



9.8 TOWNSHIP OF FAIRFIELD

This section presents the jurisdictional annex for the Township of Fairfield. The annex includes a general overview of the Township of Fairfield; 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 natural hazards.

9.8.1 Hazard Mitigation Planning Team

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

Table 9.8-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name / Title: William Smith, OEM Coordinator Address: 230 Fairfield Road Fairfield, NJ 07004 Phone Number: 973-445-1550 Email: wsmith@fairfieldnj.org	Name / Title: Steve Bury, Engineer Address: 230 Fairfield Road Fairfield, NJ 07004 Phone Number: 973-882-2700 ext. 2504 Email: sbury@fairfieldnj.org
NFIP Floodplain Administrator	
Name / Title: Phil Cheff, Construction Official Address: 230 Fairfield Road Fairfield, NJ 07004 Phone Number: 973-882-2700 ext. 2503 Email: pcheff@fairfield.org	

9.8.2 Jurisdiction Profile

In 1669, the Dutch settled along the Passaic River in the area now known as Fairfield Township. The land was purchased from Native Americans and named Gansegat, which is Dutch for "duck's pond" (Township of Fairfield, 2014).

Fairfield Township has operated as a Small Municipality Plan C form of government since 1962 (Township of Fairfield, 2014). According to the U.S. Census Bureau, the Township has a total land area of 10.46 square miles, of which 10.296 square miles is land and 0.164 square miles is water.

According to the U.S. Census, the 2010 population for the Township of Fairfield was 7,466. The estimated 2017 population was 7,671, a 2.7 percent increase from the 2010 Census. Data from the 2017 U.S. Census American Community Survey indicate that 5.9 percent of the population is 5 years of age or younger and 21.5 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.

9.8.3 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 9.8-2 summarizes recent and expected future development trends, including major residential/commercial development and major infrastructure development. Figures 9.8-1 and 9.8-2 at the



end of this annex illustrate the geographically-delineated hazard areas and the location of potential new development, where available.

Table 9.8-2. Recent and Expected Future Development

Type of Development	2014	2015	2016	2017	2018
Number of Building Permits for New Construction Issued Since the Previous HMP					
Single Family	10	1	10	9	22
Multi-Family	4	2	0	1	0
Other (commercial, mixed-use, etc.)	0	2	1	0	2
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					
Recreation Center	Recreation	1	Hollywood Ave	X zone	Complete
Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years					
DMR60	Apartment	32	Magnolia Lane	X zone	90% Complete
74 Passaic Ave	Apartment	36	74 Passaic Ave	X zone	Approved/unknown start date
Stonybrook	Townhome	25	Stonybrook	X zone	Under Construction
161 Fairfield	Townhome	24	161 Fairfield	X zone	Under Construction
170 Fairfield	Townhome	24	170 Fairfield	X zone	Board Approval Applied For
Carlos Drive	Unknown	99	Carlos Drive	X zone	Board Approval Applied For
202 Fairfield	Apartment	29	202 Fairfield	X zone	Approved/unknown start date
Allaire Health Care, LLC	Assisted Living	80 beds	212 Passaic Ave	X zone and A zone	Approved/unknown start date

* Only location-specific hazard zones or vulnerabilities identified.

9.8.4 Capability Assessment

The Township of Fairfield 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 in this section. The Township of Fairfield 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 Fairfield.

Table 9.8-3. 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	-
Comment: State mandated on local level under NJAC 5:23-3.14. International Building Code – New Jersey Edition, 2018, NJAC 5:24-3.14. Chapter 10 Building and Housing of the municipal code, enforced by the Building Department.					
Zoning Code	Yes	Local and State	Yes	No	-
Comment: Per State of NJ Municipal Land Use Law (MLUL) L. 1975, s. 2, eff Aug 1, 1976, 40-55D-62: 49. Power to zone, requires all jurisdictions to have current zoning and other land development ordinances after the planning board has adopted the land use element and master plan. Chapter 45 Zoning of the municipal code. Enforced by Zoning Officer.					
Subdivisions	Yes	Local and State	Yes	No	-
Comment: State mandated - P.L.1975, c.291 (C.40:55D-47): 40:55D-37. Grant of power; referral of proposed ordinance; county planning board approval . Dictated by the Municipal Land Use Law. NJ Statute 40:27-6.2 The board of freeholders of any county having a county planning board shall provide for the review of all subdivisions of land within the county by said county planning board and for the approval of those subdivisions affecting county road or drainage facilities as set forth and limited hereinafter in this section. Chapter 42 Land Subdivision of the municipal code. Adopted 1969.					
Stormwater Management	Yes	Local	Yes	No	-
Comment: Title 7 of the NJ Administrative Code (N.J.A.C. 7:8). Chapter 21 Streams, Water Courses, Catch Basins, Street Stormwater Sewer Inlet and Drainage Ditches. Adopted 2004. Chapter					
Post-Disaster Recovery	No	-	-	-	-
Comment:					
Real Estate Disclosure	Yes	State – Division of Consumer Affairs	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.					
Growth Management	Yes	Local	Yes	No	-
Comment: State mandated at local level. Chapter 42 Land Subdivision of the municipal code. Adopted 1969. Also noted as a goal in the master plan.					
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					



	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 #.
protection structures, and site preparation. This law is implemented through NJ's Coastal Zone Management Rules N.J.A.C. 7:27E-1 et seq.					
Site Plan Review	Yes	Local	Yes	No	-
Comment: Chapter 42 Land Subdivision of the municipal code. Adopted 1969.					
Environmental Protection	Yes	Local	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 21 Streams, Water Courses, Catch Basins, Street Stormwater Sewer Inlet and Drainage Ditches. Adopted 2004. Chapter 44 Environmental Impact Statement. Adopted 2011. Administered by Township Engineer.					
Flood Damage Prevention	Yes	Local	No	No	-
Comment: Chapter 45 Zoning, Article 8 Flood Damage Prevention of the municipal code. Adopted 2007. Administered by floodplain administrator (construction official).					
Wellhead Protection	No				
Comment:					
Emergency Management	No	-	-	-	-
Comment:					
Climate Change	No	-	-	-	-
Comment:					
Disaster Recovery Ordinance	No	-	-	-	-
Comment:					
Disaster Reconstruction Ordinance	No	-	-	-	-
Comment:					
Other	No	-	-	-	-
Comment:					
Planning Documents					
Comprehensive / Master Plan	Yes	Local	Yes	No	-
Comment: Master Plan Reexaminations in 2005 and March 2012. The reexamination reports both had goals of ensuring that traffic circulation and safety issues are affirmatively addressed on a local and regional scale. The reexamination also highlights flood risk in the Passaic River Basin as a major concern and suggests larger lots/impervious surface limits and creating a flood overly district as possible methods to minimize flood risk. The plan notes potential methods of impervious area management. The plan suggests the creation of a flood hazard mitigation plan. The plan suggests the township consider implementation of a Low Impact Development Ordinance.					
Capital Improvement Plan	Yes	Local	Allowed	No	-
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.					
Disaster Debris Management Plan	No	-	No	-	-
Comment:					
Floodplain or Watershed Plan	Yes	Local	No	No	No
Comment: Floodplain Management Plan					
Stormwater Management Plan	Yes	Local and State	Yes	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: 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). Township of Fairfield Stormwater Management Plan. March 8, 2005. The plan outlines specific stormwater design and performance standards for new development and proposes management controls to address impacts from existing development. Resulted in amendments to the zoning ordinance to incorporate nonstructural stormwater management strategies.					
Stormwater Pollution Prevention Plan	Yes	Local and State	Yes	No	-
Comment: Township of Fairfield Essex County, New Jersey Stormwater Pollution Prevention Plan. March 9, 2005, Rev. October 15, 2007.					
Urban Water Management Plan	No	-	No	-	-
Comment:					
Habitat Conservation Plan	No	-	No	-	-
Comment:					
Economic Development Plan	No	-	No	-	-
Comment:					
Shoreline Management Plan	No	-	No	-	-
Comment:					
Community Wildfire Protection Plan	No	-	No	-	-
Comment:					
Community Forest Management Plan	No	-	No	-	-
Comment:					
Transportation Plan	No	-	No	-	-
Comment:					
Agriculture Plan	No	-	No	-	-
Comment:					
Climate Action Plan	No	-	No	-	-
Comment:					
Tourism Plan	No	-	No	-	-
Comment:					
Business Development Plan	No	-	No	-	-
Comment:					
Other	No	-	No	-	-
Comment:					
Response/Recovery Planning					
Comprehensive Emergency Management Plan (CEMP) /	Yes	Local	Yes	Yes	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 #.
Emergency Operations Plan (EOP)					
<i>Comment: Per the NJ Civilian Defense and Disaster Control Act (App.A:9_43.2) Counties and municipalities must have written Emergency Operations Plans to be reviewed every 2 years.</i>					
Threat & Hazard Identification & Risk Assessment (THIRA)	Yes	Local	No	Yes	No
<i>Comment: Local Fire Prevention has software to keep track of Hazard Identification risk.</i>					
Post-Disaster Recovery Plan	Yes	Local	No	No	No
<i>Comment:</i>					
Continuity of Operations Plan	Yes	Local	No	No	No
<i>Comment:</i>					
Public Health Plan	Yes	Local	No	No	No
Other	No	-	-	-	-
<i>Comment:</i>					

Table 9.8-4. Development and Permitting Capability

Criterion	Response
Does your jurisdiction issue development permits?	Yes, Engineering Department
- If no, who does? If yes, which department?	
Does your jurisdiction have the ability to track permits by hazard area?	Yes
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

ADMINISTRATIVE AND TECHNICAL CAPABILITY

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

Table 9.8-5. Administrative and Technical Capabilities

Staff/Personnel Resource	Available?	Department/Agency/Position
Administrative Capability		
Planning Board	Yes	Planning Board
Mitigation Planning Committee	No	-
Environmental Board / Commission	Yes	Environmental Commission
Open Space Board / Committee	Yes	Recreation Commission



Staff/Personnel Resource	Available?	Department/Agency/Position
Economic Development Commission / Committee	No	-
Warning Systems / Services (reverse 911, outdoor warning signals)	Yes	Reverse 911
Maintenance program to reduce risk	No	-
Mutual aid agreements	Yes	North Caldwell Fire; Pine Brook Fire; North Caldwell Police; West Essex First Aid
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	Yes	Engineering
Engineers or professionals trained in building or infrastructure construction practices	Yes	Engineering
Planners or engineers with an understanding of natural hazards	Yes	Engineering
Staff with training in benefit/cost analysis	No	None
Staff with training in green infrastructure	No	None
Staff with education/knowledge/training in low impact development	No	None
Surveyors	No	-
Stormwater engineer	Yes	Township Engineer
Personnel skilled or trained in GIS applications	Yes	Engineering
Scientist familiar with natural hazards in local area	No	-
Emergency manager	Yes	Office of Emergency Management - OEM Coordinator
Grant writers	Yes	Engineering; Fire
Resilience Officer	No	-
Watershed planner	No	-
Environmental specialist	No	-
Other	No	-

FISCAL CAPABILITY

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

Table 9.8-6. 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, local Sewer and Water Ordinance
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	No
Withhold Public Expenditures in Hazard-Prone Areas	No
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	No



Financial Resource	Accessible or Eligible to Use?
Clean Water Act 319 Grants (Nonpoint Source Pollution)	Yes
Other	No

EDUCATION AND OUTREACH CAPABILITY

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

Table 9.8-7. Education and Outreach Capabilities

Criterion	Response
Do you have a public information officer or communications office?	Yes
Do you have personnel skilled or trained in website development?	No
Do you have hazard mitigation information available on your website? • If yes, briefly describe.	Yes; Office of Emergency Management website hosts links to flood gauges and general flooding information, the National Flood Insurance Program, FEMA Map Service Center, and information on how to apply for disaster assistance.
Do you use social media for hazard mitigation education and outreach? • If yes, briefly describe.	Yes; Town website, Facebook, and Twitter
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, CRS program
Do you have any established warning systems for hazard events? • If yes, briefly describe.	Yes; Warning methods available to the Township include EBS (WPAT), Local Radio Stations, Shadow Traffic, Suburban Cablevision, and Swiftreach 911.

COMMUNITY CLASSIFICATIONS

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

Table 9.8-8. Community Classifications

Program	Participating?	Classification	Date Classified
Community Rating System	Yes	6	10/15/2019
Building Code Effectiveness Grading Schedule (BCEGS)	No	-	-
Public Protection (Fire ISO Protection Class)	No	-	-
Storm Ready Certification	No	-	-
Firewise Community Classification	No	-	-
Sustainable Jersey	Yes	none	12/14/2009



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 climate change and the jurisdiction’s rating.

Table 9.8-9. Adaptive Capacity of Climate Change

Hazard	Adaptive Capacity (Capabilities) - High/Medium/Low
Coastal Erosion and Sea Level Rise	Low
Coastal Storms (<i>hurricanes/tropical storms, nor'easters, coastal erosion, and storm surge</i>)	Low
Drought	Medium
Earthquake	Low
Extreme Temperature	Medium
Flood (<i>riverine / flash flood, SLR</i>)	High
Geological Hazards (<i>landslides and subsidence/sinkholes</i>)	Low
Severe Weather (<i>high wind, tornado, TSTM, and hail</i>)	High
Severe Winter Weather (<i>heavy snow, blizzards, and ice storms</i>)	High
Wildfire	Medium
Civil Disorder	Low
Cyber Attack	Low
Disease Outbreak	Low
Economic Collapse	Low
Hazardous Substances	Medium
Utility Interruption	High
Terrorism	Low
Transportation Failure	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 9.8-10. National Flood Insurance Program Compliance

Criterion	Response
What local department is responsible for floodplain management?	Construction Official
Who is your floodplain administrator? (name, department/position)	Construction Official
Are any certified floodplain managers on staff in your jurisdiction?	Yes
What is the date that your flood damage prevention ordinance was last amended?	Adopted 1975
Does your floodplain management program meet or exceed minimum requirements?	Exceeds; Fairfield is Class 6 in CRS and completes all requirements to



Criterion	Response
<ul style="list-style-type: none"> If exceeds, in what ways? 	maintain that level. CRS Class 6; Fairfield collects elevation certificates and reports on all substantial development in the floodplain; Fairfield maintains log of any property owner that comes in for mitigation/flood related inquiries.
When was the most recent Community Assistance Visit or Community Assistance Contact?	December 2017-January 2018
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? <ul style="list-style-type: none"> If so, state what they are. 	No
Are any RiskMAP projects currently underway in your jurisdiction? <ul style="list-style-type: none"> If so, state what they are. 	No; Was included in the 2018 Hackensack-Passaic Watershed, 02030103 Flood Risk Report
Do your flood hazard maps adequately address the flood risk within your jurisdiction? <ul style="list-style-type: none"> If no, state why. 	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program?	No
<input type="checkbox"/> If so, what type of assistance/training is needed?	-
Does your jurisdiction participate in the Community Rating System (CRS)? <ul style="list-style-type: none"> If yes, is your jurisdiction interested in improving its CRS Classification? If no, is your jurisdiction interested in joining the CRS program? 	Yes, Class 6. Not interested in improving current classification.
How many flood insurance policies are in force in your jurisdiction?* <ul style="list-style-type: none"> What is the insurance in force? What is the premium in force? 	Flood insurance policies in force: 1,016 Insurance in force: \$320,521,700 Premium in force: \$2,204,559
How many total loss claims have been filed in your jurisdiction?* <ul style="list-style-type: none"> How many claims are still open or were closed without payment? What were the total payments for losses? 	Total loss claims: 1,948 Claims still open or closed without payment: 256 Total payments for losses: \$64,662,589
Do you maintain a list of properties that have been damaged by flooding?	Yes
Do you maintain a list of property owners interested in flood mitigation?	Yes - currently no homeowners interested. Engineering maintains log on anyone that comes in for mitigation/flood purposes.

*According to FEMA statistics as of 03/31/2019

ADDITIONAL AREAS OF EXISTING INTEGRATION

- Planning Board:** The Fairfield Township Planning Board serves two primary functions:
 - To make a master plan of growth and development, natural resources, transportation, housing, etc. identifying specific geographic zones and delineating the permitted types of development in each zone consistent with New Jersey State statutes. This includes drafting, hold hearings, and make recommendations to the Township Council on the adoption of Zoning Ordinances
 - The Planning Board hears development applications for permitted uses and makes recommendations regarding the applications to ensure both state law and community standards are met.
- Zoning Board of Adjustment:** The purpose of the Zoning Board of Adjustment is to allow special exceptions to the Zoning Ordinance. These exceptions are allowed where the literal enforcement of the provisions of the Zoning Ordinance does not permit any reasonable use of the property.



- Building Department: The purposes of the Building Department are:
 - To encourage innovation and economy in construction and to provide requirements for construction and construction materials consistent with nationally recognized standards.
 - To permit to the fullest extent feasible to use of modern technical methods, devices and improvements, including premanufactured systems, consistent with reasonable requirements for the health, safety, and welfare of occupants or users of buildings and structures.
 - To eliminate restrictive, obsolete, conflicting and unnecessary construction regulations that tend to unnecessarily increase construction costs or retard the use of new materials, products or methods of construction, or provide preferential treatment to types or classes of materials or products or methods of construction.
- **Emergency Management:** The Fairfield Office of Emergency Management page on the municipal website (<http://www.fairfieldnj.org/OEM-main.html>) hosts information on flood gauges, New Jersey severe storms and flooding, the NFIP, disaster news, and information on how to apply for assistance.
- **Engineering Department:** The Fairfield Engineering Department has several responsibilities including:
 - Planning, design, implementation and inspection of various public works projects, i.e., road improvements, water and sewer improvements and drainage improvements.
 - Flood plain determinators - The department interprets the flood plain hazard maps for residents and other departments, to determine if properties are located within the special flood hazard area.
 - Receives, reviews and processes Planning Board and Board of Adjustment applications.
 - Issue permits for sidewalk repairs, curb repairs, grading permits, driveway expansions, tree removal and road openings
 - The Engineering Department also has various mapping available for review including street maps, flood maps, and topographic maps.
- **Health Department:** The Township of Fairfield contracts with the West Caldwell Health Department for public and environmental health services.
- **Public Works:** Road Division responsibilities include the maintenance of all township roadways, signs, right of ways, recycling, grass and leaf pickup, sanitation, storm drains and snow removal. Sewer and Water Division responsibilities include repairs and maintenance of sanitary sewers and lift stations, water mains and hydrants, service connections, meter reading, water sampling and pool fillings. Fleet Maintenance responsibilities include repair and maintenance of police cars, fire trucks, engineering and administrative vehicles, all Department of Public Works trucks and heavy equipment. Building and Ground Division responsibilities include maintenance of municipal building, Police Headquarters, recreation offices and Firehouses.
- **Zoning Department:** The Fairfield Zoning Department is responsible for enforcing the provisions of Chapter XLV of the Township Code. Listed below are typical functions of the Zoning Office:
 - Discover and ascertain the existence of any zoning violations.
 - Investigate any alleged zoning violation.
 - Prosecute zoning violations in Municipal Court as provided by law.
 - Report to the Board of Adjustment and Planning Board with respect to Matters Before the Board when Required.



- Review building permits for zoning compliance.
 - Review, inspect and issue required zoning permits for residential and non-residential properties.
- **Sustainable Essex Alliance:** The Sustainable Essex Alliance (SEA) is a coalition of local municipal green teams and sustainability organizations working together to create solutions for local environments and economies. By operating as a single entity, the SEA has the opportunity to not only impact more environments, but also achieve more efficient results than we could alone. This helps to create the financial incentives needed to push sustainable actions such as reducing greenhouse gas emissions, using green energy solutions, and cutting waste while simultaneously increasing awareness and education in our communities. The Alliance is currently pursuing a renewable community energy aggregation program to provide residents of Essex County with the option of 100% green energy. The Alliance has also initiated the NJ Home Performance with ENERGYSTAR™ Program and Comfort Partners Program that offer rebates and financing for energy efficiency upgrades, insulation, and helpful assessments to reduce bills and environmental impact.
- **Building Department:** The Township of Fairfield Building Department mission is:
 - To encourage innovation and economy in construction and to provide requirements for construction and construction materials consistent with nationally recognized standards;
 - To permit to the fullest extent feasible to use of modern technical methods, devices and improvements, including premanufactured systems, consistent with reasonable requirements for the health, safety, and welfare of occupants or users of buildings and structures; and
 - To eliminate restrictive, obsolete, conflicting and unnecessary construction regulations that tend to unnecessarily increase construction costs or retard the use of new materials, products or methods of construction, or provide preferential treatment to types or classes of materials or products or methods of construction.

9.8.5 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 4.4 (Hazard Profiles) and includes a chronology of events that affected Essex County and its jurisdictions. The Township of Fairfield'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 9.8-11 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 9.8-11. Hazard Event History

Date(s) of Event	Event Type (disaster declaration if applicable)	Hudson County Designated?	Summary of Event	Summary of Local Damages and Losses
July 8, 2014	Thunderstorm Wind	N/A	A line of strong with embedded severe thunderstorms formed along a slow moving cold front as	Multiple trees were reported down around town in Fairfield. \$2K in property damages were reported.



Date(s) of Event	Event Type (disaster declaration if applicable)	Hudson County Designated?	Summary of Event	Summary of Local Damages and Losses
			it progressed through the Northeast.	
July 1, 2016	Thunderstorm Wind	N/A	A passing cold front triggered a few severe thunderstorms over northeast New Jersey.	There were multiple reports of trees and power lines down throughout Fairfield. \$3K in property damages were reported.
January 22-23, 2016	Winter Storm, Blizzard (DR-4264)	Yes	Low pressure moving across the deep South on Thursday January 21st and Friday January 22nd intensified and moved off the Mid Atlantic coast on Saturday January 23rd, bringing heavy snow and strong winds to northeast New Jersey, and blizzard conditions to the urban corridor and some nearby areas.	Snow removal operations and protective measures were taken to reduce the risk to the public.

9.8.6 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 9.8-12 summarizes the Township of Fairfield 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 Fairfield.

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 9.8-12. 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 Hazard Area (CEHA):	CEHA:	0	CEHA:	0	CEHA:	\$0	High
		SLR +1ft:	0	SLR +1ft:	0	SLR +1ft:	\$0	
	Sea Level Rise: NOAA +1ft and +3ft rise	SLR +3ft:	0	SLR +3ft:	0	SLR +3ft:	\$0	
Coastal Storm	100- and 500- MRP Hurricane Wind	Category 1:	92	Category 1:	19	100-year Wind Loss:	\$3,381,110	High
		Category 2:	951	Category 2:	197			
	Category 1 through Category 4 SLOSH	Category 3:	2,229	Category 3:	462	500-year Wind Loss:	\$16,934,187	
		Category 4:	2,595	Category 4:	533			
Drought	Drought event	Majority of the County is serviced by water suppliers with surface water sources.		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:	2,368	NEHRP D&E:	504	100-year Loss:	\$0	High
		Liquefaction Class 4:	179	Liquefaction Class 4:	37	500-year Loss:	\$4,616,521	
						2,500-year Loss:	\$71,094,612	
Extreme Temperature	Extreme temperature event (heat or cold)	Over 65 Population:	4,600	Physical impacts due to extreme temperatures would be limited.		Loss of business function is possible due to unexpected repairs (i.e. pipes bursting) or utility interruptions.		Low
		Population Below Poverty Level:	3,515					
Flood	100- and 500-Year Mean Return Period Event	100-year	716	100-year	152	100-year Loss:	\$269,142,437	High
		500-year	1,606	500-year	545			
Geological		Class A:	0	Class A:	0	Class A:	0	Moderate



Hazard of Concern	Hazard/ Scenario(s) Evaluated	Population		Buildings		Economy (Loss)		Certainty Factor
	High Landslide Susceptibility Areas	Class B:	5	Class B:	1	Class B:	\$359,884	
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 population depends on the scale of the incident.		Entire building stock is exposed; The degree of impact depends on the scale of the incident.		The cost of snow and ice removal and repair of roads can impact local operating budgets.		Low
Wildfire	Wildfire Fuel Hazard areas (High, Very High, Extreme)	Wildfire:	0	Wildfire:	0	Wildfire:	\$0	Moderate
Civil Disorder	Civil disorder event	Population in the immediate vicinity will be impacted.		Buildings in the immediate vicinity will be most impacted.		Economic assets in the immediate vicinity will be most impacted.		Low
Cyber Attack	Cyber-attack event	The degree of impact to the population depends on the scale of the incident.		Damages due to a cyber attack may be limited.		The degree of damages depends on the scale of the incident. Loss of utilities/communication would have widespread economic impacts.		Low
Disease Outbreak	An outbreak of one of the diseases evaluated	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



Hazard of Concern	Hazard/ Scenario(s) Evaluated	Population	Buildings	Economy (Loss)	Certainty Factor
Economic Collapse	Recessions, Depressions, Interruption of normal economic conditions	The degree of impact to the population depends on the scale of the incident.	Damages due to economic collapse may be limited; property owners that cannot afford to maintain the structure may become abandoned/run down.	The degree of damages depends on the scale of the incident. Massive impacts due to loss of jobs, businesses, and tax revenue are possible.	Low
Hazardous Substances	Release of a hazardous substance whether fixed site or in-transit	Population impacted will depend on the type of material and scale of the incident. May include population within small radii of site.	The degree of damages to a building depends on the scale of the incident.	The degree of damages depends on the scale of the incident.	Low
Utility Interruption	Disruption of power 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 in the County	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



Hazard of Concern	Hazard/ Scenario(s) Evaluated	Population	Buildings	Economy (Loss)	Certainty Factor
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

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REPETITIVE FLOOD LOSSES

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

- Number of repetitive loss (RL) properties: 217
- Number of severe repetitive loss (SRL) properties: 55
- Number of RL/SRL properties that have been mitigated: 5

Note: The number of SRL properties excludes RL properties.

Policies and Claims from <https://bsa.nfipstat.fema.gov/reports/1011.htm> and <https://bsa.nfipstat.fema.gov/reports/1040.htm> as of 09/30/2018

RL and SRL as of 03/31/2019; SRL includes SRL properties that have been verified only (SRL_Indicator = V).

CRITICAL FACILITIES AND LIFELINES

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

Table 9.8-13. Potential Flood Losses to Critical Facilities and Lifelines

Name	Type	Exposure		Status of Mitigation
		1% Event	0.2% Event	
Essex County Airport	Airport	X	X	2020-Fairfield-008
Fairfield Volunteer Fire Department Station 2	Fire	X	X	2020-Fairfield-009
Medicare Of Fairfield	Health Care	X	X	2020-Fairfield-010
Fairfield Sewer Pump Station	Potable Pump Station	X	X	2020-Fairfield-011
Fairfield Sewer Pump Station	Potable Pump Station	X	X	2020-Fairfield-011
Fairfield Sewer Pump Station	Potable Pump Station	X	X	2020-Fairfield-011
Fairfield Sewer Pump Station	Potable Pump Station	X	X	2020-Fairfield-011
Adlai E. Stevenson Elementary School	School	X	X	2020-Fairfield-012
Banyan School	School	X	X	2020-Fairfield-012
Glenview Academy	School	X	X	2020-Fairfield-012
The Gramon School	School	X	X	2020-Fairfield-012
The Gramon School Fairfield	School	X	X	2020-Fairfield-012
Fairfield Delta Gas Station	Transportation	X	X	2020-Fairfield-013
Ralstons Sunoco Gas Station-Fairfield	Transportation	X	X	2020-Fairfield-013
Valero Gas Station-Fairfield	Transportation	X	X	2020-Fairfield-013

**Identified lifeline*



ADDITIONAL IDENTIFIED VULNERABILITIES

The jurisdiction has identified the following vulnerabilities within their community:

- Power lines townshipwide are all above ground and vulnerable to damage from tree fallings and wind damage, which would cause an interruption to service.
- Limited manpower and equipment breakdowns cause delays and complications to efficient storm cleanup.
- The following roads experience frequent flood inundation from the Passaic River after prolonged rainfalls along Horseneck Road between the Route 80 underpass and North Jersey Gun Club; Two Bridges Road; Camp Lane.
- Flash flooding during heavy rainfalls occurs along the following roadways:
 - Passaic Ave
 - Dwight Place
 - Washington and Lincoln near the Green Brook
- Airport located in the 1-percent annual chance event floodplain: Essex County Airport
- Medical facility located in the 1-percent annual chance event floodplain: Medicare of Fairfield
- Pump stations located in the 1-percent annual chance event floodplain: Madison Road Sewer Pump Station, Riveredge Drive Sewer Pump Station, Big Piece Road Sewer Pump Station, Ray Place Sewer Pump Station
- Schools located in the 1-percent annual chance event floodplain: Adlai E. Stevenson Elementary School, Banyan School, Glenview Academy, The Gramon School.
- Gas Stations located in the 1-percent annual chance event floodplain: Fairfield Delta Gas Station, Ralstons Sunoco Gas Station, Valero Gas Station.
- There are 217 Repetitive Loss Properties and 55 Severe Repetitive Loss Properties located in the township.
- As of September 2018, there are 1,016 active NFIP policies in the township, while there are 1,768 buildings in the floodplain. Some of these may be due to private insurance holders, but many owners may not have insurance.

HAZARD AREA EXTENT AND LOCATION

Hazard area extent and location maps were generated for the Township of Fairfield 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 Fairfield has significant exposure; Figures 9.8-1 and 9.8-2. These maps also display the location of the regulatory floodplain, as well as identified critical facilities, lifelines, and RL/SRL properties within the municipality

HAZARD RANKING

This section includes the community specific identification of the primary hazard concerns based on identified problems, impacts and the results of the risk assessment as presented in Section 4 of the plan. The ranking process involves an assessment of the likelihood of occurrence for each hazard; 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 hazards for the Township of Fairfield. 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 Fairfield 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:

- The Township changed the hazard ranking for earthquake from medium to high.
- The Township changed the hazard ranking for wildfire from low to medium.
- The Township changed the hazard ranking for cyber attack from low to medium.
- The Township changed the hazard ranking for hazardous substances from low to medium.

Table 9.8-14. Township of Fairfield Hazard Ranking

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

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

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

9.8.7 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. Appendix X (Name of Appendix) provides all attributes associated with the 2015 HMP mitigation strategy.



Table 9.8-15. Status of Previous HMP Mitigation Actions

2015 Action Number Action Description	Responsible Party	Status (In Progress, No Progress, Ongoing Capability, or Completed)	Include in the 2020 HMP Update?	
			Check if Yes	Enter 2020 HMP Action #
Fairfield-1: Acquire thirteen (13) properties - all are SRL or RL identified properties located on Camp Lane, Riveredge Dr, Horseneck Rd, and Park Ave	Engineering Department	No Progress	X	
Fairfield-2: Fairfield EOC retrofit/hurricane shutters and roof replacement	Engineering Department	No Progress, discontinue. No longer a priority due to municipal complex renovations		
Fairfield-3: Obtain backup power to ensure continuity of operations. Locations identified at this time: 1. Fairfield critical facilities emergency generators 2. Fairfield municipal building generator 3. Fairfield library generator	Engineering Department	Complete		
Fairfield-4: Support mitigation of vulnerable structures via retrofit (e.g. elevation, flood-proofing) or acquisition/relocation to protect structures from future damage with repetitive and severe repetitive loss properties as a priority when applicable.	Engineering Department	No progress. Discontinued to develop actions for specific structures		
Fairfield-5: The Township will establish a community resilience committee/advisor.	Township	No Progress	X	
Fairfield-6: The Township will work with the local school district and assist with identifying joint mitigation projects.	Township	Complete. Schools did not implement due to costs.		

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 Fairfield 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 Fairfield 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 9.8 16 summarizes the comprehensive-range of specific mitigation initiatives the Township of Fairfield 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 9.8-17 provides a summary of the prioritization of all proposed mitigation initiatives for this HMP update and Table 9.8-18 summarizes the actions by type across hazards of concern.

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Table 9.8-16. Proposed Hazard Mitigation Initiatives

Initiative Number	Mitigation Initiative Name	Description of the Problem	Description of the Solution	New or Existing Assets?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Cost	Timeline	Priority	Mitigation Category	CRS Category
2020-Fairfield-001	Buyout properties located on Camp Lane, Riveredge Dr, Horseneck Rd, and Park Ave	Properties are RL and SRL properties	Acquire thirteen (13) properties.	Existing	Flood	2	Engineering Department	FEMA HMA Grants (HMGP, FMA, PDM)	Properties removed from floodplain	\$3 Million	Within 5 years	High	SIP	PP
2020-Fairfield-002	Establish a community resilience committee/advisor.	The township lacks a community resilience committee/advisor.	The Township will establish a community resilience committee/advisor.	N/A	All hazards	4, 5	Township	Municipal funds	Position established	\$0	Within 1 year	Low	LPR, EAP	PI
2020-Fairfield-003	Mitigate flood-prone properties, including RL/SRL properties	Frequent flooding events have resulted in damages. These areas are residential, and these properties have been repetitively flooded as documented by paid NFIP claims including 217 RL and 55 SRL properties.	Conduct outreach to flood-prone property owners, including RL/SRL property owners and provide information on mitigation alternatives. After preferred mitigation measures are identified, collect	Existing	Flood, Severe Storm	2	Floodplain Administrator	FEMA HMGP and FMA, local cost share by residents	Eliminate flood damage to homes and residents, creates open space for the municipality increasing flood storage.	\$3 Million	3 years	High	SIP	PP



Initiative Number	Mitigation Initiative Name	Description of the Problem	Description of the Solution	New or Existing Assets?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Cost	Timeline	Priority	Mitigation Category	CRS Category
			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 areas that experience frequent flooding (high risk areas).											
2020-Fairfield-004	Power line mitigation	Power lines Townshipwide are all above ground and vulnerable to damage from tree fallings and wind damage, which	Conduct study to determine if specific areas have more occurrences of downed power lines than others, and work to bury power	Existing	Severe Storm, Severe Winter Storm, Utility Interruption	2	Engineering	Municipal budget, HMGP, CHIPS	Reduction in power outages and property damages	\$3 million per mile of buried line, \$5 for tree trimming	Within 1 year	High	SIP	PP



Initiative Number	Mitigation Initiative Name	Description of the Problem	Description of the Solution	New or Existing Assets?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Cost	Timeline	Priority	Mitigation Category	CRS Category
		would cause an interruption to service.	lines or focus tree trimming program on these areas.											
2020-Fairfield-005	Winter storm response improvements	Limited manpower and equipment breakdowns cause delays and complications to efficient storm cleanup.	Purchase new equipment and determine if hiring additional staff is possible. Enact mutual aid agreements with surrounding communities for winter storm cleanup	N/A	Winter Storms	5	DPW	Municipal budget	Increased storm response capabilities		Within 5 years	High	LPR	ES
2020-Fairfield-006	Drainage study for Horseneck Road, Two Bridges Road, and Camp Lane	The following roads experience frequent flood inundation from the Passaic River after prolonged rainfalls along Horseneck	Conduct a drainage study to determine if flooding is primarily caused from stormwater runoff or riverine cresting. Implement drainage	Existing	Flood, Severe Storm	4	Engineering	HMGP, BRIC, municipal budget	Reduction in flooding	TBD by study	Within 5 years	Medium	LPR, SIP	SP



Initiative Number	Mitigation Initiative Name	Description of the Problem	Description of the Solution	New or Existing Assets?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Cost	Timeline	Priority	Mitigation Category	CRS Category
		Road between the Route 80 underpass and North Jersey Gun Club; Two Bridges Road; Camp Lane.	solutions, including drainage basins and increased sewer capacity to carry excess stormwater away from these locations.											
2020-Fairfield-007	Drainage study for flash flooding prone roadways	Flash flooding during heavy rainfalls occurs along the following roadways: •Passaic Ave •Dwight Place •Washington and Lincoln near the Green Brook	Conduct a drainage study to determine cause of stormwater flooding. Implement drainage solutions, including drainage basins and increased sewer capacity to carry excess stormwater away from these locations. Additional options may be to	Existing	Flood, Severe Storm	2, 4	Engineering	HMGP, BRIC, municipal budget	Reduction in flash flooding	TBD by study	Within 5 years	Medium	LPR, SIP	SP



Initiative Number	Mitigation Initiative Name	Description of the Problem	Description of the Solution	New or Existing Assets?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Cost	Timeline	Priority	Mitigation Category	CRS Category
			perform frequent maintenance on the surrounding sewer systems to ensure they are functioning properly and free of debris and blockages.											
2020-Fairfield-008	Conduct outreach to Essex County Airport	Essex County Airport is located in the 1-percent floodplain	Educate property owner on flood risk and options for mitigation. Work with owner to develop applications for grant funding to help owner obtain funding for mitigation measures.	Existing	Flood	3, 4	Floodplain Administrator, property owner	Municipal budget	Reduction in flood exposure of medical facility	\$200	6 months	Medium	EAP	PI
2020-Fairfield-009	Flood study and mitigation of Volunteer Fire Department Station 2	Fairfield Volunteer Fire Department Station 2 is located in	Conduct study to determine if Volunteer Fire Department	Existing	Flood	2, 6	Engineering	BRIC, municipal budget,	Reduction in flood exposure to pump stations	\$15,000	2 years	High	SIP	PP



Initiative Number	Mitigation Initiative Name	Description of the Problem	Description of the Solution	New or Existing Assets?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Cost	Timeline	Priority	Mitigation Category	CRS Category
		the 1-percent floodplain	Station 2 is protected against impacts from flooding. If determined to be vulnerable, floodproof the structure to ensure the pump remains functional during an event.											
2020-Fairfield-010	Conduct outreach to Medicare of Fairfield	Medicare of Fairfield is located in the 1-percent floodplain.	Educate property owner on flood risk and options for mitigation. Work with owner to develop applications for grant funding to help owner obtain funding for mitigation measures.	Existing	Flood	3	Floodplain Administrator, property owner	Municipal budget	Reduction in flood exposure of medical facility	\$200	6 months	Medium	EAP	PI



Initiative Number	Mitigation Initiative Name	Description of the Problem	Description of the Solution	New or Existing Assets?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Cost	Timeline	Priority	Mitigation Category	CRS Category
2020-Fairfield-011	Flood study and mitigation of pump stations	Numerous pump stations are located in the 1-percent floodplain: Madison Road Sewer Pump Station, Riveredge Drive Sewer Pump Station, Big Piece Road Sewer Pump Station, Ray Place Sewer Pump Station	Conduct study to determine if pump stations are protected against impacts from flooding. If determined to be vulnerable, floodproof the structure to ensure the pump remains functional during an event.	Existing	Flood	2, 6	Engineering	BRIC, municipal budget	Reduction in flood exposure to pump stations	\$15,000 per pump station	2 years	High	SIP	PP
2020-Fairfield-012	Conduct outreach to school boards	Several schools are located in the 1-percent floodplain: Adlai E. Stevenson Elementary School, Banyan School, Glenview Academy,	The floodplain administrator will educate property owners on flood risk and options for mitigation. Work with owner to develop	Existing	Flood	3	Floodplain Administrator, school boards	Municipal budget	Reduction in flood exposure	\$200	6 months	Medium	EAP	PI



Initiative Number	Mitigation Initiative Name	Description of the Problem	Description of the Solution	New or Existing Assets?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Cost	Timeline	Priority	Mitigation Category	CRS Category
		The Gramon School	application s for grant funding to help owner obtain funding for mitigation measures.											
2020-Fairfield-013	Conduct outreach to flood prone gas stations	Several gas stations are located in the 1-percent floodplain: Fairfield Delta Gas Station, Ralstons Sunoco Gas Station, Valero Gas Station	The floodplain administrat or will educate property owners on flood risk and options for mitigation. Work with owner to develop application s for grant funding to help owner obtain funding for mitigation measures.	Existing	Flood	3	<u>Floodplain Administrato</u> r, private property owners	Municipal budget	Reduction in flood exposure	\$200	6 months	Medium	EAP	PI

Notes:

Acronyms and Abbreviations:

CAV Community Assistance Visit
 CRS Community Rating System
 DPW Department of Public Works
 FEMA Federal Emergency Management Agency

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.



FPA Floodplain Administrator
HMA Hazard Mitigation Assistance
N/A Not applicable
NFIP National Flood Insurance Program
OEM Office of Emergency Management

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 9.8-17. 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-Fairfield-001	Buyout properties located on Camp Lane, Riveredge Dr, Horseneck Rd, and Park Ave	1	1	1	1	1	1	0	1	0	0	1	0	1	1	10	High
2020-Fairfield-002	Establish a community resilience committee/advisor.	1	1	1	1	1	1	1	0	1	1	1	1	1	1	13	High
2020-Fairfield-003	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-Fairfield-004	Power line mitigation	0	1	1	1	1	1	0	0	1	1	0	0	1	1	9	High



Initiative Number	Mitigation Initiative Name	Life Safety	Property Protection	Cost Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2020-Fairfield-005	Winter storm response improvements	1	1	0	1	1	1	1	1	1	1	0	0	1	1	11	High
2020-Fairfield-006	Drainage study for Horseneck Road, Two Bridges Road, and Camp Lane	0	1	0	1	1	1	0	1	0	0	1	0	1	1	8	Medium
2020-Fairfield-007	Drainage study for flash flooding prone roadways	0	1	0	1	1	1	0	1	0	0	1	0	1	1	8	Medium
2020-Fairfield-008	Conduct outreach to Essex County Airport	1	1	1	1	1	0	1	1	1	1	0	1	1	1	12	High
2020-Fairfield-009	Flood study and mitigation of Volunteer Fire Department Station 2	0	1	1	1	1	1	-1	0	1	1	0	1	1	1	10	High
2020-Fairfield-010	Conduct outreach to Medicare of Fairfield	1	1	1	1	1	0	1	1	1	1	0	1	1	1	12	High
2020-Fairfield-011	Flood study and mitigation of pump stations	0	1	1	1	1	1	-1	0	1	1	0	1	1	1	10	High
2020-Fairfield-012	Conduct outreach to school boards	1	1	1	1	1	0	1	1	1	1	0	1	1	1	12	High
2020-Fairfield-013	Conduct outreach to flood prone gas stations	1	1	1	1	1	0	1	1	1	1	0	1	1	1	12	High

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



Table 9.8-18. Analysis of Mitigation Actions by Hazard and Category

Hazard	Prevention	Property Protection	Public Education and Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilient	Community Capacity Building
Coastal Erosion and Sea Level Rise			2020-Fairfield-002					
Coastal Storm			2020-Fairfield-002					
Drought			2020-Fairfield-002					
Earthquake			2020-Fairfield-002					
Extreme Temperature			2020-Fairfield-002					
Flood		2020-Fairfield-001, 2020-Fairfield-003, 2020-Fairfield-009, 2020-Fairfield-011	2020-Fairfield-002, 2020-Fairfield-008, 2020-Fairfield-010, 2020-Fairfield-012, 2020-Fairfield-013			2020-Fairfield-006, 2020-Fairfield-007		
Geological Hazards			2020-Fairfield-002					
Severe Weather		2020-Fairfield-003, 2020-Fairfield-004	2020-Fairfield-002			2020-Fairfield-006, 2020-Fairfield-007		
Winter Storm		2020-Fairfield-004	2020-Fairfield-002		2020-Fairfield-005			
Wildfire			2020-Fairfield-002					
Civil Disorder			2020-Fairfield-002					
Cyber Attack			2020-Fairfield-002					
Disease Outbreak			2020-Fairfield-002					
Economic Collapse			2020-Fairfield-002					
Hazardous Substances			2020-Fairfield-002					



Hazard	Prevention	Property Protection	Public Education and Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilient	Community Capacity Building
Utility Interruption		2020-Fairfield-004	2020-Fairfield-002					
Terrorism			2020-Fairfield-002					
Transportation Failure			2020-Fairfield-002					

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

9.8.8 Staff and Local Stakeholder Involvement in Annex Development

The Township of Fairfield 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. The following table summarizes who participated and in what capacity. . 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 9.8-19. Contributors to the Annex

Entity	Title	Method of Participation
William Smith	OEM Coordinator	Primary POC, provided update on the mitigation strategy, attended meetings, reviewed and provided comments on draft.
Steve Bury	Engineer	Alternate POC
Phil Cheff	Construction Official	NFIP FPA



Figure 9.8-1. Township of Fairfield Hazard Area Extent and Location Map

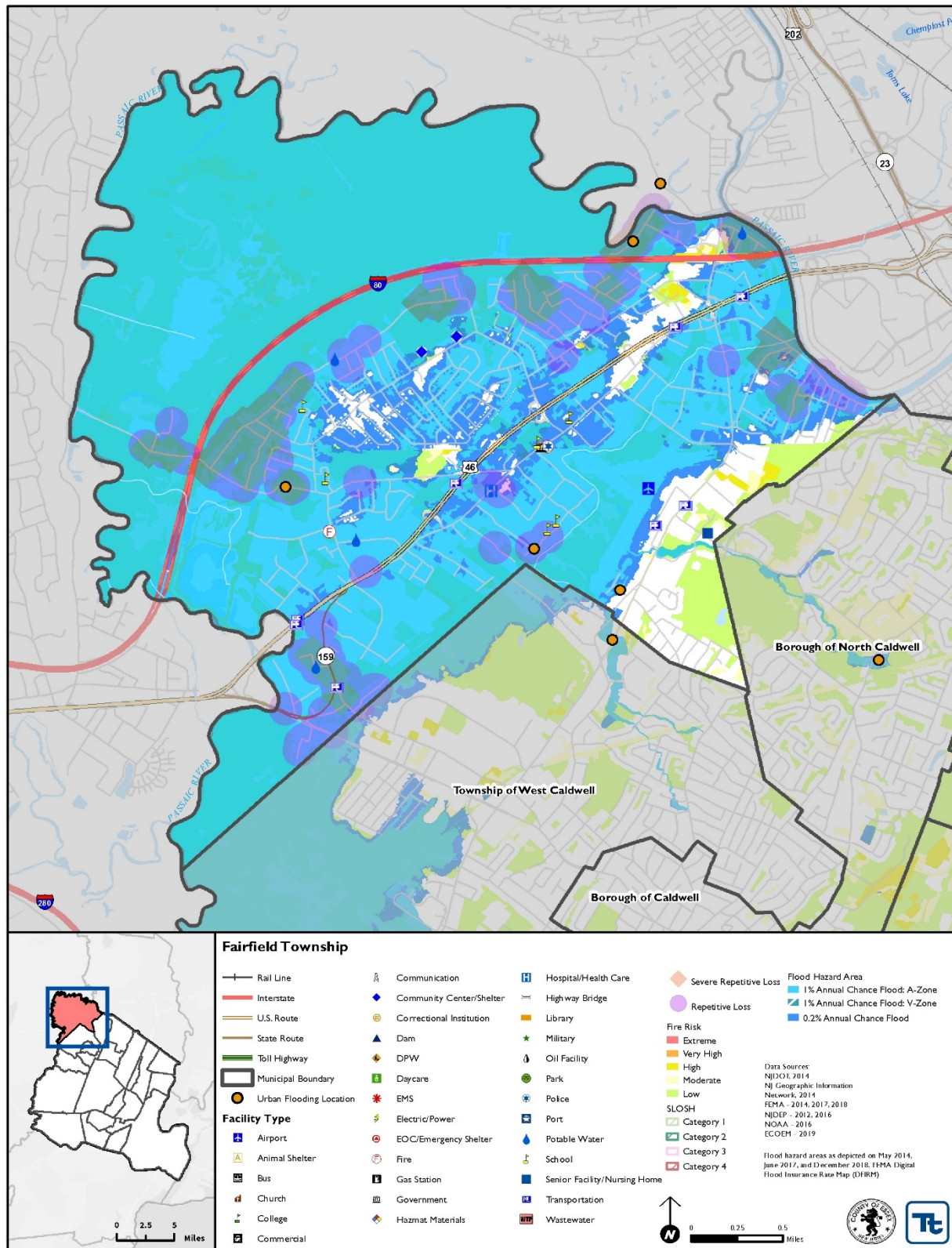
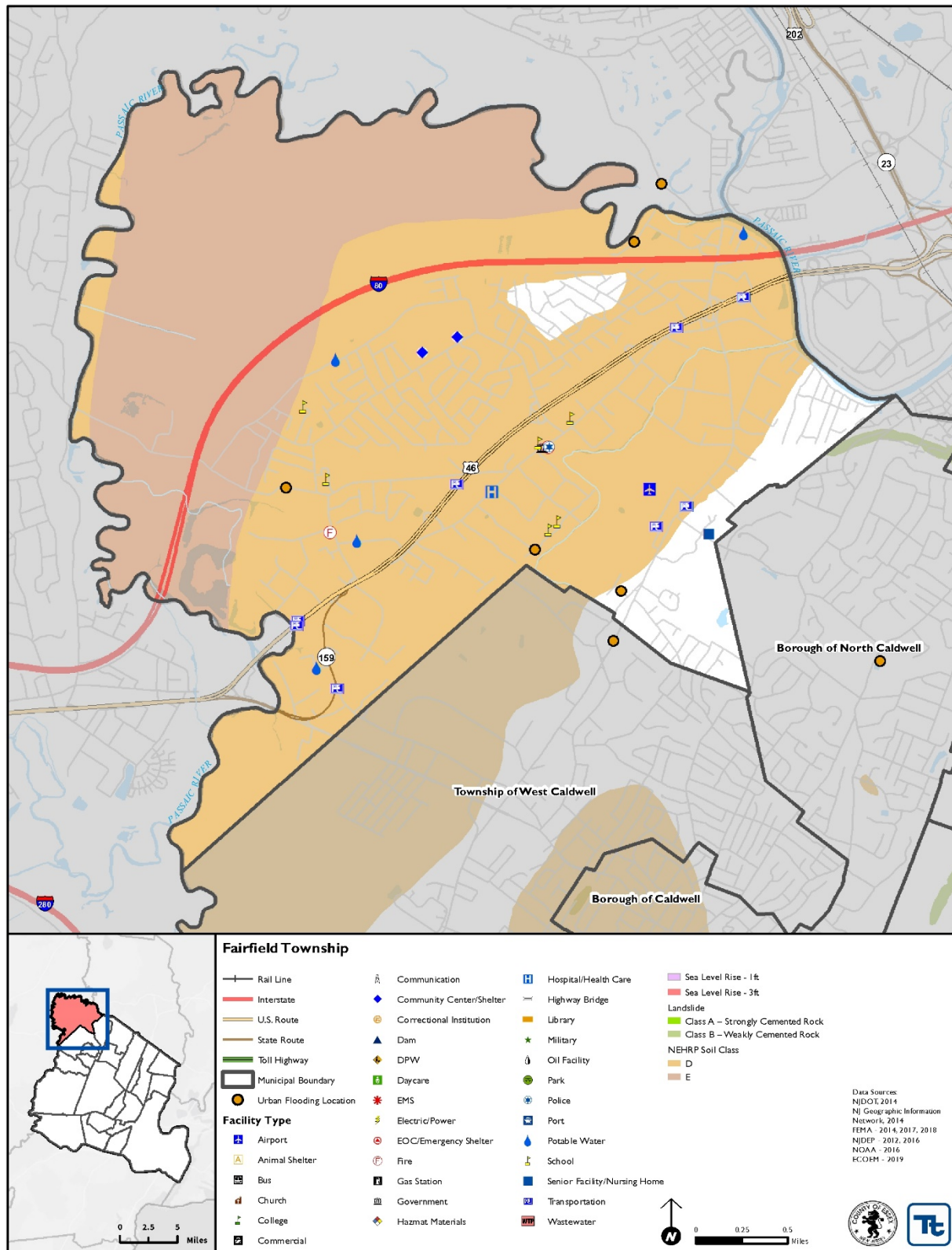




Figure 9.8-2. Township of Fairfield Hazard Area Extent and Location Map 2





Action Worksheet			
Project Name:	Buyout properties located on Camp Lane, Riveredge Dr, Horseneck Rd, and Park Ave		
Project Number:	2020-Fairfield-001		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood, Severe Storm		
Description of the Problem:	Frequent flooding events have resulted to thirteen properties located on Camp Lane, Riveredge Dr, Horseneck Rd, and Park Ave. These areas are residential, and these properties are repetitive loss and severe repetitive loss properties as documented by paid NFIP claims.		
Action or Project Intended for Implementation			
Description of the Solution:	Collect required property-owner information and develop a FEMA grant application and BCA to obtain funding to implement acquisition of 13 properties located on Camp Lane, Riveredge Dr, Horseneck Rd, and Park Ave.		
Is this project related to a Critical Facility or Lifeline?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Level of Protection:	1% annual chance flood event + freeboard <i>(in accordance with flood ordinance)</i>	Estimated Benefits (losses avoided):	Eliminates flood damage to homes and residents, creates open space for the municipality increasing flood storage.
Useful Life:	Acquisition: Lifetime	Goals Met:	2
Estimated Cost:	\$3Million	Mitigation Action Type:	Structure and Infrastructure Project
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	6-12 months
Estimated Time Required for Project Implementation:	Three years	Potential Funding Sources:	FEMA HMGP and FMA, local cost share by residents
Responsible Organization:	NFIP Floodplain Administrator, supported by homeowners	Local Planning Mechanisms to be Used in Implementation if any:	Hazard Mitigation
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Elevate homes	\$500,000	When this area floods, the entire area is impacted; elevating homes would not eliminate the problem and still lead to road closures and impassable roads
	Elevate roads	\$500,000	Elevated roadways would not protect the homes from flood damages
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			
Action Worksheet			
Project Name:	Buyout properties located on Camp Lane, Riveredge Dr, Horseneck Rd, and Park Ave		



Project Number:	2020-Fairfield-001	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Families moved out of high-risk flood areas.
Property Protection	1	Properties removed from high-risk flood areas.
Cost-Effectiveness	1	Cost-effective project
Technical	1	Technically feasible project
Political	1	
Legal	1	The Township has the legal authority to conduct the project.
Fiscal	0	Project will require grant funding.
Environmental	1	
Social	0	Project would remove families from Camp Lane, Riveredge Dr, Horseneck Rd, and Park Ave area of Town.
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	



Action Worksheet			
Project Name:	Mitigate flood-prone properties, including RL/SRL properties		
Project Number:	2020-Fairfield-003		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood, Severe Storm		
Description of the Problem:	<p>Frequent flooding events have resulted in damages in the following areas:</p> <ul style="list-style-type: none"> • Addison Drive • Beach Ave • Oak Street • Pier Lane • Sea Breeze Road • Sylvan Road • West Drive • Angeline Court • Butz Ave • Big Piece Road • Bloomfield Ave • Broadway • Camp Lane • Carl Drive • Club Road • Cole Road • Clinton Road • Carlos Drive • Courter Place • Dwight Place • Glenroy Road • Horseneck Road • Little Falls Road • Long Acres Road • Matt Drive • Pier Lane • Ray Place • Riveredge Drive • Ramkay Drive • Sylvan Road • Tuscany Terrace <p>These areas are residential, and these properties have been repetitively flooded as documented by paid NFIP claims.</p>		
Action or Project Intended for Implementation			
Description of the Solution:	Conduct outreach to flood-prone property owners, including RL/SRL property owners (217 RL, 55 SRL) 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 areas that experience frequent flooding (high risk areas).		
Is this project related to a Critical Facility or Lifeline?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Level of Protection:	1% annual chance flood event + freeboard (<i>in accordance with flood ordinance</i>)	Estimated Benefits (losses avoided):	Eliminates flood damage to homes and residents, creates open space for the municipality increasing flood storage.
Useful Life:	Acquisition: Lifetime Elevation: 30 years (residential)	Goals Met:	2
Estimated Cost:	\$3Million	Mitigation Action Type:	Structure and Infrastructure Project
Plan for Implementation			



Prioritization:	High	Desired Timeframe for Implementation:	6-12 months
Estimated Time Required for Project Implementation:	Three years	Potential Funding Sources:	FEMA HMGP and FMA, local cost share by residents
Responsible Organization:	NFIP Floodplain Administrator, supported by homeowners	Local Planning Mechanisms to be Used in Implementation if any:	Hazard Mitigation
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Elevate homes	\$500,000	When this area floods, the entire area is impacted; elevating homes would not eliminate the problem and still lead to road closures and impassable roads
	Elevate roads	\$500,000	Elevated roadways would not protect the homes from flood damages
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Mitigate flood-prone properties, including RL/SRL properties	
Project Number:	2020-Fairfield-003	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Families moved out of high-risk flood areas.
Property Protection	1	Properties removed from high-risk flood areas.
Cost-Effectiveness	1	Cost-effective project
Technical	1	Technically feasible project
Political	1	
Legal	1	The Township has the legal authority to conduct the project.
Fiscal	0	Project will require grant funding.
Environmental	1	
Social	0	Project would remove families from flood prone area of Township.
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	



Action Worksheet			
Project Name:	Power line mitigation		
Project Number:	2020-Fairfield-004		
Risk / Vulnerability			
Hazard(s) of Concern:	Severe Storm, Severe Winter Storm, Utility Interruption		
Description of the Problem:	Power lines Townshipwide are all above ground and vulnerable to damage from tree fallings and wind damage, which would cause an interruption to service.		
Action or Project Intended for Implementation			
Description of the Solution:	Conduct study to determine if specific areas have more occurrences of downed power lines than others, and work to bury power lines or focus tree trimming program on these areas.		
Is this project related to a Critical Facility or Lifeline?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Level of Protection:	N/A	Estimated Benefits (losses avoided):	Reduction in property damage, utility Interruption
Useful Life:	1 year for tree trimming, 50 years for burying lines	Goals Met:	2
Estimated Cost:	\$3 million per mile of buried line, \$5 for tree trimming	Mitigation Action Type:	Structure and Infrastructure Project
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	1 year
Estimated Time Required for Project Implementation:	1 year	Potential Funding Sources:	HMGP, PDM, CHIPS
Responsible Organization:	Engineering	Local Planning Mechanisms to be Used in Implementation if any:	None
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Ask residents to alert township to dangerous trees.	\$1,000	Reactive. Likely to miss most trees.
	Remove all trees along areas with powerlines and property	N/A	Not feasible/environmentally damaging
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Power line mitigation	
Project Number:	2020-Fairfield-004	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	
Property Protection	1	Project will protect utilities from falling tree damages
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	The Township has the legal authority to conduct the project
Fiscal	0	Project requires funding support
Environmental	0	
Social	1	
Administrative	1	
Multi-Hazard	0	Flood
Timeline	0	
Agency Champion	1	Engineering
Other Community Objectives	1	Restore natural floodplain function
Total	9	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Drainage study for Horseneck Road, Two Bridges Road, and Camp Lane		
Project Number:	2020-Fairfield-006		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood, Severe Storm		
Description of the Problem:	The following roads experience frequent flood inundation from the Passaic River after prolonged rainfalls along Horseneck Road between the Route 80 underpass and North Jersey Gun Club; Two Bridges Road; Camp Lane.		
Action or Project Intended for Implementation			
Description of the Solution:	Conduct a drainage study to determine if flooding is primarily caused from stormwater runoff or riverine cresting. Implement drainage solutions, including drainage basins and increased sewer capacity to carry excess stormwater away from these locations.		
Is this project related to a Critical Facility or Lifeline?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Level of Protection:	TBD	Estimated Benefits (losses avoided):	Reduction in flood risk in selected areas
Useful Life:	TBD by drainage study	Goals Met:	4
Estimated Cost:	TBD by study	Mitigation Action Type:	Local Plans and Regulations, Structure and Infrastructure Projects
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	Within 5 years
Estimated Time Required for Project Implementation:	5 years	Potential Funding Sources:	HMGP, BRIC, municipal budget
Responsible Organization:	Engineering	Local Planning Mechanisms to be Used in Implementation if any:	Hazard mitigation planning, stormwater planning
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Elevate roadways	\$500,000	Costly and may not solve problem
	Relocate roadways	N/A	Not possible
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Drainage study for Horseneck Road, Two Bridges Road, and Camp Lane	
Project Number:	2020-Fairfield-006	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	.
Property Protection	1	Reduction in flooding risk
Cost-Effectiveness	0	
Technical	1	Technically feasible project
Political	1	
Legal	1	The Township has the legal authority to conduct the project.
Fiscal	0	Project will require grant funding.
Environmental	1	
Social	0	Project would reduce flooding impacts..
Administrative	0	
Multi-Hazard	1	Flood, Severe Storm
Timeline	0	
Agency Champion	1	Engineering
Other Community Objectives	1	
Total	8	
Priority (High/Med/Low)	Medium	



Action Worksheet			
Project Name:	Drainage study for flash flooding prone roadways		
Project Number:	2020-Fairfield-007		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood, Severe Storm		
Description of the Problem:	Flash flooding during heavy rainfalls occurs along the following roadways: •Passaic Ave •Dwight Place •Washington and Lincoln near the Green Brook		
Action or Project Intended for Implementation			
Description of the Solution:	Conduct a drainage study to determine cause of stormwater flooding. Implement drainage solutions, including drainage basins and increased sewer capacity to carry excess stormwater away from these locations. Additional options may be to perform frequent maintenance on the surrounding sewer systems to ensure they are functioning properly and free of debris and blockages.		
Is this project related to a Critical Facility or Lifeline?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Level of Protection:	TBD	Estimated Benefits (losses avoided):	Reduction in flood risk in selected areas
Useful Life:	TBD by drainage study	Goals Met:	2, 4
Estimated Cost:	TBD by study	Mitigation Action Type:	Local Plans and Regulations, Structure and Infrastructure Projects
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	Within 5 years
Estimated Time Required for Project Implementation:	5 years	Potential Funding Sources:	HMGP, BRIC, municipal budget
Responsible Organization:	Engineering	Local Planning Mechanisms to be Used in Implementation if any:	Hazard mitigation planning, stormwater planning
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Elevate roadways	\$500,000	Costly and may not solve problem
	Relocate roadways	N/A	Not possible
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Drainage study for flash flooding prone roadways	
Project Number:	2020-Fairfield-007	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	.
Property Protection	1	Reduction in flooding risk
Cost-Effectiveness	0	
Technical	1	Technically feasible project
Political	1	
Legal	1	The Township has the legal authority to conduct the project.
Fiscal	0	Project will require grant funding.
Environmental	1	
Social	0	Project would reduce flooding impacts..
Administrative	0	
Multi-Hazard	1	Flood, Severe Storm
Timeline	0	
Agency Champion	1	Engineering
Other Community Objectives	1	
Total	8	
Priority (High/Med/Low)	Medium	



Action Worksheet			
Project Name:	Flood study and mitigation of Volunteer Fire Department Station 2		
Project Number:	2020-Fairfield-009		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood		
Description of the Problem:	Fairfield Volunteer Fire Department Station 2 is located in the 1-percent floodplain.		
Action or Project Intended for Implementation			
Description of the Solution:	Conduct study to determine if Volunteer Fire Department Station 2 is protected against impacts from flooding. If determined to be vulnerable, floodproof the structure to ensure the pump remains functional during an event.		
Is this project related to a Critical Facility or Lifeline?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Level of Protection:	1-percent plus 2 feet	Estimated Benefits (losses avoided):	Reduction in flood exposure to fire station
Useful Life:	50 years	Goals Met:	2, 6
Estimated Cost:	\$15,000	Mitigation Action Type:	Structure and Infrastructure Project
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	1 year
Estimated Time Required for Project Implementation:	2 year	Potential Funding Sources:	BRIC, municipal budget
Responsible Organization:	Engineering	Local Planning Mechanisms to be Used in Implementation if any:	Hazard mitigation
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Relocate fire station	N/A	Fire station needs to remain in current location to keep response times low
	Purchase deployable floodwall	\$15,000	Requires deployment
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Flood study and mitigation of Volunteer Fire Department Station 2	
Project Number:	2020-Fairfield-009	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	
Property Protection	1	Protects fire station
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	The township has the legal authority to complete the project
Fiscal	-1	Project requires funding support
Environmental	0	
Social	1	
Administrative	1	
Multi-Hazard	0	Flood
Timeline	1	2 years
Agency Champion	1	Engineering
Other Community Objectives	1	Protection of critical facilities
Total	10	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Flood study and mitigation of pump stations		
Project Number:	2020-Fairfield-011		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood		
Description of the Problem:	Numerous pump stations are located in the 1-percent floodplain: Madison Road Sewer Pump Station, Riveredge Drive Sewer Pump Station, Big Piece Road Sewer Pump Station, Ray Place Sewer Pump Station		
Action or Project Intended for Implementation			
Description of the Solution:	Conduct study to determine if pump stations are protected against impacts from flooding. If determined to be vulnerable, floodproof the structure to ensure the pump remains functional during an event.		
Is this project related to a Critical Facility or Lifeline?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Level of Protection:	1-percent plus 2 feet	Estimated Benefits (losses avoided):	Reduction in flood exposure to pump stations
Useful Life:	50 years	Goals Met:	2, 6
Estimated Cost:	\$15,000 per pump station	Mitigation Action Type:	Structure and Infrastructure Project
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	1 year
Estimated Time Required for Project Implementation:	2 year	Potential Funding Sources:	BRIC, municipal budget
Responsible Organization:	Engineering	Local Planning Mechanisms to be Used in Implementation if any:	Hazard mitigation
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Relocate pump stations	N/A	Pump stations need to remain in current locations
	Purchase deployable floodwall	\$15,000	Requires deployment
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			

Action Worksheet		
Project Name:	Flood study and mitigation of pump stations	
Project Number:	2020-Fairfield-011	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	
Property Protection	1	Protects pump stations
Cost-Effectiveness	1	



Technical	1	
Political	1	
Legal	1	The township has the legal authority to complete the project
Fiscal	-1	Project requires funding support
Environmental	0	
Social	1	
Administrative	1	
Multi-Hazard	0	Flood
Timeline	1	2 years
Agency Champion	1	Engineering
Other Community Objectives	1	Protection of critical facilities
Total	10	
Priority (High/Med/Low)	High	