



## 9.4 Town of Belvidere

This section presents the jurisdictional annex for the Town of Belvidere.

### 9.4.1 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
Teresa Yeisley, Municipal Clerk/Administrator 691 Water Street, Belvidere, NJ 07823 (908) 475-5331 <a href="mailto:clerk@belvidere-nj.org">clerk@belvidere-nj.org</a>	Susan Reeder, Emergency Management Coordinator 691 Water Street, Belvidere, NJ 07823 (908) 339-1531 <a href="mailto:reeder15@centurylink.net">reeder15@centurylink.net</a>

### 9.4.2 Municipal Profile

The Town of Belvidere is located where in the Pequest River meets the Delaware River in Warren County. The Town was incorporated on April 7, 1845 from portions of Oxford Township. The Town is completely surrounded by White Township, with the Delaware River bordering the western border of the Town. The Town of Belvidere has a total area of 1.5 square miles. According to the U.S. Census, the 2010 population for Town of Belvidere was 2681.

### Growth/Development Trends

The following table summarizes recent residential/commercial development since 2010 to present and any known or anticipated major residential/commercial development and major infrastructure development that has been identified in the next five years within the municipality. Refer to the map in section 9.4.8 of this annex which illustrates the hazard areas along with the location of potential new development.

**Table 9.4-1. Growth and Development**

Property or Development Name	Type (e.g. Res., Comm.)	# of Units / Structures	Location (address and/or Block & Lot)	Known Hazard Zone(s)	Description/Status of Development
<b>Recent Development from 2010 to present</b>					
Kasson Belvidere LLC	Res	257	Manunkachunk Road B: 2; L: 23	Carbonate Hazard	Approved; no construction to date
Quality First Builders	Res	13	Oxford Street B: 31; L: 15	Carbonate Hazard	Approved; no construction to date
<b>Known or Anticipated Development in the Next Five (5) Years</b>					
None identified at this time.					

*\* Only location-specific hazard zones or vulnerabilities identified.*

### 9.4.3 Natural Hazard Event History Specific to the Municipality

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



Table 9.4-2. Hazard Event History

Date(s) of Event	Event Type	FEMA Declaration # (If Applicable)	County Designated?	Summary of Damages/Losses
August 26 – September 5, 2011	Hurricane Irene	DR-4021	Yes	During Hurricane Irene, there were road closures, utility outages, commercial closures, and public closures for the duration of the event. This impacted all residents of the Town. Residential and commercial damage was caused by downed trees and minor flooding. Public assistance was requested. The DPW conducted debris removal. Town firefighters responded to 24 emergency calls to assist with basement pump outs. The Town had over \$14,000 in cleanup and overtime costs.
September 28 – October 6, 2011	Remnants of Tropical Storm Lee	DR-4039	Yes	Tropical Storm Lee led to evacuations and opening of shelters in the Town. There were road closures, utility outages, commercial and public closures throughout. Residential and commercial properties were damaged by flooding. Public assistance was requested. The Town provided dumpsters for residents to dispose of flood damaged materials from homes and businesses. The Town transported these dumpsters to a landfill. The DPW set up and assisted at the emergency command post, responded to flooded areas, set up traffic barricades, assisted with the relocation of residents, cleared storm drains and culverts, and handled emergency calls. The DPW also replaced the washed out mulch on three damaged areas in the playground area of the Town. Signage needed to be replaced in several areas of the Town as well. The Police Department assisted residents with emergency calls, disabled traffic signals, responded to calls for downed power lines and alarms due to the outages, and traffic control activities. Overall, the Town had over \$26,000 in damages, equipment, and overtime costs.
October 29, 2011	Severe Storm	DR-4048	Yes	This event brought heavy snow to the Town. There were road closures, utility outages, and commercial and public closures. Residential and commercial properties were damaged by downed trees. Public assistance was requested. The Town had over \$18,000 in overtime, equipment, and debris removal.
October 26 – November 8, 2012	Hurricane Sandy	DR-4086	Yes	Hurricane Sandy forced evacuations and opening of shelters in the Town. A state of emergency was declared for the Town. Warming centers and shelters were opened. Ice and water were handed out to residents. There were road closures, utility outages, commercial and public closures. Residential and commercial properties were damaged due to downed trees, power lines, power outages, and flooding. A structure fire occurred on Mansfield Street. Power was not restored in the Town until November 2 <sup>nd</sup> . Public assistance was requested. Costs to the town were over \$18,000 in relation to overtime for the DPW and police department.

### 9.4.4 Hazard Vulnerabilities and Ranking

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





**Hazard Risk/Vulnerability Risk Ranking**

The Table 9.4-3 summarizes the hazard risk/vulnerability rankings of potential hazards for the Town of Belvidere.

**Table 9.4-3. Hazard Risk/Vulnerability Risk Ranking**

Hazard type	Estimate of Potential Dollar Losses to Structures Vulnerable to the Hazard <sup>a, c</sup>		Probability of Occurrence	Risk Ranking Score (Probability x Impact)	Hazard Ranking <sup>b</sup>
Dam Failure	Damage estimate not available		Occasional	24	Medium
Drought	Damage estimate not available		Frequent	30	Medium
Earthquake	100-Year GBS:	\$0	Occasional	28	Medium
	500-Year GBS:	\$84,661			
	2,500-Year GBS:	\$1,312,187			
Flood	1% Annual Chance:	\$14,295,199	Frequent	27	High
Geologic	RCV Exposed to Carbonate Rock Areas:		Occasional	36	High
	100-year MRP:	\$61,739.00			
Hurricane	500-year MRP:	380887	Frequent	48	High
	Annualized:	\$4,858.00			
Nor'Easter	Damage estimate not available		Frequent	48	High
Severe Storm	100-Year MRP:	\$61,739	Frequent	48	High
	500-year MRP:	\$380,887			
	Annualized:	\$4,858			
Severe Winter Storm	1% GBS:	\$1,225,336	Frequent	51	High
	5% GBS:	\$6,126,680			
Wildfire	Estimated Value in the Extreme, Very High, and High Hazard Areas:	\$0	Occasional	12	Low
Hazardous Materials	Damage estimate not available		Frequent	36	High

Notes:

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

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



### National Flood Insurance Program (NFIP) Summary

The following table summarizes the NFIP statistics for the Town of Belvidere.

Table 9.4-3. NFIP Summary

Municipality	# Policies (1)	# Claims (Losses) (1)	Total Loss Payments (2)	# Rep. Loss Prop. (1)	# Severe Rep. Loss Prop. (1)	# Policies in 1% Flood Boundary (3)
Belvidere, Town of	102	179	\$2,524,465	31	3	66

Source: FEMA, 2014

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

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

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

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

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

### Critical Facilities

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

Table 9.4-4. Number of Critical Facilities in the DFIRM 1% and 0.2% Annual Chance Flood Boundaries

Municipality	1% Annual Chance		0.2% Annual Chance		
	Gas Station	Senior	Gas Station	Senior	Wastewater Pump
Belvidere, Town of	1	1	1	1	1

Source: Warren County, FEMA 2011

### Other Vulnerabilities Identified by Municipality

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



### 9.4.5 Capability Assessment

This section identifies the following capabilities of the local jurisdiction:

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

#### Planning and Regulatory Capability

The table below summarizes the regulatory tools that are available to the Town of Belvidere.

**Table 9.4-4. Planning and Regulatory Tools**

Tool / Program (code, ordinance, plan)	Do you have this? (Yes/No) If Yes, date of adoption or update	Authority (local, county, state, federal)	Dept. /Agency Responsible	Code Citation and Comments (Code Chapter, name of plan, explanation of authority, etc.)
<b>Planning Capability</b>				
Master Plan	Yes	Local	Planning Board	Master Plan Reexamination, Adopted December 9, 2008 N.J.S.A 40:55D-89
Capital Improvements Plan	Yes	Local	Town Council	Developed within the Municipal Budget
Floodplain Management / Basin Plan	No			
Stormwater Management Plan	Yes	Local	Planning Board	N.J.A.C. 7:14A-25
Open Space Plan	No			
Stream Corridor Management Plan	No			
Watershed Management or Protection Plan	No			
Economic Development Plan	No			
Comprehensive Emergency Management Plan	Yes	Local	Emergency Management	
Emergency Response Plan	Yes	Local	Emergency Management	
Post-Disaster Recovery Plan	No			
Transportation Plan	No			
Strategic Recovery Planning Report	No			
Other Plans:	Yes	Local	Environmental Commission	Environmental Resource Inventory
<b>Regulatory Capability</b>				
Building Code	Yes	State & Local		State Uniform Construction Code Act (N.J.S. 52:27D-119 et seq.)



**Table 9.4-4. Planning and Regulatory Tools**

Tool / Program (code, ordinance, plan)	Do you have this? (Yes/No) If Yes, date of adoption or update	Authority (local, county, state, federal)	Dept. /Agency Responsible	Code Citation and Comments (Code Chapter, name of plan, explanation of authority, etc.)
Zoning Ordinance	Yes	Local	Code Enforcement	Code of the Town of Belvidere
Subdivision Ordinance	Yes	Local	Planning Board	Code of the Town of Belvidere
NFIP Flood Damage Prevention Ordinance	Yes	Federal, State and Local	Code Enforcement	Chapter 94 of the Code of the Town of Belvidere
NFIP: Cumulative Substantial Damages	No			
NFIP: Freeboard	Yes	State, Local		
Growth Management Ordinances	No			
Site Plan Review Requirements	Yes	Local	Planning Board	Code of the Town of Belvidere
Stormwater Management Ordinance	Yes	Local	DPW	Code of the Town of Belvidere
Municipal Separate Storm Sewer System (MS4)	Yes	Local	DPW	Code of the Town of Belvidere
Natural Hazard Ordinance	No			
Post-Disaster Recovery Ordinance	No			
Real Estate Disclosure Requirement	Yes	State		
Other [Special Purpose Ordinances (i.e., sensitive areas, steep slope)]	Yes	Local	Code Enforcement	Chapter 160 of the Code of the Town of Belvidere

**Administrative and Technical Capability**

The table below summarizes potential staff and personnel resources available to the Town of Belvidere.

**Table 9.4-5. Administrative and Technical Capabilities**

Resources	Is this in place? (Yes or No)	Department/ Agency/Position
<b>Administrative Capability</b>		
Planning Board	Yes	
Mitigation Planning Committee	No	
Environmental Board/Commission	Yes	Advisory – Chapter 18 of the Code of the Town of Belvidere
Open Space Board/Committee	No	
Economic Development Commission/Committee	No	
Maintenance Programs to Reduce Risk	No	
Mutual Aid Agreements	Yes	Fire and Rescue
<b>Technical/Staffing Capability</b>		



**Table 9.4-5. Administrative and Technical Capabilities**

Resources	Is this in place? (Yes or No)	Department/ Agency/Position
Planner(s) or Engineer(s) with knowledge of land development and land management practices	Yes	Planning Board Engineer / Municipal Engineer
Engineer(s) or Professional(s) trained in construction practices related to buildings and/or infrastructure	Yes	Municipal Engineer / Construction Official
Planners or engineers with an understanding of natural hazards	Yes	Municipal Engineer & Planner
NFIP Floodplain Administrator	Yes	Municipal Engineer
Surveyor(s)	Yes	Engineering
Personnel skilled or trained in GIS and/or Hazus-MH applications	No	
Scientist familiar with natural hazards	No	
Emergency Manager	Yes	Police Department
Grant Writer(s)	Yes	Municipal Engineer & Administrator
Staff with expertise or training in benefit/cost analysis	Yes	Engineering
Professionals trained in conducting damage assessments	Yes	Construction Department

**Fiscal Capability**

The table below summarizes financial resources available to the Town of Belvidere.

**Table 9.4-6. Fiscal Capabilities**

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



### Education/Outreach and Community Classifications

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

**Table 9.4-7. Education/Outreach and Community Classifications**

Program	Do you have/participate in this? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	No	NP	N/A
Building Code Effectiveness Grading Schedule (BCEGS)	No	NP	
Public Protection (ISO Fire Protection Classes 1 to 10)	Yes	5.2	
Storm Ready	No	NP	N/A
Firewise	No	NP	N/A
Disaster/Safety Programs in/for Schools	Yes		
Organizations with Mitigation Focus (advocacy group, non-government)	No		
Public Education Program/Outreach (through website, social media)	Yes		
Public-Private Partnerships	No		

N/A = Not applicable. NP = Not participating.

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

Criteria for classification credits are outlined in the following documents:

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



### Self-Assessment of Capability

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

Table 9.4-8. Self-Assessment of Capability

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

### National Flood Insurance Program

#### NFIP Floodplain Administrator (FPA)

Paul Sterbenz, Municipal Engineer

#### Flood Vulnerability Summary

The Town of Belvidere maintains lists/inventories of properties that have been damaged by floods; however, the inventory does not identify property owners who are interested in mitigation. The FPA makes Substantial Damage estimates. There is currently no interest in mitigation (acquisition or elevation) within the Town.

#### Resources

The FPA has the support of the Town administrator and emergency management coordinator to assist with the roles and responsibilities of the floodplain administrator. NFIP administration services and functions that the FPA provides includes inspections, damage assessments, record keeping, education and outreach. Additionally, the Town conducts annual emergency preparedness seminars in conjunction with the American Red Cross, local authorities, utilities, and non-profit organizations. The FPA indicated that are currently no barriers to running an effective floodplain management program and that he feels adequately supported and trained. The FPA would consider training and/or continuing education courses on floodplain management if offered.

#### Compliance History

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

#### Regulatory

The Town's flood damage prevention ordinance meets the minimum requirements set by FEMA and the State of New Jersey. The Town's flood damage prevention ordinance can be found in Chapter 94 of the Code of the Town of Belvidere and it is in accordance with the model ordinance provided by the State. Additionally, the Town has provisions in the zoning ordinance, known as Chapter 160 of the Code of the Town of Belvidere, to restrict development in critical areas such as floodplains and steep slopes.





### Community Rating System

The Town of Belvidere does not participate in the Community Rating System (CRS) program; however, the Town has considered joining and would attend a CRS seminar if offered locally.

### Integration of Hazard Mitigation into Existing and Future Planning Mechanisms

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

#### Planning

One of the goals listed in the Town's 2008 Master Plan Reexamination Report is to encourage the conservation of open space, the preservation of natural resources and the continued expansion of parks and recreational facilities. In addition, one of the concerns discussed in the Plan includes floodplain management due to the Town's proximity to the Delaware and Pequest Rivers. The Plan notes that the Town should be supportive of efforts by property owners to floodproof their structures. Refer to 'Belvidere-1' in Table 9.4-11 in which the Town continues to have a mitigation strategy to support the mitigation of flood-prone structures.

#### Regulatory and Enforcement (Ordinances)

The Town has multiple ordinances pertaining to the mitigation of hazards. These ordinances include the NFIP Flood Damage Prevention Ordinance, a stormwater management ordinance, a fire prevention ordinance, and a snow and ice removal ordinance. The Town's codes are available on-line via a link from their homepage: <http://www.ecode360.com/be0829>

#### Operational and Administration

The Town has established an Environmental Commission and Shade Tree Commission that aid in planning decisions to support the conservation and preservation of the Town's critical environmental features.

#### Funding

The Town does not have a line-item in their municipal budget to fund mitigation projects; however they would like to. Refer to Belvidere-7 in Table 9.4-11.

#### Education and Outreach

The Town currently uses the Rapid Notify emergency notification system to provide residents with up-to-date information and announcements regarding emergency events. The Town also posts its snow removal regulations on its website's homepage so that is easily accessible for residents. The Town also includes a link to NJDEP's stormwater website to provide residents with further information on stormwater management.



### 9.4.6 Mitigation Strategy and Prioritization

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

#### Past Mitigation Initiative Status

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

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Table 9.4-9. Past Mitigation Initiative Status

2010 Mitigation Action	Responsible Party	Status (In progress, No progress, Complete)	<u>Describe Status</u> 1. Please describe what was accomplished and indicate % complete. 2. If there was no progress, indicate what obstacles/delays encountered? 3. If there was progress, how is/was the action being funded (e.g., FEMA HMGP grant, local budget)?	<u>Next Step</u> (Include in 2016 HMP? or Discontinue)	<u>Describe Next Step</u> 1. If including action in the 2016 HMP, revise/reword to be more specific (as appropriate). 2. If discontinue, explain why
Belvidere 1: Acquisition/Elevation of two Severe Repetitive Loss (SRL) properties on Water Street.	Town OEM	In Progress	0% complete due to budget and personnel constraints which have restricted this action from moving forward.	Include in 2016 HMP	The Town will seek grant funding for mitigation of these properties Refer to new action Belvidere-1.
Belvidere 2: Acquisition/Elevation of one SRL property on South Water Street.	Town OEM	In Progress	0% complete due to budget and personnel constraints which have restricted this action from moving forward.	Include in 2016 HMP	The Town will seek grant funding for mitigation of these properties Refer to new action Belvidere-1.
Belvidere 3: Acquisition/Elevation of one SRL property on Wall Street.	Town OEM	In Progress	0% complete due to budget and personnel constraints which have restricted this action from moving forward.	Include in 2016 HMP	The Town will seek grant funding for mitigation of these properties Refer to new action Belvidere-1.
Belvidere 4: Acquisition/Elevation of four flood prone properties located on Wall Street.	Town OEM	No Progress	0% complete due to budget and personnel constraints which have restricted this action from moving forward; funding has not been secured	Include in 2016 HMP	The Town will seek grant funding for mitigation of these properties Refer to new action Belvidere-1.
Belvidere 5: Acquisition/Elevation of 17 Repetitive Loss (RL) properties on Water Street.	Town OEM	No Progress	0% complete due to budget and personnel constraints which have restricted this action from moving forward; funding has not been secured	Include in 2016 HMP	The Town will seek grant funding for mitigation of these properties Refer to new action Belvidere-1.
Belvidere 6: Acquisition/Elevation of 11 RL properties on Depue Street.	Town OEM	No Progress	0% complete due to budget and personnel constraints which have restricted this action from moving forward; funding has not been secured	Include in 2016 HMP	The Town will seek grant funding for mitigation of these properties Refer to new action Belvidere-1.
Belvidere 7: Acquisition/Elevation of six RL properties on Front Street.	Town OEM	No Progress	0% complete due to budget and personnel constraints which have restricted this action from moving forward; funding has not been secured	Include in 2016 HMP	The Town will seek grant funding for mitigation of these properties. Refer to new action Belvidere-1.
Belvidere 8: Acquisition/Elevation of one RL property on Mansfield Street.	Town OEM	No Progress	0% complete due to budget and personnel constraints which have restricted this action from moving forward; funding has not been secured	Include in 2016 HMP	The Town will seek grant funding for mitigation of these properties. Refer to new action Belvidere-1.



2010 Mitigation Action	Responsible Party	Status (In progress, No progress, Complete)	<u>Describe Status</u> 1. Please describe what was accomplished and indicate % complete. 2. If there was no progress, indicate what obstacles/delays encountered? 3. If there was progress, how is/was the action being funded (e.g., FEMA HMGP grant, local budget)?	<u>Next Step</u> (Include in 2016 HMP? or Discontinue)	<u>Describe Next Step</u> 1. If including action in the 2016 HMP, revise/reword to be more specific (as appropriate). 2. If discontinue, explain why
Belvidere 9: Acquisition/Elevation of one RL property on Fourth Street.	Town OEM	No Progress	0% complete due to budget and personnel constraints which have restricted this action from moving forward; funding has not been secured	Include in 2016 HMP	The Town will seek grant funding for mitigation of these properties. Refer to new action Belvidere-1.
Belvidere 10: Storm-water management system upgrade and improvement along access way to the Belvidere Ambulance Corps located on Paul Street.	Town OEM	No Progress	0% complete due to budget and personnel constraints which have restricted this action from moving forward; funding has not been secured	Include in 2016 HMP	The Town will seek grant funding for mitigation of these properties Refer to new action Belvidere-2.
Belvidere 11: Elevation of utilities out of flood prone basement and flood-proofing of foundation of the Food Mart located on Water Street.	Store Manager	In Progress	This project is 50% complete funded by the property owner. The refrigeration units were moved from the basement and utilities were elevated.	Include in 2016 HMP	When personal funds are available, property owner will floodproof the foundation. Refer to new action Belvidere-3.
Belvidere 12: Elevation of utilities out of flood prone basement and flood-proofing of foundation of Zack's Pharmacy located on Market Street.	Store Manager	No Progress	The business has been relocated.	Discontinue	The business has relocated; therefore, this action will not be included in the 2016 HMP.
Belvidere 13: Stream bank stabilization of ¼ mile of the Pophandysen Creek located by Fourth Street and Depue Street.	Department of Public Works (DPW) Supervisor	No Progress	0% complete due to budget and personnel constraints which have restricted this action from moving forward; funding has not been secured	Include in 2016 HMP	This project requires grant funding and NJDEP approval.
Belvidere 14: Stream bank stabilization of 800 yards along Pequest River located near Water and Wall Street.	DPW Supervisor	No Progress	0% complete due to budget and personnel constraints which have restricted this action from moving forward; funding has not been secured	Include in 2016 HMP	This property belongs to NJDEP and will require that they provide the funding source and approval.
Belvidere 15: Flood-proofing of the Good Will Fire Company building.	Town Fire Chief	No Progress	This property is not located in a floodprone area.	Discontinue	This property is not located in a floodprone area; therefore, it will not be included in the 2015 HMP.
Belvidere 16: Flood-proofing of the Belvidere Police Department building.	Town Police Chief	No Progress	This property is not located in a floodprone area.	Discontinue	This property is not located in a floodprone area; therefore, it will not be included in the 2015 HMP.



<b>2010 Mitigation Action</b>	<b>Responsible Party</b>	<b>Status</b> (In progress, No progress, Complete)	<b>Describe Status</b> 1. Please describe what was accomplished and indicate % complete. 2. If there was no progress, indicate what obstacles/delays encountered? 3. If there was progress, how is/was the action being funded (e.g., FEMA HMGP grant, local budget)?	<b>Next Step</b> (Include in 2016 HMP? or Discontinue)	<b>Describe Next Step</b> 1. If including action in the 2016 HMP, revise/reword to be more specific (as appropriate). 2. If discontinue, explain why
Belvidere 17: Conduct all hazards public education and outreach program for hazard mitigation and preparedness.	WCOEM, town OEM	In Progress	This project is 50% complete and funded by the Town OEM. Emergency preparedness training is provided by American Red Cross and Town OEM.	Include in 2016 HMP	The Town will continue with emergency preparedness training and will provide similar training through the fire and police departments, OEM and JCP&L.

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### **Completed Mitigation Initiatives not Identified in the Previous Mitigation Strategy**

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

### **Proposed Hazard Mitigation Initiatives for the Plan Update**

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

Table 9.4-11 summarizes the comprehensive-range of specific mitigation initiatives the Town 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 9.4-12 provides a summary of the prioritization of all proposed mitigation initiatives for the Plan update.



Table 9.4-10. Proposed Hazard Mitigation Initiatives

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
Belvidere - 1	Support the mitigation of vulnerable structures via elevation, flood proofing/education or acquisition/relocation to protect structures from future damage, with repetitive loss and severe repetitive loss properties as a priority.	Existing	Flood, Severe Storm	1, 2	Administrator, County OEM	High	High	FEMA HMA	Short DOF	High	SIP	PP
Belvidere - 2	Install, reroute or increase capacity of storm drainage system. Increase the capacity of stormwater retention or detention basins and perform regulator drainage maintenance as well as detection and prevention of discharges.	Both	Flood, Severe Storm	1, 2	Administrator	High	High	FEMA HMA	Short DOF	High	SIP	PP
Belvidere - 3	Elevate of utilities and flood-proof foundations to ensure mechanical devices are above the base flood elevation. One property with interest is the Food Mart located on Water Street	Existing	Flood, Severe Storm	1, 2	Administrator, Private Property Owners, County OEM	High	High	FEMA HMA	Short DOF	High	SIP	PP
Belvidere - 4	Increase hazard awareness through education and outreach. Topics to include mitigation funding options, safety, flood insurance, severe winter weather impacts, GIS hazard mapping and property damage through social media, email blast systems, flyers and municipal website.	Both	All	1, 2, 3, 4	Administrator	High	Medium	FEMA HMA; Municipal Budget	Short DOF	High	EAP	PI
Belvidere - 5	Obtain backup power to ensure continuity of operations for critical facilities. LOI #1627 - Purchase and install a generator at the Town Hall/Police Department/EOC	Existing	All	1, 2	Administrator, Private Property Owner	High	High	FEMA HMA	Short DOF	High	SIP	PP



Table 9.4-10. Proposed Hazard Mitigation Initiatives

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
Belvidere - 6	Reach out to local colleges and universities for technical assistance with natural hazard mitigation activities.	N/A	All	3, 4	Administrator	High	Low	Local	Short DOF	High	EAP	PI
Belvidere - 7	Include a line item in the municipal budget for mitigation project funding.	N/A	All	All	Administrator	High	High	Local	Short DOF	High	All	All
Belvidere - 8	Create a community resilience committee and identify an advisor for this committee.	N/A	All	3, 4, 5	Administrator	High	Low	Local	Short DOF	High	EAP	PI
Belvidere - 9	Provide training to municipal employees and residents that include: best practices for hazard mitigation, grant applications, hazard identification, and outreach regarding hazards in the community.	N/A	All	3, 4, 5	Administrator	High	Low	Federal, State, Local	Short DOF	High	EAP	PI
Belvidere - 10	Assess vulnerability to severe wind by developing and maintaining a database to track inspection and maintenance of hazardous trees and establish standards for tree pruning.	Both	Hurricane/Tropical Storm Severe Weather, Winter Weather	4, 5	Administrator	High	Low	Federal, State, Local	Short DOF	High	LPR, NSP	PR, NR
Belvidere - 11	Plan for and maintain adequate road and debris clearing capabilities.	Both	Flood, Hurricane/Tropical Storm Severe Weather, Winter Weather	1, 2, 6	Administrator	High	Low	Local	Short DOF	High	LPR	PR
Belvidere - 12	Establish and promote assessable heating centers, specifically for at-risk populations in the event of long-term power outages	N/A	All	1, 6	Administrator	High	Low	Local	Short DOF	High	EAP	PI

Notes:

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

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





Acronyms and Abbreviations:

CRS	Community Rating System
DPW	Department of Public Works
FEMA	Federal Emergency Management Agency
FPA	Floodplain Administrator
HMA	Hazard Mitigation Assistance

N/A	Not applicable
NFIP	National Flood Insurance Program
NJDEP	New Jersey Department of Environmental Protection
NJOEM	New Jersey Office of Emergency Management
OEM	Office of Emergency Management

Potential FEMA HMA Funding Sources:

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

Timeline:

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

Costs:

Where actual project costs have been reasonably estimated:

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

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 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.

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

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

Mitigation Category:

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

CRS Category:

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





- *Emergency Services (ES) - Actions that protect people and property during and immediately following a disaster or hazard event. Services include warning systems, emergency response services, and the protection of essential facilities*

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Table 9.4-11. Summary of Prioritization of Actions

Mitigation Action/Project Number	Mitigation Action/Initiative	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community	Total	High / Medium / Low
Belvidere - 1	Support the mitigation of vulnerable structures via elevation, flood proofing/education or acquisition/relocation to protect structures from future damage, with repetitive loss and severe repetitive loss properties as a priority.	1	1	1	1	1	1	0	0	0	-1	1	0	0	0	8	High
Belvidere - 2	Install, reroute or increase capacity of storm drainage system. Increase the capacity of stormwater retention or detention basins and perform regulator drainage maintenance as well as detection and prevention of discharges.	1	1	1	1	1	1	0	0	0	0	1	0	0	0	7	High
Belvidere - 3	Elevate of utilities and flood-proof foundations to ensure mechanical devices are above the base flood elevation. One property with interest is the Food Mart located on Water Street	1	1	1	1	1	1	0	0	0	1	1	0	0	0	8	High
Belvidere - 4	Increase hazard awareness through education and outreach. Topics to include mitigation funding options, safety, flood insurance, severe winter weather	1	1	1	1	1	1	0	0	0	1	1	0	0	0	8	High





Table 9.4-11. Summary of Prioritization of Actions

Mitigation Action/Project Number	Mitigation Action/Initiative	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community	Total	High / Medium / Low
	impacts, GIS hazard mapping and property damage through social media, email blast systems, flyers and municipal website.																
Belvidere – 5	Obtain backup power to ensure continuity of operations. LOI #1627 - Purchase and install a generator at the Town Hall/Police Department/EOC	1	1	1	1	1	1	0	0	0	1	1	0	0	0	8	High
Belvidere - 6	Reach out to local colleges and universities for technical assistance with natural hazard mitigation activities.	1	1	1	1	1	1	0	0	0	1	1	0	0	0	8	High
Belvidere - 7	Include a line item in the municipal budget for mitigation project funding.	1	1	1	1	1	1	0	0	0	1	1	0	0	0	8	High
Belvidere - 8	Create a community resilience committee and identify an advisor for this committee.	1	1	1	1	1	1	0	0	0	0	1	0	0	0	7	High
Belvidere - 9	Provide training to municipal employees and residents that include: best practices for hazard mitigation, grant applications, hazard identification, and outreach regarding hazards in the community.	1	1	1	1	1	1	0	0	0	0	1	0	0	0	8	High
Belvidere – 10	Assess vulnerability to severe wind by developing and	1	1	1	1	1	1	0	1	0	1	1	0	0	0	9	High



**Table 9.4-11. Summary of Prioritization of Actions**

Mitigation Action/Project Number	Mitigation Action/Initiative	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community	Total	High / Medium / Low
	maintaining a database to track inspection and maintenance of hazardous trees and establish standards for tree pruning.																
Belvidere – 11	Plan for and maintain adequate road and debris clearing capabilities.	1	1	1	1	1	1	0	0	0	1	1	0	0	0	8	High
Belvidere – 12	Establish and promote assessable heating centers, specifically for at-risk populations in the event of long-term power outages	1	0	1	1	1	1	0	0	1	1	1	0	0	0	8	High

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



#### **9.4.7 Future Needs To Better Understand Risk/Vulnerability**

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None at this time.

#### **9.4.8 Hazard Area Extent and Location**

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

#### **9.4.9 Additional Comments**

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None at this time.

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Figure 9.4-1. Town of Belvidere Hazard Area Extent and Location Map 1

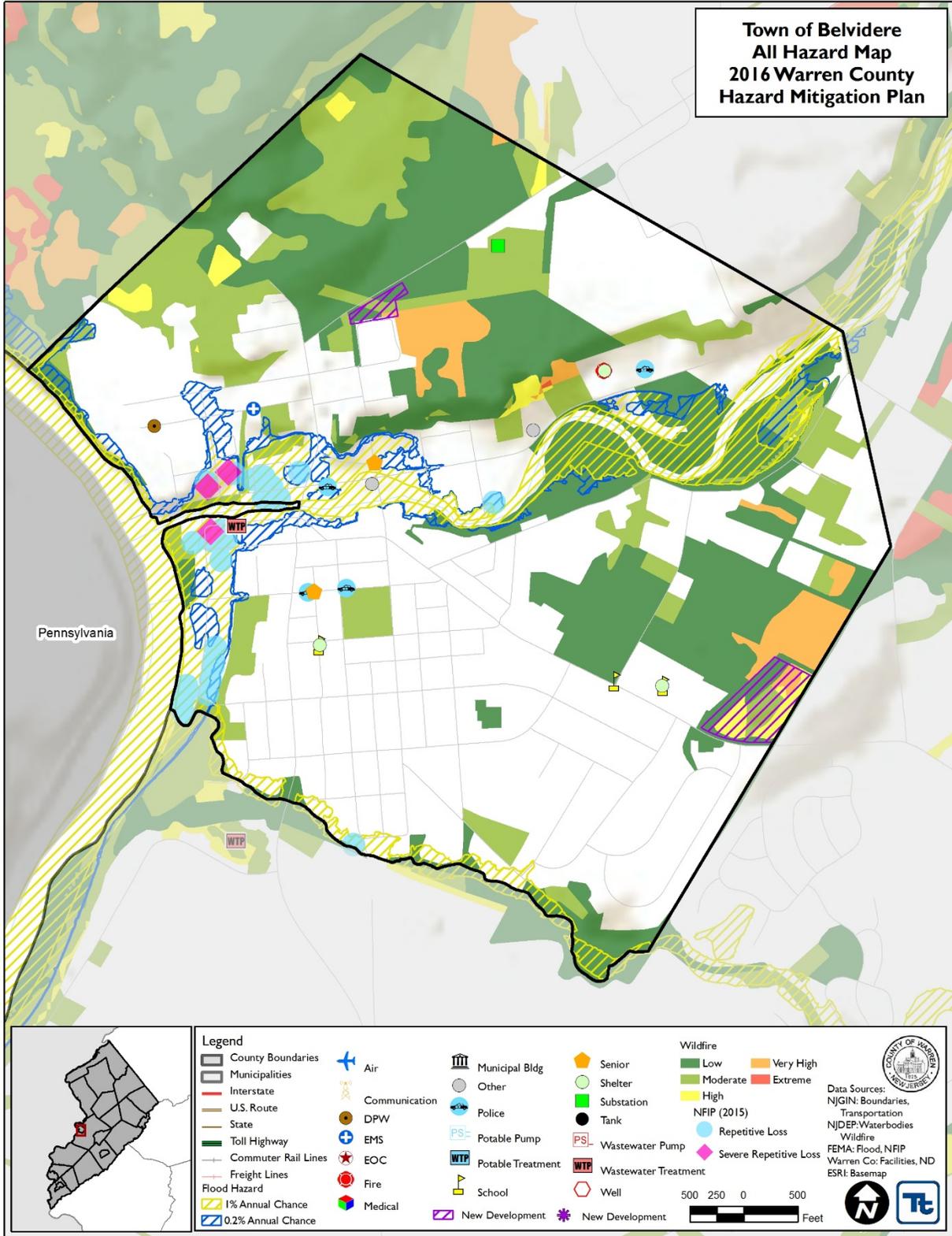
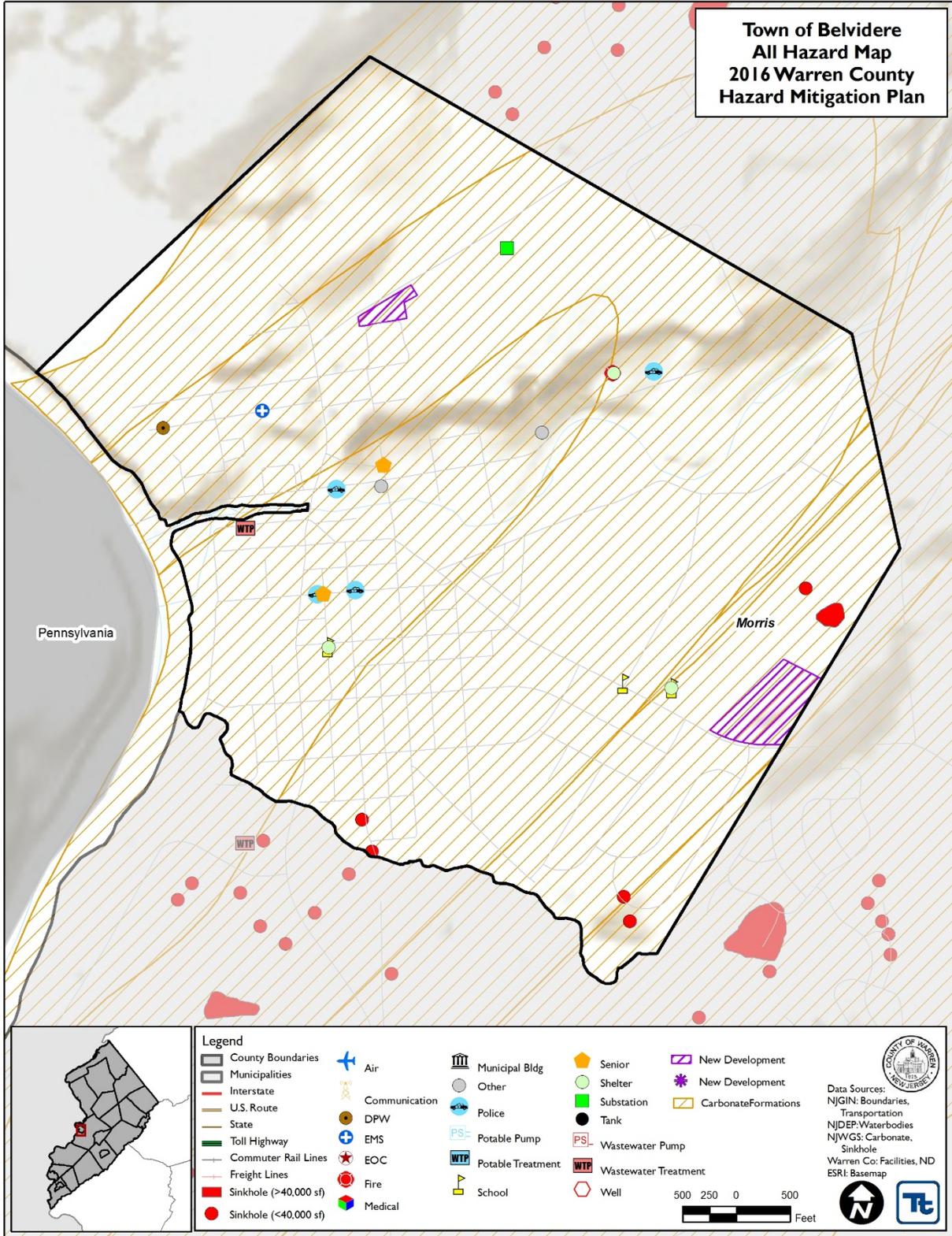




Figure 9.4-2. Town of Belvidere Hazard Area Extent and Location Map 2





**Action Number:**

Belvidere - 1

**Mitigation Action/Initiative:**

Support the mitigation of vulnerable structures via elevation, flood proofing/education or acquisition/relocation to protect structures from future damage, with repetitive loss and severe repetitive loss properties as a priority.

Assessing the Risk	
<b>Hazard(s) addressed:</b>	Flooding, Severe Weather, Severe Winter Weather
<b>Specific problem being mitigated:</b>	Support the mitigation of vulnerable structures via elevation, flood proofing/education or acquisition/relocation to protect structures from future damage, with repetitive loss and severe repetitive loss properties as a priority.
Evaluation of Potential Actions/Projects	
<b>Actions/Projects Considered (name of project and reason for not selecting):</b>	1. Flood-proofing 2. Elevation/Acquisition/Relocation 3. Do nothing
Action/Project Intended for Implementation	
<b>Description of Selected Action/Project</b>	Support the mitigation of vulnerable structures via elevation, flood proofing/education or acquisition/relocation to protect structures from future damage, with repetitive loss and severe repetitive loss properties as a priority.
<b>Action/Project Category</b>	SIP
<b>Goals/Objectives Met</b>	1, 2
<b>Applies to existing and/or new development; or not applicable</b>	Existing
<b>Benefits (losses avoided)</b>	High
<b>Estimated Cost</b>	High
<b>Priority*</b>	High
Plan for Implementation	
<b>Responsible/Lead Agency/Department</b>	Township Administrator; Warren County
<b>Local Planning Mechanism</b>	
<b>Potential Funding Sources</b>	FEMA HMA Grant Funding; In-Kind match
<b>Timeline for Completion</b>	Short (depends on available funding)
Reporting on Progress	
<b>Date of Status Report/ Report of Progress</b>	Date: Progress on Action/Project:



**Action Number:** Belvidere - 1

**Mitigation Action/Initiative:** Reduce property damage from severe wind events and expand communications, shelter capabilities during prolonged power failures.

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	
Fiscal	0	The municipal budget cannot support these actions; will require funding from another source such as FEMA grant programs
Environmental	0	
Social	0	
Administrative	-1	Personnel limitations will affect our ability to implement these actions; additional staff would be necessary or collaboration with County resources
Multi-Hazard	1	
Timeline	0	Can be completed in five years if funding is available
Local Champion	0	
Other Community Objectives	0	
Total	8	
<b>Priority (High/Med/Low)</b>	<b>High</b>	



**Action Number:** Belvidere - 5

**Mitigation Action/Initiative:** Obtain backup power to support continuity of operations

Assessing the Risk	
<b>Hazard(s) addressed:</b>	All
<b>Specific problem being mitigated:</b>	Obtain backup power to support continuity of operations
Evaluation of Potential Actions/Projects	
<b>Actions/Projects Considered (name of project and reason for not selecting):</b>	1. Purchase generators
	2. Find alternative fuel source (e.g., Co-Gen facility; solar)
	3. Do nothing
Action/Project Intended for Implementation	
<b>Description of Selected Action/Project</b>	Obtain backup power to support continuity of operations. At facility at this time includes Town Hall/Police Department/EOC
<b>Action/Project Category</b>	SIP
<b>Goals/Objectives Met</b>	1, 6
<b>Applies to existing and/or new development; or not applicable</b>	Existing building
<b>Benefits (losses avoided)</b>	High
<b>Estimated Cost</b>	High (estimated \$300,000)
<b>Priority*</b>	High
Plan for Implementation	
<b>Responsible/Lead Agency/Department</b>	Administrator
<b>Local Planning Mechanism</b>	
<b>Potential Funding Sources</b>	FEMA HMA Funding; Local Match
<b>Timeline for Completion</b>	Short (5 years but depends on funding) DOF
Reporting on Progress	
<b>Date of Status Report/ Report of Progress</b>	Date: Progress on Action/Project:



**Action Number:** Belvidere - 5

**Mitigation Action/Initiative:** Obtain backup power to support continuity of operations

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	
Fiscal	0	Grant funding is needed to implement this project
Environmental	0	
Social	1	
Administrative	1	
Multi-Hazard	1	
Timeline	1	Can implement in 5 years but depends on funding availability
Local Champion	1	
Other Community Objectives	0	
<b>Total</b>	<b>11</b>	
<b>Priority (High/Med/Low)</b>	<b>High</b>	



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