



9.23 Township of West Orange

This section presents the jurisdictional annex for the Township of West Orange.

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
Fire Chief Peter F. Smeraldo, Jr., OEM Coordinator 415 Valley Road, West Orange, NJ (973) 325-4185 WO-OEM@westorange.org	Leonard Lepore, PE, Municipal Engineer 25 Lakeside Avenue, West Orange, NJ (973) 325-4160 llepore@westorange.org

9.23.2 Municipal Profile

This section provides a summary of the community.

Population

According to the U.S. Census, the 2010 population for the Township of West Orange was 46,207.

Location

According to the U.S. Census Bureau, the Township has a total land area of 12.171 square miles, of which 12.046 square miles is land and 0.125 square miles is water.

Brief History

West Orange was part of the City of Newark until November of 1806. The first planned community in America, Llewellyn Park, is located in West Orange (Township of West Orange, 2014).

Governing Body Format

West Orange operates under the Mayor-Council form of municipal government. Every four years in even-numbered years, two or three Council seats along with the Mayoral seat are up for re-election. The current Mayor and two Council members are up for re-election in 2014 (Township of West Orange, 2014).

Growth/Development Trends

The following table summarizes major residential/commercial development and major infrastructure development that are identified for the next five (5) years in the municipality. Refer to the map in section 9.23.8 of this annex which illustrates the hazard areas along with the location of potential new development.



Table 9.23-1. Growth and Development

Property Name	Type (Residential or Commercial)	Number of Structures	Location (address and/or block/lot)	Known Hazard Zone*	Description / Status
Colonial Woods North	Residential	27 lots	Colonial Woods Drive Extension	ND	New Development
West Essex Highlands Area 2	Residential	130 units	Warner Road	ND	New Development
Harvard Development Urban Renewal Associates	Residential	228 Units	B: 9 L: 56	1% Flood: A Zone	See Orange SP 061113
Harvard Development Urban Renewal Associates	Residential	228 Units	B: 9 L: 50	1% Flood: A Zone	See Orange SP 061113
Harvard Development Urban Renewal Associates	Residential	228 Units	B: 9 L: 1	1% Flood: A Zone	See Orange SP 061113
Harvard Development Urban Renewal Associates	Residential	228 Units	B: 9 L: 7	1% Flood: A Zone	See Orange SP 061113
Harvard Development Urban Renewal Associates	Residential	228 Units	B: 9 L: 44	1% Flood: A Zone	See Orange SP 061113
Prism Green Urban Renewal Associates	Residential	334 units	B: 66 L: 5	None	App/Rej.
Prism Green Urban Renewal Associates	Residential	334 units	B: 66 L: 1	1% Flood: A Zone	App/Rej.
Prism Green Urban Renewal Associates	Residential	334 units	B: 66 L: 7	None	App/Rej.

* Only location-specific hazard zones or vulnerabilities identified.

Note: ND = Not determined because potential new development could not be located.



9.23.3 Natural Hazard Event History Specific to the Municipality

Essex 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 2007 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 9.23-2. Hazard Event History

Dates of Event	Event Type	FEMA Declaration # (If Applicable)	County Designated?	Summary of Damages/Losses
April 14-20, 2007	Severe Weathers and Inland and Coastal Flooding	DR-1694	Yes	Residential basement flooding. Emergency protection measures utilized. \$20K
March 12 – April 15, 2010	Severe Weathers and Flooding	DR-1897	Yes	Residential basement flooding. \$88K for emergency protection measures.
December 26-27, 2010	Severe Winter Storm and Snowstorm	DR-1954	Yes	Excessive snow removal, snow clearing, 133 people sheltered and emergency protective measures utilized. \$151K
August 26 – September 5, 2011	Hurricane Irene	EM-3332 DR-4021	Yes Yes	Approx. 220 homes, 10 apt. units, 10 businesses, 1 public park, 1 water control facility and 1 public building affected. Emergency protective measures utilized. \$243K
October 29, 2011	Severe Weather	DR-4048	Yes	Approx. 1,000 homes, 1 public park and public utility system. Emergency protective measures utilized. \$441K
October 26 – November 8, 2012	Hurricane Sandy	EM-3354 DR-4086	Yes Yes	Approx. 12,000 homes, 2,000 apt units, roadway damage, 1 public park and generator fuel affected. Emergency protective measures utilized. \$1.1M



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 following summarizes the hazard vulnerabilities and their ranking in the Township of West Orange. 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 West Orange.

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
Coastal Erosion	RCV in CEHA: \$0	Rare	6	Low
Coastal Storm	Category 1 SLOSH: \$0 Category 2 SLOSH: \$0 Category 3 SLOSH: \$0 Category 4 SLOSH: \$0	Occasional	12	Low
Drought	Damage estimate not available	Occasional	18	Medium
Earthquake	500-year MRP: \$2,710,857 2,500-year MRP: \$61,868,132	Occasional	12	Low
Extreme Temperature	Damage estimate not available	Frequent	27	Medium
Flood	1% Annual Chance: \$18,895,034	Frequent	18	Medium
Geological Hazards	Exposed to Class B and Class C: \$35,372,000	Occasional	12	Low
Severe Weather	100-Year MRP: \$4,369,898 500-year MRP: \$26,484,651 Annualized: \$302,472	Frequent	48	High
Winter Storm	1% GBS: \$33,798,959 5% GBS: \$168,994,794	Frequent	54	High
Wildfire	Estimated Value Exposed to Extreme, Very High and High: \$3,840,300	Frequent	18	Medium
Civil Disorder	Damage estimate not available	Occasional	24	Low
Cyber Attack	Damage estimate not available	Occasional	10	Low
Disease Outbreak	Damage estimate not available	Frequent	15	Medium
Hazardous Substances	Damage estimate not available	Frequent	15	Medium
Power Outages	Damage estimate not available	Frequent	36	Low
Terrorism	Damage estimate not available	Occasional	24	Low
Transportation Failure	Damage estimate not available	Frequent	36	Low

Notes:

- Building damage ratio estimates based on FEMA 386-2 (August 2001)
- The valuation of general building stock and loss estimates was based on custom inventory for the municipality.
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
- Loss estimates for the Severe Weather and severe winter storm hazards are structural values only and do not include the value of contents.



- d. Loss estimates for the flood and earthquake hazards represent both structure and contents.
- e. The HAZUS-MH earthquake model results are reported by Census Tract

National Flood Insurance Program (NFIP) Summary

The following table summarizes the NFIP statistics for the Township of West Orange.

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)	# Policies in 0.2% Flood Boundary (3)	# Policies Outside the 1% and 0.2% Flood Hazard (3)
West Orange, Township of	274	147	\$853,080.00	5	0	136	151	123

Source: FEMA, 2014

Note (1) Policies, claims, repetitive loss and severe repetitive loss statistics provided by FEMA and are current as of March 31, 2014 and are summarized by Community Name. Please note the total number of repetitive loss properties excludes the severe repetitive loss properties. The number of claims represents claims closed by 3/31/2014.

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

The table below presents the number of critical facilities, by type, in the community located in the FEMA flood zones (1% and 0.2% annual chance boundaries).

Table 9.23-5. Number of Critical Facilities in the 1% and 0.2% Annual Chance Flood Boundary

Municipality	1% Annual Chance				0.2% Annual Chance				
	Dam	EMS	Potable Water Plant	School	Dam	EMS	Potable Water Plant	School	WWTP
Township of West Orange	1	1	1	2	1	1	1	2	1

Source: ECOEM

Other Vulnerabilities Identified by Municipality

According to the preliminary 2014 FEMA Flood Insurance Study (FIS), the Township has been affected by flooding in most of the low-lying areas located along the numerous open stream courses within its boundaries. Several other areas are also affected by flooding due to poor drainage. In 2010, the Township of West Orange passed 2274-10 An Ordinance Amending and Supplementing Chapter 25 Section 28 of the General Ordinances of the Town of West Orange, Entitled "Steep Slope and Natural Features Ordinance" which amended the steep slope ordinance by placing additional restrictions of State open waters, wetlands, wetland transition areas,



flood hazard areas, floodways, and riparian zones. This amendment was warranted to prevent flooding, protect water quality, and preserve wildlife and aquatic habitat (FEMA FIS 2014).

A major flood area exists along the East Fork of the East Branch Rahway River in West Orange, east of Valley Road between Freeman Street and Kingsley Street. The flooding problem there, which is due to inadequate channel capacity, has been studied by the USACE (USACE, 1973). The upper portions of this stream are steeply sloped but as of the publication of the [date] countywide FIS report, requests have been made to the USACE and NJDEP to assess whether there is flood storage potential at golf courses and other open spaces as a part of the larger study underway to study flood mitigation alternatives in the Rahway River Basin (FEMA FIS 2014).

North Branch Wigwam Brook has had serious flooding problems in the vicinity of Harrison and Mississippi Avenues, and along most downstream parts of the improved channel. This is due to excessive velocity and lack of channel capacity, notably at Ashwood Terrace, Whittelsey Avenue, Watson Avenue, and Washington Avenue. South Branch Wigwam Brook has had serious flooding reported in the vicinity of Watchung Avenue, Lakeside Avenue, Standish Avenue, and Ashland Avenue (FEMA FIS 2014).

West Branch Rahway River has had flooding problems along its entire length from Northfield Avenue to Lake Vincent, although parts of this river flow through undeveloped or country club areas (FEMA FIS 2014).

Along Peckman River, flooding has occurred between Nicholas Avenue and Kenz Terrace (FEMA FIS 2014).

An area on the western boundary of the Township of West Orange known as the Merklin District is subject to frequent flooding due to inadequate pipe sewers and insufficient capacity of the existing storm water pumping station. The area flooded is centered between Hunterdon and Morris Roads and Westover and Tappan Terraces. The Mayfair District centered on Mayfair Drive in the north central part of the township is one such location plagued by flooding related to drainage issues. In this location flooding is caused by an inadequate storm water ejector system (Elson T. Killman Associates, Inc., 1972). The Township of West Orange has been moving forward with plans to undertake storm sewer improvements and in 2011 awarded construction contracts to begin the improvements to help alleviated flooding projects on several streets including Nestro Road, Midro Way, Mayfair Drive and Rosemont Terrace and Rosemont Drive. This project has been financed by a grant from the NJDEP and a loan from the New Jersey Environmental Infrastructure Trust (FEMA FIS 2014).



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
- Community classification
- 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 West Orange.

Table 9.23-6. Planning and Regulatory Tools

Tool / Program (code, ordinance, plan)	Do you have this? (Y/N)	Authority (local, county, state, federal)	Dept./ Agency Responsible	Code Citation and Comments (code chapter, date of adoption, name of plan, explanation of authority, etc.)
Building Code	Y	State	Construction Official	West Orange Revised General Ordinance (WORG) 13-1; State adopted codes-10/2010
Zoning Ordinance	Y	Local	Zoning Official	WORG 25
Subdivision Ordinance	Y	Local	Planning and Zoning Boards	WORG 25
NFIP Flood Damage Prevention Ordinance	Y	Local	Construction Official	WORG 24
Cumulative Substantial Damages	N			
Freeboard	Y	Local	Construction Official	WORG 24
Growth Management	N			
Floodplain Management / Basin Plan	Y	State		Regulated by State
Stormwater Management Plan/Ordinance	Y	Local	Municipal Engineer	WORG 25-29.1
Comprehensive Plan / Master Plan/ General Plan	Y	Local	Planning Department	WORG 25
Capital Improvements Plan	Y	Local	Planning Board	WORG 25
Site Plan Review Requirements	Y	Local	Planning and Building Departments	WORG 25
Open Space Plan	Y	Local	Municipal Engineer and Planning Director	WORG 2-57
Stream Corridor Management Plan	Y	State		Regulated by State
Watershed Management or Protection Plan	N			
Economic Development Plan	N			
Comprehensive Emergency Management Plan	Y	Local	Fire Chief OEM	Emergency Management Plan and Operations Plan
Emergency Response Plan	Y	Local	Fire Chief OEM	Emergency Operations Plan



Table 9.23-6. Planning and Regulatory Tools

Tool / Program (code, ordinance, plan)	Do you have this? (Y/N)	Authority (local, county, state, federal)	Dept./ Agency Responsible	Code Citation and Comments (code chapter, date of adoption, name of plan, explanation of authority, etc.)
Post Disaster Recovery Plan	N			
Post Disaster Recovery Ordinance	N			
Real Estate Disclosure Requirement	N			
Other [Special Purpose Ordinances (i.e., critical or sensitive areas)]	N/A			

Administrative and Technical Capability

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

Table 9.23-7. Administrative and Technical Capabilities

Staff/ Personnel Resources	Available (Y or N)	Department/ Agency/Position
Planner(s) or Engineer(s) with knowledge of land development and land management practices	Y	Public Works & Planning
Engineer(s) or Professional(s) trained in construction practices related to buildings and/or infrastructure	Y	Public Works & Building Dept.
Planners or engineers with an understanding of natural hazards	Y	Public Works & Building Dept.
NFIP Floodplain Administrator	Y	Leonard Lepore, P.E., Municipal Engineer
Surveyor(s)	N	Hire outside contractors
Personnel skilled or trained in “GIS” applications	Y	Public Works
Scientist familiar with natural hazards in the municipality.	N	
Emergency Manager	Y	Fire Department – Fire Chief
Grant Writer(s)	Y	Outside contractors
Staff with expertise or training in benefit/cost analysis	Y	Public Works & Finance
Professionals trained in conducting damage assessments	N	

Fiscal Capability

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

Table 9.23-8. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use (Yes/No/Don't Know)
Community Development Block Grants (CDBG)	Yes – Public Works
Capital Improvements Project Funding	Yes – Public Works
Authority to Levy Taxes for specific purposes	Yes – Finance
User fees for water, sewer, gas or electric service	Yes – Finance
Impact Fees for homebuyers or developers of new development/homes	Yes – Planning



Table 9.23-8. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use (Yes/No/Don't Know)
Incur debt through general obligation bonds	Yes – Finance
Incur debt through special tax bonds	Yes – Finance
Incur debt through private activity bonds	Yes – Finance
Withhold public expenditures in hazard-prone areas	No
Mitigation grant programs	Yes – Fire Department and Public Works
Other	N/A

Community Classifications

The table below summarizes classifications for community program available to the Township of West Orange.

Table 9.23-9. Community Classifications

Program	Classification	Date Classified
Community Rating System (CRS)	NP	N/A
Building Code Effectiveness Grading Schedule (BCEGS)	NP	N/A
Public Protection	NP	N/A
Storm Ready	NP	N/A
Firewise	NP	N/A

N/A = Not applicable. NP = Not participating. - = Unavailable. TBD = To be determined.

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/>



National Flood Insurance Program

NFIP Floodplain Administrator

Leonard Lepore, P.E., Municipal Engineer

Flood Vulnerability Summary

The municipality does not maintain lists/inventories of properties that have been damaged by floods. The damage experienced by Superstorm Sandy was not related to flooding and substantial damage estimates were not conducted/declared for this event.

Resources

The Municipal Engineer is the sole person assuming responsibilities of floodplain administration. The services and functions of the NFIP administration include flood zone question, construction permit review, and field inspections. Education and outreach regarding flood hazards/risk and flood risk reduction are not provided to the municipality's residents.

The FPA indicated that staff and funding are some barriers to running an effective floodplain management program in the municipality. The FPA also stated that they do not feel adequately supported and trained to fulfill their responsibilities as the municipality's FPA. The Administrator also indicated that they would be interested in attending continuing education and/or certification training on floodplain management, if offered.

Compliance History

The municipality is in good standing with the NFIP. It is unknown when the most recent compliance audit was conducted.

Regulatory

The municipality's floodplain management regulations/ordinances meet the minimum FEMA and State requirements. The land use regulations support floodplain management. The municipality has considered joining the CRS program and the FPA would consider attending a CRS seminar if offered locally.

Community Rating System

The municipality does not participate in the Community Rating System (CRS) program. The Office of Emergency Management and the Floodplain Administrator will be researching the CRS program and participating as a community.

Other Capabilities Identified

Previous actions that are now on-going programs and capabilities are described below. Refer to Table 9.X-11 presented later in this annex.

The municipality has identified the following mitigation projects/activities that have been completed:

The extended neighborhood which includes Nestro Road, Midro Way, Mayfair Drive, and Rosemont Terrace has been mitigated by the Mayfair district sanitary and storm sewer improvements projects. These projects included the elimination of a sanitary sewage pump station, construction of new gravity sewer mains and the enlargement of storm sewer pipes.



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.

- The Township utilizes mitigation funds to implement mitigation actions. The Township will continue to do so in the future, as appropriate. Past mitigation projects that were funded under Township budget to include: Nestro Road, Midro Way, Wayfair Drive, and Rosemont Terrace.
- The Township has proposed two new ordinances: Sprinkler and Stand pipe identification light and Installation of Knox boxes on new and existing commercial buildings. Same will protect first responder and structures.
- To continue implementing mitigation in day-to-day operations, the Township will develop a public outreach program to educate on hazards. Refer to action #13 in the Township's mitigation strategy.
- The Township has their ordinances and flood protection measures available on their website. Please visit the Township of West Orange's website at <http://www.westorange.org> for further information (FEMA FIS 2014).



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 2007 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

Description	Status	Review Comments
Flood mitigation – other than Nestro Rd., Midro Way, Mayfair Dr., and Rosemont Terr. Areas	Discontinued	The Township wishes to remove this initiative. More specific actions and locations will be identified in this update.
Inflow and infiltration into sanitary sewer system (I&I) work needed	Discontinued	The Township wishes to remove this initiative. More specific locations of I&I work will be identified in this update.
Improvements along Nestro Rd., Midro Way, Mayfair Dr., and Rosemont Terr. to mitigate flooding	Completed	These improvements included new storm water collection and conveyance facilities and new sanitary sewer facilities including elimination of a pump station.
Rural fires	Discontinued	This initiative no longer wishes to be pursued by the Township due to increased development of rural lands.
Terrorism due to close proximity to New York City	Discontinued	The Township wishes to remove this initiative due to annual ongoing training and procurement of necessary equipment.
Dam failure in the City of Orange Reservoir	Discontinued	The Township wishes to remove this initiative due to minimal impact, current mandatory standards and annual inspections of the dam.

Completed Mitigation Initiatives not Identified in the Previous Mitigation Strategy

The following initiatives have been completed in the municipality; however, they were not identified in the previous mitigation strategy: No initiatives have been completed since 2008 plan. The below initiatives were completed prior to 2008 mitigation plan.

- There have been numerous attempts to solve some of the flooding problems along various streams in the Township of West Orange. The East and West Forks of East Branch Rahway River have had channel improvements along substantial lengths (FEMA FIS 2014).
- The North Branch of the Wigwam Brook has had similar improvements as stated above.



Proposed Hazard Mitigation Initiatives for the Plan Update

The Township participated in a mitigation action workshop in March 2014 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 June 2014, the Township participated in a second workshop 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 9.23-11 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 and Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
West Orange-1 (NEW/LOI)	To ensure continuity of operations, obtain backup power for critical facilities: West Orange Township Hall generator.	Existing	All	1.2 6.1	OEM Township Manager	High	Medium \$75,000	HMGP	Short Term DOF	High	SIP	ES
West Orange-2 (NEW/LOI)	To ensure continuity of operations, obtain backup power for critical facilities: West Orange Fire Station #2 generator project.	Existing	All	1.2 6.1	OEM Township Manager	High	Medium \$75,000	HMGP	Short Term DOF	High	SIP	ES
West Orange-3 (NEW/LOI)	To ensure continuity of operations, obtain backup power for critical facilities: West Orange Fire Station #3 generator project.	Existing	All	1.2 6.1	OEM Township Manager	High	Medium \$75,000	HMGP	Short Term DOF	High	SIP	ES
West Orange-4 (NEW/LOI)	To ensure continuity of operations, obtain backup power for critical facilities: West Orange High School generator project.	Existing	All	1.2 6.1	OEM Township Manager	High	Medium \$75,000	HMGP	Short Term DOF	High	SIP	ES
West Orange-5 (NEW/LOI)	To ensure continuity of operations, obtain backup power for critical facilities: West Orange wastewater sewage pump stations generators project.	Existing	All	1.2 6.1	OEM Township Manager	High	Medium \$75,000	HMGP	Short Term DOF	High	SIP	ES
West Orange-6 (NEW/LOI)	To ensure continuity of operations, obtain backup power for critical facilities: West Orange public library generator project.	Existing	All	1.2 6.1	OEM Township Manager	High	Medium \$75,000	HMGP	Short Term DOF	High	SIP	ES
West Orange-7 (NEW/LOI)	To ensure continuity of operations, obtain backup power for critical facilities: West	Existing	All	1.2 6.1	OEM Township Manager	High	Medium \$75,000	HMGP	Short Term DOF	High	SIP	ES



Table 9.23-11. Proposed Hazard Mitigation Initiatives

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals and Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
	Orange Police Department generator project.											
West Orange-8 (NEW/LOI)	To ensure continuity of operations, obtain backup power for critical facilities: West Orange Roosevelt Middle School generator project.	Existing	All	1.2 6.1	OEM Township Manager	High	Medium \$75,000	HMGP	Short Term DOF	High	SIP	ES
West Orange-9 (NEW/LOI)	To ensure continuity of operations, obtain backup power for critical facilities: West Orange Fire Headquarters generator project.	Existing	All	1.2 6.1	OEM Township Manager	High	Medium \$75,000	HMGP	Short Term DOF	High	SIP	ES
West Orange-10 (NEW/LOI)	To ensure continuity of operations, obtain backup power for critical facilities: West Orange Fire Station #4 generator project.	Existing	All	1.2 6.1	OEM Township Manager	High	Medium \$75,000	HMGP	Short Term DOF	High	SIP	ES
West Orange-11 (NEW/LOI)	To ensure continuity of operations, obtain backup power for critical facilities: West Orange Alex Caprio Animal Control Shelter generator project.	Existing	All	1.2 6.1	OEM Township Manager	High	Medium \$75,000	HMGP	Short Term DOF	High	SIP	ES
West Orange-12 (NEW)	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 from FEMA and local match availability. Specifically identified are properties in the following areas: • East Branch of Rahway River • West Branch of Rahway River • North Branch Wigwam Brook • Peckman River area											
	See above.	Existing	Flood,	1.2	Engineering,	Medium	Medium	FEMA	Long term	Medium	SIP	SP



Table 9.23-11. Proposed Hazard Mitigation Initiatives

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals and Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
				2.2	Building Departments, OEM			Mitigation Grant Programs and local budget (or property owner) for cost share	DOF			
West Orange-13 (NEW)	Develop and implement an enhanced all-hazards, public outreach / education / mitigation information program on natural hazard risks and what residents can do in the way of mitigation and preparedness, including flood insurance. This program will include: • Providing general natural hazard risk, preparedness and mitigation, and related NFIP information in regular newsletter and mailings. • Including natural hazard risk and risk reduction information through social media channels and email blast systems. • Posting of flyers and other readily available NFIP informational materials at Town/Village hall or distributing at regular civic meetings. • Preparation, distribution and analysis of public surveys. • Developing/maintaining a natural hazard risk management webpage on the municipal website where information and mapping can be posted. • Enhance public outreach to residents in NFIP floodplain areas to inform of annual grant opportunities, etc. which may include periodic articles and handouts in the annual newsletter. • Provide public education on eliminating inflow from sump pump and roof leader discharges.											
	See above.	N/A	All Hazards	1.2 3.1 3.2	OEM, Town Manager	Medium	Low	Municipal Budget; HMA programs	Short	High	EAP	PE
West Orange-14 (NEW)	Support participation in the NFIP Community Rating System (CRS) program by attending CRS workshop(s) if offered within the county. Join the CRS program if adequate resources to support long term participation can be dedicated. See following related Community Assistance Visit (CAV) initiative.	N/A	Flood	1.2 1.3 2.2	Municipal NFIP FPA, as fully supported by local government officials	Medium	Medium	Municipal Budget	Short (year 1)	Medium	LPR, EAP	PR
West Orange-15	Determine if a Community Assistance	N/A	Flood	1.2	Municipal NFIP FPA,	Medium	Medium	Municipal Budget	Short (year 1)	Medium	LPR, EAP	PR



Table 9.23-11. Proposed Hazard Mitigation Initiatives

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals and Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
(NEW)	Visit (CAV) or Community Assistance Contact (CAC) is needed, and schedule if needed. This is a part of the process of joining CRS (above initiative).			1.3 2.2	as fully supported by local government officials							
West Orange-16 (NEW)	Make structural improvements to sewer system Township wide to include identifying properties susceptible to sewage backups during flooding events.	Existing	Flood, Severe Weather	1.2 2.2	Public Works Department, Engineering	High	High	Federal HMA Grant Programs	Long term. DOF	High	SIP	SP
West Orange-17 (NEW)	Enhance/expand municipal tree maintenance and identification of preferred species planting program in conjunction with utility companies and PSE&G.	Existing	Severe Weather; Severe Winter Storm	1.2 2.1 6.1	Department of Public Works working with contractors and local utilities	Medium – High (reduced risk of utility outages; life safety)	Medium	Municipal Budget	Short	Medium	NSP	NSP

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:

CAV	Community Assistance Visit
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
RFC	Repetitive Flood Claims Grant Program
SRL	Severe Repetitive Loss Grant Program

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.

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

GRS 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

Timeline:

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

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.



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
West Orange-1 (NEW/LOI)	West Orange Township Hall generator.	1	0	1	1	1	1	0	1	1	1	1	1	1	1	12	High
West Orange-2 (NEW/LOI)	West Orange Fire Station #2 generator project.	1	0	1	1	1	1	0	1	1	1	1	1	1	1	12	High
West Orange-3 (NEW/LOI)	West Orange Fire Station #3 generator project.	1	0	1	1	1	1	0	1	1	1	1	1	1	1	12	High
West Orange-4 (NEW/LOI)	West Orange High School generator project.	1	0	1	1	1	1	0	1	1	1	1	1	1	1	12	High
West Orange-5 (NEW/LOI)	West Orange wastewater sewage pump stations generators project.	1	0	1	1	1	1	0	1	1	1	1	1	1	1	12	High
West Orange-6 (NEW/LOI)	West Orange public library generator project.	1	0	1	1	1	1	0	1	1	1	1	1	1	1	12	High
West Orange-7 (NEW/LOI)	West Orange Police Department generator project.	1	0	1	1	1	1	0	1	1	1	1	1	1	1	12	High
West Orange-8 (NEW/LOI)	West Orange Roosevelt Middle School generator project.	1	0	1	1	1	1	0	1	1	1	1	1	1	1	12	High
West Orange-9 (NEW/LOI)	West Orange Fire Headquarters generator project.	1	0	1	1	1	1	0	1	1	1	1	1	1	1	12	High
West Orange-10 (NEW/LOI)	West Orange Fire Station #4 generator project.	1	0	1	1	1	1	0	1	1	1	1	1	1	1	12	High



Section 9.23: Township of West Orange

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
West Orange-11 (NEW/LOI)	West Orange Alex Caprio Animal Control Shelter generator project.	1	0	1	1	1	1	0	1	1	1	1	1	1	1	12	High
West Orange-12 (NEW)	Mitigation of Vulnerable Structures	1	1	1	1	0	1	0	1	1	1	1	0	1	1	11	High
West Orange-13 (NEW)	Public Outreach	1	1	1	1	1	1	0	0	1	1	1	1	1	1	12	High
West Orange-14 (NEW)	Explore Participation in CRS	1	1	1	1	0	1	0	0	1	1	0	0	0	1	8	Medium
West Orange-15 (NEW)	CRS Community Assistance Visit	1	1	1	1	0	1	0	0	1	1	0	0	0	1	8	Medium
17 West Orange-16 (NEW)	Make structural improvements to sewer system Township wide	1	1	1	1	1	1	0	0	1	1	1	0	1	1	11	High
West Orange-17 (NEW)	Enhance/expand municipal tree maintenance program	1	1	1	1	1	1	0	1	1	1	1	1	1	0	12	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 West Orange 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 West Orange 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 West Orange Hazard Area Extent and Location Map 1

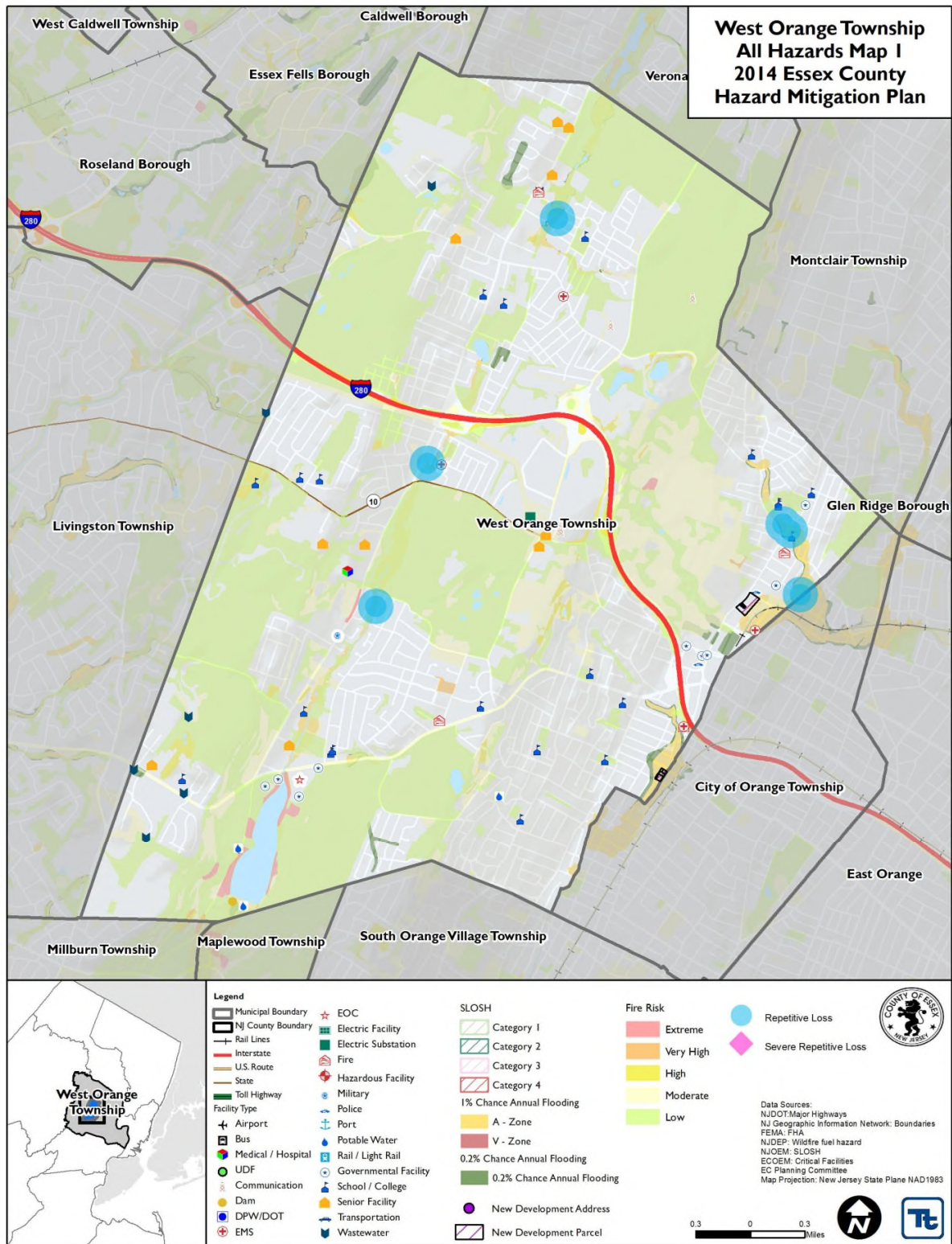
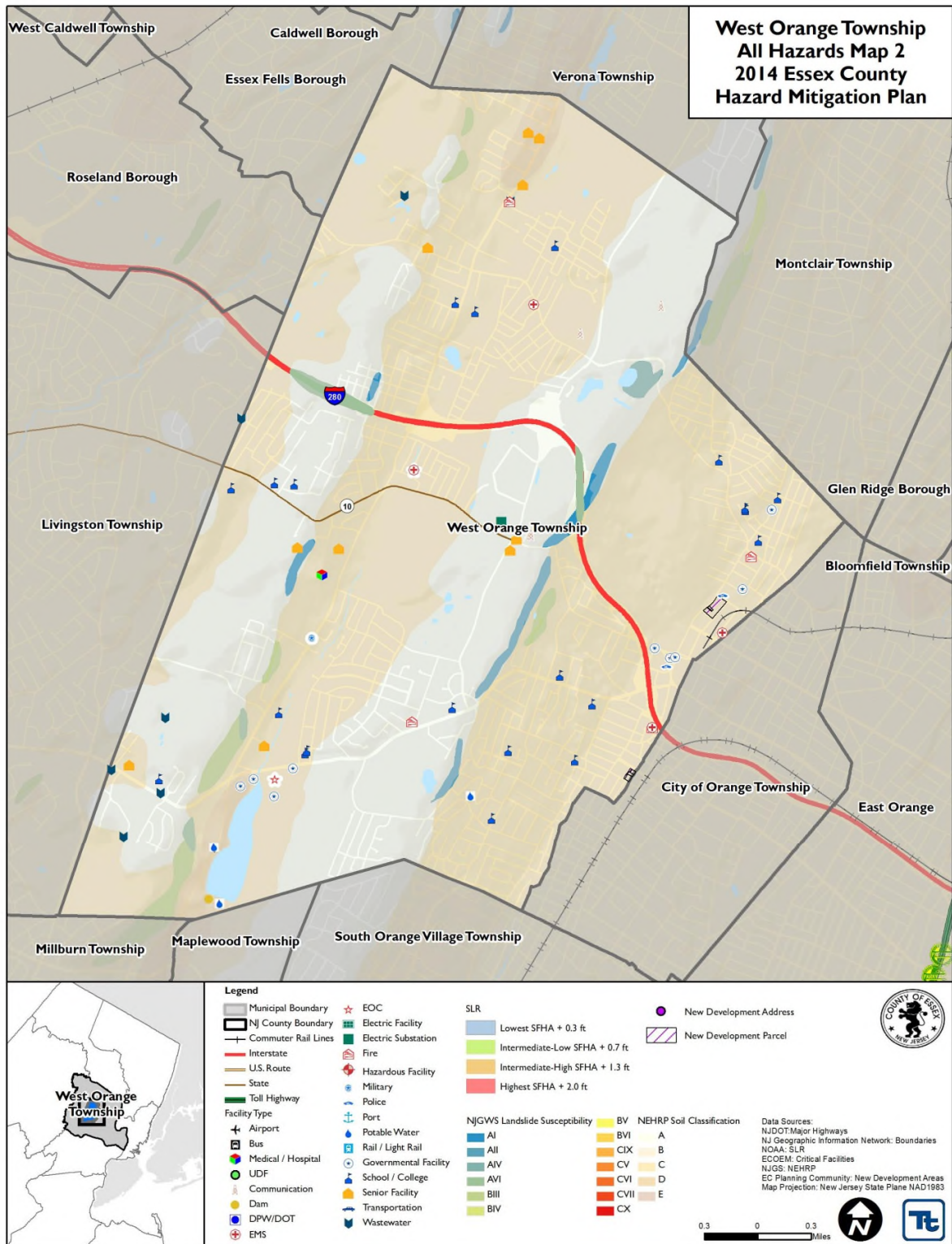




Figure 9.23-2. Township of West Orange Hazard Area Extent and Location Map 2





Section 9.23: Township of West Orange

Action Number: **West Orange-1 (NEW/LOI)**
Mitigation Action/Initiative: **West Orange Township Hall generator**

Assessing the Risk	
Hazard(s) addressed:	All Hazards
Specific problem being mitigated:	Loss of Power, loss of operational capabilities
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	1. Tree Trimming-remove tree branches that may fall onto power lines causing power outages. This is currently being done as existing town maintenance, to protect feeder lines, but doesn't help with primary or secondary lines off Town property. 2. Bury Power Lines. This option is not being pursued as it is cost prohibitive due to the long run and the Town does not have the legal authority to bury the lines. 3. Urge Special Treatment from Power Company-Meet with the executive team and urge them to take steps necessary to prevent power failures to Town Hall. This is not the best alternative because it relies on others to address the problem. The solution remains outside the control of the Town. Though we do get priority, the system is complex and does not provide a direct connection to a sub-station. (Another alternative could be to install a secondary electrical feed from an independent section of the local grid – this is typically technically infeasible and cost-prohibitive.)
Action/Project Intended for Implementation	
Description of Selected Action/Project	Purchase and install a generator at Town Hall
Action/Project Category	SIP
Goals/Objectives Met	1.2; 6.1
Applies to existing, future, or not applicable	Existing
Benefits (losses avoided)	Continuity of operations
Estimated Cost	\$75,000
Priority*	High
Plan for Implementation	
Responsible Organization	OEM, Township Manager
Local Planning Mechanism	EOP, Mitigation Plan
Potential Funding Sources	HMGP, Township Budget
Timeline for Completion	Short Term DOF
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: Progress on Action/Project:

**Refer to prioritization table.*





Section 9.23: Township of West Orange

Action Number:

West Orange-1 (NEW/LOI)

Mitigation Action/Initiative:

West Orange Township Hall generator

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Will allow this critical facility to remain operational during power outages.
Property Protection	0	This project will have no significant effect on reducing damage to the Village Hall structure.
Cost-Effectiveness	1	This project is considered highly cost-effective
Technical	1	There are no technical issues associated with the project, and with routine maintenance will provide long term protection against power interruptions.
Political	1	This project is supported both publically and politically.
Legal	1	The municipality has full legal authority to implement this project.
Fiscal	0	The town can currently fund the local match if a grant were awarded.
Environmental	1	There are no environmental constraints associated with this project.
Social	1	This project benefits all sectors of the community equally.
Administrative	1	The Town has all administrative and technical resources necessary to implement this project
Multi-Hazard	1	This project provides protection against multiple hazards.
Timeline	1	The project can be implemented within one year once funding is secured.
Agency Champion	1	The Town Supervisor and Emergency Management Coordinator are the leads for this critical project.
Other Community Objectives	1	This project supports the Town's commitment to provide uninterrupted critical services to their residents, particularly in times of natural disasters and other emergencies.
Total	12	
Priority (High/Med/Low)	High	





Action Number:

West Orange-2 (NEW/LOI)

Mitigation Action/Initiative:

West Orange Fire Station #2 generator project

Assessing the Risk	
Hazard(s) addressed:	All Hazards
Specific problem being mitigated:	Loss of Power, loss of operational capabilities
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	1. Tree Trimming-remove tree branches that may fall onto power lines causing power outages. This is currently being done as existing town maintenance, to protect feeder lines, but doesn't help with primary or secondary lines off Town property. 2. Bury Power Lines. This option is not being pursued as it is cost prohibitive due to the long run and the Town does not have the legal authority to bury the lines. 3. Urge Special Treatment from Power Company-Meet with the executive team and urge them to take steps necessary to prevent power failures to Town Hall - This is not the best alternative because it relies on others to address the problem. The solution remains outside the control of the Town. - Though we do get priority, the system is complex and does not provide a direct connection to a sub-station. (Another alternative could be to install a secondary electrical feed from an independent section of the local grid – this is typically technically infeasible and cost-prohibitive.)
Action/Project Intended for Implementation	
Description of Selected Action/Project	Purchase and install a generator at Fire Station #2
Action/Project Category	SIP
Goals/Objectives Met	1.2; 6.1
Applies to existing, future, or not applicable	Existing
Benefits (losses avoided)	Emergency Response, continuity of operations
Estimated Cost	\$75,000
Priority*	High
Plan for Implementation	
Responsible Organization	OEM, Fire Department
Local Planning Mechanism	EOP, Mitigation Plan
Potential Funding Sources	HMGP, Township Budget
Timeline for Completion	Short Term DOF
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: Progress on Action/Project:

**Refer to prioritization table.*



Section 9.23: Township of West Orange

Action Number:

West Orange-2 (NEW/LOI)

Mitigation Action/Initiative:

West Orange Fire Station #2 generator project

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Will allow this critical facility to remain operational during power outages.
Property Protection	0	This project will have no significant effect on reducing damage to the Village Hall structure.
Cost-Effectiveness	1	This project is considered highly cost-effective
Technical	1	There are no technical issues associated with the project, and with routine maintenance will provide long term protection against power interruptions.
Political	1	This project is supported both publically and politically.
Legal	1	The municipality has full legal authority to implement this project.
Fiscal	0	The town can currently fund the local match if a grant were awarded.
Environmental	1	There are no environmental constraints associated with this project.
Social	1	This project benefits all sectors of the community equally.
Administrative	1	The Town has all administrative and technical resources necessary to implement this project
Multi-Hazard	1	This project provides protection against multiple hazards.
Timeline	1	The project can be implemented within one year once funding is secured.
Agency Champion	1	The Town Supervisor and Emergency Management Coordinator are the leads for this critical project.
Other Community Objectives	1	This project supports the Town's commitment to provide uninterrupted critical services to their residents, particularly in times of natural disasters and other emergencies.
Total	12	
Priority (High/Med/Low)	High	



Action Number:

West Orange-3 (NEW/LOI)

Mitigation Action/Initiative:

West Orange Fire Station #3 generator project

Assessing the Risk	
Hazard(s) addressed:	All Hazards
Specific problem being mitigated:	Loss of Power, loss of operational capabilities
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	1. Tree Trimming-remove tree branches that may fall onto power lines causing power outages. This is currently being done as existing town maintenance, to protect feeder lines, but doesn't help with primary or secondary lines off Town property. 2. Bury Power Lines. This option is not being pursued as it is cost prohibitive due to the long run and the Town does not have the legal authority to bury the lines. 3. Urge Special Treatment from Power Company-Meet with the executive team and urge them to take steps necessary to prevent power failures to Town Hall - This is not the best alternative because it relies on others to address the problem. The solution remains outside the control of the Town. - Though we do get priority, the system is complex and does not provide a direct connection to a sub-station. (Another alternative could be to install a secondary electrical feed from an independent section of the local grid – this is typically technically infeasible and cost-prohibitive.)
Action/Project Intended for Implementation	
Description of Selected Action/Project	Purchase and install a generator at Fire Station #3
Action/Project Category	SIP
Goals/Objectives Met	1.2; 6.1
Applies to existing, future, or not applicable	Existing
Benefits (losses avoided)	Emergency Response, continuity of operations
Estimated Cost	\$75,000
Priority*	High
Plan for Implementation	
Responsible Organization	OEM, Fire Department
Local Planning Mechanism	EOP, Mitigation Plan
Potential Funding Sources	HMGP, Township Budget
Timeline for Completion	Short Term DOF
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: Progress on Action/Project:

**Refer to prioritization table.*



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Section 9.23: Township of West Orange

Action Number:

West Orange-3 (NEW/LOI)

Mitigation Action/Initiative:

West Orange Fire Station #3 generator project

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Will allow this critical facility to remain operational during power outages.
Property Protection	0	This project will have no significant effect on reducing damage to the Village Hall structure.
Cost-Effectiveness	1	This project is considered highly cost-effective
Technical	1	There are no technical issues associated with the project, and with routine maintenance will provide long term protection against power interruptions.
Political	1	This project is supported both publically and politically.
Legal	1	The municipality has full legal authority to implement this project.
Fiscal	0	The town can currently fund the local match if a grant were awarded.
Environmental	1	There are no environmental constraints associated with this project.
Social	1	This project benefits all sectors of the community equally.
Administrative	1	The Town has all administrative and technical resources necessary to implement this project
Multi-Hazard	1	This project provides protection against multiple hazards.
Timeline	1	The project can be implemented within one year once funding is secured.
Agency Champion	1	The Town Supervisor and Emergency Management Coordinator are the leads for this critical project.
Other Community Objectives	1	This project supports the Town's commitment to provide uninterrupted critical services to their residents, particularly in times of natural disasters and other emergencies.
Total	12	
Priority (High/Med/Low)	High	





Action Number:

West Orange-4 (NEW/LOI)

Mitigation Action/Initiative:

West Orange High School generator project

Assessing the Risk	
Hazard(s) addressed:	All Hazards
Specific problem being mitigated:	Maintain continuity of operations during power outage to support shelter operations
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	1. Tree Trimming-remove tree branches that may fall onto power lines causing power outages. This is currently being done as existing town maintenance, to protect feeder lines, but doesn't help with primary or secondary lines off Town property.
	2. Bury Power Lines. This option is not being pursued as it is cost prohibitive due to the long run and the Town does not have the legal authority to bury the lines.
	3. Urge Special Treatment from Power Company-Meet with the executive team and urge them to take steps necessary to prevent power failures to Town Hall - This is not the best alternative because it relies on others to address the problem. The solution remains outside the control of the Town. - Though we do get priority, the system is complex and does not provide a direct connection to a sub-station. (Another alternative could be to install a secondary electrical feed from an independent section of the local grid – this is typically technically infeasible and cost-prohibitive.)
Action/Project Intended for Implementation	
Description of Selected Action/Project	Purchase and install a generator at High School
Action/Project Category	SIP
Goals/Objectives Met	1.2; 6.1
Applies to existing, future, or not applicable	Existing
Benefits (losses avoided)	Shelter Operations, Continuity of operations
Estimated Cost	\$75,000
Priority*	High
Plan for Implementation	
Responsible Organization	OEM
Local Planning Mechanism	EOP, Mitigation Plan
Potential Funding Sources	HMGP, Township Budget
Timeline for Completion	Short Term DOF
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: Progress on Action/Project:

**Refer to prioritization table.*



Section 9.23: Township of West Orange

Action Number:

West Orange-5 (NEW/LOI)

Mitigation Action/Initiative:

West Orange High School generator project

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Will allow this critical facility to remain operational during power outages.
Property Protection	0	This project will have no significant effect on reducing damage to the Village Hall structure.
Cost-Effectiveness	1	This project is considered highly cost-effective
Technical	1	There are no technical issues associated with the project, and with routine maintenance will provide long term protection against power interruptions.
Political	1	This project is supported both publically and politically.
Legal	1	The municipality has full legal authority to implement this project.
Fiscal	0	The town can currently fund the local match if a grant were awarded.
Environmental	1	There are no environmental constraints associated with this project.
Social	1	This project benefits all sectors of the community equally.
Administrative	1	The Town has all administrative and technical resources necessary to implement this project
Multi-Hazard	1	This project provides protection against multiple hazards.
Timeline	1	The project can be implemented within one year once funding is secured.
Agency Champion	1	The Town Supervisor and Emergency Management Coordinator are the leads for this critical project.
Other Community Objectives	1	This project supports the Town's commitment to provide uninterrupted critical services to their residents, particularly in times of natural disasters and other emergencies.
Total	12	
Priority (High/Med/Low)	High	



Action Number:

West Orange-5 (NEW/LOI)

Mitigation Action/Initiative:

West Orange wastewater sewage pump stations generators project

Assessing the Risk	
Hazard(s) addressed:	All Hazards
Specific problem being mitigated:	Loss of Power, loss of operational capabilities
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	1. Tree Trimming-remove tree branches that may fall onto power lines causing power outages. This is currently being done as existing town maintenance, to protect feeder lines, but doesn't help with primary or secondary lines off Town property. 2. Bury Power Lines. This option is not being pursued as it is cost prohibitive due to the long run and the Town does not have the legal authority to bury the lines. 3. Urge Special Treatment from Power Company-Meet with the executive team and urge them to take steps necessary to prevent power failures to Town Hall - This is not the best alternative because it relies on others to address the problem. The solution remains outside the control of the Town. - Though we do get priority, the system is complex and does not provide a direct connection to a sub-station. (Another alternative could be to install a secondary electrical feed from an independent section of the local grid – this is typically technically infeasible and cost-prohibitive.)
Action/Project Intended for Implementation	
Description of Selected Action/Project	Purchase and install a generator at Pump Stations
Action/Project Category	SIP
Goals/Objectives Met	1.2; 6.1
Applies to existing, future, or not applicable	Existing
Benefits (losses avoided)	Additional flooding and back up of wastewater and sewage, Continuity of operations
Estimated Cost	\$75,000
Priority*	High
Plan for Implementation	
Responsible Organization	OEM, Township Manager
Local Planning Mechanism	EOP, Mitigation Plan
Potential Funding Sources	HMGP, Township Budget
Timeline for Completion	Short Term DOF
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: Progress on Action/Project:

**Refer to prioritization table.*



Section 9.23: Township of West Orange

Action Number:

West Orange-5 (NEW/LOI)

Mitigation Action/Initiative:

West Orange wastewater sewage pump stations generators project

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Will allow this critical facility to remain operational during power outages.
Property Protection	0	This project will have no significant effect on reducing damage to the Village Hall structure.
Cost-Effectiveness	1	This project is considered highly cost-effective
Technical	1	There are no technical issues associated with the project, and with routine maintenance will provide long term protection against power interruptions.
Political	1	This project is supported both publically and politically.
Legal	1	The municipality has full legal authority to implement this project.
Fiscal	0	The town can currently fund the local match if a grant were awarded.
Environmental	1	There are no environmental constraints associated with this project.
Social	1	This project benefits all sectors of the community equally.
Administrative	1	The Town has all administrative and technical resources necessary to implement this project
Multi-Hazard	1	This project provides protection against multiple hazards.
Timeline	1	The project can be implemented within one year once funding is secured.
Agency Champion	1	The Town Supervisor and Emergency Management Coordinator are the leads for this critical project.
Other Community Objectives	1	This project supports the Town's commitment to provide uninterrupted critical services to their residents, particularly in times of natural disasters and other emergencies.
Total	12	
Priority (High/Med/Low)	High	





Action Number:

West Orange-6 (NEW/LOI)

Mitigation Action/Initiative:

West Orange public library generator project

Assessing the Risk	
Hazard(s) addressed:	All Hazards
Specific problem being mitigated:	Maintain continuity of operations during power outage to support shelter operations
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	1. Tree Trimming-remove tree branches that may fall onto power lines causing power outages. This is currently being done as existing town maintenance, to protect feeder lines, but doesn't help with primary or secondary lines off Town property. 2. Bury Power Lines. This option is not being pursued as it is cost prohibitive due to the long run and the Town does not have the legal authority to bury the lines. 3. Urge Special Treatment from Power Company-Meet with the executive team and urge them to take steps necessary to prevent power failures to Town Hall - This is not the best alternative because it relies on others to address the problem. The solution remains outside the control of the Town. - Though we do get priority, the system is complex and does not provide a direct connection to a sub-station. (Another alternative could be to install a secondary electrical feed from an independent section of the local grid – this is typically technically infeasible and cost-prohibitive.)
Action/Project Intended for Implementation	
Description of Selected Action/Project	Purchase and install a generator at Public Library
Action/Project Category	SIP
Goals/Objectives Met	1.2; 6.1
Applies to existing, future, or not applicable	Existing
Benefits (losses avoided)	Shelter Operations, Continuity of operations
Estimated Cost	\$75,000
Priority*	High
Plan for Implementation	
Responsible Organization	OEM
Local Planning Mechanism	EOP, Mitigation Plan
Potential Funding Sources	HMGP, Township Budget
Timeline for Completion	Short Term DOF
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: Progress on Action/Project:

**Refer to prioritization table.*



Section 9.23: Township of West Orange

Action Number:

West Orange-6 (NEW/LOI)

Mitigation Action/Initiative:

West Orange public library generator project

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Will allow this critical facility to remain operational during power outages.
Property Protection	0	This project will have no significant effect on reducing damage to the Village Hall structure.
Cost-Effectiveness	1	This project is considered highly cost-effective
Technical	1	There are no technical issues associated with the project, and with routine maintenance will provide long term protection against power interruptions.
Political	1	This project is supported both publically and politically.
Legal	1	The municipality has full legal authority to implement this project.
Fiscal	0	The town can currently fund the local match if a grant were awarded.
Environmental	1	There are no environmental constraints associated with this project.
Social	1	This project benefits all sectors of the community equally.
Administrative	1	The Town has all administrative and technical resources necessary to implement this project
Multi-Hazard	1	This project provides protection against multiple hazards.
Timeline	1	The project can be implemented within one year once funding is secured.
Agency Champion	1	The Town Supervisor and Emergency Management Coordinator are the leads for this critical project.
Other Community Objectives	1	This project supports the Town's commitment to provide uninterrupted critical services to their residents, particularly in times of natural disasters and other emergencies.
Total	12	
Priority (High/Med/Low)	High	



Action Number:

West Orange-7 (NEW/LOI)

Mitigation Action/Initiative:

West Orange Police Department generator project

Assessing the Risk	
Hazard(s) addressed:	All Hazards
Specific problem being mitigated:	Maintain continuity of operations during power outages.
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	1. Tree Trimming-remove tree branches that may fall onto power lines causing power outages. This is currently being done as existing town maintenance, to protect feeder lines, but doesn't help with primary or secondary lines off Town property. 2. Bury Power Lines. This option is not being pursued as it is cost prohibitive due to the long run and the Town does not have the legal authority to bury the lines. 3. Urge Special Treatment from Power Company-Meet with the executive team and urge them to take steps necessary to prevent power failures to Town Hall - This is not the best alternative because it relies on others to address the problem. The solution remains outside the control of the Town. - Though we do get priority, the system is complex and does not provide a direct connection to a sub-station. (Another alternative could be to install a secondary electrical feed from an independent section of the local grid – this is typically technically infeasible and cost-prohibitive.)
Action/Project Intended for Implementation	
Description of Selected Action/Project	Purchase and install a generator at Police Headquarters
Action/Project Category	SIP
Goals/Objectives Met	1.2; 6.1
Applies to existing, future, or not applicable	Existing
Benefits (losses avoided)	Continuity of operations for police, fire and EMS services
Estimated Cost	\$75,000
Priority*	High
Plan for Implementation	
Responsible Organization	OEM, Police Department
Local Planning Mechanism	EOP, Mitigation Plan
Potential Funding Sources	HMGP, Township Budget
Timeline for Completion	Short Term DOF
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: Progress on Action/Project:

**Refer to prioritization table.*



Section 9.23: Township of West Orange

Action Number:

West Orange-7 (NEW/LOI)

Mitigation Action/Initiative:

West Orange Police Department generator project

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Will allow this critical facility to remain operational during power outages.
Property Protection	0	This project will have no significant effect on reducing damage to the Village Hall structure.
Cost-Effectiveness	1	This project is considered highly cost-effective
Technical	1	There are no technical issues associated with the project, and with routine maintenance will provide long term protection against power interruptions.
Political	1	This project is supported both publically and politically.
Legal	1	The municipality has full legal authority to implement this project.
Fiscal	0	The town can currently fund the local match if a grant were awarded.
Environmental	1	There are no environmental constraints associated with this project.
Social	1	This project benefits all sectors of the community equally.
Administrative	1	The Town has all administrative and technical resources necessary to implement this project
Multi-Hazard	1	This project provides protection against multiple hazards.
Timeline	1	The project can be implemented within one year once funding is secured.
Agency Champion	1	The Town Supervisor and Emergency Management Coordinator are the leads for this critical project.
Other Community Objectives	1	This project supports the Town's commitment to provide uninterrupted critical services to their residents, particularly in times of natural disasters and other emergencies.
Total	12	
Priority (High/Med/Low)	High	



Action Number:

West Orange-8 (NEW/LOI)

Mitigation Action/Initiative:

West Orange Roosevelt Middle School generator project

Assessing the Risk	
Hazard(s) addressed:	All Hazards
Specific problem being mitigated:	Maintain continuity of operations during power outage to support shelter operations
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	1. Tree Trimming-remove tree branches that may fall onto power lines causing power outages. This is currently being done as existing town maintenance, to protect feeder lines, but doesn't help with primary or secondary lines off Town property.
	2. Bury Power Lines. This option is not being pursued as it is cost prohibitive due to the long run and the Town does not have the legal authority to bury the lines.
	3. Urge Special Treatment from Power Company-Meet with the executive team and urge them to take steps necessary to prevent power failures to Town Hall - This is not the best alternative because it relies on others to address the problem. The solution remains outside the control of the Town. - Though we do get priority, the system is complex and does not provide a direct connection to a sub-station. (Another alternative could be to install a secondary electrical feed from an independent section of the local grid – this is typically technically infeasible and cost-prohibitive.)
Action/Project Intended for Implementation	
Description of Selected Action/Project	Purchase and install a generator at Middle School
Action/Project Category	SIP
Goals/Objectives Met	1.2; 6.1
Applies to existing, future, or not applicable	Existing
Benefits (losses avoided)	Shelter Operations, Continuity of operations
Estimated Cost	\$75,000
Priority*	High
Plan for Implementation	
Responsible Organization	OEM, Township Manager
Local Planning Mechanism	EOP, Mitigation Plan
Potential Funding Sources	HMGP, Township Budget
Timeline for Completion	Short Term, DOF
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: Progress on Action/Project:

**Refer to prioritization table.*



Section 9.23: Township of West Orange

Action Number:

West Orange-8 (NEW/LOI)

Mitigation Action/Initiative:

West Orange Roosevelt Middle School generator project

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Will allow this critical facility to remain operational during power outages.
Property Protection	0	This project will have no significant effect on reducing damage to the Village Hall structure.
Cost-Effectiveness	1	This project is considered highly cost-effective.
Technical	1	There are no technical issues associated with the project, and with routine maintenance will provide long term protection against power interruptions.
Political	1	This project is supported both publically and politically.
Legal	1	The municipality has full legal authority to implement this project.
Fiscal	0	The town can currently fund the local match if a grant were awarded.
Environmental	1	There are no environmental constraints associated with this project.
Social	1	This project benefits all sectors of the community equally.
Administrative	1	The Town has all administrative and technical resources necessary to implement this project.
Multi-Hazard	1	This project provides protection against multiple hazards.
Timeline	1	The project can be implemented within one year once funding is secured.
Agency Champion	1	The Town Supervisor and Emergency Management Coordinator are the leads for this critical project.
Other Community Objectives	1	This project supports the Town's commitment to provide uninterrupted critical services to their residents, particularly in times of natural disasters and other emergencies.
Total	12	
Priority (High/Med/Low)	High	



Action Number:

West Orange-9 (NEW/LOI)

Mitigation Action/Initiative:

West Orange Fire Headquarters generator project

Assessing the Risk	
Hazard(s) addressed:	All Hazards
Specific problem being mitigated:	Loss of Power, loss of operational capabilities
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	1. Tree Trimming-remove tree branches that may fall onto power lines causing power outages. This is currently being done as existing town maintenance, to protect feeder lines, but doesn't help with primary or secondary lines off Town property. 2. Bury Power Lines. This option is not being pursued as it is cost prohibitive due to the long run and the Town does not have the legal authority to bury the lines. 3. Urge Special Treatment from Power Company-Meet with the executive team and urge them to take steps necessary to prevent power failures to Town Hall - This is not the best alternative because it relies on others to address the problem. The solution remains outside the control of the Town. - Though we do get priority, the system is complex and does not provide a direct connection to a sub-station. (Another alternative could be to install a secondary electrical feed from an independent section of the local grid – this is typically technically infeasible and cost-prohibitive.)
Action/Project Intended for Implementation	
Description of Selected Action/Project	Purchase and install a generator at Fire Headquarters
Action/Project Category	SIP
Goals/Objectives Met	1.2; 6.1
Applies to existing, future, or not applicable	Existing
Benefits (losses avoided)	Emergency Response, continuity of operations
Estimated Cost	\$75,000
Priority*	High
Plan for Implementation	
Responsible Organization	Fire Department, OEM
Local Planning Mechanism	EOP, Mitigation Plan
Potential Funding Sources	HMGP, Township Budget
Timeline for Completion	Short Term DOF
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: Progress on Action/Project:

**Refer to prioritization table.*



Section 9.23: Township of West Orange

Action Number:

West Orange-9 (NEW/LOI)

Mitigation Action/Initiative:

West Orange Fire Headquarters generator project

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Will allow this critical facility to remain operational during power outages.
Property Protection	0	This project will have no significant effect on reducing damage to the Village Hall structure.
Cost-Effectiveness	1	This project is considered highly cost-effective
Technical	1	There are no technical issues associated with the project, and with routine maintenance will provide long term protection against power interruptions.
Political	1	This project is supported both publically and politically.
Legal	1	The municipality has full legal authority to implement this project.
Fiscal	0	The town can currently fund the local match if a grant were awarded.
Environmental	1	There are no environmental constraints associated with this project.
Social	1	This project benefits all sectors of the community equally.
Administrative	1	The Town has all administrative and technical resources necessary to implement this project
Multi-Hazard	1	This project provides protection against multiple hazards.
Timeline	1	The project can be implemented within one year once funding is secured.
Agency Champion	1	The Town Supervisor and Emergency Management Coordinator are the leads for this critical project.
Other Community Objectives	1	This project supports the Town's commitment to provide uninterrupted critical services to their residents, particularly in times of natural disasters and other emergencies.
Total	12	
Priority (High/Med/Low)	High	



Action Number:

West Orange-10 (NEW/LOI)

Mitigation Action/Initiative:

West Orange Fire Station #4 generator project

Assessing the Risk	
Hazard(s) addressed:	All Hazards
Specific problem being mitigated:	Loss of power, loss of operational capabilities
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	1. Tree Trimming-remove tree branches that may fall onto power lines causing power outages. This is currently being done as existing town maintenance, to protect feeder lines, but doesn't help with primary or secondary lines off Town property. 2. Bury Power Lines. This option is not being pursued as it is cost prohibitive due to the long run and the Town does not have the legal authority to bury the lines. 3. Urge Special Treatment from Power Company-Meet with the executive team and urge them to take steps necessary to prevent power failures to Town Hall - This is not the best alternative because it relies on others to address the problem. The solution remains outside the control of the Town. - Though we do get priority, the system is complex and does not provide a direct connection to a sub-station. (Another alternative could be to install a secondary electrical feed from an independent section of the local grid – this is typically technically infeasible and cost-prohibitive.)
Action/Project Intended for Implementation	
Description of Selected Action/Project	Purchase and install a generator at Fire Station #4
Action/Project Category	SIP
Goals/Objectives Met	1.2; 6.1
Applies to existing, future, or not applicable	Existing
Benefits (losses avoided)	Emergency Response, continuity of operations
Estimated Cost	\$75,000
Priority*	High
Plan for Implementation	
Responsible Organization	Fire Department
Local Planning Mechanism	EOP, Hazard Mitigation Plan
Potential Funding Sources	HMGP, Township Budget
Timeline for Completion	Short Term DOF
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: Progress on Action/Project:

**Refer to prioritization table.*



Section 9.23: Township of West Orange

Action Number:

West Orange-10 (NEW/LOI)

Mitigation Action/Initiative:

West Orange Fire Station #4 generator project

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Will allow this critical facility to remain operational during power outages.
Property Protection	0	This project will have no significant effect on reducing damage to the Village Hall structure.
Cost-Effectiveness	1	This project is considered highly cost-effective
Technical	1	There are no technical issues associated with the project, and with routine maintenance will provide long term protection against power interruptions.
Political	1	This project is supported both publically and politically.
Legal	1	The municipality has full legal authority to implement this project.
Fiscal	0	The town can currently fund the local match if a grant were awarded.
Environmental	1	There are no environmental constraints associated with this project.
Social	1	This project benefits all sectors of the community equally.
Administrative	1	The Town has all administrative and technical resources necessary to implement this project
Multi-Hazard	1	This project provides protection against multiple hazards.
Timeline	1	The project can be implemented within one year once funding is secured.
Agency Champion	1	The Town Supervisor and Emergency Management Coordinator are the leads for this critical project.
Other Community Objectives	1	This project supports the Town's commitment to provide uninterrupted critical services to their residents, particularly in times of natural disasters and other emergencies.
Total	12	
Priority (High/Med/Low)	High	



Section 9.23: Township of West Orange

Action Number:

West Orange-11 (NEW/LOI)

Mitigation Action/Initiative:

West Orange Alex Caprio Animal Control Shelter generator project

Assessing the Risk	
Hazard(s) addressed:	All Hazards
Specific problem being mitigated:	Loss of Power, loss of operational capabilities, transfer of animals
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	1. Tree Trimming-remove tree branches that may fall onto power lines causing power outages. This is currently being done as existing town maintenance, to protect feeder lines, but doesn't help with primary or secondary lines off Town property. 2. Bury Power Lines. This option is not being pursued as it is cost prohibitive due to the long run and the Town does not have the legal authority to bury the lines. 3. Urge Special Treatment from Power Company-Meet with the executive team and urge them to take steps necessary to prevent power failures to Town Hall - This is not the best alternative because it relies on others to address the problem. The solution remains outside the control of the Town. - Though we do get priority, the system is complex and does not provide a direct connection to a sub-station. (Another alternative could be to install a secondary electrical feed from an independent section of the local grid – this is typically technically infeasible and cost-prohibitive.)
Action/Project Intended for Implementation	
Description of Selected Action/Project	Purchase and install a generator at animal shelter
Action/Project Category	SIP
Goals/Objectives Met	1.2; 6.1
Applies to existing, future, or not applicable	Existing
Benefits (losses avoided)	Continuity of operations
Estimated Cost	\$75,000
Priority*	High
Plan for Implementation	
Responsible Organization	OEM, Shelter Manager
Local Planning Mechanism	EOP, Mitigation Plan
Potential Funding Sources	HMGP, Township Budget
Timeline for Completion	Short Term DOF
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: Progress on Action/Project:

**Refer to prioritization table.*





Section 9.23: Township of West Orange

Action Number:

West Orange-11 (NEW/LOI)

Mitigation Action/Initiative:

West Orange Alex Caprio Animal Control Shelter generator project

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Will allow this critical facility to remain operational during power outages.
Property Protection	0	This project will have no significant effect on reducing damage to the Village Hall structure.
Cost-Effectiveness	1	This project is considered highly cost-effective
Technical	1	There are no technical issues associated with the project, and with routine maintenance will provide long term protection against power interruptions.
Political	1	This project is supported both publically and politically.
Legal	1	The municipality has full legal authority to implement this project.
Fiscal	0	The town can currently fund the local match if a grant were awarded.
Environmental	1	There are no environmental constraints associated with this project.
Social	1	This project benefits all sectors of the community equally.
Administrative	1	The Town has all administrative and technical resources necessary to implement this project
Multi-Hazard	1	This project provides protection against multiple hazards.
Timeline	1	The project can be implemented within one year once funding is secured.
Agency Champion	1	The Town Supervisor and Emergency Management Coordinator are the leads for this critical project.
Other Community Objectives	1	This project supports the Town's commitment to provide uninterrupted critical services to their residents, particularly in times of natural disasters and other emergencies.
Total	12	
Priority (High/Med/Low)	High	





Action Number:

Mitigation Action/Initiative:

West Orange-12

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.

Assessing the Risk	
Hazard(s) addressed:	Flooding
Specific problem being mitigated:	Property damage, road closures, flooded basements
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	1. Buy outs of flooded properties
	2. Increase stream capacity
	3. Provide storm water detention - Potential future projects, no action at this time.
Action/Project Intended for Implementation	
Description of Selected Action/Project	Identify appropriate candidates, and work with property owners to implement selected action
Action/Project Category	SIP
Goals/Objectives Met	1.2, 2.2
Applies to existing and or new development, or not applicable	Existing
Benefits (losses avoided)	Flood damage
Estimated Cost	Medium
Priority*	Medium
Plan for Implementation	
Responsible Organization	Municipal OEM, homeowners
Local Planning Mechanism	Mitigation Plan
Potential Funding Sources	FEMA HMA Grants
Timeline for Completion	Long Term DOF
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: Progress on Action/Project:

**Refer to prioritization table.*



Section 9.23: Township of West Orange

Action Number:

Mitigation Action/Initiative:

West Orange-12

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.

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Will protect homeowners
Property Protection	1	Will protect structure
Cost-Effectiveness	1	Cost share with federal grants, a benefit cost analysis must be completed
Technical	1	This initiative is technically feasible
Political	0	Neutral
Legal	1	This is a legal initiative
Fiscal	0	Funding sources are needed
Environmental	1	Supports open space
Social	1	Community supports
Administrative	1	Administratively the Township can support
Multi-Hazard	1	Several hazards will be mitigated for structure
Timeline	0	Dependent upon funding
Agency Champion	1	OEM will spearhead this initiative
Other Community Objectives	1	Supports community objectives to protect life and property
Total	11	
Priority (High/Med/Low)	High	



Action Number:

West Orange -13

Mitigation Action/Initiative:

Develop and implement enhanced all hazards public outreach

Assessing the Risk	
Hazard(s) addressed:	All hazards
Specific problem being mitigated:	Preparedness
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	1. Enhance Public outreach /education and mitigation information program
	2. Do nothing
	3. Hire outside public information officer
Action/Project Intended for Implementation	
Description of Selected Action/Project	Develop and implement an enhanced all-hazards, public outreach / education / mitigation information program on natural hazard risks and what residents can do in the way of mitigation and preparedness, including flood insurance
Action/Project Category	EAP
Goals/Objectives Met	1.2; 3.1; 3.3
Applies to existing, future, or not applicable	Existing
Benefits (losses avoided)	High
Estimated Cost	\$10,000
Priority*	Medium
Plan for Implementation	
Responsible Organization	OEM, Township Administrator
Local Planning Mechanism	EOP, Mitigation Plan, codes and ordinances
Potential Funding Sources	Municipal Budget
Timeline for Completion	Short Term
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: Progress on Action/Project:

**Refer to prioritization table.*



Section 9.23: Township of West Orange

Action Number:

West Orange - 13

Mitigation Action/Initiative:

Public Outreach

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Promotes LS
Property Protection	1	Promotes PP
Cost-Effectiveness	1	Cost is low to this initiative
Technical	1	Township has technical capability for this initiative
Political	1	Supported by government
Legal	1	
Fiscal	0	This initiative is an expense and budget must be found
Environmental	0	
Social	1	Supports community
Administrative	1	Township is capable of supporting this initiative
Multi-Hazard	1	Will address several hazards
Timeline	1	Can be completed in a limited amount of time
Agency Champion	1	OEM will spearhead
Other Community Objectives	1	Meets other objectives
Total	12	
Priority (High/Med/Low)	High	





Action Number:

West Orange - 14

Mitigation Action/Initiative:

Support participation in the NFIP Community Rating System (CRS) Program.

Assessing the Risk	
Hazard(s) addressed:	Flood
Specific problem being mitigated:	Preparedness
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	1. Support Participation in CRS Program
	2. Do nothing
	3.
Action/Project Intended for Implementation	
Description of Selected Action/Project	Support participation in the NFIP Community Rating System (CRS) program by attending CRS workshop(s) if offered within the county. Join the CRS program if adequate resources to support long term participation can be dedicated. See following related Community Assistance Visit (CAV) initiative
Action/Project Category	EAP
Goals/Objectives Met	1.2; 3.1; 3.3
Applies to existing, future, or not applicable	Existing
Benefits (losses avoided)	High
Estimated Cost	\$17,000
Priority*	Medium
Plan for Implementation	
Responsible Organization	OEM, Township Administrator
Local Planning Mechanism	Mitigation Plan, EOP
Potential Funding Sources	Municipal Budget
Timeline for Completion	Short Term
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: Progress on Action/Project:

**Refer to prioritization table.*



Section 9.23: Township of West Orange

Action Number:

West Orange - 14

Mitigation Action/Initiative:

Support participation in the NFIP Community Rating System (CRS) Program.

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Supports life safety
Property Protection	1	Supports property protection
Cost-Effectiveness	1	Cost savings to residents
Technical	1	Township can support technically
Political	0	
Legal	1	Township has legal authority
Fiscal	0	Budget must be identified
Environmental	0	
Social	1	Community will support
Administrative	1	Capabilities
Multi-Hazard	0	
Timeline	0	
Agency Champion	0	
Other Community Objectives	1	Will be a cost savings to residents and useful information for Township
Total	8	
Priority (High/Med/Low)	Medium	



Action Number:

West Orange - 15

Mitigation Action/Initiative:

Determine if a Community Assistance visit is required to participate in CRS Program

Assessing the Risk	
Hazard(s) addressed:	Flood
Specific problem being mitigated:	Preparedness
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	1. Determine if a Community Assistance visit is required to participate in CRS Program
	2. Do nothing
	3.
Action/Project Intended for Implementation	
Description of Selected Action/Project	Determine if a Community Assistance Visit (CAV) or Community Assistance Contact (CAC) is needed, and schedule if needed. This is a part of the process of joining CRS (above initiative).
Action/Project Category	EAP
Goals/Objectives Met	1.2; 3.1; 3.3
Applies to existing, future, or not applicable	Existing
Benefits (losses avoided)	High
Estimated Cost	\$1,000
Priority*	Medium
Plan for Implementation	
Responsible Organization	OEM, Township Administrator
Local Planning Mechanism	Mitigation Plan
Potential Funding Sources	Municipal Budget
Timeline for Completion	Short Term
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: Progress on Action/Project:

**Refer to prioritization table.*



Section 9.23: Township of West Orange

Action Number:

Mitigation Action/Initiative:

West Orange - 15

Determine if a Community Assistance visit is required to participate in CRS Program

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Supports life safety
Property Protection	1	Supports property protection
Cost-Effectiveness	1	Cost savings to residents
Technical	1	Township can support technically
Political	0	
Legal	1	Township has legal authority
Fiscal	0	Budget must be identified
Environmental	0	
Social	1	Community will support
Administrative	1	Township has the capability to implement
Multi-Hazard	0	
Timeline	0	
Agency Champion	0	
Other Community Objectives	1	Will be a cost savings to residents and useful information for Township
Total	8	
Priority (High/Med/Low)	Medium	



Action Number:

West Orange - 16

Mitigation Action/Initiative:

Structural Improvement to Sewer System

Assessing the Risk	
Hazard(s) addressed:	Flood, Severe Weather
Specific problem being mitigated:	Flooding of roadways and back up of storm water and sewer system
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	1. Structural Improvements
	2. Do nothing
	3. Install new separate storm water and sewer system Township wide.
Action/Project Intended for Implementation	
Description of Selected Action/Project	Make structural improvements to sewer system Township wide to include identifying properties susceptible to sewage backups during flooding events.
Action/Project Category	SIP
Goals/Objectives Met	1.2; 2.1; 2.2;
Applies to existing, future, or not applicable	Existing
Benefits (losses avoided)	High
Estimated Cost	\$1.6 million
Priority*	High
Plan for Implementation	
Responsible Organization	Township Engineer, FPA, Township Administrator
Local Planning Mechanism	Mitigation Plan
Potential Funding Sources	HMA Grants, State and County Grants, Municipal Budget
Timeline for Completion	Short Term
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: Progress on Action/Project:

**Refer to prioritization table.*



Section 9.23: Township of West Orange

Action Number:

West Orange - 16

Mitigation Action/Initiative:

Structural Improvement to Sewer System

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Can support life safety due to damage to homes and hazards
Property Protection	1	Will protect property
Cost-Effectiveness	1	Benefit cost analysis must be completed with application
Technical	1	Project requires technical expertise
Political	1	Township government supports
Legal	1	Legal authority
Fiscal	0	Budget must be identified
Environmental	1	Supports environment
Social	1	Community support
Administrative	1	Township is capable of supporting
Multi-Hazard	1	Addresses several hazards
Timeline	1	Dependent upon funding and this project is a priority
Agency Champion	1	Township Administrator, FPA and engineer support this project
Other Community Objectives	0	
Total	12	
Priority (High/Med/Low)	High	



Action Number:

West Orange - 17

Mitigation Action/Initiative:

Enhance and Expand Tree Maintenance

Assessing the Risk	
Hazard(s) addressed:	Flood, Severe Weather, Winter Storm
Specific problem being mitigated:	Preparedness
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	1. Enhance expand tree maintenance program
	2. Do nothing
	3. Hire a contractor to manage tree maintenance program
Action/Project Intended for Implementation	
Description of Selected Action/Project	Enhance/expand municipal tree maintenance and identification of preferred species planting program in conjunction with utility companies and PSE&G.
Action/Project Category	NSP
Goals/Objectives Met	1.2; 2.3; 6.1
Applies to existing, future, or not applicable	Existing
Benefits (losses avoided)	High
Estimated Cost	\$50,000
Priority*	Medium
Plan for Implementation	
Responsible Organization	OEM, Township Administrator, Town Engineer
Local Planning Mechanism	Mitigation Plan, Department of Public Works
Potential Funding Sources	Municipal Budget
Timeline for Completion	Short Term
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: Progress on Action/Project:

**Refer to prioritization table.*



Section 9.23: Township of West Orange

Action Number:

West Orange - 17

Mitigation Action/Initiative:

Enhance and Expand Tree Maintenance

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Falling branches during storms and other times, power line outages
Property Protection	1	Falling branches during storms
Cost-Effectiveness	1	Liability
Technical	1	Township possesses capabilities
Political	1	Government support
Legal	1	Legal authority
Fiscal	0	Budget must be identified
Environmental	1	Supports environment
Social	1	Community will benefit
Administrative	1	Township capabilities
Multi-Hazard	1	Addresses several hazards
Timeline	1	Can be implemented in short timeframe
Agency Champion	1	Several champions, OEM, DPW
Other Community Objectives	0	
Total	12	
Priority (High/Med/Low)	High	