



9.7 TOWNSHIP OF MIDDLE

This section presents the jurisdictional annex for the Township of Middle. The annex includes a general overview of the Township of Middle; an assessment of the Township of Middle’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.

9.7.1 Staff and Local Stakeholder Involvement in Annex Development

The Township of Middle followed the planning process described in Section 3 (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 coronavirus pandemic resulted in a strain on local resources that limited some participation, but every effort was made to connect with staff and stakeholders and gain diverse input. Due to safety precautions, all meetings were held virtually. The following table summarizes who participated and in what capacity. Additional documentation on the municipality’s planning process through Planning Partnership meetings is included in Section 3 (Planning Process) and Appendix C (Meeting Documentation).

Table 9.7-1. Hazard Mitigation Planning Team and Contributors

Primary Point of Contact		Alternate Point of Contact
Name / Title: Sean McDevitt, Chief EMT/EMC/EMS Address: 33 W. Mechanic Street, Cape May Court House Phone Number: (609) 374-2009 Email: smcdevitt@middletownship.com		Name / Title: Rachel Shepherd, Land Use Administrator-Construction/Zoning Address: 33 W. Mechanic Street, Cape May Court House Phone Number: (609) 465-8740 Email: rmshepherd@middletownship.com
NFIP Floodplain Administrator		
Name / Title: Salvatore DeSimone, Floodplain Manager Address: 33 W. Mechanic Street, Cape May Court House Phone Number: (609) 465-8740 Email: sdesimone@middletownship.com		
Name	Title	Method of Participation
Sean McDevitt	Chief EMT/EMC/EMS	Primary point of contact, provided data and information, contributed to mitigation strategy, reviewed and signed off on annex
Rachel Shepherd	Land Use Administrator-Construction/Zoning	Alternate point of contact
Salvatore DeSimone	Floodplain Manager	NFIP floodplain manager
John McCann	Chief, Cape May Court House Fire Department	Took stakeholder survey

9.7.2 Jurisdiction Profile

The Township of Middle is located within the central portion of Cape May County, New Jersey. It is bounded on the north by the Township of Dennis, on the east by the Boroughs of Avalon and Stone Harbor and the Atlantic Ocean, on the south-southeast by the Wildwoods and the Atlantic Ocean, the southwest by the Township of Lower and the west by the Delaware Bay. It is part of the Ocean City Metropolitan Statistical Area. Cape May Court House, Rio Grande and Whitesboro-Burleigh are census-designated places (CDPs) and unincorporated communities located within Middle Township. Green Creek is an unincorporated community that has no corresponding CDP.





According to the U.S. Census, the 2010 population for the Township of Middle was 18,911. The estimated 2017 population was 18,492, a 2.2 percent decrease from the 2010 Census. Data from the 2017 U.S. Census American Community Survey indicate that 6.1 percent of the population is 5 years of age or younger and 21.2 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.

9.7.3 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 9.7-2 summarizes recent and expected future development trends, including major residential/commercial development and major infrastructure development. Figure 9.7-1 at the end of this annex illustrates the geographically-delineated hazard areas and the location of potential new development.

Table 9.7-2. Recent and Expected Future Development

Type of Development	2015	2016	2017	2018	2019
Number of Building Permits for New Construction Issued Since the Previous HMP					
Single and Two-Family Units	41	36	74	27	12
Multi-Family	7	0	0	1	0
Other (commercial, mixed-use, etc.)	0	3	3	1	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
Recent Major Development and Infrastructure from 2015 to Present					
Clean Energy/ South Jersey Gas	CNG Fueling Station	1	650 Shunpike Road	Category 3, 4 Storm	Completed
CRMC Surgery Center	Surgery Center	1	2 Stone Harbor Boulevard	Category 3, 4 Storm	Nearing completion
County Commons	Public Offices/ Commercial	6 units/ 1 bldg.	3801 Route 47 S., Rio Grande	None	Nearing completion
Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years					
Laguna Oaks Townhomes	Single family units	12 units/ 3 structures	Block: 335.01 Lot: 5.04	Category 2, 3, 4; Storm Wildfire Intermix Area	Not started yet

* Only location-specific hazard zones or vulnerabilities identified.

9.7.4 Capability Assessment

The Township of Middle performed an inventory and analysis of existing capabilities, plans, programs, and policies that enhance its ability to implement mitigation strategies. Section 6 (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 planning, legal and regulatory capabilities.
- Development and permitting capabilities.
- An assessment of administrative and technical capabilities.
- An assessment of fiscal capabilities.
- An assessment of education and outreach capabilities.



- Classification under various community mitigation programs.
- The community’s adaptive capacity.
- Information on National Flood Insurance Program (NFIP) compliance.

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, planning/policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress in plan integration. Areas with current mitigation integration are summarized in Capability Assessment (Section 9.7.4). The Township of Middle 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 Middle and where hazard mitigation has been integrated.

Table 9.7-3. Planning, Legal and Regulatory Capability

	Do you have this? (Yes/No)	Authority that enforces (Federal, State, Regional, County, Local)	Is this State Mandated?	Have aspects of this been integrated into your mitigation plan? 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	State & Local	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> • State mandated on local level under NJAC 5:23-3.14. International Building Code – New Jersey Edition, 2018, NJAC 5:24-3.14 Adopted 9/3/2019 (with NJ edits dated March 14, 2020 coming soon) • Construction Code, Uniform, Chapter 112, adopted by Township Committee in 1977 and amended through 2018. There is hereby established in the Township of Middle a State Uniform Construction Code enforcing agency to be known as the "Department of Construction Inspection," consisting of a Construction Official, a Building Subcode Official, a Plumbing Subcode Official, an Electrical Subcode Official, a Fire Protection Subcode Official. The Construction Official and the subcode officials shall be determined from time to time by resolution of the Township Committee. • The Ordinance contains no specific mitigation actions other than those required in the Uniform Construction Code. 					
Zoning Code	Yes.	State & Local	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> • State permissive on local level. 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. • Zoning, Chapter 250, adopted by Township Committee 08-01-2011, amended through 2018. • The purposes of this Chapter are comparable to the purposes of the Municipal Land Use Law. • This Chapter’s mitigation aspects include the classification of priority lands as hazard-prone areas identified by state and federal regulatory agencies and in the Middle Township hazard mitigation plan, it encourages clustering to provide more open space, and allows 35 ft. building height measured from the Base Flood Elevation to encourage the building elevations in the SFHA. 					
Subdivisions	Yes	County & Local	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> • P.L.1975, c.291 (C.40:55D-47): 40:55D-37. Grant of power; referral of proposed ordinance; county planning board approval a. The governing body may by ordinance require approval of subdivision plats by resolution of the planning board as a condition for the filing of such plats with the county recording officer and approval of site plans by resolution of the planning board as a condition for the issuance of a permit for any development, except that subdivision or individual lot applications for detached one or two dwelling-unit buildings shall be exempt from such site plan review and approval; provided that the resolution of the board of adjustment shall substitute for that of the planning board whenever the board of adjustment has jurisdiction over a subdivision or site plan pursuant to subsection 63b. of this act . 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 					





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<p>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.</p> <ul style="list-style-type: none"> Subdivision of Land and Site Plan Review, Chapter 218, adopted by Township Council 01-19-95 and amended through 2018. The purpose of this chapter shall be to provide rules, regulations and standards to guide land subdivision and site development in the Township of Middle in order to promote the public health, safety, convenience and general welfare of the municipality. It shall be administered to ensure orderly growth and development, the conservation, protection and proper use of land and adequate provision for circulation, utilities and services. Regarding the suitability of lands as a mitigation aspect, this Chapter requires that the developer shall review the suitability of lands in question for development and in that regard shall consider, inter alia, flood areas and drainage, slope, depth of seasonal high water, vegetation and soils; Flood-prone areas shall be identified and kept free from development and setback distances established along all waterways; encroachment on critical areas such as those having soil conditions unsuitable for proposed development, areas of high water table, steep slopes over 20%, poor drainage and major tree stands shall be avoided; adverse environmental effects such as flooding or sedimentation off-site shall also be avoided; and floodplains and riparian lands shall be identified on the site plan. The New Jersey Department of Environmental Protection, Division of Land Use Regulation, flood hazard area program must approve construction within the one-hundred-year floodplain, and in many instances, the riparian zone. Any requirements of such approval shall be part of the site plan or subdivision approval. Hazard mitigation is included in the Environmental Analysis required for all Major Development. It requires; review of Middle Township hazard mitigation plan (HMP) and identify whether development; is identified as a "repetitive loss" or "severe repetitive loss" property as defined by FEMA (and contained in the HMP); will have a significant impact on identified evacuation routes that are included in the HMP; will negatively impact the areas identified as having flooding issues; and if the project results in impacts to the areas identified in the HMP, propose mitigating measures such as additional open space preserved by deed restriction or conservation easement to serve as a buffer to flood hazards, or installing higher standards of stormwater management on site. 					
Stormwater Management	Yes	State & Local	Yes	Yes	-
<p>Comment:</p> <ul style="list-style-type: none"> See Title 7 of the NJ Administrative Code, N.J.A.C. 7:8 Storm Sewers, Chapter 213, adopted by the Township Committee on 09-03-2014. The purpose of this article is to require the retrofitting of existing storm drain inlets which are in direct contact with repaving, repairing, reconstruction, or resurfacing or alterations of facilities on private property, to prevent the discharge of solids and floatables (such as plastic bottles, cans, food wrappers and other litter) to the municipal separate storm sewer system(s) operated by the Township of Middle so as to protect public health, safety and welfare, and to prescribe penalties for the failure to comply. 					
Post-Disaster Recovery	No	-	No	-	-
<p>Comment:</p>					
Real Estate Disclosure	Yes	State, Division of Consumer Affairs	Yes	Yes	
<p>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 estimated completion dates for improvements, fees for services and amenities, the type of title and ownership interest being offered, its proximity to hospitals, schools, fire and police, as well as any hazards, risks or nuisances in or around the subdivision..</p>					
Growth Management	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
<p>Comment:</p> <ul style="list-style-type: none"> State Mandated on a municipal level. See Zoning Ordinance; Also - Plan Endorsement Process via the State Development & Redevelopment Plan provides for the delineation of Growth Areas and Environs; Use of the endorsed plans in the implementation of state environmental regulations makes the Plan Endorsement process a growth management strategy. Community Development Corporation, Chapter 12, adopted by the Township Committee on 07-19-2004. From the position of managing growth the purposes of the Community Development Corporation are; to accomplish the sale or lease of the Township of Middle's vacant lands to economic enterprises whose settlement thereon is best calculated, in the judgment of the Corporation, to advance the interests of the Township of Middle and of its citizens and inhabitants; and to acquire title to vacant land owned by the Township of Middle for the purpose of resale or lease to economic enterprises whose presence within the Township of Middle will benefit in the judgment of the Corporation, its citizens and inhabitants. 					



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Site Plan Review	Yes	County & Local	Yes	Yes	-
<p>Comment:</p> <ul style="list-style-type: none"> Dictated by the Municipal Land Use Law which sets forth minimum requirements for plans, etc., timeframes for development review. 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. 40:27-6.10 In order that county planning boards shall have a complete file of the planning and zoning ordinances of all municipalities in the county, each municipal clerk shall file with the county planning board a copy of the planning and zoning ordinances of the municipality in effect on the effective date of this act and shall notify the county planning board of the introduction of any revision or amendment of such an ordinance which affects lands adjoining county roads or other county lands, or lands lying within 200 feet of a municipal boundary, or proposed facilities or public lands shown on the county master plan or official county map. Such notice shall be given to the county planning board at least 10 days prior to the public hearing thereon by personal delivery or by certified mail of a copy of the official notice of the public hearing together with a copy of the proposed ordinance. Subdivision of Land and Site Plan Review, Chapter 218, adopted by Township Council 01-19-95 and amended through 2018. The purpose of this chapter shall be to provide rules, regulations and standards to guide land subdivision and site development in the Township of Middle in order to promote the public health, safety, convenience and general welfare of the municipality. It shall be administered to ensure orderly growth and development, the conservation, protection and proper use of land and adequate provision for circulation, utilities and services. Regarding the suitability of lands as a mitigation aspect, this Chapter requires that the developer shall review the suitability of lands in question for development and in that regard shall consider, inter alia, flood areas and drainage, slope, depth of seasonal high water, vegetation and soils; Flood-prone areas shall be identified and kept free from development and setback distances established along all waterways; encroachment on critical areas such as those having soil conditions unsuitable for proposed development, areas of high water table, steep slopes over 20%, poor drainage and major tree stands shall be avoided; adverse environmental effects such as flooding or sedimentation off-site shall also be avoided; and floodplains and riparian lands shall be identified on the site plan. 					
Environmental Protection	Yes	Local & State	No	Yes	-
<p>Comment:</p> <ul style="list-style-type: none"> Environmental Commission, Chapter 16, adopted by the Township Committee on 01-04-1990 and subsequently amended. The purpose of the Environmental Commission shall be the protection, development or use of natural resources, including water resources and solid waste, located within the territorial limits of the Township of Middle. 					
Flood Damage Prevention	Yes	State & Local	Yes	Yes	-
<p>Comment:</p> <ul style="list-style-type: none"> The NJ State Law Flood Area Control Act (N.J.S.A. 58:16A-52) and the National Flood Control Act of 1968 (NFIP) are state and federal acts to support minimization of flood losses. They do not require local adoption but as enforced by the NJDEP, the floodplain ordinances of each municipality must be reviewed for compliance with these regulations. In addition, participation in the NFIP requires a floodplain ordinance. Regulations for the Flood Control Hazards Act were adopted in 2007 and amended effective June 20, 2016. Flood Damage Prevention, Chapter 146, adopted by the Township Council on 09-06-2017. . It is the purpose of this chapter 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: a. Protect human life and health b. Minimize expenditure of public money for costly flood control projects ;c Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public; d. Minimize prolonged business interruptions. In order to accomplish its purposes, this ordinance includes methods and provisions for: a. Restricting or prohibiting uses which are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities; b. Requiring that uses vulnerable to floods including facilities which serve such uses, be protected against flood damage at the time of initial construction; c. Controlling the alteration of natural floodplains, stream channels, and natural protective barriers, which help accommodate or channel flood waters; d. Controlling filling, grading, dredging, and other development which may increase flood damage; and, Preventing or regulating the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards in other areas. The Township requires a separate Development Permit be obtained before construction or development begins, including placement of manufactured homes, within any area of special flood hazard. 					
Wellhead Protection	No	-	No	-	-
<p>Comment:</p>					



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Emergency Management	No	-	No	-	-
<i>Comment:</i>					
Climate Change	No	-	No	-	-
<i>Comment:</i>					
Disaster Recovery Ordinance	No	-	No	-	-
<i>Comment:</i>					
Disaster Reconstruction Ordinance	No	-	No	-	-
<i>Comment:</i>					
Other	Yes	Local	No	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> Shade Tree Commission, Chapter 66, adopted by the Township Committee on 02-03-1983 and subsequently amended. The purpose of the Middle Township Shade Tree Commission shall be the regulation, planting, care and control of shade and ornamental trees and shrubbery upon and in the streets, highways and public places of the Township of Middle, except state highways, unless the Department of Transportation shall assent thereto, and except county highways and parks, unless the county and/or the County Parks Commission, as the case may be, gives assent thereto. 					
Planning Documents					
Comprehensive / Master Plan	Yes	State & Local	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> 2018 Revised NJ Statute 40:27-2; the county planning board shall make and adopt a master plan for the physical development of the county. The master plan of a county, with the accompanying maps, plats, charts, and descriptive and explanatory matter, shall show the county planning board's recommendations for the development of the territory covered by the plan, and may include, among other things, the general location, character, and extent of streets or roads, viaducts, bridges, waterway and waterfront developments, parkways, playgrounds, forests, reservations, parks, airports, and other public ways, grounds, places and spaces; the general location and extent of forests, agricultural areas, and open-development areas for purposes of conservation, food and water supply, sanitary and drainage facilities, or the protection of urban development, and such other features as may be important to the development of the county. The county planning board shall encourage the co-operation of the local municipalities within the county in any matters whatsoever which may concern the integrity of the county master plan and to advise the board of chosen freeholders with respect to the formulation of development programs and budgets for capital expenditures. Per State of NJ Municipal Land Use Law (MLUL) L. 1975, s. 2, eff Aug 1, 1976 40:55D-28 provides the required components of a municipal Master Plan and requires that each municipality prepare a master plan and update it every 6 years. Further, all zoning ordinances must be consistent with the Master Plan or will not be benefitted from a presumption of validity. Master Plan – Land Use Plan Update, and Master Plan Re-Examination Report, both adopted by the Township Planning Board 07-22-2010. The specific policy goals with particular relevance to Middle Township are as follows: <ul style="list-style-type: none"> Conserve the State's natural resources and systems by promoting ecologically sound development and redevelopment and accommodating environmentally designed development and redevelopment in Centers in the Fringe, Rural and Environmentally Sensitive Planning Areas. Plan, design, invest in and manage the development and redevelopment of Centers and the use of land, water, soil, plant and animal resources to maintain biodiversity and the viability of ecological systems. Provide adequate public facilities and services at a reasonable cost...purchasing land and easements to prevent development, to protect flood plains and sustain agriculture where appropriate. Provide adequate housing at a reasonable cost... Create and maintain housing in... Centers in the Fringe, Rural and Environmentally Sensitive Planning areas... Preserve and enhance areas with historic, cultural, scenic, open space and recreational value...by comprehensive planning, design, investigation and management techniques The Township is currently in the process of updating the Master Plan 					
Capital Improvement Plan	Yes	Local	No	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> Capital Improvement Program, introduced to the Township Committee on March 2, 2020. This is a Six (6) year capital improvement program will focus on replacing end of useful life and failing vehicles and equipment for both Police Department and 					



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					If no - can it be a mitigation action? If yes, add Mitigation Action #.
<p><i>Public Works. Along with current budget appropriation for minor repairs and improvements to various municipal building, grounds, and equipment, larger price point upgrades and repairs are anticipated to replace various HVAC Systems, maintain/repair/replace various roofs, maintain/repair/replace electrical system. Various road repairs and drainage projects are ongoing priorities as well as addressing aging portions of the Township Sewer System and pump stations.</i></p>					
Disaster Debris Management Plan	No	-	No	-	2021-MiddleTwp-013
<i>Comment:</i>					
Floodplain or Watershed Plan	No	-	No	-	-
<i>Comment:</i>					
Stormwater Management Plan	Yes	State & Local	Yes	Yes	-
<p><i>Comment:</i></p> <ul style="list-style-type: none"> The Stormwater Management rules (N.J.A.C. 7:8) rules were published in the February 2, 2004 NJ Register. These rules set forth the required components of regional and municipal stormwater management plans and establish the stormwater management design and performance standards for new (proposed) development. The design and performance standards for new development include groundwater recharge, runoff quantity controls, and runoff quality controls. The rules emphasize, as a primary consideration, the use of nonstructural stormwater management techniques including minimizing disturbance, minimizing impervious surfaces, minimizing the use of stormwater pipes, preserving natural drainage features, etc. The rules also set forth requirements for groundwater recharge, stormwater runoff quantity control, stormwater runoff quality control, and the prohibition of major development to be located within or to discharge runoff from the major development into a 300-foot riparian zone without prior authorization from the Department under the Flood Hazard Area Control Act Rules, N.J.A.C. 7:13. 					
Stormwater Pollution Prevention Plan	No	-	Yes	-	-
<p><i>Comment:</i></p> <ul style="list-style-type: none"> The Phase II New Jersey Pollutant Discharge Elimination System Stormwater Regulation Program (NJPDES) rules (N.J.A.C. 7:14A) were published in the February 2, 2004, NJ Register. These NJPDES rules are intended to address and reduce pollutants associated with existing stormwater runoff. The NJPDES rules establish a regulatory program for existing stormwater discharges as required under the Federal Clean Water Act. These NJPDES rules govern the issuance of permits to entities that own or operate small municipal separate storm sewer systems, known as MS4s. Under this program, permits must be secured by municipalities, certain public complexes such as universities and hospitals, and State, interstate and federal agencies that operate or maintain highways. The permit program establishes the Statewide Basic Requirements that must be implemented to reduce nonpoint source pollutant loads from these sources. The Statewide Basic Requirements include measures such as: the adoption of ordinances (litter control, pet waste, wildlife feeding, proper waste disposal, etc.); the development of a municipal stormwater management plan and implementing ordinance(s); requiring certain maintenance activities (such as street sweeping and catch basin cleaning); implementing solids and floatables control; locating discharge points and stenciling catch basins; and a public education component. 					
Urban Water Management Plan	No	-	No	-	-
<i>Comment:</i>					
Habitat Conservation Plan	Yes	Local	No	Yes	-
<p><i>Comment:</i></p> <ul style="list-style-type: none"> Open Space and Recreation Plan, adopted by the Township Planning Board April 25, 2013. Goals of the Plan include; Promoting the preservation and management of land for wildlife, for water quality and supply, and for open space; and Promote the preservation and management of land for wildlife, for water quality and supply, and for open space. The Township also has a comprehensive Natural Resources Inventory, last revised May, 2010. 					
Economic Development Plan	Yes	Local	No	No	Yes
<p><i>Comment:</i></p> <ul style="list-style-type: none"> Market Analysis, dated March 2013. This report offers data, background and a generalized analysis of the Middle Township economy and market. It is not a comprehensive market study. It does, however, offer sufficient analysis, trend information, and documentation to provide sound direction to help the Township develop marketing policy and target potential new businesses and industry. 					



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Shoreline Management Plan	No	-	Yes – if located in a coastal zone	-	-
Comment:					
<ul style="list-style-type: none"> NJ Coastal Area Facility Review Act (N.J.S.A. 13:19) or CAFRA regulates almost all development along the coast for activities including construction, relocation, and enlargement of buildings or structures, and excavation, grading, shore protection structures, and site preparation. This law is implemented through NJ's Coastal Zone management Rules N.J.A.C. 7:7E-1 et seq. 					
Community Wildfire Protection Plan	No	-	No	-	-
Comment:					
Community Forest Management Plan	Yes	Local	No	Yes	-
Comment:					
<ul style="list-style-type: none"> Community Forestry Management Plan, submitted to the State 08-18-2017. The inventory database and mapping will aid in the tree hazard assessment that will be methodically conducted. The focus of this assessment is to identify hazardous trees occurring in close proximity to "targets" or areas of risk, in addition to invasive trees. In the interim, the organizational structure within the Township, principally through the Offices of the Mayor and Department of Public Works, in addition to the Shade Tree Commission, will report hazardous tree conditions to the Superintendent of Public Works. This Department will take corrective actions to address the hazardous tree conditions The storm damage assessment is treated concurrently with CSIP# 5 and #6. The tree inventory provides the database and mapping to monitor the tree resources. The adoption of the Plan, including the Township organizational structure and Shade Tree Commission supported by the Department of Public Works, has positioned the Township to respond to storm damage. The inventory and assessments described in the Plan function as a pre-storm assessment. Because of the intensity of the coastal storms and exposure of the Township, all Township tree resources are at risk. The Department of Public Works is experienced in addressing these challenges, and intends to continue with planning updates and training. The Plan provides the opportunity to evaluate the policies and procedures used by the Township. 					
Transportation Plan	Yes	State & Local	No	Yes	-
Comment:					
<ul style="list-style-type: none"> Transportation Improvement Study, dated July 2011. The primary purpose of this study is to evaluate the transportation conditions and roadway network in Middle Township and propose strategies to enhance mobility for the different travel modes in the Centers of Cape May Court House and Rio Grande/Whitesboro/Burleigh. To address issues identified in the study, a wide range of recommendations were made to enhance mobility and safety for vehicular, transit, bicycle and pedestrian modes in Middle Township. 					
Agriculture Plan	Yes	Local	No	No	-
Comment:					
<ul style="list-style-type: none"> This is an Ordinance, Farming, Chapter 139 adopted by the Township Committee 07-18-1991 In accordance with purposes and preambles set forth in this Chapter, the following farming activities (produce agricultural and horticultural crops, trees and forest products, livestock, poultry and other related commodities) shall be deemed established as acceptable, recognized and entitled to encouragement and protection as the collective embodiment of the "right to farm," subject in all cases, however, to any supervening applicable federal, state or county laws or regulations respecting the public health, safety or otherwise. 					
Climate Action Plan	Yes	Local	No	Yes	-
Comment:					
<ul style="list-style-type: none"> Getting to Resilience Recommendation Report, prepared August 2016. The Plan's recommendations include; Amend the township's Flood Damage Prevention Ordinance to include New Jersey's required freeboard, or higher, if deemed appropriate; Enroll in the NFIP Community Rating System (CRS) program; Review all the automated responses provided in the township's Getting to Resilience Linkages Report; Ensure the municipality's history of coastal flood hazards and disasters are fully documented, and establish a procedure for documenting future flood impacts; Document community assets subject to impacts from future flood hazards in the multi-jurisdictional hazard mitigation plan. 					
Tourism Plan	No	-	No	-	-
Comment:					
Business Development Plan	Yes	Local	No	No	-
Comment:					



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<ul style="list-style-type: none"> Market Analysis, dated March 2013. This report offers data, background and a generalized analysis of the Middle Township economy and market. It is not a comprehensive market study. It does, however, offer sufficient analysis, trend information, and documentation to provide sound direction to help the Township develop marketing policy and target potential new businesses and industry 	No	-	No	-	-
Other					
Comment:					
<ul style="list-style-type: none"> 					
Response/Recovery Planning					
Comprehensive Emergency Management Plan (CEMP) / Emergency Operations Plan (EOP)	Yes	Local	Yes	Yes	-
Comment:					
<ul style="list-style-type: none"> Each county and municipality in the State shall prepare a written Emergency Operations Plan with all appropriate annexes necessary to implement the plan. Each Emergency Operations Plan shall be adopted no later than one year after the State Emergency Planning Guidelines have been adopted by the State Office of Emergency Management and shall be evaluated at such subsequent scheduled review of the State Emergency Operations Plan. L.1989, c.222, s.19. The Municipal Emergency Manager, with support from County OEM and New Jersey OEM, continue to develop, enhance, and implement existing emergency plans. Township is currently working on updating their EOP. 					
Threat & Hazard Identification & Risk Assessment (THIRA)	Yes	Local	No	Yes	-
Comment:					
<ul style="list-style-type: none"> Municipal Coastal Vulnerability Assessment, dated August 2016. The CVA process is a methodical, step-by-step approach for conducting a comprehensive vulnerability assessment of coastal flooding hazards. It identifies the vulnerability of community assets (identified by the municipality) to a series of future flood hazard scenarios, and the associated consequences to the community. The CVA goes beyond a simple analysis of flooding extent and duration by also examining how flooding will affect the functional capacity of buildings, services, infrastructure, businesses, ecological systems, and residents. The three key steps of the CVA are; Identify and map community assets and selected coastal flood hazard scenario(s); Evaluate the vulnerability of community assets; and Evaluate the overall consequences to the community. 					
Post-Disaster Recovery Plan	No	-	No	-	-
Comment:					
Continuity of Operations Plan	Yes	Local	No	No	-
Comment:					
Public Health Plan	No	-	No	-	-
Comment:					
Other	No	-	No	-	-
Comment:					

Table 9.7-4. Development and Permitting Capability

Criterion	Response
Does your jurisdiction issue development permits? - If no, who does? If yes, which department?	Yes – Construction Dept.
Does your jurisdiction have the ability to track permits by hazard area?	No
Does your jurisdiction have a buildable lands inventory? -If yes, please describe briefly. -If no, please quantitatively describe the level of buildout in the jurisdiction.	No





ADMINISTRATIVE AND TECHNICAL CAPABILITY

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

Table 9.7-5. 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 Advisory Board
Economic Development Commission / Committee	Yes	Economic Development Council
Warning Systems / Services (reverse 911, outdoor warning signals)	Yes	Police Dept./ Emergency Services
Maintenance program to reduce risk	No	-
Mutual aid agreements	Yes	Cape May County Emergency Management. The Township OEM Coordinator creates, enhance, maintain mutual aid agreements with neighboring communities.
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	Yes	Planning & Zoning Department
Engineers or professionals trained in building or infrastructure construction practices	Yes	Construction Department
Planners or engineers with an understanding of natural hazards	Yes	Contract support
Staff with training in benefit/cost analysis	Yes	Administrator
Staff with training in green infrastructure	Yes	Township Engineer
Staff with education/knowledge/training in low impact development	Yes	Township Engineer
Surveyor	Yes	Contract Support
Stormwater engineer	Yes	Contract Support
Personnel skilled or trained in GIS applications	No	-
Local or state water quality professional	Yes	This is handled by the Cape May County Health Dept.
Scientist familiar with natural hazards in local area	No	-
Emergency manager	Yes	Emergency Management Coordinator
Watershed planner	No	-
Environmental specialist	No	-
Grant writers	Yes	Grants/Econ Dev. Coordinator
Resilience Officer	No	-
Other	No	-

FISCAL CAPABILITY

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

Table 9.7-6. Fiscal Capabilities

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants (CDBG, CDBG-DR)	Yes





Financial Resource	Accessible or Eligible to Use?
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes-sewer
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	Yes
Withhold Public Expenditures in Hazard-Prone Areas	No
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	No
Clean Water Act 319 Grants (Nonpoint Source Pollution)	No
Other	No

EDUCATION AND OUTREACH CAPABILITY

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

Table 9.7-7. Education and Outreach Capabilities

Criterion	Response
Do you have a public information officer or communications office?	Yes – Laura Bishop Communications LLC
Do you have personnel skilled or trained in website development?	Yes – Lee Ann Russ
Do you have hazard mitigation information available on your website? -If yes, briefly describe.	No
Do you use social media for hazard mitigation education and outreach? -If yes, briefly describe.	No
Do you have any citizen boards or commissions that address issues related to hazard mitigation? -If yes, briefly describe.	Yes – Planning and Zoning Board
Do you have any other programs already in place that could be used to communicate hazard-related information? If yes, briefly describe.	Yes – Nixle and Social Media Platforms

COMMUNITY CLASSIFICATIONS

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

Table 9.7-8. Community Classifications

Program	Participating?	Classification	Date Classified
Community Rating System	No	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	No	-	-
Public Protection (Fire ISO Protection Class)	Yes	Unknown	Unknown
Storm Ready Certification	No	-	-
Firewise Community Classification	No	-	-
Sustainable Jersey	Yes	Bronze	03/07/2012

ADAPTIVE CAPACITY

Adaptive capacity is defined as “the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or respond to consequences” (IPCC 2014). In other words, it describes a jurisdiction’s current ability to adjust to, protect from, or withstand a hazard event. This term is often discussed in reference to climate change; however, adaptive capacity also includes an understanding of





local capacity for adapting to current and future risks and changing conditions. The table below summarizes the adaptive capacity for each hazard and the jurisdiction’s rating.

Table 9.7-9. Adaptive Capacity

Hazard	Adaptive Capacity (Capabilities) – Strong/Moderate/Weak
Climate Change and SLR	Moderate
Coastal Erosion	Moderate
Disease Outbreak	Moderate
Drought	Moderate
Flood	Moderate
Hurricane	Moderate
Nor’Easter	Moderate
Severe Weather	Moderate
Severe Winter Weather	Strong
Tsunami	Moderate
Wildfire	Moderate

Notes:

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

Weak = 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 9.7-10. National Flood Insurance Program Compliance

Criterion	Response
What local department is responsible for floodplain management?	Construction Office
Who is your floodplain administrator? (name, department/position)	Salvatore DeSimone, Construction Official/ Floodplain Manager
Are any certified floodplain managers on staff in your jurisdiction?	Yes
What is the date that your flood damage prevention ordinance was last amended?	September 6, 2017
Does your floodplain management program meet or exceed minimum requirements? -If exceeds, in what ways?	Yes. We do plan review for Development Permits in flood zones
When was the most recent Community Assistance Visit or Community Assistance Contact?	May 2019
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? -If so, state what they are.	Yes. Incorrect number of vents
Are any RiskMAP projects currently underway in your jurisdiction? If so, state what they are.	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction? -If no, state why.	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program? - If so, what type of assistance/training is needed?	Yes. Training closer to our County would be helpful
Does your jurisdiction participate in the Community Rating System (CRS)? -If yes, is your jurisdiction interested in improving its CRS Classification? -If no, is your jurisdiction interested in joining the CRS program?	No, but we would like to join
How many flood insurance policies are in force in your jurisdiction?*	920 policies
-What is the insurance in force? -What is the premium in force?	
How many total loss claims have been filed in your jurisdiction?*	757 claims
-How many claims are still open or were closed without payment?	\$9,372,842





Criterion	Response
-What were the total payments for losses?	
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?	No

*According to FEMA statistics as of October 2020

ADDITIONAL AREAS OF EXISTING INTEGRATION

- **Sustainable Jersey:** Middle Township is a bronze certified community in the Sustainable Jersey program. Actions that scored points in the program that relate to hazard mitigation include the following:
 - **Climate Adaptation for Flooding Risk:** The Township formed a committee to address the following items with the help of the New Jersey Department of Environmental Protection. This action included the Township Public Works, our Construction Official, Grants Coordinator, Emergency Management Officer and the Business Administrator. Primary Tasks included the following
 - *Coastal Vulnerability Assessments:* The project will offer assistance to coastal communities to perform a Coastal Vulnerability Assessment (CVA) identifying vulnerabilities to coastal hazards based on existing tools developed by the NJ Coastal Management Program including a map depicting relative vulnerability to coastal hazards.
 - *Municipal Hazard Planning Actions:* The project will identify appropriate potential municipal actions to the identified coastal hazards. This New Jersey-specific document is intended to identify potential planning actions, tools, and best management practices for communities to consider in their planning efforts – with particular consideration of New Jersey’s existing regulatory requirements.
 - *Resiliency Planning:* This task funds the direct involvement of project partners with coastal communities to provide direct planning and technical support. JC NERR will provide direct assistance to municipalities to run the Getting to Resilience (GTR) tool, a facilitated questionnaire that assists communities identify gaps in existing planning and policy, and provides recommendations for planning-level responses, as well as links to other programs such as the Community Rating System. UCI, Sustainable Jersey, and NJ Future will provide communities with planning support and assist in the identification of vulnerabilities and appropriate responses, utilizing the CVA and compendium of municipal actions.
 - *NJ Coastal Management Program:* Based on the results and experience of project partners, the NJ Coastal Management Program will consider proposed changes to the Program’s enforceable actions pursuant to the Coastal Zone Management Act.
 - **Emergency Communications Planning:** The Township has an Emergency Operations Manager who oversees communications in case of an emergency. The Township also works in conjunction with the County of Cape May for seamless information sharing.

9.7.5 Hazard Event History Specific to the Jurisdiction

Cape May County has a history of hazard events, as detailed in Section 5 (Risk Assessment) of this plan. A summary of historical events is provided in each of the hazard profiles in Section 5.4 (Hazard Profiles) and includes a chronology of events that affected Cape May County and its jurisdictions. The Township of Middle’s history of federally-declared (as presented by FEMA) and significant hazard events (as presented in NOAA-NCEI) is consistent with that of Cape May County. Table 9.7-11 provides details regarding municipal-specific



loss and damages the Township experienced during hazard events. Information provided in the table below is based on reference material or local sources.

Table 9.7-11. Hazard Event History

Date(s) of Event	Event Type (disaster declaration if applicable)	Cape May County Designated?	Summary of Event	Summary of Local Damages and Losses
January 22, 2016 - January 24, 2016	DR-4264: Severe Winter Weather and Snowstorm	Yes	A major nor'easter, produced record snowfall and blizzard conditions in parts of New Jersey on January 23 rd and 24 th .	Although the County was impacted, the Township did not receive damages.
January 20, 2020 and continuing	EM-3451, DR-4488: COVID-19 Pandemic	Yes	The coronavirus pandemic resulted in the need for shutdowns and social distancing and mask requirements.	The Township was subject to masking and social distancing restrictions and business /school closures due to coronavirus.

Source: NOAA NCEI 2020, FEMA 2020

9.7.6 Jurisdiction-Specific Vulnerabilities and Hazard Ranking

The hazard profiles in Section 5 (Risk Assessment) provide detailed information regarding each plan participant’s vulnerability to the identified hazards. A gradient of certainty was developed to summarize the confidence level regarding the input used to populate the hazard ranking. Refer to Section 5.1 (Methodology) and Section 5.3 (Hazard Ranking) for a detailed summary for the Township of Middle risk assessment results and data used to determine the hazard ranking.

REPETITIVE FLOOD LOSSES

The table below summarizes the repetitive and severe repetitive flood losses in the Township of Middle.

- Number of repetitive loss (RL) properties: 79
- Number of severe repetitive loss (SRL) properties: 14
- Number of RL/SRL properties that have been mitigated: 21

Source: NFIP FEMA Region 2, 2020

Note: The number of SRL properties excludes RL properties.

CRITICAL FACILITIES

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

Table 9.7-12. Potential Flood Losses to Critical Facilities and Lifelines

Name	Type	Exposure	
		1% Event	0.2% Event
No Name	Communications Facility		X
Cape May County Correctional Center	County Facilities		X
Compost Plant	County Facilities		X
MIDDLE TOWNSHIP HIGH SCHOOL	Education		X
CAPE MAY COUNTY TECHNICAL	Education		X
Ocean Academy	Education		X
GOSHEN VOLUNTEER FIRE COMPANY	Fire Stations		X
KING NUMMY CG-WELLS 5 &	Potable Water Facilities		X
HIDEAWAY BEACH CONDO ASSOC	Potable Water Facilities		X
OLD STAGECOACH CG-WELL #	Potable Water Facilities		X
WM OF NJ INC - MIDDLE MAR-TEE LANDFILL	Superfund Sites		X





Name	Type	Exposure	
		1% Event	0.2% Event
Gravens Thorofare Bridge	Bridge	X	X
Ingrams Thorofare Bridge	Bridge	X	X
Leonards Thorofare Bridge	Bridge	X	X
Scotch Bonnet Bridge	Bridge	X	X
Great Channel Bridge	Bridge	X	X
Grassy Sound Bridge (CMCBC)	Bridge	X	X
Hand Avenue Bridge	Bridge	X	X
96th. Street Bridge	Bridge	X	X
No Name	Communications Facility	X	X
No Name	Communications Facility	X	X
Public Safety Training Center	County Facilities	X	X
Chambers of Commerce	County Facilities	X	X
Park Commission South	County Facilities	X	X
Nummytown Mill Pond Dam	Dams	X	X
Beaver Club Dam	Dams	X	X
Rutgers Cape Shore Laboratory	Education	X	X
Fire Marshal	Fire Stations	X	X
Dad's Place Marina	Marinas	X	X
Grassy Sound Marina	Marinas	X	X
Pier 47, Inc.	Marinas	X	X
Bayway Marina	Marinas	X	X
Avalon Point Marina	Marinas	X	X
Avalon Anchorage	Marinas	X	X
Stone Harbor Marina	Marinas	X	X
Smokey's Marina	Marinas	X	X
Scotch Bonnet Marina	Marinas	X	X
WILDWOOD GOLF & CC CLUB H	Potable Water Facilities	X	X
WILDWOOD GOLF & CC MAINT	Potable Water Facilities	X	X
KING NUMMY CG-WELLS 3 &	Potable Water Facilities	X	X
CAPE MAY TECHNICAL SCHOOL	Superfund Sites	X	X
Old Avalon Rd Pump Station	Wastewater Treatment Facilities	X	X
Stone Harbor Pump Station	Wastewater Treatment Facilities	X	X
Maryland St Pump Station	Wastewater Treatment Facilities	X	X
Route 47 Wwtp	Wastewater Treatment Facilities	X	X

Source: FEMA DFIRM 2014/2017; Cape May County 2020

IDENTIFIED ISSUES

The jurisdiction has identified the following vulnerabilities within their community:

- The Township has 79 repetitive loss properties and 14 severe repetitive loss properties that require mitigation.
- Frequent tidal flooding affects various roadways, impacting access to residences and businesses and restricting emergency access.
- Numerous roadways in Middle Township are not wide enough to accommodate heavy traffic that would be expected during evacuation.
- Numerous roadways in Middle Township are impacted by flooding and potential drainage issues. The exact causes of flooding and the potential solutions have not yet been identified. These roadways are County owned.
- South Dennis Road experiences stormwater flooding. The road lacks a stormwater system. The road is county owned.
- Municipal buildings require protection from storm damages to ensure continuity of operations.
- Flooding is a recurring issue in the Reeds Beach area of the Township, impacting residential properties.
- The Township has elevated wildfire risk. Water drawn stations are limited in certain areas.





- Stormwater flooding is an issue on Goshen Road (CR615) from Johnson Lane to Church Street in Middle Township.
- The Township has significant flood risk but works to offer various floodplain administrative services that go beyond the requirements of the NFIP.
- Ocean Drive is a County roadway which requires protections from flood damage.
- The Township lacks a debris management plan.

HAZARD AREA EXTENT AND LOCATION

Hazard area extent and location maps were generated for the Township of Middle 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 Middle has significant exposure. A map of the Township of Middle hazard area extent and location is provided on the following page. This map indicates the location of the regulatory floodplain, as well as identified critical facilities within the municipality.

HAZARD RANKING

This section includes the community specific identification of the primary hazard concerns based on identified problems, impacts and the results of the risk assessment as presented in Section 5 (Risk Assessment). The ranking process involves an assessment of the likelihood of occurrence for each hazard; its potential impacts on people, property, and the economy; 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 5.3 (Hazard Ranking), each plan participant may have differing degrees of risk exposure and vulnerability compared to Cape May County as a whole. Therefore, each jurisdiction ranked the degree of risk to each hazard as it pertains to their community factoring in their capabilities to withstand impacts and rebound after the event. The table below summarizes the hazard rankings of potential natural hazards for the Township of Middle. The Township of Middle has reviewed the Cape May County hazard ranking table and has provided input to 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 assented to the hazard ranking.

Table 9.7-13. Township of Middle Hazard Ranking Input

Climate Change and SLR	Coastal Erosion	Disease Outbreak	Drought	Flood	Hurricane
Medium	Medium	Medium	Medium	High	High
Nor'Easter	Severe Weather	Severe Winter Weather	Tsunami	Wildfire	
High	High	High	Low	High	

9.7.7 Mitigation Strategy and Prioritization

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

PAST MITIGATION INITIATIVE STATUS





The following table summarizes the jurisdiction’s progress on their mitigation strategy identified in the 2015 HMP. Actions that are carried forward as part of this plan update are included in the following subsection in its own table with prioritization. Previous actions that are now on-going programs and capabilities are indicated as such in the following table and can also be found under ‘Capability Assessment’ presented previously in this annex.

Table 9.7-14. 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 2021 HMP Update?	
				Check if Yes	Enter 2021 HMP Action #
TM-1a	Property Mitigation Support – Retrofit	Township (likely through NFIP Floodplain Administrator)	In progress	X	2021-MiddleTwp-001
TM-1b	Property Mitigation Support – Acquisition/Relocation	Township (likely through NFIP Floodplain Administrator)	No progress	X	2021-MiddleTwp-001
TM-2 [former TM-2 and TM-4 (CMC-2)]	Continue to maintain compliance with, and good-standing in the National Flood Insurance program, as well as continued evaluation of entering the CRS program in consideration of local resources to support the program and the overall benefits to NFIP insured property owners.	Township (likely through NFIP Floodplain Administrator)	In progress	X	2021-MiddleTwp-011
TM-3 (former TM-3)	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 7.0.	Township (through mitigation planning point of contacts)	Ongoing capability		
TM-4 (former TM-4)	Continue to develop, enhance, and implement existing emergency plans. Township is currently working on updating their EOP.	Municipal Emergency Manager with support from County OEM and NJ OEM	Ongoing capability		
TM-5 (former TM-5)	Create/enhance/ maintain mutual aid agreements with neighboring communities.	Township OEM Coordinator	Ongoing capability		
TM-6 (former TM-7)	Support County-wide initiatives identified in Section 9.1 of the County Annex. Support county-wide initiatives identified in the Cape May County Hazard Mitigation Plan.	Local departments (as applicable for specific initiative)	Ongoing capability		
TM-7 (former TM-8)	Purchase back-up generator to supply back-up power to the regional shelter located at Elementary #2 School.	School Board, as supported by Township (grant funding)	No progress		



Table 9.7-14. 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 2021 HMP Update?	
				Check if Yes	Enter 2021 HMP Action #
	Continue to seek available grant funding.				
TM-8 (former TM-9)	Widen the lanes of Route 47 to accommodate more traffic. This heavily trafficked roadway is an essential evacuation route. This project would be a part of a regional project with Dennis Township and Cumberland County.	Middle Township; Dennis Township;	No progress	x	2021-MiddleTwp-003
TM-9 (former TM-10)	Widen the lanes on Courthouse Dennisville Road to accommodate more traffic. This heavily trafficked roadway is an essential evacuation route.	Cape May County; Cumberland County; State of New Jersey	No progress	X	2021-MiddleTwp-003
TM-10 (former TM-11)	Widen the lanes on Indian Trail Road (County Road). This heavily trafficked roadway is an essential evacuation route.	Middle Township; Cape May County	No progress	X	2021-MiddleTwp-003
TM-11 (former TM-12)	Elevate Beach Avenue on Reeds Beach to mitigate flooding.	Middle Township; Cape May County	No progress	X	2021-MiddleTwp-002
TM-12 (former TM-13)	Purchase and install hurricane shutters on municipal buildings; with high priority to Town Hall.	Middle Township	No progress	X	2021-MiddleTwp-006
TM-13 (former TM-14)	Bulkheads on Reeds Beach to mitigate flooding in residential area which will mitigate flooding for approximately 30 homes.	Middle Township	In progress	X	2021-MiddleTwp-007
TM-14 (former TM-15)	Elevate Springer's Mill Road to mitigate flooding	Middle Township	No progress	X	2021-MiddleTwp-002
TM-15 (former TM-16)	Connect Grassy Sound's sewers to public sewer system. The existing sewer system consists of an above-ground tank that is vulnerable to flooding. This would be a multi-jurisdictional effort with North Wildwood.	Cape May County	Completed		
TM-16 (former TM-17)	Elevate Route 9 by High Tech in Edgewood to mitigate flooding.	North Wildwood; Middle Township	No progress	X	2021-MiddleTwp-002
TM-17 [former (CMC-9)]	Elevate Route 47 roadway and ramps, which will require elevating the Garden State Parkway bridge overpass (intersection of State Route	Middle Township; State of New Jersey	No progress	X	2021-MiddleTwp-002



Table 9.7-14. 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 2021 HMP Update?	
				Check if Yes	Enter 2021 HMP Action #
	47 and Garden State Parkway)				
TM-18 [former (CMC-12)]	Elevate Route 147 roadway and ramps, which will require elevating the Garden State Parkway bridge overpass (intersection of State Route 147 and Garden State Parkway)	NJ DOT; New Jersey Turnpike Authority	No progress	X	2021-MiddleTwp-002
TM-19 [former (CMC-20)]	As an interim project prior to implementation of TM-21 below, elevate the Avalon Boulevard northbound onramp to the GSP (chronic problem area and critical for evacuation)	NJ DOT; New Jersey Turnpike Authority	No progress, County and State Road	X	2021-MiddleTwp-002
TM-20 [former (CMC-21)]	Elevate Avalon Blvd roadway and ramp, which will require elevating the Garden State Parkway bridge overpass (intersection of Avalon Blvd and Garden State Parkway)	County Engineering with NJTPA	No progress, County and State Road	X	2021-MiddleTwp-002
TM-21 (former TM-22)	Identify and install proper locations for and install water drawn stations (siphons) to increase fire-fighting capabilities.	NJ DOT; New Jersey Turnpike Authority	No progress	X	2021-MiddleTwp-008
TM-22 [former (CMC-17 and TL-16)]	Elevate CR-603 (Bayshore Road) through Lower and Middle Townships through Fishing Creek Swamp. County to advise as to status of this project	Township	No progress	X	2021-MiddleTwp-002
TM-23 [former (CMC-22, Avalon)]	Elevate Avalon Boulevard from Parkway into Avalon proper (~2.5 miles).	Cape May County	No progress, County Road	X	2021-MiddleTwp-002
TM-24 [former (CMC-43)]	Conduct an engineering study to understand flooding issues and evaluate possible solutions along the entire length of Shunpike Road (CR620) in Middle Township	County Engineering		X	2021-MiddleTwp-004
TM-25 [former (CMC-50)]	Conduct an engineering study to understand flooding issues and evaluate possible solutions at low areas along Satt Boulevard (CR626) in Middle Township	County Engineering with municipal support		X	2021-MiddleTwp-004
TM-26 [former (CMC-51)]	Conduct an engineering study to understand flooding issues and evaluate possible solutions along Railroad	County Engineering with municipal support		X	2021-MiddleTwp-004



Table 9.7-14. 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 2021 HMP Update?	
				Check if Yes	Enter 2021 HMP Action #
	Avenue (CR626) in Middle Township				
TM-27 [former (CMC-53)]	Conduct an engineering study to understand flooding issues and evaluate possible solutions along Dias Creek Road (CR612) in Middle Township	County Engineering with municipal support		X	2021-MiddleTwp-004
TM-28 [former (CMC-54)]	Conduct an engineering study to understand flooding issues and evaluate possible solutions along Indian Trail Road (CR618) in Middle Township	County Engineering with municipal support		X	2021-MiddleTwp-004
TM-29 [former (CMC-55)]	Conduct an engineering study to understand flooding issues and evaluate possible solutions along Goshen-Swainton Road (CR646) in Middle Township	County Engineering with municipal support		X	2021-MiddleTwp-004
TM-30 [former (CMC-62)]	Install shore/roadway protection along Ocean Drive (CR619) in Middle Township	County Engineering with municipal support		X	2021-MiddleTwp-012
TM-31 [former (CMC-63)]	Construction of storm drain pipe to minimize flooding on Goshen Road (CR615) from Johnson Lane to Church Street in Middle Township	County Engineering with municipal support		X	2021-MiddleTwp-009
TM-32 [former (CMC-64)]	Construction of storm sewer system to alleviate flooding on Court House – South Dennis Road (CR657) from Village Drive to College Drive in Middle Township	County Engineering with municipal support		X	2021-MiddleTwp-005
TM-33 (former TM-34 (CMC-69))	Become a National Fire Protection Association (NFPA) “Firewise” community.	Local Fire Chiefs working with County Fire Coordinator		X	2021-MiddleTwp-010
TM-34 (former TM-35)	Enhanced Wildfire Public Awareness and Education	Local Fire Chiefs		X	2021-MiddleTwp-010

In addition to the above progress, the Township of Middle identified the following mitigation projects/activities that were completed but not identified in the 2015 HMP mitigation strategy:

- The Township installed a generator at the MLK Center.

PROPOSED HAZARD MITIGATION INITIATIVES FOR THE PLAN UPDATE

The Township of Middle participated in a risk assessment workshop in September 2020 in which detailed information was provided about assets exposed and vulnerable to the identified hazards of concern. The





Township of Middle participated in a mitigation action workshop in October 2020 and was provided a Mitigation Toolbox that included a mitigation catalog developed specifically for Cape May 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 F (Mitigation Strategy Supplement) provide a more complete description of the Mitigation Toolbox and its resources.

Table 9.7-15 summarizes the comprehensive-range of specific mitigation initiatives the Township of Middle 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*. The table below summarizes the evaluation of each mitigation initiative, listed by action number.

Table 9.7-16 provides a summary of the prioritization of all proposed mitigation initiatives for this HMP update.



Table 9.7-15. Proposed Hazard Mitigation Initiatives

Initiative Number	Mitigation Initiative Name	Description of the Problem and Solution	New or Existing Assets?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Cost	Timeline	Priority	Mitigation Category	CRS Category
2021-MiddleTwp-001	Repetitive Loss Mitigation	<p>Problem: The Township has 79 repetitive loss properties and 14 severe repetitive loss properties that require mitigation.</p> <p>Solution: The Township will conduct outreach to the RL/SRL property owners and provide information on mitigation alternatives. After preferred mitigation measures are identified, collect required property-owner information and develop a FEMA grant application and BCA to obtain funding to implement acquisition/purchase/moving/elevating residential homes in the flood prone areas that experience frequent flooding (high risk areas).</p>	Existing	Flood, Severe Weather	1	NFIP Floodplain Administrator, supported by homeowners	FEMA HMGP and FMA, BRIC, local cost share by residents	Eliminates flood damage to homes and residents, creates open space for the municipality increasing flood storage.	\$10M	3 years	High	SIP	PP
2021-MiddleTwp-002	Roadway Elevations	<p>Problem: Frequent tidal flooding affects various roadways, impacting access to residences and businesses and restricting emergency access.</p> <p>Solution: The Township will elevate the following roadways. Roadway elevation designs will be determined via engineering studies and cost benefit analyses for each roadway. Projects involving County or State Roadways will involve the County or State leading or cooperating in order to proceed:</p> <ul style="list-style-type: none"> • Pierces Point Road • Springer's Mill Road • Beach Avenue on Reeds Beach • Avalon Boulevard from Parkway into Avalon proper (~2.5 miles), which will require elevating the Garden State Parkway bridge overpass 	Existing	Flood, Severe Weather, Climate Change and Sea Level Rise	1, 6	Borough Engineer, County	HMGP, BRIC, Township budget, County budget	Prevent or reduce flooding on roadways	High	Within 5 years	Medium	SIP	PP



Table 9.7-15. Proposed Hazard Mitigation Initiatives

Initiative Number	Mitigation Initiative Name	Description of the Problem and Solution	New or Existing Assets?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Cost	Timeline	Priority	Mitigation Category	CRS Category
		<p>(intersection of Avalon Blvd and Garden State Parkway)</p> <ul style="list-style-type: none"> Route 9 by High Tech in Edgewood Route 47 roadway and ramps, which will require elevating the Garden State Parkway bridge overpass (intersection of State Route 47 and Garden State Parkway) Route 147 roadway and ramps, which will require elevating the Garden State Parkway bridge overpass (intersection of State Route 147 and Garden State Parkway) CR-603 (Bayshore Road) through Lower and Middle Townships through Fishing Creek Swamp 											
2021-MiddleTwp-003	Widen Roadways to Support Evacuations	<p>Problem: Numerous roadways in Middle Township are not wide enough to accommodate heavy traffic that would be expected during evacuation.</p> <p>Solution: The Township will widen the lanes of roadways to accommodate more traffic. The roadways targeted will include the following:</p> <ul style="list-style-type: none"> Dennisville Road Indian Trail Road (County Road) Route 47 (part of a regional project with Dennis Township and Cumberland County) 	Existing	All hazards	1, 4, 6	Engineer, Cape May County, Dennis Township, Cumberland County	HMGP, BRIC, PDM, County budget, Township budget	Increased evacuation capabilities	High	Within 5 years	High	SIP	PP, ES





Table 9.7-15. Proposed Hazard Mitigation Initiatives

Initiative Number	Mitigation Initiative Name	Description of the Problem and Solution	New or Existing Assets?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Cost	Timeline	Priority	Mitigation Category	CRS Category
2021-MiddleTwp-004	Flood Studies	<p>Problem: Numerous roadways in Middle Township are impacted by flooding and potential drainage issues. The exact causes of flooding and the potential solutions have not yet been identified. These roadways are County owned.</p> <p>Solution: The Township will work with the County to conduct engineering studies to better understand flooding issues and evaluate possible solutions at the following flooding hotspots. The Township will then support the County in the implementation of identified solutions.:</p> <ul style="list-style-type: none"> • Shunpike Road (CR620) • Satt Boulevard (CR626) • Railroad Avenue (CR626) • Dias Creek Road (CR612) • Indian Trail Road (CR618) • Goshen-Swainton Road (CR646) 	Existing	Flood, Severe Weather	1, 6	County, Township Administration	County budget	Flood issues identified,	Township staff time	Within 5 years	High	SIP	PP, SP
2021-MiddleTwp-005	Stormwater on South Dennis Road	<p>Problem: South Dennis Road experiences stormwater flooding. The road lacks a stormwater system. The road is county owned.</p> <p>Solution: The Township will support the County's construction of storm sewer system to alleviate flooding on Court House – South Dennis Road (CR657) from Village Drive to College Drive in Middle Township</p>	Existing	Flood, Severe Weather	1, 6	County, Township Administration	County budget	Reduction in stormwater flooding	Township staff time	Within 5 years	High	SIP	SP
2021-MiddleTwp-006	Retrofit Municipal Buildings for Storms	<p>Problem: Municipal buildings require protection from storm damages to ensure continuity of operations.</p> <p>Solution: The Township will purchase and install hurricane shutters on municipal buildings; with high priority to Town Hall.</p>	Existing	Hurricane, Nor'Easter, Severe Weather, Severe Winter Weather	1, 3, 4	OEM	FEMA HMGP, BRIC, USDA Community Facilities Grant Program,	Reduction in wind damages	Medium	Within 5 years	High	SIP	PP



Table 9.7-15. Proposed Hazard Mitigation Initiatives

Initiative Number	Mitigation Initiative Name	Description of the Problem and Solution	New or Existing Assets?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Cost	Timeline	Priority	Mitigation Category	CRS Category
							Emergency Management Performance Grants (EMPG) Program, Town Budget						
2021-MiddleTwp-007	Reeds Beach Bulkheads	<p>Problem: Flooding is a recurring issue in the Reeds Beach area of the Township, impacting residential properties.</p> <p>Solution: The Township will install bulkheads on Reeds Beach to mitigate flooding in residential area which will mitigate flooding for approximately 30 homes.</p>	Existing	Flood, Hurricane and Tropical Storm, Nor'Easter, Coastal Erosion, Climate Change and Sea Level Rise	1	Engineer	HMGP, BRIC, Township budget	Reduction in flood risk	High	Within 5 years	High	SIP	SP
2021-MiddleTwp-008	Increase Firefighting Capabilities	<p>Problem: The Township has elevated wildfire risk. Water drawn stations are limited in certain areas.</p> <p>Solution: The Township will identify and install proper locations for and install water drawn stations (siphons) to increase fire-fighting capabilities.</p>	New	Drought, Wildfire	1, 4, 6	Engineer, OEM, NJ DOT, New Jersey Turnpike Authority	HMGP, BRIC, Assistance to Firefighters Grant Program, Emergency Management Grant Program, Township budget, NJ DOT, New Jersey Turnpike Authority	Increased emergency response capabilities	High	Within 5 years	High	SIP	PP
2021-MiddleTwp-009	Stormwater Improvements on Goshen Road	<p>Problem: Stormwater flooding is an issue on Goshen Road (CR615) from Johnson Lane to Church Street in Middle Township.</p>	Existing	Flood, Severe Weather	1, 6	County, Township Administration	County budget	Reduction in stormwater flooding	Staff time	Within 5 years	High	SIP	SP



Table 9.7-15. Proposed Hazard Mitigation Initiatives

Initiative Number	Mitigation Initiative Name	Description of the Problem and Solution	New or Existing Assets?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Cost	Timeline	Priority	Mitigation Category	CRS Category
		Solution: The Township will support the construction of a storm drain pipe to minimize flooding on Goshen Road (CR615) from Johnson Lane to Church Street in Middle Township.											
2021-MiddleTwp-010	Join Firewise Program	Problem: The Township has a significant amount of wildfire risk. Solution: The Township will become a National Fire Protection Association (NFPA) "Firewise" community and work to enhance wildfire public awareness and education efforts.	New and Existing	Wildfire	1, 2, 4, 5, 6	Administration, OEM	Township budget	Increased wildfire awareness	Staff time	Within 5 years	High	LPR, EAP	PI
2021-MiddleTwp-011	Join Community Rating System	Problem: The Township has significant flood risk but works to offer various floodplain administrative services that go beyond the requirements of the NFIP. Solution: The Township will join the Community Rating System Program.	New and Existing	Flood	1, 2, 4, 5, 6	NFIP FPA, Administration	Township budget	Reduced flood risk, increasing capabilities, reduced flood insurance premiums	Staff time	Within 5 years	High	LPR	PP, PR, ES, NR, SP, PI
2021-MiddleTwp-012	Shore/Roadway Protection on Ocean Drive	Problem: Ocean Drive is a County roadway which requires protections from flood damage. Solution: The Township will support the County's installation of shore/roadway protection along Ocean Drive (CR619) .	Existing	Flood, Severe Weather	1, 6	County, Township Administration	County budget	Reduction in flooding damages	Staff time	Within 5 years	High	SIP	PP
2021-MiddleTwp-013	Disaster Debris Management Plan	Problem: The Township lacks a debris management plan. Solution: The Township will develop and adopt a Disaster Debris Management Plan.	N/A	All Hazards	4, 6	Administration	Municipal budget	Plan in place for debris management	Staff time	1 year	High	LPR	ES

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
 BRIC Building Resilient Infrastructure and Communities 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 9.7-16. Summary of Prioritization of Actions

Initiative Number	Mitigation Initiative Name	Life Safety	Property Protection	Cost Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community	Total	High / Medium / Low
2021-MiddleTwp-001	Repetitive Loss Mitigation	1	1	1	1	1	1	0	1	0	0	1	0	1	1	10	High ▲
2021-MiddleTwp-002	Roadway Elevations	0	1	1	1	1	0	0	1	1	1	1	0	1	1	10	High
2021-MiddleTwp-003	Widen Roadways to Support Evacuations	0	1	1	1	1	0	0	1	1	1	1	0	1	1	10	High
2021-MiddleTwp-004	Flood Studies	0	1	1	1	1	0	0	1	1	1	1	0	1	1	10	High
2021-MiddleTwp-005	Stormwater on South Dennis Road	0	1	1	1	1	0	0	1	1	1	1	0	1	1	10	High
2021-MiddleTwp-006	Retrofit Municipal Buildings for Storms	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2021-MiddleTwp-007	Reeds Beach Bulkheads	0	1	1	1	1	0	0	1	1	1	1	0	1	1	10	High
2021-MiddleTwp-008	Increase Firefighting Capabilities	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2021-MiddleTwp-009	Stormwater Improvements on Goshen Road	0	1	1	1	1	0	0	1	1	1	1	0	1	1	10	High
2021-MiddleTwp-010	Join Firewise Program	1	1	1	1	1	1	1	1	1	1	0	0	1	1	12	High
2021-MiddleTwp-011	Join Community Rating System	1	1	1	1	1	1	1	1	1	1	0	0	1	1	12	High
2021-MiddleTwp-012	Shore/Roadway Protection on Ocean Drive	1	1	1	1	1	0	0	1	1	1	1	0	1	1	11	High
2021-MiddleTwp-013	Disaster Debris Management Plan	0	1	1	1	1	1	1	1	1	1	1	1	1	1	13	High

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



This action has been identified as being of highest importance to the municipality and an action that the municipality would like to complete as soon as funding is received.





Table 9.7-17. 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
Climate Change and Sea Level Rise		X			X	X	X	X
Coastal Erosion		X			X	X		X
Disease Outbreak (new)		X			X			X
Drought (new)		X			X			X
Flood	X	X	X	X	X	X	X	X
Hurricane		X			X	X		X
Nor' Easter		X			X	X		X
Severe Weather		X			X	X		X
Severe Winter Weather		X			X			X
Tsunami		X			X			X
Wildfire		X	X		X			X

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

RED high ranked hazard

ORANGE medium ranked hazard

YELLOW low ranked hazard



Figure 9.7-1. Township of Middle Hazard Area Extent and Location Map 1

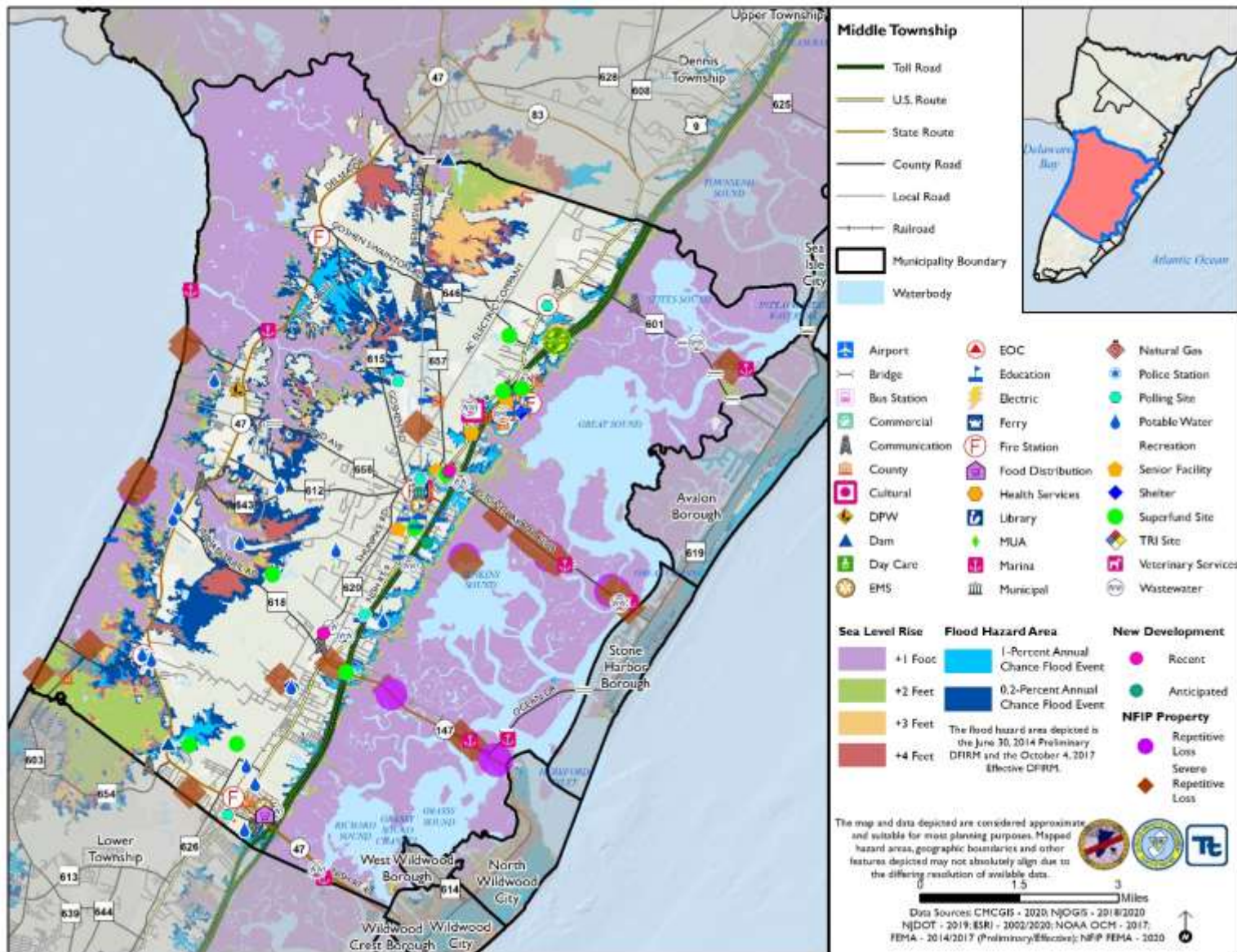




Figure 9.7-2. Township of Middle Hazard Area Extent and Location Map 2

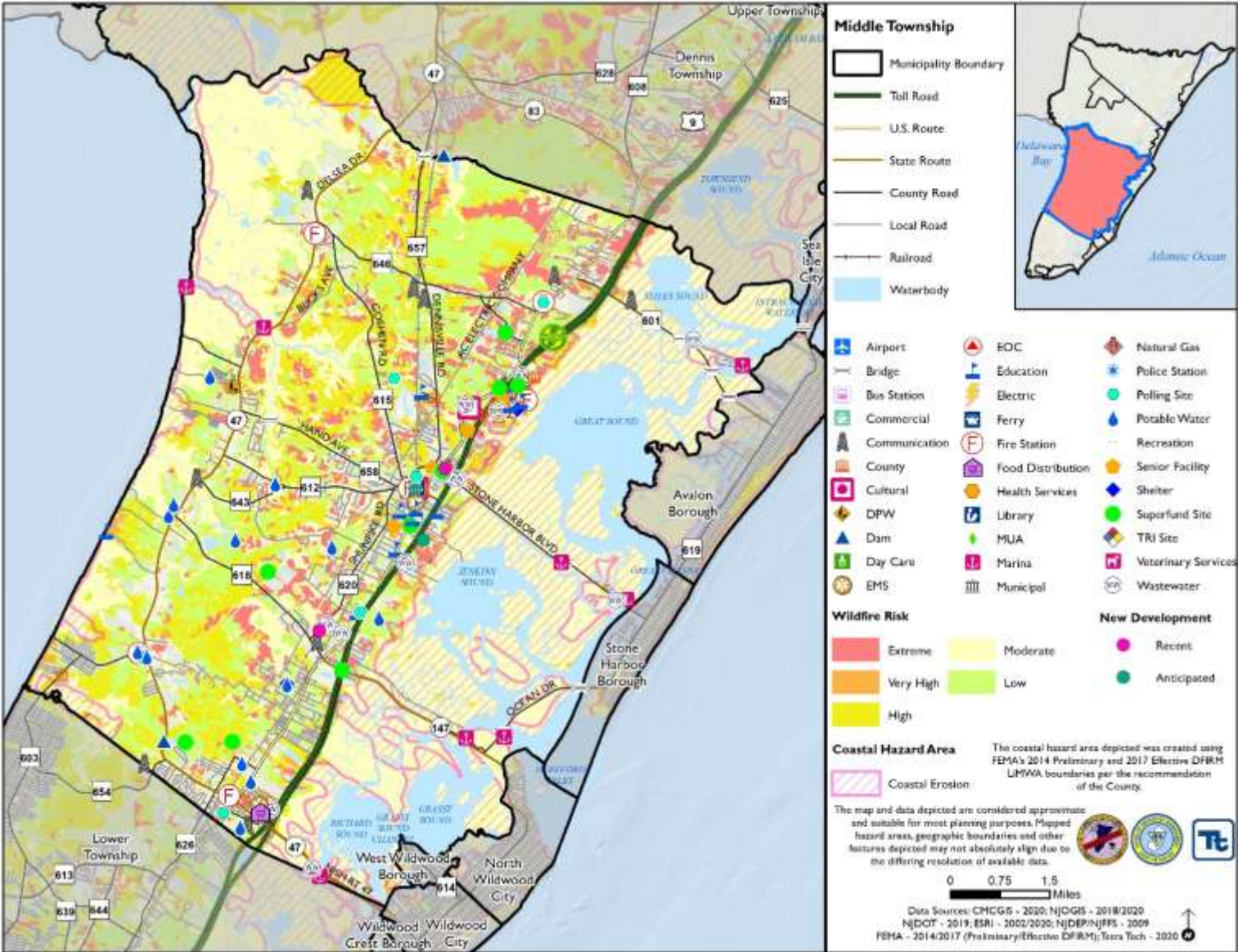
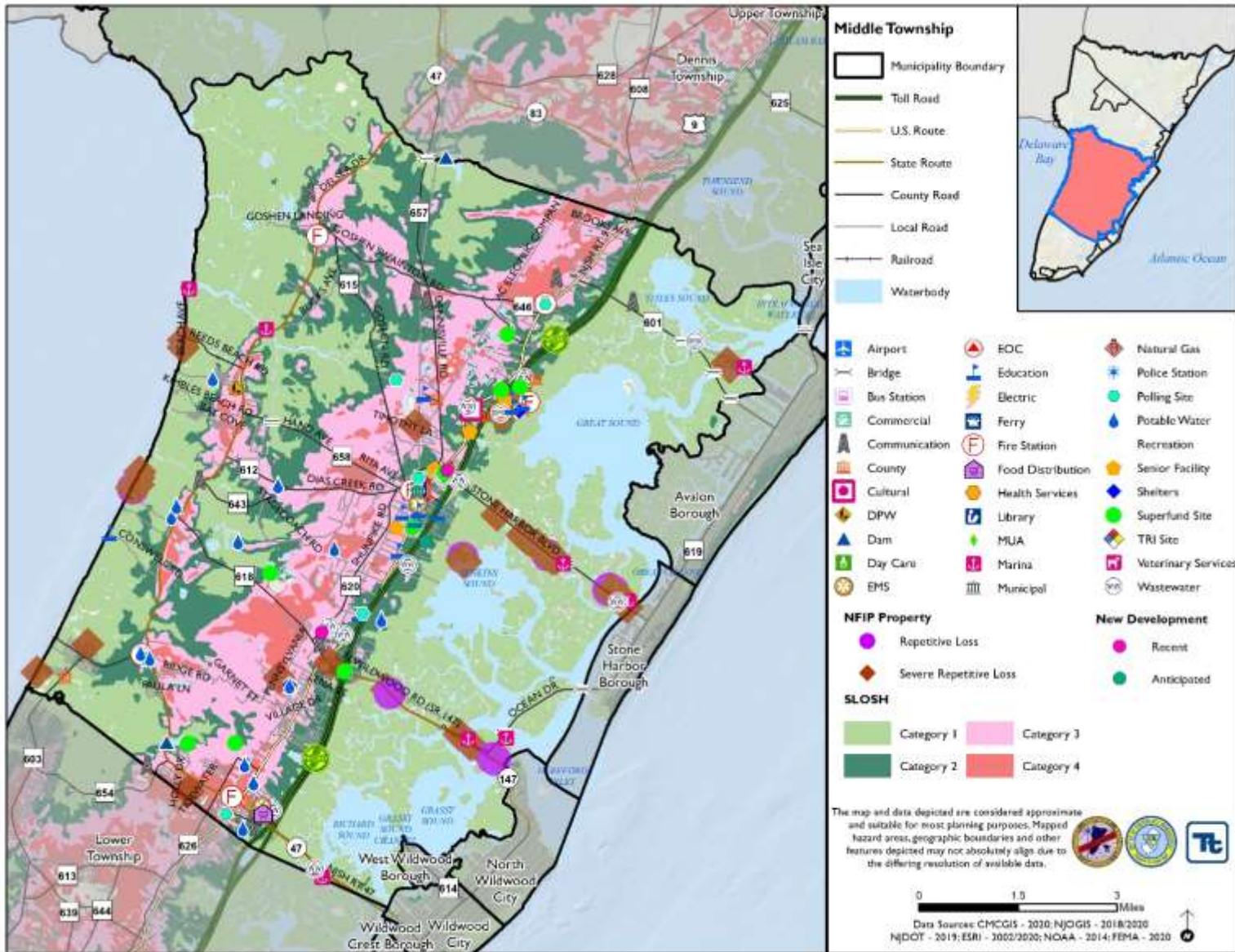




Figure 9.7-3. Township of Middle Hazard Area Extent and Location Map 3





Action Worksheet			
Project Name:	Repetitive Loss Mitigation		
Project Number:	2021-MiddleTwp-001		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood, Severe Weather		
Description of the Problem:	The Township has 79 repetitive loss properties and 14 severe repetitive loss properties that require mitigation.		
Action or Project Intended for Implementation			
Description of the Solution:	The Township will conduct outreach to the RL/SRL property owners and provide information on mitigation alternatives. After preferred mitigation measures are identified, collect required property-owner information and develop a FEMA grant application and BCA to obtain funding to implement acquisition/purchase/moving/elevating residential homes in the flood prone 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:	1
Estimated Cost:	\$10M	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, BRIC, 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:	Repetitive Loss Mitigation	
Project Number:	2021-MiddleTwp-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 the flood prone areas of the Township.
Administrative	0	
Multi-Hazard	1	Flood, Severe Weather
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:	Roadway Elevations		
Project Number:	2021-MiddleTwp-002		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood, Severe Weather, Climate Change and Sea Level Rise		
Description of the Problem:	Coastal erosion is taking place at the end of Brown's Lane. The existing bulkhead is sinking. The roadway is low-lying and prone to flooding.		
Action or Project Intended for Implementation			
Description of the Solution:	<p>The Township will elevate the following roadways. Roadway elevation designs will be determined via engineering studies and cost benefit analyses for each roadway. Projects involving County or State Roadways will involve the County or State leading or cooperating in order to proceed:</p> <ul style="list-style-type: none"> • Pierces Point Road • Springer's Mill Road • Beach Avenue on Reeds Beach • Avalon Boulevard from Parkway into Avalon proper (~2.5 miles), which will require elevating the Garden State Parkway bridge overpass (intersection of Avalon Blvd and Garden State Parkway) • Route 9 by High Tech in Edgewood • Route 47 roadway and ramps, which will require elevating the Garden State Parkway bridge overpass (intersection of State Route 47 and Garden State Parkway) • Route 147 roadway and ramps, which will require elevating the Garden State Parkway bridge overpass (intersection of State Route 147 and Garden State Parkway) • CR-603 (Bayshore Road) through Lower and Middle Townships through Fishing Creek Swamp 		
Is this project related to a Critical Facility?		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Level of Protection:	Roadways raised	Estimated Benefits (losses avoided):	Prevent or reduce flooding on roadways
Useful Life:	15 years	Goals Met:	1, 6
Estimated Cost:	High	Mitigation Action Type:	Structure and Infrastructure Project
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	Within 5 years
Estimated Time Required for Project Implementation:	3 months per roadway	Potential Funding Sources:	HMGP, BRIC, Township budget, County budget
Responsible Organization:	Borough Engineer, County	Local Planning Mechanisms to be Used in Implementation if any:	Hazard mitigation planning
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Problem continues.
	Retreat from flooded areas of roadways	High	Loss of emergency access, costly
	Close roadways when flooding is forecast	Low	Loss of access
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Roadway Elevations	
Project Number:	2021-MiddleTwp-002	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	
Property Protection	1	Project will protect roadway from flood and erosion damage
Cost-Effectiveness	1	
Technical	1	The project is technically feasible
Political	1	
Legal	0	The Township only has the legal authority to complete the roadway elevations it has jurisdiction over
Fiscal	0	Project requires funding support
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	Flood, Severe Weather, Climate Change and Sea Level Rise
Timeline	0	Within 5 years
Agency Champion	1	Borough Engineer, County
Other Community Objectives	1	
Total	10	
Priority (High/Med/Low)	High	

Action Worksheet





Project Name:	Widen Roadways to Support Evacuations		
Project Number:	2021-MiddleTwp-003		
Risk / Vulnerability			
Hazard(s) of Concern:	All Hazards		
Description of the Problem:	Numerous roadways in Middle Township are not wide enough to accommodate heavy traffic that would be expected during evacuation.		
Action or Project Intended for Implementation			
Description of the Solution:	<p>The Township will widen the lanes of roadways to accommodate more traffic. The roadways targeted will include the following:</p> <ul style="list-style-type: none"> • Dennisville Road • Indian Trail Road (County Road) • Route 47 (part of a regional project with Dennis Township and Cumberland County) 		
Is this project related to a Critical Facility?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Level of Protection:	Lanes widened	Estimated Benefits (losses avoided):	Increased evacuation capabilities
Useful Life:	15 years	Goals Met:	1, 4, 6
Estimated Cost:	High	Mitigation Action Type:	Structure and Infrastructure Project
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	Within 5 years
Estimated Time Required for Project Implementation:	3 months per roadway	Potential Funding Sources:	HMGP, BRIC, PDM, County budget, Township budget
Responsible Organization:	Engineer, Cape May County, Dennis Township, Cumberland County	Local Planning Mechanisms to be Used in Implementation if any:	Hazard mitigation planning
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Problem continues.
	Identify additional roadways for evacuation routes	N/A	Additional appropriate roadways do not exist
	Change evacuation plan to stage evacuations into two phases	Low	Increased evacuation times
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Widen Roadways to Support Evacuations	
Project Number:	2021-MiddleTwp-003	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	
Property Protection	1	Project will protect roadway from flood and erosion damage
Cost-Effectiveness	1	
Technical	1	The project is technically feasible
Political	1	
Legal	0	The Township only has the legal authority to complete the projects that are on Township owned roadways
Fiscal	0	Project requires funding support
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	All hazards
Timeline	0	Within 5 years
Agency Champion	1	Engineer, Cape May County, Dennis Township, Cumberland County
Other Community Objectives	1	
Total	10	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Retrofit Municipal Buildings for Storms		
Project Number:	2021-MiddleTwp-006		
Risk / Vulnerability			
Hazard(s) of Concern:	Hurricane, Nor'Easter, Severe Weather, Severe Winter Weather		
Description of the Problem:	Municipal buildings require protection from storm damages to ensure continuity of operations.		
Action or Project Intended for Implementation			
Description of the Solution:	The Township will purchase and install hurricane shutters on municipal buildings; with high priority to Town Hall.		
Is this project related to a Critical Facility?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Level of Protection:	500-year storm event	Estimated Benefits (losses avoided):	Reduction in wind damages
Useful Life:	25 years	Goals Met:	1, 3, 4
Estimated Cost:	Medium	Mitigation Action Type:	Structure and Infrastructure Projects (SIP)
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	Within 5 years
Estimated Time Required for Project Implementation:	1 year	Potential Funding Sources:	FEMA HMGP, BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Town Budget
Responsible Organization:	Office of Emergency Management	Local Planning Mechanisms to be Used in Implementation if any:	Hazard Mitigation, Emergency Management
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Problem continues.
	Rebuild facilities to new standards	High	Costly and not necessary
	Build secondary facilities protected to new standards	High	Costly and not necessary
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Retrofit Municipal Buildings for Storms	
Project Number:	2021-MiddleTwp-006	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Project will protect critical services of Township buildings.
Property Protection	1	Project will protect buildings from storm damage.
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	The Township has the legal authority to complete the project.
Fiscal	0	Project requires funding support.
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	Hurricane, Nor'Easter, Severe Weather, Severe Winter Weather
Timeline	0	Within 5 years
Agency Champion	1	Office of Emergency Management
Other Community Objectives	1	Protection of critical services
Total	12	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Reeds Beach Bulkheads		
Project Number:	2021-MiddleTwp-007		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood, Hurricane and Tropical Storm, Nor'Easter, Coastal Erosion, Climate Change and Sea Level Rise		
Description of the Problem:	Flooding is a recurring issue in the Reeds Beach area of the Township, impacting residential properties.		
Action or Project Intended for Implementation			
Description of the Solution:	The Township will install bulkheads on Reeds Beach to mitigate flooding in residential area which will mitigate flooding for approximately 30 homes.		
Is this project related to a Critical Facility?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Level of Protection:	TBD by height of bulkheads	Estimated Benefits (losses avoided):	Reduction in flood risk
Useful Life:	15 years	Goals Met:	1
Estimated Cost:	High	Mitigation Action Type:	Structure and Infrastructure Project
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	Within 5 years
Estimated Time Required for Project Implementation:	6 months	Potential Funding Sources:	HMGP, BRIC, Township budget
Responsible Organization:	Engineer	Local Planning Mechanisms to be Used in Implementation if any:	Hazard mitigation planning
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Problem continues.
	Retreat from flooding areas	Very high	Loss of neighborhood
	Elevate properties	Very high	Access still limited during flooding
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Evaluation and Prioritization		
Project Name:	Reeds Beach Bulkheads	
Project Number:	2021-MiddleTwp-007	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	
Property Protection	1	Project will protect adjacent properties from flooding
Cost-Effectiveness	1	
Technical	1	The project is technically feasible
Political	1	
Legal	0	The Township will require permitting to complete the project.
Fiscal	0	Project requires funding support
Environmental	1	
Social	1	Project protect social asset
Administrative	1	
Multi-Hazard	1	Flood, Hurricane and Tropical Storm, Nor'Easter, Coastal Erosion, Climate Change and Sea Level Rise
Timeline	0	Within 5 years
Agency Champion	1	Engineer
Other Community Objectives	1	Project will protect community asset
Total	11	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Increase Firefighting Capabilities		
Project Number:	2021-MiddleTwp-008		
Risk / Vulnerability			
Hazard(s) of Concern:	Drought, Wildfire		
Description of the Problem:	The Township has elevated wildfire risk. Water drawn stations are limited in certain areas.		
Action or Project Intended for Implementation			
Description of the Solution:	The Township will identify and install proper locations for and install water drawn stations (siphons) to increase fire-fighting capabilities.		
Is this project related to a Critical Facility?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Level of Protection:	To be determined	Estimated Benefits (losses avoided):	Increased emergency response capabilities
Useful Life:	20 years	Goals Met:	1, 4, 6
Estimated Cost:	High	Mitigation Action Type:	Structure and Infrastructure Project
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	Within 5 years
Estimated Time Required for Project Implementation:	Within 5 years	Potential Funding Sources:	HMGP, BRIC, Assistance to Firefighters Grant Program, Emergency Management Grant Program, Township budget
Responsible Organization:	Engineer, OEM, NJ DOT, New Jersey Turnpike Authority	Local Planning Mechanisms to be Used in Implementation if any:	Capital improvements planning, Emergency management planning, Hazard mitigation planning
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Problem continues.
	Purchase tanker truck for water	\$190,000	Transportation route lost, emergency service response times.
	Develop contract with neighboring towns for fire response	N/A	Too slow of response times, towns unable
Progress Report (for plan maintenance)			
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Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Increase Firefighting Capabilities	
Project Number:	2021-MiddleTwp-008	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Fire response preserved to protect life
Property Protection	1	Fire response preserved to protect property
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	The Township has the legal authority to complete the project
Fiscal	0	Project requires funding support
Environmental	1	
Social	1	
Administrative	1	Coordination with firemen
Multi-Hazard	1	Drought, Wildfire
Timeline	0	Within 5 years
Agency Champion	1	Engineer, OEM, NJ DOT, New Jersey Turnpike Authority
Other Community Objectives	1	
Total	12	
Priority (High/Med/Low)	High	