



9.9 CITY OF OCEAN CITY

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

9.9.1 Staff and Local Stakeholder Involvement in Annex Development

The City of Ocean City followed the planning process described in Section 3 (Planning Process). This annex was developed over the course of several months with input from many jurisdiction representatives. All departments were asked to contribute to the annex development through reviewing and contributing to the capability assessment, reporting on the status of previously identified actions, and participating in action identification and prioritization. The coronavirus pandemic resulted in a strain on local resources that limited some participation, but every effort was made to connect with staff and stakeholders and gain diverse input. Due to safety precautions, all meetings were held virtually. The following table summarizes who participated and in what capacity. Additional documentation on the municipality’s planning process through Planning Partnership meetings is included in Section 3 (Planning Process) and Appendix C (Meeting Documentation).

Table 9.9-1. Hazard Mitigation Planning Team and Contributors

Primary Point of Contact		Alternate Point of Contact
Name / Title: Frank Donato III, CFO/OEM Address: 861 Asbury Avenue Ocean City, NJ 08226 Phone Number: (609) 525-9350 Email: fdonato@ocnj.us		Name / Title: Vincent Bekier, Director Operations & Engineering Address: 115 East 12th Street Ocean City NJ 08226 Phone Number: (609) 525-9405 Email: vbekier@ocnj.us
NFIP Floodplain Administrator		
Name / Title: Mike Koochembere, Building Subcode Official Address: 115 East 12th Street Ocean City NJ 08226 Phone Number: (609) 525-9178 Email: MKoochembere@ocnj.us		
Name	Title	Method of Participation
Frank Donato III	CFO/OEM	Primary point of contact, meeting attendance; annex development, reviewed and signed off on annex
Randy Scheule	City Planner	Capability assessment development, annex updates, reviewed and signed off on annex
Vincent Bekier	Director of Operations & Engineering	Alternate point of contact, reviewed and signed off on annex
Mike Koochembere	Building Subcode Official	NFIP floodplain administrator
Jay A Gillian	Mayor	Reviewed and signed off on annex
George Savastano	Administrator/Engineer	Reviewed and signed off on annex
Cornelius Byrne	Building Code Official	Reviewed and signed off on annex
Jay Prettyman	Chief, Police Department	Reviewed and signed off on annex
James Smith	Chief, Fire Department	Reviewed and signed off on annex



9.9.2 Jurisdiction Profile

Ocean City, known as America’s Greatest Family Resort, is a resort community in northern Cape May County located on the barrier island known as Peck’s Beach. Ocean City is a historic destination for families from the mid-Atlantic region and beyond, boasting a 2.5-mile boardwalk, nine miles of beaches, more than 1,000 acres of marsh ecosystem, and unparalleled access to the Intracoastal Waterway and the Jersey Shore’s beautiful back bays. With more than 20,000 housing units, Ocean City is a lively second home and primary residential community and features amenity-filled commercial and recreation districts and small-town charm.



According to the U.S. Census, the 2010 population for the City of Ocean City was 11,701. The estimated 2017 population was 11,202, a 4.2 percent decrease from the 2010 Census. Data from the 2017 U.S. Census American Community Survey indicate that 4.9 percent of the population is 5 years of age or younger and 31.6 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.

9.9.3 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 9.9-2 summarizes recent and expected future development trends, including major residential/commercial development and major infrastructure development. Figure 9.9-1 at the end of this annex illustrates the geographically-delineated hazard areas and the location of potential new development.

Table 9.9-2. Recent and Expected Future Development

Type of Development	2015	2016	2017	2018	2019
Number of Building Permits for New Construction Issued Since the Previous HMP					
Single and Two-Family Units	217	195	194	178	183
Multi-Family	31	4	6	2	19
Other (commercial, mixed-use, etc.)	1	1	0	0	3
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					
Ocean City Housing Authority	Low income housing	20 units	6th & West Avenue	AE-9 Flood Zone	New high-rise, four living stories over parking
North Island Inn	Condo/Hotel	15 Units	10th & Ocean Avenue	AE- 8 Flood Zone	Three stories over parking

* Only location-specific hazard zones or vulnerabilities identified.



9.9.4 Capability Assessment

The City of Ocean City 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 9.9.4). The City of Ocean City 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 Ocean City and where hazard mitigation has been integrated.

Table 9.9-3. Planning, Legal and Regulatory Capability

	Do you have this? (Yes/No)	Authority that enforces (Federal, State, Regional, County, Local)	Is this State Mandated?	If yes- how? Describe in comments	Have aspects of this been integrated into your mitigation plan? 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) • Building and Housing, Chapter XII, adopted by City Council in 1985. There is hereby established in the City of Ocean City a State Uniform Construction Code Enforcing Agency, consisting of a Construction Official, Building Subcode Official, Fire Protection Subcode Official, and such other subcode officials for such additional subcodes as the Commissioner of the Department of Community Affairs, State of New Jersey. The Construction Official shall be the Chief Administrator of the Enforcing Agency. • The Ordinance contains no specific mitigation actions other than those required in the Uniform Construction Code. 					
Zoning Code	Yes	State & Local	Yes – if municipality has a Planning Board	Yes	-
<i>Comment:</i>					



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					If no - can it be a mitigation action? If yes, add Mitigation Action #.
<ul style="list-style-type: none"> State permissive on local level. Per State of NJ Municipal Land Use Law (MLUL) L. 1975, s. 2, eff Aug 1, 1976, 40-55D-62: 49. Power to zone, requires all jurisdictions to have current zoning and other land development ordinances after the planning board has adopted the land use element and master plan. Zoning and Land Development Chapter XXV, Zoning District Regulations, Article 200, adopted by City Council in 1988 and subsequently amended. The intent of this Ordinance is to establish a precise and detailed plan for the use of land in Ocean City and is enacted in order to promote and to protect the public health, safety, morals, comfort, convenience and the general welfare of the people by establishing zoning districts and therein regulate the use of land and structure for residential, business, office, conservation and other purposes, and by regulating the location, height, bulk and size of buildings and structures, the size of yards, courts and open spaces, the percentage of a lot which may be occupied by a building or a structure, and the density of population. The City created a Conservation Zone to prevent and eliminate conditions which, in the event of flood and storm, threaten the public health, safety and welfare and which lead to damage to, or loss of, property; and to promote recreational opportunities and public access along the bay front of the coastal area. The Beach and Dune Zone established in Section 25-201.3 of this Ordinance delineates areas in Ocean City where beaches and dunes have developed and are deemed to be part of those landforms which provided a natural protection from flooding. The purpose of establishing the Beach and Dune Zone is to regulate the use of this flood preventative land form in ways that will not destroy its flood preventative function, in accordance with N.J.S.A. 40:55D-2(a),(b),(g) and (j), in order to secure safety from flood and other natural disasters; to provide sufficient space for recreational uses in order to meet the needs of all New Jersey citizens; and to promote the conservation of a valuable natural resource. 					
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. 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. Zoning and Land Development Chapter XXV, Development Application Procedures and Plat Details, Article 1500. Knowledge of FEMA flood zone, base flood elevation, Zoning Flood Elevation and such other information as may assist the Planning Board in the determination of floodway and flood hazard area limits shall be provided when considering an application for Subdivision approval. 					
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 Sewer and Water, Chapter XV, adopted by the City Council All discharges of stormwater, surface water, groundwater, roof runoff, and subsurface drainage shall be made to storm sewers or natural outlets designed for such discharges. Any connection, drain, or arrangement which will permit any such waters to enter any wastewater sewer shall be deemed to be a violation of this subsection and this Chapter. Stormwater Drainage is also addressed in detail in Zoning and Land Development, Chapter XXV, Development Applications Procedures and Plat Details, Article 1500. 					
Post-Disaster Recovery	No	-	No	-	-
Comment:					
Real Estate Disclosure	Yes	State, Division of Consumer Affairs	Yes	Yes	-
Comment:					



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<ul style="list-style-type: none"> 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. . It should be noted that Section 21-1.3 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	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
Comment: <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. There is not a specific Growth Management Ordinance, but the management of growth is addressed in the City's Land Development Ordinances. The City is in the process of renewing its Regional Center designation from the State Planning Commission. 					
Site Plan Review	Yes	County & Local	Yes – if municipality has a Planning Board	Yes	-
Comment: <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. Zoning and Land Development Chapter XXV, Development Application Procedures and Plat Details, Article 1500. Knowledge of FEMA flood zone, base flood elevation, Zoning Flood Elevation and such other information as may assist the Planning Board in the determination of floodway and flood hazard area limits shall be provided when considering an application for Subdivision approval. 					
Environmental Protection	Yes	Local	No	Yes	--
Comment: <ul style="list-style-type: none"> Ocean City has adopted policies, plans and ordinances to protect the environment including the Master Plan Conservation Plan, Open Space and Recreation Plan, Stormwater Management Plan, Beach Management Plan, Watershed Management Plan, Floodplain Management Plan, and Natural Resource Inventory. The City code contains regulations that protect beach and dune areas, wetlands and bay islands. The State Plan Regional Center designation highlights the City's strategy to promote immediate and long-term adaptation and resilience strategies that protect natural resources, infrastructure, and the local economy. 					
Flood Damage Prevention	Yes	State & Local	Yes	Yes	-
Comment: <ul style="list-style-type: none"> The NJ State Law Flood Area Control Act (N.J.S.A. 58:16A-52) and the National Flood Control Act of 1968 (NFIP) are state and federal acts to support minimization of flood losses. They do not require local adoption but as enforced by the NJDEP, the floodplain ordinances of each municipality must be reviewed for compliance with these regulations. In addition, participation in the NFIP requires a floodplain ordinance. Regulations for the Flood Control Hazards Act were adopted in 2007 and amended effective June 20, 2016. 					



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<ul style="list-style-type: none"> Flood Damage Prevention, Chapter XXI, adopted by the City Council in 1985 with subsequent amendments. The City Council of the City of Ocean City of Cape May County, New Jersey does ordain as follows. <ul style="list-style-type: none"> The flood hazard areas of the City of Ocean City are subject to periodic inundation which results in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety, and general welfare. These flood losses are caused by the cumulative effect of obstructions in areas of special flood hazard which increase flood heights and velocities, and when inadequately anchored, causes damage in other areas. Uses that are inadequately floodproofed, elevated or otherwise protected from flood damage also contribute to the flood loss. In order to accomplish the purposes of flood protection described in this Chapter the following methods and provisions are proposed: <ul style="list-style-type: none"> Restricting or prohibiting uses which are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities; Requiring that uses vulnerable to floods including facilities which serve such uses, be protected against flood damage at the time of initial construction; Controlling the alteration of natural floodplains, stream channels, and natural protective barriers, which help accommodate or channel flood waters; Controlling filling, grading, dredging, and other development which may increase flood damage; and, Preventing or regulating the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards in other areas. New construction and substantial improvement of any residential structure located in an A or AE Zone shall have the lowest floor, including basement together with the attendant utilities (including all electrical, heating, ventilating, air-conditioning and other service equipment) and sanitary facilities, elevated at or above the best available flood hazard data elevation plus two (2) feet. 	No	-	No	-	-
Wellhead Protection					
<i>Comment:</i>					
Emergency Management	Yes	Local- Frank Donato, OEM	No	No	--
<i>Comment:</i>					
<ul style="list-style-type: none"> Ocean City has adopted policies, plans and ordinances to protect the environment including the Master Plan Conservation Plan, Open Space and Recreation Plan, Stormwater Management Plan, Beach Management Plan, Watershed Management Plan, Floodplain Management Plan, and Natural Resource Inventory. The City code contains regulations that protect beach and dune areas, wetlands and bay islands. The State Plan Regional Center designation highlights the City's strategy to promote immediate and long-term adaptation and resilience strategies that protect natural resources, infrastructure, and the local economy. 					
Climate Change	Yes	-	No	-	-
<i>Comment:</i>					
<ul style="list-style-type: none"> The City's Floodplain Management Plan, Coastal Resilience Plan and Municipal Self-Assessment discuss the potential effects of climate change. These documents recognize the inherent challenges to barrier island communities presented by the more frequent and powerful coastal storms which are compounded by sea level rise. 					
Disaster Recovery Ordinance	No	-	No	-	-
<i>Comment:</i>					
Disaster Reconstruction Ordinance	No	-	No	-	-
<i>Comment:</i>					
Other	Yes	State & Local	No	No	-
<i>Comment:</i>					
<ul style="list-style-type: none"> Coastal Beach Zone, Chapter XIX, adopted by the City Council on June 16, 1988. It is the intent of the City in the creation of beach preservation and tidal flood plain zones to preserve the beach for public recreational purposes and also to prevent and eliminate conditions which in the event of flood and storm threaten the public health, safety and welfare and which lead to damage to or loss of property. Within the Atlantic Ocean Coastal Beach Zone, all existing natural and man-made sand dunes and vegetations shall be preserved. Where sand dunes do not exist, sand dunes may be established through the use of sand fencing or other suitable means and stabilized with American Beachgrass (<i>Ammophila breviliquilata</i>) or other suitable plan materials. All protective sand dunes and 					



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<p>vegetation shall be protected from damage by the restriction of pedestrian, equestrian and vehicular traffic. The use of dune buggies, motorcycles, motorbikes, jeeps and similar vehicles is prohibited within sand dune areas. Where necessary, trails and stairways through and over protective sand dunes may be provided for beach and water access. The removal, cutting, burning or destruction of the natural vegetation, sand fences and/or other types of beach protection devices in the Atlantic Ocean Coastal Beach Zone is prohibited.</p>					
Planning Documents					
Comprehensive / Master Plan	Yes	State & Local	Yes	Yes	-
<p>Comment:</p> <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. The intent of the Tidal Flood Plain Zone is to prevent and eliminate conditions which, in the event of flood and storm, threaten the public health, safety and welfare and which lead to damage to, or loss of, property. The tidal flood plain zone includes all areas of the City lying waterward of official bay side flood plain line as shown on the accompanying map designated "Official Bay Side Flood Plain Line, Ocean City, New Jersey, dated December 1, 1971" and continuing to the municipal boundary. This zone specifically includes all islands in the bay. Master Plan Re-Examination Report, adopted by the Ocean City Planning Board on January 10, 2019. Master Plan objectives related to flood hazards and sustainability include to; Encourage efficient management of stormwater to address existing and prevent future drainage problems, and provide environmentally-sound land use planning, improve water quality, and reduce tidal flooding; and Promote and implement "Green" building techniques, sustainable design best management practices and energy conservation in the City, and encourage energy efficient and environmentally-sustainable development through the use of the standards established and published by the United States Green Building Council. 					
Capital Improvement Plan	Yes	Local	No	Yes	-001, -002, -003, -004, -005, -006, -009, -013, -014, -015, -016
<p>Comment:</p> <ul style="list-style-type: none"> 2019 Capital Improvement Plan, 5-year plan line item budget format. It funds Vehicle Rehab and Storm Trucks, Emergency Transport Bed; and City-Wide Communications Upgrades in 2019 &2020. 					
Disaster Debris Management Plan	No	-	No	-	-018
Comment:					
Floodplain or Watershed Plan	Yes	Local	No	Yes	-003, -005, -006, -007, -008, -009, -010, -011, -012, -013, -014, -015, -016, 017
<p>Comment:</p> <ul style="list-style-type: none"> Post-Sandy Planning Assistance Grant, Floodplain Management Plan, 2016. Floodplain management is the operation of a community program of preventive and corrective measures to reduce the risk of current and future flooding, resulting in a more 					



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<p><i>resilient community. These measures take a variety of forms, are carried out by multiple stakeholders with a vested interest in responsible floodplain management and generally include requirements for zoning, subdivision or building, building codes and special-purpose floodplain ordinances.</i></p>					
Stormwater Management Plan	Yes	State & Local	Yes	Yes	-004, -005, -006, -009
<p>Comment:</p> <ul style="list-style-type: none"> The Stormwater Management rules (N.J.A.C. 7:8) rules were published in the February 2, 2004 NJ Register. These rules set forth the required components of regional and municipal stormwater management plans and establish the stormwater management design and performance standards for new (proposed) development. The design and performance standards for new development include groundwater recharge, runoff quantity controls, and runoff quality controls. The rules emphasize, as a primary consideration, the use of nonstructural stormwater management techniques including minimizing disturbance, minimizing impervious surfaces, minimizing the use of stormwater pipes, preserving natural drainage features, etc. The rules also set forth requirements for groundwater recharge, stormwater runoff quantity control, stormwater runoff quality control, and the prohibition of major development to be located within or to discharge runoff from the major development into a 300-foot riparian zone without prior authorization from the Department under the Flood Hazard Area Control Act Rules, N.J.A.C. 7:13. Municipal Stormwater Management Plan. The goals of this MSWMP are to: <ul style="list-style-type: none"> reduce flood damage, including damage to life and property; minimize, to the extent practical, any increase in stormwater runoff from any new development; reduce soil erosion from any development or construction project; assure the adequacy of existing and proposed culverts and bridges, and other in-stream structures; maintain groundwater recharge; prevent, to the greatest extent feasible, an increase in nonpoint pollution; maintain the integrity of stream channels for their biological functions, as well as for drainage; minimize pollutants in stormwater runoff from new and existing development to restore, enhance, and maintain the chemical, physical, and biological integrity of the waters of the state, to protect public health, to safeguard fish and aquatic life and scenic and ecological values, and to enhance the domestic, municipal, recreational, industrial, and other uses of water; and protect public safety through the proper design and operation of stormwater basins. 					
Stormwater Pollution Prevention Plan	Yes	State & Local	Yes	Yes	-
<p>Comment:</p> <ul style="list-style-type: none"> The Phase II New Jersey Pollutant Discharge Elimination System Stormwater Regulation Program (NJPDES) rules (N.J.A.C. 7:14A) were published in the February 2, 2004, NJ Register. These NJPDES rules are intended to address and reduce pollutants associated with existing stormwater runoff. The NJPDES rules establish a regulatory program for existing stormwater discharges as required under the Federal Clean Water Act. These NJPDES rules govern the issuance of permits to entities that own or operate small municipal separate storm sewer systems, known as MS4s. Under this program, permits must be secured by municipalities, certain public complexes such as universities and hospitals, and State, interstate and federal agencies that operate or maintain highways. The permit program establishes the Statewide Basic Requirements that must be implemented to reduce nonpoint source pollutant loads from these sources. The Statewide Basic Requirements include measures such as: the adoption of ordinances (litter control, pet waste, wildlife feeding, proper waste disposal, etc.); the development of a municipal stormwater management plan and implementing ordinance(s); requiring certain maintenance activities (such as street sweeping and catch basin cleaning); implementing solids and floatables control; locating discharge points and stenciling catch basins; and a public education component. Stormwater Pollution Prevention Plan, dated 2005. To control stormwater from new development and redevelopment projects throughout the City of Ocean City (including projects operated by the City) we will do the following: <ul style="list-style-type: none"> The City of Ocean City is already ensuring that all new residential development and redevelopment projects that are subject to the Residential Site Improvement Standards for stormwater management (including the NJDEP Storm water Management rules, N.J.A. C. 7:8, referenced in those standards) are in compliance with those standards. The planning and zoning boards ensure such compliance before issuing preliminary or final subdivision or site plan approvals under the Municipal Land Use Law. Since the EDPA, the City of Ocean City has not constructed any new development or redevelopment projects on municipal property. If it decides to construct such a project before the municipal stormwater control ordinance takes effect, the City will ensure adequate long-term operation and maintenance of BMPs for that project by requiring a project maintenance plan similar to the maintenance plan described in the draft ordinance, and by requiring and funding the implementation of that plan. Also, any storm drain inlets that are installed will comply with the design standard in Attachment C of general permit. 					



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<p>Once the stormwater control ordinance takes effect, operation and maintenance for any new development or redevelopment projects on municipal property will comply with the maintenance requirements as outlined in the ordinance. In addition, any storm drain inlets installed for municipal projects will comply with standards outlined in the ordinance.</p> <ul style="list-style-type: none"> As a result of this Plan a Municipal Storm Water Management Plan has been adopted by the City's planning board; and, a stormwater control ordinance was adopted to control development and redevelopment projects. 					
Urban Water Management Plan	No	-	No	-	-
<i>Comment:</i>					
Habitat Conservation Plan	Yes	Local	No	No	-
<i>Comment:</i>					
<ul style="list-style-type: none"> Beach Management Plan (January 2016) - The purpose of this beach management plan (BMP) is to provide a framework for cooperation among the City of Ocean City (City), the New Jersey Department of Environmental Protection's (NJDEP) Division of Fish and Wildlife's (NJDFW) Endangered and Nongame Species Program (ENSP), and the United States Fish and Wildlife Service's (USFWS) New Jersey Field Office (NJFO) in the stewardship of federally and State-listed endangered and threatened beach-nesting birds and flora (listed species) occurring on the City's beaches. Through this plan, the parties seek to provide for the long-term protection and recovery of listed species' populations in the City and the State, while balancing potentially conflicting missions. In the plan, the parties define and describe the roles and responsibilities of the City, the NJDFW, and the USFWS in the protection and management of listed species within the City. Conservation Plan Element, Environmental Resources and Recreation Inventory, adopted by the Ocean City Planning Board, June 10, 2009. Recommended policies in the Plan that are mitigation and/or sustainable measures are to: <ul style="list-style-type: none"> establish coastal wetlands/bay islands as a zoning district, and prohibit development of any kind, except structures such as public access walkways and structures for wildlife observation. continue to implement measures to elevate streets to prepare for rising sea level. use the at-grade elevation data as a gis layer for flood predictions. support aquifer-wide and regional planning so that the water usage level does not exceed current levels to maintain potable water as long as possible. encourage low-water or native plantings in new development. identify and list large mature trees on private properties. consider an initiative that encourages plantings that provide habitat to migrating birds and butterflies; and identify and protect large mature trees on public properties. 					
Economic Development Plan	Yes	Local	No	No	-
<i>Comment:</i>					
<ul style="list-style-type: none"> Ocean City Master Plan, Economic Development Element, dated May 2017. For the purposes of the [Hurricane Sandy] Rebuilding Strategy, green infrastructure is defined as the integration of natural systems and processes, or engineered systems that mimic natural systems and processes, into investments in resilient infrastructure. Green infrastructure takes advantage of the services and natural defenses provided by land and water systems such as wetlands, natural areas, vegetated sand dunes, and forests, while contributing to the health and quality of America's communities. Damage from flooding in inland areas, and from storm surge and flooding in coastal environments, is significantly reduced when natural wetland, riparian, and floodplain areas and the ecosystem services they provide are protected. A particularly effective use of green infrastructure to reduce damage from natural disasters is to conserve environmentally sensitive areas through strategies such as acquisition of land or easements, natural resource protection ordinances, and other regulatory controls and incentives. Potential benefits to Ocean City's economy associated with green infrastructure include, but are not limited to the following: <ul style="list-style-type: none"> Creation of job and business opportunities Increased tourism, retail sales, and other economic activity Increased property values Reduced energy, health care, and gray infrastructure costs Provision of locally produced resources (food, fiber, and water) While many of the above benefits do not directly relate to post-disaster recovery, they can contribute to increased community resilience and, in doing so, reduce vulnerability to natural disasters. Ocean City should continue to explore new and innovative ways to increase coastal resilience. Integrated approaches to planning for future disasters combine green and gray infrastructure strategies such as those used in Howard Beach, a neighborhood in Queens that was flooded by Hurricane Sandy, concluded that a combination of natural and structural defenses would provide the 					



Table 9.9-3. Planning, Legal and Regulatory Capability

	Do you have this? (Yes/No)	Authority that enforces (Federal, State, Regional, County, Local)	Is this State Mandated?	If yes- how? Describe in comments	Have aspects of this been integrated into your mitigation plan?	
					If no - can it be a mitigation action? If yes, add Mitigation Action #.	
<p><i>most cost-effective protection against future storms 8. These “hybrid” strategies include restored marsh, mussel beds, rock groins, removable flood walls, and flood gates. At a larger scale, A Stronger, More Resilient New York 9 combines nature-based (e.g., beach, dune, and marsh restoration) and structural (e.g., floodwalls and storm surge barriers) measures to protect against the effects of climate change. Louisiana’s Coastal Protection Master Plan10 proposes a combination of restoration, nonstructural, and targeted structural measures to provide increased flood protection.</i></p>						
Shoreline Management Plan	Yes	Federal, State & Local	Yes – if located in a coastal zone	Yes	-	
<p>Comment:</p> <ul style="list-style-type: none"> • Ocean City is partner to a new 50-year agreement that calls for a three-year cycle of beach renourishment projects of which the federal government will pay 50 percent, the state 50 percent (with the municipality bearing 25 percent of the state’s cost). • 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. • Beach Management Plan, dated January 2016. This Beach Management Plan is more to protect Federal and State listed species, than it is a shoreline protection plan and is also suitable as a plan for habitat protection. However, while the Plan stresses protection of flora and fauna, it does so by including provisions for Dune Management and Beach Nourishment that also protects the shoreline and adjacent homes and facilities. 						
Community Wildfire Protection Plan	No	-	No	-	-	
<p>Comment:</p>						
Community Forest Management Plan	Yes	State & Local	No	Yes	-	
<p>Comment:</p> <ul style="list-style-type: none"> • Ocean City Community Forest Management Plan III, 2014-2108. The goals of Ocean City’s Shade Tree Management Program are; to continue to assure that any person constructing, reconstructing, converting, or enlarging any new building(s) or residence(s) within the City shall provide landscaping including pollution-resistant trees; to quantify and qualify tree resources; to increase the amount of, and the species diversity of shade trees on the island; to refine tree establishment standards; to protect existing trees; to acquaint, and encourage support from, the public about the value of trees; and to maximize public safety in association with trees. 						
Transportation Plan	Yes	State, County & Local	No	Yes	-	
<p>Comment:</p> <ul style="list-style-type: none"> • Bicycle Friendly Community, Feedback Report, Fall 2012. Ocean City has a local policy to engineer streets with the consideration of bicyclists. There are additional policies in place that make cycling and walking more comfortable, convenient and enjoyable. Staff receive regular training in bicycle and pedestrian planning and engineering. Parking facility guidelines conform to the currently recognized design standards. Public buses are equipped with bike racks. The street network is well connected and allows cyclists to choose among several routes to get to a destination. • In an effort to create a pedestrian and bike network that makes walking and cycling a viable alternative to driving, City Council adopted a ‘complete streets’ policy in October 2011. 						
Agriculture Plan	No	-	No	-	-	--
<p>Comment:</p>						
Climate Action Plan	No	-	No	-	-	
<p>Comment:</p>						
Tourism Plan	No	-	No	-	-	
<p>Comment:</p>						
Business Development Plan	Yes	Local	No	No	-	
<p>Comment:</p> <ul style="list-style-type: none"> • Buying Local Business Program. Although not a written plan the Ocean City Regional Chamber of Commerce has a program in place increasing its social media platform and Ocean City app features to draw more visitors to the island. The Ocean City 						



Table 9.9-3. Planning, Legal and Regulatory Capability

	Do you have this? (Yes/No)	Authority that enforces (Federal, State, Regional, County, Local)	Is this State Mandated?	If yes- how? Describe in comments	Have aspects of this been integrated into your mitigation plan? If no - can it be a mitigation action? If yes, add Mitigation Action #.
<i>Regional Chamber of Commerce has increased its social media platform to attract even more visitors to "America's Greatest Family Resort." This Program also promotes tourism.</i>					
Other	No	-	No	-	-
Comment:					
Response/Recovery Planning					
Comprehensive Emergency Management Plan (CEMP) / Emergency Operations Plan (EOP)	Yes	State, County & Local	Yes	Yes	-
Comment:					
<ul style="list-style-type: none"> Each county and municipality in the State shall prepare a written Emergency Operations Plan with all appropriate annexes necessary to implement the plan. Each Emergency Operations Plan shall be adopted no later than one year after the State Emergency Planning Guidelines have been adopted by the State Office of Emergency Management and shall be evaluated at such subsequent scheduled review of the State Emergency Operations Plan. L.1989, c.222, s.19. Emergency Operations Plan, approved 01-12-2017. The City of Ocean City, Office of Emergency Management, in cooperation with the County Office of Emergency Management, local agencies, and other members of the community, endeavors to prepare for, respond to, and recover from natural and man-made disasters that threaten the lives, safety, and property of the citizens of City of Ocean City. This Basic Plan will provide guidance for: preparedness, response, recovery, and mitigation procedures; disaster and emergency responsibilities; and training and public education activities 					
Threat & Hazard Identification & Risk Assessment (THIRA)	No	-	No	-	-
Comment:					
Post-Disaster Recovery Plan	No	-	No	-	-
Comment:					
Continuity of Operations Plan	Yes	Local	No	Yes	-
Comment:					
<ul style="list-style-type: none"> 2013 Plan. 					
Public Health Plan	No	-	No	-	-
Comment:					
Other	No	-	No	-	-
Comment:					

Table 9.9-4. 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.	No – The buildout analysis contained in the 2019 CMC Wastewater Management Plan shows the residential dwelling units (DU) and non-residential floor area (SF) potential development for each zone, which is calculated as the sum of the



Criterion	Response
	approved or potential new development. Based on the limited vacant lands available for infill development in Ocean City, the analysis estimates net future development up to 75 new residential dwellings units and 223,896 square feet of new non-residential space based on the current zoning, not including existing development.

ADMINISTRATIVE AND TECHNICAL CAPABILITY

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

Table 9.9-5. Administrative and Technical Capabilities

Staff/Personnel Resource	Available?	Department/Agency/Position
Administrative Capability		
Planning Board	Yes	Planning Board and Zoning Board of Adjustment
Mitigation Planning Committee	No	-
Environmental Board / Commission	Yes	Environmental Commission
Open Space Board / Committee	No	Committee TBD
Economic Development Commission / Committee	No	-
Warning Systems / Services (reverse 911, outdoor warning signals)	Yes	Office of Emergency Management
Maintenance program to reduce risk	Yes	Stormwater Basin Plan (Annual)
Mutual aid agreements	Yes	Fire
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	Yes	Administration City
Engineers or professionals trained in building or infrastructure construction practices	Yes	Administration City
Planners or engineers with an understanding of natural hazards	Yes	Administration City
Staff with training in benefit/cost analysis	Yes	Administration City
Staff with training in green infrastructure	No	-
Staff with education/knowledge/training in low impact development	No	-
Surveyor	No	-
Stormwater engineer	Yes	Roger Rinck- Engineering Manager, Ocean City Engineering Division
Personnel skilled or trained in GIS applications	Yes	Administration City
Local or state water quality professional	No	-
Scientist familiar with natural hazards in local area	No	-
Emergency manager	Yes	Administration City
Watershed planner	No	-
Environmental specialist	No	-
Grant writers	Yes	Administration City
Resilience Officer	No	-
Other	No	-



FISCAL CAPABILITY

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

Table 9.9-6. 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	No
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	No
Withhold Public Expenditures in Hazard-Prone Areas	No
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	No
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 Ocean City.

Table 9.9-7. Education and Outreach Capabilities

Criterion	Response
Do you have a public information officer or communications office?	Yes- Doug Bergen
Do you have personnel skilled or trained in website development?	Yes- the City has an Information Technology division. Its director is Max Hurst and the network engineer is Jeff Miletta.
Do you have hazard mitigation information available on your website? -If yes, briefly describe.	Yes- the City’s FloodSmart website hosts a wealth of information about flooding conditions in Ocean City. http://www.ocnj.us/flood-smart/
Do you use social media for hazard mitigation education and outreach? -If yes, briefly describe.	Yes- the Engineering Division’s GIS Specialist, Benny Tafoya, publishes social media information related to flooding and hazard awareness.
Do you have any citizen boards or commissions that address issues related to hazard mitigation? -If yes, briefly describe.	Yes- the City has a Floodplain Management Committee that addresses flooding issues and planning.
Do you have any other programs already in place that could be used to communicate hazard-related information? If yes, briefly describe.	Ocean City and Upper Township jointly host Community Emergency Response Team (CERT) training classes and solicit corps volunteers for events in the City.

COMMUNITY CLASSIFICATIONS

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

Table 9.9-8. Community Classifications

Program	Participating?	Classification	Date Classified
Community Rating System	Yes	4	5/1/2020
Building Code Effectiveness Grading Schedule (BCEGS)	Yes	3	May 8, 2012
Public Protection (Fire ISO Protection Class)	Yes	3	May 8, 2012
Storm Ready Certification	Yes	N/A	September, 2015





Program	Participating?	Classification	Date Classified
Firewise Community Classification	No	-	-
Sustainable Jersey	Yes	Silver	11/7/2019

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 9.9-9. Adaptive Capacity

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

Notes:
 Strong = Capacity exists and is in use; Moderate = Capacity may exist, but is not used or could use some improvement;
 Weak = Capacity does not exist or could use substantial improvement; Unsure = Not enough information is known to assign a rating.

NATIONAL FLOOD INSURANCE PROGRAM

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

Table 9.9-10. National Flood Insurance Program Compliance

Criterion	Response
What local department is responsible for floodplain management?	Engineering and Construction
Who is your floodplain administrator? (name, department/position)	Mike Koochembere , Building Subcode Official
Are any certified floodplain managers on staff in your jurisdiction?	Yes
What is the date that your flood damage prevention ordinance was last amended?	November 26, 2019
Does your floodplain management program meet or exceed minimum requirements? -If exceeds, in what ways?	Yes, the City is recognized as a Class 4 CRS community and its ordinance exceeds NFIP requirements for freeboard and other standards.
When was the most recent Community Assistance Visit or Community Assistance Contact?	August 23, 2007
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?	Yes





Criterion	Response
-If no, state why.	
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?	No
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- the City is continuing to examine ways to enhance its CRS class
How many flood insurance policies are in force in your jurisdiction?*	9,843 policies
-What is the insurance in force? -What is the premium in force?	
How many total loss claims have been filed in your jurisdiction?*	8,343 claims
-How many claims are still open or were closed without payment? -What were the total payments for losses?	\$85,589,583 in payments for losses
Do you maintain a list of properties that have been damaged by flooding?	Yes
Do you maintain a list of property owners interested in flood mitigation?	Yes

*According to FEMA statistics as of October 2020

ADDITIONAL AREAS OF EXISTING INTEGRATION

- Floodplain Management Planning:** Ocean City has undertaken a comprehensive approach to floodplain management as part of its FloodSmart program. The City has a citizen committee that advises on floodplain management planning and drainage efforts. The City continually seeks and implement measures to enhance floodplain management and improve its Community Rating System program ranking. The City requires more than two feet of freeboard for new and substantial improvements.
- Cooperation:** The City works with surrounding communities and Cape May County on multi-jurisdictional efforts promoting sound floodplain management, infrastructure improvements, and emergency response.
- Public Awareness:** Ocean City undertakes a number of projects to enhance the public’s awareness of flooding and other hazard events. The City maintains a list of recorded flood levels and impacts.
- Nature-based Solutions:** Ocean City undertakes ecological uplift for flood mitigation projects and to enhance its natural habitats.
- Bulkhead Standards:** Ocean City is working with private property owners to maintain a consistent bulkhead elevation to prevent inundation and mitigate wave action damage.
- Beach Management:** The City has an ongoing beach nourishment program and maintains its dune systems. Its Beach Management Plan manages its shoreline habitats and designates areas for recreation and preservation.

9.9.5 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 Ocean City’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 9.9-11 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 9.9-11. Hazard Event History

Date(s) of Event	Event Type (disaster declaration if applicable)	Cape May County Designated?	Summary of Event	Summary of Local Damages and Losses
January 22, 2016 Jonas	Snow Storm/ Nor'easter	Yes	A low pressure system traveled across the country and became a major nor'easter, bringing high amounts of snow, coastal flooding, and winds to coastal New Jersey.	More than 200 properties in the City filed claims for flood losses, which totaled \$4 million.
October 27, 2018	Flood	No	The City was impacted by a strong low pressure system moving up the coast. Coastal New Jersey experienced coastal flooding and high winds.	Nine structures were damaged during the flooding event, when tide gauges reported levels at 5.2 feet NAVD 88. NFIP damage claims totaled \$62,000.
April 21, 2020	Windstorm	No	An anomalous, strong cold front causing extreme wind shear and instability. Wind gusts up to 72 mph were reported in Cape May.	Some buildings experienced minor roof damage and sign posts were felled by the winds.

Source: NOAA NCEI 2020, FEMA 2020

9.9.6 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 Ocean City 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 Ocean City.

- Number of repetitive loss (RL) properties: 554
- Number of severe repetitive loss (SRL) properties: 69
- 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 9.9-12. Potential Flood Losses to Critical Facilities and Lifelines

Name	Type	Exposure	
		1% Event	0.2% Event
OCEAN CITY MUNICIPAL AIRPORT	Airport	X	X
Roosevelt Blvd. Bridge	Bridge	X	X
Ocean City-Longport Bridge(CMCBC)	Bridge	X	X
Ocean Drive Bridge (CMCBC)	Bridge	X	X
Rt. 52 Causeway	Bridge	X	X
W. 17th St. Bridge	Bridge	X	X
Gardens Plaza	Communications Facility	X	X





Name	Type	Exposure	
		1% Event	0.2% Event
Port-O-Call	Communications Facility		X
OCEAN CITY INTERMEDIATE	Education	X	X
OCEAN CITY HIGH SCHOOL	Education	X	X
OCEAN CITY PRIMARY	Education	X	X
Ocean City	EOC	X	X
OCEAN CITY FIRE DEPARTMENT Station 2	Fire Stations	X	X
OCEAN CITY FIRE DEPARTMENT Station 1	Fire Stations	X	X
OCEAN CITY FIRE DEPARTMENT Station 3	Fire Stations	X	X
Howard Stainton Senior and Nutrition Center	Health Services	X	X
Bayview Marina	Marinas	X	X
Ocean City Marina	Marinas	X	X
Bay Club	Marinas	X	X
Blue Water Marina	Marinas	X	X
Ocean City Boat Ramp	Marinas	X	X
Ocean City Bayside Center	Marinas	X	X
USCG Station Ocean City,NJ	Marinas	X	X
Ocean City City Hall	Municipal Facilities	X	X
Henry Knight Building	Municipal Facilities	X	X
Ocean City Police Department	Police Stations	X	X
8TH STREET RECREATION CENTER	Polling Places	X	X
CIVIC CENTER	Polling Places	X	X
OCEAN CITY LIBRARY	Polling Places	X	X
OCEAN CITY YACHT CLUB	Polling Places	X	X
OUR LADY OF GOOD COUNSEL HALL	Polling Places	X	X
ST. FRANCES CABRINI	Polling Places		X
WESLEY MANOR	Polling Places	X	X
OCEAN CITY HUMANE SOCIETY	Polling Places	X	X
Ocean City Boardwalk	Recreation	X	X
The Shores at Wesley Manor	Senior Facility	X	X
Wesley By the Bay	Senior Facility	X	X
Ocean City Housing Authority	Senior Facility	X	X
3rd St Pump Station	Superfund Sites	X	X
OCEAN CITY COAL GAS (JCP&L & NJNG)	Superfund Sites	X	X
OCEAN CITY MUNICIPAL AIRPORT	Superfund Sites	X	X
Waste Water Treatment Plant	Wastewater Treatment Facilities	X	X
28th Street Storm Water Pump Station	Wastewater Treatment Facilities	X	X
32nd St Pump Station	Wastewater Treatment Facilities	X	X
27th Street Storm Water Pump Station	Wastewater Treatment Facilities	X	X
20th St Pump Station	Wastewater Treatment Facilities	X	X
2nd Street Storm Water Pump Station	Wastewater Treatment Facilities	X	X
30th Street Storm Water Pump Station	Wastewater Treatment Facilities	X	X
36th Street Storm Water Pump Station	Wastewater Treatment Facilities	X	X
6th Street Storm Water Pump Station	Wastewater Treatment Facilities	X	X
Bayland Storm Water Pump Station	Wastewater Treatment Facilities	X	X



Name	Type	Exposure	
		1% Event	0.2% Event
Somerset Storm Water Pump Station	Wastewater Treatment Facilities	X	X
Westminster Storm Water Pump Station	Wastewater Treatment Facilities	X	X
Bayside Center Storm Water Pump Station	Wastewater Treatment Facilities	X	X
Rt. 52 Welcome Center Pump Station	Wastewater Treatment Facilities	X	X
Oxford CCMUA Sewage Pump	Wastewater Treatment Facilities	X	X

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

IDENTIFIED ISSUES

The jurisdiction has identified the following vulnerabilities within their community:

- Ocean City experiences frequent nuisance flooding resulting from the combined impact of tide levels and precipitation events. Debris in the stormwater system also contributes to flooding conditions. Road elevations are typically highest mid-block and slope downwards towards the sidewalks and intersections, leading to observed street flooding on numbered streets. Flooding is most prevalent in sections of the City located between West Avenue and the Bay, inclusive of Haven and Simpson Avenues.
- During storm surge events, flood waters enter the City’s upland residential areas from gaps in bulkheads and from storm drains. The City owns bulkheads for its waterfront properties, though most bulkheads in the City are on privately-owned lands where the owner is responsible for upgrades and maintenance. Gaps in bulkheads remain on certain areas of Bay Avenue and are not currently present in two low-lying neighborhoods in the City (Ocean City Homes and Merion Park).
- Stormwater flooding has been observed in various upland portions of the City, such as the 200 block of Central and Asbury Avenues, as well as street-ends located at the dunes and boardwalk.
- The North End of Ocean City’s beachfront (generally from 12th Street north to Seaview Road) and 57th Street south to Corson’s Inlet experiences consistent beach erosion, particularly during nor’easter season. The City receives regular beach nourishment projects and also has a dune system, though emergency stopgap measures to arrest erosion are deployed in response to storms.
- Ocean City is located on a barrier island that has been partially filled and is subject to subsidence. Portions of the City that are particularly low-lying include: Bay Avenue to West Avenue between 25th Street and 34th Street; Bay Avenue between 2nd Street and 17th Street; Merion Park; West 17th Street, Pleasure Avenue; Crescent Road; and Battersea Road and North Street west of Wesley Road.

HAZARD AREA EXTENT AND LOCATION

Hazard area extent and location maps were generated for the City of Ocean City 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 Ocean City has significant exposure. A map of the City of Ocean City 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 Ocean City. The City of Ocean City 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 accepted the proposed risk ranking.

Table 9.9-13. City of Ocean City Hazard Ranking Input

Climate Change and SLR	Coastal Erosion	Disease Outbreak	Drought	Flood	Hurricane
High	Medium	Medium	Medium	High	High

Nor'Easter	Severe Weather	Severe Winter Weather	Tsunami	Wildfire
High	High	High	Medium	Medium

9.9.7 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 9.9-14. 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 #
OC-1a (former OC-1a)	Support retrofitting (e.g. elevation) of floodprone structures, with repetitive loss and severe repetitive loss properties as priority.	City (likely through NFIP Floodplain Administrator)	Ongoing Capability	X	2020-OceanCity-016
OC-1b (former OC-1b)	Support acquisition and/or relocation of floodprone structures, with repetitive loss and severe repetitive loss properties as priority.	Municipal Emergency Manager with support from County OEM and NJOEM	Ongoing Capability	X	2020-OceanCity-007
OC-2 (former OC-5)	Complete the development of the City’s Strategic Recovery Plan.	City	Complete		





Table 9.9-14. 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 #
OC-3 (former OC-6)	Create/enhance/ maintain mutual aid agreements with neighboring communities.	Local departments (as applicable for specific initiative)	Ongoing Capability		
OC-4 (former OC-7)	Support County-wide initiatives identified in Section 9.1 of the County Annex.	Local departments (as applicable for specific initiative)	Ongoing Capability		
OC-5 (former OC-8)	Complete the development and adoption of an additional ordinance requiring a minimum elevation for garages, pursuant to the City's adoption of Ordinance #12-19 requiring 2 feet of freeboard.	Planning and Engineering	Ongoing Capability		
OC-6 (former OC-11)	Post expanded information on the website about more flood vulnerable sections of the City (e.g. low elevation areas) – affects CRS credits.	Local Departments	Ongoing Capability		
OC-7 (former OC-12)	Promote public awareness of local flood risk (e.g. put BFE's on telephone poles using yellow spikes or painted bands; identify flood levels at all critical facilities).	Emergency Management, Planning and Engineering	Ongoing Capability		
OC-8 (former OC-13)	Upgrade existing revetment wall (needs to be extended to the south and existing sections upgraded) and provide additional road protection to CR-619 in Strathmere to Ocean City, and elevate sections of road as needed.	County Engineering with municipal support	No Progress	X	2021-OceanCity-008
OC-9 (former OC-14, CMC-36)	Upgrade storm drainage in Ocean City, which are currently designed to handle only a 2-year storm event. Various projects.	County Engineering with municipal support	In Progress	X	2021-OceanCity-006
OC-10 (former OC-16)	Relocate or elevate firehouse at 29th and West which was severely damaged during Sandy.	City	Completed		
OC-11	Perform drainage improvements in Bayland Drive and Bay Avenue to address recurrent flooding	Engineering	No Progress		



Table 9.9-14. 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 #
	(from Master Plan Re-exam)				
OC-12	Use dredge material as a beneficial reuse for wetlands restoration in the City.	Planning, Engineering, Administration	Ongoing Capability		
OC-13 (former OC-21)	Continue program to upgrade bulkheads to 8.20' NGVD.	Planning and Engineering Department	Ongoing Capability		
OC-14 (former OC-26)	Consolidation of the Drainage Systems and Construction of a Pump Station to service drainage areas from 1st St. and 8th St. between West Ave, and the bayfront.	Planning and Engineering Departments	Complete		
OC-15 (former OC-27)	Construction of a protective floodwall with stone reinforcement around the historic Music Pier. Location is on the beachfront at Moorlyn Terrace.	Planning and Engineering Departments	No Progress	X	2021-OceanCity-003
OC-16 (former OC-29)	Road elevation of Haven Ave. between 26th St. and 34th St.; and Simpson Ave. between 31st Street and 34th Street.	Planning and Engineering Departments	Complete		
OC-17 (former OC-32, CMC-69)	Fire protection education and National Fire Protection Association (NFPA) "Firewise" initiative.	Local Fire Chiefs working with County Fire Coordinator and identified residents	No Progress	X	2021-OceanCity-010
OC-18 (former OC-33)	South End Ocean From Bulkhead Replacement	Planning and Engineering Department	No Progress	X	2021-OceanCity-011
OC-19 (former OC-35)	Standards for the Construction Adjacent to Bulkheads	Planning and Engineering	Ongoing Capability		
OC-20 (former OC-36)	Route 152 Shore Protection and Elevation	County Engineering with municipal support	No Progress	X	2021-OceanCity-017
OC-21 (former OC-37)	Elevation of Roosevelt Boulevard from Bay Avenue to the Garden State	County Engineering with municipal support	No Progress	X	2021-OceanCity-012
OC-22 (former OC-38)	Bulkhead Merion Park and Install Pump Station	Planning and Engineering Department	In Progress	X	2021-OceanCity-013



Table 9.9-14. 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 #
OC-23 (former OC-39)	Elevate Merion Park	Planning and Engineering Departments	In Progress	X	2021-OceanCity-014
OC-24 (former OC-40)	Bulkhead Ocean City Homes and Install Pump Station	Planning and Engineering Department	In Progress	X	2021-OceanCity-015
OC-25 (former OC-41)	Elevate Ocean City Homes – elevate the roads, yards and homes in this section of town to reduce flooding.	Planning and Engineering Departments working with property owners	No Progress	X	2021-OceanCity-016
OC-26 (former OC-42)	Beach nourishment and dune reconstruction for beaches south of 36th street.	USACE with municipal support	Ongoing Capability		
OC-27 (former OC-43, -44)	Once new flood maps are finalized, the City will begin the process to: Adopt Coastal A-Zone construction standards. Review and revise zoning standards to promote construction standards that embrace new higher base flood elevations.	Planning and Engineering	Complete		
OC-28	Implement outreach projects as described in the City’s PPI.	Planning, Engineering, Administration	Ongoing Capability		
OC-29	Promote protection of open space, important habitats, and environmentally sensitive areas through public and private action in order to maintain and improve the City’s biodiversity, and improve protection from sea level rise and Severe Weather events. (from Open Space Plan)	Planning, Engineering, Administration	Ongoing Capability		
OC-30	Establish design and performance standards that will protect environmentally sensitive and critical habitat lands including floodplains, wetlands, sand dunes and beaches. (from Open Space Plan)	Planning, Engineering, Administration	Ongoing Capability		



PROPOSED HAZARD MITIGATION INITIATIVES FOR THE PLAN UPDATE

The City of Ocean City 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 Ocean City 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 9.9-15 summarizes the comprehensive-range of specific mitigation initiatives the City of Ocean City 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 9.9-16 provides a summary of the prioritization of all proposed mitigation initiatives for this HMP update.



Table 9.9-15. 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-OceanCity-001	South End Flood Protection	<p>Problem: West Avenue in Ocean City is located at a low elevation. Inundation of West Avenue begins at water levels that are just two feet above the typical high tide. Currently there are no structural protective measures in place preventing floodwaters from inundating West Avenue and moving inland into Ocean City.</p> <p>Solution: Bulkhead/Barrier along West Ave. from 36th to 52nd Street and install pump station to encumber Asbury Ave. to marsh and elevate roads.</p>	Existing	Flood; Hurricane/Tropical Storm; Nor'easter; Climate Change/Sea Level Rise	1, 3, 6	Operations & Engineering Department, working with property owners and County	Ocean City capital plan funding and/or hazard mitigation funding	Protection of large low-lying sections of the City's South End	\$10 mil	2025	High	SIP	SP
2020-OceanCity-002	Recreation Facility Mitigation	<p>Problem: Some of Ocean City's recreation and open space facilities are located at low elevations. For example, the Grimes Field facility at Sixth Street begins experiencing flooding when flood levels are just one foot above typical high tides. This leads to acute drainage issues and hampers the ability of the City to use the publicly-owned land for staging and recovery during emergency situations.</p> <p>Solution: The City proposes to elevate certain recreational facilities (inclusive of the Tennessee Avenue Complex and Grimes Field at 6th and Bay Avenue) to provide local areas of high ground refuge during flooding events.</p>	Existing	Flood; Hurricane/Tropical Storm; Nor'easter; Climate Change/Sea Level Rise	1, 3, 6	Operations & Engineering Department	Ocean City capital plan funding	Localized and accessible areas of higher ground during flooding	\$3.5 mil	2021	High	SIP	SP
2020-OceanCity-003 (Former OC-15)	Music Pier Wave Mitigation	<p>Problem: The Ocean City Music Pier, located on the boardwalk, is a major destination in Ocean City as well as a building eligible for listing on the State Register of Historic Places. The Music Pier is located within the VE Zone and is highly vulnerable to coastal erosion and wave action. The historic structure is located on concrete pilings that extend into the surf.</p> <p>Solution: The City proposes to expand the deck around the Music Pier and provide</p>	Existing	Flood; Hurricane/Tropical Storm; Nor'easter; Climate Change/Sea Level Rise; Coastal Erosion	1, 3, 6	Operations & Engineering Department	US Army Corps; BRIC; Shore Protection Fund; Local match	Protection of a historic structure and surrounding infrastructure	\$5 mil	2030	Medium	SIP	SP



Table 9.9-15. 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
		wave attenuating measures to protect the Music Pier, Boardwalk, and landward properties. This would mitigate wave action and erosive forces.											
2020-OceanCity-004	West 17 th Street Improvements	<p>Problem: West 17th Street is a 10-acre section of the City’s waterfront Riviera neighborhood that is home to approximately 250 residential properties valued at \$32.1 million in structure value. The neighborhood was one of the City’s first waterfront neighborhoods and was built from fill. The neighborhood is very low-lying and begins experiencing tidal flooding impacts when tide levels are just one foot above typical high tides.</p> <p>Solution: The City proposes to elevate street and install higher bulkheads and a pump station to discharge stormwater and mitigate nuisance flooding.</p>	New	Flood; Hurricane/Tropical Storm; Nor’easter; Climate Change/Sea Level Rise	1, 3, 6	Operations & Engineering Department	Ocean City capital plan funding and/or hazard mitigation funding	Enhanced protection of neighborhood.	\$5 mil	2022	High	SIP	SP
2020-OceanCity-005	Ocean City Outfall Consolidation	<p>Problem: Ocean City has a number of outfall structures that carry stormwater from streets and properties to both the Ocean and bay. The utility of the outfalls has decreased as sediment has accumulated and caused backups at numerous outfalls. This inhibits stormwater drainage, causing upland impacts.</p> <p>Solution: The City proposes to consolidate existing outfalls and remove surplus outfalls as identified by the Operations and Engineering Department.</p>	Existing	Flood; Hurricane/Tropical Storm; Nor’easter; Climate Change/Sea Level Rise; Severe Weather	1, 3, 6	Operations & Engineering Department	Ocean City Capital Plan and NJ DEP Coastal Engineering	Enhanced drainage for neighborhoods in the City	\$3 mil	2022	High	SIP	SP
2020-OceanCity-006	Ocean City Stormwater Management Upgrades	<p>Problem: Ocean City’s drainage systems have historically been designed to handle the two-year stormwater event. The City has replaced the system in some areas, though a number of sections of the City continue to have undersized stormwater systems.</p> <p>Solution: Enhance and upgrade Ocean City’s stormwater system capabilities to handle more intense storms.</p>	Existing	Flood; Hurricane/Tropical Storm; Nor’easter; Climate Change/Sea Level Rise; Severe Weather	1, 3, 6	Operations & Engineering Department	Ocean City Capital Plan	Enhanced drainage for neighborhoods in the City	\$1 mil	2021	Medium	SIP	SP





Table 9.9-15. 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-OceanCity-007 (Former OC-1b)	Property Acquisition	<p>Problem: Due to technical or financial factors, the elevation of each floodprone structure in the Special Flood Hazard Area is not currently feasible. This includes structures at very low ground elevations where future infrastructure provision may not be feasible.</p> <p>Solution: Where appropriate, the City proposes to acquire properties in low-lying areas where structural flood protection is not feasible.</p>	Existing	Flood; Hurricane/Tropical Storm; Nor'easter; Climate Change/Sea Level Rise; Severe Weather	1, 3, 5, 6	Ocean City OEM and Floodplain Administrator	FMA; HMGP; Local match; Blue Acres	Foregone damage to structures from flooding; ecosystem enhancements	\$20 mil	2021	High	SIP	PP
2020-OceanCity-008 (Former OC-8)	CR-619 Mitigation	<p>Problem: CR-619 is an evacuation route for the Upper Township neighborhood of Strathmere and provides access to Corson's Inlet State Park. The road is vulnerable to coastal erosion and flooding near the Corsons Inlet bridge.</p> <p>Solution: Upgrade existing revetment wall (needs to be extended to the south and existing sections upgraded) and provide additional road protection to CR-619 in Strathmere to Ocean City and elevate sections of road as needed.</p>	Existing	Flood; Hurricane/Tropical Storm; Nor'easter; Climate Change/Sea Level Rise; Coastal Erosion	1, 3, 4, 6	Operations & Engineering Department and Cape May County Engineering Department	Local match; BRIC; HMGP; County funds; Transportation Trust Fund	Enhanced protection for evacuation route	\$10 mil	2030	Medium	SIP	SP
2020-OceanCity-009 (Former OC-16)	Third Ward Drainage Improvements	<p>Problem: The Third Ward of Ocean City experiences nuisance tidal and stormwater flooding owing to drainage patterns and low elevations. The neighborhood has not yet received comprehensive drainage improvements that have been undertaken for other sections of the City.</p> <p>Solution: Road elevation, consolidation of the Drainage Systems and Construction of pump stations on Haven Ave. between 9th St. and 26th St.; and Simpson Ave. between 9th Street and 26th Street.</p>	New	Flood; Hurricane/Tropical Storm; Nor'easter; Climate Change/Sea Level Rise; Severe Weather	1, 3, 6	Operations & Engineering Department	Ocean City Capital Plan; BRIC; HMGP	Enhanced drainage capabilities/mitigated stormwater issues	\$10 mil	2021	High	SIP	SP
2020-OceanCity-010 (Former	Firewise Participation	<p>Problem: Approximately one-third of Ocean City's population and structures are in the WUI Interface/Intermix Zone. This represents more than 4,000 people, nearly</p>	Existing	Wildfire	1, 2, 3, 4, 6	Local Fire Chiefs working with County Fire	Ocean City operating budget	Enhanced fire protection	\$50k	2021	Medium	EAP	PR PI





Table 9.9-15. 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
OC-17)		6,500 structures, and \$4.7 billion in RCV. The City has identified a need to enhance public outreach relating to wildfire risk in the Township. Solution: The City seeks a status as a Firewise community through the facilitation of public outreach/awareness projects and fire risk reduction activities.				Coordinator and identified residents		capabilities					
2020-OceanCity-011 (Former OC-18)	South End Oceanfront Bulkhead Replacement	Problem: The South End of Ocean City is partially protected by a wooden bulkhead that runs along Central Avenue from 57 th Street south. The oceanward side of the bulkhead is protected by a vegetated dune and the landward side of the bulkhead includes parking spaces, a road, and residential homes. The bulkhead is deteriorated and undersized. The South End is vulnerable to coastal erosion and waves overtopping dunes. Solution: The City proposes to elevate and replacement the South End bulkhead with a higher bulkhead built of sturdier materials. The bulkhead will provide an enhanced level of protection.	Existing	Flood; Hurricane/Tropical Storm; Nor'easter; Climate Change/Sea Level Rise; Coastal Erosion	1, 3, 4, 6	Operations & Engineering Department	BRIC; HMGP; US Army Corps; NJDEP Shore Protection Fund	Enhanced protection of South End from wave damage	\$30 mil	2030	Medium	SIP	SP
2020-OceanCity-012 (Former OC-21)	Roosevelt Boulevard Elevation (2020-CapeMayCounty-020)	Problem: Roosevelt Boulevard (CR-623) is a major access road and evacuation route between Ocean City and the mainland. The road sees average daily traffic of between 10,000 and 25,000 vehicles depending on the season. The Boulevard sees flooding beginning at water levels that are two feet above high tide. Solution: Elevate Roosevelt Boulevard (CR-623) from the Parkway into Ocean City proper.	Existing	Flood; Hurricane/Tropical Storm; Nor'easter; Climate Change and Sea Level Rise	1, 3, 4, 6	County Engineering	HMA grants; County funds; local match	High	\$15 mil	2026	Medium	SIP	PP
2020-OceanCity-013 (Former OC-22)	Merion Park Bulkheading	Problem: Merion Park is a neighborhood in Ocean City encompassing more than 70 acres of land, 545 properties, and more than 500 buildings worth more than \$109 million in assessed value. The neighborhood is among the City's lowest lying, with street	New	Flood; Hurricane/Tropical Storm; Nor'easter; Climate	1, 3, 6	Operations & Engineering Department	Ocean City Capital Plan; BRIC; FMA	Enhanced protection of neighborhood	\$30 mil	2030	Medium	SIP	SP





Table 9.9-15. Proposed Hazard Mitigation Initiatives

Initiative Number	Mitigation Initiative Name	Description of the Problem and Solution	New or Existing Assets?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Cost	Timeline	Priority	Mitigation Category	CRS Category
		<p>flooding observed in typical storm events and flooding observable when tide levels are less than one foot above typical high tides. The neighborhood lacks bulkheading in several sections, allowing for flood waters to inundate the neighborhood and cause flooding.</p> <p>Solution: Bulkhead Merion Park, thereby closing gaps in existing flood protection and enhancing the level of protection for the neighborhood.</p>		Change and Sea Level Rise									
2020-OceanCity-014 (Former OC-23)	Elevate Merion Park	<p>Problem: Merion Park is a neighborhood in Ocean City encompassing more than 70 acres of land, 545 properties, and more than 500 buildings worth more than \$109 million in assessed value. The neighborhood is among the City’s lowest lying, with street flooding observed in typical storm events and flooding observable when tide levels are less than one foot above typical high tides. The neighborhood lacks bulkheading in several sections, allowing for flood waters to inundate the neighborhood and cause flooding. In addition to low-lying streets and lack of bulkheads, the neighborhoods overall elevation is low, including private yards and homes. Nearly half of the properties in the neighborhood are owned by year-round residents – one of the highest proportions in the City.</p> <p>Solution: The City proposes to elevate low-lying streets and yards in Merion Park to assist with drainage and mitigate flooding.</p>	New	Flood; Hurricane/Tropical Storm; Nor’easter; Climate Change and Sea Level Rise	1, 3, 6	Operations & Engineering Department	Ocean City capital plan funding and/or hazard mitigation funding	Enhanced protection of neighborhood	\$10 mil	2022	High	SIP	SP
2020-OceanCity-015 (Former OC-24)	Ocean City Homes Bulkheading	<p>Problem: Ocean City Homes is a neighborhood of approximately 450 residential structures located at the South End of Ocean City. The neighborhood was built on filled marsh in the mid-twentieth century and is generally low-lying. Assessed structures in the neighborhood total more than \$77 million. Ocean City Homes lacks</p>	New	Flood; Hurricane/Tropical Storm; Nor’easter; Climate Change and	1, 3, 6	Operations & Engineering Department	Ocean City capital plan funding and/or hazard mitigation funding	Protection of Ocean City Homes neighborhood	\$30 mil	2024	Medium	SIP	SP





Table 9.9-15. Proposed Hazard Mitigation Initiatives

Initiative Number	Mitigation Initiative Name	Description of the Problem and Solution	New or Existing Assets?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Cost	Timeline	Priority	Mitigation Category	CRS Category
		<p>bulkheads in most of the neighborhood and there are no structural flood protection measures besides the fill and oceanfront dunes and bulkheads.</p> <p>Solution: In order to mitigate back bay flooding in Ocean City homes, the City proposes a comprehensive bulkhead/floodwall to provide protection for the neighborhood as well as an appurtenant pump station to pump out excess floodwater.</p>		Sea Level Rise				from flooding					
2020-OceanCity-016 (Former OC-25)	Ocean City Homes Elevation	<p>Problem: Ocean City Homes is a neighborhood of approximately 450 residential structures located at the South End of Ocean City. The neighborhood was built on filled marsh in the mid-twentieth century and is generally low-lying. Assessed structures in the neighborhood total more than \$77 million. Numerous sections of the neighborhood are at a particularly low elevation, including 52nd, 53rd, 54th, and 55th Streets.</p> <p>Solution: The City proposes to elevate portions of the Ocean City Homes neighborhood, including streets and yards, to facilitate drainage and prevent flooding.</p>	New	Flood; Hurricane/Tropical Storm; Nor'easter; Climate Change and Sea Level Rise	1, 3, 6	Operations & Engineering Department working with property owners	Ocean City capital plan funding and/or hazard mitigation funding	Protection of Ocean City Homes neighborhood from flooding	\$10 mil	2024	Medium	SIP	SP
2020-OceanCity-017 (Former OC-20)	Route 152 Hardening	<p>Problem: Ocean Drive/CR-656 is an evacuation route for the Gardens and the northern portion of Ocean City. The Ocean Drive bridge crosses the Great Egg Harbor Inlet into Egg Harbor Township, where it intersects with Route 152 and continues inland to Somers Point and eastward into Longport and Seaview Harbor. While the Ocean City section of roadway is on high ground, the portion in Atlantic County is at a low elevation that is subject to flooding and coastal erosion. Land on the south side of Ocean Drive has steadily eroded over the past few decades, with portions of the</p>	Existing	Flood; Hurricane/Tropical Storm; Nor'easter; Climate Change and Sea Level Rise; Coastal Erosion	1, 3, 4, 6	Atlantic County; NJ Department of Transportation; Cape May County; NJDEP; Egg Harbor Township	Transportation Trust Fund; BRIC; County funds; local match	Protection of key evacuation route for the City	TBD	TBD	Medium	SIP	PP



Table 9.9-15. 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
		roadbed now exposed and only protected by rip-rap. Solution: The City proposes a Route 152 Shore Protection and Elevation project that provides a higher degree of protection to the evacuation route and arrests the erosion issue.											
2020-OceanCity-018	Disaster Debris Management Plan	Problem: The City lacks a debris management plan. Solution: The City will develop a vegetation management program.	N/A	All Hazards	4, 6	Administration/DPW	Municipal budget	Plan in place for debris management	Staff time	1 year	High	LPR	ES
2020-OceanCity-019	Ocean City First Responder Building Consolidation	Problem: The City's existing police/court building and fire department are both located in outdated, floodprone facilities. Solution: The City proposes to consolidate the Police Department, Fire Department, emergency operations center, 9-1-1 center in a single facility located at the site of the current firehouse located between West and Asbury Avenues between Fifth and Sixth Streets.	New	All Hazards	1, 3, 4, 6	Ocean City Police Department, Fire Department, Emergency Management	Ocean City Capital Plan; BRIC	New and floodproofed facilities for emergency services	\$35 million	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 9.9-16. 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	Time line	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2020-OceanCity-001	South End Flood Protection	1	1	0	1	1	1	-1	0	1	1	1	1	1	1	10	High
2020-OceanCity-002	Recreation Facility Mitigation	1	1	0	1	1	1	-1	0	1	1	1	1	1	1	10	High
2020-OceanCity-003	Music Pier Wave Mitigation	1	1	0	1	1	0	-1	0	1	1	1	0	1	1	8	Medium
2020-OceanCity-004	West 17 th Street Improvements	1	1	0	1	1	1	-1	0	1	1	1	1	1	1	10	High
2020-OceanCity-005	Ocean City Outfall Consolidation	1	0	0	1	1	1	-1	0	1	1	1	1	1	1	10	High
2020-OceanCity-006	Ocean City Stormwater Management Upgrades	1	0	0	1	1	1	-1	0	1	1	1	0	1	1	8	Medium
2020-OceanCity-007	Property Acquisition	1	1	1	1	1	1	-1	1	1	1	1	1	1	1	12	High
2020-OceanCity-008	CR-619 Mitigation	1	0	1	1	1	1	-1	0	1	0	1	0	1	1	8	Medium
2020-OceanCity-009	Third Ward Drainage Improvements	1	0	0	1	1	1	-1	0	1	1	1	1	1	1	9	High
2020-OceanCity-010	Firewise Participation	1	1	1	1	1	1	-1	0	1	1	1	0	1	1	10	Medium
2020-OceanCity-011	South End Oceanfront Bulkhead Replacement	1	1	0	1	1	1	-1	0	1	0	1	0	1	1	8	Medium
2020-OceanCity-012	Roosevelt Boulevard Elevation	1	0	1	1	1	1	-1	0	1	0	1	0	1	1	8	Medium
2020-OceanCity-013	Merion Park Bulkheading	1	1	1	1	1	1	-1	-1	1	0	1	0	1	1	8	Medium
2020-OceanCity-014	Elevate Merion Park	1	1	0	1	1	1	-1	0	1	1	1	1	1	1	10	High
2020-OceanCity-015	Ocean City Homes Bulkheading	1	1	1	1	1	1	-1	-1	1	0	1	0	1	1	8	Medium
2020-OceanCity-016	Ocean City Homes Elevation	1	1	0	0	1	1	-1	0	1	1	0	1	1	1	8	Medium
2020-OceanCity-017	Route 152 Hardening	1	0	0	1	1	1	-1	0	1	0	1	0	1	1	7	Medium
2020-OceanCity-018	Disaster Debris Management Plan	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High



Initiative Number	Mitigation Initiative Name	Life Safety	Property Protection	Cost Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2020-OceanCity-019	First Responder Building Consolidation	1	1	1	1	1	1	-1	1	1	1	1	1	1	1	13	High

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


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



Table 9.9-17. 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		
Coastal Erosion		X			X	X		
Disease Outbreak					X			
Drought					X			
Flood		X			X	X		
Hurricane		X			X	X		
Nor'Easter		X			X	X		
Severe Weather		X			X	X		
Severe Winter Weather					X			
Tsunami					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 9.9-1. City of Ocean City Hazard Area Extent and Location Map 1

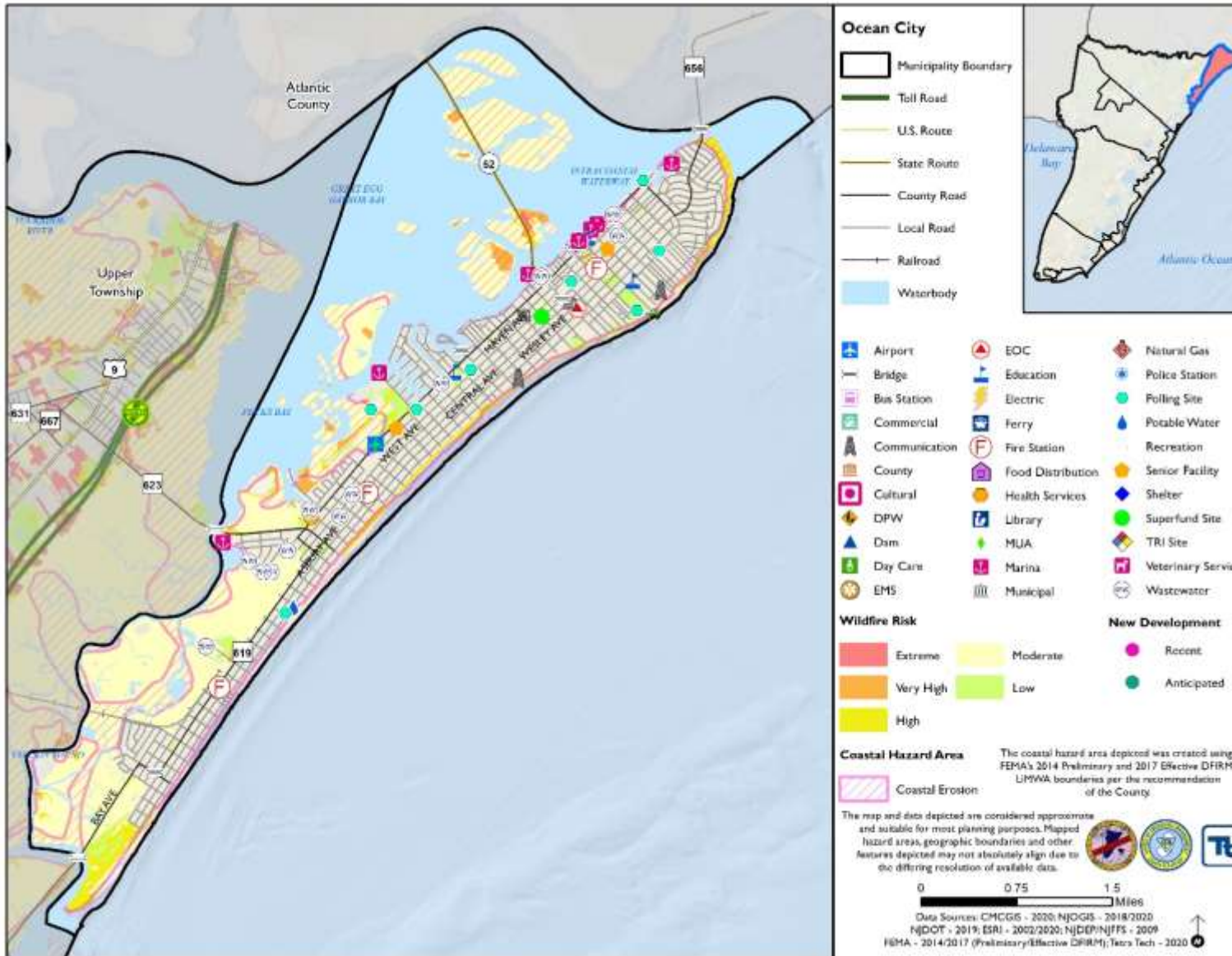




Figure 9.9-2. City of Ocean City Hazard Area Extent and Location Map 2

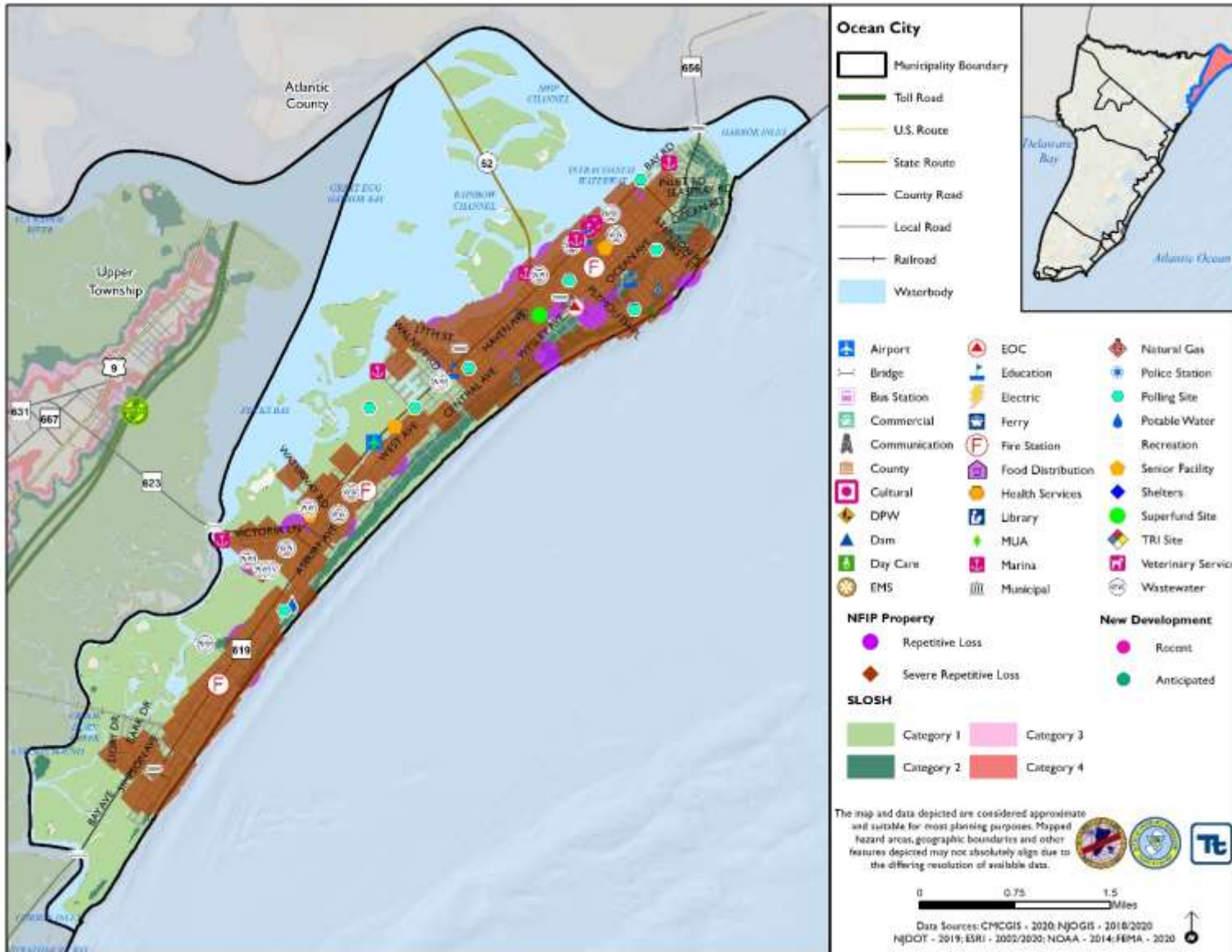
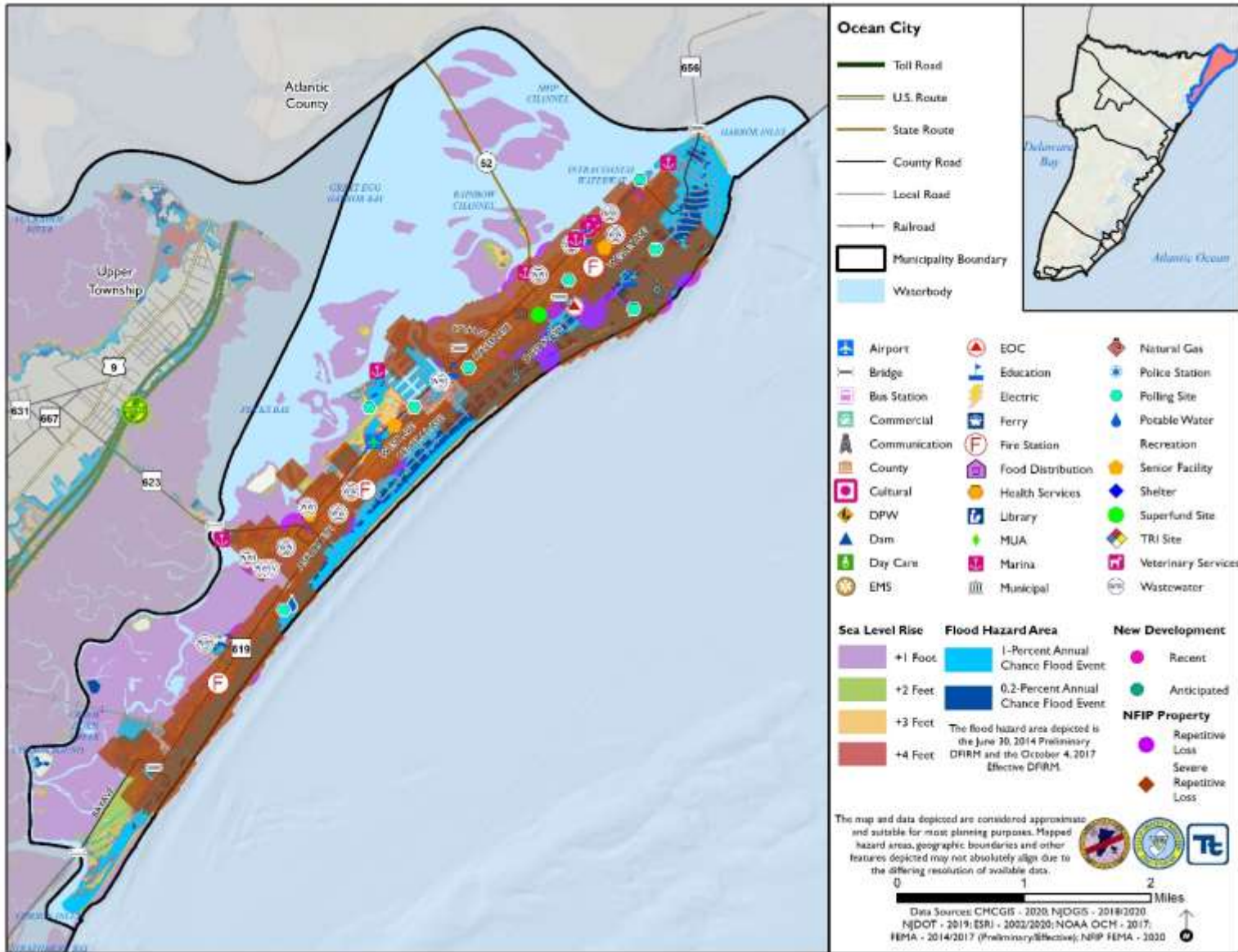




Figure 9.9-3. City of Ocean City Hazard Area Extent and Location Map 3





Action Worksheet			
Project Name:	2020-OceanCity-001		
Project Number:	South End Flood Protection		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood; Hurricane/Tropical Storm; Nor'easter; Climate Change/Sea Level Rise		
Description of the Problem:	West Avenue in Ocean City is located at a low elevation. Inundation of West Avenue begins at water levels that are just two feet above the typical high tide. Currently there are no structural protective measures in place preventing floodwaters from inundating West Avenue and moving inland into Ocean City.		
Action or Project Intended for Implementation			
Description of the Solution:	Bulkhead/Barrier along West Ave. from 36th to 52nd Street and install pump station to encumber Asbury Ave. to marsh and elevate roads.		
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):	Protection of large low-lying sections of the City's South End
Useful Life:	30 years	Goals Met:	1, 3, 6
Estimated Cost:	\$10 mil	Mitigation Action Type:	Structure and Infrastructure Project
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	2025
Estimated Time Required for Project Implementation:	2 years	Potential Funding Sources:	Ocean City capital plan funding and/or hazard mitigation funding
Responsible Organization:	Operations & Engineering Department, working with property owners and County	Local Planning Mechanisms to be Used in Implementation if any:	Flood Mitigation Plan; Capital Plan
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	N/A	Does not mitigate flooding
	Road elevation	High	Does not mitigate inundation/erosion issue
	Bulkhead project	High	mitigates flooding
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	2020-OceanCity-001	
Project Number:	South End Flood Protection	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Project would mitigate flooding and enhance emergency response
Property Protection	1	
Cost-Effectiveness	0	
Technical	1	
Political	1	Political support for mitigation exists
Legal	1	The City has the legal authority to complete the project
Fiscal	-1	Project requires funding support.
Environmental	0	
Social	1	
Administrative	1	
Multi-Hazard	1	Multiple flooding types mitigated
Timeline	1	
Agency Champion	1	City support is strong
Other Community Objectives	1	
Total	10	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	2020-OceanCity-002		
Project Number:	Recreation Facility Mitigation		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood; Hurricane/Tropical Storm; Nor'easter; Climate Change/Sea Level Rise		
Description of the Problem:	Some of Ocean City's recreation and open space facilities are located at low elevations. For example, the Grimes Field facility at Sixth Street begins experiencing flooding when flood levels are just one foot above typical high tides. This leads to acute drainage issues and hampers the ability of the City to use the publicly-owned land for staging and recovery during emergency situations.		
Action or Project Intended for Implementation			
Description of the Solution:	The City proposes to elevate certain recreational facilities (inclusive of the Tennessee Avenue Complex and Grimes Field at 6th and Bay Avenue) to provide local areas of high ground refuge during flooding events.		
Is this project related to a Critical Facility?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Level of Protection:	Base flood elevation	Estimated Benefits (losses avoided):	Localized and accessible areas of higher ground during flooding
Useful Life:	N/A	Goals Met:	1, 3, 6
Estimated Cost:	\$3.5 mil	Mitigation Action Type:	Structure and Infrastructure Project
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	2021
Estimated Time Required for Project Implementation:	1 year	Potential Funding Sources:	Ocean City capital plan funding
Responsible Organization:	Operations & Engineering Department	Local Planning Mechanisms to be Used in Implementation if any:	Flood Mitigation Plan; Capital Plan
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	N/A	Does not mitigate flooding
	Flood wall	High	Cost too high for facility
	Property elevation	Medium	mitigates flooding
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	2020-OceanCity-002	
Project Number:	Recreation Facility Mitigation	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	Project will protect the Recreation Facility.
Cost-Effectiveness	0	
Technical	1	
Political	1	Political support for mitigation exists
Legal	1	The City has the legal authority to complete the project.
Fiscal	-1	Project requires funding support.
Environmental	0	
Social	1	
Administrative	1	
Multi-Hazard	1	Flood; Hurricane/Tropical Storm; Nor'easter; Climate Change/Sea Level Rise
Timeline	1	
Agency Champion	1	City support is strong
Other Community Objectives	1	
Total	10	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	2020-OceanCity-003		
Project Number:	Music Pier Wave Mitigation		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood; Hurricane/Tropical Storm; Nor'easter; Climate Change/Sea Level Rise; Coastal Erosion		
Description of the Problem:	The Ocean City Music Pier, located on the boardwalk, is a major destination in Ocean City as well as a building eligible for listing on the State Register of Historic Places. The Music Pier is located within the VE Zone and is highly vulnerable to coastal erosion and wave action. The historic structure is located on concrete pilings that extend into the surf.		
Action or Project Intended for Implementation			
Description of the Solution:	The City proposes to expand the deck around the Music Pier and provide wave attenuating measures to protect the Music Pier, Boardwalk, and landward properties. This would mitigate wave action and erosive forces.		
Is this project related to a Critical Facility?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Level of Protection:	N/A	Estimated Benefits (losses avoided):	Protection of a historic structure and surrounding infrastructure
Useful Life:	TBD	Goals Met:	1, 3, 6
Estimated Cost:	\$5 mil	Mitigation Action Type:	Structure and Infrastructure Project
Plan for Implementation			
Prioritization:	Medium	Desired Timeframe for Implementation:	2030
Estimated Time Required for Project Implementation:	2 years	Potential Funding Sources:	US Army Corps; BRIC; Shore Protection Fund; Local match
Responsible Organization:	Operations & Engineering Department	Local Planning Mechanisms to be Used in Implementation if any:	Flood Mitigation Plan; Capital Plan
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	N/A	Does not mitigate flooding
	Facility relocation	High	Not feasible
	Wave attenuation	High	Mitigates wave damage
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	2020-OceanCity-003	
Project Number:	Music Pier Wave Mitigation	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	Project will protect Music Pier
Cost-Effectiveness	0	
Technical	1	
Political	1	Political support for mitigation exists
Legal	0	Project will likely require permitting approval from NJ DEP
Fiscal	-1	Project requires funding support
Environmental	0	
Social	1	
Administrative	1	
Multi-Hazard	1	Flood; Hurricane/Tropical Storm; Nor'easter; Climate Change/Sea Level Rise; Coastal Erosion
Timeline	0	
Agency Champion	1	City support is strong
Other Community Objectives	1	
Total	8	
Priority (High/Med/Low)	Medium	



Action Worksheet			
Project Name:	2020-OceanCity-004		
Project Number:	West 17th Street Improvements		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood; Hurricane/Tropical Storm; Nor'easter; Climate Change/Sea Level Rise		
Description of the Problem:	West 17th Street is a 10-acre section of the City's waterfront Riviera neighborhood that is home to approximately 250 residential properties valued at \$32.1 million in structure value. The neighborhood was one of the City's first waterfront neighborhoods and was built from fill. The neighborhood is very low-lying and begins experiencing tidal flooding impacts when tide levels are just one foot above typical high tides.		
Action or Project Intended for Implementation			
Description of the Solution:	The City proposes to elevate street and install higher bulkheads and a pump station to discharge stormwater and mitigate nuisance 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):	Enhanced protection of neighborhood.
Useful Life:	30 years	Goals Met:	1, 3, 6
Estimated Cost:	\$5 mil	Mitigation Action Type:	Structure and Infrastructure Project
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	2022
Estimated Time Required for Project Implementation:	2 years	Potential Funding Sources:	Ocean City capital plan funding and/or hazard mitigation funding
Responsible Organization:	Operations & Engineering Department	Local Planning Mechanisms to be Used in Implementation if any:	Flood Mitigation Plan; Capital Plan
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	N/A	Does not mitigate flooding
	Individual structure elevation	High (property owner)	Does not address inundation
	Bulkhead/pump station	High	Consistent 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:	2020-OceanCity-004	
Project Number:	West 17th Street Improvements	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Project would mitigate flooding and enhance emergency response
Property Protection	1	
Cost-Effectiveness	0	
Technical	1	
Political	1	Political support for mitigation exists
Legal	1	The City has the legal authority to complete the project
Fiscal	-1	Project requires funding support
Environmental	0	
Social	1	
Administrative	1	
Multi-Hazard	1	Flood; Hurricane/Tropical Storm; Nor'easter; Climate Change/Sea Level Rise
Timeline	1	
Agency Champion	1	City support is strong
Other Community Objectives	1	
Total	10	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	2020-OceanCity-005		
Project Number:	Ocean City Outfall Consolidation		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood; Hurricane/Tropical Storm; Nor'easter; Climate Change/Sea Level Rise; Severe Weather		
Description of the Problem:	Ocean City has a number of outfall structures that carry stormwater from streets and properties to both the Ocean and bay. The utility of the outfalls has decreased as sediment has accumulated and caused backups at numerous outfalls. This inhibits stormwater drainage, causing upland impacts.		
Action or Project Intended for Implementation			
Description of the Solution:	The City proposes to consolidate existing outfalls and remove surplus outfalls as identified by the Operations and Engineering Department.		
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):	Enhanced drainage for neighborhoods in the City
Useful Life:	50 years	Goals Met:	1, 3, 6
Estimated Cost:	\$3 mil	Mitigation Action Type:	Structure and Infrastructure Project
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	2022
Estimated Time Required for Project Implementation:	2 years	Potential Funding Sources:	Ocean City Capital Plan and NJ DEP Coastal Engineering
Responsible Organization:	Operations & Engineering Department	Local Planning Mechanisms to be Used in Implementation if any:	Flood Mitigation Plan; Capital Plan
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	N/A	Does not mitigate flooding
	Drainage enhancements/onsite detention	High	Too costly
	Outfall consolidation	Medium	
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	2020-OceanCity-005	
Project Number:	Ocean City Outfall Consolidation	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	0	
Cost-Effectiveness	0	
Technical	1	
Political	1	Political support for mitigation exists
Legal	1	
Fiscal	-1	Project requires funding support
Environmental	0	
Social	1	
Administrative	1	
Multi-Hazard	1	Flood; Hurricane/Tropical Storm; Nor'easter; Climate Change/Sea Level Rise; Severe Weather
Timeline	1	
Agency Champion	1	City support is strong
Other Community Objectives	1	
Total	10	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	2020-OceanCity-006		
Project Number:	Ocean City Stormwater Management Upgrades		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood; Hurricane/Tropical Storm; Nor'easter; Climate Change/Sea Level Rise; Severe Weather		
Description of the Problem:	Ocean City's drainage systems have historically been designed to handle the two-year stormwater event. The City has replaced the system in some areas, though a number of sections of the City continue to have undersized stormwater systems.		
Action or Project Intended for Implementation			
Description of the Solution:	Enhance and upgrade Ocean City's stormwater system capabilities to handle more intense storms.		
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):	Enhanced drainage for neighborhoods in the City
Useful Life:	50 years	Goals Met:	1, 3, 6
Estimated Cost:	\$1 million	Mitigation Action Type:	Structure and Infrastructure Project
Plan for Implementation			
Prioritization:	Medium	Desired Timeframe for Implementation:	2021
Estimated Time Required for Project Implementation:	2 years	Potential Funding Sources:	Ocean City Capital Plan
Responsible Organization:	Operations & Engineering Department	Local Planning Mechanisms to be Used in Implementation if any:	Flood Mitigation Plan; Capital Plan
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	N/A	Does not mitigate flooding
	Drainage enhancements/onsite detention	High	Too costly- private property
	Capacity enhancements	Medium	Alleviates stormwater flooding
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	2020-OceanCity-006	
Project Number:	Ocean City Stormwater Management Upgrades	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	0	
Cost-Effectiveness	0	
Technical	1	
Political	1	Political support for mitigation exists
Legal	1	The City has the legal authority to complete the project
Fiscal	-1	Project requires funding support
Environmental	0	
Social	1	
Administrative	1	
Multi-Hazard	1	Multiple flooding types mitigated
Timeline	0	
Agency Champion	1	City support is strong
Other Community Objectives	1	
Total	8	
Priority (High/Med/Low)	Medium	



Action Worksheet			
Project Name:	2020-OceanCity-007		
Project Number:	Property Acquisition		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood; Hurricane/Tropical Storm; Nor'easter; Climate Change/Sea Level Rise; Severe Weather		
Description of the Problem:	Due to technical or financial factors, the elevation of each floodprone structure in the Special Flood Hazard Area is not currently feasible. This includes structures at very low ground elevations where future infrastructure provision may not be feasible.		
Action or Project Intended for Implementation			
Description of the Solution:	Where appropriate, the City proposes to acquire properties in low-lying areas where structural flood protection is not feasible.		
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):	Foregone damage to structures from flooding; ecosystem enhancements
Useful Life:	N/A	Goals Met:	1, 3, 5, 6
Estimated Cost:	\$20 million	Mitigation Action Type:	Structure and Infrastructure Project
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	2021
Estimated Time Required for Project Implementation:	1.5 years	Potential Funding Sources:	FMA; HMGP; Local match; Blue Acres
Responsible Organization:	Ocean City OEM and Floodplain Administrator	Local Planning Mechanisms to be Used in Implementation if any:	Flood Mitigation Plan; Capital Plan
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	N/A	Does not mitigate flooding
	Continue development	Low	additional risk
	Acquisition	medium	
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	2020-OceanCity-007	
Project Number:	Property Acquisition	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Project will remove families from high flood risk
Property Protection	1	
Cost-Effectiveness	1	
Technical	1	
Political	1	Political support for mitigation exists
Legal	1	
Fiscal	-1	Project requires funding support
Environmental	1	Natural floodplain functions
Social	1	
Administrative	1	
Multi-Hazard	1	
Timeline	1	
Agency Champion	1	City support is strong
Other Community Objectives	1	
Total	12	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	2020-OceanCity-008		
Project Number:	CR-619 Mitigation		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood; Hurricane/Tropical Storm; Nor'easter; Climate Change/Sea Level Rise; Coastal Erosion		
Description of the Problem:	CR-619 is an evacuation route for the Upper Township neighborhood of Strathmere and provides access to Corson's Inlet State Park. The road is vulnerable to coastal erosion and flooding near the Corsons Inlet bridge.		
Action or Project Intended for Implementation			
Description of the Solution:	Upgrade existing revetment wall (needs to be extended to the south and existing sections upgraded) and provide additional road protection to CR-619 in Strathmere to Ocean City and elevate sections of road as needed.		
Is this project related to a Critical Facility?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Level of Protection:	N/A	Estimated Benefits (losses avoided):	Enhanced protection for evacuation route
Useful Life:	20 years	Goals Met:	1, 3, 4, 6
Estimated Cost:	\$10 million	Mitigation Action Type:	Structure and Infrastructure Project
Plan for Implementation			
Prioritization:	Medium	Desired Timeframe for Implementation:	2030
Estimated Time Required for Project Implementation:	2 years	Potential Funding Sources:	Local match; BRIC; HMGP; County funds; Transportation Trust Fund
Responsible Organization:	Operations & Engineering Department and Cape May County Engineering Department	Local Planning Mechanisms to be Used in Implementation if any:	County CIP
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	N/A	Does not mitigate flooding
	Road abandonment	Low	not feasible due to access need
	Wall upgrade	high	Arrests erosion
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	2020-OceanCity-008	
Project Number:	CR-619 Mitigation	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Project would mitigate flooding and enhance emergency response
Property Protection	0	
Cost-Effectiveness	1	
Technical	1	
Political	1	Political support for mitigation exists
Legal	1	
Fiscal	-1	Project requires funding support
Environmental	0	
Social	1	
Administrative	0	
Multi-Hazard	1	Flood; Hurricane/Tropical Storm; Nor'easter; Climate Change/Sea Level Rise; Coastal Erosion
Timeline	0	
Agency Champion	1	City support is strong
Other Community Objectives	1	
Total	8	
Priority (High/Med/Low)	Medium	



Action Worksheet			
Project Name:	2020-OceanCity-009		
Project Number:	Third Ward Drainage Improvements		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood; Hurricane/Tropical Storm; Nor'easter; Climate Change/Sea Level Rise; Severe Weather		
Description of the Problem:	The Third Ward of Ocean City experiences nuisance tidal and stormwater flooding owing to drainage patterns and low elevations. The neighborhood has not yet received comprehensive drainage improvements that have been undertaken for other sections of the City.		
Action or Project Intended for Implementation			
Description of the Solution:	Road elevation, consolidation of the Drainage Systems and Construction of pump stations on Haven Ave. between 9th St. and 26th St.; and Simpson Ave. between 9th Street and 26th Street.		
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):	Enhanced drainage capabilities/mitigated stormwater issues
Useful Life:	50 years	Goals Met:	1, 3, 6
Estimated Cost:	\$10 million	Mitigation Action Type:	Structure and Infrastructure Project
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	2021
Estimated Time Required for Project Implementation:	3 years	Potential Funding Sources:	Ocean City Capital Plan; BRIC; HMGP
Responsible Organization:	Operations & Engineering Department	Local Planning Mechanisms to be Used in Implementation if any:	Flood Mitigation Plan; Capital Plan
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	N/A	Does not mitigate flooding
	Road elevation	Low	does not address drainage
	Drainage system consolidation	High	
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	2020-OceanCity-009	
Project Number:	Third Ward Drainage Improvements	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	0	
Cost-Effectiveness	0	
Technical	1	
Political	1	Political support for mitigation exists
Legal	1	The City has the legal authority to complete the project
Fiscal	-1	Project requires funding support
Environmental	0	
Social	1	
Administrative	1	
Multi-Hazard	1	Multiple flooding types mitigated
Timeline	1	
Agency Champion	1	City support is strong
Other Community Objectives	1	
Total	9	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	2020-OceanCity-011		
Project Number:	South End Oceanfront Bulkhead Replacement		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood; Hurricane/Tropical Storm; Nor'easter; Climate Change/Sea Level Rise; Coastal Erosion		
Description of the Problem:	The South End of Ocean City is partially protected by a wooden bulkhead that runs along Central Avenue from 57th Street south. The oceanward side of the bulkhead is protected by a vegetated dune and the landward side of the bulkhead includes parking spaces, a road, and residential homes. The bulkhead is deteriorated and undersized. The South End is vulnerable to coastal erosion and waves overtopping dunes.		
Action or Project Intended for Implementation			
Description of the Solution:	The City proposes to elevate and replacement the South End bulkhead with a higher bulkhead built of sturdier materials. The bulkhead will provide an enhanced level of protection.		
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):	Enhanced protection of South End from wave damage
Useful Life:	50 years	Goals Met:	1, 3, 4, 6
Estimated Cost:	\$30 million	Mitigation Action Type:	Structure and Infrastructure Project
Plan for Implementation			
Prioritization:	Medium	Desired Timeframe for Implementation:	2030
Estimated Time Required for Project Implementation:	3 years	Potential Funding Sources:	BRIC; HMGP; US Army Corps; NJDEP Shore Protection Fund
Responsible Organization:	Operations & Engineering Department	Local Planning Mechanisms to be Used in Implementation if any:	Flood Mitigation Plan; Capital Plan
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	N/A	Does not mitigate flooding
	Bulkhead removal	Low	Loss of protection
	Bulkhead elevation	Medium	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:	2020-OceanCity-011	
Project Number:	South End Oceanfront Bulkhead Replacement	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	
Cost-Effectiveness	0	
Technical	1	
Political	1	Political support for mitigation exists
Legal	1	The City has the legal authority to complete the project
Fiscal	-1	Project requires funding support
Environmental	0	
Social	1	
Administrative	0	
Multi-Hazard	1	Multiple flooding types mitigated
Timeline	0	
Agency Champion	1	City support is strong
Other Community Objectives	1	
Total	8	
Priority (High/Med/Low)	Medium	



Action Worksheet			
Project Name:	2020-OceanCity-012		
Project Number:	Roosevelt Boulevard Elevation		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood; Hurricane/Tropical Storm; Nor'easter; Climate Change and Sea Level Rise		
Description of the Problem:	Roosevelt Boulevard (CR-623) is a major access road and evacuation route between Ocean City and the mainland. The road sees average daily traffic of between 10,000 and 25,000 vehicles depending on the season. The Boulevard sees flooding beginning at water levels that are two feet above high tide.		
Action or Project Intended for Implementation			
Description of the Solution:	Elevate Roosevelt Boulevard (CR-623) from the Parkway into Ocean City proper.		
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:	\$15 million	Mitigation Action Type:	Structure and Infrastructure Project
Plan for Implementation			
Prioritization:	Medium	Desired Timeframe for Implementation:	2026
Estimated Time Required for Project Implementation:	3 years	Potential Funding Sources:	HMA grants; County funds; local match
Responsible Organization:	County Engineering	Local Planning Mechanisms to be Used in Implementation if any:	County CIP
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	N/A	Does not mitigate flooding
	Road abandonment	Low	Not feasible-loss of access
	Road elevation	High	Enhanced access during flooding
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	2020-OceanCity-012	
Project Number:	Roosevelt Boulevard Elevation	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Project would mitigate flooding and enhance emergency response
Property Protection	0	
Cost-Effectiveness	1	
Technical	1	
Political	1	Political support for mitigation exists
Legal	1	The City has the legal authority to complete the project
Fiscal	-1	The project requires funding support
Environmental	0	
Social	1	
Administrative	0	
Multi-Hazard	1	
Timeline	0	
Agency Champion	1	City support is strong
Other Community Objectives	1	
Total	8	
Priority (High/Med/Low)	Medium	



Action Worksheet			
Project Name:	2020-OceanCity-013		
Project Number:	Merion Park Bulkheading		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood; Hurricane/Tropical Storm; Nor'easter; Climate Change and Sea Level Rise		
Description of the Problem:	Merion Park is a neighborhood in Ocean City encompassing more than 70 acres of land, 545 properties, and more than 500 buildings worth more than \$109 million in assessed value. The neighborhood is among the City's lowest lying, with street flooding observed in typical storm events and flooding observable when tide levels are less than one foot above typical high tides. The neighborhood lacks bulkheading in several sections, allowing for flood waters to inundate the neighborhood and cause flooding.		
Action or Project Intended for Implementation			
Description of the Solution:	Bulkhead Merion Park, thereby closing gaps in existing flood protection and enhancing the level of protection for the neighborhood.		
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):	Enhanced protection of neighborhood
Useful Life:	50 years	Goals Met:	1, 3, 6
Estimated Cost:	\$30 million	Mitigation Action Type:	Structure and Infrastructure Project
Plan for Implementation			
Prioritization:	Medium	Desired Timeframe for Implementation:	2030
Estimated Time Required for Project Implementation:	2 years	Potential Funding Sources:	Ocean City Capital Plan; BRIC; FMA
Responsible Organization:	Operations & Engineering Department	Local Planning Mechanisms to be Used in Implementation if any:	Flood Mitigation Plan; Capital Plan
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	N/A	Does not mitigate flooding
	Continue drainage enhancements	Medium	Will not mitigate floodnig
	Install bulkhead	High	Mitigate inundaton risk
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	2020-OceanCity-013	
Project Number:	Merion Park Bulkheading	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Project would mitigate flooding and enhance emergency response
Property Protection	1	
Cost-Effectiveness	1	
Technical	1	
Political	1	Political support for mitigation exists
Legal	1	The City has the legal authority to complete the project
Fiscal	-1	Project requires funding support
Environmental	-1	
Social	1	
Administrative	0	
Multi-Hazard	1	
Timeline	0	
Agency Champion	1	City support is strong
Other Community Objectives	1	
Total	8	
Priority (High/Med/Low)	Medium	



Action Worksheet			
Project Name:	2020-OceanCity-014		
Project Number:	Elevate Merion Park		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood; Hurricane/Tropical Storm; Nor'easter; Climate Change and Sea Level Rise		
Description of the Problem:	Merion Park is a neighborhood in Ocean City encompassing more than 70 acres of land, 545 properties, and more than 500 buildings worth more than \$109 million in assessed value. The neighborhood is among the City's lowest lying, with street flooding observed in typical storm events and flooding observable when tide levels are less than one foot above typical high tides. The neighborhood lacks bulkheading in several sections, allowing for flood waters to inundate the neighborhood and cause flooding. In addition to low-lying streets and lack of bulkheads, the neighborhoods overall elevation is low, including private yards and homes. Nearly half of the properties in the neighborhood are owned by year-round residents – one of the highest proportions in the City.		
Action or Project Intended for Implementation			
Description of the Solution:	The City proposes to elevate low-lying streets and yards in Merion Park to assist with drainage and mitigate 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):	Enhanced protection of neighborhood
Useful Life:	40 years	Goals Met:	1, 3, 6
Estimated Cost:	\$10 million	Mitigation Action Type:	Structure and Infrastructure Project
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	2022
Estimated Time Required for Project Implementation:	5 years	Potential Funding Sources:	Ocean City capital plan funding and/or hazard mitigation funding
Responsible Organization:	Operations & Engineering Department	Local Planning Mechanisms to be Used in Implementation if any:	Flood Mitigation Plan; Capital Plan
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	N/A	Does not mitigate flooding
	Continue drainage enhancements	Medium	Does not address vulnerability
	Low-lying fill	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:	2020-OceanCity-014	
Project Number:	Elevate Merion Park	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Project would mitigate flooding and enhance emergency response
Property Protection	1	
Cost-Effectiveness	0	
Technical	1	
Political	1	Political support for mitigation exists
Legal	1	The City has the legal authority to complete the project
Fiscal	-1	Project requires funding support
Environmental	0	
Social	1	
Administrative	1	
Multi-Hazard	1	Flood; Hurricane/Tropical Storm; Nor'easter; Climate Change and Sea Level Rise
Timeline	1	
Agency Champion	1	City support is strong
Other Community Objectives	1	
Total	10	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	2020-OceanCity-015		
Project Number:	Ocean City Homes Bulkheading		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood; Hurricane/Tropical Storm; Nor'easter; Climate Change and Sea Level Rise		
Description of the Problem:	Ocean City Homes is a neighborhood of approximately 450 residential structures located at the South End of Ocean City. The neighborhood was built on filled marsh in the mid-twentieth century and is generally low-lying. Assessed structures in the neighborhood total more than \$77 million. Ocean City Homes lacks bulkheads in most of the neighborhood and there are no structural flood protection measures besides the fill and oceanfront dunes and bulkheads.		
Action or Project Intended for Implementation			
Description of the Solution:	In order to mitigate back bay flooding in Ocean City homes, the City proposes a comprehensive bulkhead/floodwall to provide protection for the neighborhood as well as an appurtenant pump station to pump out excess floodwater.		
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):	Protection of Ocean City Homes neighborhood from flooding
Useful Life:	30 years	Goals Met:	1, 3, 6
Estimated Cost:	\$30 million	Mitigation Action Type:	Structure and Infrastructure Project
Plan for Implementation			
Prioritization:	Medium	Desired Timeframe for Implementation:	2024
Estimated Time Required for Project Implementation:	3 years	Potential Funding Sources:	Ocean City capital plan funding and/or hazard mitigation funding
Responsible Organization:	Operations & Engineering Department	Local Planning Mechanisms to be Used in Implementation if any:	Flood Mitigation Plan; Capital Plan
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	N/A	Does not mitigate flooding
	Continue drainage enhancements	Medium	Will not mitigate floodnig
	Install bulkhead	High	Mitigate inundaton risk
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	2020-OceanCity-015	
Project Number:	Ocean City Homes Bulkheading	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Project would mitigate flooding and enhance emergency response
Property Protection	1	
Cost-Effectiveness	1	
Technical	1	
Political	1	Political support for mitigation exists
Legal	1	The City has the legal authority to complete the project
Fiscal	-1	Project requires funding support
Environmental	-1	
Social	1	
Administrative	0	
Multi-Hazard	1	Flood; Hurricane/Tropical Storm; Nor'easter; Climate Change and Sea Level Rise
Timeline	0	
Agency Champion	1	City support is strong
Other Community Objectives	1	
Total	8	
Priority (High/Med/Low)	Medium	



Action Worksheet			
Project Name:	2020-OceanCity-016		
Project Number:	Ocean City Homes Elevation		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood; Hurricane/Tropical Storm; Nor'easter; Climate Change and Sea Level Rise		
Description of the Problem:	Ocean City Homes is a neighborhood of approximately 450 residential structures located at the South End of Ocean City. The neighborhood was built on filled marsh in the mid-twentieth century and is generally low-lying. Assessed structures in the neighborhood total more than \$77 million. Numerous sections of the neighborhood are at a particularly low elevation, including 52nd, 53rd, 54th, and 55th Streets.		
Action or Project Intended for Implementation			
Description of the Solution:	The City proposes to elevate portions of the Ocean City Homes neighborhood, including streets and yards, to facilitate drainage and prevent 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):	Protection of Ocean City Homes neighborhood from flooding
Useful Life:	50 years	Goals Met:	1, 3, 6
Estimated Cost:	\$10 million	Mitigation Action Type:	Structure and Infrastructure Project
Plan for Implementation			
Prioritization:	Medium	Desired Timeframe for Implementation:	2024
Estimated Time Required for Project Implementation:	5 years	Potential Funding Sources:	Ocean City capital plan funding and/or hazard mitigation funding
Responsible Organization:	Operations & Engineering Department working with property owners	Local Planning Mechanisms to be Used in Implementation if any:	Flood Mitigation Plan; Capital Plan
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	N/A	Does not mitigate flooding
	Continue drainage enhancements	Medium	Does not address vulnerability
	Low-lying fill	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:	2020-OceanCity-016	
Project Number:	Ocean City Homes Elevation	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Project would mitigate flooding and enhance emergency response
Property Protection	1	Project will protect properties from flooding
Cost-Effectiveness	0	
Technical	0	
Political	1	Political support for mitigation exists
Legal	1	
Fiscal	-1	The project requires funding support
Environmental	0	
Social	1	
Administrative	1	
Multi-Hazard	0	
Timeline	1	
Agency Champion	1	City support is strong
Other Community Objectives	1	
Total	8	
Priority (High/Med/Low)	Medium	



Action Worksheet			
Project Name:	2020-OceanCity-017		
Project Number:	Route 152 Hardening		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood; Hurricane/Tropical Storm; Nor'easter; Climate Change and Sea Level Rise; Coastal Erosion		
Description of the Problem:	Ocean Drive/CR-656 is an evacuation route for the Gardens and the northern portion of Ocean City. The Ocean Drive bridge crosses the Great Egg Harbor Inlet into Egg Harbor Township, where it intersects with Route 152 and continues inland to Somers Point and eastward into Longport and Seaview Harbor. While the Ocean City section of roadway is on high ground, the portion in Atlantic County is at a low elevation that is subject to flooding and coastal erosion. Land on the south side of Ocean Drive has steadily eroded over the past few decades, with portions of the roadbed now exposed and only protected by rip-rap.		
Action or Project Intended for Implementation			
Description of the Solution:	The City proposes a Route 152 Shore Protection and Elevation project that provides a higher degree of protection to the evacuation route and arrests the erosion issue.		
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):	Protection of key evacuation route for the City
Useful Life:	50 years	Goals Met:	1, 3, 4, 6
Estimated Cost:	TBD	Mitigation Action Type:	Structure and Infrastructure Project
Plan for Implementation			
Prioritization:	Medium	Desired Timeframe for Implementation:	5 years
Estimated Time Required for Project Implementation:	2 years	Potential Funding Sources:	Transportation Trust Fund; BRIC; County funds; local match
Responsible Organization:	Atlantic County; NJ Department of Transportation; Cape May County; NJDEP; Egg Harbor Township	Local Planning Mechanisms to be Used in Implementation if any:	Atlantic County CIP
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	N/A	Does not mitigate flooding
	Road elevation	Medium	Does not address erosion threat
Erosion project	High	continued road functionality	
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	2020-OceanCity-017	
Project Number:	Route 152 Hardening	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Project would mitigate flooding and enhance emergency response
Property Protection	0	
Cost-Effectiveness	0	
Technical	1	
Political	1	Political support for mitigation exists
Legal	1	
Fiscal	-1	Project requires funding support
Environmental	0	
Social	1	
Administrative	0	
Multi-Hazard	1	Flood; Hurricane/Tropical Storm; Nor'easter; Climate Change and Sea Level Rise; Coastal Erosion
Timeline	0	
Agency Champion	1	City support is strong
Other Community Objectives	1	
Total	7	
Priority (High/Med/Low)	Medium	



Action Worksheet			
Project Name:	2020-OceanCity-019		
Project Number:	Ocean City First Responder Building Consolidation		
Risk / Vulnerability			
Hazard(s) of Concern:	All hazards		
Description of the Problem:	The City's existing police/court building and fire department are both located in outdated, floodprone facilities.		
Action or Project Intended for Implementation			
Description of the Solution:	The City proposes to consolidate the Police Department, Fire Department, emergency operations center, 9-1-1 center in a single facility located at the site of the current firehouse located between West and Asbury Avenues between Fifth and Sixth Streets.		
Is this project related to a Critical Facility?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Level of Protection:	500 year	Estimated Benefits (losses avoided):	New and floodproofed facilities for emergency services
Useful Life:	60 years	Goals Met:	1, 3, 4, 6
Estimated Cost:	TBD	Mitigation Action Type:	Structure and Infrastructure Project
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	2023
Estimated Time Required for Project Implementation:	2 years	Potential Funding Sources:	Ocean City Capital Plan; BRIC
Responsible Organization:	Ocean City Police Department, Fire Department, Emergency Management	Local Planning Mechanisms to be Used in Implementation if any:	Ocean City Capital Plan
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	N/A	Facilities are vulnerable
	Floodproof separate facilities	High	Cost prohibitive/inefficient
Facility consolidaton/Floodproofing	High	Enhanced operations	
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	2020-OceanCity-019	
Project Number:	Ocean City First Responder Building Consolidation	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Project would enhance emergency response
Property Protection	1	New facility will be mitigated
Cost-Effectiveness	1	
Technical	1	
Political	1	Political support for mitigation exists
Legal	1	
Fiscal	-1	Project requires funding support
Environmental	1	
Social	1	Project will protect residents and visitors to the City
Administrative	1	
Multi-Hazard	1	All hazards addressed with new EOC and first responder facility consolidation
Timeline	1	
Agency Champion	1	City support is strong
Other Community Objectives	1	
Total	13	
Priority (High/Med/Low)	High	