



9.10 TOWNSHIP OF IRVINGTON

This section presents the jurisdictional annex for the Township of Irvington. The annex includes a general overview of the Township of Irvington; an assessment of the Township of Irvington's risk and vulnerability, and mitigation capabilities; and a prioritized action plan to implement prior to a disaster to reduce future losses and achieve greater resilience to hazards.

9.10.2 Hazard Mitigation Planning Team

The following individuals are the Township of Irvington's identified hazard mitigation plan primary and alternate points of contact and NFIP Floodplain Administrator.

Table 9.10-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name / Title: John F. Brown, OEM Coordinator Address: 1 Civic Square Irvington NJ, 07111 Phone Number: 973-399-6554 Email: JBrown@Irvingtonnj.org	Name / Title: Antonio Gary, Fire Chief/Deputy Coordinator Address: 1 Civic Square Irvington NJ, 07111 Phone Number: 973-416-5677 Email: AGary@Irvingtonnj.org
NFIP Floodplain Administrator	
Name / Title: John Wiggins, Engineer Address: 1 Civic Square Irvington NJ, 07111 Phone Number: 973-399-6696 Email: jwiggins@Irvingtonnj.org	

9.10.3 Jurisdiction Profile

Township of Irvington has a total land area of 2.930 square miles of which 2.928 square miles is land and 0.002 square miles is water. The bordering communities are Maplewood to the West, Newark to the East, South Orange to the Northwest, and Union and Hillside to the Southwest. The Elizabeth River cuts through the Township and passes Civic Square and Clinton Cemetery. The Garden State Parkway runs south west to northeast through the Township.

The area now known as the Township of Irvington has significant ties to the Revolutionary War when it was known as Clinton Township and later Camptown. What was known as Camptown in 1834 included Irvington, Maplewood, and parts of Newark and South Orange. The name of the Township was changed after the iconic "Camptown Races" ballad written by Stephen Foster in 1850 was published. In order to avoid any association with the song, the name of the Township was changed to Irvington in honor of the author Washington Irving. In 1874, New Jersey approved the political area to be known as the Village of Irvington. On March 2, 1898, Irvington was incorporated as a Town, replacing Irvington Village.

According to the U.S. Census, the 2010 population for the Township of Irvington was 53,926. The estimated 2017 population was 54,175, which is a 0.5 percent increase in population from 2010. Data from the 2017 U.S. Census American Community Survey estimates that 7.8 percent of the township population is five years of age or younger, and 10.8 percent is 65 years of age or older. 3.8 percent of the population is estimated to be below the poverty line. Communities must deploy a support system that enables all populations to safely reach shelters or to quickly evacuate a hazard area.



Township of Irvington operates its local government with a Mayor-Council form of government under the Faulkner Act. There are seven members of the Council and an elected Mayor. Of the seven council members, four are elected as ward council members and three are elected at large.

9.10.4 Growth/Development Trends

Understanding how past, current, and projected development patterns have or are likely to increase or decrease risk in hazard areas is a key component to understanding a jurisdiction's overall risk to its hazards of concern. Table 9.10-2 summarizes recent and expected future development trends including major residential/commercial development and major infrastructure development. Refers to Figure 9.10-1 and 9.10-2 at the end of this annex which illustrate the geographically-delineated hazard areas and the location of potential new development, where available.

Table 9.10-2. Recent and Expected Future Development

Type of Development	2014	2015	2016	2017	2018
Number of Building Permits for New Construction Issued Since the Previous HMP					
Single Family					
Multi-Family					
Other (commercial, mixed-use, etc.)					
Property or Development Name	Type of Development	# of Units / Structures	Location (address and/or block and lot)	Known Hazard Zone(s)*	Description / Status of Development
Recent Major Development and Infrastructure from 2015 to Present					
None identified					
Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years					
None identified					

* Only location-specific hazard zones or vulnerabilities identified.

9.10.5 Capability Assessment

The Township of Irvington performed an inventory and analysis of existing capabilities, plans, programs, and policies that enhance its ability to implement mitigation strategies. Section 5 (Capability Assessment) in Volume I of this plan describes the components included in the capability assessment and their significance for hazard mitigation planning. This section summarizes the following findings of the assessment:

- An assessment of legal and regulatory capabilities
- Development and permitting capabilities
- An assessment of fiscal capabilities
- An assessment of education and outreach capabilities
- Information on National Flood Insurance Program (NFIP) compliance
- Classification under various community mitigation programs
- The community's adaptive capacity for the impacts of climate change

PLANNING, LEGAL AND REGULATORY CAPABILITY

The table below summarizes the legal and regulatory tools that are available to the Township of Irvington.



Table 9.10-3. Planning, Legal and Regulatory Capability

	Do you have this? (Yes/No)	Authority that enforces (Federal, State, Regional, County, Local)	State Mandated / Allowed	Has the HMP been integrated in the last 5 years? If yes- how?	
				If yes- how? Describe in comments	If no - can it be a mitigation action? If yes, add Mitigation Action #.
Codes, Ordinances, & Requirements					
Building Code	Yes	Local and State	Yes	No	No
Comment: State mandated on local level under NJAC 5:23-3.14. International Building Code – New Jersey Edition, 2018, NJAC 5:24-3.14. Chapter 82; 1997; Periodic updates since 1977.					
Zoning Code	Yes	Local and State	Yes	No	No
Comment: Per State of NJ Municipal Land Use Law (MLUL) L. 1975, s. 2, eff Aug 1, 1976, 40-55D-62: 49. Power to zone, requires all jurisdictions to have current zoning and other land development ordinances after the planning board has adopted the land use element and master plan. Updated 6/15/04; Periodic updates since 2004.					
Subdivisions	Yes	Local and State	Yes	No	No
Comment: State mandated - P.L.1975, c.291 (C.40:55D-47): 40:55D-37. Grant of power; referral of proposed ordinance; county planning board approval . Dictated by the Municipal Land Use Law. NJ Statute 40:27-6.2. The board of freeholders of any county having a county planning board shall provide for the review of all subdivisions of land within the county by said county planning board and for the approval of those subdivisions affecting county road or drainage facilities as set forth and limited hereinafter in this section. Chapter 174; updated 5/14/79; Periodic updates since 1979.					
Stormwater Management	Yes	Local	Yes	No	No
Comment: Title 7 of the NJ Administrative Code (N.J.A.C. 7:8). Chapter 172; updated 2/14/07.					
Post-Disaster Recovery	No	-	-	-	-
Comment:					
Real Estate Disclosure	Yes	State – Division of Consumer Affairs	Yes	No	No
Comment: N.J.A.C. 13:45A-29.1; Before signing a contract of sale, all purchasers must receive a New Jersey Public Offering Statement (POS) approved by the New Jersey Real Estate Commission. The POS provides information such as proximity to hospitals, schools, fire and police, as well as any hazards, risks or nuisances in or around the subdivision.					
Growth Management	Yes	Local	Yes	No	No
Comment: State mandated at local level.					
Shoreline Development	No	-	Yes – if coastal community	-	-
Comment: NJ Coastal Area Facility Review Act (N.J.S.A. 13:19) or CAFRA regulates almost all development along the coast for activities including construction, relocation, and enlargement of buildings or structures, and excavation, grading, shore protection structures, and site preparation. This law is implemented through NJ's Coastal Zone Management Rules N.J.A.C. 7:7E-1 et seq.					
Site Plan Review	Yes	Local	Yes	No	No
Comment: Chapter 174 Section 170:40-43 (8/14/79); Periodic Updates since 8/14/79.					
Environmental Protection	No	-	Yes	-	-
Comment: The rules that are utilized by the NJDEP and other environmental agencies are codified at Title 7 of the NJ Municipal Administrative Code.					
Flood Damage Prevention	Yes	Local	No	No	No
Comment: Chapter 107; updated 4/10/07					
Wellhead Protection	No	-	-	-	-
Comment:					
Emergency Management	No	-	-	-	-
Comment:					



	Do you have this? (Yes/No)	Authority that enforces (Federal, State, Regional, County, Local)	State Mandated / Allowed	Has the HMP been integrated in the last 5 years? If yes- how?	
				If yes- how? Describe in comments	If no - can it be a mitigation action? If yes, add Mitigation Action #.
Climate Change	No	-	-	-	-
<i>Comment:</i>					
Disaster Recovery Ordinance	No	-	-	-	-
<i>Comment:</i>					
Disaster Reconstruction Ordinance	No	-	-	-	-
<i>Comment:</i>					
Other	No	-	-	-	-
<i>Comment:</i>					
Planning Documents					
Comprehensive / Master Plan	Yes	Local	Yes	No	No
<i>Comment: Master Plan updated 12/09. The Master Plan includes elements for land use, relationship to neighboring plans, housing, economic plan, utility service, circulation, community facilities, recreation/open space, and historic preservation. The utility service and recreation elements discuss flooding. The economic plan discusses economic collapse and hazardous substances. Transportation failure is addressed in the circulation element.</i>					
Capital Improvement Plan	Yes	Local	Allowed	No	No
<i>Comment: Per NJSA 40:55D-29 the governing body is authorized to direct the planning board to prepare a CIP with at least a six year planning horizon.</i>					
Disaster Debris Management Plan	Yes/No		No	Yes/No	Yes/No
<i>Comment:</i>					
Floodplain or Watershed Plan	Yes	Local	No	No	No
<i>Comment: Chapter 105 of the municipal code; updated 4/10/07</i>					
Stormwater Management Plan	Yes	Local and State	Yes	No	No
<i>Comment: Per NJDEP Storm Water Management Rule (N.J.A.C. 7:8, et seq.). The Municipal Stormwater Regulation Program was developed in response to the U. S. Environmental Protection Agency's (USEPA) Phase II rules published in December 1999. The Department issued final stormwater rules on February 2, 2004 and four (4) NJPDES general permits authorizing stormwater discharges from Tier A and Tier B municipalities, as well as public complexes, and highway agencies that discharge stormwater from municipal separate storm sewers (MS4s).</i>					
Stormwater Pollution Prevention Plan	Yes	Local and State	Yes	No	No
<i>Comment:</i>					
Urban Water Management Plan	Yes/No		No	Yes/No	Yes/No
<i>Comment:</i>					
Habitat Conservation Plan	Yes/No		No	Yes/No	Yes/No
<i>Comment:</i>					
Economic Development Plan	Yes	-	No	No	No
<i>Comment: Element within the Master Plan. 2002.</i>					
Shoreline Management Plan	Yes/No		No	Yes/No	Yes/No
<i>Comment:</i>					



	Do you have this? (Yes/No)	Authority that enforces (Federal, State, Regional, County, Local)	State Mandated / Allowed	Has the HMP been integrated in the last 5 years? If yes- how?	
				If yes- how? Describe in comments	If no - can it be a mitigation action? If yes, add Mitigation Action #.
Community Wildfire Protection Plan	Yes/No		No	Yes/No	Yes/No
<i>Comment:</i>					
Community Forest Management Plan	Yes/No		No	Yes/No	Yes/No
<i>Comment:</i>					
Transportation Plan	Yes/No		No	Yes/No	Yes/No
<i>Comment:</i>					
Agriculture Plan	Yes/No		No	Yes/No	Yes/No
<i>Comment:</i>					
Climate Action Plan	Yes/No		No	Yes/No	Yes/No
<i>Comment:</i>					
Tourism Plan	Yes/No		No	Yes/No	Yes/No
<i>Comment:</i>					
Business Development Plan	Yes/No		No	Yes/No	Yes/No
<i>Comment:</i>					
Other	Yes/No		Yes/No	Yes/No	Yes/No
<i>Comment:</i>					
Response/Recovery Planning					
Comprehensive Emergency Management Plan (CEMP) / Emergency Operations Plan (EOP)	Yes	Local	Yes	No	No
<i>Comment: Per the NJ Civilian Defense and Disaster Control Act (App.A:9_43.2) Counties and municipalities must have written Emergency Operations Plans to be reviewed every 2 years. Plan is required by the County Office of Emergency Management and updated on a regular basis.</i>					
Threat & Hazard Identification & Risk Assessment (THIRA)	No	-	-	-	-
<i>Comment:</i>					
Post-Disaster Recovery Plan	No	-	No	-	-
<i>Comment:</i>					
Continuity of Operations Plan	In development	Local	No	-	-
<i>Comment:</i>					
Public Health Plan	Yes/No		Yes/No	Yes/No	Yes/No
<i>Comment:</i>					
Other	No	-	-	-	-
<i>Comment:</i>					

**Table 9.10-4. Development and Permitting Capability**

Criterion	Response
Does your jurisdiction issue development permits?	Yes, Planning and Building Departments
- If no, who does? If yes, which department?	
Does your jurisdiction have the ability to track permits by hazard area?	No, but the Township is working on developing GIS capacity. Baseline maps currently exist.
Does your jurisdiction have a buildable lands inventory? -If yes, please describe briefly. -If no, please quantitatively describe the level of buildout in the jurisdiction.	Yes, the Township has a vacant lots inventory.

ADMINISTRATIVE AND TECHNICAL CAPABILITY

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

Table 9.10-5. Administrative and Technical Capabilities

Staff/Personnel Resource	Available?	Department/Agency/Position
Administrative Capability		
Planning Board	Yes	Planning Board
Mitigation Planning Committee	No	-
Environmental Board / Commission	Yes	Irvington Green Team and Environmental Commission
Open Space Board / Committee	Yes	Recreation Board
Economic Development Commission / Committee	Yes	Office of Economic Development
Warning Systems / Services (reverse 911, outdoor warning signals)	Yes	Reverse 911, Swift 911
Maintenance program to reduce risk	Yes	Storm drain cleaning and tree trimming
Mutual aid agreements	Yes	For emergency services, police and fire, County and neighboring municipalities
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	Yes	Dept. of Neighborhood Services/Township Engineer
Engineers or professionals trained in building or infrastructure construction practices	Yes	Dept. of Neighborhood Services/Township Engineer
Planners or engineers with an understanding of natural hazards	Yes	Dept. of Neighborhood Services/Township Engineer
Staff with training in benefit/cost analysis	Yes	Township's Engineer/Dept. of Neighborhood Services
Surveyors	No	-
Personnel skilled or trained in GIS applications	No	-
Scientist familiar with natural hazards in local area	No	-
Emergency manager	Yes	OEM director



Staff/Personnel Resource	Available?	Department/Agency/Position
Grant writers	Yes	Consultant/Bruno Associates
Resilience Officer	No	-
Other	No	-

FISCAL CAPABILITY

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

Table 9.10-6. Fiscal Capabilities

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants (CDBG, CDBG-DR)	Yes - Dept of Community Development
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes - Tax Assessor
User Fees for Water, Sewer, Gas or Electric Service	Yes - Tax Collector
Incur Debt through General Obligation Bonds	Yes - Municipal Council
Incur Debt through Special Tax Bonds	Yes - Municipal Council
Incur Debt through Private Activity Bonds	Yes - Municipal Council
Withhold Public Expenditures in Hazard-Prone Areas	Possible, but has not been used.
State-Sponsored Grant Programs	Yes, State demolitions funding, Road resurfacing
Development Impact Fees for Homebuyers or Developers	Township is starting to develop fees
Other	County OEM grant, New EOC funding from FEMA, added 2 emergency generators from FEMA

EDUCATION AND OUTREACH CAPABILITY

The table below summarizes the education and outreach resources available to the Township of Irvington.

Table 9.10-7. Education and Outreach Capabilities

Criterion	Response
Do you have a public information officer or communications office?	Yes
Do you have personnel skilled or trained in website development?	Yes
Do you have hazard mitigation information available on your website? • If yes, briefly describe.	No
Do you use social media for hazard mitigation education and outreach? • If yes, briefly describe.	Yes, the Mayor uses social media for many community announcements
Do you have any citizen boards or commissions that address issues related to hazard mitigation? • If yes, briefly describe.	Yes, Environmental Commission
Do you have any other programs already in place that could be used to communicate hazard-related information? • If yes, briefly describe.	No
Do you have any established warning systems for hazard events? • If yes, briefly describe.	Reverse 911 and Swift911. Swift911 in its simplest form is a system that makes phone calls to specific people or areas in the event of an emergency or for sharing important information.

COMMUNITY CLASSIFICATIONS

The table below summarizes the classifications for community programs available to the Township of Irvington.



Table 9.10-8. Community Classifications

Program	Participating?	Classification	Date Classified
Community Rating System	No	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	No	-	-
Public Protection (Fire ISO Protection Class)	No	-	-
Storm Ready Certification	No	-	-
Firewise Community Classification	No	-	-
Sustainable Jersey	Yes	Bronze	10/18/2017

ADAPTIVE CAPACITY

Adaptive capacity is defined as “the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or respond to consequences” (IPCC 2014). In other words, it describes a jurisdiction’s current ability to adjust to, protect from or withstand a hazard event. This term is often referred to while discussing climate change adaptation; however, it also provides an understanding of local capacity for adapting to current and future risks and changing conditions. The table below summarizes the adaptive capacity for climate change and the jurisdiction’s rating.

Table 9.10-9. Adaptive Capacity of Climate Change

Hazard	Adaptive Capacity (Capabilities) - High/Medium/Low
Coastal Erosion and Sea Level Rise	Low
Coastal Storm	Low
Drought	Medium
Earthquake	Low
Extreme Temperature	Medium
Flood	Medium
Geological Hazards	Low
Severe Weather	High
Winter Storm	High
Wildfire	Medium
Civil Disorder	Low
Cyber Attack	Low
Disease Outbreak	Medium
Economic Collapse	Medium
Hazardous Substances	Medium
Utility Interruption	High
Terrorism	Medium
Transportation Failure	Medium

Notes:

High = Capacity exists and is in use; Medium = Capacity may exist, but is not used or could use some improvement;

Low = Capacity does not exist or could use substantial improvement; Unsure = Not enough information is known to assign a rating.

NATIONAL FLOOD INSURANCE PROGRAM

This section provides specific information on the management and regulation of the regulatory floodplain.



Table 9.10-10. National Flood Insurance Program Compliance

Criterion	Response
What local department is responsible for floodplain management?	Department of Engineering
Who is your floodplain administrator? (name, department/position)	Joh Wiggins, Engineer
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date that your flood damage prevention ordinance was last amended?	12/4/1979
Does your floodplain management program meet or exceed minimum requirements? • If exceeds, in what ways?	Meets
When was the most recent Community Assistance Visit or Community Assistance Contact?	None
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? • If so, state what they are.	No
Are any RiskMAP projects currently underway in your jurisdiction? • If so, state what they are.	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction? • If no, state why.	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program?	Feel adequately supported
<input type="checkbox"/> If so, what type of assistance/training is needed?	-
Does your jurisdiction participate in the Community Rating System (CRS)? • If yes, is your jurisdiction interested in improving its CRS Classification? • If no, is your jurisdiction interested in joining the CRS program?	No, not interested
How many flood insurance policies are in force in your jurisdiction?*	45 policies
• What is the insurance in force? • What is the premium in force?	Insurance in force: \$11,722,800; Premiums in force \$106,688
How many total loss claims have been filed in your jurisdiction?*	87 total loss claims, \$488,116.06 in total payments
• How many claims are still open or were closed without payment? • What were the total payments for losses?	
Do you maintain a list of properties that have been damaged by flooding?	No
Do you maintain a list of property owners interested in flood mitigation?	No

*According to FEMA statistics as of 9/30/2018

ADDITIONAL AREAS OF EXISTING INTEGRATION

In the performance period since adoption of the 2015 HMP, the Township of Irvington made progress on integrating hazard mitigation into other initiatives. The following plans and programs currently integrate components of the hazard mitigation plan and strategy:

- **Housing Department:** The functions of the Housing Department are:
 - Enforce all Housing Codes; enforcement of the property maintenance codes
 - Heat complaints
 - Protecting the public health & safety moral and welfare, by establishing standards that govern the maintenance of appearance and or condition and occupancy of residential and non-residential properties
- **Building Department:** The Building Department enforces the New Jersey Construction Code. The Department:
 - is responsible for the administration & supervision of the Building Code
 - is designated as State Uniform Construction Code (UCC) Enforcement agency
 - is supervised by the Division manager who shall be a licensed Construction Official & township employee in classified Civil Service



- **Community Development and Planning:** The Office of Community Development and Planning. performs three functions are Planning and Zoning, Redevelopment, and Property Disposition. The Irvington Office of Community Development and Planning's mission is to encourage economic growth throughout the Township by strengthening the Township's competitive position and facilitating investments that build capacity, create jobs, generate economic opportunity, grow the tax base and improve quality of life.
- **Fire Department:** It is the mission of the Irvington Fire Department to save lives and protect property by the provision of a comprehensive fire protection program designed to deliver its prevention and suppression services efficiently and effectively, and in a manner consistent with proper risk management and all duty recognized standard operating procedures.
- **Public Works:** The mission of the Department of Public Works is to design, build, operate and maintain the Township's public facilities and infrastructure in a manner that is safe, sustainable, economical and attractive. The Department of Public Works is responsible for the general management, operation and care of the infrastructure found in the Township's right-of-way including streets, alleys, parking lots, bridges, curbs, gutters, sidewalks, traffic signals, traffic signage, street striping, legend painting, curb painting, sanitary sewer system, storm drain system, reclaimed and potable water systems for irrigation, street lights, street sweeping, graffiti removal, landscapes and tree trimming, right-of-way permits and inspections; general management operation and care of Township facilities and properties including electrical, carpentry, plumbing, air conditioning & heating systems, painting, janitorial, phone system; the purchase, maintenance and repair of the Township's vehicle fleet and equipment; review of development projects for public improvements, review of tentative and final subdivision, review and approval of waste management plans. The Department of Public Works is responsible for all Public Works functions of Municipal government, and for providing technical advice and service to other departments. Through the Public Property and Motorized Equipment Divisions, DPW touches every other township office. Through streets and parks maintenance, the Department's responsibilities extend to every corner of the township.
- **Sustainable Essex Alliance:** The Sustainable Essex Alliance (SEA) is a coalition of local municipal green teams and sustainability organizations working together to create solutions for local environments and economies. By operating as a single entity, the SEA has the opportunity to not only impact more environments, but also achieve more efficient results than we could alone. This helps to create the financial incentives needed to push sustainable actions such as reducing greenhouse gas emissions, using green energy solutions, and cutting waste while simultaneously increasing awareness and education in our communities. The Alliance is currently pursuing a renewable community energy aggregation program to provide residents of Essex County with the option of 100% green energy. The Alliance has also initiated the NJ Home Performance with ENERGYSTAR™ Program and Comfort Partners Program that offer rebates and financing for energy efficiency upgrades, insulation, and helpful assessments to reduce bills and environmental impact.
- **Sustainable Jersey:** The Township of Irvington is a bronze certified community in the Sustainable Jersey program. The township has earned points toward certification in animals in community education, green team creation, lead education and outreach programs, renewable energy, energy efficiency, energy tracking and management, and community gardens.

9.10.6 Hazard Event History Specific to the Jurisdiction

Essex County has a history of hazard events, as detailed in Volume I, Section 4 (Risk Assessment) of this plan. A summary of historical events is provided in each of the hazard profiles (Section 4.3) and includes a chronology of events that have affected Essex County and its jurisdictions. The Township of Irvington's history of federally-declared (as presented by FEMA) and significant hazard events (as presented in NOAA-NCEI) is consistent with



that of Essex County. Table 9.10-11 provides details regarding municipal-specific loss and damages the township experienced during hazard events from 2014 to 2019. Information provided in the table below is based on reference material or local sources. For details of these and additional events, refer to Volume I, Section 4 (Risk Assessment) of this plan.

Table 9.10-11. Hazard Event History

Date(s) of Event	Event Type (disaster declaration if applicable)	Essex County Designated?	Summary of Event	Summary of Local Damages and Losses
January 22-23, 2016	Winter Storm, Blizzard (DR-4264)	Yes	Low pressure moving across the deep South on Thursday January 21st and Friday January 22nd intensified and moved off the Mid Atlantic coast on Saturday January 23rd, bringing heavy snow and strong winds to northeast New Jersey, and blizzard conditions to the urban corridor and some nearby areas. At Newark Airport, the storm total snowfall was 24.5 inches, where winds gusted to 39 mph. Newark Airport ASOS observations showed blizzard conditions, with visibility less than one quarter mile in heavy snow and frequent wind gusts over 35 mph through the day and into the early evening on Saturday January 23rd.	Governor Chris Christie declared a state of emergency for New Jersey on Friday January 22nd. New Jersey Transit stopped running trains, buses and light rail at 2 AM Saturday January 23rd. Although the County was impacted, the Township did not report damages.
July 17, 2019	Severe Storm, Flood	N/A	Powerful thunderstorms resulted in flash flooding throughout the region.	The Garden State Parkway was closed in both directions due to flooding.

9.10.7 Jurisdiction-Specific Vulnerabilities and Hazard Ranking

The hazard profiles in Section 4 (Risk Assessment) provide detailed information regarding each plan participant's vulnerability to the identified hazards. Table 9.10-12 summarizes the hazards of greatest concern and risk to the Township of West Orange.

A gradient of certainty was developed to summarize the confidence level regarding the input used to populate the hazard ranking. A certainty factor of high, medium or low was selected and assigned to each hazard to provide a level of transparency and create increased understanding of the data used to support the resulting ranking. The following scale was used to assign a certainty factor to each hazard:

- High—Defined scenario/event to evaluate; probability calculated; evidenced-based/quantitative assessment to estimate potential impacts through hazard modeling.
- Moderate—Defined scenario/event or only a hazard area to evaluate; estimated probability; combination of quantitative (exposure analysis, no hazard modeling) and qualitative data to estimate potential impacts.
- Low—Scenario or hazard area is undefined; there is a degree of uncertainty regarding event probability; majority of potential impacts are qualitative.



Table 9.10-12. Summary of Risk Assessment Results

Hazard of Concern	Hazard/ Scenario Area Evaluated	Population		Buildings		Economy (Loss)		Certainty Factor
Coastal Erosion and Sea Level Rise	Coastal Erosion: CEHA	CEHA:	0	CEHA:	0	CEHA:	\$0	High
		SLR +1ft:	0	SLR +1ft:	0	SLR +1ft:	\$0	
	Sea Level Rise: NOAA +1ft and +3ft rise	SLR +3ft:	0	SLR +3ft:	0	SLR +3ft:	\$0	
Coastal Storm	100- and 500- MRP Hurricane Wind	Category 1:	0	Category 1:	0	100-year Wind Loss:	\$3,446,736	High
		Category 2:	0	Category 2:	0			
	Category 1 through Category 4 SLOSH	Category 3:	0	Category 3:	0	500-year Wind Loss:	\$29,273,808	
		Category 4:	0	Category 4:	0			
Drought	Drought event	Majority of the County is serviced by water supplies who get water from surface water.		Droughts are not expected to cause direct damage to buildings.		Losses would be limited, due to lack of major agricultural industry.		Low
Earthquake	100, 500-, 2,500-Year Mean Return Period Event	NEHRP D&E:	219	NEHRP D&E:	30	100-year Loss:	\$0	High
		Liquefaction Class 4:	0	Liquefaction Class 4:	0	500-year Loss:	\$3,990,827	
						2,500-year Loss:	\$66,871,152	
Extreme Temperature	Extreme temperature event (heat or cold)	Over 65 Population:	5,928	Physical impacts due to extreme temperatures would be limited.		Loss of business function is possible due to unexpected repairs (i.e. pipes bursting) or power failures.		Low
		Population Below Poverty Level:	12,602					
Flood	100- and 500-Year Mean Return Period Event	100-year	263	100-year	39	100-year Loss:	\$33,487,235	High
		500-year	263	500-year	545			
Geological	High Landslide Susceptibility Areas	Class A:	0	Class A:	0	Class A:	0	Moderate
		Class B:	838	Class B:	120	Class B:	\$40,533,104	
Severe Weather	Severe Weather Event	Entire population exposed; The degree of impact to the population depends on the scale of the incident.		Entire building stock is exposed; The degree of impact depends on the scale of the incident.		Economic losses could be similar to those of the coastal storm (wind and surge) and flooding hazards.		Low



Hazard of Concern	Hazard/ Scenario Area Evaluated	Population		Buildings		Economy (Loss)		Certainty Factor
Severe Winter Weather	Severe Winter Weather Event	Entire population exposed; The degree of impact to the population depends on the scale of the incident.		Entire building stock is exposed; The degree of impact depends on the scale of the incident.		The cost of snow and ice removal and repair of roads can impact local operating budgets.		Low
Wildfire	Wildfire Fuel Hazard areas (High, Very High, Extreme)	Wildfire:	0	Wildfire:	0	Wildfire:	\$0	Moderate
Civil Disorder	Civil disorder event	Population in the immediate vicinity will be impacted.		Buildings in the immediate vicinity will be most impacted.		Economic assets in the immediate vicinity will be most impacted.		Low
Cyber Attack	Cyber-attack event	The degree of impact to the population depends on the scale of the incident.		Damages due to a cyber attack may be limited.		The degree of damages depends on the scale of the incident. Loss of utilities/communication would have widespread economic impacts.		Low
Disease Outbreak	One of the following: West Nile Virus, Eastern Equine Encephalitis, St. Louis Encephalitis, La Crosse Encephalitis, Lyme Disease, Influenza, Ebola Virus	Entire population exposed; The degree of impact to the population depends on the scale of the incident		Disease outbreak would not have a direct impact on buildings.		Impacts to food supply and water supply; Costs of activities and programs implemented to address outbreaks and prevent spread.		Low
Economic Collapse	Recessions, Depressions, Interruption of normal economic conditions	The degree of impact to the population depends on the scale of the incident.		Damages due to economic collapse may be limited; property owners that cannot afford to maintain the structure may become abandoned/run-down.		The degree of damages depends on the scale of the incident. Massive impacts due to loss of jobs, businesses, and tax revenue are possible.		Low



Hazard of Concern	Hazard/ Scenario Area Evaluated	Population	Buildings	Economy (Loss)	Certainty Factor
Hazardous Substances	Port Newark is in Essex County (3 rd largest port in the U.S.) Major highways/rail Pipelines 10 NPL Sites in County	Population impacted will depend on the type of material and scale of the incident. May include population within small radii of site.	The degree of damages to a building depends on the scale of the incident.	The degree of damages depends on the scale of the incident.	Low
Utility Interruption	Disruption of power or potable water caused by accident, sabotage, natural hazards, or equipment failure.	The degree of impact to the population depends on the scale of the incident.	The degree of damages to buildings depends on the scale of the incident; Physical impacts to structures may occur if utilities are keeping critical functions online (i.e. sump pumps).	The degree of damages depends on the scale of the incident.	Low
Terrorism	Terrorist Attack	The degree of impact to the population depends on the scale of the incident; Population in the immediate vicinity will be impacted.	The degree of damages to buildings depends on the scale of the incident; Buildings in the immediate vicinity will be most impacted.	The degree of damages depends on the scale of the incident.	Low
Transportation Failure	One accident on any of the following: Roadway/vehicular, Aviation, Rail	The degree of impact to the population depends on the scale of the incident; Population in the immediate vicinity will be impacted.	The degree of damages to asset depends on the scale of the incident; Assets in the immediate vicinity will be most impacted.	The degree of damages depends on the scale of the incident; Assets in the immediate vicinity will be most impacted.	Low



REPETITIVE FLOOD LOSSES

The following summarizes the repetitive and severe repetitive flood losses in the Township of Irvington.

- Number of repetitive loss (RL) properties: 12
- Number of severe repetitive loss (SRL) properties: 0
- Number of RL/SRL properties that have been mitigated: The township has only held discussions thus far.

*Notes: RL and SRL as of 03/31/2019; SRL includes SRL properties that have been verified only (SRL_Indicator = V).
The number of SRL properties excludes RL properties.*

CRITICAL FACILITIES

No identified critical facilities and lifelines in the community are located in the 1-percent and 0.2-percent floodplain.

Table 9.10-13. Potential Flood Losses to Critical Facilities

Name	Type	Exposure	
		1% Event	0.2% Event
None of the Township’s critical facilities are located in the floodplain.			

ADDITIONAL IDENTIFIED VULNERABILITIES

The jurisdiction has identified the following vulnerabilities within their community:

- Camp Field, Drakes Lane, and Lennox are flood prone.
- An emergency generator is needed at Town Hall, possibly at Library. Would allow for command center and sheltering.
- The fire department needs an additional fire engine and fire truck, which could be used for various natural hazard response and an additional
- OEM lacks water response vehicles.
- Emergency services require an upgrade to the emergency communications system to allow for communications with neighboring municipalities and the county during disaster events.
- DPW needs tandem dump trucks for debris removal. The Township lacks the capacity.
- Parts of the stormwater system are difficult to reach and expensive to fix. Unable to handle capacity during heavy rain events. Nye Avenue and Ball Street. Lions Avenue and Claremount are areas of concern.
- Flood prone areas including 12 repetitive loss properties.
- The Township needs additional fire protection facilities.

HAZARD AREA EXTENT AND LOCATION

Hazard area extent and location maps have been generated for the Township of Irvington 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 Irvington has significant exposure; Figures 9.10-1 and 9.10-2 These maps also display the location of the regulatory floodplain, as well as identified critical facilities, lifelines, and RL/SRL properties within the municipality.



HAZARD RANKING

This section includes the community specific identification of the primary hazard concerns based on identified problems, impacts and the results of the risk assessment as presented in Section 4 of the plan. The ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property, and the economy as well as community capability and changing future climate conditions. This input supports the mitigation action development to target those hazards with highest level of concern.

As discussed in Section 4.4 (Hazard Ranking), each plan participant may have differing degrees of risk exposure and vulnerability compared to Essex County as a whole. Therefore, each jurisdiction ranked the degree of risk to each hazard as it pertains to their community. The table below summarizes the hazard risk/vulnerability rankings of potential hazards for the Township of Irvington. During the review of the calculated hazard ranking, the Township adjusted the calculated rankings to incorporate the perceived adaptive capacity of the community with respect to the relevant hazard and any other changes needed. The Township of Irvington has reviewed the County hazard ranking table as well as its individual results to reflect the relative risk of the hazards of concern to the community. During the review of the hazard ranking, the Township indicated the following:

- The Township changed the risk ranking of extreme temperature from high to medium.
- The Township changed the risk ranking of flood from low to medium.
- The Township changed the risk ranking of wildfire from low to medium.
- The Township changed the risk ranking of disease outbreak from low to medium.
- The Township changed the risk ranking of hazardous substances from low to medium.
- The Township changed the risk ranking of terrorism from low to medium.
- The Township changed the risk ranking of transportation failure from low to medium.

Table 9.10-13. Township of Irvington Hazard Ranking Input

Coastal Erosion and Sea Level Rise	Coastal Storm	Drought	Earthquake	Extreme Temperature	Flood
Low	Low	Medium	Low	Medium	Medium

Geological Hazards	Severe Storm	Winter Storm	Wildfire	Civil Disorder	Cyber Attack
Low	High	High	Medium	Low	Low

Disease Outbreak	Economic Collapse	Hazardous Substances	Utility Interruption	Terrorism	Transportation Failure
Medium	Medium	Medium	High	Medium	Medium

9.10.8 Mitigation Strategy and Prioritization

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

**PAST MITIGATION INITIATIVE STATUS**

The following table summarizes the jurisdiction's progress on their mitigation strategy identified in the 2015 HMP. 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 9.10-15. Status of Previous HMP Mitigation Actions

2015 Action Number Action Description	Responsible Party	Status (In Progress, No Progress, Ongoing Capability, or Completed)	Include in the 2020 HMP Update?	
			Check if Yes	Enter 2020 HMP Action #
Irvington-1: Obtain backup power for critical facilities to ensure continuity of operations. The following Irvington critical facilities have been identified to acquire generators – Fire Station 1 Fire Station 2 Fire Station 4 Chris Gatling Center Irvington Township Fire Hall	Office of Emergency Management	In Progress: 1 emergency natural gas generator EOC/Wagner Place Fire House 1 emergency diesel generator for police and fire 1 emergency diesel generator for Gatling Recreation Center (place of refuge) at Union Avenue	X	2020-Irvington-006
Irvington-2: Construction of an Emergency Operations Center	Township of Irvington	Complete: EOC constructed at Wagner Place Fire House		
Irvington-3: ACOE to do a study to identify corrective issues with flooding and affect repairs to concrete and masonry flumes	US ACOE	No Progress	X	2020-Irvington-007
Irvington-4: Continue to police the condition of river channels. Monitoring is performed annually which is required under the Township Storm water permit. Inspection looks for illicit discharges and structural integrity of the channel.	Township of Irvington Department of Public Works	Ongoing capability		
Irvington-5: Sanitary sewers in Columbia Ave. area – action to rehabilitate and monitor the condition of the sewer lines.	Township of Irvington Department of Public Works	-		
Irvington-6: Hazmat roadway corridors - the identification, monitoring and ability to address hazardous materials within the Township. Reduce exposure to Hazardous Materials being transported in the community	Township of Irvington Police Department	No Progress, Discontinue (Covered by state requirements and oversight)		
Irvington-7: Monitor utility substations	PSE&G	In Progress (Discontinue, PSEG responsibility. Township does coordinate and keep up to date on activity)		
Irvington-8: 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.	Township	In Progress	X	2020-Irvington-008



The Township did not identify any other activities that were completed in addition to those in the 2015 HMP mitigation strategy.

PROPOSED HAZARD MITIGATION INITIATIVES FOR THE PLAN UPDATE

The Township of Irvington participated in a risk assessment workshop in September 2019 where detailed information was provided on assets exposed and vulnerable to the identified hazards of concern. The Township of Irvington participated in a mitigation action workshop in October 2019 and was provided a Mitigation Toolbox that included a mitigation catalog developed specifically for Essex County and its hazards of concerns; challenges and opportunities identified during the capability and risk assessments, and 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). Refer to Section 6 and Appendix H (Mitigation Strategy Supplement) for a more complete description of the Mitigation Toolbox and its resources.

Table 9.10-16 summarizes the comprehensive-range of specific mitigation initiatives the Township of Irvington 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 (Mitigation Strategy), 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 9.10-16 provides a summary of the prioritization of all proposed mitigation initiatives for the HMP update and Table 9.10-18 summarizes the actions by type across hazards of concern.



Table 9.10-16. Proposed Hazard Mitigation Initiatives

Initiative Number	Mitigation Initiative Name	Description of the Problem	Description of the Solution	New or Existing Assets?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Cost	Timeline	Priority	Mitigation Category	CRS Category
2020-Irvington-001	Expand natural floodplain of the Brook	The Brook runs through Irvington. The natural floodplain for the Brook is built out and lacks the ability absorb runoff before it enters the Brook. The channel for the Brook is narrow in areas and is prone to overflowing. This leads to properties being flooded.	The Township will identify the most flood prone properties along the Brook that would be most effective to purchase and return to natural floodplain function in order to reduce runoff into the Brook. The Township will then approach property owners and work to buyout properties. Properties that are bought out will be returned to natural	Existing	Flood, Severe Storm	1, 2	Engineering	FMA, PDM, HMGP, Private environmental grants, municipal budget	Natural floodplain function restored, water entering into Brook reduced, removal of flood properties	TBD by number of properties purchased and cost of individual properties.	5 years	Medium	SIP, NSP	PP, NR



Initiative Number	Mitigation Initiative Name	Description of the Problem	Description of the Solution	New or Existing Assets?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Cost	Timeline	Priority	Mitigation Category	CRS Category
			floodplain function.											
2020-Irvington-002	Lennox Avenue	Lenox Avenue is a flood prone area. The source of flooding cannot be mitigated in a cost-effective manner. Properties will be continually exposed to flooding over time.	The township will work to buyout properties that are most flood prone and elevate properties that are not interested in buyout. Elevated properties will be elevated to the base flood elevation plus 1 foot. Properties that have been bought out will be restored to natural floodplain function to decrease runoff.	Existing	Flood, Severe Storm	1, 2	Engineering	FMA, PDM, HMGP, municipal budget	Residential properties removed and elevated out of flooding potential, natural floodplain functions increased	Cost dependent on number of interested property owners, number of elevations vs buyouts, and costs of properties.	5 years	High	SIP, NSP	PP, NR
2020-Irvington-003	Drakes Lane	Drakes Lane is a flood prone area. The source	The township will work to buyout	Existing	Flood, Severe Storm	1, 2	Engineering	FMA, PDM, HMGP,	Residential properties removed and elevated out	Cost dependent on number	5 years	High	SIP, NSP	PP, NR



Initiative Number	Mitigation Initiative Name	Description of the Problem	Description of the Solution	New or Existing Assets?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Cost	Timeline	Priority	Mitigation Category	CRS Category
		of flooding cannot be mitigated in a cost-effective manner. Properties will be continually exposed to flooding over time.	properties that are most flood prone and elevate properties that are not interested in buyout. Elevated properties will be elevated to the base flood elevation plus 1 foot. Properties that have been bought out will be restored to natural floodplain function to decrease runoff.					municipal budget	of flooding potential, natural floodplain functions increased	of interested property owners, number of elevations vs buyouts, and costs of properties.				
2020-Irvington-004	Lincoln Place	Lincoln Place is a flood prone area. The source of flooding cannot be mitigated in a cost-effective	The township will work to buyout properties that are most flood prone and elevate properties	Existing	Flood, Severe Storm	1, 2	Engineering	FMA, PDM, HMGP, municipal budget	Residential properties removed and elevated out of flooding potential, natural floodplain functions increased	Cost dependent on number of interested property owners, number	5 years	High	SIP, NSP	PP, NR



Initiative Number	Mitigation Initiative Name	Description of the Problem	Description of the Solution	New or Existing Assets?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Cost	Timeline	Priority	Mitigation Category	CRS Category
		manner. Properties will be continually exposed to flooding over time.	that are not interested in buyout. Elevated properties will be elevated to the base flood elevation plus 1 foot. Properties that have been bought out will be restored to natural floodplain function to decrease runoff.							of elevations vs buyouts, and costs of properties.				
2020-Irvington-005	Camp Field	Camp Field is a flood prone area. The source of flooding cannot be mitigated in a cost-effective manner. Properties will be continually exposed to flooding over time.	The township will work to buyout properties that are most flood prone and elevate properties that are not interested in buyout. Elevated properties will be	Existing	Flood, Severe Storm	1, 2	Engineering	FMA, PDM, HMGP, municipal budget	Residential properties removed and elevated out of flooding potential, natural floodplain functions increased	Cost dependent on number of interested property owners, number of elevations vs buyouts, and costs of	5 years	High	SIP, NSP	PP, NR



Initiative Number	Mitigation Initiative Name	Description of the Problem	Description of the Solution	New or Existing Assets?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Cost	Timeline	Priority	Mitigation Category	CRS Category
			elevated to the base flood elevation plus 1 foot. Properties that have been bought out will be restored to natural floodplain function to decrease runoff.							properties.				
2020-Irvington-006	Backup Power for Town Hall/Library	The Town Hall and Library lack a backup power source. The structures are adjacent. This prevents the buildings from being properly utilized as a command center or potential shelter during severe hazard events.	The township will research and purchase the proper sized generator to handle the capacity of the Town Hall and Library. The township will then install the generator and	Existing	Utility Interruption	6	<u>Engineering</u>	FEMA HMGP and PDM, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget	Ensures continuity of operations; provides a shelter for residents	\$50,000	1 year	High	SIP	PP



Initiative Number	Mitigation Initiative Name	Description of the Problem	Description of the Solution	New or Existing Assets?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Cost	Timeline	Priority	Mitigation Category	CRS Category
			required hookups.											
2020-Irvington-007	Study to identify corrective issues to concrete and masonry flumes	Concrete and masonry flumes are deficient and cause flooding.	USACE to do a study to identify corrective issues with flooding and affect repairs to concrete and masonry flumes	Existing	Flood, Severe Storm	2	USACE, Engineering	USACE	Reduces flooding	TBD by study	5 years	High	SIP	SP
2020-Irvington-008	Mitigate flood-prone properties, including RL/SRL properties	Frequent flooding events have resulted in damages in the Brook, Drakes Lane, Lennox Avenue, and Lincoln Place area. This area is residential, and these properties have been repetitively flooded as documented by paid NFIP claims.	Conduct outreach to 30 flood-prone property owners, including RL/SRL property owners and provide information on mitigation alternatives. After preferred mitigation measures are identified, collect required property-	Existing	Flood	2	NFIP Floodplain Administrator, supported by homeowners	FEMA HMGP and FMA, local cost share by residents	Eliminates flood damage to homes and residents, creates open space for the municipality increasing flood storage.	\$3 million	3 years	High	SIP	PP



Initiative Number	Mitigation Initiative Name	Description of the Problem	Description of the Solution	New or Existing Assets?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Cost	Timeline	Priority	Mitigation Category	CRS Category
			owner information and develop a FEMA grant application and BCA to obtain funding to implement acquisition/purchase/moving/elevating residential homes in the Brook, Drakes Lane, Lennox Avenue, and Lincoln Place area that experience frequent flooding (high risk areas).											
2020-Irvington-009	Emergency response equipment	The township requires additional emergency response equipment.	The township will purchase an additional fire engine and fire	N/A	All hazards	5	OEM	Community Facilities Grant Program, Firefighters Grant Program,	Increases capacity of emergency administration.	\$750,000	5 years	High	LPR	ES



Initiative Number	Mitigation Initiative Name	Description of the Problem	Description of the Solution	New or Existing Assets?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Cost	Timeline	Priority	Mitigation Category	CRS Category
			truck for the fire department, water response vehicles for OEM, an upgraded emergency communications system, tandem dump trucks for debris removal.					municipal budget						

Notes:

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
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

Timeline:

The time required for completion of the project upon implementation

Cost:

The estimated cost for implementation.

Benefits:

A description of the estimated benefits, either quantitative and/or qualitative.

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 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 preserve or restore the functions of natural systems. These actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.
- *Structural Flood Control Projects (SP)* - Actions that involve the construction of structures to reduce the impact of a hazard. Such structures include dams, setback levees, floodwalls, retaining walls, and safe rooms.
- *Emergency Services (ES)* - Actions that protect people and property during and immediately following a disaster or hazard event. Services include warning systems, emergency response services, and the protection of essential facilities

Table 9.10-16. Summary of Prioritization of Actions

Initiative Number	Mitigation Initiative Name	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
2020-Irvington-001	Expand natural floodplain of the Brook	1	1	1	-1	1	-1	0	1	0	1	1	-1	1	1	6	Medium
2020-Irvington-002	Lennox Avenue	1	1	1	-1	1	-1	0	1	1	1	1	0	1	1	8	High
2020-Irvington-003	Drakes Lane	1	1	1	-1	1	-1	0	1	1	1	1	0	1	1	8	High
2020-Irvington-004	Lincoln Place	1	1	1	-1	1	-1	0	1	1	1	1	0	1	1	8	High
2020-Irvington-005	Camp Field	1	1	1	-1	1	-1	0	1	1	1	1	0	1	1	8	High
2020-Irvington-006	Backup Power for Town Hall/Library	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
2020-Irvington-007	Study to identify corrective issues to concrete and masonry flumes	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High



Initiative Number	Mitigation Initiative Name	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
2020-Irvington-008	Mitigate flood-prone properties, including RL/SRL properties	1	1	1	1	1	1	0	1	0	0	1	0	1	1	10	High
2020-Irvington-009	Emergency response equipment	1	1	0	1	1	1	0	1	1	1	1	0	1	1	11	High

Note (1): Refer to Section 6, which conveys guidance on prioritizing mitigation actions.

Note (2): Low (0-4), Medium (5-8), High (9-14).



Table 9.10-18. Analysis of Mitigation Actions by Hazard and Category

Hazard	Prevention	Property Protection	Public Education and Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilient	Community Capacity Building
Coastal Erosion and Sea Level Rise					2020-Irvington-009			
Coastal Storm					2020-Irvington-009			
Drought					2020-Irvington-009			
Earthquake					2020-Irvington-009			
Extreme Temperature					2020-Irvington-009			
Flood		2020-Irvington-001, 2020-Irvington-002, 2020-Irvington-003, 2020-Irvington-004, 2020-Irvington-005, 2020-Irvington-008		2020-Irvington-001, 2020-Irvington-002, 2020-Irvington-003, 2020-Irvington-004, 2020-Irvington-005	2020-Irvington-009	2020-Irvington-007		
Geological Hazards					2020-Irvington-009			
Severe Weather		2020-Irvington-001, 2020-Irvington-002, 2020-Irvington-003, 2020-Irvington-004, 2020-Irvington-005		2020-Irvington-001, 2020-Irvington-002, 2020-Irvington-003, 2020-Irvington-004, 2020-Irvington-005	2020-Irvington-009	2020-Irvington-007		
Winter Storm					2020-Irvington-009			
Wildfire					2020-Irvington-009			
Civil Disorder					2020-Irvington-009			
Cyber Attack					2020-Irvington-009			



Hazard	Prevention	Property Protection	Public Education and Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilient	Community Capacity Building
Disease Outbreak					2020-Irvington-009			
Economic Collapse					2020-Irvington-009			
Hazardous Substances					2020-Irvington-009			
Utility Interruption		2020-Irvington-006			2020-Irvington-006, 2020-Irvington-009			
Terrorism					2020-Irvington-009			
Transportation Failure					2020-Irvington-009			

Refer to Section 6 (Mitigation Strategy) for an explanation of the mitigation categories.

9.10.9 Staff and Local Stakeholder Involvement in Annex Development

The Township of Irvington followed the planning process described in Section 2 (Planning Process) in Volume I of this plan update. This annex was developed over the course of several months with input from many jurisdiction representatives. All departments were asked to contribute to the annex development through reviewing and contributing to the capability assessment, reporting on the status of previously identified actions, and participating in action identification and prioritization. In addition, several municipal representatives were asked to review and contribute to the draft annex as documented on the annex sign-off sheets in Appendix B (Participation Documentation). The following table summarizes who participated and in what capacity. Additional documentation on the municipality's planning process through Planning Partnership meetings is included in Section 2 (Planning Process) and Appendix C (Meeting Documentation).

Table 9.10-18. Contributors to the Annex

Entity	Title	Method of Participation
John F. Brown	OEM Coordinator	Primary POC, Provided impact data, contributed to the mitigation strategy
Antonio Gary	Fire Chief/Deputy Coordinator	Provided impact data, contributed to the mitigation strategy, attended plan participant meetings
John Wiggins	Engineer	Provided impact data, contributed to the mitigation strategy, attended plan participant meetings
Tony Outerbridge	Police Lt.	Provided impact data, contributed to the mitigation strategy, attended plan participant meetings



Figure 9.10-1. Township of Irvington Hazard Area Extent and Location Map

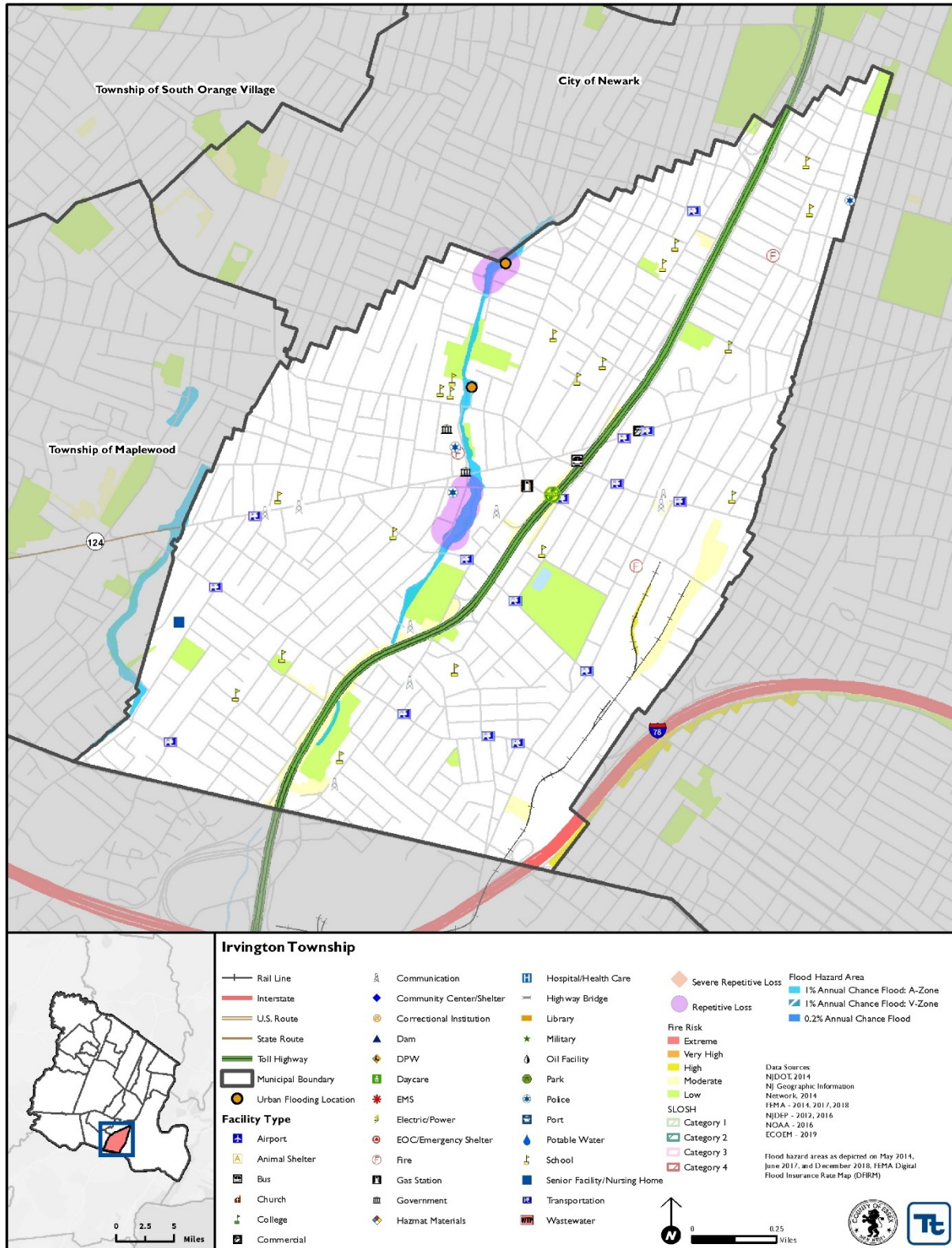
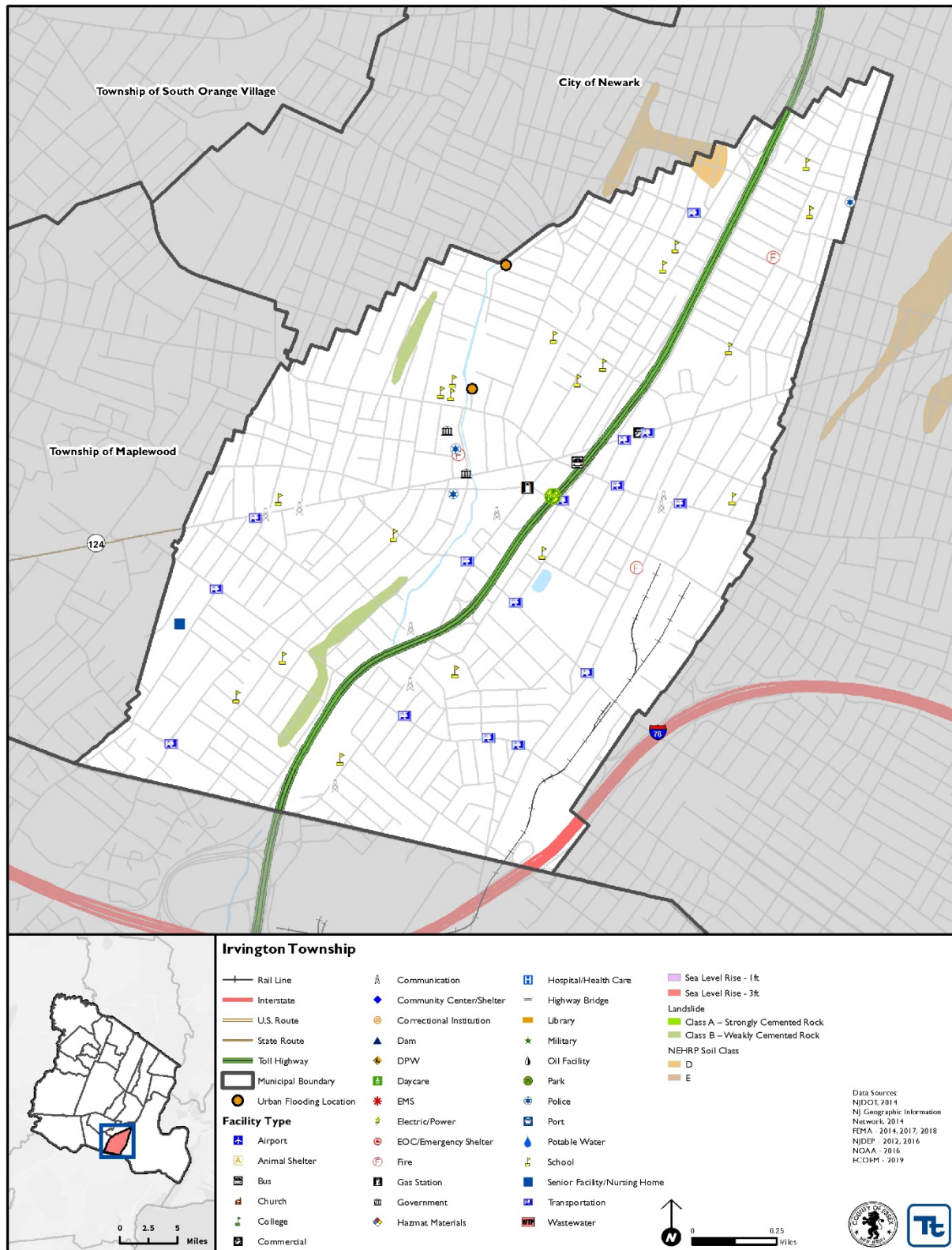




Figure 9.10-2. Township of Irvington Hazard Area Extent and Location Map 2





Action Worksheet			
Project Name:	Expand natural floodplain of the Brook		
Project Number:	2020-Irvington-001		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood, Severe Storm		
Description of the Problem:	The Brook runs through Irvington. The natural floodplain for the Brook is built out and lacks the ability absorb runoff before it enters the Brook. The channel for the Brook is narrow in areas and is prone to overflowing. This leads to properties being flooded.		
Action or Project Intended for Implementation			
Description of the Solution:	The Township will conduct an assessment to identify the most flood prone properties along the Brook that would be most effective to purchase and return to natural floodplain function in order to reduce runoff into the Brook. The Township will then approach property owners and work to buyout properties. Properties that are bought out will be returned to natural floodplain function.		
Is this project related to a Critical Facility or Lifeline?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Level of Protection:	Properties removed from floodplain	Estimated Benefits (losses avoided):	Natural floodplain function restored, water entering into Brook reduced, removal of flood properties
Useful Life:	100 years	Goals Met:	1, 2
Estimated Cost:	TBD by number of properties purchased and cost of individual properties.	Mitigation Action Type:	Structure and Infrastructure Project, Natural Systems Protection
Plan for Implementation			
Prioritization:	Medium	Desired Timeframe for Implementation:	5 years
Estimated Time Required for Project Implementation:	5 years	Potential Funding Sources:	FMA, PDM, HMGP, Private environmental grants, municipal budget
Responsible Organization:	Engineering	Local Planning Mechanisms to be Used in Implementation if any:	Hazard mitigation, Open space
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Conduct outreach for property owners to reduce impervious surface	\$1,000	Impervious surface reductions likely to be limited.
	Elevate houses	\$50,000 per structure on average	Less costly than buyouts but natural floodplain function not restored
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Expand natural floodplain of the Brook	
Project Number:	2020-Irvington-001	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Remove residents from flood prone locations
Property Protection	1	Properties removed from flood prone locations, flood heights reduced
Cost-Effectiveness	1	
Technical	-1	
Political	1	
Legal	-1	Project requires private property owner interest and cooperation
Fiscal	0	Project requires funding support
Environmental	1	Project restores natural floodplain function
Social	0	Families removed from area
Administrative	1	
Multi-Hazard	1	Severe storm, flood
Timeline	-1	5 years
Agency Champion	1	Engineering
Other Community Objectives	1	
Total	6	
Priority (High/Med/Low)	Medium	



Action Worksheet			
Project Name:	Lenox Avenue		
Project Number:	2020-Irvington-002		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood, Severe Storm		
Description of the Problem:	Lenox Avenue is a flood prone area. The source of flooding cannot be mitigated in a cost effective manner. Properties will be continually exposed to flooding over time.		
Action or Project Intended for Implementation			
Description of the Solution:	The township will work to buyout properties that are most flood prone and elevate properties that are not interested in buyout. Elevated properties will be elevated to the base flood elevation plus 1 foot. Properties that have been bought out will be restored to natural floodplain function to decrease runoff.		
Is this project related to a Critical Facility or Lifeline?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Level of Protection:	Properties elevated above 100 year flood elevation plus 1 foot of freeboard.	Estimated Benefits (losses avoided):	Residential properties removed and elevated out of flooding potential, natural floodplain functions increased
Useful Life:	100 years for buyouts, 30 years for elevations	Goals Met:	2
Estimated Cost:	Cost dependent on number of interested property owners, number of elevations vs buyouts, and costs of properties.	Mitigation Action Type:	Structure and Infrastructure Project, Natural Systems Protection
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	Within 1 year
Estimated Time Required for Project Implementation:	5 years	Potential Funding Sources:	FMA, PDM, HMGP, municipal budget
Responsible Organization:	Engineering	Local Planning Mechanisms to be Used in Implementation if any:	Hazard Mitigation
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Buyout all properties	\$200,000 per property	Not all property owners likely to be interested
	Elevate all properties	\$50,000 per structure on average	Less costly than buyouts but natural floodplain function not restored
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Lenox Avenue	
Project Number:	2020-Irvington-002	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Remove residents from flood areas
Property Protection	1	Remove/protect property in flood areas
Cost-Effectiveness	1	
Technical	-1	
Political	1	
Legal	-1	Project requires property owners to sign on
Fiscal	0	Project requires funding support
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	
Timeline	0	Five years
Agency Champion	1	Engineering
Other Community Objectives	1	
Total	8	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Drakes Lane		
Project Number:	2020-Irvington-003		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood, Severe Storm		
Description of the Problem:	Drakes Lane is a flood prone area. The source of flooding cannot be mitigated in a cost effective manner. Properties will be continually exposed to flooding over time.		
Action or Project Intended for Implementation			
Description of the Solution:	The township will work to buyout properties that are most flood prone and elevate properties that are not interested in buyout. Elevated properties will be elevated to the base flood elevation plus 1 foot. Properties that have been bought out will be restored to natural floodplain function to decrease runoff.		
Is this project related to a Critical Facility or Lifeline?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Level of Protection:	Properties elevated above 100 year flood elevation plus 1 foot of freeboard.	Estimated Benefits (losses avoided):	Residential properties removed and elevated out of flooding potential, natural floodplain functions increased
Useful Life:	100 years for buyouts, 30 years for elevations	Goals Met:	2
Estimated Cost:	Cost dependent on number of interested property owners, number of elevations vs buyouts, and costs of properties.	Mitigation Action Type:	Structure and Infrastructure Project, Natural Systems Protection
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	Within 1 year
Estimated Time Required for Project Implementation:	5 years	Potential Funding Sources:	FMA, PDM, HMGP, municipal budget
Responsible Organization:	Engineering	Local Planning Mechanisms to be Used in Implementation if any:	Hazard Mitigation
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Buyout all properties	\$200,000 per property	Not all property owners likely to be interested
	Elevate all properties	\$50,000 per structure on average	Less costly than buyouts but natural floodplain function not restored
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Drakes Lane	
Project Number:	2020-Irvington-003	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Remove residents from flood areas
Property Protection	1	Remove/protect property in flood areas
Cost-Effectiveness	1	
Technical	-1	
Political	1	
Legal	-1	Project requires property owners to sign on
Fiscal	0	Project requires funding support
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	
Timeline	0	Five years
Agency Champion	1	Engineering
Other Community Objectives	1	
Total	8	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Lincoln Place		
Project Number:	2020-Irvington-004		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood, Severe Storm		
Description of the Problem:	Drakes Lane is a flood prone area. The source of flooding cannot be mitigated in a cost effective manner. Properties will be continually exposed to flooding over time.		
Action or Project Intended for Implementation			
Description of the Solution:	The township will work to buyout properties that are most flood prone and elevate properties that are not interested in buyout. Elevated properties will be elevated to the base flood elevation plus 1 foot. Properties that have been bought out will be restored to natural floodplain function to decrease runoff.		
Is this project related to a Critical Facility or Lifeline?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Level of Protection:	Properties elevated above 100 year flood elevation plus 1 foot of freeboard.	Estimated Benefits (losses avoided):	Residential properties removed and elevated out of flooding potential, natural floodplain functions increased
Useful Life:	100 years for buyouts, 30 years for elevations	Goals Met:	2
Estimated Cost:	Cost dependent on number of interested property owners, number of elevations vs buyouts, and costs of properties.	Mitigation Action Type:	Structure and Infrastructure Project, Natural Systems Protection
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	Within 1 year
Estimated Time Required for Project Implementation:	5 years	Potential Funding Sources:	FMA, PDM, HMGP, municipal budget
Responsible Organization:	Engineering	Local Planning Mechanisms to be Used in Implementation if any:	Hazard Mitigation
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Buyout all properties	\$200,000 per property	Not all property owners likely to be interested
	Elevate all properties	\$50,000 per structure on average	Less costly than buyouts but natural floodplain function not restored
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Lincoln Place	
Project Number:	2020-Irvington-004	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Remove residents from flood areas
Property Protection	1	Remove/protect property in flood areas
Cost-Effectiveness	1	
Technical	-1	
Political	1	
Legal	-1	Project requires property owners to sign on
Fiscal	0	Project requires funding support
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	
Timeline	0	Five years
Agency Champion	1	Engineering
Other Community Objectives	1	
Total	8	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Camp Field		
Project Number:	2020-Irvington-005		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood, Severe Storm		
Description of the Problem:	Camp Field is a flood prone area. The source of flooding cannot be mitigated in a cost effective manner. Properties will be continually exposed to flooding over time.		
Action or Project Intended for Implementation			
Description of the Solution:	The township will work to buyout properties that are most flood prone and elevate properties that are not interested in buyout. Elevated properties will be elevated to the base flood elevation plus 1 foot. Properties that have been bought out will be restored to natural floodplain function to decrease runoff.		
Is this project related to a Critical Facility or Lifeline?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Level of Protection:	Properties elevated above 100 year flood elevation plus 1 foot of freeboard.	Estimated Benefits (losses avoided):	Residential properties removed and elevated out of flooding potential, natural floodplain functions increased
Useful Life:	100 years for buyouts, 30 years for elevations	Goals Met:	2
Estimated Cost:	Cost dependent on number of interested property owners, number of elevations vs buyouts, and costs of properties.	Mitigation Action Type:	Structure and Infrastructure Project, Natural Systems Protection
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	Within 1 year
Estimated Time Required for Project Implementation:	5 years	Potential Funding Sources:	FMA, PDM, HMGP, municipal budget
Responsible Organization:	Engineering	Local Planning Mechanisms to be Used in Implementation if any:	Hazard mitigation
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Buyout all properties	\$200,000 per property	Not all property owners likely to be interested
	Elevate all properties	\$50,000 per structure on average	Less costly than buyouts but natural floodplain function not restored
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Camp Field	
Project Number:	2020-Irvington-005	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Remove residents from flood areas
Property Protection	1	Remove/protect property in flood areas
Cost-Effectiveness	1	
Technical	-1	
Political	1	
Legal	-1	Project requires property owners to sign on
Fiscal	0	Project requires funding support
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	
Timeline	0	Five years
Agency Champion	1	Engineering
Other Community Objectives	1	
Total	8	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Mitigate flood-prone properties, including RL/SRL properties		
Project Number:	2020-Irvington-008		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood, Severe Storm		
Description of the Problem:	Frequent flooding events have resulted in damages in the Brook, Drakes Lane, Lennox Avenue, and Lincoln Place area. This area is residential, and these properties have been repetitively flooded as documented by paid NFIP claims.		
Action or Project Intended for Implementation			
Description of the Solution:	Conduct outreach to 30 flood-prone property owners, including RL/SRL property owners and provide information on mitigation alternatives. After preferred mitigation measures are identified, collect required property-owner information and develop a FEMA grant application and BCA to obtain funding to implement acquisition/purchase/moving/elevating residential homes in the Brook, Drakes Lane, Lennox Avenue, and Lincoln Place area that experience frequent flooding (high risk areas).		
Is this project related to a Critical Facility or Lifeline?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Level of Protection:	1% annual chance flood event + freeboard (<i>in accordance with flood ordinance</i>)	Estimated Benefits (losses avoided):	Eliminates flood damage to homes and residents, creates open space for the municipality increasing flood storage.
Useful Life:	Acquisition: Lifetime Elevation: 30 years (residential)	Goals Met:	2
Estimated Cost:	\$3Million	Mitigation Action Type:	Structure and Infrastructure Project
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	6-12 months
Estimated Time Required for Project Implementation:	Three years	Potential Funding Sources:	FEMA HMGP and FMA, local cost share by residents
Responsible Organization:	NFIP Floodplain Administrator, supported by homeowners	Local Planning Mechanisms to be Used in Implementation if any:	Hazard Mitigation
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Elevate homes	\$500,000	When this area floods, the entire area is impacted; elevating homes would not eliminate the problem and still lead to road closures and impassable roads
	Elevate roads	\$500,000	Elevated roadways would not protect the homes from flood damages
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Mitigate flood-prone properties, including RL/SRL properties	
Project Number:	2020-Irvington-008	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Families moved out of high-risk flood areas.
Property Protection	1	Properties removed from high-risk flood areas.
Cost-Effectiveness	1	Cost-effective project
Technical	1	Technically feasible project
Political	1	
Legal	1	The Township has the legal authority to conduct the project.
Fiscal	0	Project will require grant funding.
Environmental	1	
Social	0	Project would remove families from the Brook, Drakes Lane, Lennox Avenue, and Lincoln Place areas.
Administrative	0	
Multi-Hazard	1	Flood, Severe Storm
Timeline	0	
Agency Champion	1	NFIP Floodplain Administrator, supported by homeowners
Other Community Objectives	1	
Total	10	
Priority (High/Med/Low)	High	