



9.23 Township of White

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

9.23.1 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
Kathleen Reinalda, Township Clerk/Administration 555 CR 519, Belvidere, NJ 07823 (908) 475-2093 ext. 1 clerk@whitetwp-nj.com	Jeff Herb, EMC/Emergency Management 555 CR 519, Belvidere, NJ 07823 (908) 347-9081 jdherb@comcast.net

9.23.2 Municipal Profile

White Township encompasses 28.6 square miles in western Warren County and according to the 2010 U.S. Census, its population was 4,882. The hamlets of Bridgeville, Brookfield, Buttzville, and Foul Rift are found in the Township. White Township is bordered to the north by the Townships of Knowlton and Hope, to the east by the Townships of Liberty and Oxford, to the south by the Townships of Harmony and Franklin, and to the west by the State of Pennsylvania. The Township also completely surrounds the Town of Belvidere. The major streams in the Township include the Delaware River which flows along the northwest corner of the Township and the Pequest River which flows through the northerly portion of the Township. Buckhorn Creek, Furnance Brook and Pophandusing Brook are major tributaries to these Rivers and located in White Township as well. Additionally, the Township is located within the New Jersey Highlands Region.

Growth/Development Trends

The following table summarizes recent residential/commercial development since 2010 to present and any known or anticipated major residential/commercial development and major infrastructure development that has been identified in the next five years within the municipality. Refer to the map in section 9.X of this annex which illustrates the hazard areas along with the location of potential new development.

Table 9.23-1. Growth and Development

Property or Development Name	Type (e.g. Res., Comm.)	# of Units / Structures	Location (address and/or Block & Lot)	Known Hazard Zone(s)	Description/Status of Development
Recent Development from 2010 to present					
None identified					
Known or Anticipated Development in the Next Five (5) Years					
Beckett	Comm	2 bldgs	Rt. 46 West B: 62; L: 15, 17 and 17.01	No	Approved by Planning Board
Big Red Transport	Comm	1 Bldg	454 Rt. 46 B: 62; L: 6.01 and 7	No	Approved by Zoning Board
JERC Partners X	Comm	3 Bldgs	Rt 46 West and Upper Sarepta Rd. B: 54.01; L: 1 and 1.01	No	Approved by Planning Board





Property or Development Name	Type (e.g. Res., Comm.)	# of Units / Structures	Location (address and/or Block & Lot)	Known Hazard Zone(s)	Description/Status of Development
LaTorre Plaza	Comm	1 Bldg	187 Rt 519 B: 21; L: 7.03	No	Approved by Planning Board

* Only location-specific hazard zones or vulnerabilities identified.

9.23.3 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 at the municipal level, is presented in the table below. This summary is based on reference material or local sources. For further details on these and additional events, refer to Volume I, Section 5.0 of this plan.

Table 9.23-2. 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	During Hurricane Irene, the Township was without power for two days and Mutton Hill Road was closed for nearly two weeks due to asphalt wash-out. Public assistance was requested by the Township and losses and damages to the Township was over \$15,000 for road repairs and labor/equipment for clearing of debris.
October 29, 2011	Severe Storm	DR-4048	Yes	This event resulted in debris removal throughout the Township. No other damages were reported in the Township. Public Assistance was requested and losses to the Township exceeded \$20,000 for debris removal costs, labor and outside contractor.
October 26 – November 8, 2012	Hurricane Sandy	DR-4086	Yes	Hurricane Sandy caused a township-wide power outage for up to 15 days. Residents were being sheltered at the Goodwill Fire Company and the County Facility. There were roads closed throughout the Township because they were unpassable. There was guide rail damage on Castners Road and Foul Rift Road which resulted in nearly \$5,000 in repair costs. There were various claims for facilities and structural damage on private properties. The Township requested Public Assistance. Losses to the Township included debris clean-up, contractor costs and DPW labor which totaled over \$57,000.

9.23.4 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 White. 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 White.

Table 9.23-3. 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: \$208,633 2,500-Year GBS: \$3,327,536	Occasional	28	Medium
Flood	1% Annual Chance: \$13,205,250	Frequent	18	Medium
Geologic	RCV Exposed to Carbonate Rock Areas: \$389,880,426	Occasional	36	High
Hurricane	100-year MRP: \$193,975.00 500-year MRP: 1234035 Annualized: \$16,671.00	Frequent	48	High
Nor'Easter	Damage estimate not available	Frequent	48	High
Severe Storm	100-Year MRP: \$193,975 500-year MRP: \$1,234,035 Annualized: \$16,671	Frequent	48	High
Severe Winter Storm	1% GBS: \$3,357,374 5% GBS: \$16,786,871	Frequent	51	High
Wildfire	Estimated Value in the Extreme, Very High, and High Hazard Areas: \$25,009,750	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 White.





Table 9.23-4. 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)
Township of White	27	44	\$1,742,627	2	2	10

Source: FEMA Region 2, 2014

(1) Policies, claims, repetitive loss and severe repetitive loss statistics provided by FEMA Region 2, and are current as of 11/30/2014. Please note the total number of repetitive loss properties includes the severe repetitive loss properties. The number of claims represents claims closed by 11/30/14.

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

(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.

Notes: 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.

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

Number of policies and claims and claims total exclude properties located outside County boundary, based on provided latitude and longitude.

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.

9.23.5 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 White.

Table 9.23-5. 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 2014	State/Local	Planning Board	N.J.S.A. 40:55D - 89
Capital Improvements Plan	Yes Annual	Local	Governing body	Municipal Budget





Table 9.23-5. 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.)
Floodplain Management / Basin Plan	Yes 2011	State/local	Governing body	Chapter 140 of Township Code
Stormwater Management Plan	Yes 2005	State/local	Planning Board	N.J.A.C. 7:14A-25
Open Space Plan	Yes 2014	Local	Governing Body	Ch. 33 of Township Code
Stream Corridor Management Plan	Yes 2010	Local	Planning Board	Ch. 160 of Township Code
Watershed Management or Protection Plan	Yes 2010	Local	Planning Board	Ch. 160 of Township Code
Economic Development Plan	No			
Comprehensive Emergency Management Plan	No			
Emergency Operation Plan	Yes 2012	Local/County	EMC	2012 Emergency Operations Plan
Post-Disaster Recovery Plan	No			
Transportation Plan	No			
Strategic Recovery Planning Report	No			
Other Plans:	No			
Regulatory Capability				
Building Code	Yes 2013	State & Local	Construction Office	State Uniform Construction Code Act (N.J.S. 52:27D-119 et seq.)
Zoning Ordinance	Yes 2010	Local	Planning Board	Ch. 160 of Township Code
Subdivision Ordinance	Yes 2010	Local	Planning Board	Ch. 160 of Township Code
NFIP Flood Damage Prevention Ordinance	Yes	Federal, State	Zoning / Township Engineer	Ch. 140 of Township Code
NFIP: Cumulative Substantial Damages	No			
NFIP: Freeboard	Yes	State, Local	Zoning / Township Engineer	N.J.A.C 7:13 Flood Hazard Area Control Act
Growth Management Ordinances	No			
Site Plan Review Requirements	Yes 2010	Local	Planning Board	Ch. 160 of Township Code
Stormwater Management Ordinance	Yes 2006	Local	Planning Board	Ch. 260 of Township Code
Municipal Separate Storm Sewer System (MS4)	Yes 2006	State/local	Planning Board	Ch. 260 of Township Code
Natural Hazard Ordinance	No			
Post-Disaster Recovery Ordinance	No			
Real Estate Disclosure Requirement	Yes	State	Division of Consumer Affairs	N.J.A.C. 13:45A-29.1



Table 9.23-5. 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.)
Other [Special Purpose Ordinances (i.e., sensitive areas, steep slope)]	Yes 2010	Local	Planning Board	Ch. 160 of Township Code

Administrative and Technical Capability

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

Table 9.23-6. Administrative and Technical Capabilities

Resources	Is this in place? (Yes or No)	Department/ Agency/Position
Administrative Capability		
Planning Board	Yes	White Township Planning Board
Mitigation Planning Committee	No	
Environmental Board/Commission	Yes	White Township Environmental Commission
Open Space Board/Committee	Yes	White Township Open Space and Farmland Preservation Committee
Economic Development Commission/Committee	No	
Maintenance Programs to Reduce Risk	No	
Mutual Aid Agreements	Yes	Warren County Dept. of Public Safety/Warren County Health Board
Technical/Staffing Capability		
Planner(s) or Engineer(s) with knowledge of land development and land management practices	Yes	Township Engineer, Township Planner
Engineer(s) or Professional(s) trained in construction practices related to buildings and/or infrastructure	Yes	Township Engineer, Construction Department
Planners or engineers with an understanding of natural hazards	Yes	Township Engineer, Township Planner
NFIP Floodplain Administrator	Yes	Zoning Officer / Township Engineer
Surveyor(s)	Yes	Township Engineering Firm
Personnel skilled or trained in GIS and/or Hazus-MH applications	No	
Scientist familiar with natural hazards	No	
Emergency Manager	Yes	EMC
Grant Writer(s)	Yes	Township Engineering Firm
Staff with expertise or training in benefit/cost analysis	Yes	Township Engineering Firm
Professionals trained in conducting damage assessments	Yes	Construction Official/Township Engineer

Fiscal Capability

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





Table 9.23-7. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use (Yes/No/Don't Know)
Community development Block Grants (CDBG, CDBG-DR)	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for specific purposes	Yes
User fees for water, sewer, gas or electric service	Yes
Impact Fees for homebuyers or developers of new development/ homes	No
Stormwater Utility Fee	No
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	Yes
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 White.

Table 9.23-8. 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)	Yes	3	February 2015
Public Protection (ISO Fire Protection Classes 1 to 10)	Yes	3	February 2015
Storm Ready	No	NP	N/A
Firewise	No	NP	N/A
Disaster/Safety Programs in/for Schools	No		
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 White’s capability to work in a hazard-mitigation capacity and/or effectively implement hazard mitigation strategies to reduce hazard vulnerabilities.

Table 9.23-9. 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 Limited Budget		
Community Political Capability	X time constraints		
Community Resiliency Capability		X	
Capability to Integrate Mitigation into Municipal Processes and Activities.		X	

National Flood Insurance Program

NFIP Floodplain Administrator (FPA)

Paul Sterbenz, Township Engineer and Township Staff

Flood Vulnerability Summary

The Township does not maintain lists/inventories of properties that have been flood damaged. During Hurricane Sandy, the number of damaged structures is unknown. The FPA does not make Substantial Damage estimates. The number of those interested in mitigation and the funding sources for those interested in the Township is unknown.

Resources

Township personnel assist the FPA with the responsibilities of floodplain administration. The only NFIP administration service provided by the FPA and staff is permit review. The Township does not provide any education or outreach regarding flood hazards/risk to the community. The FPA indicated that funding is a barrier to running an effective floodplain management program in the Township. The FPA also stated that he does not





feel adequately supported or trained to fulfill his responsibilities as the municipal FPA and would consider attending continuing education and/or certification training on floodplain management.

Compliance History

The Township is currently in good standing with the NFIP. Although, it is unknown as to when the most recent compliance audit was conducted.

Regulatory

Township Code Chapter 140 meets the standards of the floodplain management regulations/ordinances of the FEMA and State minimum requirements. Additionally, Chapter 160 of the Township code restricts development in critical areas and supports floodplain management and meets the NFIP requirements.

Community Rating System

The Township of White does not participate in the Community Rating System (CRS) program. However, the Township has considered joining CRS and would attend a CRS seminar if offered.

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 2010 Comprehensive Farmland Preservation details the current state of farmland preservation in the Township, as well as proposes preservation goals and other mitigation actions. At the time of the Plan's development, the Township had already preserved 752 acres of farmland and had 428 acres pending; future goals were: one year target of 100 additional acres, five year target of additional 500 acres and 10 year target of 1,000 additional acres of farmland preservation.

The 2005 Stormwater Management Plan was adopted as a means to reduce the impacts on public health and the infrastructure by flooding caused by stormwater runoff, as well as increased soil erosion and nonpoint source pollution. Mitigation actions include changes to existing ordinances and adoption of new ordinances. All new development must be able to manage any increases in stormwater runoff on-site; mitigation projects off-site will not be permitted as a replacement.

White Township in Warren County has 7,800 acres in the Preservation Area and 9,993 acres in the Planning Area of the Highlands Region. The municipality submitted a Notice of Intent to Petition the Highlands Council for Plan Conformance for all lands lying within the Preservation Area.

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 soil removal and surface mining ordinance. The Township also encourages the consideration of low occupancy, low-density zoning in hazard areas when practical. The Township also limits development in high hazard areas. When updating the municipal ordinances, hazard mitigation is and will be a priority. When reviewing permits, the process includes addressing hazards in the Township. Hazard resistant construction standards are incorporated into the design



and location of projects as well. The Township's rezoning procedures also recognize hazard areas as limits on zoning changes.

Prior to land use, zoning changes or development permitting, the Township currently does not review the hazard mitigation plan and other hazard analysis to ensure consistent and compatible land use. However, this will be pursued in the next five years. Refer to White Twp-3 in Table 9.23-11 for details regarding this mitigation action.

Operational and Administration

The Township has established an Environmental Commission and Open Space Committee that aid in planning decisions to support the conservation and preservation of the Township's critical environmental features.

Funding

The Township established a Farmland Preservation and Open Space Trust Fund tax of two cents per \$100 of assessed value. The Township does not have a line item for mitigation project funding in their municipal/operating budget; however, it will be pursued in the next five years. Refer to White Twp-4 in Table 9.23-11 for details regarding this mitigation action. The Capital Improvement budget also does not include a line item for mitigation project funding and it has not provided funding for mitigation projects identified in the 2011 HMP. However, both will be pursued in the next five years. Refer to White Twp-4 in Table 9.23-11 for details regarding this mitigation action.

Education and Outreach

Currently, the Township does not have a public outreach program to inform its citizens on hazards; however, they will pursue this to incorporate into the next five years. Refer to White Twp-3 in Table 9.23-11 for details regarding this mitigation action.

White Township annually contracts with Rapid Notify to alert residents of any potential issues, problems or events in the Township

9.23.6 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.



Table 9.23-10. Past Mitigation Initiative Status

2010 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
White 1: Acquisition/Elevation of one Severe Repetitive Loss property on Riverview Avenue.	OEM Coordinator	No Progress	1. 40 and 44 Riverview Ave. both were elevated. 100% complete 2. 3.	Discontinue	This action has been completed and will not be included in the 2016 HMP update.
White 2: Installation of an early warning siren system along the Delaware River.	OEM Coordinator	No Progress	1. 0% Complete 2. Not feasible or practical 3.	Discontinue	No funding available; the Township will not include this action in the 2016 HMP Update.
White 3: Conduct all hazards public education and outreach program for hazard mitigation and preparedness.	WCOEM, OEM Coordinator	In Progress	1. White Township annually contracts with Rapid Notify to alert residents of any potential issues, problems or events in the Township 2. Funded through the Municipal Budget 3.	Include in 2016 HMP	The Township will pursue educational opportunities to better understand hazard mitigation and preparedness; this action will be included in the 2016 HMP Update.



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 where the following FEMA publications were provided to all plan participants to use as a resource as part of the municipal 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, the Township participated in 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 9.23-11 summarizes the comprehensive-range of specific mitigation initiatives the Township 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 9.23-12 provides a summary of the prioritization of all proposed mitigation initiatives for the Plan update.



Table 9.23-11. 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
White Twp-1 (old White-3)	The Township will pursue educational opportunities to better understand hazard mitigation and preparedness.	N/A	All	All	Township Committee	Medium	Low	Municipal Budget	Short Term	Medium	EAP	PI
White Twp-2	Review the hazard mitigation plan prior to land use, zoning changes and/or development permitting to ensure consistent and compatible land use.	N/A	All	All	Township OEM	Medium	Low	Municipal Budget	Ongoing	Medium	LPR	PR
White Twp-3	Create and conduct a public outreach program to inform residents on hazards within the Township.	N/A	All	All	Township OEM	Medium	Low	Municipal Budget	Ongoing	Medium	EAP	PI
White Twp-4	The Township will have a line item for hazard mitigation in the municipal/operating budget and the capital improvement budget.	N/A	All	All	Township OEM	Medium	Low	Municipal Budget	Ongoing	Medium	LPR	PR
White Twp-5	The Township will fund mitigation projects identified in the hazard mitigation plan.	N/A	All	All	Township OEM	Medium	Low	Capital Improvement Budget	Ongoing	Medium	LPR	PR
White Twp-6	Improve/eliminate flooding of Rt. 519 North recreation area	Existing	Flood	1, 2, 6	Township Committee	Medium	Low	Grants and Local Budget	Short Term	High	SIP	PP
White Twp-7	Eliminate stormwater run-off from compost facility located at 40 Foul Rift Road.	Existing	Flood, Severe Storm	1, 2, 6	Landowner	Medium	Medium	Landowner and Grants	Ongoing	Low	NSP	NR
White Twp-8	Remove structures in flood prone areas along Rt. 46 West in White Township – Columbia area only	Existing	Flood, Severe Storm	1, 2	Township Committee	High	High	Grants	Long Term	Low	SIP	PP
White Twp-9	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. 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		Engineering via NFIP FPA with NJOEM, FEMA support	High	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Ongoing (outreach and specific project identification); Long term DOF (specific project application and implementation)	High	SIP	PP



Table 9.23-11. 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
White Twp-10	Support continuity of operations at critical facilities. The following project is identified at this time: Purchase and install a generator for the DPW building	Existing	All	1, 2, 6	Township OEM	High	Medium	HMGP funding with local cost share	Short Term / DOF	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 reapportionment 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

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Table 9.23-12. 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
White Twp-1 (old White-3)	The Township will pursue educational opportunities to better understand hazard mitigation and preparedness.	1	1	1	1	1	1	0	0	0	1	1	1	0	0	9	Medium
White Twp-2	Review the hazard mitigation plan prior to land use, zoning changes and/or development permitting to ensure consistent and compatible land use.	1	1	1	1	1	1	0	0	0	1	1	1	0	0	9	Medium
White Twp-3	Create and conduct a public outreach program to inform residents on hazards within the Township.	1	1	1	1	1	1	0	0	0	1	1	1	0	0	9	Medium
White Twp-4	The Township will have a line item for hazard mitigation in the municipal/operating budget and the capital improvement budget.	1	1	1	1	1	1	0	0	0	1	1	1	0	0	9	Medium
White Twp-5	The Township will fund mitigation projects identified in the hazard mitigation plan.	1	1	1	1	1	1	0	0	0	1	1	1	0	0	9	Medium
White Twp-6	Improve/eliminate flooding of Rt. 519 North recreation area	0	1	1	1	1	1	1	1	-1	1	-1	1	1	-1	7	High
White Twp-7	Eliminate stormwater run-off from compost facility located at 40 Foul Rift Road.	0	1	0	1	0	-1	-1	-1	-1	-1	1	-1	1	1	1	Low
White Twp-8	Remove structures in flood prone areas along Rt. 46 West in White	1	1	-1	-1	-1	-1	-1	0	-1	-1	1	-1	-1	-1	-7	Low





Table 9.23-12. 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
	Township – Columbia area only																
White Twp-9	Support the mitigation of vulnerable structures via retrofit (e.g. elevation, flood-proofing) or acquisition/relocation to protect structures from future damage.	1	1	1	1	0	0	0	0	1	1	1	1	0	0	8	High
White Twp-10	Support continuity of operations at critical facilities: Purchase and install a generator for the DPW building	1	1	1	1	0	0	0	0	1	1	1	1	0	0	8	High

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





9.23.7 Future Needs To Better Understand Risk/Vulnerability

None at this time.

9.23.8 Hazard Area Extent and Location

Hazard area extent and location maps have been generated for the Township of White 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 White has significant exposure. These maps are illustrated in the hazard profiles within Section 5.4, Volume I of this Plan.

9.23.9 Additional Comments

None at this time.

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Figure 9.23-1. Township of White Hazard Area Extent and Location Map 1

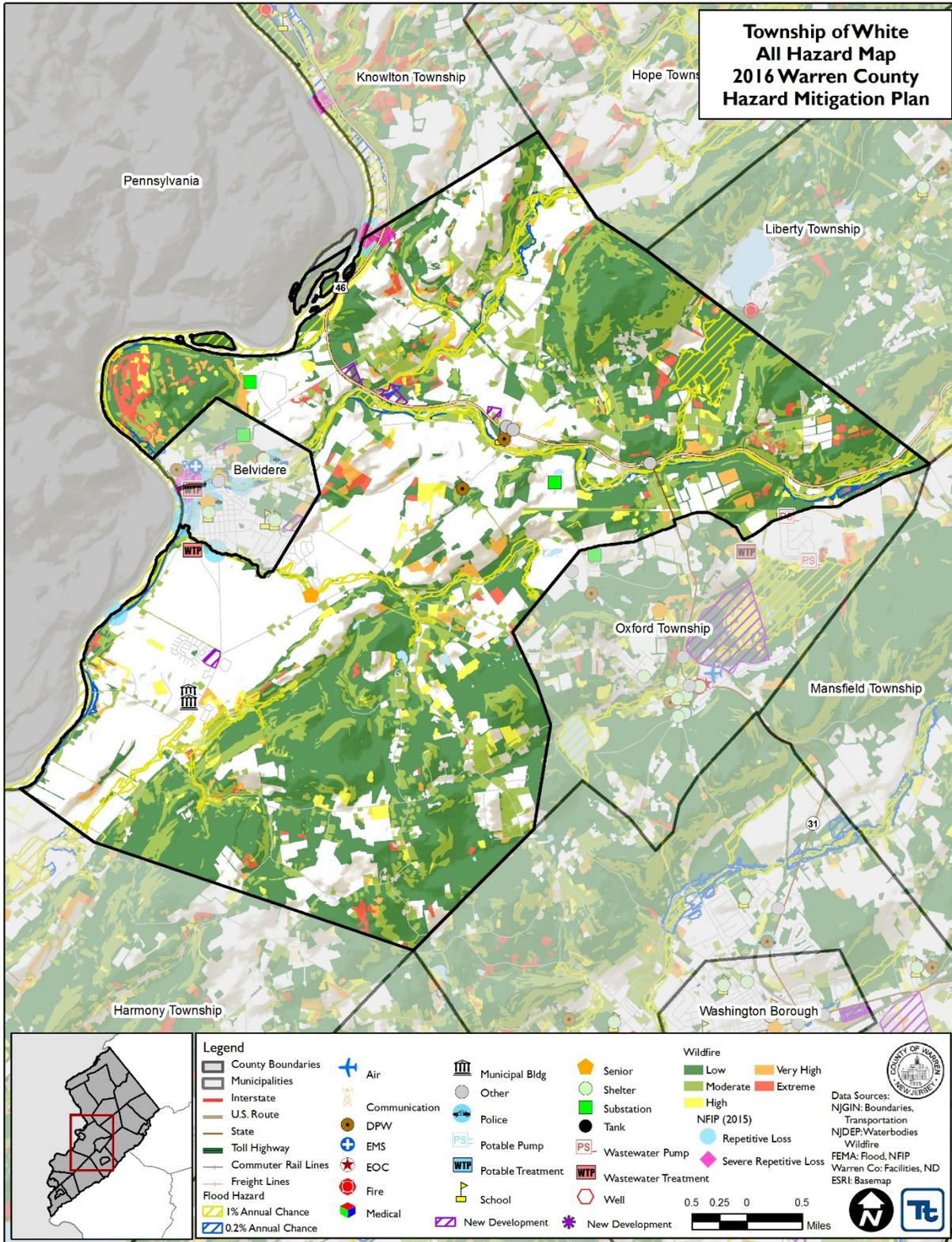
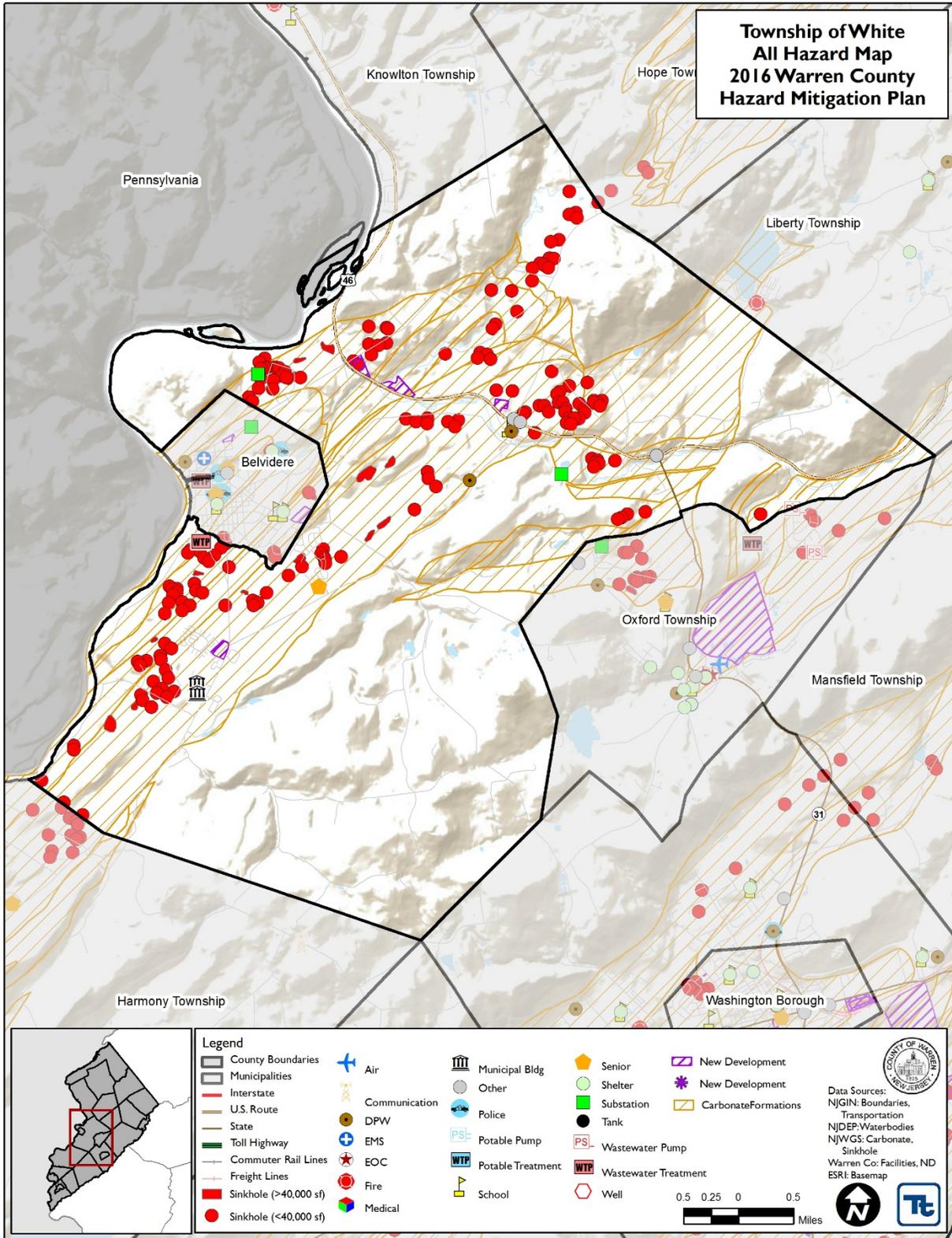




Figure 9.23-2. Township of White Hazard Area Extent and Location Map 2





Action Number: White Twp-6

Mitigation Action/Initiative: White Township Recreation Field, 581 CR 519 North - drainage

Assessing the Risk	
Hazard(s) addressed:	Flooding
Specific problem being mitigated:	Rt 519 North Recreation Fields – flooding from nearby swamp
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	1. Increase drainage
	2. Do nothing – current problem continues
	3. No other feasible options were identified
Action/Project Intended for Implementation	
Description of Selected Action/Project	Improve/eliminate flooding of Rt. 519 North recreation area
Action/Project Category	Structure and Infrastructure Project
Goals/Objectives Met	Protect Property
Applies to existing and/or new development; or not applicable	Existing
Benefits (losses avoided)	Avoid physical property damage
Estimated Cost	Low
Priority*	High
Plan for Implementation	
Responsible/Lead Agency/Department	White Township Committee
Local Planning Mechanism	Capital Improvement
Potential Funding Sources	Budgeted Funds and/or Grants
Timeline for Completion	short
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: Progress on Action/Project:



Action Number: White Twp-6

Mitigation Action/Initiative: White Township Recreation Field, 581 CR 519 North - drainage

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	
Property Protection	1	Reduce the potential of the recreational fields from flooding
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	
Fiscal	1	
Environmental	1	
Social	-1	
Administrative	1	
Multi-Hazard	-1	Flood
Timeline	1	Once funding is obtained, project will be completed in less than five years
Local Champion	1	
Other Community Objectives	-1	
Total	7	
Priority (High/Med/Low)	high	



Action Number: White Twp-7

Mitigation Action/Initiative: 40 Foul Rift Road, White Township – stormwater discharge

Assessing the Risk	
Hazard(s) addressed:	Flood, Severe Storm
Specific problem being mitigated:	Flooding due to stormwater run-off from the compost facility
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	1. Eliminate stormwater runoff
	2. Do nothing – current problem continues
	3. No other feasible options were identified
Action/Project Intended for Implementation	
Description of Selected Action/Project	Eliminate stormwater run-off from compost facility located at 40 Foul Rift Road.
Action/Project Category	Natural Systems Protection
Goals/Objectives Met	Protect Property
Applies to existing and/or new development; or not applicable	Existing
Benefits (losses avoided)	Avoid physical property damage and well water contamination
Estimated Cost	Medium
Priority*	Low
Plan for Implementation	
Responsible/Lead Agency/Department	Landowner/Operator at 40 Foul Rift Road
Local Planning Mechanism	Capital Improvement
Potential Funding Sources	Owner responsibility/grant funds
Timeline for Completion	On-going program
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: Progress on Action/Project:



Action Number: White Twp-7

Mitigation Action/Initiative: 40 Foul Rift Road, White Township – stormwater discharge

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	
Property Protection	1	Reduce impact of flooding from stormwater runoff
Cost-Effectiveness	0	
Technical	1	
Political	0	
Legal	-1	
Fiscal	-1	
Environmental	1	
Social	-1	
Administrative	-1	
Multi-Hazard	1	Flood, Severe Storm
Timeline	-1	
Local Champion	1	
Other Community Objectives	1	
Total	1	
Priority (High/Med/Low)	low	



Action Number: White Twp-8

Mitigation Action/Initiative: White Township - Rt 46 West flooding - Columbia area

Assessing the Risk	
Hazard(s) addressed:	Flooding
Specific problem being mitigated:	Rt 46 West – Columbia Area – flooding from Delaware River
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	1. Acquire all severe repetitive loss properties along Rt. 46 West in White Township – Columbia Area only
	2. Do nothing – current problem continues
	3. No other feasible options were identified
Action/Project Intended for Implementation	
Description of Selected Action/Project	Remove structures in flood prone areas along Rt. 46 West in White Township – Columbia area only
Action/Project Category	Structure and Infrastructure Project
Goals/Objectives Met	Protect Life; Protect Property
Applies to existing and/or new development; or not applicable	Existing
Benefits (losses avoided)	Avoid physical property damage and loss of life/injury
Estimated Cost	High
Priority*	Low
Plan for Implementation	
Responsible/Lead Agency/Department	White Township Committee
Local Planning Mechanism	Capital Improvement
Potential Funding Sources	Grants
Timeline for Completion	Long Term
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: Progress on Action/Project:



Action Number: White Twp-8

Mitigation Action/Initiative: White Township - Rt 46 West flooding - Columbia area

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	
Cost-Effectiveness	-1	
Technical	-1	
Political	-1	
Legal	-1	
Fiscal	-1	
Environmental	0	
Social	-1	
Administrative	-1	
Multi-Hazard	1	
Timeline	-1	
Local Champion	-1	
Other Community Objectives	-1	
Total	-7	
Priority (High/Med/Low)	low	



Action Number: White Twp-10

Mitigation Action/Initiative: Support continuity of operations at critical facilities - Purchase and install a backup generator at the DPW building

Assessing the Risk	
Hazard(s) addressed:	All
Specific problem being mitigated:	Loss of power prevents the DPW building from functioning properly during times of emergency
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	1. Purchase and install a backup generator at the DPW building
	2. Do nothing – current problem continues
	3. No other feasible options were identified
Action/Project Intended for Implementation	
Description of Selected Action/Project	Support continuity of operations at critical facilities - Purchase and install a backup generator at the DPW building
Action/Project Category	SIP
Goals/Objectives Met	1, 2, 6
Applies to existing and/or new development; or not applicable	Existing
Benefits (losses avoided)	Medium
Estimated Cost	Medium
Priority*	High
Plan for Implementation	
Responsible/Lead Agency/Department	Township OEM
Local Planning Mechanism	Emergency Operations, Capital Improvement
Potential Funding Sources	HMGP with local cost share
Timeline for Completion	Short Term / DOF
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: Progress on Action/Project:



Action Number: White Twp-10

Mitigation Action/Initiative: Support continuity of operations at critical facilities - Purchase and install a backup generator at the DPW building

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	Allow for DPW to function during periods of power outages
Cost-Effectiveness	1	
Technical	1	
Political	0	
Legal	0	
Fiscal	0	
Environmental	0	
Social	1	
Administrative	1	
Multi-Hazard	1	All hazards
Timeline	1	
Local Champion	0	
Other Community Objectives	0	
Total	8	
Priority (High/Med/Low)	High	