



9.11 Township of Harmony

This section presents the jurisdictional annex for the Township of Harmony.

9.11.1 Hazard Mitigation Plan Point of Contact

The following individuals have been identified as the hazard mitigation plan’s primary and alternate points of contact.

Primary Point of Contact	Alternate Point of Contact
Kelley Smith, Municipal Clerk 3003 Belvidere Road, Phillipsburg, NJ 08865 (908) 213-1600 ext. 10 harmonyclerk@ptd.net	Gene Weber, Municipal Engineer Finelli Consulting Engineers (908) 835-9500 genew@finellicon.com

9.11.2 Municipal Profile

Harmony Township is located in southwestern Warren County and is bordered to the north by White Township, to the south by Lopatcong Township, to the east by Franklin Township and to the west by Pennsylvania. The Township has a total land area of 24.1 square miles. Harmony Township is located in the New Jersey Highlands Region. As of the 2010 U.S. Census, the Township's population was 2,667. Brainards, Harmony, and Hutchinson are unincorporated communities located within the Township.

Growth/Development Trends

Township of Harmony did not note any recent residential/commercial development since 2010 or any major residential or commercial development, or major infrastructure development planned for the next five years in the municipality.

9.11.3 Natural Hazard Event History Specific to the Municipality

Warren County has a history of natural and non-natural hazard events as detailed in Volume I, Section 5.0 of this plan. A summary of historical events is provided in each of the hazard profiles and includes a chronology of events that have affected the County and its municipalities. For the purpose of this plan update, events that have occurred in the County from 2008 to present were summarized to indicate the range and impact of hazard events in the community. Information regarding specific damages is included, if available, based on reference material or local sources. This information is presented in the table below. For details of these and additional events, refer to Volume I, Section 5.0 of this plan.

Table 9.11-1. Hazard Event History

Date(s) of Event	Event Type	FEMA Declaration # (If Applicable)	County Designated?	Summary of Damages/Losses
August 26 – September 5, 2011	Hurricane Irene	DR-4021	Yes	Minor flooding along Delaware River/ Damage to drainage channels. Rebuild Roxburg Hill Road with new drainage. Hutchinson River Road was closed due to flooding. A shelter was opened to residents.
October 26 – November 8, 2012	Hurricane Sandy	DR-4086	Yes	Roof Damage to Municipal Building, Public Works Building and Historical Farmstead Barn. The Township was without power for up to 10 days. A shelter was open to residents. There was widespread damage to private homes and businesses.



9.11.4 Hazard Vulnerabilities and Ranking

The hazard profiles in Section 5.0 of this plan have detailed information regarding each plan participant’s vulnerability to the identified hazards. The risk ranking methodology is presented in Section 5.3. However, each municipality had the opportunity to adjust the final ranking based on municipal feedback. The following summarizes the hazard vulnerabilities and their ranking in the Township of Harmony. For additional vulnerability information relevant to this jurisdiction, refer to Section 5.0.

Hazard Risk/Vulnerability Risk Ranking

The table below summarizes the hazard risk/vulnerability rankings of potential hazards for the Township of Harmony.

Table 9.11-2. Hazard Risk/Vulnerability Risk Ranking

Hazard type	Estimate of Potential Dollar Losses to Structures Vulnerable to the Hazard ^{a, c}	Probability of Occurrence	Risk Ranking Score (Probability x Impact)	Hazard Ranking ^b
Dam Failure	Damage estimate not available	Occasional	24	Medium
Drought	Damage estimate not available	Frequent	30	Medium
Earthquake	100-Year GBS: \$0 500-Year GBS: \$280,578 2,500-Year GBS: \$4,638,280	Occasional	28	Medium
Flood	1% Annual Chance: \$48,840,550	Frequent	18	High
Geologic	RCV Exposed to Carbonate Rock Areas: \$166,724,950	Occasional	36	High
Hurricane	100-year MRP: \$119,128.00 500-year MRP: 889689 Annualized: \$11,407.00	Frequent	48	High
Nor'Easter	Damage estimate not available	Frequent	48	High
Severe Storm	100-Year MRP: \$119,128 500-year MRP: \$889,689 Annualized: \$11,407	Frequent	48	High
Severe Winter Storm	1% GBS: \$3,704,057 5% GBS: \$18,520,286	Frequent	51	High
Wildfire	Estimated Value in the Extreme, Very High, and High Hazard Areas: \$5,474,800	Occasional	16	Medium
Hazardous Materials	Damage estimate not available	Frequent	36	High

Notes:

GBS = General building stock; MRP = Mean return period.

- a. The general building stock valuation is based on the custom inventory generated for the municipality and based on improved value.
- b. High = Total hazard priority risk ranking score of 31 and above
Medium = Total hazard priority risk ranking of 20-30+
Low = Total hazard risk ranking below 20
- c. Loss estimates for the severe storm and severe winter storm hazards are structural values only and do not include the estimated value of contents. Loss estimates for the flood and earthquake hazards represent both structure and contents. Potential flood loss estimates were generated using Hazus-MH 2.2 and the 2011 FEMA DFIRM for the 1-percent annual chance event. For the geologic and wildfire hazards, the improved value and estimated contents of buildings located within the identified hazard zones is provided.





National Flood Insurance Program (NFIP) Summary

The following table summarizes the NFIP statistics for the Township of Harmony.

Table 9.11-3. NFIP Summary

Municipality	# Policies (1)	# Claims (Losses) (1)	Total Loss Payments (2)	# Rep. Loss Prop. (1)	# Severe Rep. Loss Prop. (1)	# Policies in 1% Flood Boundary (3)
Harmony, Township of	76	364	\$14,054,540	27	12 (+1 from Phillipsburg)	68

Source: FEMA, 2014

Note (1) Policies, claims, repetitive loss and severe repetitive loss statistics provided by FEMA and are current as of December 31, 2014 and are summarized by Community Name. Please note the total number of repetitive loss properties excludes the severe repetitive loss properties. Number of claims includes open and closed claims. The number of claims represents claims closed by 12/31/2014.

Note (2) Total building and content losses from the claims file provided by FEMA Region 2.

Note (3) The policies inside and outside of the flood zones is based on the latitude and longitude provided by FEMA Region 2 in the policy file.

Note (4) FEMA noted that where there is more than one entry for a property, there may be more than one policy in force or more than one GIS possibility.

Note (5) A zero percentage denotes less than 1/100th percentage and not zero damages or vulnerability as may be the case.

Critical Facilities

There are no critical facilities located in the FEMA 1% or 0.2% annual chance boundary.

Other Vulnerabilities Identified by Municipality

The hazard profiles in Section 5.0 of this plan have detailed information regarding each plan participant's vulnerability to the identified hazards. Further, mitigation projects have been identified that may more specifically detail vulnerabilities in the community. There are no additional vulnerabilities identified at this time.



9.11.5 Capability Assessment

This section identifies the following capabilities of the local jurisdiction:

- Planning and regulatory capability
- Administrative and technical capability
- Fiscal capability
- Education/Outreach and Community classification
- Self-Assessment of Capability
- National Flood Insurance Program
- Integration of Mitigation Planning into Existing and Future Planning Mechanisms

Planning and Regulatory Capability

The table below summarizes the regulatory tools that are available to the Township of Harmony.

Table 9.11-4. Planning and Regulatory Tools

Tool / Program (code, ordinance, plan)	Do you have this? (Yes/No) If Yes, date of adoption or update	Authority (local, county, state, federal)	Dept. /Agency Responsible	Code Citation and Comments (Code Chapter, name of plan, explanation of authority, etc.)
Planning Capability				
Master Plan	Yes	Local	Township	Master Plan
Capital Improvements Plan	No			
Floodplain Management / Basin Plan	Yes	Local	Township	Floodplain Management Plan
Stormwater Management Plan	Yes	Local	Township	Stormwater Management Plan
Open Space Plan	Yes	Local	Township	Open Space Plan
Stream Corridor Management Plan	No			
Watershed Management or Protection Plan	No			
Economic Development Plan	No			
Comprehensive Emergency Management Plan	Yes	Local	OEM	Emergency Management Plan
Emergency Response Plan	Yes	Local	OEM	Emergency Management Plan
Post-Disaster Recovery Plan	No			
Transportation Plan	Yes	Local		Master Plan
Strategic Recovery Planning Report	No			
Other Plans:	N/A			
Regulatory Capability				
Building Code	Yes	State & Local		State Uniform Construction Code Act (N.J.S. 52:27D-119 et seq.)
Zoning Ordinance	Yes	Local	Township	Chapter 165 of the Township Code
Subdivision Ordinance	Yes	Local	Township	Chapter 148 of the Township Code
NFIP Flood Damage Prevention Ordinance	Yes	Federal, State, Local	Township	Chapter 94 of the Township Code



Table 9.11-4. Planning and Regulatory Tools

Tool / Program (code, ordinance, plan)	Do you have this? (Yes/No) If Yes, date of adoption or update	Authority (local, county, state, federal)	Dept. /Agency Responsible	Code Citation and Comments (Code Chapter, name of plan, explanation of authority, etc.)
NFIP: Cumulative Substantial Damages	CHECK			
NFIP: Freeboard	Yes	State, Local	Township	
Growth Management Ordinances	No			
Site Plan Review Requirements	Yes	Local	Township	Chapter 137 of the Township Code
Stormwater Management Ordinance	Yes	Local	Township	Chapter 142 of the Township Code
Municipal Separate Storm Sewer System (MS4)	Yes	State	NJ DEP	
Natural Hazard Ordinance	No			
Post-Disaster Recovery Ordinance	No			
Real Estate Disclosure Requirement	Yes	State		
Other [Special Purpose Ordinances (i.e., sensitive areas, steep slope)]	Yes	Local	Township	Steep Slope Ordinance

Administrative and Technical Capability

The table below summarizes potential staff and personnel resources available to the Township of Harmony.

Table 9.11-5. Administrative and Technical Capabilities

Resources	Is this in place? (Yes or No)	Department/ Agency/Position
Administrative Capability		
Planning Board	Yes	Land Use Board
Mitigation Planning Committee	No	
Environmental Board/Commission	Yes	Environmental Commission
Open Space Board/Committee	Yes	Open Space Committee
Economic Development Commission/Committee	No	
Maintenance Programs to Reduce Risk	No	
Mutual Aid Agreements	Yes	
Technical/Staffing Capability		
Planner(s) or Engineer(s) with knowledge of land development and land management practices	Yes	Township Engineer
Engineer(s) or Professional(s) trained in construction practices related to buildings and/or infrastructure	Yes	Township Engineer
Planners or engineers with an understanding of natural hazards	Yes	Township Engineer
NFIP Floodplain Administrator	Yes	Eugene Weber, P.E.





Table 9.11-5. Administrative and Technical Capabilities

Resources	Is this in place? (Yes or No)	Department/ Agency/Position
Surveyor(s)	Yes	Township Engineer
Personnel skilled or trained in GIS and/or Hazus-MH applications	Yes	Township Engineer
Scientist familiar with natural hazards	No	
Emergency Manager	Yes	Emergency Management / 911 Coordinator
Grant Writer(s)	Yes	Township Engineer
Staff with expertise or training in benefit/cost analysis	No	
Professionals trained in conducting damage assessments	No	

Fiscal Capability

The table below summarizes financial resources available to the Township of Harmony.

Table 9.11-6. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use (Yes/No/Don't Know)
Community development Block Grants (CDBG, CDBG-DR)	No
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for specific purposes	Yes
User fees for water, sewer, gas or electric service	No
Impact Fees for homebuyers or developers of new development/ homes	Yes
Stormwater Utility Fee	No
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	No
Incur debt through private activity bonds	No
Withhold public expenditures in hazard-prone areas	No
Other Federal or State Funding Programs	Yes
Open Space Acquisition Funding Programs	Yes
Other	

Education/Outreach and Community Classifications

The table below summarizes education/outreach programs the community participates in and the classifications for community program available to the Township of Harmony.

Table 9.11-7. Education/Outreach and Community Classifications

Program	Do you have/participate in this? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	No	NP	N/A
Building Code Effectiveness Grading Schedule (BCEGS)			
Public Protection (ISO Fire Protection Classes 1 to 10)			





Table 9.11-7. Education/Outreach and Community Classifications

Program	Do you have/participate in this? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Storm Ready	No	NP	N/A
Firewise	Yes		
Disaster/Safety Programs in/for Schools	Yes		
Organizations with Mitigation Focus (advocacy group, non-government)	No		
Public Education Program/Outreach (through website, social media)	No		
Public-Private Partnerships	No		

N/A = Not applicable; NP = Not participating

The classifications listed above relate to the community’s ability to provide effective services to lessen its vulnerability to the hazards identified. These classifications can be viewed as a gauge of the community’s capabilities in all phases of emergency management (preparedness, response, recovery and mitigation) and are used as an underwriting parameter for determining the costs of various forms of insurance. The CRS class applies to flood insurance while the BCEGS and Public Protection classifications apply to standard property insurance. CRS classifications range on a scale of 1 to 10 with class 1 being the best possible classification, and class 10 representing no classification benefit. Firewise classifications include a higher classification when the subject property is located beyond 1000 feet of a creditable fire hydrant and is within 5 road miles of a recognized Fire Station.

Criteria for classification credits are outlined in the following documents:

- The Community Rating System Coordinators Manual
- The Building Code Effectiveness Grading Schedule
- The ISO Mitigation online ISO’s Public Protection website at <http://www.isomitigation.com/ppc/0000/ppc0001.html>
- The National Weather Service Storm Ready website at <http://www.weather.gov/stormready/howto.htm>
- The National Firewise Communities website at <http://firewise.org/>

Self-Assessment of Capability

The table below provides an approximate measure of the Township of Harmony’s capability to work in a hazard-mitigation capacity and/or effectively implement hazard mitigation strategies to reduce hazard vulnerabilities.

Table 9.11-8. Self-Assessment of Capability

Area	Degree of Hazard Mitigation Capability		
	Limited (If limited, what are your obstacles?)	Moderate	High
Planning and Regulatory Capability		X	
Administrative and Technical Capability	X		
Fiscal Capability	X		





Table 9.11-8. Self-Assessment of Capability

Area	Degree of Hazard Mitigation Capability		
	Limited (If limited, what are your obstacles?)	Moderate	High
Community Political Capability	X		
Community Resiliency Capability	X		
Capability to Integrate Mitigation into Municipal Processes and Activities.	X		

National Flood Insurance Program

NFIP Floodplain Administrator (FPA)

Eugene Weber, P.E. is the NFIP FPA for Harmony Township

Flood Vulnerability Summary

The Township of Harmony maintains lists/inventories of properties that have been damaged by floods. The inventory identifies property owners who are interested in mitigation. During Hurricane Sandy, there was only minor damages to structures in the Township (shingles, downed trees and downed utilities). The FPA did not make Substantial Damage estimates after Hurricane Sandy since this is the responsibility of the insurance companies to make these estimates. Currently, there is only a small interest in acquisition, with up to six residences showing an interest in mitigation. Funding sources for those interested in mitigation would include FEMA, property owners, flood insurance/ICC, and NJDEP.

Resources

The FPA is not the sole person assuming the responsibilities of floodplain administration; there is a balance of technical staff in the office as needed. NFIP administration services provided by the FPA and staff include permit review, inspections, damage assessments, record-keeping, and GIS. The Township does not provide any education or outreach to the community regarding flood hazards/risk or flood risk reduction. The FPA indicated that there are barriers to running an effective floodplain management program due to limited staff and limited funding. The FPA feels adequately supported and trained to fulfill their responsibilities as the municipal FPA and has knowledgeable staff to assist with FPA duties and responsibilities. The FPA would consider attending continuing education and/or certification training on floodplain management if it was offered.

Compliance History

The Township of Harmony is currently in good standing with the NFIP and the most recent compliance audit was conducted in spring 2014.

Regulatory

The Township's floodplain management regulations/ordinance meet the expectations of the FEMA and state minimum requirements. The Township has local ordinances, plans and programs that support floodplain management and meet NFIP requirements. The Township currently does not participate in the CRS program; however, the Township has considered joining the program and would attend a CRS seminar if offered locally.





Community Rating System

The Township of Harmony does not participate in the Community Rating System (CRS) program.

Integration of Hazard Mitigation into Existing and Future Planning Mechanisms

For a community to succeed in reducing long-term risk, hazard mitigation must be integrated into the day-to-day local government operations. As part of this planning effort, each community was surveyed to obtain a better understanding of their community's progress in plan integration. A summary is provided below. In addition, the community identified specific integration activities that will be incorporated into municipal procedures.

Planning

The Township is located in both the Highlands Planning and Preservation Area. The 2012 Highlands Preservation Area Master Plan Element aims to protect and preserve the environmentally sensitive areas and natural resources of the Township. Limiting forest development and prohibiting clear-cutting will help to protect and maintain contiguous forests, while limiting the disturbance of natural vegetation and increases in impervious areas adjacent to Highlands Open Waters and Riparian Areas will help to protect water quality and stormwater runoff. The Plan proposes to update maps and delineations of environmental features, such as steep slopes and carbonate rock.

Natural hazard risk/mitigation is incorporated into the Township's master plan and will also be incorporated into any updates to the master plan. Additionally, the Township has safe growth practices.

Harmony Township does have a stormwater management plan and a stormwater management ordinance.

The Township's transportation plan does not limit access to hazard areas.

The Township does not have a fire plan.

The Township does not have a Continuity of Operations (COOP) Plan; however, it will be pursued within the next five years.

Regulatory and Enforcement (Ordinances)

The Township has multiple ordinances pertaining to the mitigation of hazards. These ordinances include the NFIP Flood Damage Prevention Ordinance, a stormwater management ordinance, and a land disturbance ordinance. When updating municipal ordinances, hazard mitigation is currently not a priority; however, it will be pursued in the next five years. Refer to Table 9.11-10 for the mitigation action related to this item.

The Township has plans/practices in place to protect natural resources within the Township.

Operational and Administration

The Township has established a Land Use Board and Environmental Commission that aid in planning decisions to support the conservation and preservation of the Township's critical environmental features.

The Township has employee job descriptions that include hazard mitigation. Additionally, the Township's hazard mitigation actions are incorporated into daily operations and all projects are a goal of the municipality. However, the Township does not have a community resilience committee or advisor.

The Township has practices in place to protect infrastructure.



The current Warren County HMP is reviewed prior to land use, zoning changes or development permitting in the Township. The Township encourages consideration of low occupancy, low-density zoning in hazard areas when practical. Additionally, the Township limits development in high hazard areas. The permit review process in the Township includes addressing hazards that may impact the Township. Hazard resistant construction standards are incorporated into the design and location of projects. Rezoning procedures in Harmony Township recognizes hazard areas as limits on zoning changes.

Funding

The Township's municipal/operating budget does not have a line item for mitigation project funding and this will not be incorporated in the next five years. The Township's mitigation actions will not be looked at when allocating funding in the future due to a limited budget.

The Capital Improvement Budget does not have a line item for mitigation project funding. However, funding has been provided for mitigation projects identified in the County HMP. The Township has not provided protection to buildings/infrastructure in high hazard areas.

Education and Outreach

The Township has a link to the JCP&L website, where residents can find information regarding power outages in their areas.

The Township currently does not reach out to colleges and universities for technical assistance with natural hazard mitigation activities and does not plan to within the next five years. Currently, the Township does not have a public outreach program to inform citizen on hazards but plans to pursue in the next five years. Refer to Table 9.11-10 for the mitigation action related to this item.

The Township works closely with the local school district and assists with community service projects for the service organization.

Currently, the Township does not offer training on best practices for hazard mitigation, grant application, or hazard identification; however, if funding is available it will be pursued in the next five years. The Township does not conduct outreach on hazards or other training related to hazard mitigation. If funding is available, this will be pursued in the next five years.



9.11.6 Mitigation Strategy and Prioritization

This section discusses past mitigations actions and status, describes proposed hazard mitigation initiatives, and prioritization.

Past Mitigation Initiative Status

The following table indicates progress on the community's mitigation strategy identified in the 2011 Plan. Actions that are carried forward as part of this plan update are included in the following subsection in its own table with prioritization. Previous actions that are now on-going programs and capabilities are indicated as such in the following table and may also be found under 'Capability Assessment' presented previously in this annex.

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Table 9.11-9. Past Mitigation Initiative Status

2011 Mitigation Action	Responsible Party	Status (In progress, No progress, Complete)	<u>Describe Status</u> 1. Please describe what was accomplished and indicate % complete. 2. If there was no progress, indicate what obstacles/delays encountered? 3. If there was progress, how is/was the action being funded (e.g., FEMA HMGP grant, local budget)?	<u>Next Step</u> (Include in 2016 HMP? or Discontinue)	<u>Describe Next Step</u> 1. If including action in the 2016 HMP, revise/reword to be more specific (as appropriate). 2. If discontinue, explain why
Harmony 1: Acquisition/Elevation of six Severe Repetitive Loss (SRL) properties on Harmony Station Road.	OEM Coordinator	Complete	All eligible homes have been demolished HMGP Grant	Discontinue	This project has been completed and will not be included in the 2016 HMP.
Harmony 2: Acquisition/Elevation of four SRL properties on Hutchinson River Road.	OEM Coordinator	Complete	All eligible homes demolished or elevated in accordance with flood plain regulations HMGP Grant	Discontinue	This project has been completed and will not be included in the 2016 HMP.
Harmony 3: Acquisition/Elevation of two SRL properties on Harmony Terrace.	OEM Coordinator	Complete	All eligible homes demolished HMGP Grant	Discontinue	This project has been completed and will not be included in the 2016 HMP.
Harmony 4: Acquisition/Elevation of two SRL properties on Lenape Lane.	OEM Coordinator	Complete	All eligible homes demolished HMGP Grant	Discontinue	This project has been completed and will not be included in the 2016 HMP.
Harmony 5: Acquisition/Elevation of two SRL properties on South River Terrace.	OEM Coordinator	Complete	All eligible homes demolished HMGP Grant	Discontinue	This project has been completed and will not be included in the 2016 HMP.
Harmony 6: Acquisition/Elevation of one SRL property on Goat Farm Road.	OEM Coordinator	Complete	All eligible homes demolished HMGP Grant	Discontinue	This project has been completed and will not be included in the 2016 HMP.
Harmony 7: Acquisition/Elevation of one Repetitive Loss (RL) property on Harmony Station Road.	OEM Coordinator	Complete	All eligible homes demolished and/or elevated HMP Grant	Discontinue	This project has been completed and will not be included in the 2016 HMP.
Harmony 8: Acquisition/Elevation of one RL property on River Edge Lane.	OEM Coordinator	Complete	All eligible homes demolished HMGP Grant	Discontinue	This project has been completed and will not be included in the 2016 HMP.



2011 Mitigation Action	Responsible Party	Status (In progress, No progress, Complete)	Describe Status 1. Please describe what was accomplished and indicate % complete. 2. If there was no progress, indicate what obstacles/delays encountered? 3. If there was progress, how is/was the action being funded (e.g., FEMA HMGP grant, local budget)?	Next Step (Include in 2016 HMP? or Discontinue)	Describe Next Step 1. If including action in the 2016 HMP, revise/reword to be more specific (as appropriate). 2. If discontinue, explain why
Harmony 9: Acquisition/Elevation of one RL property on South River Terrace.	OEM Coordinator	Complete	All eligible homes demolished HMGP Grant	Discontinue	This project has been completed and will not be included in the 2016 HMP.
Harmony 10: Retro impact resistant windows and shutters on Radiant Star Nursing Home located on Reeder Road.	Nursing Home Administrator	No Progress	0% complete	Discontinue	Nursing home is privately owned and not under Township jurisdiction. This action will not be included in the 2016 HMP.
Harmony 11: Retrofit the roof to meet current snow load standards on Harmony Township Municipal Building located on Belvidere Road.	Twp Administrator	No progress	0% complete	Discontinue	The roof meets current standards; therefore, this action will not be included in the 2016 HMP.
Harmony 12: Retrofit roof to meet current snow load standards on Harmony Township Fire Department building located on Brainards Road.	Station Commander	No progress	0% complete	Discontinue	The roof meets current standards; therefore, this action will not be included in the 2016 HMP.
Harmony 13: Upgrade and improvement of culverts passing under Harmony Station Road located near Brainards Road.	Department of Public Works Supervisor	No progress	1.0% complete 2. Jurisdiction unknown ; funding	Include in 2016 HMP	This project will be included in the 2016 HMP.
Harmony 14: Review applicable building code requirements to ensure that structures are designed for appropriate wind loads.	Twp Construction Official	No progress	1.0% complete 2. Railroad Property	Include in 2016 HMP	New mitigation - this project will be included in the 2016 HMP.
Harmony 15: Conduct all hazards public education and outreach program for hazard mitigation and preparedness.	WCOEM, twp OEM	No progress	1.0% complete 2. Railroad Property	Include in 2016 HMP	New mitigation - this project will be included in the 2016 HMP.





Completed Mitigation Initiatives not Identified in the Previous Mitigation Strategy

There are no additional mitigation projects/activities identified that have also been completed but were not identified in the previous mitigation strategy in the 2011 Plan.

Proposed Hazard Mitigation Initiatives for the Plan Update

The County hosted a mitigation action workshop in March 2015 and was provided the following FEMA publications to use as a resource as part of their comprehensive review of all possible activities and mitigation measures to address their hazards: FEMA 551 'Selecting Appropriate Mitigation Measures for Floodprone Structures' (March 2007) and FEMA 'Mitigation Ideas – A Resource for Reducing Risk to Natural Hazards' (January 2013). In May 2015, a second workshop led by FEMA Region 2 and NJOEM and was provided the results to the risk assessment to further assist with the identification of mitigation actions.

Table 9.11-11 summarizes the comprehensive-range of specific mitigation initiatives the Borough would like to pursue in the future to reduce the effects of hazards. Some of these initiatives may be previous actions carried forward for this plan update. These initiatives are dependent upon available funding (grants and local match availability) and may be modified or omitted at any time based on the occurrence of new hazard events and changes in municipal priorities. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table below to further demonstrate the wide-range of activities and mitigation measures selected.

As discussed in Section 6, 14 evaluation/prioritization criteria are used to complete the prioritization of mitigation initiatives. For each new mitigation action, a numeric rank is assigned (-1, 0, or 1) for each of the 14 evaluation criteria to assist with prioritizing your actions as 'High', 'Medium', or 'Low.' The table below summarizes the evaluation of each mitigation initiative, listed by Action Number.

Table 9.11-12 provides a summary of the prioritization of all proposed mitigation initiatives for the Plan update.



Table 9.11-10. Proposed Hazard Mitigation Initiatives

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
Harmony-1 (old)	Upgrade and improvement of culverts passing under Harmony Station Road located near Brainards Road.	Existing	Flood, Severe Weather	1, 2	Township DPW	Medium	Medium	HMGP with local cost share	Long Term	Low	SIP	PP
Harmony-2 (old)	Review applicable building code requirements to ensure that structures are designed for appropriate wind loads.	N/A	Severe Weather, Hurricane / Tropical Storm, Nor'Easter	All	Twp Construction Official	Medium	Low	Local Budget	Short Term	High	LPR	PR
Harmony-3	Provide hazard risk, preparedness and mitigation information via mailings, township website and info posted in municipal building	N/A	All	1, 2, 3	Township OEM	High	Low	Local Budget	Short Term	High	LPR, EAP	PR, PI
Harmony-4	HMP to be utilized in revisions to Master Plan and Ordinances governing development and mitigation in flood hazard areas	N/A	All	All	Township Committee	Medium	Low	Local Budget	Short Term	High	LPR	PR
Harmony-5	Support the mitigation of vulnerable structures via retrofit (e.g. elevation, flood-proofing) or acquisition/relocation to protect structures from future damage, with repetitive loss and severe repetitive loss properties as a priority when applicable. Phase 1: Identify appropriate candidates and determine most cost-effective mitigation option (in progress). Phase 2: Work with the property owners to implement selected action based on available funding and local match availability.											
	See above.	Existing	Flood, Severe Weather Wildfire, Severe Winter Weather	All	Engineering via NFIP FPA with NJOEM, FEMA support	High	High	HMGP with local cost share	Ongoing	High	SIP	PP

Notes:

Not all acronyms and abbreviations defined below are included in the table.

*Does this mitigation initiative reduce the effects of hazards on new and/or existing buildings and/or infrastructure? Not applicable (N/A) is inserted if this does not apply.

Acronyms and Abbreviations:

CRS Community Rating System
DPW Department of Public Works

FEMA Federal Emergency Management Agency
FPA Floodplain Administrator





HMA Hazard Mitigation Assistance
 N/A Not applicable
 NFIP National Flood Insurance Program

NJDEP New Jersey Department of Environmental Protection
 NJOEM New Jersey Office of Emergency Management
 OEM Office of Emergency Management

Potential FEMA HMA Funding Sources:

FMA Flood Mitigation Assistance Grant Program
 HMGP Hazard Mitigation Grant Program
 PDM Pre-Disaster Mitigation Grant Program
 HMA Hazard Mitigation Assistance Program

Timeline:

Short 1 to 5 years
 Long Term 5 years or greater
 OG On-going program
 DOF Depending on funding

Costs:

Where actual project costs have been reasonably estimated:

Low < \$10,000
 Medium \$10,000 to \$100,000
 High > \$100,000

Where actual project costs cannot reasonably be established at this time:

Low Possible to fund under existing budget. Project is part of, or can be part of an existing on-going program.
 Medium Could budget for under existing work plan, but would require a reappropriation of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.
 High Would require an increase in revenue via an alternative source (i.e., bonds, grants, fee increases) to implement. Existing funding levels are not adequate to cover the costs of the proposed project.

Benefits:

Where possible, an estimate of project benefits (per FEMA's benefit calculation methodology) has been evaluated against the project costs, and is presented as:

Low= < \$10,000
 Medium \$10,000 to \$100,000
 High > \$100,000

Where numerical project benefits cannot reasonably be established at this time:

Low Long-term benefits of the project are difficult to quantify in the short term.
 Medium Project will have a long-term impact on the reduction of risk exposure to life and property, or project will provide an immediate reduction in the risk exposure to property.
 High Project will have an immediate impact on the reduction of risk exposure to life and property.

Mitigation Category:

- Local Plans and Regulations (LPR) - These actions include government authorities, policies or codes that influence the way land and buildings are being developed and built.
- Structure and Infrastructure Project (SIP)- These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures as well as critical facilities and infrastructure. This type of action also involves projects to construct manmade structures to reduce the impact of hazards.
- Natural Systems Protection (NSP) - These are actions that minimize damage and losses, and also preserve or restore the functions of natural systems.
- Education and Awareness Programs (EAP) - These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as StormReady and Firewise Communities

CRS Category:

- Preventative Measures (PR) - Government, administrative or regulatory actions, or processes that influence the way land and buildings are developed and built. Examples include planning and zoning, floodplain local laws, capital improvement programs, open space preservation, and storm water management regulations.
- Property Protection (PP) - These actions include public activities to reduce hazard losses or actions that involve (1) modification of existing buildings or structures to protect them from a hazard or (2) removal of the structures from the hazard area. Examples include acquisition, elevation, relocation, structural retrofits, storm shutters, and shatter-resistant glass.
- Public Information (PI) - Actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. Such actions include outreach projects, real estate disclosure, hazard information centers, and educational programs for school-age children and adults.
- Natural Resource Protection (NR) - Actions that minimize hazard loss and also preserve or restore the functions of natural systems. These actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.
- Structural Flood Control Projects (SP) - Actions that involve the construction of structures to reduce the impact of a hazard. Such structures include dams, setback levees, floodwalls, retaining walls, and safe rooms.
- Emergency Services (ES) - Actions that protect people and property during and immediately following a disaster or hazard event. Services include warning systems, emergency response services, and the protection of essential facilities





Table 9.11-11. Summary of Prioritization of Actions

Mitigation Action / Project Number	Mitigation Action/Initiative	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
Harmony-1 (old)	Upgrade and improvement of culverts passing under Harmony Station Road located near Brainards Road.	-1	1	0	1	0	1	0	1	0	1	-1	1	-1	-1	2	Low
Harmony-2 (old)	Review applicable building code requirements to ensure that structures are designed for appropriate wind loads.	1	1	1	1	1	1	-1	0	0	0	1	1	0	0	7	High
Harmony-3	Provide hazard risk, preparedness and mitigation information via mailings, township website and info posted in municipal building	1	1	1	1	1	1	-1	0	0	0	1	1	0	0	7	High
Harmony-4	HMP to be utilized in revisions to Master Plan and Ordinances governing development and mitigation in flood hazard areas	0	1	1	1	0	1	1	0	0	0	1	1	0	0	7	High
Harmony-5	Support the mitigation of vulnerable structures via retrofit (e.g. elevation, flood-proofing) or acquisition/relocation to protect structures from future damage, with repetitive loss and severe repetitive loss properties as a priority when applicable.	0	1	1	1	1	1	-1	0	0	1	-1	1	0	0	4	High

Note: Refer to Section 6 which contains the guidance on conducting the prioritization of mitigation actions.



9.11.7 Future Needs To Better Understand Risk/Vulnerability

None at this time.

9.11.8 Hazard Area Extent and Location

Hazard area extent and location maps have been generated for the Township of Harmony that illustrate the probable areas impacted within the municipality. These maps are based on the best available data at the time of the preparation of this plan, and are considered to be adequate for planning purposes. Maps have only been generated for those hazards that can be clearly identified using mapping techniques and technologies, and for which the Township of Harmony has significant exposure. These maps are illustrated in the hazard profiles within Section 5.4, Volume I of this Plan.

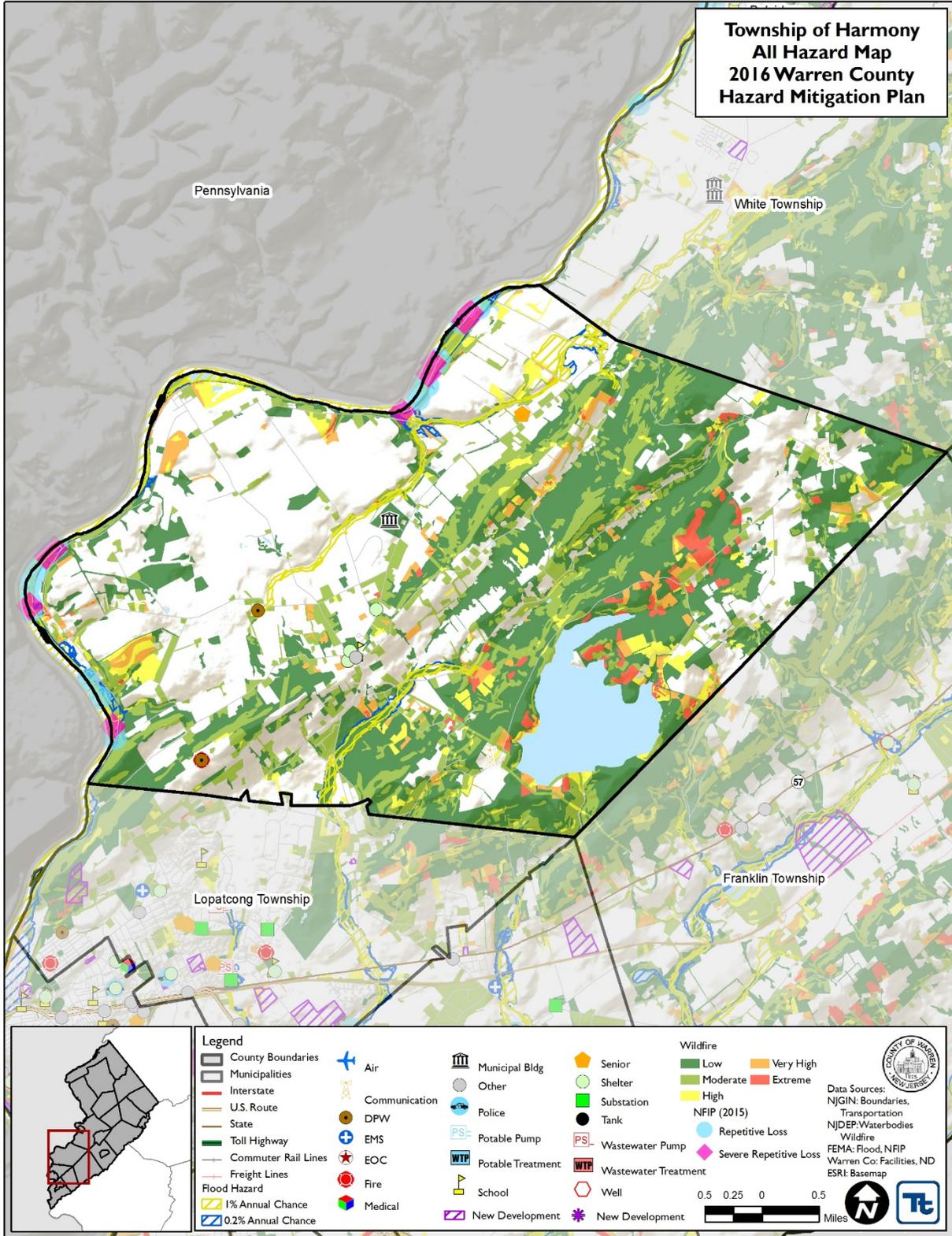
9.11.9 Additional Comments

None at this time.

DRAFT



Figure 9.11-1. Township of Harmony Hazard Area Extent and Location Map 1





Action Number: Harmony-1
Mitigation Action/Initiative: Upgrade culverts - Harmony Station Road near Brainards Road

Assessing the Risk	
Hazard(s) addressed:	Flooding
Specific problem being mitigated:	Flooding of Harmony Station Road near Brainards Road
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	1. Replace culverts 2. Do nothing – current problem continues 3. No other feasible options were identified
Action/Project Intended for Implementation	
Description of Selected Action/Project	Replace culverts
Action/Project Category	SIP
Goals Met	Protect property
Applies to existing and or new development, or not applicable	NA
Benefits (losses avoided)	Road closing; detours
Estimated Cost	Medium
Priority*	Low
Plan for Implementation	
Responsible Organization	Harmony Township
Local Planning Mechanism	Stormwater Management, Roads, Local Budget
Potential Funding Sources	Local
Timeline for Completion	Long term
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: 10.14.15 Progress on Action/Project: None



Action Number: Harmony-1

Mitigation Action/Initiative: Upgrade culverts - Harmony Station Road near Brainards Road

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	-1	
Property Protection	1	Protect roadways from flooding
Cost-Effectiveness	0	
Technical	1	
Political	0	
Legal	1	
Fiscal	0	
Environmental	1	
Social	0	
Administrative	1	
Multi-Hazard	-1	
Timeline	1	Completed in the next five years
Agency Champion	-1	
Other Community Objectives	-1	
Total	2	
Priority (High/Med/Low)	Low	