



9.3 CITY OF CAPE MAY

This section presents the jurisdictional annex for the City of Cape May. The annex includes a general overview of the City of Cape May; an assessment of the City of Cape May’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.

9.3.1 Hazard Mitigation Planning Team

The City of Cape May 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). The following individuals are the City of Cape May’s identified HMP update primary and alternate points of contact and NFIP Floodplain Administrator.

Table 9.3-1. Hazard Mitigation Planning Team and Contributors

Primary Point of Contact		Updated Primary Point of Contact		Alternate Point of Contact	
Name / Title: Jerry Inderwies, Jr., City Manager Address: 643 Washington St, Cape May, NJ 08204 Phone Number: (609) 884-9537 Email: Jinderwies@capemaycity.com		Name / Title: Michael Voll, City Manager Address: 643 Washington St, Cape May, NJ 08204 Phone Number: (609) 884-9537 Email: mvoll@capemaycity.com		Name / Title: Joseph Picard, PW Superintendent Address: 833 Canning House Lane, Cape May, NJ 08204 Phone Number: (609) 884-9570 Email: joep@capemaycity.com	
NFIP Floodplain Administrator					
Name / Title: Louis Belasco, Floodplain Manager Address: 643 Washington St, Cape May, NJ 08204 Phone Number: (609) 884-9545 Email: assessor@capemaycity.com					
Name		Title	Method of Participation		
Lou Belasco		CRS Coordinator/Tax Assessor	NFIP Floodplain Administrator, Annex Contribution, Review/Attended Meetings		
Joseph Picard, PW Superintendent		DPW Superintendent	Alternate Point of Contact, Annex Contribution/Annex Review		
Jerry Inderwies, Jr.		City Manager	Primary Point of Contact, Meeting Attendance/Annex Review		
Clarence F. Lear		Mayor	Reviewed and Signed Off on Annex		
Thomas Thornton		Engineer	Reviewed and Signed Off on Annex		
Neil Young		Fiscal/CFO	Reviewed and Signed Off on Annex		
Lou Vito, Jr.		Building Code Official	Reviewed and Signed Off on Annex		
Craig Hurlless		Land Use Planner	Reviewed and Signed Off on Annex		
Anthony Marino		Chief, Police Department	Reviewed and Signed Off on Annex		
Alexander Coulter		Chief, Fire Department	Took Stakeholder Survey, Reviewed and Signed Off on Annex		
Rick Lundholm		Deputy Fire Chief	Took Stakeholder Survey		
Christine Bry		Director of People Operations, Cape May Brewing Company	Took Stakeholder Survey		



9.3.2 Jurisdiction Profile

Cape May is a city at the southern tip of Cape May Peninsula in Cape May County, New Jersey, where the Delaware Bay meets the Atlantic Ocean. It is bounded on the north by the Township of Lower, on the east and the south by the Atlantic Ocean and Delaware Bay, and on the west by the Township of Lower, and Borough of West Cape May. It is part of the Ocean City Metropolitan Statistical Area.



According to the U.S. Census, the 2010 population for the City of Cape May was 3,607. The estimated 2017 population was 3,491, a 3.2 percent decrease from the 2010 Census. Data from the 2017 U.S. Census American Community Survey indicate that 5.6 percent of the population is 5 years of age or younger and 29.3 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.

9.3.3 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 9.3-2 summarizes recent and expected future development trends, including major residential/commercial development and major infrastructure development. Figure 9.3-1 at the end of this annex illustrates the geographically delineated hazard areas and the location of potential new development.

Table 9.3-2. 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										
	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA
Single and Two-Family Units	16	0	17	0	5	0	6	0	24	0
Multi-Family	0	0	0	0	0	0	0	0	2	0
Other (commercial, mixed-use, etc.)	2	0	2	1	2	1	1	0	1	0
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										
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		
DiDonato Tract	Residential	13		Pittsburgh and Missouri Aves		Special Flood Hazard Area		Approved		



Pela Development	Residential	15	New York Ave (1500 Block)	Special Flood Hazard Area	Active
Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years					
Desalination Plant Expansion	Governmental	1	830 Canning House Lane	Special/Moderate Flood Hazard Area	Planning and Permitting

* Only location-specific hazard zones or vulnerabilities identified.

9.3.4 Capability Assessment

The City of Cape May 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 9.3.4). The City of Cape May 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 City of Cape May and where hazard mitigation has been integrated.

Table 9.3-3. 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) • City Construction Codes, Uniform, Chapter 199, Adopted by City Council in 1997 & Amended in entirety 10-20-2015. • In 2016, the City amended this Chapter, adding 199-6. Certificate of Flood Damage Prevention Compliance. This Section requires the inspection of buildings, structures, or units prior to transfer of title to determine compliance with the Flood Damage Prevention Ord. as an example integrating mitigation. • The City can add green building and other resiliency constructions methods with incentives as a possible mitigation action. 					





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	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 #.
Zoning Code	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
Comment: <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. City Zoning Code, Chapter 525, Adopted by City Council in 1997 & amended in entirety 12-2-2004 with subsequent amendments. The purposes of this Section are consistent with the purposes on the Municipal Land Use Law. Article VI – Beach Strand and Dune Stabilization Districts, incorporate aspects of mitigation planning. It is the intent of the Beach Strand and Dune Stabilization Districts to protect the City's important beach resources from development and use that is inconsistent with their natural character or which could have an adverse impact on them. 					
Subdivisions	Yes	County & Local	Yes – if municipality has a Planning Board	Yes	-
Comment: <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 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. Subdivision of Land, Chapter 445, Adopted by City Council in 1997 and subsequently amended. The purpose of this Chapter shall be to provide rules, regulations and standards to guide land subdivision in Cape May City in order to promote the public health, safety, convenience and general welfare of the City and to carry out the objectives of the Municipal Land Use Law (N.J.S.A. 40:55D-1 et seq.). It shall be administered to insure the orderly growth and development, the conservation, protection and proper use of land and adequate provisions for circulation, utilities and services, and the conservation and environmental protection of all land, water and air resources within the jurisdiction of Cape May City. The Subdivision Ordinance requires a subdivider of any lands having natural features such as watercourses, floodplains, wetlands or sand dune areas shall, as a condition of completeness of his application pursuant to § 445-9, secure and submit to the Secretary of the Planning Board at the time of filing a written determination from all applicable state and federal jurisdictions, as to the exact extent and location of such natural resources. 					
Stormwater Management	yes	State & Local	Yes	Yes	-
Comment: <ul style="list-style-type: none"> See Title 7 of the NJ Administrative Code, N.J.A.C. 7:8 Stormwater Management Ordinance, Chapter 437, Adopted by City Council, May 10, 2005. It is the purpose of this article to establish minimum stormwater management requirements and controls for "major development," as defined in § 437-2 of this chapter. In an effort to protect local water quality and human health, for purposes of this Article I of Chapter 437, major development as defined for new, redevelopment projects and infill projects in the City of Cape May is more stringent than as defined in the New Jersey Stormwater Rule (N.J.A.C. 7:8). As an aspect of mitigation, this Chapter requires stormwater management measures for major development shall be developed to meet the erosion control, groundwater recharge, stormwater runoff quantity, and stormwater runoff quality standards in § 437-4 of this chapter. To the maximum extent practicable, these standards shall be met by incorporating nonstructural stormwater management strategies into the design. The standards in this Chapter apply only to new major development and are intended to minimize the impact of stormwater runoff on water quality and water quantity in receiving water bodies and maintain groundwater recharge. 					
Post-Disaster Recovery	Yes	State & Local	No	Yes	-
Comment: <ul style="list-style-type: none"> Natural Disasters, Access Limited During, Chapter 331, Adopted by City Council, May 21, 2004. The Ordinance limits access to the City following a natural disaster. In the event that the City is evacuated due to natural disaster and the Department of Emergency Management, 					



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				If yes- how? Describe in comments	If no - can it be a mitigation action? If yes, add Mitigation Action #.
<p>after consulting with the Chief of Police, determines that such disaster has resulted in damage which requires substantial cleanup, including, without limitation, damage to the City's roads, traffic signals and/or public utilities, the Department of Emergency Management may issue an order which allows only City employees and individuals who own property within the City to enter the City, but only after such time as the City has been substantially cleaned up, including, without limitation, the clearing of roads, repair of traffic signals and repair of public utilities.</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> <ul style="list-style-type: none"> Real Estate disclosure of flood hazards could become an Ordinance Requirement for Real Estate Agents and/or a written policy for disclosing a property's Flood information. Also, providing flood insurance information for impacted properties could be an additional requirement. It should be noted that Section 258-3 of the City's Flood Damage Prevention Ordinance 'Statement of Purpose' has a provision to ensure that potential buyers are notified that property is in an area of special flood hazard 					
Growth Management	No	State, County & 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. Cape May City – State Agency Opportunities and Constraints Analysis, January 10, 2011, no formal adoption indicated. The Office for Planning Advocacy (OPA) and our State Agency partners have preliminarily assessed local opportunities and constraints in the City of Cape May relating to existing development, current zoning regulations, infrastructure and natural resources. This report provides for a comparison of information within the Municipal Self-Assessment Report with the most up-to-date regional and statewide data to determine whether trend growth, or the continuance of existing development patterns, is sustainable and viable based on the information provided. trend growth can then be compared to plan growth, or that which is aligned with the New Jersey State Development and Redevelopment Plan (State Plan) and is based on the principles of smart growth. Although this is not an Ordinance, it does address the City's efforts toward consistency with the State Plan. Flood Hazard Areas were included in the Analysis – It stated that the recently adopted Flood Hazard Area Control Act rule (NJAC 7:13) regulates development within the floodplain and the Riparian Zone (50 - 300 feet adjacent to the water). Under this rule all projects that are adjacent to a "regulated water" that is designated C1 or is upstream within the HUC 14 of a "regulated water", regardless of whether they are mapped, require a Flood Hazard Area Control Act permit. Cape May City should take the Flood Hazard Area Control Act and associated buffers into consideration when performing visioning requirements of Plan. There are no Groundwater Recharge Areas, Wellhead Protection Areas or Priority Species Habitat mapped by DEP. The City is welcome to use more detailed data that it has collected regarding any of these environmental constraints. 					
Site Plan Review	Yes	County & Local?	Yes – if municipality has a Planning Board	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. 					



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<ul style="list-style-type: none"> • <i>Site Plan Review, Chapter 417, Adopted by City Council, May 12, 2004 and subsequently amended. As it relates to mitigation purposed of this Chapter are to:</i> <ul style="list-style-type: none"> ○ <i>Preserve existing natural resources and give proper consideration to the physical constraints of the land.</i> ○ <i>Develop proper safeguards to minimize the impact on the environment, including but not limited to soil erosion and sedimentation and air and water pollution.</i> ○ <i>Ensure the provision of adequate water supply, drainage and stormwater management, sanitary facilities, and other utilities and services.</i> 					
Environmental Protection	No	-	No	-	-
Comment:					
<ul style="list-style-type: none"> • <i>The Site Plan Review Ordinance, Chapter 417, does require an Environmental Impact Statement as part of the application for Preliminary Site Plan approval, but there is not a Environmental Protection Ordinance.</i> 					
Flood Damage Prevention	Yes	Federal, State & Local	Yes	Yes	-
Comment:					
<ul style="list-style-type: none"> • <i>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.</i> • <i>Floodplain Damage Prevention, Chapter 258, Adopted by City Council in 1997 & Amended in its entirety 8-1-2017. 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:</i> <ul style="list-style-type: none"> ○ <i>Protect human life and health;</i> ○ <i>Minimize expenditure of public money for costly flood control projects;</i> ○ <i>Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public and risk to those individuals who are providing rescue efforts;</i> ○ <i>Minimize prolonged business interruptions;</i> ○ <i>Minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets, bridges located in areas of special flood hazard;</i> ○ <i>Help maintain a stable tax base by providing for the sound use and development of areas of special flood hazard so as to minimize future flood blight areas;</i> ○ <i>Ensure that potential buyers are notified that property is in an area of special flood hazard; and</i> ○ <i>Ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.</i> • <i>Integrated mitigation actions in this Section include methods and provisions for: a. Restricting or prohibiting uses which are potentially 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 floodwaters; d. Controlling filling, grading, dredging, and other development which may increase flood damage; and, e. Preventing or regulating the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards in other areas.</i> • <i>In a Special Flood Hazard Area regulated residential construction is required to have two feet of freeboard above the BFE.</i> 					
Wellhead Protection	No	-	No	-	-
Comment:					
Emergency Management	No	-	No	-	-
Comment:					
Climate Change	Yes	Local/HPC	No	Yes	-
Comment: Addition to allow electric vehicle charging stations; solar panels; energy aggregation.					
Disaster Recovery Ordinance	Yes	State & Local	No	Yes	-
Comment:					
<ul style="list-style-type: none"> • <i>Natural Disasters, Access Limited During, Chapter 331, Adopted by City Council, May 21, 2004. The Ordinance limits access to the City following a natural disaster. In the event that the City is evacuated due to natural disaster and the Department of Emergency Management, after consulting with the Chief of Police, determines that such disaster has resulted in damage which requires substantial cleanup, including, without limitation, damage to the City's roads, traffic signals and/or public utilities, the Department of Emergency Management may issue an</i> 					



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<i>order which allows only City employees and individuals who own property within the City to enter the City, but only after such time as the City has been substantially cleaned up, including, without limitation, the clearing of roads, repair of traffic signals and repair of public utilities.</i>					
Disaster Reconstruction Ordinance	No	-	No	-	-
Comment:					
Other	Yes	Local	Yes	Yes	-
Comment:					
<ul style="list-style-type: none"> Open Space and Recreation Land Acquisition, Development and Maintenance, Chapter 356, adopted by City Council in 2002 & amended in its entirety on 6-6-2016. The purpose of this chapter is to establish a minimum annual appropriation for open space and recreation land acquisition and associated costs, which shall include, without limitation, legal, appraisal, survey, engineering and preservation acquisition debt servicing in order to provide a guaranteed source of funds to match Green Acres funding and for the development and maintenance of open space and recreation land. The acquisition and maintenance of open space is an aspect of mitigation included in the HMP. 					
Planning Documents					
Comprehensive / Master Plan	Yes	State & Local	Yes	Yes	-
Comment:					
<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. New master plan adopted 2019 Master Plan Re-examination, adopted by the City Planning Board, 2-27-2009 – Revised 3-13-2009. Among the Re-examination's recommendations are the following mitigation aspects: <ul style="list-style-type: none"> As the beaches are the first line of protection from flooding and waves from storms approaching from the sea, continual preservation and enhancement of the beach and dunes shall remain a priority. The City should continue to enforce flood protection standards for development and implement flood protection/mitigation projects as funding allows. 					
Capital Improvement Plan	Yes	Local	No	Yes	-
Comment:					
<ul style="list-style-type: none"> Capital Planning and Sustainability - The Cape May City Governing Body has successfully integrated its long-range planning agenda with the long-term financial and capital improvement programs to create a comprehensive and systematic sustainability approach for the City over the next two decades. 					
Disaster Debris Management Plan	Yes	Local/County	Yes	Yes	-
Comment:					
Floodplain or Watershed Plan	Yes	Local	No	Yes	-
Comment:					
<ul style="list-style-type: none"> Floodplain Management Plan Annual Progress Report 9-15-2015 as required to maintain CRS credits for the Comprehensive Floodplain Management Plan. The Plan contains a number of Action Items that have been or can be integrated in the Hazard Mitigation Plan. 					
Stormwater Management Plan	Yes	Local	Yes	Yes	-
Comment:					



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<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	-	-
Comment:					
<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	-	-
Comment:					
Habitat Conservation Plan	Yes	Local	No	Yes	-
Comment:					
<ul style="list-style-type: none"> There is no formal Habitat Conservation Plan but the City has pledged to support the NJ Wildlife Action Plan. The City of Cape May supports all the goals of the Atlantic Coast section of Fish and Wildlife's Action Plan. They protect piping plovers each year with roped off sections of the beach for their nesting areas and by putting up signs about the plover's nesting. Dune protection is also a huge concern for Cape May government as they are stabilizing and growing the dunes. Wildlife Interaction Plan. In 2008, the City of Cape May created the City of Cape May Beach Management Plan for the Protection of Federally & State-Listed Species. This plan was developed in concert with the NJDEP Division of Fish and Wildlife and the US Fish and Wildlife Service, New Jersey Field Office. The City submitted its 2016 Municipal Public Access Plan (MPAP)—the 5-year follow-up to the 2011 plan. 					
Economic Development Plan	No	-	No	No	-
Comment:					
Shoreline Management Plan	Yes	State/Local	Yes – if located in a coastal zone	Yes	-
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. The City has been a participant of the beach replenishment program. The City of Cape May is continuing to maintain the City of Cape May Beach Management Plan for the Protection of Federally and State-Listed Species (March 2008). 					
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, 1-31-2017. The management of the community forest and the administration of the community forest' program is a cooperative effort between the mayor, council, city manager, public works, planning, emergency management, city solicitor, 					





Table 9.3-3. 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 #.
<p><i>Shade Tree Commission, Historic Preservation Committee and the residents of the City of Cape May. A new development in the administration of the municipal government has been the new role of the City Manager in the day-to-day administration of city.</i></p> <ul style="list-style-type: none"> • <i>After a severe weather event the Shade Tree Commission members assess their districts and work with representatives of the Public Works Department, Emergency management and private contractors to address all of the damage and respond immediately. The Shade Tree Commission will continue with the existing storm damage assessment procedures and develop additional procedures for extreme storm damage situations.</i> 					
Transportation Plan	Yes	Local	No	Yes	-
<p>Comment:</p> <ul style="list-style-type: none"> • <i>The Master Plan has a Circulation Element.</i> 					
Agriculture Plan	No	-	No	-	-
<p>Comment:</p>					
Climate Action Plan	Yes	Local	No	Yes	-
<p>Comment:</p> <ul style="list-style-type: none"> • <i>Climate Mitigation and Adaption, submitted to Sustainable NJ, June 2014. Key findings from flood risk mapping that occurred as part of this plan exercise are: 1) critical municipal structures are located outside of the flood risk zone on the areas of highest elevation within city limits, 2) the city's sea wall provides mitigation from V zone flooding located along the city's beaches with most commercial and residential structures located on the opposite side of Beach Avenue, 3) the marsh and open green spaces located along the Cape Island Creek in the northwestern area of the city provide mitigation for flooding and sea level rise. Increasing green space land use and informing residents of potential sea level rise impacts in this area could be provided to increase resilience, 4) the impact of flooding and sea level rise in the Bucks Landing area is one of the greatest potential risks to the city. The City could work in conjunction with Lower Township to develop strategies for mitigating risk at this critical transportation junction.</i> 					
Tourism Plan	No	-	No	-	-
<p>Comment:</p> <ul style="list-style-type: none"> • <i>There is no formal Tourism Plan, but the City and Business Community provide substantial web and in print information concerning Cape May points of interest, activities and events.</i> 					
Business Development Plan	No	-	No	-	-
<p>Comment:</p>					
Other	No	-	No	-	-
<p>Comment:</p> <ul style="list-style-type: none"> • 					
Response/Recovery Planning					
Comprehensive Emergency Management Plan (CEMP) / Emergency Operations Plan (EOP)	Yes	Local	Yes	Yes	-
<p>Comment:</p> <ul style="list-style-type: none"> • <i>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.</i> • <i>Cape May City has an Emergency Communications Section in their Emergency Operations Plan per state requirements. A new Emergency Management Coordinator was appointed in 2016 and he has been ensuring that all emergency plans are up to date. The current plan was just re-approved in February 2017. The City's main form of communication is through the Reverse 9-1-1 system. They call their system Code Red and any resident, homeowner, or even vacationer can sign up to receive emergency alerts through this system via the City's website—on the home page.</i> 					
Threat & Hazard Identification & Risk Assessment (THIRA)	No	-	No	-	-
<p>Comment:</p>					
Post-Disaster Recovery Plan	No	-	No	-	-
<p>Comment:</p>					



Table 9.3-3. 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 #.
Continuity of Operations Plan	Yes	Local	Yes	Yes	-
<i>Comment:</i> Part of Emergency Management Plan.					
Public Health Plan	Yes	Local	No	Yes	-
<i>Comment:</i>					
Other	No	-	No	-	-
<i>Comment:</i>					

Table 9.3-4. Development and Permitting Capability

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

ADMINISTRATIVE AND TECHNICAL CAPABILITY

The table below summarizes potential staff and personnel resources available to the City of Cape May.

Table 9.3-5. Administrative and Technical Capabilities

Staff/Personnel Resource	Available?	Department/Agency/Position
Administrative Capability		
Planning Board	Yes	Cape May Planning Board
Mitigation Planning Committee	No	
Environmental Board / Commission	Yes	Cape May Environmental Commission
Open Space Board / Committee	No	-
Economic Development Commission / Committee	No	-
Warning Systems / Services (reverse 911, outdoor warning signals)	Yes	Siren system throughout town; and PA system along beachfront – usually used for public notification, thunderstorms, severe surf conditions, lost children; Reverse 911.
Maintenance program to reduce risk	Yes	City of Cape May - DPW, Water / Sewer Dept. The City of Cape May, NJDEP, and USFW is maintaining storm water drains and outfalls along Beach Drive (CR603) in Cape May City. The City of Cape May, the DEP, and ALS are maintaining current beach replenishment and dune erosion protection measures, as they are essential to safeguard oceanfront and harbor front land uses (from Master Plan).



Staff/Personnel Resource	Available?	Department/Agency/Position
Mutual aid agreements	Yes	City of Cape May, West Cape May, Cape May Point, U.S. Coast Guard Base, Lower Township, Cape May County
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	Yes	Planning and Zoning Engineer/Planner &
Engineers or professionals trained in building or infrastructure construction practices	Yes	City Engineer
Planners or engineers with an understanding of natural hazards	Yes	Planning and Zoning Engineer/Planner &
Staff with training in benefit/cost analysis	Yes	Consultant
Staff with training in green infrastructure	Yes	City Engineer
Staff with education/knowledge/training in low impact development	Yes	City Engineer
Surveyor	Yes	City Engineer
Stormwater engineer	Yes	City Engineer
Personnel skilled or trained in GIS applications	Yes	City Engineer (Mott MacDonald),
Local or state water quality professional	Yes	Water Department
Scientist familiar with natural hazards in local area	Yes	Stockton; Gretchen Whitman at Nature Center
Emergency manager	Yes	City OEM Coordinator
Watershed planner	Yes	City Engineer
Environmental specialist	Yes	City Engineer
Grant writers	Yes	Consultants & City of Cape May
Resilience Officer	No	-
Other	No	-

FISCAL CAPABILITY

The table below summarizes financial resources available to the City of Cape May.

Table 9.3-6. Fiscal Capabilities

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants (CDBG, CDBG-DR)	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	No
Incur Debt through Private Activity Bonds	No
Withhold Public Expenditures in Hazard-Prone Areas	No
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	No
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 City of Cape May.





Table 9.3-7. Education and Outreach Capabilities

Criterion	Response
Do you have a public information officer or communications office?	Yes- Laurie Taylor
Do you have personnel skilled or trained in website development?	Yes- Daniel Shustack
Do you have hazard mitigation information available on your website? -If yes, briefly describe.	Yes, The Floodplain Management Page covers the hazard mitigation options and strategies.
Do you use social media for hazard mitigation education and outreach? -If yes, briefly describe.	Yes, Information is available through the Office of Emergency Management Facebook page
Do you have any citizen boards or commissions that address issues related to hazard mitigation? -If yes, briefly describe.	Yes, The City has several Citizen’s Committees that meet on monthly and bi-monthly intervals. The Beach Safety Committee studies and review beach safety issues; The Sewall Committee explores the costs, funding resources, timetable and options for reinforcing and extending the existing seawall. And the Public Safety Building Committee studies the feasibility and options of constructing a new facility to house the fire department, rescue squad, police department, office of emergency management and related city operations
Do you have any other programs already in place that could be used to communicate hazard-related information? If yes, briefly describe.	No

COMMUNITY CLASSIFICATIONS

The table below summarizes the classifications for community programs available to the City of Cape May.

Table 9.3-8. Community Classifications

Program	Participating?	Classification	Date Classified
Community Rating System	Yes	5	Oct. 1, 2020
Building Code Effectiveness Grading Schedule (BCEGS)	Yes	3	May 2013
Public Protection (Fire ISO Protection Class)	Yes	04	April 27, 2015
Storm Ready Certification	No	-	-
Firewise Community Classification	No	-	-
Sustainable Jersey	Yes	Silver	December 13, 2017

ADAPTIVE CAPACITY

Adaptive capacity is defined as “the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or respond to consequences” (IPCC 2014). In other words, it describes a jurisdiction’s current ability to adjust to, protect from, or withstand a hazard event. This term is often 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 9.3-9. Adaptive Capacity

Hazard	Adaptive Capacity (Capabilities) – Strong/Moderate/Weak
Climate Change and Sea Level Rise	Strong
Coastal Erosion	Moderate
Disease Outbreak (new)	Moderate
Drought (new)	Moderate
Flood	Strong





Hazard	Adaptive Capacity (Capabilities) – Strong/Moderate/Weak
Hurricane	Strong
Nor’Easter	Strong
Severe Weather	Strong
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.

The City has access to resources to determine the possible impacts of climate change upon the municipality through NOAA and NJDEP websites, and the Getting to Resiliency Study. The administration understands the City’s position along the front edge of sea level rise. Sea level rise was covered in the placement of the public safety building and a topic in the effectiveness of our current seawall.

NATIONAL FLOOD INSURANCE PROGRAM

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

Table 9.3-10. National Flood Insurance Program Compliance

Criterion	Response
What local department is responsible for floodplain management?	Construction & Zoning
Who is your floodplain administrator? (name, department/position)	Louis Belasco, CFM
Are any certified floodplain managers on staff in your jurisdiction?	Yes, two
What is the date that your flood damage prevention ordinance was last amended?	August 1, 2017
Does your floodplain management program meet or exceed minimum requirements? -If exceeds, in what ways?	Exceed
When was the most recent Community Assistance Visit or Community Assistance Contact?	March 13, 2018
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? -If so, state what they are.	No
Are any RiskMAP projects currently underway in your jurisdiction? If so, state what they are.	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction? -If no, state why.	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program? - If so, what type of assistance/training is needed?	The floodplain administrator is currently adequately trained for floodplain management responsibilities, although additional training would be welcome.
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?	Yes and yes
How many flood insurance policies are in force in your jurisdiction?*	1,666 policies
-What is the insurance in force? -What is the premium in force?	
How many total loss claims have been filed in your jurisdiction?*	1,118 claims
-How many claims are still open or were closed without payment? -What were the total payments for losses?	\$9,262,941
Do you maintain a list of properties that have been damaged by flooding?	Yes
Do you maintain a list of property owners interested in flood mitigation?	Yes

*According to FEMA statistics as of October 2020

ADDITIONAL AREAS OF EXISTING INTEGRATION





- The City Department of Public Works and Engineering continues to support property mitigation, acquisition, and relocation.
- The City of Cape May continues to support dune enhancement (continuing ongoing programs of annual planting and installation of new dune fence).
- The City of Cape May is participating in and supporting a multi-jurisdictional effort between Lower, City of Cape May and West Cape May to control flooding in the Meadows.
- Cape May County and the Borough of Cape May Point is encouraging and working with County to install duckbill valves on County storm water outfalls (some 9+ county owned and the City pumping facilities on Queen Street).
- The County of Cape May and City of Cape May is continuing efforts to consolidate and reduce the number of outfalls that need to be maintained.
- The City of Cape May, NJDEP, JCPL, are EPA are partnering to continue to perform storm drain maintenance twice a year.
- The City of Cape May is partnering with the County to continue quarterly emergency management team meetings and perform annual drills.
- The City of Cape May attained a Silver certification from Sustainable Jersey. The City received credit for a Climate Adaptation: Flooding Risk activity, Vulnerable Population Identification for Emergencies, Water Conservation Education Programs, and a Tree Maintenance program.

9.3.5 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 City of Cape May’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 9.3-11 provides details regarding municipal-specific loss and damages the City experienced during hazard events. Information provided in the table below is based on reference material or local sources.

Table 9.3-11. 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 23, 2016	Winter Storm Jonas	DR-4264	Coastal storm with major coastal flooding and high winds.	Although the County was impacted, the City of Cape May did not report damages.
July 10, 2020	Tropical Storm Fay	No	Tropical Storm with moderate flooding and high winds.	Various structures were damaged throughout the City and numerous trees were toppled.
January 20, 2020-continuing	Covid-19 Pandemic	DR-4488, EM-3451	The coronavirus pandemic resulted in hospitalizations, death.	The City was impacted by required business and school closures and mask/social distancing requirements.
August 4, 2020	Tropical Storm Isaias	Pending	Tropical Storm with high winds.	Various structures were damaged throughout the City and numerous trees were toppled.

Source: NOAA NCEI 2020, FEMA 2020

9.3.6 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 City of Cape May 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 City of Cape May.

- Number of repetitive loss (RL) properties: 129
- Number of severe repetitive loss (SRL) properties: 8
- Number of RL/SRL properties that have been mitigated: 81

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 9.3-12. Potential Flood Losses to Critical Facilities and Lifelines

Name	Type	Exposure	
		1% Event	0.2% Event
US COAST GUARD TRAINING CENTER	Fire Stations		X
U.S. COAST GUARD TRAINING CENTER CAPE MAY	Superfund Sites		X
U.S. COAST GUARD TRAINING CENTER CAPE MAY	TRI Sites		X
Department of Public Works	DPW	X	X
Fuel Island	DPW	X	X
Lifeguard Headquarters	EMS	X	X
Roseman's Boat Yard	Marinas	X	X
Cape May Marine	Marinas	X	X
Harborview Marina	Marinas	X	X
MUA Pump Station	MUA	X	X
KIWANIS CLUB	Polling Places	X	X
CORINTHIAN YACHT CLUB	Polling Places	X	X
Elevated Water Storage Tank	Potable Water Facilities	X	X
Reverse Osmosis Plant	Potable Water Facilities	X	X
Well 6	Potable Water Facilities	X	X
USDOT COAST GUARD TRAINING CTR	Superfund Sites	X	X
North St Pump Station	Wastewater Treatment Facilities	X	X
Madison Ave Pump Station	Wastewater Treatment Facilities	X	X
Sewer Lift Station	Wastewater Treatment Facilities	X	X
Storm Water Pumping Station	Wastewater Treatment Facilities	X	X

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

Note:
 *Identified lifeline

IDENTIFIED ISSUES

The jurisdiction has identified the following vulnerabilities within their community:

- Cape May’s Fire and OEM are housed in a functionally obsolete building. The Fire and OEM building is susceptible to wind and rain damage and lacks an emergency command center.
- City Hall is functionally obsolete. It is a Contributing Building in the City’s Historic District. It contains the City Administrative and police functions. The building requires updates to continue functioning in its current capacity to respond to natural hazards and be more resilient to hazard events.
- Various Public Buildings lack back up power. This results in disrupted operations when the City is impacted by power outages and hazard events.





- Cape May has longstanding water supply issues owing to overdrawing wells and intrusion of saltwater into freshwater aquifers. The City has one of the first reverse-osmosis desalinization plant and requires additional upgrades to remain functional. The facility requires a rebuild.
- The City has a large visitor and second-home population during the summer season and fall/spring shoulder seasons. Informing these visitors and part-time residents of natural hazards is a challenge due to a lack of awareness of emergency resources.
- Delaware Avenue/CR-640 connects the US Coast Guard Training Center to Cape May and evacuation routes to the north. Delaware Avenue is protected from Cape May Harbor by a rip-rap system that is subject to erosion and provides inconsistent protection.
- The Cape May beach promenade protects the City from destructive storm surge and high tides. Currently the promenade seawall provides a consistent level of protection except for a gap between Madison Avenue and Wilmington Avenue. At this location there is a low rock wall and decrepit timber bulkhead. This gap presents a major vulnerability for a storm surge event in the eastern section of the City. A feasibility study for a new promenade wall was partially financed through a FMA grant.
- The Cape May promenade is a seawall that extends along the beachfront and protects the City from storm surge. The seawall is deteriorating in some sections and requires an overall elevation to account for rising sea levels.
- Cape May is vulnerable to nuisance and stormwater flooding due to low-lying land elevations near Cape Island Creek and Frog Hollow. The City has installed stormwater pump stations to mitigate the flood risk. However, if the pumps fail due to severe storms, the stormwater pumps will not be able to function.
- The Venice Avenue pump station is located in a low-lying section of the City near Cape Island Creek. The pump station provides service to nearby properties. The land near the pump station floods when tide levels are just one foot above typical high tides. The Cape May Police force is staffed in West Cape May (with the exception of Administration). Venice Avenue is an essential route back to the City of Cape May.
- Cape May has widely varying elevation ranging from areas of relative high ground near the City Center to low-lying former wetlands area in the periphery of the City. Due to the density of development and existing geography, large-scale flood protection infrastructure requires careful planning to maintain the historic integrity of the City and protect the existing ecosystems.
- Cape May's Back Bay areas do not have the same structural protection as the oceanfront areas. Though certain portions of the waterfront received bulkheads (such as Harbor Lane in 2014), additional mitigation is needed to create a ring of protection for the City and surrounding communities.
- Cape May has various low-lying streets found throughout the City. These streets are plagued by regular nuisance flooding, particularly in the western and eastern ends of the City as well as the Elmira Street corridor. A combination of high tides and rainfalls will cause nuisance flooding that hinders access to the areas for residents and for emergency vehicles.
- Sewell Point is a roughly 130-acre tract of undeveloped land located between the City's center and the Coast Guard Training Center. The land is privately owned, located in the Special Flood Hazard Area, and is subject to litigation over proposed development. The wetlands serve as a natural floodplain buffer.
- Cape May has a number of repetitive loss, severe repetitive loss, and substantially damaged properties. Many of these structures were built without flood design standards. These properties require mitigation to prevent future losses and prevent loss of life and property damage. Progress has been made on elevating buildings and reconstructing new buildings that are more resistant to flooding.
- The dunes play an important role in the protection of Cape May's beaches and structures. Dune plantings take place regularly to help maintain and protect the dunes. However, non-indigenous plants have begun to take over the dunes, causing eyesores and threatening the dune grass.
- Quick moving storm systems or quickly moving beach related hazards can result in beachgoers being caught unaware. Currently, the need to evacuate the beach and seek shelter is met by beach staff but this is slow and not efficient at times. The City has begun installation of a Beachfront Public Address System to meet this need.



HAZARD AREA EXTENT AND LOCATION

Hazard area extent and location maps were generated for the City of Cape May 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 City of Cape May has significant exposure. A map of the City of Cape May 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 City of Cape May. The City of Cape May 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 City assented to the proposed hazard mitigation ranking.

Table 9.3-13. City of Cape May 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	Medium	Medium

9.3.7 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 9.3-14. 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 #
CCM-1a (former CCM-11)	Property Mitigation Support – Retrofit	City DPW and Engineering	In Progress	X	2021-CapeMayCity-015
CCM-1b (former CCM-1b)	Property Mitigation Support – Acquisition/Relocation	City DPW and engineering	In Progress	X	2021-CapeMayCity-015
CCM-2 (former CCM-2)	Continue and enhance participation in CRS.	USACE and NJDEP; support from City	In Progress	X	
CCM-3 (former CCM-7)	Support County-wide initiatives identified in Section 9.1 of the County Annex.		In Progress	X	2021-CapeMayCity-015
CCM-4 (former CCM-8 (CMC-18)	Install shoreline protection for Delaware Avenue (CR-640; entrance to Coast Guard Base) along the Cape May Harbor in the City of Cape May. County has met with USACE and NJDEP on this previously.	City DPW and Engineering	In Progress	X	2021-Cape May City-006
CCM-5 (former CCM-10)	Install a cap on the existing seawall from Madison Avenue to Wilmington Avenue	County Engineering, with City of Cape May	In Progress	X	2021-Cape May City-007
CCM-6 (former CCM-11)	Seawall repair / replacement - please see the interim initiative following	County Engineering with the City of Cape May	In Progress	X	2020-Cape May City-008
CCM-7 (former CCM-12 (CMC-32)	Install backup power to two storm water pump stations at Madison Avenue and Grant Street in Cape May City.	City DPW and Engineering, County of Cape May	In Progress	X	2020-Cape May City-009
CCM-8 (former CCM-13)	Upgrade Venice Avenue pump station (increased capacity, backup power)	County of Cape May, as supported by the City	In Progress	X	2020-Cape May City-010
CCM-9 (former CCM-14)	Work with County GIS to leverage recent LIDAR elevation data to identify areas that need a berm to prevent back bay flooding	City along with USFW and NJDEP, Cape May Point	In Progress	X	2020-Cape May City-011
CCM-10 (former CCM-15)	Based on findings of previous initiative, develop and implement a program to install dikes/barriers to protect from back bay flooding	County Engineering with municipal support	In Progress	X	2020-Cape May City-012



Table 9.3-14. 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 #
CCM-11 (former CCM-16)	Dune Enhancement – Continue ongoing programs of annual planting and installation of new fence	City of Cape May	In Progress	X	2021-CapeMayCity-016
CCM-12 (former CCM-17)	Participate and support a multi-jurisdictional effort between Lower, City of Cape May and West Cape May to control flooding in the Meadows – gate valve on east end.	City of Cape May	Ongoing Capability		
CCM-13 (former CCM-18)	Encourage and work with County to install duckbill valves on County storm water outfalls (some 9+ county owned and the City Pumping facilities on Queen Street).	County of Cape May and Borough of Cape May Point	Ongoing Capability		
CCM-14 (former CCM-19)	Work with county who owns and manages outfall pipes to continue efforts to consolidate and reduce the number of outfalls that need to be maintained.	County of Cape May and City of Cape May	Ongoing Capability		
CCM-15 (former CCM-20)	Elevation of roadways – determine elevations and causes of flooding on Elmira Street	Work with county who owns and manages outfall pipes to continue efforts to consolidate and reduce the number of outfalls that need to be maintained (e.g., as was done when they built the county Grant Street Pumping Station and combined the Jackson, Windsor, Grant and Patterson outfall pipes). This is a consideration for the east end of the City.	In Progress	X	2020-Cape May City-013
CCM-16 (former CCM-21)	Maintain the reverse 911 system in the City	County of Cape May	Ongoing Capability		
CCM-17 (former CCM-22)	Continue to maintain the City of Cape May Beach Management Plan for the Protection of Federally and State-Listed Species (March 2008).	City of Cape May	Ongoing Capability		



Table 9.3-14. 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 #
CCM-18 (former CCM-23 (CMC-57)	Maintain storm water drains and outfalls along Beach Drive (CR603) in Cape May City	City of Cape May, NJDEP, and USFW	Ongoing Capability		
CCM-19 (former CCM-24)	Installation of back-up generators – water wells 5 and 7	City of Cape May and County of Cape May	Completed		
CCM-20 (former CCM-25)	Installation of a back-up generator for the Cape May City Elementary School	City of Cape May	Completed- 2018		
CCM-21 (former CCM-26)	Installation of a new water well (#8) and back-up generator	City of Cape May	Completed		
CCM-22 (former CCM-27)	CHP Micro Grid for critical City facilities	City of Cape May	No Progress, no longer a priority		
CCM-23 (former CCM-28)	Siren Warning System	City of Cape May, BPU	In Progress	X	2020-Cape May City-005
CCM-24	Outdoor public announcement system on beachfront	City of Cape May	Completed		
CCM-25	Integrate the Hazard Mitigation Plan with the Master Plan.	City of Cape May	Completed		
CCM-26	Acquire Sewell Point wetlands (from Master Plan)	Cape May City Planning Board	No Progress	X	2020-Cape May City-015
CCM-27	Maintain current beach replenishment and dune erosion protection measures as they are essential to safeguard oceanfront and harbor front land uses (from Master Plan)	City of Cape May, DEP, ALS	Ongoing Capability		
CCM-28	Acquire lands and consolidate ownership of the areas bordered by St. John Street, Lafayette and the Cape May Elementary School to facilitate an upgrade in active recreation. Playground equipment and playing field equipment needs upgrading. (from Master Plan)	City of Cape May, ACE, DEP	Completed		
CCM-29	Continue to perform storm drain maintenance twice a year (from Floodplain Management Plan)	City of Cape May, NJDEP, JCPL, NJEPA	Ongoing Capability		



Table 9.3-14. 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 #
CCM-30	Continue quarterly emergency management team meetings and perform annual drills.	City of Cape May, County	Ongoing Capability		
CCM-31	Installation of a back-up generator for the Cape May Convention Hall. This facility could provide temporary sheltering during non-flood related emergencies.	City of Cape May, County	In Progress	X	2020-Cape May City-003

PROPOSED HAZARD MITIGATION INITIATIVES FOR THE PLAN UPDATE

The City of Cape May 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 City of Cape May 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 9.3-15 summarizes the comprehensive-range of specific mitigation initiatives the City of Cape May 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 9.3-16 provides a summary of the prioritization of all proposed mitigation initiatives for this HMP update.



Table 9.3-15. 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
2020-Cape May City-001	New Fire and OEM Department Building	Problem: Cape May’s Fire and OEM are housed in a functionally obsolete building. The Fire and OEM building is susceptible to wind and rain damage and lacks an emergency command center. Solution: Construct a new state of the art fire and OEM building that houses an emergency control center and enhances the ability of the City to respond to hazards.	New	All hazards	1, 2, 3, 4, 6	Cape May City Administration/Fire Department	CDBG; City funds	Enhanced operations and interoperability of first responder departments	\$7 million	1-3 years	High	SIP	ES
2020-Cape May City-002	City Hall and Police Station Modernization	Problem: City Hall is functionally obsolete. It is a Contributing Building in the City’s Historic District. It contains the City Administrative and police functions. The building requires updates to continue functioning in its current capacity to respond to natural hazards and be more resilient to hazard events. Solution: Facilitate the modernization of the building to ensure critical functions during hazard events.	Existing	All hazards	1, 2,3, 4, 6	Cape May City Administration/Police Department	CDBG; City Funds	Increased City capabilities to all hazards	High	Within three years	High	SIP	ES
2020-Cape May City-003 (Former CCM-31)	Backup Power for Critical Facilities	Problem: Various Public Buildings lack back up power. This results in disrupted operations when the City is impacted by power outages and hazard events. Solution: Installation of a back-up generator for the Cape May Convention Hall. This facility could provide temporary sheltering during non-flood related emergencies.	Existing	All	1, 2, 3, 4	City Administration and Department of Public Works	BRIC; Local match	Continued operation of critical facilities during power outages	\$1.2 M	<1 year	Medium	SIP	ES
2020-Cape May City-004	Desalinization Plant Upgrades	Problem: Cape May has longstanding water supply issues owing to overdrawing wells and intrusion of saltwater into freshwater aquifers. The City has one of the first reverse-osmosis desalinization plant and requires additional upgrades to remain functional. The facility requires a rebuild.	Existing	Sea Level Rise, Drought	1, 3	Cape May City Water and Sewer	NJ I-Bank; Local match; EPA	Enhanced provision of potable water for	High	Medium term	High	SIP	NR



Table 9.3-15. 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: Upgrade Desalinization plant-- rebuild and new facility and advance planning/engineering.						Cape Island					
2020-Cape May City-005	Transient Population Emergency Awareness	Problem: The City has a large visitor and second-home population during the summer season and fall/spring shoulder seasons. Informing these visitors and part-time residents of natural hazards is a challenge due to a lack of awareness of emergency resources. Solution: Develop a geo-fencing alert system that will push alerts to all internet connected devices within the municipal boundaries. Additionally, develop a city-wide siren system to reach visitors in the City regardless of location and length of stay.	New	All	2, 3, 4	Cape May City OEM	City funds	Greater awareness of natural hazards	Low	Less than a year	High	EAP	PI
2020-Cape May City-006 (Former CCM-4)	CR-640/Coast Guard Shoreline Protection (See 2020-CapeMayCounty-014)	Problem: Delaware Avenue/CR-640 connects the US Coast Guard Training Center to Cape May and evacuation routes to the north. Delaware Avenue is protected from Cape May Harbor by a rip-rap system that is subject to erosion and provides inconsistent protection. Solution: Install shoreline protection for CR-640 (entrance to Coast Guard Base) along the Cape May Harbor in the City of Cape May.	Existing	Flood; Hurricane/ Tropical Storm; Nor'easter; Climate Change and Sea Level Rise; Coastal Erosion	1, 3, 5	County Engineering and USACE	US Army Corps of Engineers; BRIC; USCG	High	High	In progress	High	SIP	PP
2020-Cape May City-007 (Former CCM-5)	Cape May Promenade Seawall Extension	Problem: The Cape May beach promenade protects the City from destructive storm surge and high tides. Currently the promenade seawall provides a consistent level of protection except for a gap between Madison Avenue and Wilmington Avenue. At this location there is a low rock wall and decrepit timber bulkhead. This gap presents a major vulnerability for a storm surge event in the eastern section of the City. A feasibility study for a new promenade wall was partially financed through a FMA grant.	Existing	Flood; Hurricane/ Tropical Storm; Nor'easter; Climate Change and Sea Level Rise; Coastal Erosion	1, 3, 4, 5	County Engineering, with City of Cape May Engineering; US Army Corps, DEP	Local funding; Shore Protection Fund; US Army Corps; BRIC/FMA	High	Medium-High	Short-term D OF	High	SIP	SP



Table 9.3-15. 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: Install a cap on the existing seawall from Madison Avenue to Wilmington Avenue.											
2020-Cape May City-008 (Former CCM-6)	Seawall Retrofit	Problem: The Cape May promenade is a seawall that extends along the beachfront and protects the City from storm surge. The seawall is deteriorating in some sections and requires an overall elevation to account for rising sea levels. Solution: Undertake a retrofit of the existing seawall to increase its elevation and continue to protect Cape May	Existing	Flood; Hurricane/ Tropical Storm; Nor'easter; Climate Change and Sea Level Rise	1, 3, 4, 6	County and City Engineering ; USACE	BRIC/HM GP; USACE; Shore Protection Fund	High	High	Long Term D OF	Medium	SIP	PP
2020-Cape May City-009 (Former CCM-7)	Cape May City Stormwater Pump Station Resilience (See 2020-CapeMayCounty-021)	Problem: Cape May is vulnerable to nuisance and stormwater flooding due to low-lying land elevations near Cape Island Creek and Frog Hollow. The City has installed stormwater pump stations to mitigate the flood risk. However, if the pumps fail due to severe storms, the stormwater pumps will not be able to function. Solution: Install backup power to two stormwater pump stations at Madison Avenue and Grant Avenue in Cape May City. Work with the City to properly site the generator, which could be co-managed with the City to provide backup power for their station on Queen Street and Benton Avenue.	Existing	Hurricane/ Tropical Storm, Nor'Easter , Severe Weather, Flooding	1, 3, 4, 5	City DPW and Engineering , County of Cape May	County Funded	High	Low (for City)	Long Term D OF	High	SIP	ES
2020-Cape May City-010 (Former CCM-8)	Venice Avenue Upgrades	Problem: The Venice Avenue pump station is located in a low-lying section of the City near Cape Island Creek. The pump station provides service to nearby properties. The land near the pump station floods when tide levels are just one foot above typical high tides. The Cape May Police force is staffed in West Cape May (with the exception of Administration). Venice Avenue is an essential route back to the City of Cape May.	Existing	Flood; Hurricane/ Tropical Storm; Nor'easter; Climate Change and Sea Level Rise; Severe Weather	1, 3, 4	Cape May City- Public Works	Local Budgets with HMA grants where applicable	High	High	<5 years	Medium	SIP	PP



Table 9.3-15. 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: Upgrade Venice Avenue pump station (increased capacity, backup power)											
2020-Cape May City-011 (Former CCM-9)	Cape May Back Bay Flood Study	Problem: Cape May has widely varying elevation ranging from areas of relative high ground near the City Center to low-lying former wetlands area in the periphery of the City. Due to the density of development and existing geography, large-scale flood protection infrastructure requires careful planning to maintain the historic integrity of the City and protect the existing ecosystems. Solution: Work with County GIS to leverage recent LIDAR elevation data to identify areas that need a berm to prevent back bay flooding	N/A	Flood; Hurricane/Tropical Storm; Nor'easter; Climate Change and Sea Level Rise; Severe Weather	1, 3, 4	City along with USFWS and NJDEP, Cape May Point; Cape May County	Local and County budgets	Medium	Low-Medium	Ongoing	High	SIP	PR
2020-Cape May City-012 (Former CCM-10)	Cape May Back Bay Flood Mitigation Implementation	Problem: Cape May's Back Bay areas do not have the same structural protection as the oceanfront areas. Though certain portions of the waterfront received bulkheads (such as Harbor Lane in 2014), additional mitigation is needed to create a ring of protection for the City and surrounding communities. Solution: Based on findings of previous initiative, develop and implement a program to install dikes/barriers to protect from back bay flooding.	Existing/New	Flood; Hurricane/Tropical Storm; Nor'easter; Climate Change and Sea Level Rise; Severe Weather	1, 3, 4, 5	City of Cape May Administration, USACE, NJDEP, Cape May County	Local budgets with USACE, NJDEP and HMA grants as applicable	High-enhanced protection throughout City	High	Long-term	Medium	SIP	SP
2020-Cape May City-013 (Former CCM-15)	Road Flood Mitigation Planning	Problem: Cape May has various low-lying streets found throughout the City. These streets are plagued by regular nuisance flooding, particularly in the western and eastern ends of the City as well as the Elmira Street corridor. A combination of high tides and rainfalls will cause nuisance flooding that hinders access to the areas for residents and for emergency vehicles.	Existing	Flood; Hurricane/Tropical Storm; Nor'easter; Climate Change and Sea Level Rise;	1, 3, 4	City Engineering with County support; West Cape May	County and local budgets with HMA funding; Transportation Trust Fund	High	High	Less than 5 years	Medium	SIP	SP



Table 9.3-15. 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: Develop a plan for road elevations and drainage improvements in low-lying sections of the City impacted by nuisance stormwater and tidal flooding.		Severe Weather									
2020-Cape May City-014 (Former CCM-26)	Sewell Point Acquisition	Problem: Sewell Point is a roughly 130-acre tract of undeveloped land located between the City’s center and the Coast Guard Training Center. The land is privately owned, located in the Special Flood Hazard Area, and is subject to litigation over proposed development. The wetlands serve as a natural floodplain buffer. Solution: The City proposes to acquire the Sewell Point tract and conserve the land as open space, thereby reducing risk to existing development and preventing the addition of more structures in the floodplain.	Existing	Flood; Hurricane/ Tropical Storm; Nor’easter; Climate Change and Sea Level Rise; Severe Weather	1, 5	Cape May City Planning Board; NJDEP; Cape May County	Federal, State, County, Local	High	High	Long	High	NSP	NR
2021-CapeMay City-015	Property Mitigation Support – Retrofit	Problem: Cape May has a number of repetitive loss, severe repetitive loss, and substantially damaged properties. Many of these structures were built without flood design standards. These properties require mitigation to prevent future losses and prevent loss of life and property damage. Progress has been made on elevating buildings and reconstructing new buildings that are more resistant to flooding. Solution: Where appropriate, support retrofitting (e.g. elevation) of structures located in hazard-prone areas to protect structures from future damage, with substantial damages, repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost-effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider implementation of that action based on available funding.	Existing	Flood; Hurricane/ Tropical Storm; Nor’easter; Climate Change and Sea Level Rise; Severe Weather	1, 3, 4	Floodplain Administrator, Homeowners	FMA; HMGP; Owner funds	High	High	Long Term D OF	High	SIP	PP



Table 9.3-15. 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-CapeMay City-016	Dune System Enhancement	<p>Problem: The dunes play an important role in the protection of Cape May's beaches and structures. Dune plantings take place regularly to help maintain and protect the dunes. However, non-indigenous plants have begun to take over the dunes, causing eyesores and threatening the dune grass.</p> <p>Solution: Better maintenance will take place through researched, eco-friendly methods will improve the integrity of the dunes and help maintain a pristine appearance along the Promenade. Bi-Annual maintenance will be performed through a coordinated effort between local volunteers and Cape May City Public Works.</p>	N/A	Coastal Erosion, Hurricane, Nor'Easter, Tsunami	3, 5, 6	Public Works, local volunteers	City budget, environmental grants from state/federal sources and non-profits	Increased health and strength of protective dune system	Low	1 year	High	NSP	NR
2021-CapeMay City-017	Beachfront Public Address System	<p>Problem: Quick moving storm systems or quickly moving beach related hazards can result in beachgoers being caught unaware. Currently, the need to evacuate the beach and seek shelter is met by beach staff but this is slow and not efficient at times. The City has begun installation of a Beachfront Public Address System to meet this need.</p> <p>Solution: The City will complete installation of the Beachfront Public Address System.</p>	New	Severe Weather, Tsunami	1, 2, 4	Public Works, OEM	City budget	Increased emergency warnings	Medium	2 years	High	SIP	ES

Notes:

Acronyms and Abbreviations:

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

Potential FEMA HMA Funding Sources:

- FMA Flood Mitigation Assistance Grant Program
- HMGP Hazard Mitigation Grant Program
- BRIC Building Resilient Infrastructure and Communities Program

Timeline:

The time required for completion of the project upon implementation

Cost:

The estimated cost for implementation.

Benefits:

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

Mitigation Category:





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

CRS Category:

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



Table 9.3-16. Summary of Prioritization of Actions

Initiative Number	Mitigation Initiative Name	Life Safety	Property Protection	Cost Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2020-Cape May City-001	New Fire and OEM Department Building	1	1	1	1	1	1	1	1	1	0	1	1	1	0	12	High ▲
2021-Cape May City-002	City Hall and Police Station Modernization	1	1	1	1	1	1	1	1	1	0	1	1	1	0	12	High
2021-Cape May City-003 (Former CCM-31)	Backup Power for Critical Facilities	1	1	1	1	1	1	-1	-1	1	1	1	0	1	0	8	Medium
2021-Cape May City-004	Desalinization Plant Upgrades	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
2021-Cape May City-005	Transient Population Emergency Awareness	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
2021-Cape May City-006 (Former CCM-4)	CR-640/Coast Guard Shoreline Protection (See 2021-CapeMayCounty-014)	1	1	1	1	1	1	-1	-1	1	0	1	1	1	0	12	High
2021-Cape May City-007 (Former CCM-5)	Cape May Promenade Seawall Extension	1	1	1	1	1	1	-1	-1	1	1	1	1	1	1	12	High
2021-Cape May City-008 (Former CCM-6)	Seawall Retrofit	1	1	1	1	1	0	-1	-1	1	1	1	0	0	1	8	Medium
2021-Cape May City-009 (Former CCM-7)	Cape May City Stormwater Pump Station Resilience (See 2021-CapeMayCounty-021)	1	1	1	1	1	1	-1	-1	1	0	1	1	1	0	12	High
2021-Cape May City-010 (Former CCM-8)	Venice Avenue Upgrades	1	1	1	1	1	1	-1	0	1	1	0	0	1	0	8	Medium
2021-Cape May City-011 (Former CCM-9)	Cape May Back Bay Flood Study	1	1	1	1	1	1	1	0	1	1	1	1	1	1	12	High
2021-Cape May City-012 (Former CCM-10)	Cape May Back Bay Flood Mitigation Implementation	1	1	1	0	1	0	-1	-1	1	1	1	1	1	1	9	High



Table 9.3-16. Summary of Prioritization of Actions

Initiative Number	Mitigation Initiative Name	Life Safety	Property Protection	Cost Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2020-Cape May City-013 (Former CCM-15)	Road Flood Mitigation Planning	1	1	1	1	1	1	-1	0	1	1	0	0	1	0	8	Medium
2020-Cape May City-014 (Former CCM-26)	Sewell Point Acquisition	1	1	1	1	1	1	3	1	1	1	1	1	1	1	14	High
2021-CapeMayCity-015	Property Mitigation Support – Retrofit	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
2021-CapeMayCity-016	Dune System Enhancement	0	1	1	1	1	1	1	1	1	1	1	1	1	1	13	High
2021-CapeMayCity-017	Beachfront Public Address System	1	0	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 9.3-17. 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 SLR	X	X	X	X	X	X	X	X
Coastal Erosion		X	X	X	X	X	X	X
Disease Outbreak			X		X			X
Drought			X	X	X		X	X
Flood	X	X	X	X	X	X		X
Hurricane	X	X	X	X	X	X	X	X
Nor'Easter	X	X	X	X	X	X	X	X
Severe Weather	X		X	X	X			X
Severe Winter Weather			X		X			X
Tsunami			X	X	X		X	X
Wildfire			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 9.3-1. City of Cape May Hazard Area Extent and Location Map 1

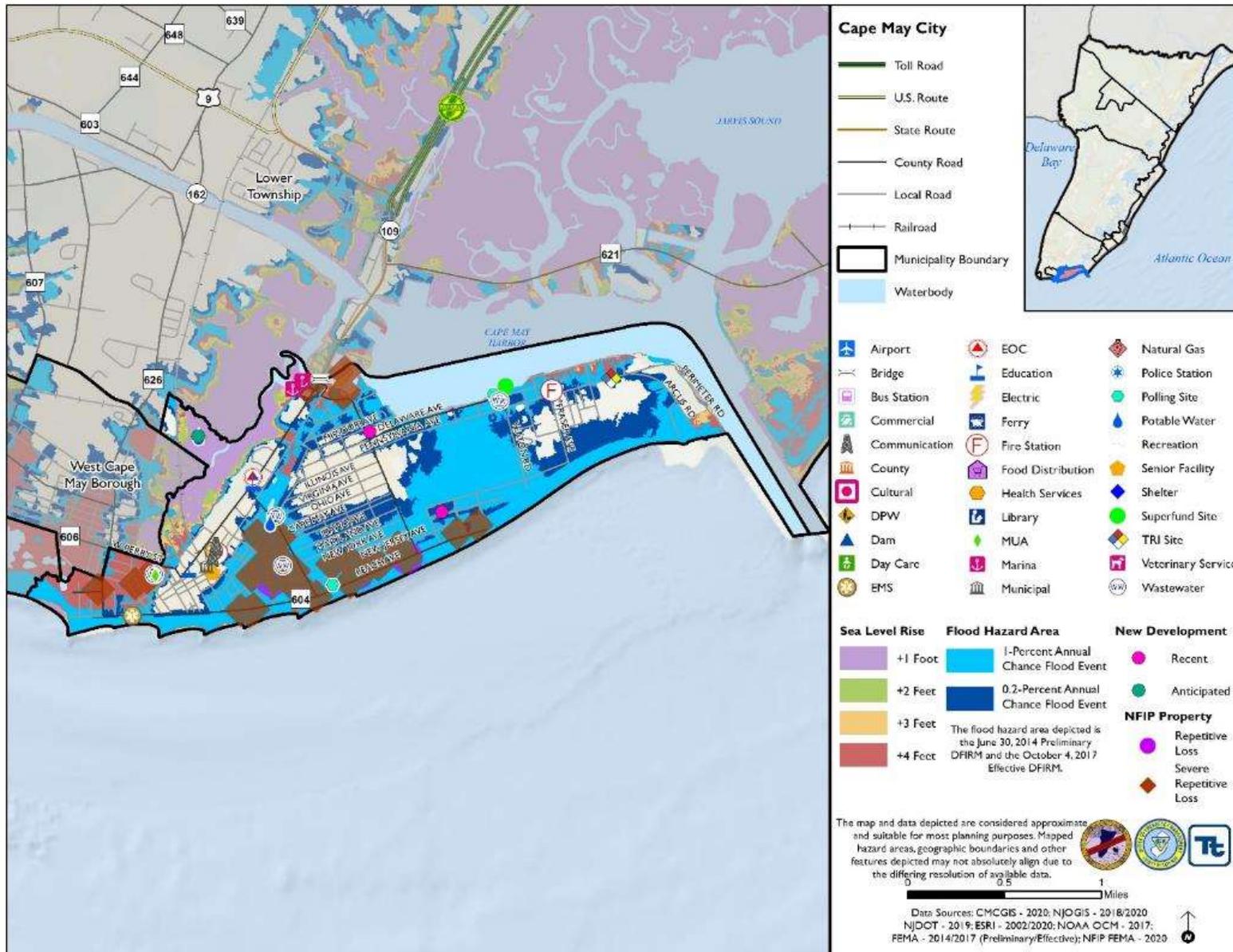




Figure 9.3-2. City of Cape May Hazard Area Extent and Location Map 2

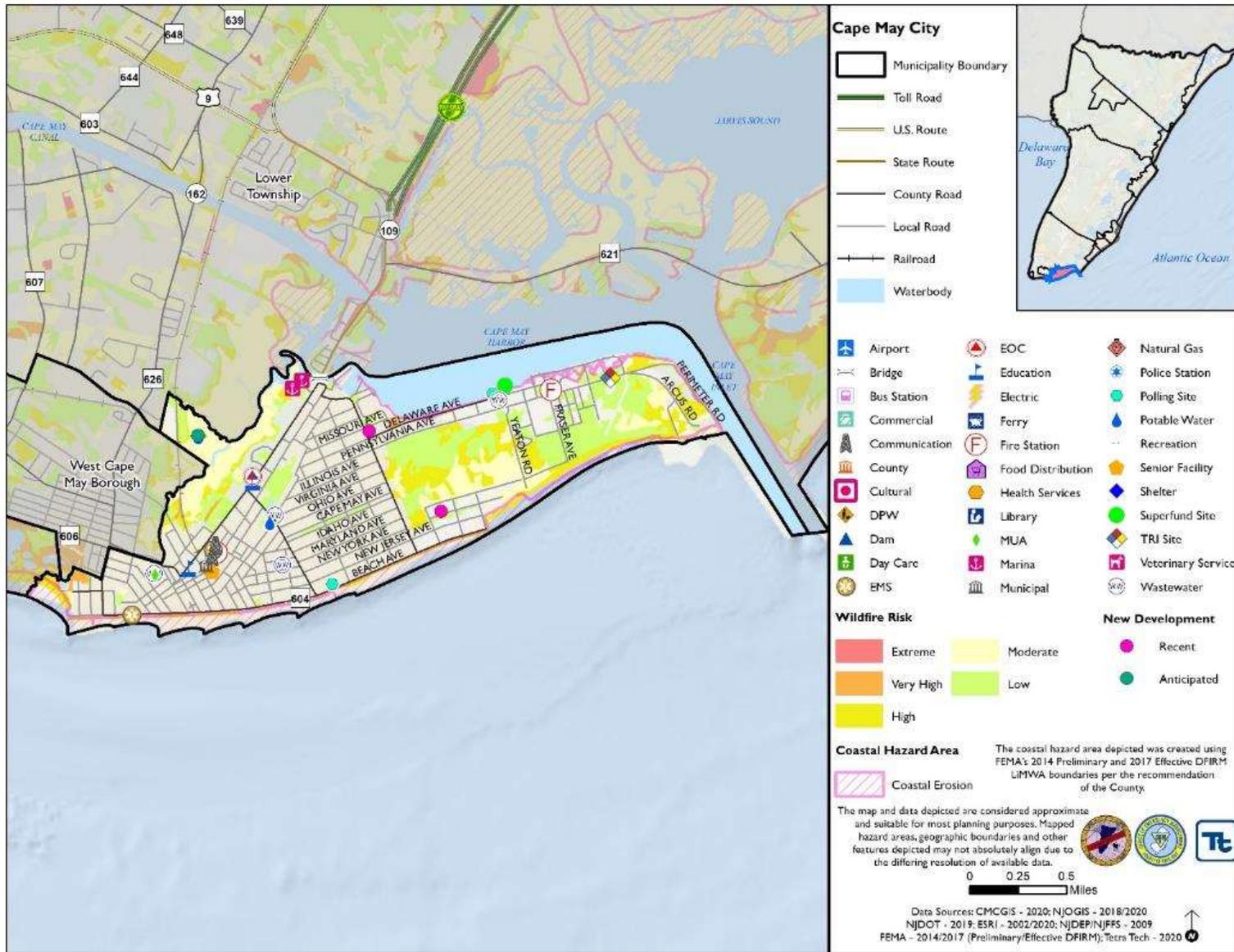
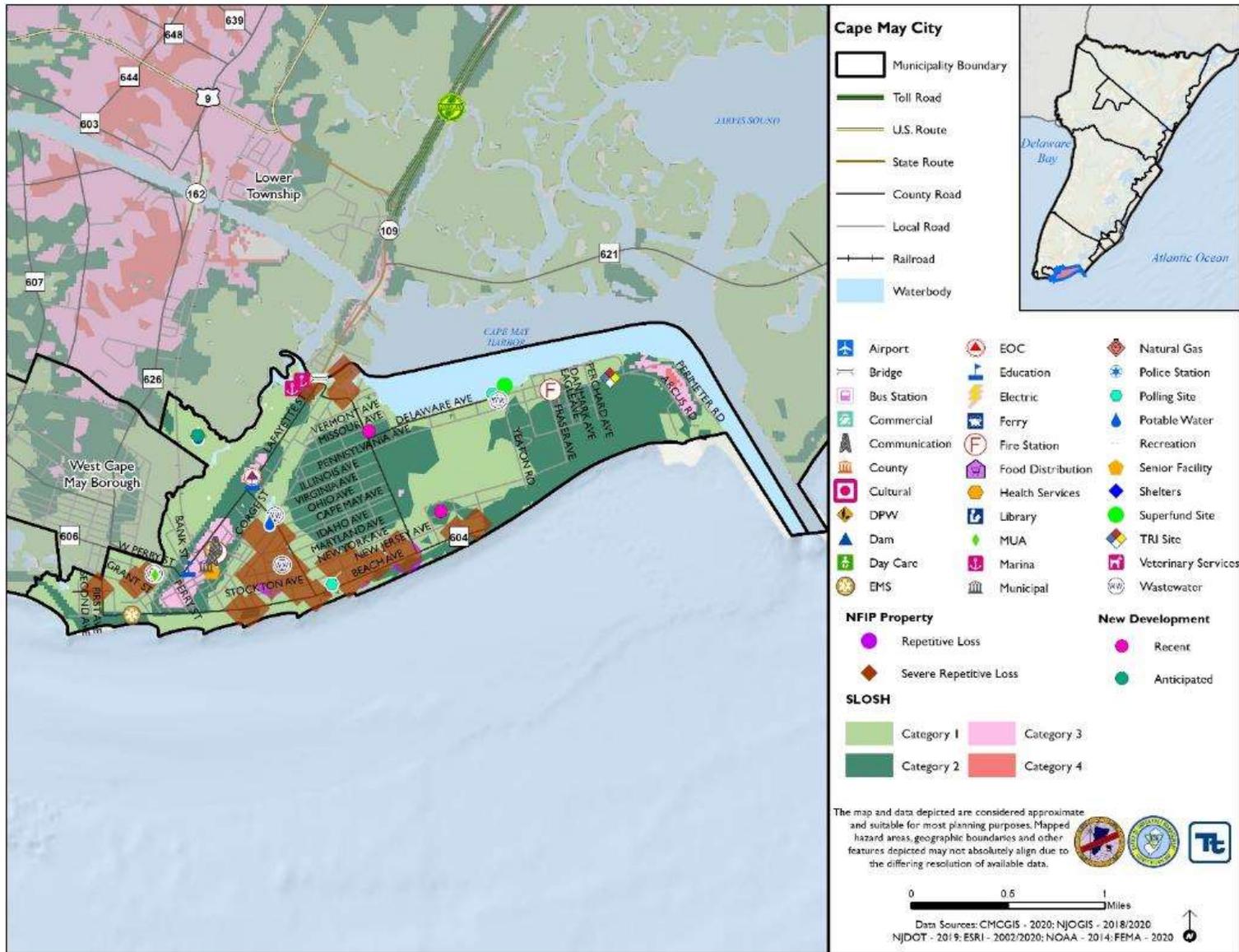




Figure 9.3-3. City of Cape May Hazard Area Extent and Location Map 3





Action Worksheet			
Project Name:	New Fire and OEM Department building		
Project Number:	2021-Cape May City-001		
Risk / Vulnerability			
Hazard(s) of Concern:	All		
Description of the Problem:	Cape May's Fire and OEM are housed in a functionally obsolete building. The Fire and OEM building is susceptible to wind and rain damage and lacks an emergency command center.		
Action or Project Intended for Implementation			
Description of the Solution:	Construct a new state of the art fire and OEM building that houses an emergency control center and enhances the ability of the City to respond to hazards.		
Is this project related to a Critical Facility or Lifeline?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Level of Protection:	High	Estimated Benefits (losses avoided):	Increased response capabilities to all hazards
Useful Life:	50 years	Goals Met:	1, 2, 3, 4, 6
Estimated Cost:	\$8,000,000	Mitigation Action Type:	Structure and Infrastructure Project
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	1-3 years
Estimated Time Required for Project Implementation:	3 months	Potential Funding Sources:	CDBG; City Funds
Responsible Organization:	City Administration	Local Planning Mechanisms to be Used in Implementation if any:	Capital Improvement Plan
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Combined facility	High	Cost prohibitive
	New fire/OEM building	\$8M	Feasible
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	New Fire and OEM Department building	
Project Number:	2021-Cape May City-001	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Improves and modernizes the City's Fire, EMS, and OEM functions
Property Protection	1	Improves and modernizes the City's Fire, EMS, and OEM functions
Cost-Effectiveness	1	The current building has outlived its useful life
Technical	1	The current building has outlived its useful life
Political	1	Approved in a public Referendum in 2020
Legal	1	Yes, it is a municipal building
Fiscal	1	The project in conjunction with the needed Police Department and City Hall building renovations would need outside funding.
Environmental	1	No environmental issues are known at this time
Social	1	Keeps City functions located in the neighborhood they have been located for the past 100+ years.
Administrative	0	Outside professionals will be needed
Multi-Hazard	1	Covers all identified Hazards; current location is no in a flood zone
Timeline	1	1-3 years
Agency Champion	1	Local Government
Other Community Objectives	0	
Total	12	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	City Hall and Police Station Modernization		
Project Number:	2021-Cape May City-002		
Risk / Vulnerability			
Hazard(s) of Concern:	All Hazards		
Description of the Problem:	City Hall is functionally obsolete. It is a Contributing Building in the City's Historic District. It contains the City Administrative and police functions. The building requires updates to continue functioning in its current capacity to respond to natural hazards and be more resilient to hazard events.		
Action or Project Intended for Implementation			
Description of the Solution:	Facilitate the modernization of the building to ensure critical functions during hazard events.		
Is this project related to a Critical Facility or Lifeline?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Level of Protection:	High	Estimated Benefits (losses avoided):	Increased City capabilities to all hazards
Useful Life:	50 years	Goals Met:	1, 2, 3, 4, 6
Estimated Cost:	High	Mitigation Action Type:	Structure and Infrastructure Plan
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	2-3 years
Estimated Time Required for Project Implementation:	3 months	Potential Funding Sources:	CDBG; City Funds
Responsible Organization:	City Administration	Local Planning Mechanisms to be Used in Implementation if any:	Capital Improvement Plan
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Combined facilities	\$15M	Cost prohibitive
	Facility revamp	High-TBD	Cost feasible
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	City Hall and Police Station Modernization	
Project Number:	2021-Cape May City-002	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Improves and modernizes the City's Police functions
Property Protection	1	
Cost-Effectiveness	1	Combines Police and Administrative Government functions into a single building
Technical	1	The building has existed for 100 years in its current location
Political	1	Updates the City's Elected Officials offices
Legal	1	Yes, it is a municipal building
Fiscal	1	The project in conjunction with the needed Fire Department building replacement would need outside funding.
Environmental	1	No environmental issues are known at this time
Social	1	Keeps City functions located in the neighborhood they have been located for the past 100+ years.
Administrative	0	Outside professionals will be needed
Multi-Hazard	1	Covers all identified Hazards; current location is not in a flood zone
Timeline	1	4-5 years
Agency Champion	1	Local Government
Other Community Objectives	0	
Total	12	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Backup Power for Critical Facilities		
Project Number:	2021-Cape May City-003		
Risk / Vulnerability			
Hazard(s) of Concern:	All		
Description of the Problem:	Various Public Buildings lack back up power. This results in disrupted operations when the City is impacted by power outages and hazard events.		
Action or Project Intended for Implementation			
Description of the Solution:	Install 1500 kW Generators for City Hall and Convention Hall, and a 3000kW generator for the new Fire Station. The Convention Hall can provide temporary sheltering during non-flood related emergencies.		
Is this project related to a Critical Facility or Lifeline?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Level of Protection:	High	Estimated Benefits (losses avoided):	Increased response capabilities to all hazards
Useful Life:	20 years	Goals Met:	1, 2, 3, 4
Estimated Cost:	\$1,200,000	Mitigation Action Type:	Structure and Infrastructure Project
Plan for Implementation			
Prioritization:	Medium	Desired Timeframe for Implementation:	< 1 year
Estimated Time Required for Project Implementation:	3 months	Potential Funding Sources:	City funds; BRIC
Responsible Organization:	City Administration and Department of Public Works	Local Planning Mechanisms to be Used in Implementation if any:	Capital Improvement Plan
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Microgrid	High	Too costly
	Distributed generators	Medium	Feasible
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Backup Power for Critical Facilities	
Project Number:	2021-Cape May City-003	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	Project protects critical facility property
Cost-Effectiveness	1	
Technical	1	Project is technically feasible
Political	1	
Legal	1	Project is legally possible
Fiscal	-1	
Environmental	-1	
Social	1	Project mitigates social disruption due to loss of services
Administrative	1	
Multi-Hazard	1	
Timeline	0	
Agency Champion	1	City supports project
Other Community Objectives	0	
Total	8	
Priority (High/Med/Low)	Medium	



Action Worksheet			
Project Name:	Desalinization Plant Upgrades		
Project Number:	2021-Cape May City-004		
Risk / Vulnerability			
Hazard(s) of Concern:	All hazards Sea Level Rise, Drought		
Description of the Problem:	Cape May has longstanding water supply issues owing to overdrawing wells and intrusion of saltwater into freshwater aquifers. The City has one of the first reverse-osmosis desalinization plant and requires additional upgrades to remain functional. The facility requires a rebuild.		
Action or Project Intended for Implementation			
Description of the Solution:	The City proposes to upgrade Desalinization plant--- rebuild and new facility and advance planning/engineering.		
Is this project related to a Critical Facility or Lifeline?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Level of Protection:	500 Year	Estimated Benefits (losses avoided):	Enhanced provision of potable water for Cape Island
Useful Life:	350 years	Goals Met:	1, 3
Estimated Cost:	High	Mitigation Action Type:	Structure and Infrastructure Project
Plan for Implementation			
Prioritization:	Medium	Desired Timeframe for Implementation:	Less than one year
Estimated Time Required for Project Implementation:	1 year	Potential Funding Sources:	NJ I-Bank; Local match; EPA
Responsible Organization:	Cape May City Water and Sewer	Local Planning Mechanisms to be Used in Implementation if any:	Capital Improvement Plan
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	New water source	High	Cost prohibitive
	Desalinization plant	High	Effective
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Desalinization Plant Upgrades	
Project Number:	2021-Cape May City-004	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Maintains potable water supply
Property Protection	1	
Cost-Effectiveness	1	
Technical	1	
Political	1	Project is politically supported
Legal	1	Project is legally feasible
Fiscal	0	Project requires funding support
Environmental	1	Mitigates environmental impacts
Social	1	
Administrative	1	
Multi-Hazard	1	
Timeline	1	
Agency Champion	1	City can champion with partners
Other Community Objectives	1	
Total	13	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	CR-640/Coast Guard Shoreline Protection		
Project Number:	2021-CapeMay-006 (Former CCM-4) 2021-CapeMayCounty-014 (Former CMC 21)		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood; Hurricane/Tropical Storm; Nor'easter; Climate Change and Sea Level Rise; Coastal Erosion		
Description of the Problem:	Delaware Avenue/CR-640 connects the US Coast Guard Training Center to Cape May and evacuation routes to the north. Delaware Avenue is protected from Cape May Harbor by a rip-rap system that is subject to erosion and provides inconsistent protection.		
Action or Project Intended for Implementation			
Description of the Solution:	Install shoreline protection/bulkhead for CR-640 (entrance to Coast Guard Base) along the Cape May Harbor in the City of Cape May.		
Is this project related to a Critical Facility or Lifeline?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Level of Protection:	Base flood elevation	Estimated Benefits (losses avoided):	High
Useful Life:	50 years	Goals Met:	1, 3, 5
Estimated Cost:	High	Mitigation Action Type:	Structure and Infrastructure Project
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	Within five years
Estimated Time Required for Project Implementation:	In progress	Potential Funding Sources:	US Army Corps of Engineers; BRIC; USCG
Responsible Organization:	County Engineering and USACE	Local Planning Mechanisms to be Used in Implementation if any:	Capital Improvement Plan
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Road Abandonment	Low	No access to Sewell Point/USCG
	Shore protection	High	Continued protection
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	CR-640/Coast Guard Shoreline Protection	
Project Number:	2021-CapeMayCounty-014 (Former CMC 21)	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Protects inhabitants of landward properties
Property Protection	1	Protects landward properties
Cost-Effectiveness	1	
Technical	1	Project is technically possible
Political	1	
Legal	1	
Fiscal	-1	
Environmental	-1	May cause adverse impacts
Social	1	
Administrative	1	
Multi-Hazard	1	Project will address multiple hazards
Timeline	1	
Agency Champion	1	
Other Community Objectives	1	Protects Coast Guard base
Total	12	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Cape May Promenade Seawall Extension		
Project Number:	2021-Cape May City-007 (Former CCM-5)		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood; Hurricane/Tropical Storm; Nor'easter; Climate Change and Sea Level Rise; Coastal Erosion		
Description of the Problem:	The Cape May beach promenade protects the City from destructive storm surge and high tides. Currently the promenade seawall provides a consistent level of protection except for a gap between Madison Avenue and Wilmington Avenue. At this location there is a low rock wall and decrepit timber bulkhead. This gap presents a major vulnerability for a storm surge event in the eastern section of the City. A feasibility study for a new promenade wall was partially financed through a FMA grant.		
Action or Project Intended for Implementation			
Description of the Solution:	Install a cap on the existing seawall from Madison Avenue to Wilmington Avenue.		
Is this project related to a Critical Facility or Lifeline?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Level of Protection:	Base flood elevation	Estimated Benefits (losses avoided):	High
Useful Life:	50 years	Goals Met:	1, 3, 4, 5
Estimated Cost:	Medium-High	Mitigation Action Type:	Structure and Infrastructure Plan
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	Within five years
Estimated Time Required for Project Implementation:	Short-term DOF	Potential Funding Sources:	Local funding; Shore Protection Fund; US Army Corps; BRIC/FMA
Responsible Organization:	County Engineering, with City of Cape May	Local Planning Mechanisms to be Used in Implementation if any:	Capital Improvement Plan; Feasibility Study; Master Plan; Plan
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Seawall removal	Medium	Loss of protection
	Seawall Extension	Medium-High	Enhanced protection
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Cape May Promenade Seawall Extension	
Project Number:	2021-Cape May City-007 (Former CCM-5)	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	Protects landward properties
Cost-Effectiveness	1	Value of protected properties exceed project
Technical	1	
Political	1	
Legal	1	
Fiscal	-1	Project requires funding support
Environmental	-1	Potentially adverse impacts
Social	1	
Administrative	1	
Multi-Hazard	1	Multiple hazards mitigated
Timeline	1	
Agency Champion	1	City will champion, stakeholder agencies are involved
Other Community Objectives	1	
Total	High	
Priority (High/Med/Low)	12	



Action Worksheet			
Project Name:	Seawall Retrofit		
Project Number:	2021-Cape May City-008 (Former CCM-6)		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood; Hurricane/Tropical Storm; Nor'easter; Climate Change and Sea Level Rise		
Description of the Problem:	The Cape May promenade is a seawall that extends along the beachfront and protects the City from storm surge. The seawall is deteriorating in some sections and requires an overall elevation to account for rising sea levels.		
Action or Project Intended for Implementation			
Description of the Solution:	Undertake a retrofit of the existing seawall to increase its elevation and continue to protect Cape May		
Is this project related to a Critical Facility or Lifeline?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Level of Protection:	Base flood elevation	Estimated Benefits (losses avoided):	High
Useful Life:	50 years	Goals Met:	1, 3, 4, 6
Estimated Cost:	High	Mitigation Action Type:	Structure and Infrastructure Project
Plan for Implementation			
Prioritization:	Medium	Desired Timeframe for Implementation:	Within five years
Estimated Time Required for Project Implementation:	Long Term DOF	Potential Funding Sources:	BRIC/HMGP; USACE; Shore Protection Fund
Responsible Organization:	County Engineering and Municipality; USACE	Local Planning Mechanisms to be Used in Implementation if any:	Capital Improvements Plan
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Seawall removal	Medium	Loss of protection
	Seawall retrofit	High	Enhanced protection
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Seawall Retrofit	
Project Number:	2021-Cape May City-008 (Former CCM-6)	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	
Cost-Effectiveness	1	
Technical	1	Technically feasible to elevate promenade
Political	1	Politically feasible
Legal	0	
Fiscal	-1	Project requires funding support
Environmental	-1	Potentially adverse environmental impacts
Social	1	
Administrative	1	
Multi-Hazard	1	
Timeline	0	
Agency Champion	0	City supports, requires coordination
Other Community Objectives	1	
Total	8	
Priority (High/Med/Low)	Medium	



Action Worksheet			
Project Name:	Cape May City Stormwater Pump Station Resilience		
Project Number:	2021-CapeMay-009 (Former CCM-7) 2021-CapeMayCounty-021 (Former CMC 33)		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood; Hurricane/Tropical Storm; Nor'easter; Climate Change and Sea Level Rise		
Description of the Problem:	Cape May is vulnerable to nuisance and stormwater flooding due to low-lying land elevations near Cape Island Creek and Frog Hollow. The City has installed stormwater pump stations to mitigate the flood risk. However, if the pumps fail due to severe storms, the stormwater pumps will not be able to function.		
Action or Project Intended for Implementation			
Description of the Solution:	Install backup power to two stormwater pump stations at Madison Avenue and Grant Avenue in Cape May City. Work with the City to properly site the generator, which could be co-managed with the City to provide backup power for their station on Queen Street and Benton Avenue.		
Is this project related to a Critical Facility or Lifeline?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Level of Protection:	500 Year	Estimated Benefits (losses avoided):	High
Useful Life:	30 Years	Goals Met:	1, 3, 4, 6
Estimated Cost:	Medium (not high \$ cost)	Mitigation Action Type:	Structure and Infrastructure Project
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	Within five years
Estimated Time Required for Project Implementation:	Long Term DOF	Potential Funding Sources:	HMA grants with local match
Responsible Organization:	County Engineering and Municipality	Local Planning Mechanisms to be Used in Implementation if any:	Capital Improvement Plan/Local Plans
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Microgrid	High	Too costly
	Backup generator	Medium	Feasible
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Cape May City Stormwater Pump Station Resilience	
Project Number:	2021-CapeMayCounty-021 (Former CMC 33)	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Maintains road access for emergencies
Property Protection	1	Protection of pump station
Cost-Effectiveness	1	
Technical	1	
Political	1	Project is politically supported
Legal	1	Project is legally feasible
Fiscal	-1	Project requires funding support
Environmental	-1	
Social	1	Prevents social disruption
Administrative	1	City can administer project
Multi-Hazard	1	
Timeline	1	
Agency Champion	1	
Other Community Objectives	1	
Total	10	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Venice Avenue Upgrades		
Project Number:	2021-Cape May City-010 (Former CCM-8)		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood; Hurricane/Tropical Storm; Nor'easter; Climate Change and Sea Level Rise; Severe Weather		
Description of the Problem:	The Venice Avenue pump station is located in a low-lying section of the City near Cape Island Creek. The pump station provides service to nearby properties. The land near the pump station floods when tide levels are just one foot above typical high tides.		
Action or Project Intended for Implementation			
Description of the Solution:	Upgrade Venice Avenue pump station (increased capacity, backup power)		
Is this project related to a Critical Facility or Lifeline?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Level of Protection:	500 Year Flood Elevation	Estimated Benefits (losses avoided):	High
Useful Life:	30 years	Goals Met:	1, 3, 4
Estimated Cost:	High	Mitigation Action Type:	Structure and Infrastructure Project
Plan for Implementation			
Prioritization:	Medium	Desired Timeframe for Implementation:	<5 years
Estimated Time Required for Project Implementation:	Long Term DOF	Potential Funding Sources:	Local Budgets with HMA grants where applicable
Responsible Organization:	Cape May City	Local Planning Mechanisms to be Used in Implementation if any:	Capital Improvement Plan
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Pump Station abandonment	low	Loss of service
	Pump Station Enhancements	Medium	Enhanced service
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Venice Avenue Upgrades	
Project Number:	2021-Cape May City-010 (Former CCM-8)	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	Will enhance existing pump station
Cost-Effectiveness	1	
Technical	1	
Political	1	Project is politically supported
Legal	1	
Fiscal	-1	Project requires funding support
Environmental	0	
Social	1	Plan prevents social disruption
Administrative	1	
Multi-Hazard	0	
Timeline	0	
Agency Champion	1	City will support
Other Community Objectives	0	
Total	8	
Priority (High/Med/Low)	Medium	



Action Worksheet			
Project Name:	Cape May Back Bay Flood Study		
Project Number:	2021-Cape May City-011 (Former CCM-9)		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood; Hurricane/Tropical Storm; Nor'easter; Climate Change and Sea Level Rise; Severe Weather		
Description of the Problem:	Cape May has widely varying elevation ranging from areas of relative high ground near the City Center to low-lying former wetlands area in the periphery of the City. Due to the density of development and existing geography, large-scale flood protection infrastructure requires careful planning to maintain the historic integrity of the City and protect the existing ecosystems		
Action or Project Intended for Implementation			
Description of the Solution:	Work with County GIS to leverage recent LIDAR elevation data to identify areas that need a berm to prevent back bay flooding		
Is this project related to a Critical Facility or Lifeline?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Level of Protection:	N/A	Estimated Benefits (losses avoided):	Medium
Useful Life:	TBD by study	Goals Met:	1, 3, 4
Estimated Cost:	Low-Medium	Mitigation Action Type:	Structure and Infrastructure Project
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	Within five years
Estimated Time Required for Project Implementation:	Long-term DOF	Potential Funding Sources:	Local and County budgets
Responsible Organization:	City of Cape May, USACE, NJDEP, Cape May County	Local Planning Mechanisms to be Used in Implementation if any:	Capital Improvement Plan
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Back bay floodgates plan	High	Cost prohibitive
	Holistic floodplain plan	Low	Examines feasibility
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Cape May Back Bay Flood Study	
Project Number:	2021-Cape May City-011 (Former CCM-9)	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Planning will protect life safety
Property Protection	1	Planning will protect properties upon implementation
Cost-Effectiveness	1	
Technical	1	Planning will examine technical feasibility
Political	1	Political support exists
Legal	1	
Fiscal	1	
Environmental	0	Potential environmental impacts
Social	1	Planning will prevent social disruption
Administrative	1	
Multi-Hazard	1	
Timeline	1	
Agency Champion	1	City will champion
Other Community Objectives	1	
Total	13	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Cape May Back Bay Flood Mitigation Implementation		
Project Number:	2021-Cape May City-012 (Former CCM-10)		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood; Hurricane/Tropical Storm; Nor'easter; Climate Change and Sea Level Rise; Severe Weather		
Description of the Problem:	Cape May's Back Bay areas do not have the same structural protection as the oceanfront areas. Though certain portions of the waterfront received bulkheads (such as Harbor Lane in 2014), additional mitigation is needed to create a ring of protection for the City and surrounding communities.		
Action or Project Intended for Implementation			
Description of the Solution:	Based on findings of previous initiative, develop and implement a program to install dikes/barriers to protect from back bay flooding.		
Is this project related to a Critical Facility or Lifeline?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Level of Protection:	N/A	Estimated Benefits (losses avoided):	High- enhanced protection throughout City
Useful Life:	35-100 years	Goals Met:	1, 3, 4, 5
Estimated Cost:	High	Mitigation Action Type:	Structure and Infrastructure Project
Plan for Implementation			
Prioritization:	Medium	Desired Timeframe for Implementation:	Within five years
Estimated Time Required for Project Implementation:	Ongoing; Long-term DOF.	Potential Funding Sources:	Local budgets with USACE, NJDEP and HMA grants as applicable
Responsible Organization:	County Engineering with municipal support	Local Planning Mechanisms to be Used in Implementation if any:	Capital Improvement Plan; Proposed Back Bay Plan
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Back bay floodgates	High	Cost prohibitive
	Holistic floodplain plan	High	Technically feasible
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Cape May Back Bay Flood Mitigation Implementation	
Project Number:	2021-Cape May City-012 (Former CCM-10)	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Protects residents from flooding
Property Protection	1	Protects City projects
Cost-Effectiveness	1	
Technical	0	
Political	1	City support exists
Legal	0	Potential for legal challenges
Fiscal	-1	Project requires funding support
Environmental	-1	Potential adverse environmental impacts
Social	1	
Administrative	1	
Multi-Hazard	1	Addresses multiple flood hazards
Timeline	1	
Agency Champion	1	City will serve as champion
Other Community Objectives	1	
Total	9	
Priority (High/Med/Low)	High	