9.17 TOWNSHIP OF NUTLEY

This section presents the jurisdictional annex for the Township of Nutley. The annex includes a general overview of the Township of Nutley; an assessment of the Township's risk, 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.

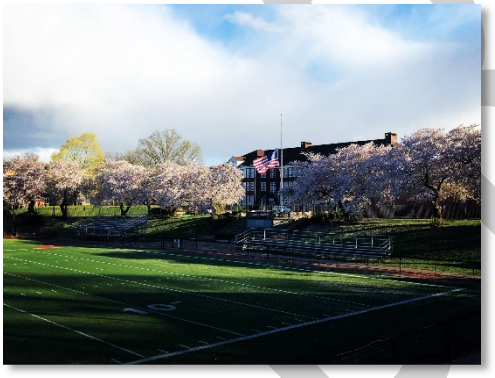
9.17.1 Hazard Mitigation Planning Team

The following individuals are the Township of Nutley's identified HMP update primary and alternate points of contact and NFIP Floodplain Administrator.

Table 9.17-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Salvatore Ferraro, Engineering/DPW 1 Kennedy Drive, Nutley, NJ 07110 973-284-4658 sferraro@nutleynj.org	William Cassidy, OEM Coordinator 1 Kennedy Drive, Nutley, NJ 07110 973-590-9802 wcassidy@nutleynj.org
NFIP Floodplain Administrator	
Salvatore Ferraro, Engineering/DPW 1 Kennedy Drive, Nutley, NJ 07110 973-284-4658 sferraro@nutleynj.org	

9.17.2 Jurisdiction Profile



Nutley derived its name from the large estate of the Satterthwaite family, established in 1844, which stretched along the banks of the Passaic River. In 1902, Franklin, New Jersey, once the northeast corner of Newark, changed its name to Nutley when a growth in population prompted a change in the form of government from Township to Mayor/Council. Today, the Township is governed by a mayor and 4-member commission.

The Township of Nutley is located in northern Essex County, along the Passaic River. It is bordered to the north by Passaic County, to the east by Bergen County, to the south by Belleville Township, and to the west by Bloomfield Township.

According to the U.S. Census, the 2010 population for the Township of Nutley was 28,370. The estimated 2017 population was 28,829, a 1.6 percent increase from the 2010 Census. Data from the 2017 U.S. Census American Community Survey indicate that 5.7 percent of the population is 5 years of age or younger and 16.7 percent is 65 years of age or older. Communities must deploy a support system that enables all populations to safely reach shelters or to quickly evacuate a hazard area.

9.17.3 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 9.17-2 summarizes recent and expected future development trends, including major residential/commercial development and major infrastructure development. Figures 9.17-1 and 9.17-2 at the end of this annex illustrate the geographically-delineated hazard areas and the location of potential new development, where available.

Table 9.17-2. Recent and Expected Future Development

Type of Development	2014	2015	2016	2017	2018	Total
Number of Building Permits for New Construction Issued Since the Previous HMP						
Single Family	3	2	3	5	2	15
Multi-Family	1	0	1	0	1	2
Other (commercial, mixed-use, etc.)	6	1	2	0	3	12
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 and Mitigation if located in Hazard Zone**	
Recent Major Development and Infrastructure from 2015 to Present						
551 Centre Street	Mix-Use	23 Units/1 structure	Block 7800 Lot 1.01	Flood Zone A	Structure elevated above design flood elevation	
10 Kingsland Street	Commercial	1 structure	Block 602 Lot 5	Flood Zone X	Structure is not in Flood Zone	
100 Centre Street	Commercial	1 structure	Block 7001 Lot 33	N/A	-	
124 Washington Ave	Commercial	1 structure	Block 6902 Lot 7	N/A	-	
113 East Centre Street, Building 3	Mix-Use	25 Units/1 structure	Block 6904 Lot 13	N/A	-	
113 East Centre Street, Building 4	Mix-Use	25 Units/1 structure	Block 6904 Lot 13	N/A	-	
134 Franklin Avenue	Mix-Use	14 Units/1 structure	Block 7500 Lot 5	Flood Zone AE	Structure elevated above design flood elevation	
599 Franklin Avenue	Mix-Use	7 Units/1 structure	Block 2002 Lot 6	N/A	-	
100 Kingsland Street	Mix-Use	27 Units/1 structure	Block 502 Lot 16.01	N/A	-	
184 Franklin Avenue	Mix-Use	23 Units/1 structure	Block 7501 Lot 5	N/A	-	
4 Franklin Avenue	Mix-Use	2 Units/1 structure	Block 9100 Lot 1	Flood Zone AE	Structure elevated above design flood elevation	
345 Centre Street	Mix-Use	11 Units/1 structure	Block 7502 Lot 7	N/A	-	
74 East Passaic Ave	Mix-Use	4 Units/1 structure	Block 8600 Lot 1	N/A	-	
434-438 Centre Street	Mix-Use	23 Units/1 structure	Block 5902 Lot 28/29	N/A	-	
Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years						
Diamond Spring Pool Club - 35 Evergreen Ave	Unknown	Unknown	-	Flood Zone X	-	
Hillside Avenue	Mix-Use	4 structures	Block 2000 Lot 27	Flood Zone A	Project not yet determined	

Type of Development	2014	2015	2016	2017	2018	Total
On3-Prism (formerly known as Roche)	Mix-Use	Unknown	B: 102 L: 2	None	Project not yet determined	
On3-Prism (formerly known as Roche)	Mix-Use	Unknown	B: 2101 L: 1	1% Flood: A Zone	Project not yet determined	
On3-Prism (formerly known as Roche)	Mix-Use	Unknown	B: 2000 L: 4	1% Flood: A Zone	Project not yet determined	
On3-Prism (formerly known as Roche)	Mix-Use	Unknown	B: 2000 L: 5	1% Flood: A Zone	Project not yet determined	
On3-Prism (formerly known as Roche)	Mix-Use	Unknown	B: 200 L: 2	1% Flood: A Zone	Project not yet determined	
On3-Prism (formerly known as Roche)	Mix-Use	Unknown	B: 200 L: 24	None	Project not yet determined	
On3-Prism (formerly known as Roche)	Mix-Use	Unknown	B: 102 L: 9	None	Project not yet determined	
On3-Prism (formerly known as Roche)	Mix-Use	Unknown	B: 201 L: 1	None	Project not yet determined	
On3-Prism (formerly known as Roche)	Mix-Use	Unknown	B: 200 L: 3	1% Flood: A Zone	Project not yet determined	
On3-Prism (formerly known as Roche)	Mix-Use	Unknown	B: 300 L: 1	None	Project not yet determined	
On3-Prism (formerly known as Roche)	Mix-Use	Unknown	B: 200 L: 6	1% Flood: A Zone	Project not yet determined	
On3-Prism (formerly known as Roche)	Mix-Use	Unknown	B: 200 L: 5	1% Flood: A Zone	Project not yet determined	
On3-Prism (formerly known as Roche)	Mix-Use	Unknown	B: 200 L: 4	1% Flood: A Zone	Project not yet determined	
On3-Prism (formerly known as Roche)	Mix-Use	Unknown	B: 2304 L: 18 Q: C0001	Flood	Project not yet determined	
On3-Prism (formerly known as Roche)	Mix-Use	Unknown	B: 2304 L: 18 Q: C0002	Flood	Project not yet determined	
On3-Prism (formerly known as Roche)	Mix-Use	Unknown	B: 2304 L: 18 Q: C0003	None	Project not yet determined	
On3-Prism (formerly known as Roche)	Mix-Use	Unknown	B: 2100 L: 9 Q: C0101	None	Project not yet determined	
On3-Prism (formerly known as Roche)	Mix-Use	Unknown	B: 2100 L: 9 Q: C0102	None	Project not yet determined	
On3-Prism (formerly known as Roche)	Mix-Use	Unknown	B: 2100 L: 9 Q: C0103	None	Project not yet determined	
On3-Prism (formerly known as Roche)	Mix-Use	Unknown	B: 2100 L: 9 Q: C0104	None	Project not yet determined	
On3-Prism (formerly known as Roche)	Mix-Use	Unknown	B: 2100 L: 9 Q: C0105	None	Project not yet determined	
On3-Prism (formerly known as Roche)	Mix-Use	Unknown	B: 2100 L: 9 Q: C0106	None	Project not yet determined	
On3-Prism (formerly known as Roche)	Mix-Use	Unknown	B: 2100 L: 9 Q: C0107	None	Project not yet determined	
On3-Prism (formerly known as Roche)	Mix-Use	Unknown	B: 2100 L: 9 Q: C0110	None	Project not yet determined	
On3-Prism (formerly known as Roche)	Mix-Use	Unknown	B: 2100 L: 9 Q: C0111	None	Project not yet determined	

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

9.17.4 Capability Assessment

The Township of Nutley performed an inventory and analysis of existing capabilities, plans, programs, and policies that enhance its ability to implement mitigation strategies. Section 5 (Capability Assessment) 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.

Areas that mitigation is currently integrated are summarized in this subsection. The Township of Nutley identified specific integration activities that will be incorporated into municipal procedures are included in the updated mitigation strategy.

Planning, Legal and Regulatory Capability

The table below summarizes the legal and regulatory tools that are available to the Township of Nutley and where hazard mitigation has been integrated.

Table 9.17-3. 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 Adopted 9/3/2019. Township Code Chapter 272 (December 1971); enforced by the Building Department*					
Zoning Code	Yes	Local	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. Township Code Chapter 700, adopted by the Board of Commissioners on 10/15/2002 by Ordinance Number 2752; enforced by the Building Department. The Master Plan listed recommended revisions to the zoning code, including the change of the building height definition to allow homes within the 100-year floodplain to be elevated without requiring variances.*					
Subdivisions	Yes	Local	Yes	Yes	-
Comment: *State mandated - P.L.1975, c.291 (C.40:55D-47): 40:55D-37. Dictated by the Municipal Land Use Law. NJ Statute 40:27-6.2. Township Code Chapter 630, adopted November 1988; enforced by the Building Department and Planning Board. The Planning Board requires design standards to show that the proposed work will not be susceptible to flood, fire, erosion or other menace.*					
Stormwater Management	Yes	Local	Yes	Yes	-
Comment: *Title 7 of the NJ Administrative Code (N.J.A.C. 7:8). Township Code Chapter 622 – adopted July 2007; enforced by DPW. Any building plan that will add impervious coverage to a property must be reviewed by the Municipal Engineer to ensure that preventive measures are put in place to protect persons and property and preserve the public health, safety and welfare. Design and performance standards for stormwater management measures for major development must be developed to meet erosion control, groundwater recharge, stormwater runoff quantity, and stormwater runoff quality standards. A design engineer must show that there is no increase in the peak runoff rates of stormwater and will not increase flood damage at or downstream from the site. Structural stormwater management measures must be designed to take into account existing site conditions, including floodprone areas, slopes, and soil type. The Township provides a lot of outreach on stormwater management in the community.*					
Post-Disaster Recovery	No	-	-	-	-
Comment:					
Real Estate Disclosure	Yes	State – Division of Consumer Affairs	Yes	Yes/No	Yes/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.*					

	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 #.
Growth Management	No	-	Yes	-	-
Comment: *State mandated at local level; Chapter 18 Etseq, 4/27/1976 of the Township code; enforced by Planning Board and Governing Body*					
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. Nutley Township is considered a tidally influenced municipality due to their proximity to the Passaic River. New Jersey regulations state that this only pertains to the nearest public roadway which is Route 21, adjacent to the Passaic River. The next closest roadway is River Road which is a county road.*					
Site Plan Review	Yes	Local	No	-	-
Comment*: Township Code Chapter 600 was adopted by the Board of Commissioners on 10/15/2002 by Ordinance Number 2751; enforced by the Building Department and Board of Adjustment*					
Environmental Protection	Yes	Local	Yes	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.* *Chapter 200 – Air Pollution – adopted by the Board of Commissioners on 5/6/1969. It declares that pollution of the atmosphere by smoke, cinders, soot, fly ash, gases, fumes, vapors, odors, dust and other contaminants is a menace to the health, welfare and comfort of the residents of the Township of Nutley and a cause of substantial damage to property.* *Chapter 665 – Trees – adopted by the Board of Commissioners and provides codes for removal of dead and dying trees; shade trees; and preservation of trees. The purpose of the preservation section of this chapter is to preserve, protect, and plant trees that aid in the stabilization of soil by the prevention of erosion and sedimentation; reduce stormwater runoff and the potential damage it can cause; and provide protection against severe weather.*					
Flood Damage Prevention	Yes	Local	No	-	-
Comment*: Chapter 349 (Flood Damage Prevention) of the Township code. It was adopted by the Board of Commissioners on 5/15/07 by Ordinance Number 3007. The code identifies the Floodplain Administrator to administer and implement the code. A development permit is required before any construction or development begins in any SFHA. The code has requirements for construction and substantial development in the SFHA. For residential properties, new construction and substantial improvements of any residential structure must have the lowest floor (include basement) elevated to or above the base flood elevation. For residential properties in any AO zone, all new construction and substantial improvement of any residential structure shall have the lowest floor, including basement, elevated above the highest adjacent grade at least as high as the depth number specified in feet (at least two feet if no depth number is specified). And, require adequate drainage paths around structures on slopes to guide floodwaters around and away from proposed structures. Refer to Chapter 349 of the municipal code for details regarding non-residential construction and manufactured homes.* *Chapter 352 (Flood Hazard Area Certification) was adopted by the Board of Commissions on 5/7/1974 by Ordinance Number 1809. It states that the Engineering Department (within the DPW) will furnish, upon request, a certificate identifying properties as to their location in flood areas.*					
Wellhead Protection	Yes	Local	No	Yes	-
Comment: *The December 2012 Master Plan includes a discussion on wellhead protection areas. While there are no primary public community water supply (PCWS) wells in the Township, the master plan recognizes a secondary well at Vincent Place and that portions of the Township are located within areas that may impact PCWS in surrounding communities. The master plan included a recommendation that the Township should evaluate greater buffering needs around the Vincent Street well as part of land use planning efforts.*					
Emergency Management	Yes	Local	No	Yes	-
Comment: *The Nutley Emergency Management Council Resolution was adopted in January 2015 and includes the resolution for the appointment of the Emergency Management Coordinator and adopted the control of hazardous chemicals.*					
Climate Change	No	-	-	-	-
Comment: *While the Township does not have a specific climate change ordinance, climate change is discussed in the 2012 Master Plan.*					
Disaster Recovery Ordinance	No	-	-	-	-
Comment:					
Disaster Reconstruction Ordinance	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 #.
Other	No	-	-	-	-
Comment:					
Planning Documents					
Comprehensive / Master Plan	Yes	Local	Yes	Yes	-
***Comment**: Adopted 2012; enforced by the Planning Board and Board of Commissioners. The Land Use Element of the master plan recognizes flooding problems and changes needed to encourage building outside of the 1% annual chance flood area. The Future Land Use Strategy proposes that the Township will continue to expand its open space system of passive and active open space to protect environmentally critical lands, providing species habitat, protect water quality, and control flooding. There are three overlay districts in the Township including a floodplain overlay district. The master plan states that floodplains should be regulated by adding a floodplain overlay district to discourage the type of development in the floodplain that would pose a threat to life and property from flood events. The plan also recommends that the Township work on acquiring properties in the floodways or flood areas and prevent further construction in those areas.*					
Capital Improvement Plan	Yes	Local	Allowed	-	-
***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. This is enforced by the Board of Commissioners for the Township*					
Disaster Debris Management Plan	Yes	Local	No	-	-
***Comment:** This is part of the Township's EOP, dated June 2016; the Parks and Recreation Department and the DPW are the local authority*					
Floodplain or Watershed Plan	No	-	No	-	-
Comment:					
Stormwater Management Plan	Yes	Local and State	Yes	Yes	-
***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). The Township adopted a stormwater management element of their master plan in 2008. It provides a strategy for the Township to plan for and manage increased runoff with associated development and changes in land use.*					
Stormwater Pollution Prevention Plan	Yes	Local	Yes	Yes	-
***Comment:** Adopted on March 31, 2005. This plan includes the following: the Township ensures that all new residential development and redevelopment projects are in compliance with Residential Site Improvement Standards; the Township sweeps all streets monthly; the DPW monitors their roads for erosion problems and if identified, repair accordingly.*					
Urban Water Management Plan	No	-	No	-	-
Comment:					
Habitat Conservation Plan	Yes	Local	No	Yes	-
***Comment:** An element of the Township's 2012 Master Plan; the element states that the Township must protect it's natural resources by managing environmentally-sensitive features including floodplains and stormwater runoff.*					
Economic Development Plan	Yes	Local	No	-	-
***Comment:** An element of the Township's 2012 Master Plan*					
Shoreline Management Plan	No	-	No	-	-
Comment:					
Community Wildfire Protection Plan	No	-	No	-	-
Comment:					
Community Forest Management Plan	Yes	Local	No	No	No
***Comment:** This plan is administered by the Township's Parks and Public Property Department. The initial plan was approved in 2000 and the most recent plan was updated in 2015.*					
Transportation Plan	Yes	Local	No	No	No

	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 #.
Comment: *An element of the Township's 2012 Master Plan*					
Agriculture Plan	No	-	No	-	-
Comment:					
Climate Action Plan	Yes	Local	No	No	No
Comment: *Part of the 2012 Master Plan - Green and Sustainability Plan*					
Tourism Plan	No	-	No	-	-
Comment:					
Business Development Plan	Yes – part of Master Plan	Local	No	-	-
Comment: *This is included as an element of the Master Plan*					
Other	Yes	Local	No	No	No
Comment*: Stream Corridor Management Plan (DPW); Watershed Management Plan (DPW); Open Space Element (part of the Master Plan)*					
Response/Recovery Planning					
Comprehensive Emergency Management Plan (CEMP) / Emergency Operations Plan (EOP)	Yes	Local	Yes	Yes	-
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. The Township's EOP is dated June 2016; the OEM is the authority for the plan. The purpose of the plan is to protect life and property in emergencies (both goals in the current County HMP) by coordinating response activities of municipal and volunteer entities to ensure their optimum use. The plan is an all-hazards approach to emergency management and covers natural disasters, technological disasters, and national security crisis.*					
Threat & Hazard Identification & Risk Assessment (THIRA)	No	-	-	-	-
Comment:					
Post-Disaster Recovery Plan	Yes	Local	No	-	-
Comment: *Part of the 2016 EOP*					
Continuity of Operations Plan	Yes	Local	No	-	-
Comment: *Part of the 2016 EOP*					
Public Health Plan	Yes	Local	No	-	-
Comment: *Part of the 2016 EOP*					
Other	No	-	-	-	-
Comment:					

Table 9.17-4. Development and Permitting Capability

Criterion	Response
Does your jurisdiction issue development permits?	Yes
- If no, who does? If yes, which department?	Code Enforcement typically issues development permits; however, it depends on zoning. Depending on zoning, the Planning Board, Zoning Board and/or Board of Commissioners will issue permits.

Criterion	Response
Does your jurisdiction have the ability to track permits by hazard area?	No
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.	No; but the major area of development is the former Roche site and some areas of smaller development (e.g. gas station redeveloped to mix use); majority of the Township is built out

Administrative and Technical Capability

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

Table 9.17-5. Administrative and Technical Capabilities

Staff/Personnel Resource	Available?	Department/Agency/Position
Administrative Capability		
Planning Board	Yes	Township of Nutley Planning Board
Mitigation Planning Committee	No	-
Environmental Board / Commission	Yes	Shade Tree Advisory Committee
Open Space Board / Committee	No	-
Economic Development Commission / Committee	Yes	Economic Development Advisory Board
Warning Systems / Services (reverse 911, outdoor warning signals)	Yes	Mass emails to residents regarding upcoming storms/events, water main issues, etc. - residents would sign up
Maintenance program to reduce risk	Yes	tree trimming, clearing of sewers, annual catch basin cleaning program, cleaning and repairing of culverts as needed
Mutual aid agreements	Yes	Police, Fire, and EOP for other services; part of UASI through HAZMAT
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	Yes	DPW, Engineering (consultants)
Engineers or professionals trained in building or infrastructure construction practices	Yes	DPW, Engineering (consultants)
Planners or engineers with an understanding of natural hazards	Yes	DPW, Engineering (consultants)
Staff with training in benefit/cost analysis	Yes	DPW, Engineering (in-house)
Staff with training in green infrastructure	Yes	DPW, Engineering (consultant
Staff with education/knowledge/training in low impact development	No	-
Surveyors	Yes	DPW, Engineering (consultants)
Stormwater engineer	Yes	DPW, Engineering (consultants)
Personnel skilled or trained in GIS applications	Yes	IT department with DPW, Engineering (consultants)
Scientist familiar with natural hazards in local area	No	-
Emergency manager	Yes	Public Safety
Grant writers	Yes	Revenue and Finance; consultants
Resilience Officer	No	-
Watershed planner	No	-
Environmental specialist	No	-
Other	No	-

Fiscal Capability

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

Table 9.17-6. Fiscal Capabilities

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants (CDBG, CDBG-DR)	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes - residents pay for water to water company; sewer is paid through muni taxes; but upgrades are paid through the Sewer Dept. but if someone wants to re-do the sewer line, they need the proper permits to do so; gas and electric is through PSE&G
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	Yes
Withhold Public Expenditures in Hazard-Prone Areas	No
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes - have ordinance
Clean Water Act 319 Grants (Nonpoint Source Pollution)	Yes
Other	The Township has access to federal grants and have applied to them in the past

Education and Outreach Capability

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

Table 9.17-7. Education and Outreach Capabilities

Criterion	Response
Do you have a public information officer or communications office?	Yes – Public Safety Department
Do you have personnel skilled or trained in website development?	Yes – IT Department
Do you have hazard mitigation information available on your website? • If yes, briefly describe.	Yes – post information online and through emails to residents. The municipal website contains a page called "Emergency Notifications" and encourages residents to sign up on Swift911 to receive reverse 911 notifications.
Do you use social media for hazard mitigation education and outreach? • If yes, briefly describe.	No
Do you have any citizen boards or commissions that address issues related to hazard mitigation? • If yes, briefly describe.	No
Do you have any other programs already in place that could be used to communicate hazard-related information? • If yes, briefly describe.	Yes – recycling calendar, newsletters
Do you have any established warning systems for hazard events? • If yes, briefly describe.	Electronic warning signs; mass emails to residents regarding upcoming storms/events, water main issues, etc. - residents would sign up

Community Classifications

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

Table 9.17-8. Community Classifications

Program	Participating?	Classification	Date Classified
Community Rating System	No		
Building Code Effectiveness Grading Schedule (BCEGS)	No		
Public Protection (Fire ISO Protection Class)	Yes	4; currently working on getting a 3	-
Storm Ready Certification	No		
Firewise Community Classification	No		

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 discussed in reference to climate change; however, adaptive capacity also includes an understanding of local capacity for adapting to current and future risks and changing conditions. The table below summarizes the adaptive capacity for each hazard and the jurisdiction's rating.

- Does the municipality have access to resources to determine the possible impacts of climate change upon the municipality? Yes, through engineering and environmental consultants
- Is the administrative supportive of integrating climate change in policies or actions? Yes, the administration is supportive and will review all initiatives that support climate change
- Is climate change already being integrated into current policies/plans or actions (projects/monitoring) within the municipality? Climate change is discussed in the Township's master plan

Table 9.17-9. Adaptive Capacity of Climate Change

Hazard	Adaptive Capacity (Capabilities) - High/Medium/Low
Coastal Erosion and Sea Level Rise	Low
Coastal Storm (Hurricane, Tropical Storm, Nor'Easter)	Medium
Drought	Medium
Earthquake	Low
Extreme Temperature	High
Flood	Medium
Geological hazards (landslide, subsidence, sinkholes)	Low
Severe Weather	Medium
Severe Winter Weather	High
Wildfire	High
Civil Disorder	High
Cyber Attack	Medium
Disease Outbreak (West Nile Virus, Eastern Equine Encephalitis, St. Louis Encephalitis, La Crosse Encephalitis, Lyme Disease, Influenza, Ebola Virus)	Low
Economic Collapse (new)	Low

Hazard	Adaptive Capacity (Capabilities) - High/Medium/Low
Hazardous Substances	High
Utility Interruption	Medium
Terrorism	Medium
Transportation Failure (vehicular accidents, aviation accidents, railway failures and accidents, roadway and bridge failures)	Low

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 9.17-10. National Flood Insurance Program Compliance

Criterion	Response
What local department is responsible for floodplain management?	Engineering/DPW
Who is your floodplain administrator? (name, department/position)	Salvatore Ferraro, DPW
Are any certified floodplain managers on staff in your jurisdiction?	Yes – Salvatore Ferraro
What is the date that your flood damage prevention ordinance was last amended?	May 15, 2007
Does your floodplain management program meet or exceed minimum requirements? • If exceeds, in what ways?	Meet
When was the most recent Community Assistance Visit or Community Assistance Contact?	The most CAC was conducted on January 12, 2011
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 – maps prepared by FEMA adequately address the flood risk in Nutley
Does your floodplain management staff need any assistance or training to support its floodplain management program?	No
• If so, what type of assistance/training is needed?	N/A
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 – the Township is not interested in joining CRS at the time of the plan update
How many flood insurance policies are in force in your jurisdiction?* • What is the insurance in force? • What is the premium in force?	222 $43,847,000 $292,628
How many total loss claims have been filed in your jurisdiction?* • How many claims are still open or were closed without payment? • What were the total payments for losses?	240 45 CWOP $1,734,852
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 July 31, 2019; CWOP = closed without payment.*

Additional Areas of Existing Integration

- Municipal ordinances and codes pertaining to stormwater and floodplain management are reviewed and updated as needed

9.17.5 Hazard Event History Specific to the Jurisdiction

Essex County has a history of hazard events, as detailed in Section 4 (Risk Assessment) of this plan. A summary of historical events is provided in each of the hazard profiles in Section 4.3 (Hazard Profiles) and includes a chronology of events that affected Essex County and its jurisdictions. The Township of Nutley'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 9.17-11 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.

Table 9.17-11. 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
July 3, 2014	Flash Flood	N/A	As a cold front slowly moved across the area, moisture from Tropical Cyclone Arthur passing to the south and east converged along the boundary resulting in severe thunderstorms, heavy rain and flash flooding in portions of Northeast New Jersey. Washington Ave. was closed due to flooding in Nutley.	Specific damages and losses for Nutley Township were not identified/reported.
January 22-23, 2016	Winter Storm (FEMA-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. 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. Bridges and tunnels from New York City into New Jersey were shut down by mid-afternoon Saturday. 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.	Specific damages and losses for Nutley Township were not identified/reported.
August 11, 2018	Heavy Rain and Flash Flooding	N/A	A system brought several rounds of heavy rain to Essex County, resulting in widespread flash flooding. Rainfall totals ranged from 2.5 inches to 4 inches.	A business located at 633 Franklin Avenue was damaged, three properties on Elm Street were damaged, basements flooded. Flooding was

Date(s) of Event	Event Type (disaster declaration if applicable)	Essex County Designated?	Summary of Event	Summary of Local Damages and Losses
				also reported at Bloomfield and Center, Bloomfield and Harrison, and Bloomfield and Raymond that resulted in people being trapped in their vehicles.

9.17.6 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 9.17-12 summarizes the Township of Nutley risk assessment results and data used to determine the hazard ranking. The following summarizes the hazards of greatest concern and risk to the Township of Nutley.

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 9.17-12. Summary of Risk Assessment Results

Hazard of Concern	Hazard/ Scenario(s) Evaluated	Population		Buildings		Economy (Loss)		Certainty Factor
Coastal Erosion and Sea Level Rise	Coastal Erosion: CEHA Sea Level Rise: NOAA +1ft and +3ft rise	CEHA:	0	CEHA:	0	CEHA:	$0	High
		SLR +1ft:	0	SLR +1ft:	0	SLR +1ft:	$0	
		SLR +3ft:	0	SLR +3ft:	0	SLR +3ft:	$0	
Coastal Storm	100- and 500- MRP Hurricane Wind Category 1 through Category 4 SLOSH	Category 1:	0	Category 1:	0	100-year Wind Loss:	$3,173,692	High
		Category 2:	35	Category 2:	6			
		Category 3:	227	Category 3:	39	500-year Wind Loss:	$13,964,506	
		Category 4:	558	Category 4:	96			
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:	1,358	NEHRP D&E:	414	100-year Loss:	$0	High
		Liquefaction Class 4:	87	Liquefaction Class 4:	15	500-year Loss:	$3,082,906	
						2,500-year Loss:	$51,088,073	
Extreme Temperature	Extreme temperature event (heat or cold)	Over 65 Population:	4,810	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:	1,516					
Flood	100- and 500-Year Mean Return Period Event	100-year	810	100-year	231	100-year Loss:	$152,170,149	High
		500-year	1,044	500-year	545			
Geological	High Landslide Susceptibility Areas	Class A:	0	Class A:	0	Class A:	0	Moderate
		Class B:	76	Class B:	13	Class B:	$4,901,120	
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
Severe Winter Weather	Severe Winter Weather Event	Entire population exposed; The degree of impact to the		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		Low

Hazard of Concern	Hazard/ Scenario(s) Evaluated	Population	Buildings	Economy (Loss)	Certainty Factor
		population depends on the scale of the incident.		can impact local operating budgets.	
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/rundown.	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
Hazardous Substances	Port Newark is in Essex County (3rd largest port in the U.S.) Major highways/rail Pipelines	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

Hazard of Concern	Hazard/ Scenario(s) Evaluated	Population	Buildings	Economy (Loss)	Certainty Factor
	10 NPL Sites in County				
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 Nutley.

- Number of repetitive loss (RL) properties: 21
- Number of severe repetitive loss (SRL) properties: 1
- Number of RL/SRL properties that have been mitigated: The Township acquired three homes at the end of Donna Court. The land has been converted to open space and deed restricted. This project was part of a FEMA/State of New Jersey grant.

Critical Facilities and Lifelines

The table below identifies critical facilities and lifelines in the community located in the 1-percent and 0.2-percent floodplains.

Table 9.17-13. Potential Flood Losses to Critical Facilities and Lifelines

Name	Type	Exposure		Status of Mitigation
		1% Event	0.2% Event	
Nutley Twsp Garage*	Government	X	X	While this structure is in the floodplain, it cannot be elevated due to its purpose and the use of storing equipment. The Township has backup power and fuel for this facility. Prior to storms, the Township moves equipment to higher ground.
Hackensack Meridian School of Medicine at Seton Hall University*	School	X	X	Do not have jurisdiction to mitigate; according to the Township, this building is not in the floodplain

**Identified lifeline*

Additional Identified Vulnerabilities

The jurisdiction has identified the following vulnerabilities within their community:

- Certain streams and small waterbodies in the Township do not have their flood hazard areas delineated. This includes: Passaic Avenue/Rutgers Place, Kingsland Street/Bloomfield Avenue, Bloomfield Avenue/Mountainview Avenue, and Franklin Avenue/Harrison Street

Hazard Area Extent and Location

Hazard area extent and location maps were generated for the Township of Nutley 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 adequate for planning purposes. Maps have been generated only for those hazards that can be clearly identified using mapping techniques and technologies and for which the Township of Nutley has significant exposure; Figures 9.17-1 and 9.17-2. 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 5 of the plan. The ranking process involves an assessment of the likelihood of occurrence for each hazard; its potential impacts on people,

property, and the economy; and 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 natural hazards for the Township of Nutley. 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 Nutley has reviewed the Essex 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:

- Adjusted the calculated risk ranking for: Coastal Erosion and Sea Level Rise, Flood, Hazardous Substances, and Power Outages

Table 9.17-14. Township of Nutley Hazard Ranking

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

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

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

9.17.7 Mitigation Strategy and Prioritization

This section discusses past mitigations actions and status, describes proposed hazard mitigation initiatives, and provides action 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 can also be found under 'Capability Assessment' presented previously in this annex.

Table 9.17-15. 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	Include in the 2020 HMP Update? Enter 2020 HMP Action #
Nutley-1	Install generators at all essential government facilities to ensure that necessary services and facility operations are operational during emergency events. The following locations have been identified at this time: 1. Energy allocation- generator, 4 sites; 2. Nutley Park Avenue shelter generator 3. Nutley Fire House generator 4. Nutley Rescue Squad generator	Township OEM	Ongoing – have applied for grant funding but did not receive the funds; Township has purchased generators on their own	X	2020-NUTLEY-001
Nutley-2	Nutley Township EOC/Fresh Water well pump generator	Township OEM	Generator has been purchased and installed		
Nutley-3	Nutley minor flood control project. Install gabion walls along Third River near Passaic Avenue bridge with Rutgers Place	Township	In Progress – applied for mitigation grants but denied funding	X	2020-NUTLEY-002
Nutley-4	Cleaning and repairing of culverts within the Township carrying stormwater from various locations to discharge points	Township Engineering, County Engineering	Ongoing – part of the day-to-day duties of the DPW		
Nutley-5	Perform infiltration and inflow study of sanitary system to identify dedicated and non-dedicated material entering system	Township DPW	No Progress	X	2020-NUTLEY-003
Nutley-6	Install gabion walls at specific flood-prone locations along Third River in the Township	Township	In Progress – applied for mitigation grants but denied funding; Town has done gabion walls in certain areas in the park; but there are areas that still need the walls installed	X	2020-NUTLEY-004
Nutley-7	Implement flood proofing measures to the Township's sanitary sewer pump station	Township DPW	In Progress but need additional funding – pumps have been upgraded and maintained; electrical equipment is elevated (what can be elevated)	X	2020-NUTLEY-005
Nutley-8	Dredging of Third River within the Township	NJDEP, Township, Essex County	No Progress	X	2020-NUTLEY-006
Nutley-9	Review Township ordinances pertaining to stormwater and floodplain management	Township DPW, Township Code Enforcement	Ongoing Capability – updated as needed		

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	Include in the 2020 HMP Update? Enter 2020 HMP Action #
Nutley-10	Perform study of Passaic River flooding onto River Road in Nutley Township	USACE, NJDEP, Essex County, Township	No Progress	X	2020-NUTLEY-007
Nutley-11	Improve drainage on Bloomfield Ave.	Township DPW	Areas of urban flooding – not a flood zones but prone to flooding due to volume of water that comes during certain storms; piping system cannot handle the amount of water but as soon as it dries up, it clears up	X	2020-NUTLEY-008
Nutley-12	Installation of solid manhole covers and inserts to prevent water infiltration into sanitary system	Township DPW	Ongoing Capability – completed the known flood areas but additional work is needed; adding manhole inserts that doesn't allow water to flow in		
Nutley-13	Maintenance of storm sewer system	Township DPW	Ongoing capability – day to day operation for the DPW		
Nutley-14	Assess and prioritize flood hazard mitigation alternatives for at risk properties within the floodplain, including those that have been identified as repetitive loss, such as acquisition/relocation, or elevation depending on feasibility. The parameters for feasibility for this initiative would be: funding, benefits versus costs and willing participation of property owners. Implement as funding becomes available. Specifically identified are properties in the following areas: • Passaic Avenue and Rutgers Place	Township Engineering, FPA, NJOEM, FEMA	In Progress – Township has applied for grants to do some work with the river to alleviate/reduce the issues in this area; no funding has been received to date	X	2020-NUTLEY-010
Nutley-15	Develop and implement an enhanced all-hazards, public outreach / education / mitigation information program on natural hazard risks and what they can do in the way of mitigation and preparedness, including flood insurance. This program will include: • Providing general natural hazard risk, preparedness and mitigation, and related NFIP information in regular newsletter and mailings	Township	Ongoing Capability – post on website, do a lot of stormwater outreach/notification through mailings, etc.		
Nutley-16	Support participation in the NFIP CRS program by attending CRS workshop(s) if offered within the county. Join the CRS program if adequate resources to support long term participation can be dedicated.	FPA, Township Officials	In Progress – not in CRS but have looked at and would like to participate in	X	2020-NUTLEY-011

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	Include in the 2020 HMP Update? Enter 2020 HMP Action #
Nutley-17	Enhance/expand tree maintenance program and coordination with utilities (e.g., PSEG).	Township Parks Department, Contractors and Utilities as needed	Ongoing Capability – have worked with PSEG, Parks and DPW; maintain/prune trees, remove trees, etc.; performed annually		

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 Nutley participated in a risk assessment workshop in September 2019 in which detailed information was provided about assets exposed and vulnerable to the identified hazards of concern. The Township of Nutley 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). Section 6 (Mitigation Strategy) and Appendix H (Mitigation Strategy Supplement) provide a more complete description of the Mitigation Toolbox and its resources.

Table 9.17-16 summarizes the comprehensive-range of specific mitigation initiatives the Township of Nutley would like to pursue in the future to reduce the effects of hazards. Some of these initiatives might be previous actions carried forward for this HMP update. Initiatives are dependent upon available funding (grants and local match availability) and can be modified or omitted at any time based on the occurrence of new hazard events and changes in municipal priorities. Both the 4 FEMA mitigation action categories and the 6 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 actions as *High*, *Medium*, or *Low*. Table 9.17-17 provides a summary of the prioritization of all proposed mitigation initiatives for this HMP update and Table 9.17-18 summarizes the actions by type across hazards of concern.

Table 9.17-16. Proposed Hazard Mitigation Initiatives

Initiative Number	Mitigation Initiative Name	Description of the Problem and 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-NUTLEY-001 (previous action)	Generator at the Parks Annex	**Problem**: The Parks Annex is identified as a critical facility for the Township; however, it does not have a source of backup power in the event of a power outage. **Solution**: Purchase and install a diesel generator at the Parks Annex. This will allow the building to function during power outages and provide essential services to the community.	Existing	Utility Interruption	1, 2, 6	DPW, Township Board	FEMA HMGP	Continuity of operations	$50,000	2 years	High	SIP	ES, PP
2020-NUTLEY-002 (previous action)	Nutley minor flood control project	**Problem**: Near the Passaic Avenue bridge, at the intersection with Rutgers Place, flooding occurs during periods of heavy rain. This causes flood damage to surrounding buildings and leads to road closures. **Solution**: Install gabion walls along Third River near Passaic Avenue bridge with Rutgers Place	Existing	Flood, Severe Weather, Coastal Storm	1, 2, 6	DPW, Engineer, Township Board	Municipal Budget	Increase protection from flood events; protect roads and buildings from flood damage	$100,000	2 years	Medium	SIP, NSP	PP, NR, SP
2020-NUTLEY-003 (previous action)	Infiltration and inflow study and reduction plan in floodplain areas	**Problem**: Sections of the Township's sanitary system are located in the floodplain. During flood events, water is entering the system which leads to the system becoming overwhelmed and result in surcharge. This could lead to sewer backups, sewage entering the waterways, and create a health hazard to residents. **Solution**: Conduct an I&I study and reduction plan for sections throughout the Township. The study will identify the amount of infiltration and inflow that enters the system. The study will also determine available solutions. The Township will identify the best solutions, seek funding for solutions, and implement projects.	Existing	Flood, Severe Weather, Coastal Storm	1, 2, 6	DPW	FEMA PDM and HMGP, Municipal Budget	Reduce or eliminate the risk of sewage surcharge; protect the health and safety of residents	$100,000	Within 5 years	High	SIP	PP
2020-NUTLEY-004	Install gabion walls at specific flood-prone locations	**Problem**: The Township has installed gabion walls in certain areas of the Township; however, there are areas that still need the walls installed.	Existing	Flood, Severe Weather,	1, 2, 6	DPW, Engineer, Township Board	Municipal Budget	Increase protection from flood events; protect roads	$100,000	2 years	Medium	SIP, NSP	PP, NR, SP

Initiative Number	Mitigation Initiative Name	Description of the Problem and 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
(previous action)	throughout the Township	**Solution**: Conduct a survey of the existing gabion walls in the Township to determine which ones need to be replaced. Also identify locations where walls need to be installed. Once survey is complete, walls will be installed or replaced where necessary.		Coastal Storm				and buildings from flood damage					
2020-NUTLEY-005 (previous action)	Bloomfield Avenue pump station	**Problem**: The pump station on Bloomfield Avenue pumps a majority of the sewage from one part of the Township. If the station shuts down due to an outage, it creates a major problem, impacting homes in the Township and surrounding municipalities. The Township has upgraded and maintained the pumps and the electrical equipment has been elevated. **Solution**: Purchase a trailer-mounted portable pump to be used to bypass the stationary pumps in the event the pumps cannot operate properly. This will provide continuity of operations and allow the Township's sewer system to operate during a power outage or flood event.	Existing	Flood, Severe Weather, Severe Winter Weather, Utility Interruption	1, 2, 6	DPW	FEMA PDM and HMGP, Municipal Budget	Reduce sewage backups and surcharge of sewage reducing public health impacts	$25,000 - $50,000	Within 5 years	High	SIP	ES
2020-NUTLEY-006 (previous action)	Third River Maintenance Plan	**Problem**: The Third River flows through the Township. During periods of heavy rain, the river overflows its banks, leading to flooding of surrounding properties. **Solution**: Develop a maintenance program to reduce the buildup of debris and sediment to increase flow and reduce flooding.	Existing	Flood, Coastal Storm, Severe Weather	1, 2	DPW, Engineer	Municipal Budget	Reduces buildup of debris; reduces flood damage	$100,000	5 years	High	LPR, NSP	PP, PR, NR
2020-NUTLEY-007 (previous action)	Perform study of Passaic River flooding onto River Road in Nutley Township	**Problem**: During high tide the Passaic River surcharges the local storm collection system causing local flooding conditions **Solution**: Study the enhanced hydraulic characteristics of outflow pipes for feasibility of installing back flow/tide gates at outfall points to the Passaic River.	Existing	Flood, Coastal Storm, Severe Weather	1, 2	DPW	FEMA, NJDEP, Municipal Budget	Prevent flood waters from inundation River Road	$50,000	5 years	Medium	LPR	PR
2020-NUTLEY-008 (previous action)	Study of urban flooding along Bloomfield Avenue and	**Problem**: There are several areas within the Township that experience flooding during heavy rain events (4"+ inches in short amount of time). The existing stormwater system is older. These areas	Existing	Flood, Severe Weather, Severe Winter	1, 2, 6	DPW, Township Board	FEMA FMA and HMGP	Increase understanding of flood problems in Township;	$50,000 - $75,000	Within 5 years	High	SIP	PP

Initiative Number	Mitigation Initiative Name	Description of the Problem and 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
	project implementation	are not adjacent to a body of water – identified as urban flooding. The areas include Bloomfield Avenue ,/ Harrison Street intersection, Parallel Street, Stanley Avenue, Rhoda Avenue, Maple Avenue, Milton Avenue/Bloomfield Avenue intersection, Raymond Avenue/Bloomfield Avenue intersection, and Centre Street/Bloomfield Avenue intersection. **Solution**: Conduct study to identify the cause of the urban flooding. Once study is complete, the Township will evaluate the recommendations from the study and implement projects that will benefit the Township. Additionally, the Township will update the stormwater ordinances to require on-site retention basins.		Weather, Utility Interruption				identify projects to alleviate this problem					
2020-NUTLEY-010 (previous action)	Mitigate flood-prone properties, including RL/SRL properties	**Problem**: Frequent flooding events have resulted in damages in the various areas in the Township. This area is residential, and these properties have been repetitively flooded as documented by paid NFIP claims. **Solution**: Conduct outreach to 192 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 identified areas that experience frequent flooding (high risk areas).	Existing	Flood, Severe Weather, Coastal Storm	1, 2, 3	Floodplain Administrator	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.	<$10,000 for outreach; $1 million+ for mitigation	3 years	High	SIP	PP
2020-NUTLEY-011 (previous action)	Community Rating System (CRS) Consideration	**Problem**: The Township has 21 repetitive loss and 1 severe repetitive loss properties. Additionally, there are 241 NFIP flood policies in the Township. The Township currently does not participate in the CRS program.	New and Existing	Flood	1, 2, 3	Floodplain Administrator	Municipal Budget	Residents will receive discounted flood insurance	$20,000	Within 2 years	Medium	LPR	PR

Initiative Number	Mitigation Initiative Name	Description of the Problem and 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
		Solution: The Township will determine whether or not they have the means to join CRS. If they do, they will prepare the appropriate documentation to join. If they become a CRS, the residents with flood insurance might receive a discount based on the CRS classification of the Township .											
2020-NUTLEY-012 (previous action)	Generator at Parks and Recreation Building (Recreation Center)	**Problem**: The Parks and Recreation Building is identified as a critical facility for the Township; however, it does not have a source of backup power in the event of a power outage. **Solution**: Purchase and install a diesel generator at the Parks and Recreation Building. This will allow the building to function during power outages and provide essential services to the community.	Existing	Utility Interruption	1, 2, 6	DPW, Township Board	FEMA HMGP	Continuity of operations	$50,000	2 years	High	SIP	ES
2020-NUTLEY-013 (previous action)	Generator at Town Hall	**Problem**: The Town Hall is identified as a critical facility for the Township; however, it does not have a source of backup power in the event of a power outage. **Solution**: Purchase and install a diesel generator at the Town Hall. This will allow the building to function during power outages and provide essential services to the community.	Existing	Utility Interruption	1, 2, 6	DPW, Township Board	FEMA HMGP	Continuity of operations	$50,000	2 years	High	SIP	ES
2020-NUTLEY-014 (previous action)	Upgrade existing generator at the rescue squad building	**Problem**: The existing generator at the rescue squad building is older and in need of updating. **Solution**: Purchase and install a diesel generator at the rescue squad building. This will allow the building to function during power outages and provide essential services to the community.	Existing	Utility Interruption	1, 2, 6	DPW, Township Board	FEMA HMGP	Continuity of operations	$50,000	2 years	High	SIP	ES
2020-NUTLEY-015 (previous action)	Purchase portable generator to use to run the fresh water well pump during power outages	**Problem**: The Township has a fresh water well available to residents. It provides clean drinking water for residents to fill up containers. In the event of a power outage, the pump is not available to use. **Solution**: Purchase a portable generator to use during power outages to allow the	Existing	Utility Interruption	1, 2, 3	DPW	FEMA HMGP, Municipal Budget	Drinking water during power outages	$10,000	1 year	Medium	SIP	PR, ES

Initiative Number	Mitigation Initiative Name	Description of the Problem and 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
		fresh water well pump to operate and provide clean drinking water to residents.											
2020-NUTLEY-016	Stormwater Discharge Points Study	**Problem**: There are several areas within the Township that experience flooding during heavy rain events (4"+ inches in short amount of time). The existing stormwater system is older. These areas are not adjacent to a body of water – identified as urban flooding. **Solution**: Conduct a study to look at all the stormwater discharge points (Bloomfield and Kingsland; Franklin Avenue; Hillside Avenue; and Elm Street) to see how the Township can redesign to create a positive discharge using natural conveyance of an existing waterway in the Township.	Existing	Flood, Severe Weather, Severe Winter Weather, Utility Interruption	1, 2, 6	DPW, Township Board	FEMA FMA and HMGP	Increase understanding of flood problems in Township; identify projects to alleviate this problem	$75,000 - $100,000	Within 5 years	High	SIP	PP

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. 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. 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. 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 9.17-17. 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-NUTLEY-001 (previous action)	Generator at the Parks Annex	1	1	1	1	1	1	0	0	1	1	0	1	1	0	10	High
2020-NUTLEY-002 (previous action)	Nutley minor flood control project	1	1	1	1	0	0	0	1	0	1	1	0	0	0	7	Medium
2020-NUTLEY-003 (previous action)	Infiltration and inflow study and reduction plan in floodplain areas	1	1	1	1	1	1	0	1	1	1	1	1	1	0	12	High
2020-NUTLEY-004 (previous action)	Install gabion walls at specific flood-prone locations throughout the Township	1	1	1	1	1	0	0	0	0	1	0	1	1	0	8	Medium
2020-NUTLEY-005 (previous action)	Bloomfield Avenue pump station	1	1	1	1	1	1	0	1	1	1	1	1	1	0	12	High
2020-NUTLEY-006 (previous action)	Third River Maintenance Plan	1	1	1	1	0	0	0	1	1	1	1	0	0	0	8	Medium
2020-NUTLEY-007 (previous action)	Perform study of Passaic River flooding onto River Road in Nutley Township	1	1	1	1	0	0	0	1	1	1	1	0	0	0	8	Medium

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-NUTLEY-008 (previous action)	Study of urban flooding along Bloomfield Avenue and project implementation	1	1	1	1	1	1	0	1	1	1	1	1	1	0	12	High
2020-NUTLEY-010 (previous action)	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-NUTLEY-011 (previous action)	Community Rating System (CRS) Consideration	1	1	1	1	0	0	1	0	1	1	0	1	0	0	8	Medium
2020-NUTLEY-012 (previous action)	Generator at Parks and Recreation Building (Recreation Center)	1	1	1	1	1	1	0	0	1	1	0	1	1	0	10	High
2020-NUTLEY-013 (previous action)	Generator at Town Hall	1	1	1	1	1	1	0	0	1	1	0	1	1	0	10	High
2020-NUTLEY-014 (previous action)	Upgrade existing generator at the rescue squad building	1	1	1	1	1	1	0	0	1	1	0	1	1	0	10	High
2020-NUTLEY-015 (previous action)	Purchase portable generator to use to run the fresh water well pump during power outages	1	1	1	1	0	0	0	0	1	1	0	1	1	0	8	Medium
2020-NUTLEY-016	Stormwater Discharge Points Study	1	1	1	1	1	1	0	0	1	1	1	1	1	0	11	High

Notes: Section 6 (Mitigation Strategy) conveys guidance on prioritizing mitigation actions.
Low (0-4), Medium (5-8), High (9-14).

Table 9.17-18. 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								
Coastal Storm	-006	-002, -003, -004, -006, -008, -010, -017		-002, -004, -006		-002, -003, -004, -008, -010, -017		
Drought								
Earthquake								
Extreme Temperature								
Flood	-006, -011	-002, -003, -004, -006, -017		-002, -004, -006		-002, -003, -004, -017		
Geological hazards								
Severe Weather		-002, -003, -017		-002		-002, -003, -017		
Severe Winter Weather		-002, -004, -017		-002, -004		-002, -004, -017		
Wildfire								
Civil Disorder								
Cyber Attack								
Disease Outbreak								
Economic Collapse								
Hazardous Substances								
Utility Interruption	-015	-001, -017			-001, -012, -013, -014, -015, -016	-001, -012, -013, -014, -015, -016, -017		
Terrorism								
Transportation Failure								

Note: Section 6 (Mitigation Strategy) provides for an explanation of the mitigation categories.

9.17.8 Staff and Local Stakeholder Involvement in Annex Development

The Township of Nutley followed the planning process described in Section 2 (Planning Process). 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). 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 9.17-19. Contributors to the Annex

Entity	Title	Method of Participation
Salvatore Ferraro	Engineering / Recycling Coordinator	Primary POC and floodplain administrator, reviewed annex, attended meetings, provided information, and contributed to the mitigation strategy
William Cassidy	OEM Coordinator	Alternate POC, reviewed annex, attended meetings, provided information, and contributed to the mitigation strategy

Figure 9.17-1. Township of Nutley Hazard Area Extent and Location Map

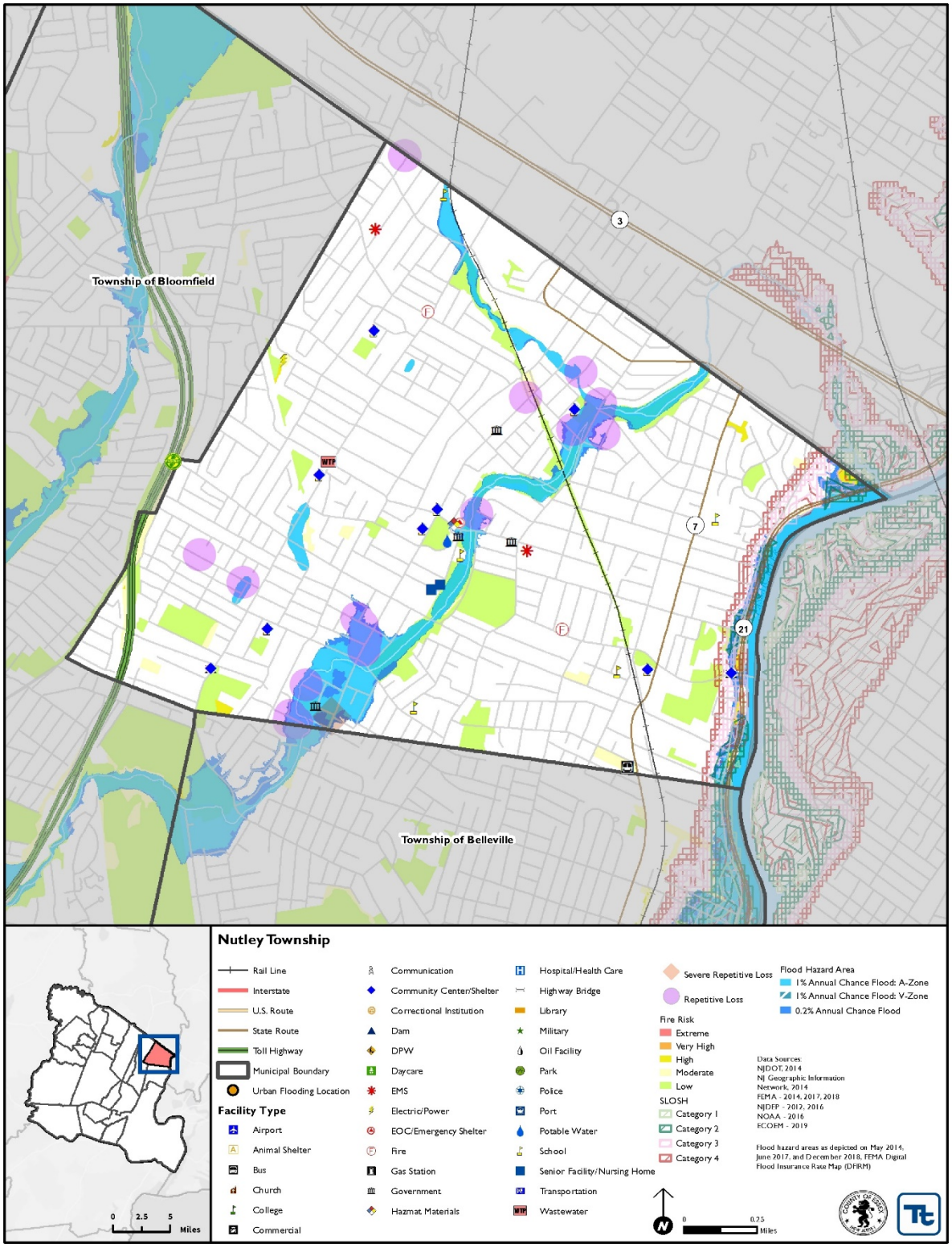
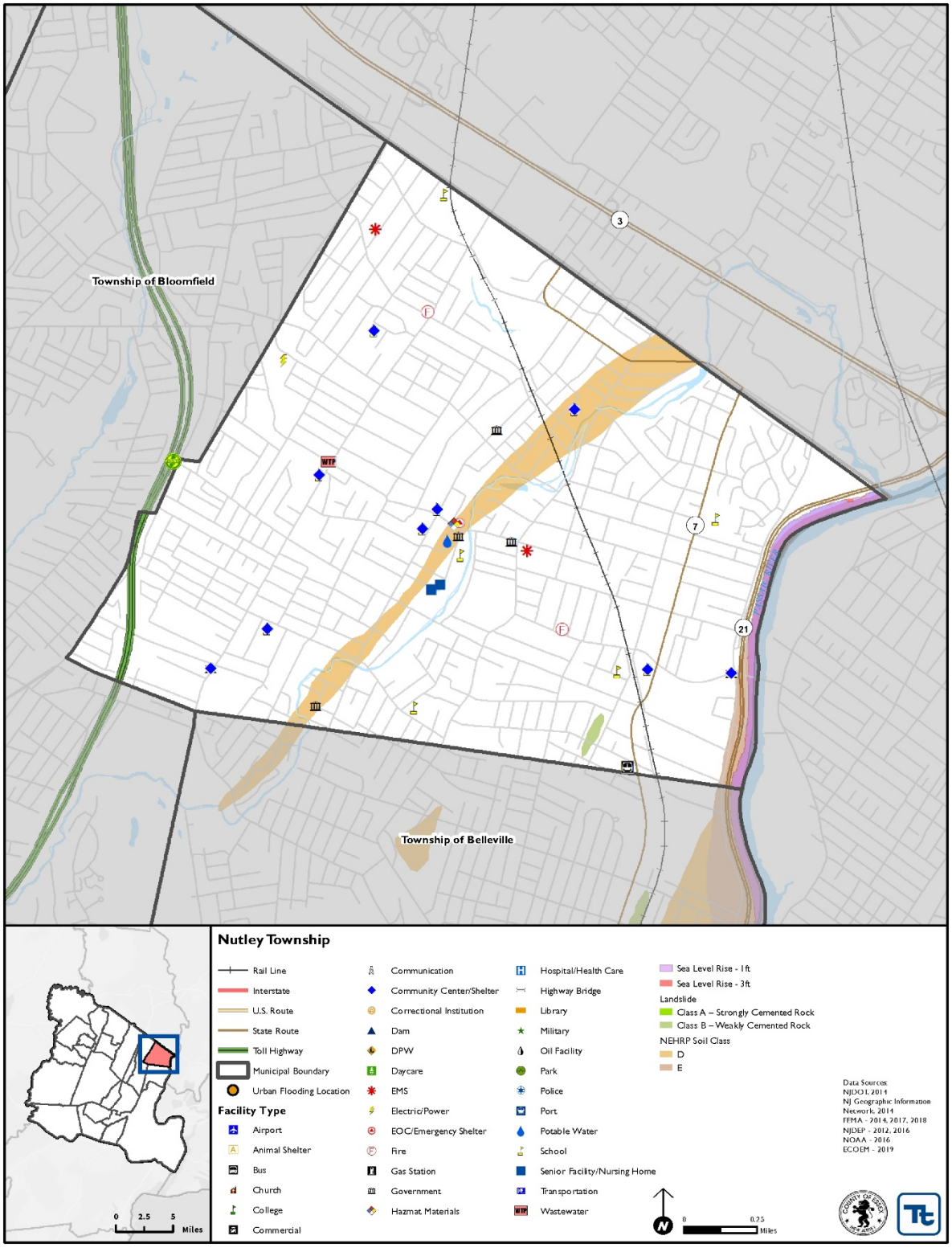


Figure 9.17-2. Township of Nutley Hazard Area Extent and Location Map 2



Name of Jurisdiction: _____

Name and Title Completing Worksheet: _____

Action Worksheet			
Project Name:	Generator at the Parks Annex		
Project Number:	2020-NUTLEY-001		
Risk / Vulnerability			
Hazard(s) of Concern:	Utility Interruption		
Description of the Problem:	The Parks Annex is identified as a critical facility for the Township; however, it does not have a source of backup power in the event of a power outage.		
Action or Project Intended for Implementation			
Description of the Solution:	Purchase and install a diesel generator at the Parks Annex. This will allow the building to function during power outages and provide essential services to the community.		
Is this project related to a Critical Facility or Lifeline?	Yes ☒	No ☐	
Level of Protection:	N/A	**Estimated Benefits (losses avoided):**	Continuity of operations
Useful Life:	30 years	**Goals Met:**	1, 2, 6
Estimated Cost:	$50,000	**Mitigation Action Type:**	SIP
Plan for Implementation			
Prioritization:	High	**Desired Timeframe for Implementation:**	within 1 year of receiving funds
Estimated Time Required for Project Implementation:	2 years	**Potential Funding Sources:**	FEMA HMGP
Responsible Organization:	DPW, Township Board	**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
	Install solar panels	$500,000	Weather dependent; not good for long-term power outages
	Install wind turbines	$500,000	weather dependent; facility property would need open space for turbine

Progress Report (for plan maintenance)	
Date of Status Report:	
Report of Progress:	
Update Evaluation of the Problem and/or Solution:	

Name of Jurisdiction: _____

Name and Title Completing Worksheet: _____

Action Worksheet		
Project Name:	Generator at the Parks Annex	
Project Number:	2020-NUTLEY-001	
Criteria	**Numeric Rank (-1, 0, 1)**	**Provide brief rationale for numeric rank when appropriate**
Life Safety	1	
Property Protection	1	
Cost-Effectiveness	1	Project is cost effective; benefits outweigh the costs
Technical	1	
Political	1	
Legal	1	
Fiscal	0	
Environmental	0	
Social	1	
Administrative	1	
Multi-Hazard	0	Utility Interruption
Timeline	1	2 years
Agency Champion	1	
Other Community Objectives	0	
Total	10	
Priority (High/Med/Low)	High	

Name of Jurisdiction: _____

Name and Title Completing Worksheet: _____

Action Worksheet			
Project Name:	I&I Study and Reduction Plan in Floodplain Areas		
Project Number:	2020-NUTLEY-003		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood, Severe Storm		
Description of the Problem:	Sections of the Township's sanitary system are located in the floodplain. During flood events, water is entering the system which leads to the system becoming overwhelmed and result in surcharge. This could lead to sewer backups, sewage entering the waterways, and create a health hazard to residents.		
Action or Project Intended for Implementation			
Description of the Solution:	Conduct an I&I study and reduction plan for sections throughout the Township. The study will identify the amount of infiltration and inflow that enters the system. The study will also determine available solutions. The Township will identify the best solutions, seek funding for solutions, and implement projects.		
Is this project related to a Critical Facility or Lifeline?	Yes ☐	No ☒	
Level of Protection:	1% annual chance flood event	**Estimated Benefits (losses avoided):**	Reduce or eliminate the risk of sewage surcharge; protect the health and safety of residents
Useful Life:	50 years	**Goals Met:**	1, 2, 6
Estimated Cost:	$100,000 for the study	**Mitigation Action Type:**	SIP
Plan for Implementation			
Prioritization:	High	**Desired Timeframe for Implementation:**	Within 1 year
Estimated Time Required for Project Implementation:	Within 5 years	**Potential Funding Sources:**	FEMA PDM and HMGP, Municipal Budget
Responsible Organization:	DPW	**Local Planning Mechanisms to be Used in Implementation if any:**	
Three Alternatives Considered (including No Action)			
Alternatives:	**Action**	**Estimated Cost**	**Evaluation**
	No Action	$0	Current problem continues
	Ongoing maintenance and troubleshooting	Based on existing manpower	Not a permanent solution
	Educating residents on what to do in the event of sewer system overflows	$25,000	increases awareness of residents but problem still exists
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			

Name of Jurisdiction: _____

Name and Title Completing Worksheet: _____

Action Worksheet		
Project Name:	Purchase portable pump	
Project Number:	2020-NUTLEY-003	
Criteria	**Numeric Rank (-1, 0, 1)**	**Provide brief rationale for numeric rank when appropriate**
Life Safety	1	Reduce or eliminate health hazards associated with sewer backup
Property Protection	1	Reduce or eliminate damages associated with sewer backup
Cost-Effectiveness	1	Benefits outweigh the costs
Technical	1	
Political	1	
Legal	1	Township owns and operates the sewer system
Fiscal	0	Need to seek grant funding to complete project
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	Flood, Severe Storm, Severe Winter Storm, Utility Interruption
Timeline	1	When funding is received, project can be completed in the next five years
Agency Champion	1	
Other Community Objectives	0	
Total	12	
Priority (High/Med/Low)	High	

Name of Jurisdiction: _____

Name and Title Completing Worksheet: _____

Action Worksheet			
Project Name:	Bloomfield Avenue pump station		
Project Number:	2020-NUTLEY-005		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood, Severe Weather		
Description of the Problem:	The pump station on Bloomfield Avenue pumps a majority of the sewage from one part of the Township. If the station shuts down due to an outage, it creates a major problem, impacting homes in the Township and surrounding municipalities. The Township has upgraded and maintained the pumps and the electrical equipment has been elevated.		
Action or Project Intended for Implementation			
Description of the Solution:	Purchase a trailer-mounted portable pump to be used to bypass the stationary pumps in the event the pumps cannot operate properly. This will provide continuity of operations and allow the Township's sewer system to operate during a power outage or flood event.		
Is this project related to a Critical Facility or Lifeline?	Yes ☒	No ☐	
Level of Protection:	N/A	**Estimated Benefits (losses avoided):**	Continuity of operations; allow sewer system to operate during outage
Useful Life:	5 years	**Goals Met:**	1, 2, 6
Estimated Cost:	$25,000	**Mitigation Action Type:**	SIP
Plan for Implementation			
Prioritization:	High	**Desired Timeframe for Implementation:**	Within 6 months of receiving funds
Estimated Time Required for Project Implementation:	4 months	**Potential Funding Sources:**	FEMA FMA and HMGP, Municipal Budget
Responsible Organization:	DPW	**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
	Purchase additional stationary pumps	$50,000 - $75,000	Costly
	Renting portable pumps as needed	$5,000/month plus damages associated with loss of pump system	Not a quick fix; would need to find vendor and bring pump to Township

Progress Report (for plan maintenance)	
Date of Status Report:	
Report of Progress:	
Update Evaluation of the Problem and/or Solution:	

Name of Jurisdiction: _____

Name and Title Completing Worksheet: _____

Action Worksheet		
Project Name:	Bloomfield Avenue pump station	
Project Number:	2020-NUTLEY-005	
Criteria	**Numeric Rank (-1, 0, 1)**	**Provide brief rationale for numeric rank when appropriate**
Life Safety	1	Reduce or eliminate health hazards associated with sewer backup
Property Protection	1	Reduce or eliminate damages associated with sewer backup
Cost-Effectiveness	1	Benefits outweigh the costs
Technical	1	
Political	1	
Legal	1	Township owns and operates the sewer system
Fiscal	0	Need to seek grant funding to complete project
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	Flood, Severe Storm, Severe Winter Storm, Utility Interruption
Timeline	1	When funding is received, project can be completed in the next five years
Agency Champion	1	
Other Community Objectives	0	
Total	12	
Priority (High/Med/Low)	High	

Name of Jurisdiction: _____

Name and Title Completing Worksheet: _____

Action Worksheet			
Project Name:	Study of urban flooding along Bloomfield Avenue and project implementation		
Project Number:	2020-NUTLEY-008		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood, Severe Weather, Severe Winter Weather, Utility Interruption		
Description of the Problem:	There are several areas within the Township that experience flooding during heavy rain events (4"+ inches in short amount of time). The existing stormwater system is older. These areas are not adjacent to a body of water – identified as urban flooding. The areas include Bloomfield Avenue, Milton Avenue, Raymond Avenue, and Centre Street.		
Action or Project Intended for Implementation			
Description of the Solution:	Conduct study to identify the cause of the urban flooding. Once study is complete, the Township will evaluate the recommendations from the study and implement projects that will benefit the Township. Additionally, the Township will update the stormwater ordinances to require on-site retention basins.		
Is this project related to a Critical Facility or Lifeline?	Yes ☐	No ☒	
Level of Protection:	1% annual chance flood event	**Estimated Benefits (losses avoided):**	Increase understanding of flood problems in Township; identify projects to alleviate this problem
Useful Life:	30 years	**Goals Met:**	1, 2, 6
Estimated Cost:	$50,000 - $75,000	**Mitigation Action Type:**	SIP
Plan for Implementation			
Prioritization:	High	**Desired Timeframe for Implementation:**	Within 1 year of receiving funds
Estimated Time Required for Project Implementation:	Within 5 years	**Potential Funding Sources:**	FEMA FMA and HMGP
Responsible Organization:	DPW, Township Board	**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
	Acquire properties that flood in this area	$50 million	Too costly; acquiring properties reduces tax base
	Upgrade entire stormwater system	$10 million+	Too costly
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			

Name of Jurisdiction: _____

Name and Title Completing Worksheet: _____

Action Worksheet		
Project Name:	Study of urban flooding along Bloomfield Avenue and project implementation	
Project Number:	2020-NUTLEY-008	
Criteria	**Numeric Rank (-1, 0, 1)**	**Provide brief rationale for numeric rank when appropriate**
Life Safety	1	Reduce or eliminate health hazards associated with sewer backup
Property Protection	1	Reduce or eliminate damages associated with sewer backup
Cost-Effectiveness	1	Benefits outweigh the costs
Technical	1	
Political	1	
Legal	1	Township owns and operates the sewer system
Fiscal	0	Need to seek grant funding to complete project
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	Flood, Severe Weather, Severe Winter Weather, Utility Interruption
Timeline	1	When funding is received, project can be completed in the next five years
Agency Champion	1	
Other Community Objectives	0	
Total	12	
Priority (High/Med/Low)	High	

Name of Jurisdiction: _____

Name and Title Completing Worksheet: _____

Action Worksheet			
Project Name:	Mitigate flood-prone properties, including RL/SRL properties		
Project Number:	2020-NUTLEY-010		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood, Severe Weather, Coastal Storm		
Description of the Problem:	Frequent flooding events have resulted in damages in the various areas in the Township. 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 192 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 identified areas that experience frequent flooding (high risk areas).		
Is this project related to a Critical Facility or Lifeline?	Yes ☐	No ☒	
Level of Protection:	1% annual chance flood event + freeboard *(in accordance with flood ordinance)*	**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:**	1, 2, 3
Estimated Cost:	$3 Million	**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:	

Name of Jurisdiction: _____

Name and Title Completing Worksheet: _____

Action Worksheet		
Project Name:	Mitigate flood-prone properties, including RL/SRL properties	
Project Number:	2020-NUTLEY-010	
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 Town has the legal authority to conduct the project.
Fiscal	0	Project will require grant funding.
Environmental	1	
Social	0	
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	

Name of Jurisdiction: _____

Name and Title Completing Worksheet: _____

Action Worksheet			
Project Name:	Generator at Parks and Recreation Building (Recreation Center)		
Project Number:	2020-NUTLEY-012		
Risk / Vulnerability			
Hazard(s) of Concern:	Utility Interruption		
Description of the Problem:	The Parks and Recreation Building is identified as a critical facility for the Township; however, it does not have a source of backup power in the event of a power outage.		
Action or Project Intended for Implementation			
Description of the Solution:	Purchase and install a diesel generator at the Parks and Recreation Building. This will allow the building to function during power outages and provide essential services to the community.		
Is this project related to a Critical Facility or Lifeline?	Yes ☐	No ☐	
Level of Protection:	N/A	**Estimated Benefits (losses avoided):**	Continuity of operations
Useful Life:	30 years	**Goals Met:**	1, 2, 6
Estimated Cost:	$50,000	**Mitigation Action Type:**	SIP
Plan for Implementation			
Prioritization:	High	**Desired Timeframe for Implementation:**	within 1 year of receiving funds
Estimated Time Required for Project Implementation:	2 years	**Potential Funding Sources:**	FEMA HMGP
Responsible Organization:	DPW, Township Board	**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
	Install solar panels	$500,000	Weather dependent; not good for long-term power outages
	Install wind turbines	$500,000	weather dependent; facility property would need open space for turbine

Progress Report (for plan maintenance)	
Date of Status Report:	
Report of Progress:	
Update Evaluation of the Problem and/or Solution:	

Name of Jurisdiction: _____

Name and Title Completing Worksheet: _____

Action Worksheet		
Project Name:	Generator at Parks and Recreation Building (Recreation Center)	
Project Number:	2020-NUTLEY-012	
Criteria	**Numeric Rank (-1, 0, 1)**	**Provide brief rationale for numeric rank when appropriate**
Life Safety	1	
Property Protection	1	
Cost-Effectiveness	1	Project is cost effective; benefits outweigh the costs
Technical	1	
Political	1	
Legal	1	
Fiscal	0	
Environmental	0	
Social	1	
Administrative	1	
Multi-Hazard	0	Utility Interruption
Timeline	1	2 years
Agency Champion	1	
Other Community Objectives	0	
Total	10	
Priority (High/Med/Low)	High	

Name of Jurisdiction: _____

Name and Title Completing Worksheet: _____

Action Worksheet			
Project Name:	Generator at Town Hall		
Project Number:	2020-NUTLEY-013		
Risk / Vulnerability			
Hazard(s) of Concern:	Utility Interruption		
Description of the Problem:	The Town Hall is identified as a critical facility for the Township; however, it does not have a source of backup power in the event of a power outage.		
Action or Project Intended for Implementation			
Description of the Solution:	Purchase and install a diesel generator at the Town Hall. This will allow the building to function during power outages and provide essential services to the community.		
Is this project related to a Critical Facility or Lifeline?	Yes ☐	No ☐	
Level of Protection:	N/A	**Estimated Benefits (losses avoided):**	Continuity of operations
Useful Life:	30 years	**Goals Met:**	1, 2, 6
Estimated Cost:	$50,000	**Mitigation Action Type:**	SIP
Plan for Implementation			
Prioritization:	High	**Desired Timeframe for Implementation:**	within 1 year of receiving funds
Estimated Time Required for Project Implementation:	2 years	**Potential Funding Sources:**	FEMA HMGP
Responsible Organization:	DPW, Township Board	**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
	Install solar panels	$500,000	Weather dependent; not good for long-term power outages
	Install wind turbines	$500,000	weather dependent; facility property would need open space for turbine

Progress Report (for plan maintenance)	
Date of Status Report:	
Report of Progress:	
Update Evaluation of the Problem and/or Solution:	

Name of Jurisdiction: _____

Name and Title Completing Worksheet: _____

Action Worksheet	
Project Name:	Generator at Town Hall

Project Number:	2020-NUTLEY-013	
Criteria	**Numeric Rank (-1, 0, 1)**	**Provide brief rationale for numeric rank when appropriate**
Life Safety	1	
Property Protection	1	
Cost-Effectiveness	1	Project is cost effective; benefits outweigh the costs
Technical	1	
Political	1	
Legal	1	
Fiscal	0	
Environmental	0	
Social	1	
Administrative	1	
Multi-Hazard	0	Utility Interruption
Timeline	1	2 years
Agency Champion	1	
Other Community Objectives	0	
Total	10	
Priority (High/Med/Low)	High	

Name of Jurisdiction: _____

Name and Title Completing Worksheet: _____

Action Worksheet			
Project Name:	Upgrade existing generator at the rescue squad building		
Project Number:	2020-NUTLEY-014		
Risk / Vulnerability			
Hazard(s) of Concern:	Utility Interruption		
Description of the Problem:	The existing generator at the rescue squad building is older and in need of updating.		
Action or Project Intended for Implementation			
Description of the Solution:	Purchase and install a diesel generator at the rescue squad building. This will allow the building to function during power outages and provide essential services to the community.		
Is this project related to a Critical Facility or Lifeline?	Yes ☐	No ☐	
Level of Protection:	N/A	**Estimated Benefits (losses avoided):**	Continuity of operations
Useful Life:	30 years	**Goals Met:**	1, 2, 6
Estimated Cost:	$50,000	**Mitigation Action Type:**	SIP
Plan for Implementation			
Prioritization:	High	**Desired Timeframe for Implementation:**	within 1 year of receiving funds
Estimated Time Required for Project Implementation:	2 years	**Potential Funding Sources:**	FEMA HMGP
Responsible Organization:	DPW, Township Board	**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
	Install solar panels	$500,000	Weather dependent; not good for long-term power outages
	Install wind turbines	$500,000	weather dependent; facility property would need open space for turbine

Progress Report (for plan maintenance)	
Date of Status Report:	
Report of Progress:	
Update Evaluation of the Problem and/or Solution:	

Name of Jurisdiction: _____

Name and Title Completing Worksheet: _____

Action Worksheet		
Project Name:	Upgrade existing generator at the rescue squad building	
Project Number:	2020-NUTLEY-014	
Criteria	**Numeric Rank (-1, 0, 1)**	**Provide brief rationale for numeric rank when appropriate**
Life Safety	1	
Property Protection	1	
Cost-Effectiveness	1	Project is cost effective; benefits outweigh the costs
Technical	1	
Political	1	
Legal	1	
Fiscal	0	
Environmental	0	
Social	1	
Administrative	1	
Multi-Hazard	0	Utility Interruption
Timeline	1	2 years
Agency Champion	1	
Other Community Objectives	0	
Total	10	
Priority (High/Med/Low)	High	

Name of Jurisdiction: _____

Name and Title Completing Worksheet: _____

Action Worksheet			
Project Name:	Purchase portable generator to use to run the fresh water well pump during power outages		
Project Number:	2020-NUTLEY-015		
Risk / Vulnerability			
Hazard(s) of Concern:	Utility Interruption		
Description of the Problem:	The Township has a fresh water well available to residents. It provides clean drinking water for residents to fill up containers. In the event of a power outage, the pump is not available to use.		
Action or Project Intended for Implementation			
Description of the Solution:	Purchase a portable generator to use during power outages to allow the fresh water well pump to operate and provide clean drinking water to residents.		
Is this project related to a Critical Facility or Lifeline?	Yes ☐	No ☐	
Level of Protection:	N/A	**Estimated Benefits (losses avoided):**	Drinking water during power outages
Useful Life:	5 years	**Goals Met:**	1, 2, 3
Estimated Cost:	$10,000	**Mitigation Action Type:**	SIP
Plan for Implementation			
Prioritization:	Medium	**Desired Timeframe for Implementation:**	within 1 year of receiving funds
Estimated Time Required for Project Implementation:	1 year	**Potential Funding Sources:**	FEMA HMGP, Municipal Budget
Responsible Organization:	DPW	**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
	Install solar panels	$500,000	Weather dependent; not good for long-term power outages
	Install wind turbines	$500,000	weather dependent; facility property would need open space for turbine

Progress Report (for plan maintenance)	
Date of Status Report:	
Report of Progress:	
Update Evaluation of the Problem and/or Solution:	

Name of Jurisdiction: _____

Name and Title Completing Worksheet: _____

Action Worksheet		
Project Name:	Purchase portable generator to use to run the fresh water well pump during power outages	
Project Number:	2020-NUTLEY-015	
Criteria	**Numeric Rank (-1, 0, 1)**	**Provide brief rationale for numeric rank when appropriate**
Life Safety	1	
Property Protection	1	
Cost-Effectiveness	1	Project is cost effective; benefits outweigh the costs
Technical	1	
Political	0	
Legal	0	
Fiscal	0	
Environmental	0	
Social	1	
Administrative	1	
Multi-Hazard	0	Utility Interruption
Timeline	1	1 year
Agency Champion	1	
Other Community Objectives	0	
Total	8	
Priority (High/Med/Low)	Medium	

Name of Jurisdiction: _____

Name and Title Completing Worksheet: _____

Action Worksheet			
Project Name:	Stormwater Discharge Points Study		
Project Number:	2020-NUTLEY-016		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood, Severe Weather, Severe Winter Weather, Utility Interruptions		
Description of the Problem:	There are several areas within the Township that experience flooding during heavy rain events (4"+ inches in short amount of time). The existing stormwater system is older. These areas are not adjacent to a body of water – identified as urban flooding.		
Action or Project Intended for Implementation			
Description of the Solution:	Conduct a study to look at all the stormwater discharge points (Bloomfield and Kingsland; Franklin Avenue; Hillside Avenue; and Elm Street) to see how the Township can redesign to create a positive discharge using natural conveyance of an existing waterway in the Township.		
Is this project related to a Critical Facility or Lifeline?	Yes ☐	No ☐	
Level of Protection:	To be determined after project is identified	**Estimated Benefits (losses avoided):**	Increase understanding of flood problems in Township; identify projects to alleviate this problem
Useful Life:	To be determined after project is identified	**Goals Met:**	1, 2, 6
Estimated Cost:	$50,000-$75,000	**Mitigation Action Type:**	SIP
Plan for Implementation			
Prioritization:	High	**Desired Timeframe for Implementation:**	within 1 year of receiving funds
Estimated Time Required for Project Implementation:	Within 5 years	**Potential Funding Sources:**	FEMA FMA and HMGP
Responsible Organization:	DPW, Township Board	**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 all buildings	$1 million	Costly; might not be necessary
	Replace stormwater system	$5 million+	costly; long-term project

Progress Report (for plan maintenance)	
Date of Status Report:	
Report of Progress:	
Update Evaluation of the Problem and/or Solution:	

Name of Jurisdiction: _____

Name and Title Completing Worksheet: _____

Action Worksheet		
Project Name:	Stormwater Discharge Points Study	
Project Number:	2020-NUTLEY-016	
Criteria	**Numeric Rank (-1, 0, 1)**	**Provide brief rationale for numeric rank when appropriate**
Life Safety	1	
Property Protection	1	
Cost-Effectiveness	1	Project is cost effective; benefits outweigh the costs
Technical	1	
Political	1	
Legal	1	
Fiscal	0	
Environmental	0	
Social	1	
Administrative	1	
Multi-Hazard	1	Flood, Severe Weather, Severe Winter Weather, Utility Interruptions
Timeline	1	Within 5 years
Agency Champion	1	
Other Community Objectives	0	
Total	11	
Priority (High/Med/Low)	High	