		
Land surveyors		x		
Scientists or staff familiar with the hazards of the community		x		
Personnel skilled in Geographic Information Systems (GIS) and/or FEMA's HAZUS program		x		
Grant writers or fiscal staff to handle large/complex grants		x		
Other				

3. *Fiscal Capability:* Please indicate whether your jurisdiction has access to or is eligible to use the following local financial resources ***for hazard mitigation purposes*** (including as match funds for State of Federal mitigation grant funds). Then, identify the primary department or agency responsible for its administration or allocation and provide any other comments you may have in the space provided or with attachments.

Financial Resources	*Yes*	*No*	*Department / Agency*	*Comments*
Capital improvement programming		x		
Community Development Block Grants (CDBG)		x		
Special purpose taxes		x		
Gas / electric utility fees		x		
Water / sewer fees		x		
Stormwater utility fees		x		
Development impact fees		x		
General obligation, revenue and/or special tax bonds		x		
Partnering arrangements or intergovernmental agreements		x		
Other				

4. Community Political Capability: Political capability in this instance is being measured by the degree to which local political leadership (including appointed boards) is willing to enact policies and programs that reduce hazard vulnerabilities in your community, even if met with some opposition. Examples may include guiding development away from identified hazard areas, restricting public investments or capital improvements within hazard areas, or enforcing local development standards that go beyond minimum State or Federal requirements (e.g., building codes, floodplain management, etc.). Rate the jurisdiction's political capability to enact policies and programs that reduce hazard vulnerabilities on a scale from 0 to 5. Generally, a higher the score corresponds to a higher degree of community political capability.

5-Very Willing *3-Moderately Willing* *0-Unwilling to Adopt Policies/Programs* *Score:* 5

5. Self-Assessment of Capability: Please provide an approximate measure of your jurisdiction's capability to effectively implement hazard mitigation strategies to reduce hazard vulnerabilities. Using the following table, please place an "**X**" in the box marking the most appropriate degree of capability (Limited, Moderate or High) based upon best available information and the responses provided in Sections 1-5 of this survey. For multi-jurisdictional plans, record the results of this section into the Self Assessment Capability Matrix in **Appendix 4**.

Area	***Degree of Capability***		
	Limited	***Moderate***	***High***
Planning and Regulatory Capability			X
Administrative and Technical Capability		X	
Fiscal Capability	X		
Community Political Capability			X
Community Resiliency Capability	X		

COMPLETED GOAL AND OBJECTIVE EVALUATION SHEETS

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Name Edward Blund Jurisdiction Lehman Township

Instructions: Please review the following proposed mitigation Goals and Objectives which are to be included in the Mitigation Strategy section of the County Hazard Mitigation Plan. Use the comment boxes to provide feedback or to suggest modification of any of the proposed goals or objectives. You may suggest additional objectives below each goal, or new goals and objectives on the last page of this exercise.

Proposed Goals and Objectives		Comments
GOAL 1	***Provide for properly managed and environmentally sound growth and disaster-resistant development.***	
Objective A	***Provide for better stormwater and floodplain management planning and implementation.***	yes
Objective B	***Encourage and facilitate the development or revision of comprehensive plans and zoning/land-use ordinances to consider limiting development in high-hazard areas and reducing its impact.***	yes
Objective C	***Encourage and help to facilitate Multi-Municipal Planning in Pike County.***	yes
Objective (New)		

GOAL 2	***Reduce the potential impact of natural and human made hazards on property.***	
Objective A	***Identify and implement structural and property protection projects to reduce the impacts from flooding including acquisition, elevation and relocation projects.***	yes
Objective (New)		

Proposed Goals and Objectives		Comments
GOAL 3	***Enhance and improve emergency services provided to the growing population of Pike County.***	
Objective A	***Provide residents with adequate warning of potential floods and other weather related events.***	yes
Objective B	***Ensure that emergency response services and critical facilities are adequate and are not interrupted by hazards.***	yes

	Proposed Goals and Objectives	Comments
Objective (New)		

GOAL 4	***Reduce vulnerability including loss of life and damage to assets from natural hazards.***	
Objective A	***Identify and implement mitigation projects to reduce flooding, reduce/eliminate sewage leakage and inflow/infiltration problems.***	yes
Objective (New)		

GOAL 5	***Conserve, protect and enhance existing natural and water resources.***	
Objective A	***Provide appropriate safeguards for the preservation of the quality of stream corridors, watershed areas, and floodplains.***	yes
Objective B	***Ensure that streams and rivers are functioning properly to reduce flooding.***	yes
Objective (New)		

GOAL 6	***Increase awareness, understanding, and preparedness across all sectors by encouraging hazard risk, preparedness, and mitigation related education and outreach activities.***	
Objective A	***Develop partnerships both at the local, state and federal government level as well as with local business, private communities, civic and volunteer organizations and other appropriate non-traditional partners to continue to develop a County-wide approach to identifying and implementing mitigation actions.***	yes Private Communities are The Big Problem In our Township with Storm water & Road maintenance
Objective (New)		

Suggested Additional Goals and/or Objectives		Comments
GOAL		
Objective		
Objective		
Objective		
Objective		

GOAL		
Objective		
Objective		
Objective		
Objective		

GOAL		
Objective		
Objective		
Objective		
Objective		

Name Bill Dellinger Jurisdiction DCNR Forestry

Instructions: Please review the following proposed mitigation Goals and Objectives which are to be included in the Mitigation Strategy section of the County Hazard Mitigation Plan. Use the comment boxes to provide feedback or to suggest modification of any of the proposed goals or objectives. You may suggest additional objectives below each goal, or new goals and objectives on the last page of this exercise.

Proposed Goals and Objectives		Comments
GOAL 1	***Provide for properly managed and environmentally sound growth and disaster-resistant development.***	INCLUDE FIREWISE COMMUNITY PLANNING IN OBJ B
Objective A	***Provide for better stormwater and floodplain management planning and implementation.***	
Objective B	***Encourage and facilitate the development or revision of comprehensive plans and zoning/land-use ordinances to consider limiting development in high-hazard areas and reducing its impact.***	
Objective C	***Encourage and help to facilitate Multi-Municipal Planning in Pike County.***	
Objective (New)		

GOAL 2	***Reduce the potential impact of natural and human made hazards on property.***	
Objective A	***Identify and implement structural and property protection projects to reduce the impacts from flooding including acquisition, elevation and relocation projects.***	
Objective (New)		

Proposed Goals and Objectives		Comments
GOAL 3	***Enhance and improve emergency services provided to the growing population of Pike County.***	
Objective A	***Provide residents with adequate warning of potential floods and other weather related events.***	
Objective B	***Ensure that emergency response services and critical facilities are adequate and are not interrupted by hazards.***	

Proposed Goals and Objectives		Comments
Objective (New)		

GOAL 4	***Reduce vulnerability including loss of life and damage to assets from natural hazards.***	
Objective A	***Identify and implement mitigation projects to reduce flooding, reduce/eliminate sewage leakage and inflow/infiltration problems.***	
Objective (New)		

GOAL 5	***Conserve, protect and enhance existing natural and water resources.***	
Objective A	***Provide appropriate safeguards for the preservation of the quality of stream corridors, watershed areas, and floodplains.***	
Objective B	***Ensure that streams and rivers are functioning properly to reduce flooding.***	
Objective (New)		

GOAL 6	***Increase awareness, understanding, and preparedness across all sectors by encouraging hazard risk, preparedness, and mitigation related education and outreach activities.***	
Objective A	***Develop partnerships both at the local, state and federal government level as well as with local business, private communities, civic and volunteer organizations and other appropriate non-traditional partners to continue to develop a County-wide approach to identifying and implementing mitigation actions.***	
Objective (New)		

Pike County Hazard Mitigation Plan Update
Proposed Goals and Objectives

Suggested Additional Goals and/or Objectives		Comments
GOAL		
Objective		
Objective		
Objective		
Objective		
GOAL		
Objective		
Objective		
Objective		
Objective		
GOAL		
Objective		
Objective		
Objective		
Objective		

Name VICE ALBERTE Jurisdiction LACKAWAXEN

Instructions: Please review the following proposed mitigation Goals and Objectives which are to be included in the Mitigation Strategy section of the County Hazard Mitigation Plan. Use the comment boxes to provide feedback or to suggest modification of any of the proposed goals or objectives. You may suggest additional objectives below each goal, or new goals and objectives on the last page of this exercise.

Proposed Goals and Objectives		Comments
GOAL 1	***Provide for properly managed and environmentally sound growth and disaster-resistant development.***	
Objective A	***Provide for better stormwater and floodplain management planning and implementation.***	
Objective B	***Encourage and facilitate the development or revision of comprehensive plans and zoning/land-use ordinances to consider limiting development in high-hazard areas and reducing its impact.***	
Objective C	***Encourage and help to facilitate Multi-Municipal Planning in Pike County.***	
Objective (New)		

GOAL 2	***Reduce the potential impact of natural and human made hazards on property.***	
Objective A	***Identify and implement structural and property protection projects to reduce the impacts from flooding including acquisition, elevation and relocation projects.***	
Objective (New)		

Proposed Goals and Objectives		Comments
GOAL 3	***Enhance and improve emergency services provided to the growing population of Pike County.***	COMPLETED
Objective A	***Provide residents with adequate warning of potential floods and other weather related events.***	
Objective B	***Ensure that emergency response services and critical facilities are adequate and are not interrupted by hazards.***	

Proposed Goals and Objectives		Comments
Objective (New)		

GOAL 4	***Reduce vulnerability including loss of life and damage to assets from natural hazards.***	
Objective A	***Identify and implement mitigation projects to reduce flooding, reduce/eliminate sewage leakage and inflow/infiltration problems.***	
Objective (New)		

GOAL 5	***Conserve, protect and enhance existing natural and water resources.***	
Objective A	***Provide appropriate safeguards for the preservation of the quality of stream corridors, watershed areas, and floodplains.***	
Objective B	***Ensure that streams and rivers are functioning properly to reduce flooding.***	
Objective (New)		

GOAL 6	***Increase awareness, understanding, and preparedness across all sectors by encouraging hazard risk, preparedness, and mitigation related education and outreach activities.***	
Objective A	***Develop partnerships both at the local, state and federal government level as well as with local business, private communities, civic and volunteer organizations and other appropriate non-traditional partners to continue to develop a County-wide approach to identifying and implementing mitigation actions.***	
Objective (New)		

Suggested Additional Goals and/or Objectives		Comments
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Name Gary L. Gabb Jurisdiction MATAMORAS

Instructions: Please review the following proposed mitigation Goals and Objectives which are to be included in the Mitigation Strategy section of the County Hazard Mitigation Plan. Use the comment boxes to provide feedback or to suggest modification of any of the proposed goals or objectives. You may suggest additional objectives below each goal, or new goals and objectives on the last page of this exercise.

Proposed Goals and Objectives		Comments
GOAL 1	***Provide for properly managed and environmentally sound growth and disaster-resistant development.***	
Objective A	***Provide for better stormwater and floodplain management planning and implementation.***	
Objective B	***Encourage and facilitate the development or revision of comprehensive plans and zoning/land-use ordinances to consider limiting development in high-hazard areas and reducing its impact.***	
Objective C	***Encourage and help to facilitate Multi-Municipal Planning in Pike County.***	
Objective (New)		

GOAL 2	***Reduce the potential impact of natural and human made hazards on property.***	
Objective A	***Identify and implement structural and property protection projects to reduce the impacts from flooding including acquisition, elevation and relocation projects.***	
Objective (New)		

Proposed Goals and Objectives		Comments
GOAL 3	***Enhance and improve emergency services provided to the growing population of Pike County.***	
Objective A	***Provide residents with adequate warning of potential floods and other weather related events.***	
Objective B	***Ensure that emergency response services and critical facilities are adequate and are not interrupted by hazards.***	

	Proposed Goals and Objectives	Comments
Objective (New)		

GOAL 4	***Reduce vulnerability including loss of life and damage to assets from natural hazards.***	
Objective A	***Identify and implement mitigation projects to reduce flooding, reduce/eliminate sewage leakage and inflow/infiltration problems.***	
Objective (New)		

GOAL 5	***Conserve, protect and enhance existing natural and water resources.***	
Objective A	***Provide appropriate safeguards for the preservation of the quality of stream corridors, watershed areas, and floodplains.***	
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GOAL 6	***Increase awareness, understanding, and preparedness across all sectors by encouraging hazard risk, preparedness, and mitigation related education and outreach activities.***	
Objective A	***Develop partnerships both at the local, state and federal government level as well as with local business, private communities, civic and volunteer organizations and other appropriate non-traditional partners to continue to develop a County-wide approach to identifying and implementing mitigation actions.***	
Objective (New)		

Suggested Additional Goals and/or Objectives		Comments
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Name Robert Ewbank Jurisdiction Westfall Township

Instructions: Please review the following proposed mitigation Goals and Objectives which are to be included in the Mitigation Strategy section of the County Hazard Mitigation Plan. Use the comment boxes to provide feedback or to suggest modification of any of the proposed goals or objectives. You may suggest additional objectives below each goal, or new goals and objectives on the last page of this exercise.

Proposed Goals and Objectives		Comments
GOAL 1	***Provide for properly managed and environmentally sound growth and disaster-resistant development.***	ok
Objective A	***Provide for better stormwater and floodplain management planning and implementation.***	
Objective B	***Encourage and facilitate the development or revision of comprehensive plans and zoning/land-use ordinances to consider limiting development in high-hazard areas and reducing its impact.***	
Objective C	***Encourage and help to facilitate Multi-Municipal Planning in Pike County.***	
Objective (New)		

GOAL 2	***Reduce the potential impact of natural and human made hazards on property.***	ok
Objective A	***Identify and implement structural and property protection projects to reduce the impacts from flooding including acquisition, elevation and relocation projects.***	
Objective (New)		

Proposed Goals and Objectives		Comments
GOAL 3	***Enhance and improve emergency services provided to the growing population of Pike County.***	ok
Objective A	***Provide residents with adequate warning of potential floods and other weather related events.***	
Objective B	***Ensure that emergency response services and critical facilities are adequate and are not interrupted by hazards.***	

	Proposed Goals and Objectives	Comments
Objective (New)		

GOAL 4	***Reduce vulnerability including loss of life and damage to assets from natural hazards.***	Ok
Objective A	***Identify and implement mitigation projects to reduce flooding, reduce/eliminate sewage leakage and inflow/infiltration problems.***	
Objective (New)		

GOAL 5	***Conserve, protect and enhance existing natural and water resources.***	Ok
Objective A	***Provide appropriate safeguards for the preservation of the quality of stream corridors, watershed areas, and floodplains.***	
Objective B	***Ensure that streams and rivers are functioning properly to reduce flooding.***	
Objective (New)		

GOAL 6	***Increase awareness, understanding, and preparedness across all sectors by encouraging hazard risk, preparedness, and mitigation related education and outreach activities.***	ok
Objective A	***Develop partnerships both at the local, state and federal government level as well as with local business, private communities, civic and volunteer organizations and other appropriate non-traditional partners to continue to develop a County-wide approach to identifying and implementing mitigation actions.***	
Objective (New)		

Pike County Hazard Mitigation Plan Update
Proposed Goals and Objectives

Suggested Additional Goals and/or Objectives		Comments
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Name Kyle Wright **Jurisdiction** Delaware Twp.

Instructions: Please review the following proposed mitigation Goals and Objectives which are to be included in the Mitigation Strategy section of the County Hazard Mitigation Plan. Use the comment boxes to provide feedback or to suggest modification of any of the proposed goals or objectives. You may suggest additional objectives below each goal, or new goals and objectives on the last page of this exercise.

Proposed Goals and Objectives		Comments
GOAL 1	***Provide for properly managed and environmentally sound growth and disaster-resistant development.***	OK
Objective A	***Provide for better stormwater and floodplain management planning and implementation.***	
Objective B	***Encourage and facilitate the development or revision of comprehensive plans and zoning/land-use ordinances to consider limiting development in high-hazard areas and reducing its impact.***	
Objective C	***Encourage and help to facilitate Multi-Municipal Planning in Pike County.***	
Objective (New)		

GOAL 2	***Reduce the potential impact of natural and human made hazards on property.***	OK
Objective A	***Identify and implement structural and property protection projects to reduce the impacts from flooding including acquisition, elevation and relocation projects.***	
Objective (New)		

Proposed Goals and Objectives		Comments
GOAL 3	***Enhance and improve emergency services provided to the growing population of Pike County.***	OK
Objective A	***Provide residents with adequate warning of potential floods and other weather related events.***	
Objective B	***Ensure that emergency response services and critical facilities are adequate and are not interrupted by hazards.***	

	Proposed Goals and Objectives	Comments
Objective (New)		

GOAL 4	***Reduce vulnerability including loss of life and damage to assets from natural hazards.***	ok
Objective A	***Identify and implement mitigation projects to reduce flooding, reduce/eliminate sewage leakage and inflow/infiltration problems.***	
Objective (New)		

GOAL 5	***Conserve, protect and enhance existing natural and water resources.***	ok
Objective A	***Provide appropriate safeguards for the preservation of the quality of stream corridors, watershed areas, and floodplains.***	
Objective B	***Ensure that streams and rivers are functioning properly to reduce flooding.***	
Objective (New)		

GOAL 6	***Increase awareness, understanding, and preparedness across all sectors by encouraging hazard risk, preparedness, and mitigation related education and outreach activities.***	ok
Objective A	***Develop partnerships both at the local, state and federal government level as well as with local business, private communities, civic and volunteer organizations and other appropriate non-traditional partners to continue to develop a County-wide approach to identifying and implementing mitigation actions.***	
Objective (New)		

Suggested Additional Goals and/or Objectives		Comments
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Name ROB HELLYER Jurisdiction PORTER TWP

Instructions: Please review the following proposed mitigation Goals and Objectives which are to be included in the Mitigation Strategy section of the County Hazard Mitigation Plan. Use the comment boxes to provide feedback or to suggest modification of any of the proposed goals or objectives. You may suggest additional objectives below each goal, or new goals and objectives on the last page of this exercise.

	Proposed Goals and Objectives	Comments
GOAL 1	***Provide for properly managed and environmentally sound growth and disaster-resistant development.***	OK
Objective A	***Provide for better stormwater and floodplain management planning and implementation.***	
Objective B	***Encourage and facilitate the development or revision of comprehensive plans and zoning/land-use ordinances to consider limiting development in high-hazard areas and reducing its impact.***	
Objective C	***Encourage and help to facilitate Multi-Municipal Planning in Pike County.***	
Objective (New)		

GOAL 2	***Reduce the potential impact of natural and human made hazards on property.***	OK
Objective A	***Identify and implement structural and property protection projects to reduce the impacts from flooding including acquisition, elevation and relocation projects.***	
Objective (New)		

	Proposed Goals and Objectives	Comments
GOAL 3	***Enhance and improve emergency services provided to the growing population of Pike County.***	OK
Objective A	***Provide residents with adequate warning of potential floods and other weather related events.***	
Objective B	***Ensure that emergency response services and critical facilities are adequate and are not interrupted by hazards.***	

Proposed Goals and Objectives		Comments
Objective (New)		

GOAL 4	***Reduce vulnerability including loss of life and damage to assets from natural hazards.***	OK
Objective A	***Identify and implement mitigation projects to reduce flooding, reduce/eliminate sewage leakage and inflow/infiltration problems.***	
Objective (New)		

GOAL 5	***Conserve, protect and enhance existing natural and water resources.***	OK
Objective A	***Provide appropriate safeguards for the preservation of the quality of stream corridors, watershed areas, and floodplains.***	
Objective B	***Ensure that streams and rivers are functioning properly to reduce flooding.***	
Objective (New)		

GOAL 6	***Increase awareness, understanding, and preparedness across all sectors by encouraging hazard risk, preparedness, and mitigation related education and outreach activities.***	OK
Objective A	***Develop partnerships both at the local, state and federal government level as well as with local business, private communities, civic and volunteer organizations and other appropriate non-traditional partners to continue to develop a County-wide approach to identifying and implementing mitigation actions.***	
Objective (New)		

Suggested Additional Goals and/or Objectives		Comments
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Name William Mikulak Jurisdiction DINGMAN Township

Instructions: Please review the following proposed mitigation Goals and Objectives which are to be included in the Mitigation Strategy section of the County Hazard Mitigation Plan. Use the comment boxes to provide feedback or to suggest modification of any of the proposed goals or objectives. You may suggest additional objectives below each goal, or new goals and objectives on the last page of this exercise.

Proposed Goals and Objectives		Comments
GOAL 1	***Provide for properly managed and environmentally sound growth and disaster-resistant development.***	Dingman's Stormwater & floodplain is already effective
Objective A	***Provide for better stormwater and floodplain management planning and implementation.***	
Objective B	***Encourage and facilitate the development or revision of comprehensive plans and zoning/land-use ordinances to consider limiting development in high-hazard areas and reducing its impact.***	
Objective C	***Encourage and help to facilitate Multi-Municipal Planning in Pike County.***	
Objective (New)		

GOAL 2	***Reduce the potential impact of natural and human made hazards on property.***	
Objective A	***Identify and implement structural and property protection projects to reduce the impacts from flooding including acquisition, elevation and relocation projects.***	
Objective (New)		K

Proposed Goals and Objectives		Comments
GOAL 3	***Enhance and improve emergency services provided to the growing population of Pike County.***	
Objective A	***Provide residents with adequate warning of potential floods and other weather related events.***	K
Objective B	***Ensure that emergency response services and critical facilities are adequate and are not interrupted by hazards.***	

	Proposed Goals and Objectives	Comments
Objective (New)		

GOAL 4	***Reduce vulnerability including loss of life and damage to assets from natural hazards.***	K
Objective A	***Identify and implement mitigation projects to reduce flooding, reduce/eliminate sewage leakage and inflow/infiltration problems.***	
Objective (New)		

GOAL 5	***Conserve, protect and enhance existing natural and water resources.***	K
Objective A	***Provide appropriate safeguards for the preservation of the quality of stream corridors, watershed areas, and floodplains.***	
Objective B	***Ensure that streams and rivers are functioning properly to reduce flooding.***	
Objective (New)		

GOAL 6	***Increase awareness, understanding, and preparedness across all sectors by encouraging hazard risk, preparedness, and mitigation related education and outreach activities.***	K
Objective A	***Develop partnerships both at the local, state and federal government level as well as with local business, private communities, civic and volunteer organizations and other appropriate non-traditional partners to continue to develop a County-wide approach to identifying and implementing mitigation actions.***	
Objective (New)		

Suggested Additional Goals and/or Objectives		Comments
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Name Mary Ann Hubbard Jurisdiction Greene

Instructions: Please review the following proposed mitigation Goals and Objectives which are to be included in the Mitigation Strategy section of the County Hazard Mitigation Plan. Use the comment boxes to provide feedback or to suggest modification of any of the proposed goals or objectives. You may suggest additional objectives below each goal, or new goals and objectives on the last page of this exercise.

Proposed Goals and Objectives		Comments
GOAL 1	***Provide for properly managed and environmentally sound growth and disaster-resistant development.***	OK
Objective A	***Provide for better stormwater and floodplain management planning and implementation.***	
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Objective C	***Encourage and help to facilitate Multi-Municipal Planning in Pike County.***	
Objective (New)		

GOAL 2	***Reduce the potential impact of natural and human made hazards on property.***	OK
Objective A	***Identify and implement structural and property protection projects to reduce the impacts from flooding including acquisition, elevation and relocation projects.***	
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Proposed Goals and Objectives		Comments
GOAL 3	***Enhance and improve emergency services provided to the growing population of Pike County.***	OK
Objective A	***Provide residents with adequate warning of potential floods and other weather related events.***	
Objective B	***Ensure that emergency response services and critical facilities are adequate and are not interrupted by hazards.***	

	Proposed Goals and Objectives	Comments
Objective (New)		

GOAL 4	***Reduce vulnerability including loss of life and damage to assets from natural hazards.***	OK
Objective A	***Identify and implement mitigation projects to reduce flooding, reduce/eliminate sewage leakage and inflow/infiltration problems.***	
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GOAL 5	***Conserve, protect and enhance existing natural and water resources.***	OK
Objective A	***Provide appropriate safeguards for the preservation of the quality of stream corridors, watershed areas, and floodplains.***	
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Objective (New)		

GOAL 6	***Increase awareness, understanding, and preparedness across all sectors by encouraging hazard risk, preparedness, and mitigation related education and outreach activities.***	OK
Objective A	***Develop partnerships both at the local, state and federal government level as well as with local business, private communities, civic and volunteer organizations and other appropriate non-traditional partners to continue to develop a County-wide approach to identifying and implementing mitigation actions.***	
Objective (New)		

Pike County Hazard Mitigation Plan Update
Proposed Goals and Objectives

Suggested Additional Goals and/or Objectives		Comments
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Name Gene Reynolds Jurisdiction O&R Pike Co. L&P

Instructions: Please review the following proposed mitigation Goals and Objectives which are to be included in the Mitigation Strategy section of the County Hazard Mitigation Plan. Use the comment boxes to provide feedback or to suggest modification of any of the proposed goals or objectives. You may suggest additional objectives below each goal, or new goals and objectives on the last page of this exercise.

Proposed Goals and Objectives		Comments
GOAL 1	***Provide for properly managed and environmentally sound growth and disaster-resistant development.***	Looks Fine
Objective A	***Provide for better stormwater and floodplain management planning and implementation.***	
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Objective (New)		

GOAL 2	***Reduce the potential impact of natural and human made hazards on property.***	Looks Fine
Objective A	***Identify and implement structural and property protection projects to reduce the impacts from flooding including acquisition, elevation and relocation projects.***	
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Proposed Goals and Objectives		Comments
GOAL 3	***Enhance and improve emergency services provided to the growing population of Pike County.***	Looks Fine
Objective A	***Provide residents with adequate warning of potential floods and other weather related events.***	
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GOAL 4	***Reduce vulnerability including loss of life and damage to assets from natural hazards.***	Looks Fine
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GOAL 5	***Conserve, protect and enhance existing natural and water resources.***	Looks Fine
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Name Bob Myers **Jurisdiction** Shohola Twp.

Instructions: Please review the following proposed mitigation Goals and Objectives which are to be included in the Mitigation Strategy section of the County Hazard Mitigation Plan. Use the comment boxes to provide feedback or to suggest modification of any of the proposed goals or objectives. You may suggest additional objectives below each goal, or new goals and objectives on the last page of this exercise.

Proposed Goals and Objectives		Comments
GOAL 1	***Provide for properly managed and environmentally sound growth and disaster-resistant development.***	OK
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Objective B	***Encourage and facilitate the development or revision of comprehensive plans and zoning/land-use ordinances to consider limiting development in high-hazard areas and reducing its impact.***	
Objective C	***Encourage and help to facilitate Multi-Municipal Planning in Pike County.***	
Objective (New)		

GOAL 2	***Reduce the potential impact of natural and human made hazards on property.***	OK
Objective A	***Identify and implement structural and property protection projects to reduce the impacts from flooding including acquisition, elevation and relocation projects.***	
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Proposed Goals and Objectives		Comments
GOAL 3	***Enhance and improve emergency services provided to the growing population of Pike County.***	OK
Objective A	***Provide residents with adequate warning of potential floods and other weather related events.***	
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	Proposed Goals and Objectives	Comments
Objective (New)		

GOAL 4	***Reduce vulnerability including loss of life and damage to assets from natural hazards.***	OK
Objective A	***Identify and implement mitigation projects to reduce flooding, reduce/eliminate sewage leakage and inflow/infiltration problems.***	
Objective (New)		

GOAL 5	***Conserve, protect and enhance existing natural and water resources.***	OK
Objective A	***Provide appropriate safeguards for the preservation of the quality of stream corridors, watershed areas, and floodplains.***	
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GOAL 6	***Increase awareness, understanding, and preparedness across all sectors by encouraging hazard risk, preparedness, and mitigation related education and outreach activities.***	OK
Objective A	***Develop partnerships both at the local, state and federal government level as well as with local business, private communities, civic and volunteer organizations and other appropriate non-traditional partners to continue to develop a County-wide approach to identifying and implementing mitigation actions.***	
Objective (New)		

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COMPLETED JURISDICTIONAL RISK MATRIX COMMENT FORMS

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Part I: Countywide Risk Factor Evaluation

Name/Title Stanley Whittaker EMC

Jurisdiction/Organization Lehman Township

Pike County - Ranking of hazard types based on Risk Factor (RF) methodology.

HAZARD RISK	HAZARD NATURAL (N) or MAN-MADE (M)	RISK ASSESSMENT CATEGORY					RISK FACTOR	COMMENTS
		PROBABILITY	IMPACT	SPATIAL EXTENT	WARNING TIME	DURATION		
HIGH	Flood, Flash flood, ice jam (N)	4	3	3	2	3	3.2	ok
	Wildfires (N)	4	2	3	4	3	3.1	ok
	Winter Storm (N)	4	2	4	1	3	3.0	ok
MODERATE	Drought (N)	2	1	4	1	4	2.2	ok
	Transportation accidents (M)	4	1	1	4	1	2.2	ok
	Hurricane, Tropical Storm, Nor'easter (N)	2	2	3	1	3	2.2	ok
	Environmental Hazards - (Hazardous Material Release) (M)	2	2	2	3	2	2.1	ok
	Tornados and Windstorms (N)	2	2	2	4	1	2.1	more in windstorms
	Pandemic (N)	1	2	3	1	4	2.0	ok
	Utility Interruption (M)	2	1	2	4	3	2.0	more
	Urban Fire and Explosion (M)	2	2	1	4	2	2.0	-
LOW	Nuclear Incidents (M)	1	2	2	3	3	1.9	ok
	Terrorism (M)	2	2	1	4	1	1.9	ok
	Dam Failure (M)	1	2	1	4	2	1.7	ok
	Drowning (M)	2	1	1	4	1	1.6	more
	Earthquake (N)	1	1	2	4	1	1.5	ok

Calculated Countywide Risk Factor by Hazard and Comparative Jurisdictional Risk

JURISDICTION	IDENTIFIED HAZARD AND CORRESPONDING COUNTYWIDE RISK FACTOR																COMMENTS
	Flood, Flash Flood, Ice Jam	*Wildfire*	*Winter Storm*	*Drought*	*Transportation Accident*	*Hurricane, Tropical Storm, Nor'easter*	*Environmental Hazards (Hazardous Material Release)*	*Tornado and Windstorm*	*Pandemic*	*Utility Interruption*	*Urban Fire and Explosion*	*Nuclear Incidents*	*Terrorism*	*Dam Failure*	*Drowning*	*Earthquake*	
	3.2	3.1	3.0	2.2	2.2	2.2	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.7	1.6	1.5	
Blooming Grove Township	=	=	=	=	>	=	=	=	=	=	=	=	=	=	=	=	
Delaware Township	=	=	=	=	=	=	>	=	=	=	=	=	=	=	=	=	
Dingman Township	=	=	=	=	>	=	=	=	=	=	=	=	=	=	=	=	
Greene Township	=	<	=	=	>	=	=	=	=	=	=	>	=	=	=	=	
Lackawaxen Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
Lehman Township	=	=	=	=	=	=	=	≠ >	=	= >	= >	=	=	=	=	=	More windstorms Cable is more in utilitys High Urban Fires
Matamoras Borough	=	=	=	=	>	=	>	=	=	=	>	=	=	<	=	=	
Milford Borough	=	=	=	=	=	=	=	=	=	=	>	=	=	=	=	=	
Milford Township	=	=	=	=	>	=	>	=	=	=	=	=	=	=	=	=	
Palmyra Township	=	=	=	=	>	=	=	=	=	=	=	=	=	=	>	=	
Porter Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
Shohola Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
Westfall Township	=	=	=	=	>	=	>	=	=	=	=	=	=	=	=	=	

< Means LESS than the County Risk Factor > Means GREATER than the County Risk Factor = Means equal to the County Risk Factor

Part I: Countywide Risk Factor Evaluation

Name/Title ROB HELLYER SUPERVISOR

Jurisdiction/Organization PORTER TWP

Pike County - Ranking of hazard types based on Risk Factor (RF) methodology.

HAZARD RISK	HAZARD NATURAL (N) or MAN-MADE (M)	RISK ASSESSMENT CATEGORY					RISK FACTOR	COMMENTS
		PROBABILITY	IMPACT	SPATIAL EXTENT	WARNING TIME	DURATION		
HIGH	Flood, Flash flood, Ice jam (N)	4	3	3	2	3	3.2	ok
	Wildfires (N)	4	2	3	4	3	3.1	/
	Winter Storm (N)	4	~~2~~ 3	4	~~1~~ 2	3	3.0	
MODERATE	Drought (N)	2	~~1~~ 2	4	1	4	2.2	
	Transportation accidents (M)	4	~~1~~ 2	1	4	1	2.2	
	Hurricane, Tropical Storm, Nor'easter (N)	2	2	3	1	3	2.2	ok
	Environmental Hazards - (Hazardous Material Release) (M)	2	2	2	3	2	2.1	
	Tornados and Windstorms (N)	2	2	2	4	1	2.1	
	Pandemic (N)	1	2	3	1	4	2.0	
	Utility Interruption (M)	2	1	2	4	3	2.0	
	Urban Fire and Explosion (M)	2	2	1	4	2	2.0	
LOW	Nuclear Incidents (M)	1	2	2	3	3	1.9	
	Terrorism (M)	2	2	1	4	1	1.9	
	Dam Failure (M)	1	2	1	4	2	1.7	
	Drowning (M)	~~2~~ 4	1	1	4	1	1.6	
	Earthquake (N)	1	1	2	4	1	1.5	ok

Calculated Countywide Risk Factor by Hazard and Comparative Jurisdictional Risk

JURISDICTION	IDENTIFIED HAZARD AND CORRESPONDING COUNTYWIDE RISK FACTOR																COMMENTS
	Flood, Flash Flood, Ice Jam	*Wildfire*	*Winter Storm*	*Drought*	*Transportation Accident*	*Hurricane, Tropical Storm, Nor'easter*	*Environmental Hazards (Hazardous Material Release)*	*Tornado and Windstorm*	*Pandemic*	*Utility Interruption*	*Urban Fire and Explosion*	*Nuclear Incidents*	*Terrorism*	*Dam Failure*	*Drowning*	*Earthquake*	
	3.2	3.1	3.0	2.2	2.2	2.2	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.7	1.6	1.5	
Blooming Grove Township	=	=	=	=	>	=	=	=	=	=	=	=	=	=	=	=	
Delaware Township	=	=	=	=	=	=	>	=	=	=	=	=	=	=	=	=	
Dingman Township	=	=	=	=	>	=	=	=	=	=	=	=	=	=	=	=	
Greene Township	=	<	=	=	>	=	=	=	=	=	=	>	=	=	=	=	
Lackawaxen Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
Lehman Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
Matamoras Borough	=	=	=	=	>	=	>	=	=	=	>	=	=	<	=	=	
Milford Borough	=	=	=	=	=	=	=	=	=	=	>	=	=	=	=	=	
Milford Township	=	=	=	=	>	=	>	=	=	=	=	=	=	=	=	=	
Palmyra Township	=	=	=	=	>	=	=	=	=	=	=	=	=	=	>	=	
Porter Township	=	=	>	=	=	>	<	>	=	=	=	=	=	=	<	=	
Shohola Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
Westfall Township	=	=	=	=	>	=	>	=	=	=	=	=	=	=	=	=	

< Means LESS than the County Risk Factor > Means GREATER than the County Risk Factor = Means equal to the County Risk Factor

Part I: Countywide Risk Factor Evaluation

Name/Title Edward Bland

Jurisdiction/Organization Lehman Township

Pike County - Ranking of hazard types based on Risk Factor (RF) methodology.

HAZARD RISK	HAZARD NATURAL (N) or MAN-MADE (M)	RISK ASSESSMENT CATEGORY					RISK FACTOR	COMMENTS
		PROBABILITY	IMPACT	SPATIAL EXTENT	WARNING TIME	DURATION		
HIGH	Flood, Flash flood, Ice jam (N)	4	3	3	2	3	3.2	ok
	Wildfires (N)	4	2	3	4	3	3.1	ok
	Winter Storm (N)	4	2	4	1	3	3.0	ok
MODERATE	Drought (N)	2	1	4	1	4	2.2	ok
	Transportation accidents (M)	4	1	1	4	1	2.2	ok
	Hurricane, Tropical Storm, Nor'easter (N)	2	2	3	1	3	2.2	ok
	Environmental Hazards - (Hazardous Material Release) (M)	2	2	2	3	2	2.1	ok
	Tornados and Windstorms (N)	2	2	2	4	1	2.1	more
	Pandemic (N)	1	2	3	1	4	2.0	ok
	Utility Interruption (M)	2	1	2	4	3	2.0	more
	Urban Fire and Explosion (M)	2	2	1	4	2	2.0	more
LOW	Nuclear Incidents (M)	1	2	2	3	3	1.9	ok
	Terrorism (M)	2	2	1	4	1	1.9	ok
	Dam Failure (M)	1	2	1	4	2	1.7	ok
	Drowning (M)	2	1	1	4	1	1.6	more
	Earthquake (N)	1	1	2	4	1	1.5	ok

Calculated Countywide Risk Factor by Hazard and Comparative Jurisdictional Risk

JURISDICTION	IDENTIFIED HAZARD AND CORRESPONDING COUNTYWIDE RISK FACTOR																COMMENTS
	Flood, Flash Flood, Ice Jam	*Wildfire*	*Winter Storm*	*Drought*	*Transportation Accident*	*Hurricane, Tropical Storm, Nor'easter*	*Environmental Hazards (Hazardous Material Release)*	*Tornado and Windstorm*	*Pandemic*	*Utility Interruption*	*Urban Fire and Explosion*	*Nuclear Incidents*	*Terrorism*	*Dam Failure*	*Drowning*	*Earthquake*	
	3.2	3.1	3.0	2.2	2.2	2.2	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.7	1.6	1.5	
Blooming Grove Township	=	=	=	=	>	=	=	=	=	=	=	=	=	=	=	=	
Delaware Township	=	=	=	=	=	=	>	=	=	=	=	=	=	=	=	=	
Dingman Township	=	=	=	=	>	=	=	=	=	=	=	=	=	=	=	=	
Greene Township	=	<	=	=	>	=	=	=	=	=	=	>	=	=	=	=	
Lackawaxen Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
Lehman Township	=	=	=	=	=	= >	=	=	=	= >	= >	=	=	=	= >	=	more wind storm's
Matamoras Borough	=	=	=	=	>	=	>	=	=	=	>	=	=	<	=	=	
Milford Borough	=	=	=	=	=	=	=	=	=	=	>	=	=	=	=	=	
Milford Township	=	=	=	=	>	=	>	=	=	=	=	=	=	=	=	=	
Palmyra Township	=	=	=	=	>	=	=	=	=	=	=	=	=	=	>	=	
Porter Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
Shohola Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
Westfall Township	=	=	=	=	>	=	>	=	=	=	=	=	=	=	=	=	

< Means LESS than the County Risk Factor > Means GREATER than the County Risk Factor = Means equal to the County Risk Factor

Part I: Countywide Risk Factor Evaluation

Name/Title Gary L. Babb MATAMORAS EMC

Jurisdiction/Organization MATAMORAS / Emergency management

Pike County - Ranking of hazard types based on Risk Factor (RF) methodology.

HAZARD RISK	HAZARD NATURAL (N) or MAN-MADE (M)	RISK ASSESSMENT CATEGORY					RISK FACTOR	COMMENTS
		PROBABILITY	IMPACT	SPATIAL EXTENT	WARNING TIME	DURATION		
HIGH	Flood, Flash flood, Ice jam (N)	4	3	3	2	3	3.2	
	Wildfires (N)	4	2	3	4	3	3.1	
	Winter Storm (N)	4	2	4	1	3	3.0	
MODERATE	Drought (N)	2	1	4	1	4	2.2	
	Transportation accidents (M)	4	1	1	4	1	2.2	
	Hurricane, Tropical Storm, Nor'easter (N)	2	2	3	1	3	2.2	
	Environmental Hazards - (Hazardous Material Release) (M)	2	2	2	3	2	2.1	
	Tornados and Windstorms (N)	2	2	2	4	1	2.1	? more
	Pandemic (N)	1	2	3	1	4	2.0	
	Utility Interruption (M)	2	1	2	4	3	2.0	? more
	Urban Fire and Explosion (M)	2	2	1	4	2	2.0	
LOW	Nuclear Incidents (M)	1	2	2	3	3	1.9	
	Terrorism (M)	2	2	1	4	1	1.9	
	Dam Failure (M)	1	2	1	4	2	1.7	
	Drowning (M)	2	1	1	4	1	1.6	? more
	Earthquake (N)	1	1	2	4	1	1.5	

Part II: Jurisdictional Risk Factor Evaluation

Calculated Countywide Risk Factor by Hazard and Comparative Jurisdictional Risk																	
JURISDICTION	IDENTIFIED HAZARD AND CORRESPONDING COUNTYWIDE RISK FACTOR																COMMENTS
	Flood, Flash Flood, Ice Jam	Wildfire	Winter Storm	Drought	Transportation Accident	Hurricane, Tropical Storm, Nor'easter	Environmental Hazards (Hazardous Material Release)	Tornado and Windstorm	Pandemic	Utility Interruption	Urban Fire and Explosion	Nuclear Incidents	Terrorism	Dam Failure	Drowning	Earthquake	
	3.2	3.1	3.0	2.2	2.2	2.2	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.7	1.6	1.5	
Blooming Grove Township	=	=	=	=	>	=	=	=	=	=	=	=	=	=	=	=	
Delaware Township	=	=	=	=	=	=	>	=	=	=	=	=	=	=	=	=	
Dingman Township	=	=	=	=	>	=	=	=	=	=	=	=	=	=	=	=	
Greene Township	=	<	=	=	>	=	=	=	=	=	=	>	=	=	=	=	
Lackawaxen Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
Lehman Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
Matamoras Borough	=	< =	=	=	> =	=	>	=	=	> =	>	=	=	> <	> =	=	
Milford Borough	=	=	=	=	=	=	=	=	=	=	>	=	=	=	=	=	
Milford Township	=	=	=	=	>	=	>	=	=	=	=	=	=	=	=	=	
Palmyra Township	=	=	=	=	>	=	=	=	=	=	=	=	=	=	>	=	
Porter Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
Shohola Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
Westfall Township	=	=	=	=	>	=	>	=	=	=	=	=	=	=	=	=	

< Means LESS than the County Risk Factor > Means GREATER than the County Risk Factor = Means equal to the County Risk Factor

Part I: Countywide Risk Factor Evaluation

Name/Title Bill Dolling Fire Specialist Jurisdiction/Organization DCNR Bureau of Forestry

Pike County - Ranking of hazard types based on Risk Factor (RF) methodology.

HAZARD RISK	HAZARD NATURAL (N) or MAN-MADE (M)	RISK ASSESSMENT CATEGORY					RISK FACTOR	COMMENTS
		PROBABILITY	IMPACT	SPATIAL EXTENT	WARNING TIME	DURATION		
HIGH	Flood, Flash flood, Ice jam (N)	4	3	3	2	3	3.2	
	Wildfires (N)	4	2	3	4	3	3.1	
	Winter Storm (N)	4	2	4	1	3	3.0	
MODERATE	Drought (N)	2	1	4	1	4	2.2	
	Transportation accidents (M)	4	1	1	4	1	2.2	
	Hurricane, Tropical Storm, Nor'easter (N)	2	2	3	1	3	2.2	
	Environmental Hazards - (Hazardous Material Release) (M)	2	2	2	3	2	2.1	
	Tornados and Windstorms (N)	2	2	2	4	1	2.1	
	Pandemic (N)	1	2	3	1	4	2.0	
	Utility Interruption (M)	2	1	2	4	3	2.0	
	Urban Fire and Explosion (M)	2	2	1	4	2	2.0	
LOW	Nuclear Incidents (M)	1	2	2	3	3	1.9	
	Terrorism (M)	2	2	1	4	1	1.9	
	Dam Failure (M)	1	2	1	4	2	1.7	
	Drowning (M)	2	1	1	4	1	1.6	
	Earthquake (N)	1	1	2	4	1	1.5	

Calculated Countywide Risk Factor by Hazard and Comparative Jurisdictional Risk

JURISDICTION	IDENTIFIED HAZARD AND CORRESPONDING COUNTYWIDE RISK FACTOR																COMMENTS
	Flood, Flash Flood, Ice Jam	Wildfire	Winter Storm	Drought	Transportation Accident	Hurricane, Tropical Storm, Nor'easter	Environmental Hazards (Hazardous Material Release)	Tornado and Windstorm	Pandemic	Utility Interruption	Urban Fire and Explosion	Nuclear Incidents	Terrorism	Dam Failure	Drowning	Earthquake	
	3.2	3.1	3.0	2.2	2.2	2.2	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.7	1.6	1.5	
Blooming Grove Township	=	=	=	=	>	=	=	=	=	=	=	=	=	=	=	=	
Delaware Township	=	=	=	=	=	=	>	=	=	=	=	=	=	=	>	=	
Dingman Township	=	=	=	=	>	=	=	=	=	=	=	=	=	=	=	=	
Greene Township	=	<	=	=	>	=	=	=	=	=	=	>	=	=	=	=	
Lackawaxen Township	>	=	=	=	=	=	=	=	=	=	=	=	=	=	>	=	
Lehman Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
Matamoras Borough	>	=	=	=	>	=	>	=	=	=	>	=	=	<	>	=	
Milford Borough	=	=	=	=	=	=	=	=	=	=	>	=	=	=	=	=	
Milford Township	=	=	=	=	>	=	>	=	=	=	=	=	=	=	=	=	
Palmyra Township	=	=	=	=	>	=	=	=	=	=	=	=	=	=	>	=	
Porter Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
Shohola Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
Westfall Township	=	=	=	=	>	=	>	=	=	=	=	=	=	=	>	=	

< Means LESS than the County Risk Factor > Means GREATER than the County Risk Factor = Means equal to the County Risk Factor

Part I: Countywide Risk Factor Evaluation

Name/Title Robert Ewbank Supervisor/EMC

Jurisdiction/Organization Westfall Township

Pike County - Ranking of hazard types based on Risk Factor (RF) methodology.

HAZARD RISK	HAZARD NATURAL (N) or MAN-MADE (M)	RISK ASSESSMENT CATEGORY					RISK FACTOR	COMMENTS
		PROBABILITY	IMPACT	SPATIAL EXTENT	WARNING TIME	DURATION		
HIGH	Flood, Flash flood, Ice jam (N)	4	3	3	2	3	3.2	
	Wildfires (N)	4	2	3	4	3	3.1	
	Winter Storm (N)	4	2	4	1	3	3.0	
MODERATE	Drought (N)	2	1	4	1	4	2.2	
	Transportation accidents (M)	4	1	1	4	1	2.2	
	Hurricane, Tropical Storm, Nor'easter (N)	2	2	3	1	3	2.2	
	Environmental Hazards - (Hazardous Material Release) (M)	2	2	2	3	2	2.1	
	Tornados and Windstorms (N)	2	2	2	4	1	2.1	
	Pandemic (N)	1	2	3	1	4	2.0	
	Utility Interruption (M)	2	1	2	4	3	2.0	Bump Up 1 Notch
	Urban Fire and Explosion (M)	2	2	1	4	2	2.0	
LOW	Nuclear Incidents (M)	1	2	2	3	3	1.9	
	Terrorism (M)	2	2	1	4	1	1.9	
	Dam Failure (M)	1	2	1	4	2	1.7	
	Drowning (M)	2	1	1	4	1	1.6	Bump Up 1 Notch
	Earthquake (N)	1	1	2	4	1	1.5	

Calculated Countywide Risk Factor by Hazard and Comparative Jurisdictional Risk

JURISDICTION	IDENTIFIED HAZARD AND CORRESPONDING COUNTYWIDE RISK FACTOR																COMMENTS
	Flood, Flash Flood, Ice Jam	*Wildfire*	*Winter Storm*	*Drought*	*Transportation Accident*	*Hurricane, Tropical Storm, Nor'easter*	*Environmental Hazards (Hazardous Material Release)*	*Tornado and Windstorm*	*Pandemic*	*Utility Interruption*	*Urban Fire and Explosion*	*Nuclear Incidents*	*Terrorism*	*Dam Failure*	*Drowning*	*Earthquake*	
	3.2	**3.1**	**3.0**	**2.2**	**2.2**	**2.2**	**2.1**	**2.1**	**2.0**	**2.0**	**2.0**	**1.9**	**1.9**	**1.7**	**1.6**	**1.5**	
Blooming Grove Township	=	=	=	=	>	=	=	=	=	=	=	=	=	=	=	=	
Delaware Township	=	=	=	=	=	=	>	=	=	=	=	=	=	=	=	=	
Dingman Township	=	=	=	=	>	=	=	=	=	=	=	=	=	=	=	=	
Greene Township	=	<	=	=	>	=	=	=	=	=	=	>	=	=	=	=	
Lackawaxen Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
Lehman Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
Matamoras Borough	=	=	=	=	>	=	>	=	=	=	>	=	=	<	=	=	
Milford Borough	=	=	=	=	=	=	=	=	=	=	>	=	=	=	=	=	
Milford Township	=	=	=	=	>	=	>	=	=	=	=	=	=	=	=	=	
Palmyra Township	=	=	=	=	>	=	=	=	=	=	=	=	=	=	>	=	
Porter Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
Shohola Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
Westfall Township	=	=	=	=	>	=	>	=	=	=	≥	=	=	≥	≥	=	Industry & Big Box Stores Sullivan County NY Dams Located On Delaware River

< Means LESS than the County Risk Factor > Means GREATER than the County Risk Factor = Means equal to the County Risk Factor

Part I: Countywide Risk Factor Evaluation

Name/Title Kyle Wright EMA

Jurisdiction/Organization Delaware Township / Pike County ALS

Pike County - Ranking of hazard types based on Risk Factor (RF) methodology.

HAZARD RISK	HAZARD NATURAL (N) or MAN-MADE (M)	RISK ASSESSMENT CATEGORY					RISK FACTOR	COMMENTS
		PROBABILITY	IMPACT	SPATIAL EXTENT	WARNING TIME	DURATION		
HIGH	Flood, Flash flood, Ice jam (N)	4	3	3	2	3	3.2	OK
	Wildfires (N)	4	2	3	4	3	3.1	
	Winter Storm (N)	4	2	4	1	3	3.0	
MODERATE	Drought (N)	2	1	4	1	4	2.2	
	Transportation accidents (M)	4	1	1	4	1	2.2	
	Hurricane, Tropical Storm, Nor'easter (N)	2	2	3	1	3	2.2	
	Environmental Hazards - (Hazardous Material Release) (M)	2	2	2	3	2	2.1	
	Tornados and Windstorms (N)	2	2	2	4	1	2.1	
	Pandemic (N)	1	2	3	1	4	2.0	
	Utility Interruption (M)	~~2~~ 4	1	2	4	3	2.0	Increase Probability
	Urban Fire and Explosion (M)	2	2	1	4	2	2.0	OK
LOW	Nuclear Incidents (M)	1	2	2	3	3	1.9	
	Terrorism (M)	2	2	1	4	1	1.9	
	Dam Failure (M)	1	~~2~~ 3	1	4	2	1.7	Increase Impact
	Drowning (M)	~~2~~ 3	1	1	4	1	1.6	Increase Probability
	Earthquake (N)	1	1	2	4	1	1.5	OK

Calculated Countywide Risk Factor by Hazard and Comparative Jurisdictional Risk

JURISDICTION	IDENTIFIED HAZARD AND CORRESPONDING COUNTYWIDE RISK FACTOR																COMMENTS
	Flood, Flash Flood, Ice Jam	Wildfire	Winter Storm	Drought	Transportation Accident	Hurricane, Tropical Storm, Nor'easter	Environmental Hazards (Hazardous Material Release)	Tornado and Windstorm	Pandemic	Utility Interruption	Urban Fire and Explosion	Nuclear Incidents	Terrorism	Dam Failure	Drowning	Earthquake	
	3.2	3.1	3.0	2.2	2.2	2.2	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.7	1.6	1.5	
Blooming Grove Township	=	=	=	=	>	=	=	=	=	=	=	=	=	=	=	=	
Delaware Township	=	=	=	=	=	=	>	=	=	=	<	=	=	>	=	=	
Dingman Township	=	=	=	=	>	=	=	=	=	=	=	=	=	=	=	=	
Greene Township	=	<	=	=	>	=	=	=	=	=	=	>	=	=	=	=	
Lackawaxen Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
Lehman Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
Matamoras Borough	=	=	=	=	>	=	>	=	=	=	>	=	=	<	=	=	
Milford Borough	=	=	=	=	=	=	=	=	=	=	>	=	=	=	=	=	
Milford Township	=	=	=	=	>	=	>	=	=	=	=	=	=	=	=	=	
Palmyra Township	=	=	=	=	>	=	=	=	=	=	=	=	=	=	>	=	
Porter Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
Shohola Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
Westfall Township	=	=	=	=	>	=	>	=	=	=	=	=	=	=	=	=	

More (high-hazard) dams than other municipalities

Less Industry + Residential Density

< Means LESS than the County Risk Factor > Means GREATER than the County Risk Factor = Means equal to the County Risk Factor

Part I: Countywide Risk Factor Evaluation

Name/Title MARY ANN HUBBARD

Jurisdiction/Organization GREENE

Pike County - Ranking of hazard types based on Risk Factor (RF) methodology.

HAZARD RISK	HAZARD NATURAL (N) or MAN-MADE (M)	RISK ASSESSMENT CATEGORY					RISK FACTOR	COMMENTS
		PROBABILITY	IMPACT	SPATIAL EXTENT	WARNING TIME	DURATION		
HIGH	Flood, Flash flood, Ice jam (N)	4	3	3	2	3	3.2	
	Wildfires (N)	4	2	3	4	3	3.1	
	Winter Storm (N)	4	2	4	X	3	3.0	
MODERATE	Drought (N)	2	1	4	1	4	2.2	
	Transportation accidents (M)	4	1	1	4	1	2.2	
	Hurricane, Tropical Storm, Nor'easter (N)	2	2	3	1	3	2.2	
	Environmental Hazards - (Hazardous Material Release) (M)	2	2	2	3	2	2.1	
	Tornados and Windstorms (N)	2	2	2	4	1	2.1	
	Pandemic (N)	1	2	3	1	4	2.0	
	Utility Interruption (M)	2	1	2	4	3	2.0	
	Urban Fire and Explosion (M)	2	2	1	4	2	2.0	
LOW	Nuclear Incidents (M)	1	2	2	3	3	1.9	
	Terrorism (M)	2	2	1	4	1	1.9	
	Dam Failure (M)	1	2	1	4	2	1.7	
	Drowning (M)	2	1	1	4	1	1.6	
	Earthquake (N)	1	1	2	4	1	1.5	

Calculated Countywide Risk Factor by Hazard and Comparative Jurisdictional Risk

JURISDICTION	IDENTIFIED HAZARD AND CORRESPONDING COUNTYWIDE RISK FACTOR																COMMENTS
	Flood, Flash Flood, Ice Jam	*Wildfire*	*Winter Storm*	*Drought*	*Transportation Accident*	*Hurricane, Tropical Storm, Nor'easter*	*Environmental Hazards (Hazardous Material Release)*	*Tornado and Windstorm*	*Pandemic*	*Utility Interruption*	*Urban Fire and Explosion*	*Nuclear Incidents*	*Terrorism*	*Dam Failure*	*Drowning*	*Earthquake*	
	3.2	3.1	3.0	2.2	2.2	2.2	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.7	1.6	1.5	
Blooming Grove Township	=	=	=	=	>	=	=	=	=	=	=	=	=	=	=	=	
Delaware Township	=	=	=	=	=	=	>	=	=	=	=	=	=	=	=	=	
Dingman Township	=	=	=	=	>	=	=	=	=	=	=	=	=	=	=	=	
Greene Township	> Hail 65	<	> Alt. Diff Blizzard 96	=	>	=	=	> History has repeated	=	=	=	>	=	=	=	=	
Lackawaxen Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
Lehman Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
Matamoras Borough	=	=	=	=	>	=	>	=	=	=	>	=	=	<	=	=	
Milford Borough	=	=	=	=	=	=	=	=	=	=	>	=	=	=	=	=	
Milford Township	=	=	=	=	>	=	>	=	=	=	=	=	=	=	=	=	
Palmyra Township	=	=	=	=	>	=	=	=	=	=	=	=	=	=	>	=	
Porter Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
Shohola Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
Westfall Township	=	=	=	=	>	=	>	=	=	=	=	=	=	=	=	=	

< Means LESS than the County Risk Factor > Means GREATER than the County Risk Factor = Means equal to the County Risk Factor

Part I: Countywide Risk Factor Evaluation

Name/Title W. Mikulak EMA

Jurisdiction/Organization DINGMAN TOWNSHIP

Pike County - Ranking of hazard types based on Risk Factor (RF) methodology.

HAZARD RISK	HAZARD NATURAL (N) or MAN-MADE (M)	RISK ASSESSMENT CATEGORY					RISK FACTOR	COMMENTS
		PROBABILITY	IMPACT	SPATIAL EXTENT	WARNING TIME	DURATION		
HIGH	Flood, Flash flood, ice jam (N)	4	3	3	2	3	3.2	
	Wildfires (N)	4	2	3	4	3	3.1	
	Winter Storm (N)	4	2	4	1	3	3.0	
MODERATE	Drought (N)	2	1	4	1	4	2.2	
	Transportation accidents (M)	4	1	1	4	1	2.2	
	Hurricane, Tropical Storm, Nor'easter (N)	2	2	3	1	3	2.2	
	Environmental Hazards - (Hazardous Material Release) (M)	2	2	2	3	2	2.1	
	Tornados and Windstorms (N)	2	2	2	4	1	2.1	
	Pandemic (N)	1	2	3	1	4	2.0	
	Utility Interruption (M)	~~2~~ 3	~~1~~ 2	2	4	3	~~2.0~~ 2.5	
	Urban Fire and Explosion (M)	2	2	1	4	2	2.0	
LOW	Nuclear Incidents (M)	1	2	2	3	3	1.9	
	Terrorism (M)	2	2	1	4	1	1.9	
	Dam Failure (M)	1	2	1	4	2	1.7	
	Drowning (M)	~~2~~ 4	1	1	4	1	1.6	
	Earthquake (N)	1	1	2	4	1	1.5	

Part II: Jurisdictional Risk Factor Evaluation

Calculated Countywide Risk Factor by Hazard and Comparative Jurisdictional Risk

JURISDICTION	IDENTIFIED HAZARD AND CORRESPONDING COUNTYWIDE RISK FACTOR																COMMENTS
	Flood, Flash Flood, Ice Jam	*Wildfire*	*Winter Storm*	*Drought*	*Transportation Accident*	*Hurricane, Tropical Storm, Nor'easter*	*Environmental Hazards (Hazardous Material Release)*	*Tornado and Windstorm*	*Pandemic*	*Utility Interruption*	*Urban Fire and Explosion*	*Nuclear Incidents*	*Terrorism*	*Dam Failure*	*Drowning*	*Earthquake*	
	3.2	**3.1**	**3.0**	**2.2**	**2.2**	**2.2**	**2.1**	**2.1**	**2.0**	**2.0**	**2.0**	**1.9**	**1.9**	**1.7**	**1.6**	**1.5**	
Blooming Grove Township	=	=	=	=	>	=	=	=	=	=	=	=	=	=	=	=	
Delaware Township	=	=	=	=	=	=	>	=	=	=	=	=	=	=	=	=	
Dingman Township	<	=	=	=	>	=	=	=	=	=	=	<	=	=	=	=	Flood Plains in the past have been steady - Nuclear INC Around us but not included -
Greene Township	=	<	=	=	>	=	=	=	=	=	=	>	=	=	=	=	
Lackawaxen Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
Lehman Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
Matamoras Borough	=	=	=	=	>	=	>	=	=	=	>	=	=	<	=	=	
Milford Borough	=	=	=	=	=	=	=	=	=	=	>	=	=	=	=	=	
Milford Township	=	=	=	=	>	=	>	=	=	=	=	=	=	=	=	=	
Palmyra Township	=	=	=	=	>	=	=	=	=	=	=	=	=	=	>	=	
Porter Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
Shohola Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
Westfall Township	=	=	=	=	>	=	>	=	=	=	=	=	=	=	=	=	

< Means LESS than the County Risk Factor > Means GREATER than the County Risk Factor = Means equal to the County Risk Factor

Okay.

Part I: Countywide Risk Factor Evaldation

Name/Title Mark Moglia, Chief

Jurisdiction/Organization Delaware Valley School District

Pike County - Ranking of hazard types based on Risk Factor (RF) methodology.

HAZARD RISK	HAZARD NATURAL (N) or MAN-MADE (M)	RISK ASSESSMENT CATEGORY					RISK FACTOR	COMMENTS
		PROBABILITY	IMPACT	SPATIAL EXTENT	WARNING TIME	DURATION		
HIGH	Flood, Flash flood, Ice jam (N)	4	3	3	2	3	3.2	
	Wildfires (N)	4	2	3	4	3	3.1	
	Winter Storm (N)	4	2	4	1	3	3.0	
MODERATE	Drought (N)	2	1	4	1	4	2.2	
	Transportation accidents (M)	4	1	1	4	1	2.2	
	Hurricane, Tropical Storm, Nor'easter (N)	2	2	3	1	3	2.2	
	Environmental Hazards - (Hazardous Material Release) (M)	2	2	2	3	2	2.1	
	Tornados and Windstorms (N)	2	2	2	4	1	2.1	
	Pandemic (N)	1	2	3	1	4	2.0	
	Utility Interruption (M)	2	1	2	4	3	2.0	
	Urban Fire and Explosion (M)	2	2	1	4	2	2.0	
LOW	Nuclear Incidents (M)	1	2	2	3	3	1.9	
	Terrorism (M)	2	2	1	4	1	1.9	
	Dam Failure (M)	1	2	1	4	2	1.7	
	Drowning (M)	2	1	1	4	1	1.6	
	Earthquake (N)	1	1	2	4	1	1.5	

Calculated Countywide Risk Factor by Hazard and Comparative Jurisdictional Risk																	
JURISDICTION	IDENTIFIED HAZARD AND CORRESPONDING COUNTYWIDE RISK FACTOR																COMMENTS
	Flood, Flash Flood, Ice Jam	Wildfire	Winter Storm	Drought	Transportation Accident	Hurricane, Tropical Storm, Nor'easter	Environmental Hazards (Hazardous Material Release)	Tornado and Windstorm	Pandemic	Utility Interruption	Urban Fire and Explosion	Nuclear Incidents	Terrorism	Dam Failure	Drowning	Earthquake	
	3.2	3.1	3.0	2.2	2.2	2.2	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.7	1.6	1.5	
Blooming Grove Township	=	=	=	=	>	=	=	=	=	=	=	=	=	=	=	=	
Delaware Township	=	=	=	=	=	=	>	=	=	=	=	=	=	=	=	=	
Dingman Township	=	=	=	=	>	=	=	=	=	=	=	=	=	=	=	=	
Greene Township	=	<	=	=	>	=	=	=	=	=	=	>	=	=	=	=	
Lackawaxen Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
Lehman Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
Matamoras Borough	=	=	=	=	>	=	>	=	=	=	>	=	=	<	=	=	
Milford Borough	=	=	=	=	=	=	=	=	=	=	>	=	=	=	=	=	
Milford Township	=	=	=	=	>	=	>	=	=	=	=	=	=	=	=	=	
Palmyra Township	=	=	=	=	>	=	=	=	=	=	=	=	=	=	>	=	
Porter Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
Shohola Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
Westfall Township	=	=	=	=	>	=	>	=	=	=	=	=	=	=	=	=	

< Means LESS than the County Risk Factor > Means GREATER than the County Risk Factor = Means equal to the County Risk Factor

Part I: Countywide Risk Factor Evaluation

Name/Title Vince Arpanese

Jurisdiction/Organization Lackawaxen

Pike County - Ranking of hazard types based on Risk Factor (RF) methodology.

HAZARD RISK	HAZARD NATURAL (N) or MAN-MADE (M)	RISK ASSESSMENT CATEGORY					RISK FACTOR	COMMENTS
		PROBABILITY	IMPACT	SPATIAL EXTENT	WARNING TIME	DURATION		
HIGH	Flood, Flash flood, Ice jam (N)	4	3	3	2	3	3.2	
	Wildfires (N)	4	2	3	4	3	3.1	
	Winter Storm (N)	4	2	4	1	3	3.0	
MODERATE	Drought (N)	2	1	4	1	4	2.2	
	Transportation accidents (M)	4	1	1	4	1	2.2	
	Hurricane, Tropical Storm, Nor'easter (N)	2	2	3	1	3	2.2	
	Environmental Hazards - (Hazardous Material Release) (M)	2	2	2	3	2	2.1	
	Tornados and Windstorms (N)	2	2	2	4	1	2.1	
	Pandemic (N)	1	2	3	1	4	2.0	
	Utility Interruption (M)	2	1	2	4	3	2.0	
	Urban Fire and Explosion (M)	2	2	1	4	2	2.0	
LOW	Nuclear Incidents (M)	1	2	2	3	3	1.9	
	Terrorism (M)	~~2~~ 3	2	1	4	1	1.9	
	Dam Failure (M)	~~1~~ 2	2	1	4	2	1.7	
	Drowning (M)	~~2~~ 1	1	1	4	1	1.6	
	Earthquake (N)	1	1	2	4	1	1.5	

Calculated Countywide Risk Factor by Hazard and Comparative Jurisdictional Risk

JURISDICTION	IDENTIFIED HAZARD AND CORRESPONDING COUNTYWIDE RISK FACTOR																COMMENTS
	Flood, Flash Flood, Ice Jam	*Wildfire*	*Winter Storm*	*Drought*	*Transportation Accident*	*Hurricane, Tropical Storm, Nor'easter*	*Environmental Hazards (Hazardous Material Release)*	*Tornado and Windstorm*	*Pandemic*	*Utility Interruption*	*Urban Fire and Explosion*	*Nuclear Incidents*	*Terrorism*	*Dam Failure*	*Drowning*	*Earthquake*	
	3.2	3.1	3.0	2.2	2.2	2.2	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.7	1.6	1.5	
Blooming Grove Township	=	=	=	=	>	=	=	=	=	=	=	=	=	=	=	=	
Delaware Township	=	=	=	=	=	=	>	=	=	=	=	=	=	=	=	=	
Dingman Township	=	=	=	=	>	=	=	=	=	=	=	=	=	=	=	=	
Greene Township	=	<	=	=	>	=	=	=	=	=	=	>	=	=	=	=	
Lackawaxen Township	>	=	=	<	=	>	=	>	=	=	=	=	=	>	>	=	
Lehman Township	=	=	=	=	=	=	=	=	=	=	=	=	=	[illegible]	=	=	
Matamoras Borough	=	=	=	=	>	=	>	=	=	=	>	=	=	<	=	=	
Milford Borough	=	=	=	=	=	=	=	=	=	=	>	=	=	=	=	=	
Milford Township	=	=	=	=	>	=	>	=	=	=	=	=	=	=	=	=	
Palmyra Township	=	=	=	=	>	=	=	=	=	=	=	=	=	=	>	=	
Porter Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
Shohola Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
Westfall Township	=	=	=	=	>	=	>	=	=	=	=	=	=	=	=	=	

< Means LESS than the County Risk Factor > Means GREATER than the County Risk Factor = Means equal to the County Risk Factor

Part I: Countywide Risk Factor Evaluation

Name/Title Bob Myers - EMC

Jurisdiction/Organization Dingman Twp

Pike County - Ranking of hazard types based on Risk Factor (RF) methodology.

HAZARD RISK	HAZARD NATURAL (N) or MAN-MADE (M)	RISK ASSESSMENT CATEGORY					RISK FACTOR	COMMENTS
		PROBABILITY	IMPACT	SPATIAL EXTENT	WARNING TIME	DURATION		
HIGH	Flood, Flash flood, Ice jam (N)	4	3	3	2	3	3.2	
	Wildfires (N)	4	2	3	4	3	3.1	
	Winter Storm (N)	4	2	4	1	3	3.0	
MODERATE	Drought (N)	2	1	4	1	4	2.2	
	Transportation accidents (M)	4	1	1	4	1	2.2	
	Hurricane, Tropical Storm, Nor'easter (N)	2	2	3	1	3	2.2	
	Environmental Hazards - (Hazardous Material Release) (M)	2	2	2	3	2	2.1	
	Tornados and Windstorms (N)	2	2	2	4	1	2.1	
	Pandemic (N)	1	2	3	1	4	2.0	
	Utility Interruption (M)	2	1	2	4	3	2.0	
	Urban Fire and Explosion (M)	2	2	1	4	2	2.0	
LOW	Nuclear Incidents (M)	1	2	2	3	3	1.9	
	Terrorism (M)	2	2	1	4	1	1.9	
	Dam Failure (M)	1	2	1	4	2	1.7	
	Drowning (M)	~~2~~ 4	1	1	4	1	1.6	
	Earthquake (N)	1	1	2	4	1	1.5	

Calculated Countywide Risk Factor by Hazard and Comparative Jurisdictional Risk																	
JURISDICTION	IDENTIFIED HAZARD AND CORRESPONDING COUNTYWIDE RISK FACTOR																COMMENTS
	Flood, Flash Flood, Ice Jam	Wildfire	Winter Storm	Drought	Transportation Accident	Hurricane, Tropical Storm, Nor'easter	Environmental Hazards (Hazardous Material Release)	Tornado and Windstorm	Pandemic	Utility Interruption	Urban Fire and Explosion	Nuclear Incidents	Terrorism	Dam Failure	Drowning	Earthquake	
	3.2	3.1	3.0	2.2	2.2	2.2	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.7	1.6	1.5	
Blooming Grove Township	=	=	=	=	>	=	=	=	=	=	=	=	=	=	=	=	
Delaware Township	=	=	=	=	=	=	>	=	=	=	=	=	=	=	=	=	
Dingman Township	=	=	=	=	>	=	=	=	=	=	=	=	=	=	=	=	
Greene Township	=	<	=	=	>	=	=	=	=	=	=	>	=	=	=	=	
Lackawaxen Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
Lehman Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
Matamoras Borough	=	=	=	=	>	=	>	=	=	=	>	=	=	<	=	=	
Milford Borough	=	=	=	=	=	=	=	=	=	=	>	=	=	=	=	=	
Milford Township	=	=	=	=	>	=	>	=	=	=	=	=	=	=	=	=	
Palmyra Township	=	=	=	=	>	=	=	=	=	=	=	=	=	=	>	=	
Porter Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
Shohola Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
Westfall Township	=	=	=	=	>	=	>	=	=	=	=	=	=	=	=	=	

< Means LESS than the County Risk Factor > Means GREATER than the County Risk Factor = Means equal to the County Risk Factor

COMPLETED MITIGATION ACTION AND PROJECT EVALUATIONS

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Mitigation Action Form

Instructions: Complete an action form for each action.

Community Name:	Action Title/Description:
Dingman Township	TR 430 Tunnel Rd. Box Culvert

Technique (Category)	
Hazard(s) Addressed	Flooding
Priority (High, Medium, Low)	High
Estimated Cost	$170,000
Potential Funding Source(s)	
Lead Agency/Department	Road Dept. 296-2140
Implementation Schedule	

GREENE TWP. ROAD INFORMATION-MITIGATION PLAN

T389 Beaver Dam	about 300' in off Greentown Rd.-concrete pipe too small- water runs over road about 1foot deep. Need bigger pipe.
T351 Old Greentown	from Beaver Dam Rd. to Smith east, road from Beaver Dam for about 900' must be raised up about 2 feet and more pipe from 900' to Smith enlarge pipe size, ditch work on right side.
T372 Saw Mill	from Hemlock to foot of hill left side, ditch work and one new pipe added 24 inches.
T372 Saw Mill	by State Game Land road to be raised up 3 feet and more pipe added about 2000 feet long.
T390 Mozzette	by L Marro, pipe too small and floods road, need 36 inch pipe to fix problem.
T374 Mt. View	about 500 feet off Rte 191 road to be filled in about 4 ½ feet for About 3000 feet and new pipe added. Road washes out in rain storms and flood the road with about 2 feet of water.
T368 Misery	from County line to top of hill north side of Lake Jaime about 3000 feet, need new pipe and ditch work.
T343 Lake Russell	second pipe west of Misery Rd. needs to be larger because water runs out of the woods. Water flows over road and washes out the road.
T353 Creamery	from top of hill towards 191 need more pipe work. Road washes out and 2A washes into the woods.

Mitigation Action Form

Instructions: Complete an action form for each action.

Community Name: Lehman Township	***Action Title/Description:*** Public Awareness
Technique (Category)	Through Township and private community newsletters.
Hazard(s) Addressed	Flooding and extreme weather conditions
Priority (High, Medium, Low)	High
Estimated Cost	$500.00
Potential Funding Source(s)	EMA Funding / Tax Revenue
Lead Agency/Department	Emergency Management
Implementation Schedule	Ongoing

Mitigation Action Form

Instructions: Complete an action form for each action.

Community Name:	***Action Title/Description:***
Lehman Township	Mink Pond Road Stormwater Management

Technique (Category)	Implement Stormwater Management BMP's along Mink Pond Road
Hazard(s) Addressed	Road deterioration along Mink Pond Road due to stormwater.
Priority (High, Medium, Low)	Medium
Estimated Cost	$40,000.00
Potential Funding Source(s)	Taxpayer Revenue
Lead Agency/Department	Lehman Township Board of Supervisors
Implementation Schedule	Fall of 2011

Mitigation Action Form

Instructions: Complete an action form for each action.

Community Name:	*Action Title/Description:*
Lehman Township	Stormwater Management Winona Falls Road / Lehman Community Park

Technique (Category)	Engineering Study
Hazard(s) Addressed	Severe erosion in the park caused by stormwater runoff from Winona Falls Road
Priority (High, Medium, Low)	High
Estimated Cost	$30,000 or more
Potential Funding Source(s)	EMA Funding / Taxpayer Revenue
Lead Agency/Department	Lehman Township Board of Supervisors
Implementation Schedule	Start by October 1, 2011

Mitigation Action Form

Instructions: Complete an action form for each action.

Community Name: Lehman Township	***Action Title/Description:*** Stormwater Management Winona Falls Road / Lehman Community Park
Technique (Category)	Implementation of Engineering Study Recomendations
Hazard(s) Addressed	Severe erosion in the park caused by stormwater runoff from Winona Falls Road
Priority (High, Medium, Low)	High
Estimated Cost	Unknown at this time.
Potential Funding Source(s)	EMA Funding / Taxpayer Revenue
Lead Agency/Department	Lehman Township Board of Supervisors
Implementation Schedule	As soon as possible after engineering study is completed.

Mitigation Action Form

Instructions: Complete an action form for each action.

Community:	***Action Title/Description:***
Borough of Matamoras	Camera system for monitoring varying problematic areas on river.

Technique (Category)	Early Warning
Hazard(s) Addressed	Monitoring problematic areas along the river
Priority (High, Medium, Low)	High
Estimated Cost	$250,000.00
Potential Funding Source(s)	Grants
Lead Agency/Department	Matamoras EMA
Implementation Schedule	2014

Mitigation Action Form

Instructions: Complete an action form for each action.

Community: Matamoras and Westfall	***Action Title/Description:*** Cleaning and removing debris from previous high water deposits on islands and waterway channels
Technique (Category)	Preventing jams and damming from deposited debris
Hazard(s) Addressed	Flooding and Ice Jams
Priority (High, Medium, Low)	High
Estimated Cost	$12,000,000.00
Potential Funding Source(s)	Grants / Government / DRBC / Army Corps
Lead Agency/Department	Matamoras and Westfall EMA
Implementation Schedule	ASAP pending funding

Mitigation Action Form

Instructions: Complete an action form for each action.

Community:	***Action Title/Description:***
Milford Boro	Storm water management

Technique (Category)	
Hazard(s) Addressed	Replacement and up grading storm-water system catch basin and covert piping
Priority (High, Medium, Low)	
Estimated Cost	
Potential Funding Source(s)	
Lead Agency/Department	Boro Council
Implementation Schedule	

Mitigation Action Form

Instructions: Complete an action form for each action.

Community Name:	Action Title/Description:
MILFORD TOWNSHIP PIKE COUNTY, PA	Emergency Backup Generator

Technique (Category)	
Hazard(s) Addressed	Power Outage
Priority (High, Medium, Low)	HIGH
Estimated Cost	$5000 - $7000
Potential Funding Source(s)	PEMA, FEMA
Lead Agency/Department	BOARD OF SUPERVISORS
Implementation Schedule	2012

Mitigation Action Form

Instructions: Complete an action form for each action.

Community Name:	*Action Title/Description:*
PORTER TOWNSP.	ROAD REPAIR

Technique (Category)	
Hazard(s) Addressed	WHITTAKER ROAD: CULVERT PIPE REPLACEMENT
Priority (High, Medium, Low)	WHITTAKER ROAD: WASH OUTS
Estimated Cost	$ 10,000 00
Potential Funding Source(s)	TOWNSHIP FUNDS
Lead Agency/Department	ROAD DEPT.
Implementation Schedule	1 YEAR

Mitigation Action Form

Instructions: Complete an action form for each action.

Community Name: Westfall Township/ Mashipacong Island		***Action Title/Description: Clean and remove debris from previous high water deposits on island. See Matamoras priority #5.***
Technique (Category)		**Prevent jams and damming from deposited debris.**
Hazard(s) Addressed		**Flooding and ice jams.**
Priority (High, Medium, Low)		**High.**
Estimated Cost		**$12,000,000.00.**
Potential Funding Source(s)		**Grants/Government/DRBC/Army Corps of Engineers.**
Lead Agency/Department		**Matamoras/Westfall EMA.**
Implementation Schedule		**ASAP/Pending funding.**

Project	Jurisdiction	No Progress / Unknown	In Progress / Not Yet Complete	Continuous	Completed	Discontinued	Review Comments
TR342 - Tarkill Creek Box Culvert	Blooming Grove		X				
TR410 - Sring Road Shohola Creek/County Bridge Bank re-inforcement	Blooming Grove		X				
Stream Debris Clean-up - Blooming Grove Creek and Shohola Creek	Blooming Grove		X				
Park Road Engineering Study	Delaware						
Portable Generators	Delaware						
Emergency Access Roads Engineering Study	Delaware						
State-Owned Roadway improvements	Dingman						
Mountain View Road Flooding	Greene						
Sawmill Road French Mattress	Greene						
German Valley Road Sluice Pipe/French Mattress	Greene						
Repetitive Loss Structures (3)	Greene						
Old Greentown Road Roadway elevation/Sluice pipe enlargement	Greene						
Beaver Dam Road Sluice pipe enlargement	Greene						
Bartelson Road Sluice pipe enlargement	Greene						
Lackawaxen River Stream Guage installation	Lackawaxen / Pike County						
Installation of early warning sirens	Lackawaxen / Matamoras						
6' Dike and Bulkhead at Avenue R and 10th Street - Airport Park	Matamoras						
Raise the Delaware River Bank from Route 84 to the Mid Delaware Bridge, including Flood Gates	Matamoras						
Borough backup generator system	Matamoras						
Secure evacuation shelters	Matamoras						
Visual River Gauge/EMA access secondary gauge	Matamoras						
Local Radio Station Announcement system installation	Matamoras / Pike County						
Repetitive Loss Structures (12)	Milford Borough						

Project	Jurisdiction	No Progress / Unknown	In Progress / Not Yet Complete	Continuous	Completed	Discontinued	Review Comments
Wallenpaupack Creek Restoration and Railroad Bridge Replacement / Realignment	Palmyra / Pike County	✓		•			Continue into 2011 Plan
Whittaker Road Repetitive Loss Structures (2)	Porter						
State Owned Roadway improvements SR434 and SR1012	Shohola						
Twin Lakes Road Slide	Shohola						
Pond Eddy - Rosas Switch Road Slide	Shohola						
Allmuellier Bridge	Shohola						
Kokolias Lane Repetitive LossStructures (3)	Westfall						
MillRift River Road Repetitive Loss Structures (20)	Westfall						
Delaware Drive Structures (4)	Westfall						
Bell Manor/I84 Berm along River (see Matamoras Priority #2)	Westfall						

Vincent Accordino Councilman
Milford Boro

Project	Jurisdiction	No Progress / Unknown	In Progress / Not Yet Complete	Continuous	Completed	Discontinued	Review Comments
TR342 - Tarkill Creek Box Culvert	Blooming Grove						
TR410 - Sring Road Shohola Creek/County Bridge Bank re-inforcement	Blooming Grove						
Stream Debris Clean-up - Blooming Grove Creek and Shohola Creek	Blooming Grove						
Park Road Engineering Study	Delaware						
Portable Generators	Delaware						
Emergency Access Roads Engineering Study	Delaware						
State-Owned Roadway improvements	Dingman						
Mountain View Road Flooding	Greene						
Sawmill Road French Mattress	Greene						
German Valley Road Sluice Pipe/French Mattress	Greene						
Repetitive Loss Structures (3)	Greene						
Old Greentown Road Roadway elevation/Sluice pipe enlargement	Greene						
Beaver Dam Road Sluice pipe enlargement	Greene						
Bartelson Road Sluice pipe enlargement	Greene						
Lackawaxen River Stream Guage installation	Lackawaxen / Pike County						
Installation of early warning sirens	Lackawaxen / Matamoras						
6' Dike and Bulkhead at Avenue R and 10th Street - Airport Park	Matamoras						-
Raise the Delaware River Bank from Route 84 to the Mid Delaware Bridge, including Flood Gates	Matamoras						
Borough backup generator system	Matamoras						
Secure evacuation shelters	Matamoras						
Visual River Gauge/EMA access secondary gauge	Matamoras						
Local Radio Station Announcement system installation	Matamoras / Pike County						
Repetitive Loss Structures (12)	Milford Borough	(NONE) NO PROGRESS		✓			TO BE CONTINUED INTO 2011 PLAN

Project	Jurisdiction	No Progress / Unknown	In Progress / Not Yet Complete	Continuous	Completed	Discontinued	Review Comments
TR342 - Tarkill Creek Box Culvert	Blooming Grove						
TR410 - Sring Road Shohola Creek/County Bridge Bank re-inforcement	Blooming Grove						
Stream Debris Clean-up - Blooming Grove Creek and Shohola Creek	Blooming Grove						
Park Road Engineering Study	Delaware						
Portable Generators	Delaware						
Emergency Access Roads Engineering Study	Delaware						
State-Owned Roadway improvements	Dingman						
Mountain View Road Flooding	Greene						
Sawmill Road French Mattress	Greene						
German Valley Road Sluice Pipe/French Mattress	Greene						
Repetitive Loss Structures (3)	Greene						
Old Greentown Road Roadway elevation/Sluice pipe enlargement	Greene						
Beaver Dam Road Sluice pipe enlargement	Greene						
Bartelson Road Sluice pipe enlargement	Greene						
Lackawaxen River Stream Guage Installation	Lackawaxen / Pike County						
Installation of early warning sirens	Lackawaxen / Matamoras						
6' Dike and Bulkhead at Avenue R and 10th Street - Airport Park	Matamoras						
Raise the Delaware River Bank from Route 84 to the Mid Delaware Bridge, Including Flood Gates	Matamoras						
Borough backup generator system	Matamoras						
Secure evacuation shelters	Matamoras						
Visual River Gauge/EMA access secondary gauge	Matamoras						
Local Radio Station Announcement system installation	Matamoras / Pike County						
Repetitive Loss Structures (12)	Milford Borough						
Wallenpaupack Creek Restoration and Railroad Bridge Replacement / Realignment	Palmyra / Pike County						
Whittaker Road Repetitive Loss Structures (2)	Porter				X		
State Owned Roadway Improvements SR434 and SR1012	Shohola						
Twin Lakes Road Slide	Shohola						
Pond Eddy - Rosas Switch Road Slide	Shohola						
Allmueller Bridge	Shohola						
Kokolias Lane Repetitive LossStructures (3)	Westfall						
MillRift River Road Repetitive Loss Structures (20)	Westfall						
Delaware Drive Structures (4)	Westfall						
Bell Manor/I84 Berm along River (see Matamoras Priority #2)	Westfall						

Project	Jurisdiction	No Progress / Unknown	In Progress / Not Yet Complete	Continuous	Completed	Discontinued	Review Comments
TR342 - Tarkill Creek Box Culvert	Blooming Grove						
TR410 - Sring Road Shohola Creek/County Bridge Bank re-inforcement	Blooming Grove						
Stream Debris Clean-up - Blooming Grove Creek and Shohola Creek	Blooming Grove						
Park Road Engineering Study	Delaware						
Portable Generators	Delaware						
Emergency Access Roads Engineering Study	Delaware						
State-Owned Roadway improvements	Dingman						
Mountain View Road Flooding	Greene						
Sawmill Road French Mattress	Greene						
German Valley Road Sluice Pipe/French Mattress	Greene						
Repetitive Loss Structures (3)	Greene						
Old Greentown Road Roadway elevation/Sluice pipe enlargement	Greene						
Beaver Dam Road Sluice pipe enlargement	Greene						
Bartelson Road Sluice pipe enlargement	Greene						
Lackawaxen River Stream Guage installation	Lackawaxen / Pike County		X				
Installation of early warning sirens	Lackawaxen / Matamoras				X		
6' Dike and Bulkhead at Avenue R and 10th Street - Airport Park	Matamoras						
Raise the Delaware River Bank from Route 84 to the Mid Delaware Bridge, including Flood Gates	Matamoras						
Borough backup generator system	Matamoras						
Secure evacuation shelters	Matamoras						
Visual River Gauge/EMA access secondary gauge	Matamoras						
Local Radio Station Announcement system installation	Matamoras / Pike County						
Repetitive Loss Structures (12)	Milford Borough						

Project	Jurisdiction	No Progress / Unknown	In Progress / Not Yet Complete	Continuous	Completed	Discontinued	Review Comments
Wallenpaupack Creek Restoration and Railroad Bridge Replacement / Realignment	Palmyra / Pike County						
Whittaker Road Repetitive Loss Structures (2)	Porter				yes		
State Owned Roadway Improvements SR434 and SR1012	Shohola						
Twin Lakes Road Slide	Shohola						
Pond Eddy - Rosas Switch Road Slide	Shohola						
Allmueller Bridge	Shohola						
Kokolias Lane Repetitive LossStructures (3)	Westfall						
MillRift River Road Repetitive Loss Structures (20)	Westfall						
Delaware Drive Structures (4)	Westfall						
Bell Manor/I84 Berm along River (see Matamoras Priority #2)	Westfall						

Delaware Twp

Project	Jurisdiction	No Progress / Unknown	In Progress / Not Yet Complete	Continuous	Completed	Discontinued	Review Comments
TR342 - Tarkill Creek Box Culvert	Blooming Grove						
TR410 - Sring Road Shohola Creek/County Bridge Bank re-inforcement	Blooming Grove						
Stream Debris Clean-up - Blooming Grove Creek and Shohola Creek	Blooming Grove						
Park Road Engineering Study	Delaware	✓					No progress - No funding
Portable Generators	Delaware	✓					
Emergency Access Roads Engineering Study	Delaware	✓					Continuing to 2011
State-Owned Roadway Improvements	Dingman						Plan
Mountain View Road Flooding	Greene						
Sawmill Road French Mattress	Greene						
German Valley Road Sluice Pipe/French Mattress	Greene						
Repetitive Loss Structures (3)	Greene						
Old Greentown Road Roadway elevation/Sluice pipe enlargement	Greene						
Beaver Dam Road Sluice pipe enlargement	Greene						
Bartelson Road Sluice pipe enlargement	Greene						
Lackawaxen River Stream Guage installation	Lackawaxen / Pike County						
Installation of early warning sirens	Lackawaxen / Matamoras						
6' Dike and Bulkhead at Avenue R and 10th Street - Airport Park	Matamoras						
Raise the Delaware River Bank from Route 84 to the Mid Delaware Bridge, including Flood Gates	Matamoras						
Borough backup generator system	Matamoras						
Secure evacuation shelters	Matamoras						
Visual River Gauge/EMA access secondary gauge	Matamoras						
Local Radio Station Announcement system installation	Matamoras / Pike County						
Repetitive Loss Structures (12)	Milford Borough						
Wallenpaupack Creek Restoration and Railroad Bridge Replacement / Realignment	Palmyra / Pike County						
Whittaker Road Repetitive Loss Structures (2)	Porter						
State Owned Roadway Improvements SR434 and SR1012	Shohola						
Twin Lakes Road Slide	Shohola						
Pond Eddy - Rosas Switch Road Slide	Shohola						
Allmueller Bridge	Shohola						
Kokolias Lane Repetitive LossStructures (3)	Westfall						
MillRift River Road Repetitive Loss Structures (20)	Westfall						
Delaware Drive Structures (4)	Westfall						
Bell Manor/I84 Berm along River (see Matamoras Priority #2)	Westfall						

Project	Jurisdiction	No Progress / Unknown	In Progress / Not Yet Complete	Continuous	Completed	Discontinued	Review Comments
Wallenpaupack Creek Restoration and Railroad Bridge Replacement / Realignment	Palmyra / Pike County						
Whittaker Road Repetitive Loss Structures (2)	Porter						
State Owned Roadway Improvements SR434 and SR1012	Shohola				X		
Twin Lakes Road Slide	Shohola				X		
Pond Eddy - Rosas Switch Road Slide	Shohola				X		
Allmueller Bridge	Shohola	X					
Kokolias Lane Repetitive LossStructures (3)	Westfall						
MillRift River Road Repetitive Loss Structures (20)	Westfall						
Delaware Drive Structures (4)	Westfall						
Bell Manor/I84 Berm along River (see Matamoras Priority #2)	Westfall						

Project	Jurisdiction	No Progress / Unknown	In Progress / Not Yet Complete	Continuous	Completed	Discontinued	Review Comments
TR342 - Tarkill Creek Box Culvert	Blooming Grove						
TR410 - Sring Road Shohola Creek/County Bridge Bank re-inforcement	Blooming Grove						
Stream Debris Clean-up - Blooming Grove Creek and Shohola Creek	Blooming Grove						
Park Road Engineering Study	Delaware						
Portable Generators	Delaware						
Emergency Access Roads Engineering Study	Delaware						
State-Owned Roadway improvements	Dingman						
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Beaver Dam Road Sluice pipe enlargement	Greene						
Bartelson Road Sluice pipe enlargement	Greene						
Lackawaxen River Stream Guage installation	Lackawaxen / Pike County						
Installation of early warning sirens	Lackawaxen / Matamoras				completed		
6' Dike and Bulkhead at Avenue R and 10th Street - Airport Park	Matamoras	on hold					
Raise the Delaware River Bank from Route 84 to the Mid Delaware Bridge, including Flood Gates	Matamoras	on hold					
Borough backup generator system - Fire house rebuilt	Matamoras		[redacted]		completed		
Secure evacuation shelters	Matamoras		working on				
Visual River Gauge/EMA access secondary gauge	Matamoras		working on				
Local Radio Station Announcement system installation	Matamoras / Pike County				completed		

Repetitive Loss Structures (12)	Milford Borough						
Wallenpaupack Creek Restoration and Railroad Bridge Replacement / Realignment	Palmyra / Pike County						
Whittaker Road Repetitive Loss Structures (2)	Porter						
State Owned Roadway Improvements SR434 and SR1012	Shohola						
Twin Lakes Road Slide	Shohola						
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Kokolias Lane Repetitive LossStructures (3)	Westfall						
MillRift River Road Repetitive Loss Structures (20)	Westfall						
Delaware Drive Structures (4)	Westfall						
Bell Manor/I84 Berm along River (see Matamoras Priority #2)	Westfall						

MATAMORAS
New:

1. Clean up Islands of debry from all the high water's and flooding. To prevent blockages in future high waters or Ice jams. Island by Beary Kill and Islands South of the 84 Bridge.

2. Camera system to monitor River at different locations.

Project	Jurisdiction	No Progress / Unknown	In Progress / Not Yet Complete	Continuous	Completed	Discontinued	Review Comments
TR342 - Tarkill Creek Box Culvert	Blooming Grove						
TR410 - Sring Road Shohola Creek/County Bridge Bank re-inforcement	Blooming Grove						
Stream Debris Clean-up - Blooming Grove Creek and Shohola Creek	Blooming Grove						
Park Road Engineering Study	Delaware						
Portable Generators	Delaware						
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Project	Jurisdiction	No Progress / Unknown	In Progress / Not Yet Complete	Continuous	Completed	Discontinued	Review Comments
Wallenpaupack Creek Restoration and Railroad Bridge Replacement / Realignment	Palmyra / Pike County						
Whittaker Road Repetitive Loss Structures (2)	Porter						
State Owned Roadway Improvements SR434 and SR1012	Shohola						
Twin Lakes Road Slide	Shohola						
Pond Eddy - Rosas Switch Road Slide	Shohola						
Allmueller Bridge	Shohola						
Kokolias Lane Repetitive LossStructures (3)	Westfall	On Hold					
MillRift River Road Repetitive Loss Structures (20)	Westfall	On Hold					
Delaware Drive Structures (4)	Westfall	On Hold					
Bell Manor/I84 Berm along River (see Matamoras Priority #2)	Westfall	On Hold					
Mashipacong Island Clean and remove debris from previous	Westfall/Matamoras	On Hold					
high water deposits on island. See Matamoras prioity #5							

RECEIVED PUBLIC COMMENTS

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Melusky, Alexis A

From: Mike Mrozinski [mmrozinski@pikepa.org]
Sent: Monday, June 27, 2011 1:44 PM
To: Mike Mrozinski; 'Dingman Township'; 'Greene Township (secretary@greenetownship.org)'; 'IleanaH@delawaretownshippa.gov'; 'joanna.donahue@bloominggrovetownship.com'; 'lehmanpk@ptd.net'; 'mataboro@optonline.net'; 'milfrdtp@ptd.net'; 'Porter Twp (sec@portertownship.net)'; 'shohtwp@ptd.net'; 'town@ptd.net'; 'westfallsec@optonline.net'; Gary Orben; Karl Wagner; Kathy Hummel; Rich Caridi; 'Bob Ewbank - Wfall'; 'Doug Carrick - Palm'; 'Gary Babb - MatB'; 'Jim Ellison - Wfall'; 'Kyle Wright - Del'; 'Mary Ann Hubbard - Gre'; 'Rob Hellyer - Port'; 'Robert Myers - Shoh'; 'Stanley Whittaker - Leh'; 'Steve Mullin - BlGr'; 'Thomas Olver - MatB'; 'Tony Mann - Milf'; 'Vincent Albanese - Lack'; 'William Mikulak - Ding'; 'carolosterberg@yahoo.com'; 'reynoldsg@oru.com'; 'lwwmd@verizon.net'; 'dgreene@co.orange.ny.us'; 'shirleym@ptd.net'; 'Denise_cooke-bauer@nps.gov'; 'patrick_lynch@nps.gov'; Susan Beecher; 'ddemara@state.pa.us'; 'rpitcavage@state.pa.us'; 'tconway@state.pa.us'; 'silsbymi@wallenpaupack.org'; 'cfinan@dvsd.org'; 'sharon-laverdure@esasd.net'; 'neg2@psu.edu'; 'pjcanevari@pplweb.com'; 'brizzolarat@oru.com'; 'kolvenbacha@oru.com'; 'rcollins@state.pa.us'; 'tbalch@state.pa.us'; 'kwright@pikeals.org'; 'billmik@ptd.net'; Gary Orben; Karl Wagner; Kathy Hummel; Rich Caridi
Cc: Sally Corrigan; Roger Maltby; Melusky, Alexis A
Subject: Pike County 2011 Hazard Mitigation Plan

Importance: High

Dear Municipal Representative,

In February of 2011, the Pike County Board of Commissioners, in cooperation with the Pike County Office of Community Planning and the Pike County Emergency Management Agency, began an update of Pike County's Hazard Mitigation Plan. The original plan was approved in 2006 and adopted by Pike's municipalities in 2007. The updated plan will serve as a blueprint for reducing property damage and saving lives from the effects of future natural and human-made disasters in Pike County and our communites. The Plan is also required in order for Pike County and your municipality to be eligible to receive certain types of state and federal disaster relief funds after a disaster occurs.

Over the last several months, representatives from all thirteen municipalities participated in the planning process by attending meetings and providing input into creation of the plan. **We are pleased to notify you that a draft of the Pike County Hazard Mitigation Plan Update has been completed and is available on the website www.PikeHMP.com.** The draft plan will be available for review on the website until July 17 and we ask that if you have any comments to please submit them in writing to our planning consultant Alexis Melusky at 1818 Market Street, Suite 3110, Philadelphia, Pennsylvania 19103 or via email to amelusky@mbakercorp.com.

Once we have incorporated all stakeholder comments into the plan, we will submit it to the Federal Emergency Management Agency (FEMA) in late July for their review. Once we receive plan approval this fall, we will notify you about municipal adoption of the plan.

If you have any questions about the draft plan or the planning process, please do not hesitate to contact me at 570-296-3500 or mmrozinski@pikepa.org.

Sincerely,

Michael Mrozinski
Pike County Community Planning
837 Route 6, Unit 4
Shohola, PA 18458
T: 570.296.3500 **F:** 570.296.3501
mmrozinski@pikepa.org
www.pikepa.org

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Name W. Mikula K. Jurisdiction/Organization Dingman

Pike County All-Hazard Mitigation Plan Update
Comment Form

Please use this form to provide comments on the topics below.

Hazard Identification and Risk Assessment

IS A Mfg home Considered a trailer -

Dingman township HAS Trailer Park. without manufactured homes.

Mitigation Strategy (Goals, Objectives, Actions)

Other Topics

For questions or comments about today's meeting please contact:

Alexis Melusky, 215-430-5512, amelusky@mbakercorp.com

To review the entire Draft Pike County 2011 All-Hazard Mitigation Plan and provide additional comments please visit the Pike County Hazard Mitigation Plan Update site starting June 17, 2011:

www.PikeHMP.com

Baker

Name M Mrozinski Jurisdiction/Organization Pike Co

Pike County All-Hazard Mitigation Plan Update
Comment Form

Please use this form to provide comments on the topics below.

Hazard Identification and Risk Assessment

Mitigation Strategy (Goals, Objectives, Actions)

Other Topics

Check Matamoras # Homes in Floodzone
.2% ? 500 year ?

For questions or comments about today's meeting please contact:

Alexis Melusky, 215-430-5512, amelusky@mbakercorp.com

To review the entire Draft Pike County 2011 All-Hazard Mitigation Plan and provide additional comments please visit the Pike County Hazard Mitigation Plan Update site starting June 17, 2011:

www.PikeHMP.com

Baker

Name Gary L. Babb Jurisdiction/Organization MATAMORAS / EMA

Pike County All-Hazard Mitigation Plan Update
Comment Form

Please use this form to provide comments on the topics below.

Hazard Identification and Risk Assessment

Homes in the Flood Plain should be more Then 7

Mitigation Strategy (Goals, Objectives, Actions)

Other Topics

For questions or comments about today's meeting please contact:

Alexis Melusky, 215-430-5512, amelusky@mbakercorp.com

To review the entire Draft Pike County 2011 All-Hazard Mitigation Plan and provide additional comments please visit the Pike County Hazard Mitigation Plan Update site starting June 17, 2011:

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Baker