



9.11 Township of Delran

This section presents the jurisdictional annex for the Township of Delran.

9.11.1 Hazard Mitigation Plan Point of Contact

The following individuals have been identified as the hazard mitigation plan's primary and alternate points of contact.

Primary Point of Contact	Alternate Point of Contact
Walter Bauer, EMC 900 Chester Avenue, Delran, NJ 08075 609.352.4633 walt_bauer@hotmail.com	Joseph Cunningham, Deputy Fire Chief 900 Chester Avenue, Delran, NJ 08075 609.352.4735 joseph.cunningham@delranfire.org

9.11.2 Municipal Profile

The Township of Delran was incorporated in 1880 from portions of Cinnaminson Township. In 1895, portions of Delran were taken to create Riverside Township. The name Delran is a contraction of the names of the two streams on which the Township is located: the Delaware and the Rancocas.

The Township is organized under the Optional Municipal Charter Law as a Mayor-Council form of government conducted every two years. The governing body consists of five members with three elected to represent their wards. The terms are four-year staggered terms. The Mayor and the remaining two members of the governing body are elected at large for four-year terms. Daily operations are entrusted to the Business Administrator, appointed by the Mayor with advice and consent of Council.

The Township is located in northwestern Burlington County and bordered to the north by the Townships of Riverside and Delanco and the State of Pennsylvania, to the south by the Township of Moorestown, to the east by the Township of Willingboro and to the west by the Township of Cinnaminson. Additionally, the Delaware River forms the northern border of the Township. Delran has a total area of 7.2 square miles, of which 6.5 square miles is land and 0.6 miles is water. There are several unincorporated communities found within the Township: Bridgeboro, Cambridge, Chesterville, Fairview, Milltown and Riverside Park. Route 130 runs through Delran, and serves as the Township's principle artery. According to the 2010 Census, the community's population was 16,896.

Growth/Development Trends

The following table summarizes recent residential/commercial development since 2013 to present and any known or anticipated major residential/commercial development and major infrastructure development that has been identified in the next five years within the municipality. Refer to the map in 9.11.8 of this annex which illustrates the hazard areas along with the location of potential new development.

Table 9.11-1. Growth and Development

Property or Development Name	Type (e.g. Res., Comm.)	# of Units / Structures	Address	Block / Lot	Known Hazard Zone(s)	Description/Status of Development
Recent Development from 2013 to present						
Millers Run	Res	28	Miller Run	118.18 / 5	Wildfire: High	finished
Orchard Farms at Delran	Res	45	Peach Tree Ct. Pear Tree Ct.	4 / 117	Could not locate.	under construction



Property or Development Name	Type (e.g. Res., Comm.)	# of Units / Structures	Address	Block / Lot	Known Hazard Zone(s)	Description/Status of Development
Simon and Schuster	Comm	200,000 Sq Ft Warehouse	Front & Chester	10 / 2	SLOSH: Category 4	Finished
Known or Anticipated Development in the Next Five (5) Years						
Timber Ridge	Res	108	Unknown	116 / 8	Flood: 1% Event: A-Zone; Wildfire: High	approved
Stellwag Farm	Res	82	Unknown	23 / 28.9	Could not locate.	approved
LIDL Grocery Store	Comm	1	1223 Fairview St.	65 / 13.01	May have vehicle fluid contamination. The site could not be located so additional hazards have not been identified.	approved
Next to Home Depot	Comm	1	8015 Rt. 130 S.	65 / 18.01	Could not locate.	undeveloped
Soft & Mini Golf (vacant)	Comm / Res	Unknown	2901 Rt. 130 S.	9 / 46	None	undeveloped
Hunters Glen Apartments	Res	75	3001 Rt. 130 S.	9 / 43 & 44	Could not locate.	approved
Former Automobile Salvage Yard	Res	Unknown	115 Mulberry St.	125 / 24	Flood: 0.2% Event; May have vehicle fluid contamination	undeveloped
The Foundry	Res	Unknown	unknown	125 / 27	Flood: 1% Event: A-Zone; Wildfire: High; SLOSH: Category 4; Sea-Level Rise: 2 ft. SLR Super Fund Site	undeveloped

* Only location-specific hazard zones or vulnerabilities identified.

9.11.3 Natural Hazard Event History Specific to the Municipality

Burlington County has a history of natural and non-natural hazard events as detailed in Volume I, Section 5.0 of this plan. A summary of historical events is provided in each of the hazard profiles and includes a chronology of events that have affected the County and its municipalities. For the purpose of this plan update, events that have occurred in the County from 2013 to present were summarized to indicate the range and impact of hazard events in the community. Information regarding specific damages is included, if available, based on reference material or local sources. This information is presented in the table below. For details of these and additional events, refer to Volume I, Section 5.0 of this plan.

Table 9.11-2. Hazard Event History

Dates of Event	Event Type (Disaster Declaration if applicable)	Burlington County Designated?	Summary of Damages/Losses
April 30-May 1, 2014	Heavy Rain and Flooding	No	Roads were closed in the Riverside Park neighborhood due to flooding. Many homes experienced basement flooding from this



Dates of Event	Event Type (Disaster Declaration if applicable)	Burlington County Designated?	Summary of Damages/Losses
			event (41, 71, 75, 79, 80, 81 Stewart Ave.). The fire department assisted with basement pump outs.
June 23, 2015	Severe Storm (DR-4231)	Yes	In the Township, roads were closed due to downed wires. Other costs to the Township included debris removal (less than \$3,000). The fire department responded to numerous downed wires and provided mutual aid to other municipalities.
January 22-24, 2016	Severe Winter Storm (DR-4264)	Yes	The Township requested Public Assistance from FEMA and had costs for snow removal (\$77,294.78). P.O. borough one unit in Overtime.

Notes:

FEMA Federal Emergency Management Agency

DR Major Disaster Declaration (FEMA)

9.11.4 Hazard Vulnerabilities and Ranking

The hazard profiles in Section 5.0 of this plan have detailed information regarding each plan participant's vulnerability to the identified hazards. The following summarizes the hazard vulnerabilities and their ranking in the Township of Delran. For additional vulnerability information relevant to this jurisdiction, refer to Section 5.0.

Hazard Risk/Vulnerability Risk Ranking

The table below summarizes the hazard risk/vulnerability rankings of potential hazards for the Township of Delran. During the review of the hazard/vulnerability risk ranking, the Township indicated the following:

- Flood was changed from a low hazard to a medium hazard.

Table 9.11-3. Hazard Risk/Vulnerability Risk Ranking

Hazard type	Estimate of Potential Dollar Losses to Structures Vulnerable to the Hazard ^{a, c}	Probability of Occurrence	Risk Ranking Score (Probability x Impact)	Hazard Ranking ^b
Coastal Erosion	RCV Exposed to CE Hazard Area: \$30,140,493	Occasional	12	Low
Drought	Damage estimate not available.	Frequent	30	Medium
Earthquake	100-Year GBS: \$0 500-Year GBS: \$2,951,059 2,500-Year GBS: \$43,245,088	Occasional	28	Medium
Flood*	1% Annual Chance: \$181,464,342	Frequent	18	Medium
Landslide	RCV Exposed to Landslide Hazard Area \$4,276,293,097	Occasional	36	High
Severe Storm	100-year MRP: \$3,375,285 500-year MRP: \$26,921,484 Annualized: \$156,070	Frequent	48	High
Severe Winter Weather	1% GBS: \$32,171,208 5% GBS: \$160,856,039	Frequent	51	High
Wildfire	Estimated Value in the Extreme, Very High, and High Hazard Areas: \$13,364,332	Occasional	12	Low



Notes:

- a. Building damage ratio estimates based on FEMA 386-2 (August 2001)
 - b. The valuation of general building stock and loss estimates was based on custom inventory for the municipality.
High = Total hazard priority risk ranking score of 31 and above
Medium = Total hazard priority risk ranking of 20-30+
Low = Total hazard risk ranking below 20
 - c. Loss estimates for the severe storm and severe winter storm hazards are structural values only and do not include the value of contents.
 - d. Loss estimates for the flood and earthquake hazards represent both structure and contents.
 - e. The HAZUS-MH earthquake model results are reported by Census Tract.
- * The Township of Delran changed the risk ranking for flood from low to medium

National Flood Insurance Program (NFIP) Summary

The following table summarizes the NFIP statistics for the Township of Delran.

Table 9.11-4. NFIP Summary

Municipality	# Policies (1)	# Claims (Losses) (1)	Total Loss Payments (2)	# Rep. Loss Prop. (1)	# Severe Rep. Loss Prop. (1)	# Policies in 100- year Boundary (3)
Township of Delran	114	99	\$690,575.82	10	0	11

Source: FEMA Region 2 2017, 2018

(1) Repetitive loss and severe repetitive loss statistics provided by FEMA Region 2 and are current as of 10/31/2017. Policy and claims statistics current as of 9/30/2018
Please note the total number of repetitive loss properties does not include the severe repetitive loss properties. The number of claims represents claims closed by 9/30/2018.

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

(3) The policies inside and outside of the flood zones are based on the addresses geocoded from the FEMA Region 2 policy file – 10/31/2017.

Notes: FEMA noted that where there is more than one entry for a property, there may be more than one policy in force or more than one GIS possibility.

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

Critical Facilities

The table below presents Hazards United States (HAZUS) – Multi-Hazards (MH) estimates of the damage and loss of use to critical facilities in the community as a result of a 1-percent annual chance flood event.

Table 9.11-5. Potential Flood Losses to Critical Facilities

Name	Type	Exposure		Potential Loss from 1% Flood Event	
		1% Event	0.2% Event	Percent Structure Damage	Percent Content Damage
Delran Sewerage Auth - Delran Sewer Plant	Chemical	X	X	-	-
Delran Sewerage Authority	Wastewater Treatment	X	X	-	-

Source: FEMA 2017, Burlington County

Note: - = Damages not calculated by HAZUS-MH v4.0

Other Vulnerabilities Identified

The municipality has identified the following vulnerabilities within their community:

- None identified



9.11.5 Capability Assessment

This section identifies the following capabilities of the local jurisdiction:

- Planning and regulatory capability
- Administrative and technical capability
- Fiscal capability
- Community classification
- National Flood Insurance Program
- Integration of mitigation planning into existing and future planning mechanisms

Planning and Regulatory Capability

The table below summarizes the regulatory tools that are available to the Township of Delran.

Table 9.11-6. Planning and Regulatory Tools

Tool / Program (code, ordinance, plan)	Do you have this? (Yes/No) If Yes, date of adoption or update	Authority (local, county, state, federal)	Dept. /Agency Responsible	Code Citation and Comments (Code Chapter, name of plan, explanation of authority, etc.)
Planning Capability				
Master Plan	Yes	Local	Town Council	Master Plan (2009)
Capital Improvements Plan	Yes	Local	Town Council	Township Budget
Floodplain Management / Basin Plan	Yes	Local	Town Council	Twp. Ordinances, Chapter 167
Stormwater Management Plan	Yes	Local and State	Town Council	Twp. Ordinances, Chapter 303
Stormwater Pollution Prevention Plan	Yes	Local and State	Town Council	-
Open Space Plan	Yes	Local	Town Council & R.A.C.	Part of Master Plan
Stream Corridor Management Plan	No	-	-	-
Watershed Management or Protection Plan	No	-	-	-
Economic Development Plan	No	-	-	-
Comprehensive Emergency Management Plan	Yes	Local	Emergency Management	Emergency Management Plan
Emergency Operation Plan	Yes	Local	Emergency Management	Emergency Management Plan
Post-Disaster Recovery Plan	No	Local	Emergency Management	Emergency Management Plan
Transportation Plan	Yes	Local	Emergency Management	Emergency Management Plan
Strategic Recovery Planning Report	No	Local	Emergency Management	-
Other Plans:	Yes	Local	DVRPC	Delran Township Coastal Vulnerability Assessment Report 2017



Tool / Program (code, ordinance, plan)	Do you have this? (Yes/No) If Yes, date of adoption or update	Authority (local, county, state, federal)	Dept. /Agency Responsible	Code Citation and Comments (Code Chapter, name of plan, explanation of authority, etc.)
Regulatory Capability				
Building Code	Yes	State & Local	Community Development	State Uniform Construction Code Act (N.J.S. 52:27D-119 et seq.)
Zoning Ordinance	Yes	Local	Town Council	Twp. Ordinances – Chapter 335
Subdivision Ordinance	Yes	Local	Town Council	Twp. Ordinances – Chapter 335
NFIP Flood Damage Prevention Ordinance	Yes	Federal, State, Local	Town Council	Twp. Ordinances, Chapter 167
NFIP: Cumulative Substantial Damages	Yes	Local	Construction Official	Twp. Ordinances, Chapter 167 Emergency Management Plan
NFIP: Freeboard	Yes	State, Local	Construction Official	Building Code – I.C.C./NJ Section 1612
Growth Management Ordinances	Yes	Local	Town Council	Master Plan; Township Code – Chapter 335
Site Plan Review Requirements	Yes	Local	Construction Official	Building Code
Stormwater Management Ordinance	Yes	Local	Community Development / Building Inspector	Township Code – Chapter 303
Municipal Separate Storm Sewer System (MS4)	Yes	Local	Town Council	Twp. Ordinances, Chapter 303
Stormwater Program Ordinances • Pet waste • Litter Control • Improper Disposal of Waste • Wildlife Feeding • Yard Waste Collection • Illicit Connection • Private Storm Drain Retrofitting • Refuse Container / Dumpster (optional)	Yes	Local	Town Council	Township Code: Chapter 303 Article II Improper Disposal of Waste, Article III Pet Waste, Article IV Wildlife Feeding, Article V Yard Waste, Article VI Illicit Connections, Article VII Stormwater Control for Major Development, Article VIII Retrofitting of Private Storm Drains
Natural Hazard Ordinance	No	-	-	-
Post-Disaster Recovery Ordinance	No	-	-	-
Real Estate Disclosure Requirement	No	-	-	-
Other (Special Purpose Ordinances [i.e., sensitive areas, steep slope])	No	-	-	-

Administrative and Technical Capability

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



Table 9.11-7. Administrative and Technical Capabilities

Resources	Is this in place? (Yes or No)	Department/ Agency/Position
Administrative Capability		
Planning Board	Yes	Planning Board
Mitigation Planning Committee	Yes	Emergency Management
Environmental Board/Commission	Yes	Green Team
Open Space Board/Committee	Yes	Town Council & Recreation Committee
Economic Development Commission/Committee	No	
Maintenance programs to reduce risk	Yes	Joint Insurance Fund
Mutual aid agreements	Yes	Police Fire E.M.S. Public Works
Technical/Staffing Capability		
Planner(s) or engineer(s) with knowledge of land development and land management practices	Yes	Township Engineer
Engineer(s) or professional(s) trained in construction practices related to buildings and/or infrastructure	Yes	Township Engineer
Planners or engineers with an understanding of natural hazards	Yes	Township Engineer
NFIP Floodplain Administrator (FPA)	Yes	Construction Official
Surveyor(s)	Yes	Construction Official Township Engineer
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	Yes	Burlington County
Scientist familiar with natural hazards	No	
Emergency Manager	Yes	Emergency Management Coordinator
Grant writer(s)	Yes	Township Administrator and Township Engineer
Staff with expertise or training in benefit/cost analysis	Yes	Township Administrator
Professionals trained in conducting damage assessments	Yes	Construction Official

Fiscal Capability

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

Table 9.11-8. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use (Yes/No)
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
Impact fees for homebuyers or developers of new development/homes	No
Stormwater utility fee	No
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	Yes



Financial Resources	Accessible or Eligible to Use (Yes/No)
Other federal or state Funding Programs	Yes
Open Space Acquisition funding programs	Yes
Other	-

Community Classifications

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

Table 9.11-9. Community Classifications

Program	Do you have this? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	No	N/A	N/A
Building Code Effectiveness Grading Schedule (BCEGS)	Yes	1	-
Public Protection (ISO Fire Protection Classes 1 to 10)	Yes	03/3Y	October 25, 2016
Storm Ready Certification	No	N/A	N/A
Firewise Communities classification	No	N/A	N/A
Natural disaster/safety programs in/for schools	No	-	-
Organizations with mitigation focus (advocacy group, non-government)	No	-	-
Public education program/outreach (through website, social media)	Yes	-	-
Public-private partnership initiatives addressing disaster-related issues	No	-	-

Note:

N/A Not applicable

NP Not participating

- Unavailable

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

Criteria for classification credits are outlined in the following documents:

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

Self-Assessment of Capability





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

Table 9.11-10. Self-Assessment Capability for the Municipality

Area	Degree of Hazard Mitigation Capability		
	Limited (If limited, what are your obstacles?)*	Moderate	High
Planning and regulatory capability		X	
Administrative and technical capability			X
Fiscal capability			X
Community political capability		X	
Community resiliency capability		X	
Capability to integrate mitigation into municipal processes and activities		X	

National Flood Insurance Program

NFIP Floodplain Administrator (FPA)

Steve Rickershauser, Building Inspector

Flood Vulnerability Summary

The Township of Delran does not maintain lists or inventories of properties that have been damaged by flooding. During Hurricane Sandy and other recent events, there was no structural damage within the Township. The FPA indicated that there is one resident who is interested in acquisition of their property. If the resident wishes to go through with the acquisition, grant funding will be perused to mitigate the property.

Resources

The FPA and the township engineer assume the responsibilities of floodplain administration for the Township of Delran. NFIP administration services and functions provided to residents of Delran include permit review, inspections, damage assessments, and substantial damage determinations. At this time, there are no education or outreach programs to the community regarding flood hazards/risk or flood risk reduction. The FPA stated that there are currently no barriers to running an effective floodplain management program; however, he does not feel adequately supported or trained and stated more training is needed. The FPA would consider attending continuing education and certification training on floodplain management if it were offered in the future.

Compliance History

The Township is currently in good standing with the NFIP; however, the date of the most recent compliance audit is unknown.

Regulatory

The Township of Delran's floodplain ordinance meets the minimum set by FEMA and the State of New Jersey. There are no additional ordinances that support floodplain management within the Township. The Township is currently not in the CRS program; however, they have considered joining and would attend a seminar if offered.

Integration of Hazard Mitigation into Existing and Future Planning Mechanisms



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

Planning

Master Plan: The Township of Delran's Master Plan was last updated in 2009. The Plan incorporates natural hazard risk/mitigation and includes safe growth practices.

Stormwater Management Plan: The Township's Stormwater Management Plan can be found in Chapter 303 of the municipal code. The Stormwater Plan is posted on the municipal stormwater website.

Transportation Plan: The Township's Transportation Plan is part of the Emergency Management Plan. The Plan limits access to hazard areas.

Fire Plan: The Township's Fire Plan includes a risk assessment and identifies vulnerable areas.

Regulatory and Enforcement (Ordinances)

NJDEP Municipal Stormwater Regulation Program: New Jersey Department of Environmental Protection issued the statewide municipal stormwater permits that became effective January 1, 2018 and authorizes stormwater discharges from municipal separate storm sewer systems (MS4s) to the waters of the state. Municipalities that have been issued a Notice of Authorization (NOA) to discharge under the Tier A (urban and coastal municipalities) or Tier B (more rural municipalities) master general permit must develop and implement a stormwater program. The first New Jersey Pollutant Discharge Elimination System (NJPDES) permit authorizing discharges from MS4 municipalities became effective in 2004 (subsequently renewed in 2009 and now in 2018), so most municipalities have developed stormwater programs; however, the 2018 permit requires the municipalities to maintain a stormwater management plan and enforce stormwater ordinances to address development and redevelopment consistent with the Stormwater Management rules at N.J.A.C 7:8, as well as implementation of additional requirements. For more information on the municipal stormwater regulation program, see www.nj.gov/dep/dwq/msrp_home.htm. The Township of Delran is Tier A municipality.

Stormwater Management: Chapter 303 of the municipal code discusses stormwater management. The chapter is intended to regulate the feeding of wildlife, disposal of waste, including pet solid waste, yard waste collection, litter, and other waste and pollution that may find its way into stormwater runoff in order to improve, preserve and protect the water quality of waters and streams within the Township and surrounding communities that may be downstream from the Township so as to protect the health safety and welfare of the public. This chapter also regulates connections to the municipal separate storm sewer system (MS4) operated by the Township and establishes penalties for violations of the provisions of this chapter.

Flood Damage Prevention: The purpose of the flood damage prevention ordinance (Chapter 167 of the municipal code) is to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:

- Protect human life and health.
- Minimize expenditure of public money for costly flood control projects.
- Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public.
- Minimize prolonged business interruptions.



- Minimize damage to public facilities and utilities, such as water and gas mains, electric, telephone and sewer lines, streets or bridges located in areas of special flood hazard.
- Help maintain a stable tax base by providing for the sound use and development of areas of special flood hazard so as to minimize future flood blight areas.
- Ensure that potential buyers are notified that property is in an area of special flood hazard.
- Ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.

Operational and Administration

Hazard mitigation actions are incorporated into daily operations in the Township and all projects identified in the Hazard Mitigation Plan are considered Township goals.

Sustainable Jersey: The Township of Delran is bronze certified in the Sustainable Jersey program. Sustainable Jersey certification is a prestigious designation for municipal governments in New Jersey. Municipalities that achieve the certification are considered by their peers, by state government and by the experts and civic organizations in New Jersey, to be among the leading municipalities. All actions taken by municipalities to score points toward certification must be accompanied by documentary evidence and is reviewed. The certification is free and completely voluntary.

Funding

The Township's operating budget has a line item for mitigation project funding. The Capital Improvements Budget also includes a line item for mitigation project funding and has provide funding in the past for projects identified in the hazard mitigation plan and protection to buildings/infrastructure in high hazard areas.

Education and Outreach

The Township of Delran conducts outreach on hazards. The Township operates a municipal website (<http://www.delrantownship.org/>) which has a news section that discusses hazards. The Township also completes stormwater education and outreach activities and documents their achievements.

9.11.6 Mitigation Strategy and Prioritization

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

Past Mitigation Initiative Status

The following table indicates progress on the community's mitigation strategy identified in the 2013 Plan. Actions that are carried forward as part of this plan update are included in the following subsection in its own table with prioritization. Previous actions that are now on-going programs and capabilities are indicated as such in the following table and may also be found under 'Capability Assessment' presented previously in this annex.



Table 9.11-11. Status of Previous Mitigation Actions

Action Number	2013 Mitigation Action	Responsible Party	Status (In progress, No progress, Complete)	Describe Status 1. Please describe what was accomplished and indicate % complete. 2. If there was no progress, indicate what obstacles/delays encountered? 3. If there was progress, how is/was the action being funded (e.g., FEMA HMGP grant, local budget)?	Next Steps 1. Project to be included in 2019 HMP or Discontinue 2. If including action in the 2019 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
DR-1	Purchase properties and convert to open space and/or increase first floor elevations and eliminating basements, where applicable at Riverside Park (River Dr., Stewart Ave., Alden Ave., and Norman Ave.)	Lead: Twp. Engineer Support: Twp. DPW, NJOEM, NJDEP	No Progress	1. 0% complete 2. met with residents, some interest, no one filled 3. Some funding secured, need more	Include in 2019 HMP
DR-2	Construct pump stations and rebuild the storm water management system to collect and remove storm water runoff at Riverside Park (River Dr., Stewart Ave., Alden Ave., and Norman Ave.)	Lead: Twp. Engineer Support: Twp. DPW, NJOEM, USACE, NJDEP	No Progress	1. 0% complete 2. Budget and personnel constraints have restricted this action from moving forward 3. No funding secured	Include in 2019 HMP
DR-3	Restoring and increase height of berm and stabilizing Rancocas Creek stream bank along River Dr.	Lead: Twp. Engineer Support: Twp. DPW, NJOEM, USACE, NJDEP	No Progress	1. 0% complete 2. Budget and personnel constraints have restricted this action from moving forward 3. No funding secured	Include in 2019 HMP
DR-4	Reconstruct sewer outfall on River Dr. at Stewart Ave., including installation of a tide valve to prevent high tide waters from backing up storm water sewer system.	Lead: Twp. Engineer Support: Twp. DPW, NJDEP, Burlington County	Complete	1. 100% complete 2. 3.	Discontinue
DR-5	Stabilize stream embankments with steel sheeting or other acceptable method to mitigate against continued erosion of stream bank associated with a tributary to Swede's Run (Conrow Rd.) and Laurel Run Creek (Stoneham Dr.)	Lead: Twp. Engineer Support: Twp. DPW	No Progress	1. 0% complete 2. Numerous meetings with Army Engineers and others. Made several attempts for funding. 3. Unable to acquire funding	Include in 2019 HMP



Action Number	2013 Mitigation Action	Responsible Party	Status (In progress, No progress, Complete)	Describe Status 1. Please describe what was accomplished and indicate % complete. 2. If there was no progress, indicate what obstacles/delays encountered? 3. If there was progress, how is/was the action being funded (e.g., FEMA HMGP grant, local budget)?	Next Steps 1. Project to be included in 2019 HMP or Discontinue 2. If including action in the 2019 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
DR-6	Evaluate benefits of participating in CRS program	Twp. Committee; Planning	In Progress	1. 10 % completion 2. Budget and personnel constraints have restricted this action from moving forward 3. Local Budget	Include in 2019 HMP
DR-7	Conduct and facilitate community and public education and outreach for residents and businesses to promote natural hazard risk reduction to include: Disaster preparedness Hazard mitigation	Municipality with support from Planning Partners, County Planning, NJOEM, FEMA	In Progress	1. 10 % completion 2. Budget and personnel constraints have restricted this action from moving forward 3. Local Budget	Include in 2019 HMP
DR-8	Improve municipal communications systems to include information sharing with county and surrounding municipalities	Municipality with support from County, NJOEM and FEMA	In Progress	1. 25 % completion 2. Budget and personnel constraints have restricted this action from moving forward 3. Local Budget	Include in 2019 HMP
DR-9	Obtain and install backup power sources at critical facilities	Municipality with support from County, NJOEM and FEMA	In Progress	1. 50% completion 2. Need more funding Generator was installed at fire station 1 3. Local Budget	Include in 2019 HMP
DR-10	Create/Enhance/Maintain Mutual Aid agreements with neighboring communities for continuity of operations	Municipality with support from County, NJOEM, FEMA and surrounding communities	In Progress	1. 25 % completion 2. Budget and personnel constraints have restricted this action from moving forward 3. Local Budget	Include in 2019 HMP
DR-11	Continue to support the implementation, monitoring, maintenance, and updating of this Plan through participating in the 5 year Plan Update	Municipality with support from Planning Partners, County Planning,	In Progress	1. 25 % completion 2. Need to allot time to this project 3. Local Budget	1. Include in 2019 HMP



Action Number	2013 Mitigation Action	Responsible Party	Status (In progress, No progress, Complete)	Describe Status 1. Please describe what was accomplished and indicate % complete. 2. If there was no progress, indicate what obstacles/delays encountered? 3. If there was progress, how is/was the action being funded (e.g., FEMA HMGP grant, local budget)?	Next Steps 1. Project to be included in 2019 HMP or Discontinue 2. If including action in the 2019 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
		NJOEM, FEMA			
DR-12	Promote the participation of Floodplain Administrator within the planning process and other activities.	Municipality with support from County, NJOEM and FEMA	In Progress	1. 75% completion 2. Budget and personnel constraints have restricted this action from moving forward 3. Local Budget	Include in 2019 HMP
DR-13	Enhance resilience to severe storms by joining the NOAA "Storm Ready" program.	Municipality with support from County, NJOEM and FEMA	No Progress	1. 0 % completion 2. personnel constraints have restricted this action from moving forward 3. Local Budget	Include in 2019 HMP
DR-14	Provide public education and outreach on proper installation and/or use of backup power	Municipal Clerk	No Progress	1. 0 % completion 2. personnel constraints have restricted this action from moving forward 3. Local Budget	Include in 2019 HMP
DR-15	Address dangerous trees threatening people and property through proactive tree-trimming (vegetation management) programs in conjunction with property owners and utility companies.	Municipal DPW	No Progress	1. 0 % completion 2. Need funding for project 3. Local Budget	1. Include in 2019 HMP



Completed Mitigation Initiatives Not Identified in the Previous Mitigation Strategy

The Township of Delran has identified the following mitigation projects/activities that have also been completed but were not identified in the previous mitigation strategy in the 2013 Plan:

- In the last five years, the Town Council has taken action to reduce flooding in the Riverside Park section of the Township by repairing and installing control valves on stormwater piping where it terminates in the Rancocas Creek. Repairs were also made along the bank of the Creek.

Proposed Hazard Mitigation Initiatives for the Plan Update

The Township of Delran participated in a mitigation action workshop in March 2018 and was provided the following FEMA publications to use as a resource as part of their comprehensive review of all possible activities and mitigation measures to address their hazards: FEMA 551 ‘Selecting Appropriate Mitigation Measures for Floodprone Structures’ (March 2007) and FEMA ‘Mitigation Ideas – A Resource for Reducing Risk to Natural Hazards’ (January 2013).

Table 9.11-12 summarizes the comprehensive-range of specific mitigation initiatives the Township of Delran would like to pursue in the future to reduce the effects of hazards. Some of these initiatives may be previous actions carried forward for this plan update. These initiatives are dependent upon available funding (grants and local match availability) and may be modified or omitted at any time based on the occurrence of new hazard events and changes in municipal priorities. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table below to further demonstrate the wide-range of activities and mitigation measures selected.

As discussed in Section 6, 14 evaluation/prioritization criteria are used to complete the prioritization of mitigation initiatives. For each new mitigation action, a numeric rank is assigned (-1, 0, or 1) for each of the 14 evaluation criteria to assist with prioritizing your actions as ‘High’, ‘Medium’, or ‘Low.’ The table below summarizes the evaluation of each mitigation initiative, listed by Action Number.

Table 9.11-13 provides a summary of the prioritization of all proposed mitigation initiatives for the Plan update.



Table 9.11-12. Proposed Hazard Mitigation Initiatives

Initiative	Mitigation Initiative	Critical Facility (Yes/No)	Hazard(s) Mitigated	Goals and Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
T. Delran-1 (former DR-1)	Purchase properties and convert to open space and/or increase first floor elevations and eliminating basements, where applicable at Riverside Park (River Dr., Stewart Ave., Alden Ave., and Norman Ave.)	No	Flood	2, 3, 4	Lead: Twp. Engineer Support: Twp. DPW, NJOEM, NJDEP	High	High	FEMA PDM, NJDEP Blue/Green Acres	Long Term DOF	High	SIP	PP
T. Delran-2 (former DR-2)	Construct pump stations and rebuild the storm water management system to collect and remove storm water runoff at Riverside Park (River Dr., Stewart Ave., Alden Ave., and Norman Ave.)	No	Flood	1, 2	Lead: Twp. Engineer Support: Twp. DPW, NJOEM, USACE, NJDEP	High	High (\$2M-3M)	FEMA PDM, USACE CAP	Long Term DOF	High	SIP	PP
T. Delran-3 (former DR-3)	Restoring and increase height of berm and stabilizing Rancocas Creek stream bank along River Dr.	No	Flood	1, 3	Lead: Twp. Engineer Support: Twp. DPW, NJOEM, USACE, NJDEP	High	High	FEMA PDM, USACE CAP, NJDEP Coastal Engineering Shore Protection Program	Short Term DOF	High	NSP	NR
T. Delran-4 (former DR-5)	Stabilize stream embankments with steel sheeting or other acceptable method to mitigate against continued erosion of stream bank associated with a tributary to Swede's Run (Conrow Rd.) and Laurel Run Creek (Stoneham Dr.)	No	Coastal Erosion	3	Lead: Twp. Engineer Support: Twp. DPW	High	High	FEMS PDM, Private Homeowner	Short Term DOF	Medium	NSP	NR



Table 9.11-12. Proposed Hazard Mitigation Initiatives

Initiative	Mitigation Initiative	Critical Facility (Yes/No)	Hazard(s) Mitigated	Goals and Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
T. Delran-5 (former DR-6)	Evaluate benefits of participating in CRS program	No	All	1, 2, 3, 4, 5	Twp. Committee; Planning	Medium	Low	Local Budget	Short Term	Medium	LPR	PR
T. Delran-6 (former DR-7)	Conduct and facilitate community and public education and outreach for residents and businesses to promote natural hazard risk reduction to include: - Disaster preparedness - Hazard mitigation	No	All	5	Municipality with support from Planning Partners, County Planning, NJOEM, FEMA	Medium	Medium	Local Budget	Short Term	High	EAP	PI
T. Delran-7 (former DR-8)	Improve municipal communications systems to include information sharing with county and surrounding municipalities	No	All	3	Municipality with support from County, NJOEM and FEMA	Medium	Medium	Local Budget	Short Term	Medium	LPR	PR, ES
T. Delran-8 (former DR-9)	Obtain and install backup power sources at critical facilities	Yes	All	1, 3	Municipality with support from County, NJOEM and FEMA	Medium	Medium	Local Budget	Short Term	Medium	SIP	ES
T. Delran-9 (former DR-10)	Create/Enhance/Maintain Mutual Aid agreements with neighboring communities for continuity of operations	No	All	3	Municipality with support from County, NJOEM, FEMA and surrounding communities	Medium	Low	Local Budget	Short Term	High	LPR	PR
T. Delran-10 (former DR-11)	Continue to support the implementation, monitoring, maintenance, and updating of this Plan	No	All	1	Municipality with support from Planning Partners,	High	Low – High (for 5 year update)	Local Budget	Ongoing	High	LPR	PR



Table 9.11-12. Proposed Hazard Mitigation Initiatives

Initiative	Mitigation Initiative	Critical Facility (Yes/No)	Hazard(s) Mitigated	Goals and Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
	through participating in the 5 year Plan Update				County Planning, NJOEM, FEMA							
T. Delran-11 (former DR-12)	Promote the participation of Floodplain Administrator within the planning process and other activities.	No	Flood	1, 4	Municipality with support from County, NJOEM and FEMA	Medium	Medium	Local Budget	Short Term	Medium	LPR	PR
T. Delran-12 (former DR-13)	Enhance resilience to severe storms by joining the NOAA "Storm Ready" program.	No	Severe Storm	1, 3	Municipality with support from County, NJOEM and FEMA	Medium	Low	Local Budget	Short Term DOF	Medium	EAP	PI
T. Delran-13 (former DR-14)	Provide public education and outreach on proper installation and/or use of backup power	No	Severe Storm	1, 5	Municipal Clerk	Medium	Low	Local Budget	Short	High	LPR	PR
T. Delran-14 (former DR-15)	Address dangerous trees threatening people and property through proactive tree-trimming (vegetation management) programs in conjunction with property owners and utility companies.	No	Severe Storm, Severe Winter Storm	1, 4	Municipal DPW	Medium	Low/Medium	Local Budget	Ongoing	Medium	LPR	PR
T. Delran-15	Require new developments to provide mitigation to ensure that the cumulative rate of peak runoff is maintained at pre-development levels	No	All Hazards	2, 4	Municipality	High	Low	Municipal Budget	Short Term DOF	High	LRP	PR
T. Delran-16	The Township will continue to promote and support non-structural flood hazard mitigation alternatives for at risk	No	Flood	1, 2, 3, 4	Municipality	High	High	HMGP, PDM, Municipal Budget	Short Term DOF	High	SIP	PR PP



Table 9.11-12. Proposed Hazard Mitigation Initiatives

Initiative	Mitigation Initiative	Critical Facility (Yes/No)	Hazard(s) Mitigated	Goals and Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
	properties within the floodplain, including those that have been identified as Repetitive Loss (RL) and Severe Repetitive Loss (SRL), such as acquisition/relocation or elevation depending on feasibility. The parameters for this initiative would be: funding, benefits versus cost, and willing participation of property owners											

Notes:

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

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

Acronyms and Abbreviations:

CAV	Community Assistance Visit
CRS	Community Rating System
DPW	Department of Public Works
FEMA	Federal Emergency Management Agency
FPA	Floodplain Administrator
HMA	Hazard Mitigation Assistance
N/A	Not applicable
NFIP	National Flood Insurance Program
OEM	Office of Emergency Management

Potential FEMA HMA Funding Sources:

FMA	Flood Mitigation Assistance Grant Program
HMGP	Hazard Mitigation Grant Program
PDM	Pre-Disaster Mitigation Grant Program
RFC	Repetitive Flood Claims Grant Program (discontinued in 2015)
SRL	Severe Repetitive Loss Grant Program (discontinued in 2015)

Timeline:

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

Costs:

Where actual project costs have been reasonably estimated:

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

Benefits:

Where possible, an estimate of project benefits (per FEMA's benefit calculation methodology) has been evaluated against the project costs, and is presented as:

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



Costs:

Where actual project costs cannot reasonably be established at this time:

- Low Possible to fund under existing budget. Project is part of, or can be part of an existing on-going program.
- Medium Could budget for under existing work plan, but would require a reapportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.
- High Would require an increase in revenue via an alternative source (i.e., bonds, grants, fee increases) to implement. Existing funding levels are not adequate to cover the costs of the proposed project.

Benefits:

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

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

Mitigation Category:

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

CRS Category:

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



Table 9.11-13. Summary of Prioritization of Actions

Mitigation Action/Project Number	Mitigation Action/Initiative	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community	Total	High / Medium / Low
T. Delran-1 (former DR-1)	Purchase properties and convert to open space and/or increase first floor elevations and eliminating basements, where applicable at Riverside Park (River Dr., Stewart Ave., Alden Ave., and Norman Ave.)	0	1	0	1	1	1	-1	0	1	1	1	0	1	0	6	High
T. Delran-2 (former DR-2)	Construct pump stations and rebuild the storm water management system to collect and remove storm water runoff at Riverside Park (River Dr., Stewart Ave., Alden Ave., and Norman Ave.)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
T. Delran-3 (former DR-3)	Restoring and increase height of berm and stabilizing Rancocas Creek stream bank along River Dr.	1	1	0	1	1	1	0	1	1	1	0	1	1	1	11	High
T. Delran-4 (former DR-5)	Stabilize stream embankments with steel sheeting or other acceptable method to mitigate against continued erosion of stream bank associated with a tributary to Swede's Run (Conrow Rd.) and Laurel Run Creek (Stoneham Dr.)	1	1	0	1	0	0	-1	1	0	0	1	0	1	1	6	Medium
T. Delran-5 (former DR-6)	Evaluate benefits of participating in CRS program	1	1	0	1	1	1	0	0	1	1	1	0	1	0	9	Medium
T. Delran-6 (former DR-7)	Conduct and facilitate community and public education and outreach	1	1	1	1	1	1	1	1	1	1	1	1	1	0	13	High



Table 9.11-13. Summary of Prioritization of Actions

Mitigation Action/Project Number	Mitigation Action/Initiative	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community	Total	High / Medium / Low
	for residents and businesses to promote natural hazard risk reduction to include: - Disaster preparedness - Hazard mitigation																
T. Delran-7 (former DR-8)	Improve municipal communications systems to include information sharing with county and surrounding municipalities	1	1	0	1	1	1	0	0	1	0	1	1	0	1	9	Medium
T. Delran-8 (former DR-9)	Obtain and install backup power sources at critical facilities	1	0	0	1	1	1	0	0	1	1	1	0	1	0	8	Medium
T. Delran-9 (former DR-10)	Create/Enhance/Maintain Mutual Aid agreements with neighboring communities for continuity of operations	1	1	0	1	1	1	0	0	1	1	1	1	1	1	11	High
T. Delran-10 (former DR-11)	Continue to support the implementation, monitoring, maintenance, and updating of this Plan through participating in the 5-year Plan Update	1	1	0	1	1	1	0	0	1	1	1	1	1	1	11	High
T. Delran-11 (former DR-12)	Promote the participation of Floodplain Administrator within the planning process and other activities.	1	1	0	1	1	1	0	0	1	0	1	1	0	1	9	Medium
T. Delran-12 (former DR-13)	Enhance resilience to severe storms by joining the NOAA "Storm Ready" program.	1	1	0	1	1	1	0	0	1	1	1	0	1	0	9	Medium
T. Delran-13 (former DR-14)	Provide public education and outreach on proper	1	1	1	1	1	1	1	1	1	1	1	1	1	0	13	High



Table 9.11-13. Summary of Prioritization of Actions

Mitigation Action/Project Number	Mitigation Action/Initiative	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community	Total	High / Medium / Low
	installation and/or use of backup power																
T. Delran-14 (former DR-15)	Address dangerous trees threatening people and property through proactive tree-trimming (vegetation management) programs in conjunction with property owners and utility companies.	1	1	1	1	0	0	-1	1	0	0	1	0	1	1	7	Medium
T. Delran-15	Require new developments to provide mitigation to ensure that the cumulative rate of peak runoff is maintained at pre-development levels	0	1	0	1	1	1	-1	0	1	1	1	0	1	0	6	Medium
T. Delran-16	The Township will continue to promote and support non-structural flood hazard mitigation alternatives for at risk properties within the floodplain, including those that have been identified as Repetitive Loss (RL) and Severe Repetitive Loss (SRL), such as acquisition/relocation or elevation depending on feasibility. The parameters for this initiative would be: funding, benefits versus cost, and willing participation of property owners	1	1	0	1	1	1	-1	0	1	1	1	0	1	0	8	Medium

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



9.11.7 Future Needs to Better Understand Risk/Vulnerability

None at this time.

9.11.8 Hazard Area Extent and Location

Hazard area extent and location maps have been generated for the Township of Delran that illustrate the probable areas impacted within the municipality. These maps are based on the best available data at the time of the preparation of this plan and are considered to be adequate for planning purposes. Maps have only been generated for those hazards that can be clearly identified using mapping techniques and technologies, and for which the Township of Delran has significant exposure. These maps are illustrated in the hazard profiles within Section 5.4, Volume I of this Plan.

9.11.9 Additional Comments

None at this time.



Figure 9.11-1. Township of Delran Hazard Area Extent and Location Map 1

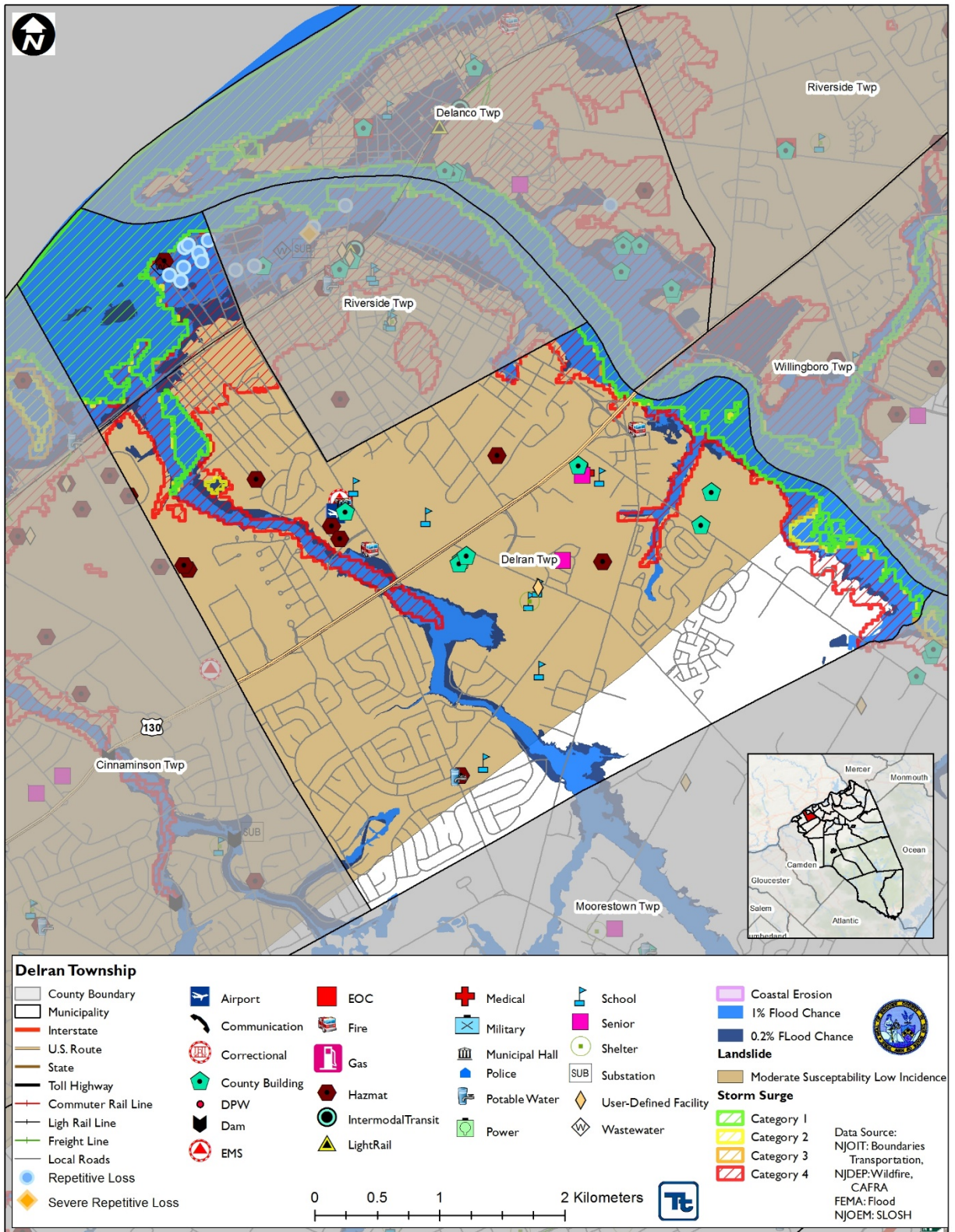
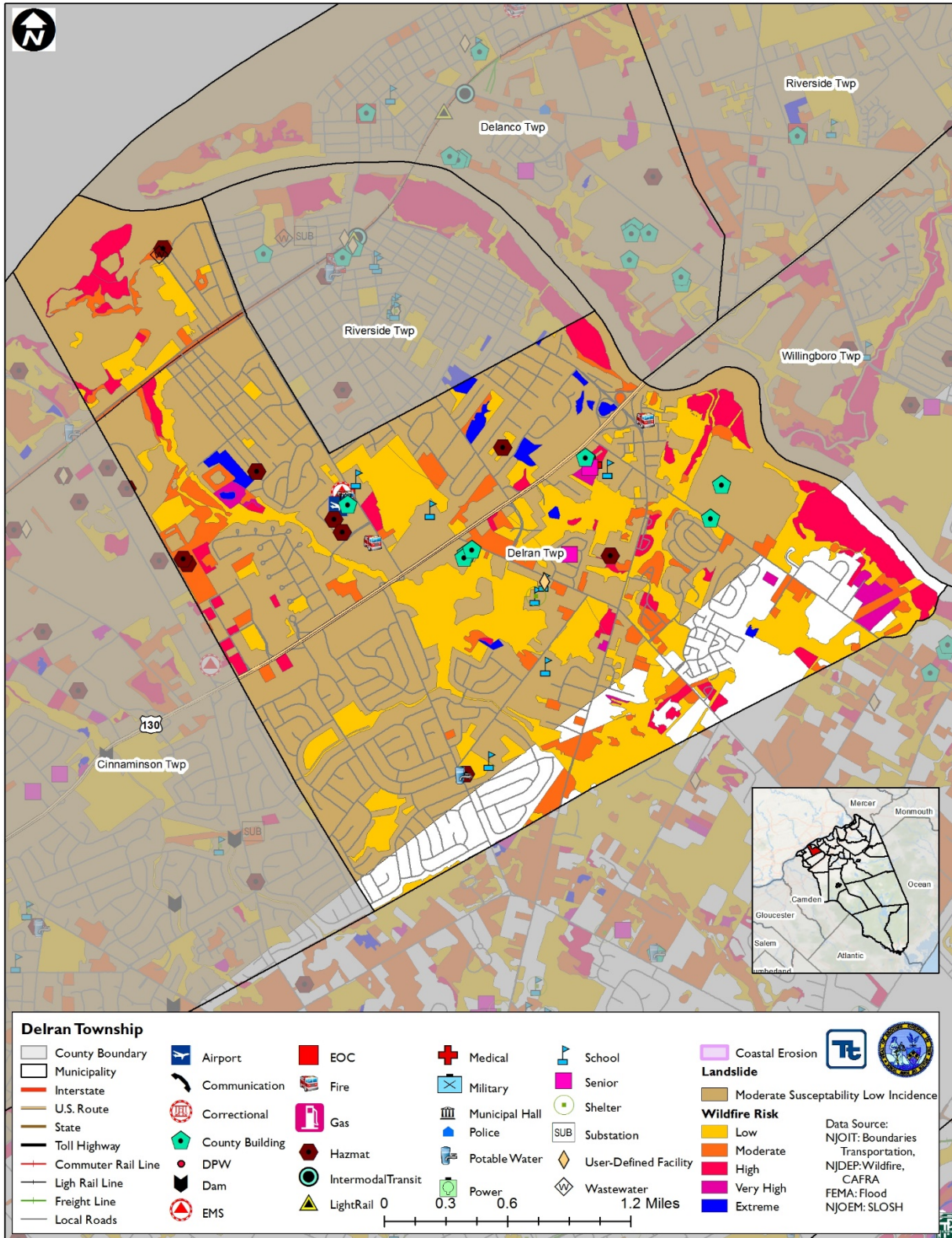




Figure 9.11-2. Township of Delran Hazard Area Extent and Location Map 2





Action Number:

T. Delran-2 (former DR-2)

Mitigation Action/Initiative:

Construct pump stations and rebuild the storm water management system to collect and remove storm water runoff at Riverside Park (River Dr., Stewart Ave., Alden Ave., and Norman Ave.)

Assessing the Risk	
Hazard(s) addressed:	Flood, Severe Storm
Specific problem being mitigated:	Stormwater system at Riverside Park is not efficient and causes flooding
Actions/Projects Considered (name of project and reason for not selecting):	1. No action: Current problem continues 2. Replace sections of the park with drainage basins: Lose park area, may not be efficient. 3. Install green infrastructure to help in collecting stormwater runoff. – May not have sufficient space for adequate effectiveness.
Description of Selected Action/Project	Riverside Park at River Dr., Stewart Ave., Alden Ave., and Norman Ave. will have the stormwater system redesigned. Pump stations will be installed and stormwater pipes will be redirected to reduce stormwater flooding risk.
Action/Project Category	Structure and Infrastructure Project (SIP)
Goals Met	1, 2
Critical Facility (Y/N)	No
Benefits (losses avoided)	High
Estimated Cost	High (\$2M-3M)
Priority*	High
Responsible Organization	Lead: Twp. Engineer Support: Twp. DPW, NJOEM, USACE, NJDEP
Local Planning Mechanism	Hazard Mitigation Planning, Stormwater Planning
Potential Funding Sources	FEMA PDM, USACE CAP
Timeline for Completion	Long Term, DOF
Date of Status Report/ Report of Progress	



Action Number:

T. Delran-2 (former DR-2)

Mitigation Action/Initiative:

Construct pump stations and rebuild the storm water management system to collect and remove storm water runoff at Riverside Park (River Dr., Stewart Ave., Alden Ave., and Norman Ave.)

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	Reduce flood risk to the pump stations and reduce flood damage
Cost-Effectiveness	1	
Technical	1	Project is technically feasible
Political	1	Political support for project
Legal	1	
Fiscal	1	
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	Flood, Severe Storm
Timeline	1	
Agency Champion	1	
Other Community Objectives	1	
Total	14	
Priority (High/Med/Low)	High	



Action Number:

T. Delran-3 (former DR-3)

Mitigation Action/Initiative:

Restoring and increase height of berm and stabilizing Rancocas Creek stream bank along River Dr.

Assessing the Risk	
Hazard(s) addressed:	Flood
Specific problem being mitigated:	Rancocas Creek stream bank along River Drive is low, allowing bank overtopping and erosion.
Actions/Projects Considered (name of project and reason for not selecting):	1. No Action: Problem continues 2. Remove properties impacted by stream overflow: Costly 3. Construct floodwall to prevent flooding – Cost prohibitive and could ruin natural floodplain function.
Description of Selected Action/Project	The stream bank of the Rancocas Creek at River Drive will be restored and elevated to prevent overtopping and continued erosion.
Action/Project Category	Natural Systems Protection
Goals Met	1, 3
Critical Facility (Y/N)	No
Benefits (losses avoided)	High
Estimated Cost	High
Priority*	High
Responsible Organization	Lead: Twp. Engineer Support: Twp. DPW, NJOEM, USACE, NJDEP
Local Planning Mechanism	Hazard Mitigation Planning
Potential Funding Sources	FEMA PDM, USACE CAP, NJDEP Coastal Engineering Shore Protection Program
Timeline for Completion	Short Term DOF
Date of Status Report/ Report of Progress	



Action Number:

T. Delran-3 (former DR-3)

Mitigation Action/Initiative:

Restoring and increase height of berm and stabilizing Rancocas Creek stream bank along River Dr.

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	
Cost-Effectiveness	0	
Technical	1	
Political	1	
Legal	1	
Fiscal	0	Need funding to complete project
Environmental	1	Reduce erosion and runoff into creek
Social	1	
Administrative	1	
Multi-Hazard	0	Flood
Timeline	1	
Agency Champion	1	
Other Community Objectives	1	
Total	11	
Priority (High/Med/Low)	High	



Action Number:

T. Delran-4 (former DR-5)

Mitigation Action/Initiative:

Stabilize stream embankments with steel sheeting or other acceptable method to mitigate against continued erosion of stream bank associated with a tributary to Swede's Run (Conrow Rd.) and Laurel Run Creek (Stoneham Dr.)

Assessing the Risk	
Hazard(s) addressed:	Coastal Erosion
Specific problem being mitigated:	Stream bank of Swede's Run and Laurel Run Creek is undercut and continues to erode
Actions/Projects Considered (name of project and reason for not selecting):	1. No Action: Problem continues 2. Remove properties impacted by stream overflow: Costly 3. Construct floodwall to prevent flooding – Cost prohibitive and could ruin natural floodplain function.
Description of Selected Action/Project	Sections of stream embankments that are currently eroding or in threat of erosion will be stabilized with steel sheeting or other acceptable stabilization materials in the tributary to Swede's Run (Conrow Rd.) and Laurel Run Creek (Stoneham Dr.)
Action/Project Category	Natural Systems Protection
Goals Met	3
Critical Facility (Y/N)	No
Benefits (losses avoided)	High
Estimated Cost	High
Priority*	Medium
Responsible Organization	Lead: Twp. Engineer Support: Twp. DPW
Local Planning Mechanism	Hazard Mitigation Planning
Potential Funding Sources	FEMS PDM, Private Homeowner
Timeline for Completion	Short Term DOF
Date of Status Report/ Report of Progress	



Action Number:

T. Delran-4 (former DR-5)

Mitigation Action/Initiative:

Stabilize stream embankments with steel sheeting or other acceptable method to mitigate against continued erosion of stream bank associated with a tributary to Swede's Run (Conrow Rd.) and Laurel Run Creek (Stoneham Dr.)

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	
Cost-Effectiveness	0	
Technical	1	
Political	0	
Legal	0	
Fiscal	-1	Need funding to complete project
Environmental	1	Reduce erosion and runoff into creek
Social	0	
Administrative	0	
Multi-Hazard	1	Erosion
Timeline	0	
Agency Champion	1	
Other Community Objectives	1	
Total	6	
Priority (High/Med/Low)	Medium	



Action Number:

T. Delran-8 (former DR-9)

Mitigation Action/Initiative:

Obtain and install backup power sources at critical facilities

Assessing the Risk	
Hazard(s) addressed:	All Hazards
Specific problem being mitigated:	Critical facilities lack back up power sources
Actions/Projects Considered (name of project and reason for not selecting):	1. No Action: Current problem continues 2. Solar Panels: Weather dependent, costly 3. Mobile Generator – May have inadequate run time and power capacity.
Description of Selected Action/Project	Backup power sources (generators) will be obtained and installed at critical facilities to maintain critical functions.
Action/Project Category	SIP
Goals Met	1, 3
Critical Facility (Y/N)	Yes
Benefits (losses avoided)	Medium
Estimated Cost	Medium
Priority*	Medium
Responsible Organization	Municipality with support from County, NJOEM and FEMA
Local Planning Mechanism	Hazard Mitigation Planning
Potential Funding Sources	Local Budget
Timeline for Completion	Short Term
Date of Status Report/ Report of Progress	



Action Number: T. Delran-8 (former DR-9)

Mitigation Action/Initiative: Obtain and install backup power sources at critical facilities

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Continuity of operations to critical facilities that provide emergency services to residents
Property Protection	0	
Cost-Effectiveness	0	
Technical	1	
Political	1	
Legal	1	
Fiscal	0	Need funding to complete project
Environmental	0	
Social	1	
Administrative	1	
Multi-Hazard	1	All hazards
Timeline	0	
Agency Champion	1	
Other Community Objectives	0	
Total	8	
Priority (High/Med/Low)	Medium	