



9.1 County of Cape May

This section presents the jurisdictional annex for the County of Cape May.

9.1.1 Hazard Mitigation Plan Point of Contact

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

Primary Point of Contact	Alternate Point of Contact
Dale M. Foster, PE; County Engineer Cape May County Department of Public Works/County Engineer Administration Building - 4 Moore Road Cape May Court House, NJ 08210-1654 (609) 465-1035 countyengineer@co.cape-may.nj.us	Martin L. Pagliughi; Director Cape May County Office of Emergency Management 30 West Mechanic Street Cape May Court House, NJ 08210 (609) 463-6570 mpagliughi@co.cape-may.nj.us

9.1.2 Municipal Profile

Please refer to Section 4, Volume I of this Plan for details on Cape May County’s population, location, climate, history, growth and development.

9.1.3 Natural Hazard Event History Specific to the Municipality

Cape May County has a history of natural and non-natural hazard events as detailed in Volume I, Section 5.0 of this plan. A summary of historical events is provided in each of the hazard profiles and includes a chronology of events that have affected the County and its municipalities.

9.1.4 Hazard Vulnerabilities and Ranking

The hazard profiles in Section 5.0 of this plan have detailed information regarding each plan participant’s vulnerability to the identified hazards. The risk ranking methodology is presented in Section 5.3. However, each municipality had the opportunity to adjust the final ranking based on municipal feedback. The following summarizes the hazard vulnerabilities and their ranking in the County of Cape May. For additional vulnerability information relevant to this jurisdiction, refer to Section 5.0.

Hazard Risk/Vulnerability Risk Ranking

The table below summarizes the hazard risk/vulnerability rankings of potential hazards for the County of Cape May.

Table 9.1-1. Hazard Risk/Vulnerability Risk Ranking

Hazard type	Estimate of Potential Dollar Losses to Structures Vulnerable to the Hazard ^{a, c}	Probability of Occurrence	Risk Ranking Score (Probability x Impact)	Hazard Ranking ^b
Climate Change & Sea Level Rise	RCV in +3 feet: \$7,675,980,411	Frequent	18	Medium
Coastal Erosion	RCV in CEHA: \$222,749,650	Frequent	18	Medium
Flood	1% Annual Chance: \$32,945,021,180	Frequent	54	High
Hurricanes & Tropical Storms	Category 1 SLOSH: \$35,810,097,020 Category 2 SLOSH: \$47,507,918,611 Category 3 SLOSH: \$55,804,887,170 Category 4 SLOSH: \$60,728,142,797	Frequent	54	High



Table 9.1-1. Hazard Risk/Vulnerability Risk Ranking

Hazard type	Estimate of Potential Dollar Losses to Structures Vulnerable to the Hazard ^{a, c}	Probability of Occurrence	Risk Ranking Score (Probability x Impact)	Hazard Ranking ^b
Nor'Easter	Damage estimate not available	Frequent	48	High
Severe Weather	100-Year MRP: \$237,781,856 500-year MRP: \$1,704,604,149 Annualized: \$15,615,868	Frequent	48	High
Severe Winter Weather	1% GBS: \$433,104,760 5% GBS: \$2,165,523,798	Frequent	51	High
Tsunami	Damage estimate not available	Occasional	12	Low
Wildfire	Estimated Value Exposed to Extreme, Very High and High: \$1,113,101,501	Frequent	24	Medium

Notes: GBS = General building stock; MRP = Mean return period.

- a. The general building stock valuation is based on the custom inventory generated for the County utilizing improved value.
- b. High = Total hazard priority risk ranking score of 31 and above
Medium = Total hazard priority risk ranking of 20-30+
Low = Total hazard risk ranking below 20
- c. Refer to Section 5.1 for further details on the loss methodology. Loss estimates for the severe storm and severe winter storm hazards are structural values only and do not include the estimated value of contents. Loss estimates for the flood and earthquake hazards represent both structure and contents. Potential flood loss estimates were generated using Hazus-MH and the 2015 FEMA DFIRM for the 1-percent annual chance event. For the wildfire hazard, the improved value and estimated contents of buildings located within the identified hazard zones is provided.

9.1.5 Capability Assessment

This section summarizes the following capabilities of the County. Refer to Section 6 (Mitigation Strategy – Capability Assessment) for additional details on County programs and capabilities.

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

Planning and Regulatory Capability

The table below summarizes the planning and regulatory tools that are available to Cape May County.

Table 9.1-2. Planning and Regulatory Tools

Tool / Program (code, ordinance, plan)	Do you have this? (Yes/No) If Yes, date of adoption or update	Authority (county, state, federal)	Dept. /Agency Responsible	Code Citation and Comments (Code Chapter, name of plan, explanation of authority, etc.)
Planning Capability				
Master/Comprehensive Plan	Yes	County	Department of Planning	Last updated in 2005



Tool / Program (code, ordinance, plan)	Do you have this? (Yes/No) If Yes, date of adoption or update	Authority (county, state, federal)	Dept. /Agency Responsible	Code Citation and Comments (Code Chapter, name of plan, explanation of authority, etc.)
Capital Improvements Plan	Yes	County	Department of Public Works/Office of the County Engineer	County capital plan updated annually; includes projects to address flooding issues to County infrastructure
Floodplain Management / Basin Plan	No			
Stormwater Management Plan	No			
Open Space Plan	Yes	County	Department of Planning	
Stream Corridor Management Plan	No			
Watershed Management or Protection Plan	Yes	County	Department of Planning	
Economic Development Plan	No			
Comprehensive Emergency Management Plan	Yes	County & Local	Office of Emergency Management	Emergency Operations Plan
Emergency Response Plan	Yes	County & Local	Office of Emergency Management	Emergency Operations Plan
Post-Disaster Recovery Plan	Yes	Federal, State, County	County Board of Chosen Freeholders	Strategic Recovery Planning Report (SRPR), Draft, November 2015
Transportation Plan	Yes	County	Department of Planning, working with South Jersey Transportation Planning Organization	Cape May County Transportation Study (2006)
Strategic Recovery Planning Report	Yes	Federal, State, County	County Board of Chosen Freeholders	Strategic Recovery Planning Report (SRPR), Draft, November 2015
Regulatory Capability				
Building Code	Yes	State & Local	Department of Public Works/Engineering for County projects	State Uniform Construction Code Act (N.J.S. 52:27D-119 et seq.)
Zoning Ordinance	N/A	Local		
Subdivision Ordinance	Yes	County, Local	Department of Planning	Subdivision and Site plan Resolution (2011) – limited to lands along County roads
NFIP Flood Damage Prevention Ordinance	N/A	Federal, State, Local		
Growth Management Ordinances	No			
Site Plan Review Requirements	Yes	County, Local	Department of Planning	Subdivision and Site plan Resolution (2011) – limited to lands along County roads
Stormwater Management Ordinance	No			
Municipal Separate Storm Sewer System (MS4)	No			



Tool / Program (code, ordinance, plan)	Do you have this? (Yes/No) If Yes, date of adoption or update	Authority (county, state, federal)	Dept. /Agency Responsible	Code Citation and Comments (Code Chapter, name of plan, explanation of authority, etc.)
Natural Hazard Ordinance	No			
Post-Disaster Recovery Ordinance	No			County has a Strategic Recovery Planning Report (SRPR) as required under CDBG-DR
Real Estate Disclosure Requirement	No			
Other [Special Purpose Ordinances (i.e., sensitive areas, steep slope)]	No			

Administrative and Technical Capabilities

The table below summarizes potential staff and personnel resources available to Cape May County.

Table 9.1-3. Administrative and Technical Capabilities

Resources	Is this in place? (Yes or No)	Department/ Agency/Position
Administrative Capability		
Planning Board	Yes	Associated with Department of Planning
Mitigation Planning Committee	Yes	OEM – Mitigation Plan Lead
Environmental Board/Commission	No	
Open Space Board/Committee	Yes	Department of Planning - Open Space and Farmland Preservation; Open Space Review Board
Economic Development Commission/Committee	No	
Maintenance Programs to Reduce Risk	Yes	Department of Public Works/Office of the County Engineer
Mutual Aid Agreements	Yes	OEM
Technical/Staffing Capability		
Planner(s) or Engineer(s) with knowledge of land development and land management practices	Yes	Department of Public Works/Office of the County Engineer Department of Planning
Engineer(s) or Professional(s) trained in construction practices related to buildings and/or infrastructure	Yes	Department of Public Works/Office of the County Engineer
Planners or engineers with an understanding of natural hazards	Yes	Department of Public Works/Office of the County Engineer Department of Planning
NFIP Floodplain Administrator	Not Applicable	
Surveyor(s)	Yes	Contracted
Personnel skilled or trained in GIS and/or Hazus-MH applications	Yes	Department of Planning
Scientist familiar with natural hazards	Yes	Department of Planning
Emergency Manager	Yes	Emergency Management Coordinator at OEM



Resources	Is this in place? (Yes or No)	Department/ Agency/Position
Grant Writer(s)	Yes	Various County Departments, including contracted
Staff with expertise or training in benefit/cost analysis	Yes	County DPW/Engineering
Professionals trained in conducting damage assessments	Yes	County DPW/Engineering

Fiscal Capability

Mitigation projects and initiatives are largely or entirely dependent on available funding. The table below summarizes financial resources available to Cape May County.

Table 9.1-4. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use (Yes/No/Don't Know)
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
Impact Fees for homebuyers or developers of new development/homes	No
Stormwater Utility Fee	No
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	Yes
Incur debt through private activity bonds	No
Withhold public expenditures in hazard-prone areas	Yes
Other Federal or State Funding Programs	Yes
Open Space Acquisition Funding Programs	Yes; focused on Farmland Easement Acquisition and Farmland Preservation.
Corridor Enhancement Funds	Yes

Education/Outreach and Community Classifications

The table below summarizes education/outreach programs the community participates in and the classifications for community program available to Cape May County.

Table 9.1-5. Education/Outreach and Community Classifications

Program	Do you have this? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	N/A		
Building Code Effectiveness Grading Schedule (BCEGS)	N/A		
Public Protection (ISO Fire Protection Classes 1 to 10)	N/A		
Storm Ready	No		
TsunamiReady	No		Considering participation
Firewise (National Fire Protection Agency)	No		See County and Local mitigation actions towards Firewise participation
Disaster/Safety Programs in/for Schools	Yes		
Organizations with Mitigation Focus (advocacy group, non-government)	Yes	N/A	Atlantic Cape May Coastal Coalition



Program	Do you have this? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Public Education Program/Outreach (through website, social media)	Yes	N/A	County Website and Social Media
Public-Private Partnerships	Yes	N/A	Various; County is currently working with local lending institutions to provide bridge-loans for private property owners seeking to mitigate under FEMA HMA grant program(s)

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

Criteria for classification credits are outlined in the following documents:

- The Community Rating System Coordinators Manual
- The Building Code Effectiveness Grading Schedule
- The ISO Mitigation online ISO’s Public Protection website at <http://www.isomitigation.com/ppc/0000/ppc0001.html>
- The National Weather Service Storm Ready website at <http://www.weather.gov/stormready/howto.htm>
- The National Firewise Communities website at <http://firewise.org/>

Self-Assessment of Capability

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

Table 9.1-6. Education/Outreach and Community Classifications

Area	Degree of Hazard Mitigation Capability		
	Limited (If limited, what are your obstacles?)	Moderate	High
Planning and Regulatory Capability		X – Limited by State	
Administrative and Technical Capability		X	
Fiscal Capability	X – Limited by available funding		
County Political Capability		X	



Area	Degree of Hazard Mitigation Capability		
	Limited (If limited, what are your obstacles?)	Moderate	High
County Resiliency Capability		X	
Capability to Integrate Mitigation into Municipal Processes and Activities.		X	

Additional Capabilities

Please refer to following subsection (Integration of Hazard Mitigation into Existing and Future Planning Mechanisms) and Section 6 for details on County capabilities.

Integration of Hazard Mitigation into Existing and Future Planning Mechanisms

It is the intention of the County to incorporate hazard mitigation planning and natural hazard risk reduction as an integral component of the County’s administrative, regulatory, and operational framework. A summary of how the County currently integrates hazard mitigation into daily operations is presented below. In addition, the County identified specific integration activities that will be incorporated into procedures and are included in their updated mitigation strategy.

Planning

Land Use Planning (Comprehensive Plan): The Cape May County Planning Board’s (and Planning Department’s) responsibility for creating and implementing a county-wide comprehensive plan is derived from the County Planning Enabling Act of 1935 (C.40:27). This act empowers Counties with the ability to establish planning boards and directs those boards to "...make and adopt a master plan for the physical development of the county." The County’s plan is available at <http://capemaycountynj.gov/DocumentCenter/View/422> .

Local Assistance Planning: The Planning Department occasionally assists municipal planning boards and other bodies such as Environmental Commissions in their planning efforts. In the past, the department has assisted local bodies by providing information on such diverse issues as:

- Land use trends
- New Jersey State Development and Redevelopment Plan
- Population
- Zoning practices

Watershed Management Planning: The County Planning Department houses and provides primary assistance to the County’s Watershed Management Planning program. This 4-year program is funded by the New Jersey Department of Environmental Protection and tasks the citizens and interested groups within the County to create a Watershed Management Plan for the Cape May Watershed.

Strategic Recovery Planning Report: The County Planning Department developed the Strategic Recovery Planning Report, which qualified the County for Sandy CDBG-DR funding for applicable and eligible post-disaster recovery and mitigation funding.

Hazard Mitigation: The County works with NJOEM and FEMA to incorporate any recommended revisions per review of the County’s current HMP and all future plan updates which is a mitigation priority to develop a better plan for the County and participating municipalities. Through such current programs as the Countywide “Enhanced RL/SRL Initiative”, the County will continue to encourage and support municipalities to implement jurisdictional level mitigation projects and programs.





Regulatory and Enforcement (Ordinances)

County Emergency Management, Planning, and Public Works/Engineering continues to monitor federal, state and regional agency regulations and programs affecting floodplain management to assure compliance at the County and local level.

The County HMP is a vital resource for flood mitigation. As such, the HMP will continue to affect floodplain management, zoning, subdivision regulations and other local regulations where possible and appropriate.

The County continues to ensure full and effective enforcement of building codes, floodplain management, zoning, and other risk-reducing regulations.

County Emergency Management has identified the following initiatives in the updated mitigation strategy to develop or update the following plans:

- Prepare a Continuity of Operations Plan (COOP)
- Update the Disaster Debris Management Plan (DDMP)
- Update evacuation plan.

Cape May County Planning identified the following integration actions in the SRPR, which have been included in the County's updated strategy:

- Update the County Master Plan with a Community Resiliency Element that reviews the Land Use Plan Element and development standards against the vulnerability issues outlined in this SRPR and adopt as a Master Plan Element.
- Review zoning and land use regulations against the vulnerability issues outlined in this SRPR and develop amendments to anticipate necessary changes to height, bulk and setback requirements needed to improve resiliency based on recommendations in the Community Resiliency Element
- Prepare, modify or replace plans for Local Neighborhoods or specific areas that were impacted by Sandy (i.e. Redevelopment or Rehabilitation Plans, Economic Development Plans and Strategies, Historic District Plans and Open Space/Recreation Plans).
- Review existing Permitting procedures to determine improvements for fast-tracking/streamlining for expediting projects directly related to recovery or mitigation and that are consistent with adopted Design Standards
- Develop design standards to address the visual impact of mitigation measures such as elevating bulkheads, elevating buildings on foundations or pilings, etc. Such design standards might include requirements for skirting exposed pilings, parking under the lowest habitable floor, using exterior decking to stagger stairways to elevated first floor levels, etc.
- The long term impacts of Future Sea Level Rise should be projected and studied for Cape May County.
- Encourage communities to participate in the Getting To Resilience community planning evaluation tool from the Jacques Cousteau National Estuarine Research Reserve.

Operational and Administration

CMC Emergency Management continues to fortify relationships and strategic partnerships within the county, with municipalities, and with regional stakeholders to further technical aspects of mitigation and preparedness. Examples include ongoing partnerships with County GIS, Public Works/Engineering, the Atlantic-Cape Coastal Coalition, Jacques Cousteau National Estuarine Research Reserve-Rutgers University, and Stockton State College.



The County provides grants information, planning tools, training and technical assistance to the municipal emergency coordinators during their coordinators meeting as needed.

The County has initiated the Enhanced RL/SRL Initiative to support the mitigation of flood-vulnerable private property throughout the County, resulting in the submission of a 2016 FMA application for the elevation of 39 properties. The County will support the management and administration of the grant if awarded, and will secure project management resources for project implementation as necessary.

Funding

Cape May County Planning identified the following integration action in the SRPR, which have been included in the County's updated strategy:

- Develop a five year Post Disaster Recovery Capital Improvement Plan for capital projects directly linked to recovery, mitigation or preparedness.

The Department of Public Works/Engineering continues to include mitigation projects for County-owned infrastructure in annual capital funding programs.

County Emergency Management is currently working with local lending institutions to provide private property owners with bridge-loans to support elevation projects funded through FEMA Hazard Mitigation Assistance (HMA) program, specifically the 2016 Flood Mitigation Assistance (FMA) program.

Education and Outreach

The Cape May County Office of Emergency Management website (www.capemaycountyemergency.net) provides up to the minute reports on various emergencies in Cape May County, including storms, floods, blizzards, hurricanes, and other non-weather related emergencies including missing persons. During a prolonged emergency event, the website continues to provide updates, photos, videos and other essential information.

This website serves to keep Cape May County residents fully updated and educated in the areas of:

- Storm and weather information
- Important Borough contact information
- Local and Regional Media outlets that provide continuous information
- Information for reacting to an emergency or an evacuation
- Traffic information, power outage maps, and helpful information videos

In addition, www.capemaycountyemergency.net includes links to many government websites that are designed to educate and inform residents about how to develop an emergency plan for their households.

The County Planning Department provides location specific data for evacuation routes, hurricane flood inundation (based on SLOSH modeling) and NFIP floodplains on their mapping web-server site at <http://www.capemaycountyims.net>. Further, the Planning Department provides free services to property owners seeking to determine the NFIP flood zone for their property.

The County has sponsored Emergency Preparedness Conferences, the most recent being in June 2014 (Wildwoods Convention Center) to support local and regional emergency and disaster preparedness.



9.1.6 Mitigation Strategy and Prioritization

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

Past Mitigation Initiative Status

The following table indicates progress on the community’s mitigation strategy identified in the 2010 Plan. Actions that are carried forward as part of this plan update are included in the following subsection in its own table with prioritization. Previous actions that are now on-going programs and capabilities are indicated as such in the following table and may also be found under ‘Capability Assessment’ presented previously in this annex.



Table 9.1-7. Past Mitigation Initiative Status

2010 Mitigation Action	Responsible Agency	Status (In progress, No progress, Complete)	Describe Status 1. Please describe what was accomplished and indicate % complete. 2. If there was no progress, indicate what obstacles/delays encountered? 3. If there was progress, how is/was the action being funded (e.g., FEMA HMGP grant, local budget)?	Next Step (Include in 2016 HMP or Discontinue)	Describe Next Step 1. If including action in the 2016 HMP, revise/reword to be more specific (as appropriate). 2. If discontinue, explain why.
CMC-1a: Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost-effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider implementation of that action based on available funding.	County, supporting municipalities (likely through NFIP Floodplain Administrator), including working with regional stakeholders (e.g. Atlantic-Cape Coastal Coalition)	In Progress	1. The County has continued to support the mitigation of structures before and since Sandy. Most recently, the County has sponsored the "Enhanced RL/SRL Initiative" to promote the mitigation of flood vulnerable structures throughout the County. 2. 3.	Include in 2016 HMP Update	1. Updated to include continued implementation of the "Enhanced RL/SRL Initiative" 2.
CMC-1b: Where appropriate, support purchase, or relocation of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for relocation based on cost-effectiveness versus retrofitting. Where relocation is determined to be a viable option, consider implementation of that action based on available funding.	County, supporting municipalities (likely through NFIP Floodplain Administrator), including working with regional stakeholders (e.g. Atlantic-Cape Coastal Coalition))	In Progress	1. The County has continued to support the mitigation of structures before and since Sandy. Most recently, the County has sponsored the "Enhanced RL/SRL Initiative" to promote the mitigation of flood vulnerable structures throughout the County. 2. 3.	Include in 2016 HMP Update	1. Updated to include continued implementation of the "Enhanced RL/SRL Initiative" 2.



2010 Mitigation Action	Responsible Agency	Status (In progress, No progress, Complete)	Describe Status 1. Please describe what was accomplished and indicate % complete. 2. If there was no progress, indicate what obstacles/delays encountered? 3. If there was progress, how is/was the action being funded (e.g., FEMA HMGP grant, local budget)?	Next Step (Include in 2016 HMP or Discontinue)	Describe Next Step 1. If including action in the 2016 HMP, revise/reword to be more specific (as appropriate). 2. If discontinue, explain why.
CMC-2: Promote municipal participation in incentive-based programs such as CRS. Specifically, within the first year of Plan adoption, request FEMA to conduct a community informational workshop on the Community Rating System at a central location provided by the County. The County shall promote this workshop through established groups and forums including the Cape May County Emergency Management Coordinators, the Cape May County Chapter of the New Jersey League of Municipalities, and the ongoing Cape May County Hazard Mitigation Planning Committee.	CMC Engineering and Emergency Management	In Progress	1. The County sponsored a CRS informational workshop in 2012, and has sponsored the countywide "Enhanced RL/SRL Initiative" which has included an application under 2016 FMA for 39 flood-vulnerable properties. 2. 3.	Include in 2016 HMP	1. Updated to include continued support, specifically through the "Enhanced RL/SRL Initiative" as well as continued efforts to participate in NFPA Firewise Program, and NWS StormReady and Tsunami Ready. 2.
CMC-3: Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 7.0	CMC Engineering and Emergency Management	In Progress	1. The County has led the 2016 update to the County HMP. 2. 3.	Include in 2016 HMP	1. Updated to include a specific annual plan review procedure intended to better facilitate the annual review process. 2.
CMC-4: Promote the National Flood Insurance program.	CMC (through mitigation planning point of contacts)	In Progress	1. To the extent applicable, the County has supported and promoted the NFIP. 2. 3.	Discontinue	1. To the extent applicable, this is a normal and ongoing part of County activities, and does not need to be identified specifically in the County updated strategy. 2.
CMC-5: Continue to develop, enhance, and implement existing emergency plans.	CMC Engineering and Emergency Management	In Progress	1. Ongoing activity 2. 3.	Include in 2016 HMP	1. 2.
CMC-6: Create/enhance/maintain mutual aid agreements with neighboring Counties, law enforcement, municipal public works and County public works departments.	County OEM and NJOEM	In Progress	1. Ongoing activity 2. 3.	Include in 2016 HMP	1. 2.
CMC-7 (TL-14): Replace three (3) bridges and elevate 2.7 miles of	County Engineering	No Progress	1.	Include in 2016 HMP	1. Modified initiative provided in updated strategy - Replace three (3)



2010 Mitigation Action	Responsible Agency	Status (In progress, No progress, Complete)	Describe Status 1. Please describe what was accomplished and indicate % complete. 2. If there was no progress, indicate what obstacles/delays encountered? 3. If there was progress, how is/was the action being funded (e.g., FEMA HMGP grant, local budget)?	Next Step (Include in 2016 HMP or Discontinue)	Describe Next Step 1. If including action in the 2016 HMP, revise/reword to be more specific (as appropriate). 2. If discontinue, explain why.
County Route 621 in Lower Township. This project is currently in the scoping phase.			2. US Fish and Wildlife obtained property that the initial preferred alternative was proposed for. This resulted in the study having to go back to the beginning. Lack of support by State due to the anticipated cost of the project. 3.		bridges and elevate 2.7 miles of County Route 621 in Lower Township. 2.
CMC-8 (TL-15 and WCM-12): Elevate ~1.5 miles of CR-606 (Sunset Boulevard) through the South Cape May Meadows (Lower and WCM).	County Engineering	No Progress	1. 2. Lack of funding. 3.	Include in 2016 HMP	1. 2.
CMC-9 (TM-18): Intersection of State Route 47 and the Garden State Parkway (Middle Township) – Elevate Route 47 roadway and ramps, which will require elevation of the Parkway bridge overpass	County Engineering NJDOT and NJ Turnpike Authority	No Progress	1. 2. Lack of funding. This is a State project 3.	Include in 2016 HMP	1. The County will continue to support State efforts to mitigate vulnerable State-owned infrastructure, understanding that this is a State led project. 2.
CMC-10 (CW-10): Elevate State Route 47 from George Redding Bridge to Susquehanna Avenue (Wildwood).	County Engineering and State DOT and NJ Turnpike Authority	In Progress	1. 5% complete. Currently completing the conceptual phase to establish the initial preferred alternative. 2. 3. County funds	Include in 2016 HMP	1. Modify as indicated. Need to include pump station. The limits have been expanded and the project being studied goes from the George Redding Bridge to Park Boulevard. 2.
Address flooding on Glenwood Avenue (CR-614) through West Wildwood	County Engineering and municipality State DOT	No Progress	1. 2. Funding 3.	Include in 2016 HMP	1. Modify as indicated. 2.
CMC-12 (TM-19): Intersection of State Route 147 and the Garden State Parkway (Middle Township) – Elevate Route 147 roadway and ramps, which will require elevation of the Parkway bridge overpass	State DOT and NJ Turnpike Authority County Engineering with municipal support	No Progress	1. 2. Funding 3.	Include in 2016 HMP	1. Modify as indicated. 2.
CMC-13: Elevate tie-in section of State Route 147 into North Wildwood	State DOT and municipality NJ Turnpike Authority	No Progress	1. 2. Funding 3.	Include in 2016 HMP	1. Modify as indicated. 2.
CMC-14 (SH-16): Elevate Stone Harbor Boulevard (CR-657) from the Parkway into Stone Harbor proper. This will require elevating one residential property on 96th Street (part of CR-657) and potentially others. 96 th Street was	County Engineering State DOT	No Progress	1. 2. Funding 3.	Include in 2016 HMP	1. Modify as indicated. The 96 th Street portion of the project may need a pump station to address the stormwater. 2.



<u>2010 Mitigation Action</u>	<u>Responsible Agency</u>	<u>Status</u> (In progress, No progress, Complete)	<u>Describe Status</u> 1. Please describe what was accomplished and indicate % complete. 2. If there was no progress, indicate what obstacles/delays encountered? 3. If there was progress, how is/was the action being funded (e.g., FEMA HMGP grant, local budget)?	<u>Next Step</u> (Include in 2016 HMP or Discontinue)	<u>Describe Next Step</u> 1. If including action in the 2016 HMP, revise/reword to be more specific (as appropriate). 2. If discontinue, explain why.
elevated in 2008 to the extent possible in consideration of existing home elevations.					
CMC-15: Elevate Courthouse-South Dennis Road (CR-657) through the swamps (evacuation route)	County Engineering	No Progress	1. 2. Funding 3.	Include in 2016 HMP	1. 2.
CMC-16 (TD-14): Identify and rectify cause of flooding at the intersection of State Route 47 and the newly completed bridge over Dennis Creek. Both improved drainage design and elevation in and near the intersection may be needed.	State DOT County Engineering	In Progress	1. State DOT is aware of the problem and has been pumping down the retention basin before and after a storm event. However a permanent solution is needed to address the nuisance flooding of NJ Route 47 2. 3.	Include in 2016 HMP	1. Modify as indicated. 2.
CMC-17 (TM-23 and TL-16): Elevate CR-603 through Lower and Middle Township through Fishing Creek Swamp.	County Engineering State DOT	No Progress	1. 2. Funding and Green Acres encumbered lands 3.	Include in 2016 HMP	1. Modify as indicated. 2.
CMC-18 (CCM-8): Install shoreline protection for CR-640 (entrance to Coast Guard Base) along the Cape May Harbor in the City of Cape May. County has met with ACOE and NJDEP on this previously.	County Engineering and ACOE	In Progress	1. 5%. ACOE is in the process of performing a feasibility study to determine if the project is cost-effective. 2. 3. ACOE funds to date.	Include in 2016 HMP	1. 2.
CMC-19 (Wildwoods): Upgrade stormwater drainage system along CR-621 and arterials in the Wildwoods (Wildwood Crest, Wildwood and North Wildwood). These are inadequate to even a two-year storm.	County Engineering, Municipalities, and ACOE	No Progress	1. 2. Funding 3.	Include in 2016 HMP	1. 2.
CMC-20 (TM-20): As an interim project prior to implementation of CMC-21 below, elevate the Avalon Boulevard northbound onramp to the GSP (chronic problem area and critical for evacuation)	NJ Turnpike Authority County Engineering with municipalities	No Progress	1. This is a State led project. 2. Funding 3.	Include in 2016 HMP	1. Modify as indicated. The County will continue to support State efforts to mitigate vulnerable State-owned infrastructure, understanding that this is a State led project. 2.
CMC-21 (TM-21): Intersection of Avalon Boulevard and the Garden State Parkway (Middle Township)	County Engineering with NJTPA	No Progress	1. 2. Funding 3.	Include in 2016 HMP	1. 2.



2010 Mitigation Action	Responsible Agency	Status (In progress, No progress, Complete)	Describe Status 1. Please describe what was accomplished and indicate % complete. 2. If there was no progress, indicate what obstacles/delays encountered? 3. If there was progress, how is/was the action being funded (e.g., FEMA HMGP grant, local budget)?	Next Step (Include in 2016 HMP or Discontinue)	Describe Next Step 1. If including action in the 2016 HMP, revise/reword to be more specific (as appropriate). 2. If discontinue, explain why.
– Elevate Avalon Boulevard roadway and ramps, which will first require elevation of the Parkway bridge overpass.					
CMC-22 (TM-24, BA-40): Elevate Avalon Boulevard from Parkway into Avalon proper (~2.5 miles).	County Engineering with NJTPA	No Progress	1. 2. Funding 3.	Include in 2016 HMP	1. Modify as indicated. 2.
CMC-23 (TD-21): Elevate Sea Isle Boulevard (CR-601) from the Parkway to the Sea Isle bridge. This project is currently under construction. in the State Transportation Improvement Plan (TIP) for construction over the next two years, and is currently in the preliminary engineering phase.	County Engineering	In Progress	1. 35% complete 2. 3. Federal dollars through Federal Highway Administration and County funds.	Include in 2016 HMP	1. Modify as indicated. Unfortunately it is a 6 year project and is not anticipated to be completed until 2020. Action has been modified in the 2016 update. 2.
CMC-24 (TD-15): Intersection of Sea Isle Boulevard (CR-601) and the Garden State Parkway (Dennis Township) – Elevate Sea Isle Boulevard roadway and ramps, which will first require elevation of the Parkway bridge overpass	County Engineering and NJ Turnpike Authority	No Progress	1. 2. Funding 3.	Include in 2016 HMP	1. 2.
CMC-25 (SIC-12): Elevate JFK Boulevard (CR-625) into Sea Isle City (no funding source currently for project, but is in design phase), and upgrade stormwater system. This project is in the NJ TIP. This project will require elevation of one or more commercial properties along JFK Boulevard.	County Engineering with NJTPA	Complete	1. 100% complete 2. 3. Federal dollars through Federal Highway Administration and County funds.	Include in 2016 HMP	1. Modify as indicated. Raising of the roadway was limited by the elevations of entrances into buildings along JFK Boulevard and Landis Avenue. Stormwater flooding is still an issue, though not as frequent. Stormwater pump station(s) should be installed. 2.
CMC-26 (SH-10a, Avalon): Upgrade stormwater system on CR-619 through Stone Harbor and Avalon. Seven stormwater pump stations were installed along CR-619 from Avalon Boulevard to 19th Street (Avalon business district) to address flooding in this area.	County Engineering with municipalities	No Progress	1. 2. Funding 3.	Include in 2016 HMP	1. Avalon, working with the County, has applied for grants to fund stormwater drainage improvements to lessen the flooding associated with stormwater runoff. 2.
CMC-27 (SIC-13): Install bulkheads along back bay in Sea	Municipality	In Progress	1. This is a local project. 2. Funding	Discontinue	1. 2. This is a local project.



2010 Mitigation Action	Responsible Agency	Status (In progress, No progress, Complete)	Describe Status 1. Please describe what was accomplished and indicate % complete. 2. If there was no progress, indicate what obstacles/delays encountered? 3. If there was progress, how is/was the action being funded (e.g., FEMA HMGP grant, local budget)?	Next Step (Include in 2016 HMP or Discontinue)	Describe Next Step 1. If including action in the 2016 HMP, revise/reword to be more specific (as appropriate). 2. If discontinue, explain why.
Isle City in locations (large areas) that are not protected. This includes both public and private property.	County Engineering with municipalities		3.		
CMC-28 (SIC-8, TU-13): Install permanent protection to CR-619, from the Whale Beach area in Sea Isle City to the Strathmere section of Upper Township, to replace the existing GeoTube installed in the late 1990s. The GeoTube is beyond its design life.	Municipalities, with County and property owner support	In Progress	1. This is a local project. 2. 3.	Discontinue	1. 2. This is a local project.
CMC-29 (TU-14, OC): Upgrade exiting 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 and ACOE, with municipal support	In Progress	1.50% complete 2. funding 3. Emergency Relief funds from Federal Highway Administration and County funds provided the funding to reconstruct a portion of Ocean Drive that was destroyed during Superstorm Sandy. The project also funded an extension of the existing revetment wall through the area of Ocean Drive that was destroyed by Superstorm Sandy.	Include in 2016 HMP	1. Approximately an 800-foot section of the revetment wall is needed to close the gap along Ocean Drive that floods during a high tide event with a northeast or east wind. 2.
CMC-30 (TU-15): Intersection of Roosevelt Boulevard (CR-623) and the Garden State Parkway (Upper Township) – Roosevelt Boulevard Elevate roadway and ramps, which will first require elevation of the Parkway bridge overpass.	County Engineering and NJ Turnpike Authority	No Progress	1. 2. Funding 3.	Include in 2016 HMP	1. 2.
CMC-31 (TU-16): Elevate Roosevelt Boulevard (CR-623) from the Parkway into Ocean City proper.	NJTPA, County Engineering	No Progress	1. 2. Funding 3.	Include in 2016 HMP	1. Modify as indicated. 2.
CMC-32 (CCM-12): Install backup power to two stormwater pump stations at Madison Avenue and Grant Avenue in Cape May City. Work with the City to properly site the generator, which could be co-managed with the City to provide backup power for their station on Queen Street and Benton Avenue.	County Engineering and Municipality	No Progress	1. 2. Funding 3.	Include in 2016 HMP	1. 2.



<u>2010 Mitigation Action</u>	<u>Responsible Agency</u>	<u>Status (In progress, No progress, Complete)</u>	<u>Describe Status</u> 1. Please describe what was accomplished and indicate % complete. 2. If there was no progress, indicate what obstacles/delays encountered? 3. If there was progress, how is/was the action being funded (e.g., FEMA HMGP grant, local budget)?	<u>Next Step (Include in 2016 HMP or Discontinue)</u>	<u>Describe Next Step</u> 1. If including action in the 2016 HMP, revise/reword to be more specific (as appropriate). 2. If discontinue, explain why.
CMC-33 (TU-17): Elevate Tuckahoe Road (CR-636) from Butter Road to CR-610. A conceptual design for this project is available.	County Engineering with City of Cape May	In Progress	1. Study is 80% complete. 2. Funding – the preferred alternative proved to be too costly. Re-evaluating alternatives to avoid replacing existing bridge, however the end result is less than desirable. 3. Federal Highway Administration funds and County funds	Include in 2016 HMP	1. Modify as indicated. 2.
CMC-34 (TU-18): Work with the State DOT to address vulnerabilities on SR-50 along Cedar Swamp Creek.	State DOT County Engineering with municipal support	No Progress	1. 2. Funding 3.	Include in 2016 HMP	1. Modify as indicated. 2.
CMC-35 (TU-19): Develop an engineering solution for severe flooding problems along CR-650 NJ Route 50 and Hope Corson Road (CR-671).	State DOT with County and municipal support	In Progress	1. Project is designed and is expect to go to bid shortly. 2. CAFRA permit 3. County funds and HMP Grant	Include in 2016 HMP	1. Modify as indicated. 2. Work should be completed by the end of 2016.
CMC-36 (OC-14): Upgrade storm drainage in Ocean City, which are currently not designed to handle a 25-year storm event.	County Engineering with municipal support	In Progress	1. Ocean City is working on some sections of the City that floods frequently; however much more needs to be done. 2. Funding 3. City and HMP Grant	Include in 2016 HMP	1. 2.
CMC-37 (OC-15): Elevate Bay Avenue (CR-659) in floodprone areas (33rd to 28th, 20th to 18th, 9th to 2nd). This is an evacuation route, and was is generally impassable during the recent (Sept. 2009) Nor'Easters	County Engineering with municipal support	No Progress	1. 2. Funding and limitations due to the elevation of development adjacent to Bay Avenue. 3.	Include in 2016 HMP	1. Modify as indicated. Should look at installing stormwater pump stations. 2.
CMC-38: Retrofit or replace county communications towers (Paris Grant Program towers), which are currently rated for winds less than Cat1 strength. These towers are used for emergency communications as well as electronic document archiving (COOP/COG).	County Engineering with municipal support	In Progress	1. The main tower for the electronic document archiving has been designed for greater than a Cat 1 storm. 2. 3. County and Paris Grant funds.	Include in 2016 HMP	1. 2.
CMC-39: Work with Verizon and other wireless tower owners to assess their vulnerability to wind damage.	County Engineering and Emergency Management	No Progress	1. 2. Funding 3.	Include in 2016 HMP	1. 2.



<u>2010 Mitigation Action</u>	<u>Responsible Agency</u>	<u>Status</u> (In progress, No progress, Complete)	<u>Describe Status</u> 1. Please describe what was accomplished and indicate % complete. 2. If there was no progress, indicate what obstacles/delays encountered? 3. If there was progress, how is/was the action being funded (e.g., FEMA HMGP grant, local budget)?	<u>Next Step</u> (Include in 2016 HMP or Discontinue)	<u>Describe Next Step</u> 1. If including action in the 2016 HMP, revise/reword to be more specific (as appropriate). 2. If discontinue, explain why.
CMC-40: Assess vulnerability of communications equipment located on water towers, and address as necessary	County Emergency Management with facility owners	Choose an item.	1. 2. 3.	Choose an item.	1. 2.
CMC-41 (TU-21, Woodbine): Identify proper locations for and install water draw (siphon) stations to increase fire-fighting capabilities.	County Emergency Management with facility owners	Choose an item.	1. 2. 3.	Choose an item.	1. 2.
CMC-42 (TD-22): Conduct an engineering study to understand flooding issues and evaluate possible solutions at low areas along Court House-South Dennis Road (CR657) near Beaver Dam Road in Dennis Township	County Engineering And Municipality County Fire and OEM with support from local fire and OEM	In Progress	1. 5% complete. Topographical survey completed and preliminary design has been initiated. 2. Funding and permitting issues. 3. County funds	Include in 2016 HMP	1. Modify as indicated. 2.
CMC-43 (TM-25): Conduct an engineering study to understand flooding issues and evaluate possible solutions along the entire length of Shunpike Road (CR620) in Middle Township	County Engineering with municipal support	No Progress	1. 2. Funding 3.	Include in 2016 HMP	1. 2.
CMC-44 (TL-17): Conduct an engineering study to understand flooding issues and evaluate possible solutions along Fishing Creek/Academy Road (CR639) in Lower Township	County Engineering with municipal support	In Progress	1. 1% complete. County is completing consultant selection process. 2. 3. County funds	Include in 2016 HMP	1. 2.
CMC-45 (TD-23): Conduct an engineering study to understand flooding issues and evaluate possible solutions at low areas along Woodbine-Ocean View Road (CR550) in Dennis Township	County Engineering with municipal support	No Progress	1. 2. Funding and permitting issues 3.	Include in 2016 HMP	1. 2.
CMC-46 (TL-18): Conduct an engineering study to understand flooding issues and evaluate possible solutions at low areas along Tabernacle Road (CR647) in Lower Township	County Engineering with municipal support	No Progress	1. 2. Funding. 3.	Include in 2016 HMP	1. 2.



<u>2010 Mitigation Action</u>	<u>Responsible Agency</u>	<u>Status (In progress, No progress, Complete)</u>	<u>Describe Status</u> 1. Please describe what was accomplished and indicate % complete. 2. If there was no progress, indicate what obstacles/delays encountered? 3. If there was progress, how is/was the action being funded (e.g., FEMA HMGP grant, local budget)?	<u>Next Step (Include in 2016 HMP or Discontinue)</u>	<u>Describe Next Step</u> 1. If including action in the 2016 HMP, revise/reword to be more specific (as appropriate). 2. If discontinue, explain why.
CMC-47 (TD-24): Conduct an engineering study to understand flooding issues and evaluate possible solutions along Fidler Road (CR638) in Dennis Township	County Engineering with municipal support	No Progress	1. 2. Funding and permitting issues. 3.	Include in 2016 HMP	1. 2.
CMC-48 (VW-13): Conduct an engineering study to understand flooding issues and evaluate possible solutions along Webster Avenue (CR638) in the Village of Woodbine	County Engineering with municipal support	In Progress	1. 10% complete. Topographical survey completed and preliminary design has been initiated. 2. 3.	Include in 2016 HMP	1. 2. Work should be completed by the end of 2017.
CMC-49 (TL-19): Conduct an engineering study to understand flooding issues and evaluate possible solutions along Shunpike Road (CR644) in Lower Township	County Engineering with municipal support	No Progress	1. 2. Funding 3.	Include in 2016 HMP	1. 2.
CMC-50 (TM-26): Conduct an engineering study to understand flooding issues and evaluate possible solutions at low areas along Satt Boulevard (CR626) in Middle Township	County Engineering with municipal support	Complete	1. 100% complete. 2. 3. County funds.	Discontinue	1. 2. Project completed.
CMC-51 (TM-27): Conduct an engineering study to understand flooding issues and evaluate possible solutions along Railroad Avenue (CR626) in Middle Township	County Engineering with municipal support	No Progress	1. 2. Funding 3.	Include in 2016 HMP	1. 2.
CMC-52 (TL-20): Conduct an engineering study to understand flooding issues and evaluate possible solutions along Seashore Road (CR626) in Lower Township	County Engineering with municipal support	No Progress	1. 2. Funding 3.	Include in 2016 HMP	1. 2.
CMC-53 (TM-28): Conduct an engineering study to understand flooding issues and evaluate possible solutions along Dias Creek Road (CR612) in Middle Township	County Engineering with municipal support	No Progress	1. 2. Funding 3.	Include in 2016 HMP	1. 2.
CMC-54 (TM-29): Conduct an engineering study to understand flooding issues and evaluate possible solutions along Indian	County Engineering with municipal support	No Progress	1. 2. Funding 3.	Include in 2016 HMP	1. 2.



<u>2010 Mitigation Action</u>	<u>Responsible Agency</u>	<u>Status</u> (In progress, No progress, Complete)	<u>Describe Status</u> 1. Please describe what was accomplished and indicate % complete. 2. If there was no progress, indicate what obstacles/delays encountered? 3. If there was progress, how is/was the action being funded (e.g., FEMA HMGP grant, local budget)?	<u>Next Step</u> (Include in 2016 HMP or Discontinue)	<u>Describe Next Step</u> 1. If including action in the 2016 HMP, revise/reword to be more specific (as appropriate). 2. If discontinue, explain why.
Trail Road (CR618) in Middle Township					
CMC-55 (TM-30): Conduct an engineering study to understand flooding issues and evaluate possible solutions along Goshen-Swainton Road (CR646) in Middle Township	County Engineering with municipal support	No Progress	1. 2. Funding 3.	Include in 2016 HMP	1. 2.
CMC-56 (TD-25): Conduct an engineering study to understand flooding issues and evaluate possible solutions along Corsons Tavern Road (CR628) in Dennis Township	County Engineering with municipal support	In Progress	1. 5% complete. Topographical survey has been completed. 2. 3.	Include in 2016 HMP	1. 2.
CMC-57 (CCM-23): Upgrade stormwater drains and outfalls along Beach Drive (CR603) in Cape May City	County Engineering with municipal support	In Progress	1. 15 % complete. Thus far only one outfall pipe has been eliminated. Several more need to be eliminated. 2. Funding 3. County funds.	Include in 2016 HMP	1. 2.
CMC-58 (WCM-13): Develop a stormwater master plan for West Cape May	County Engineering with municipal support	No Progress	1. 2. Funding 3.	Include in 2016 HMP	1. 2.
CMC-59: Support Municipalities in either the development of update of local stormwater master plans	County Engineering/ Planning with municipal support	No Progress	1. 2. Funding 3.	Include in 2016 HMP	1. 2.
CMC-60 (VA-41): Install shore protection along Ocean Drive (CR619) at Townsends Inlet in Avalon	County Engineering/ Planning with municipal support	In Progress	1. Roadway was reconstructed in 2015-16 due to damage from Superstorm Sandy and revetment berm installed along the west side of roadway. The seawall was repaired along the east side. However waves during high tides with an easterly wind crash onto the roadway. A beachfill is needed in front of the seawall to dissipate the waves. 2. Funding 3. Emergency Relief funds from Federal Highway Administration and County funds provided the funding to reconstruct the portion of Ocean Drive that was destroyed during Superstorm Sandy.	Include in 2016 HMP	1. 2.
CMC-61 (OC-31 and TU-22): Install shore protection along Ocean Drive (CR619) at Corsons	County Engineering with municipal support	No Progress	1. 2. Funding 3.	Include in 2016 HMP	1. 2.



2010 Mitigation Action	Responsible Agency	Status (In progress, No progress, Complete)	Describe Status 1. Please describe what was accomplished and indicate % complete. 2. If there was no progress, indicate what obstacles/delays encountered? 3. If there was progress, how is/was the action being funded (e.g., FEMA HMGP grant, local budget)?	Next Step (Include in 2016 HMP or Discontinue)	Describe Next Step 1. If including action in the 2016 HMP, revise/reword to be more specific (as appropriate). 2. If discontinue, explain why.
Inlet in Upper Township and Ocean City					
CMC-62 (TM-31): Install shore/roadway protection along Ocean Drive (CR619) in Middle Township	County Engineering with municipal support	No Progress	1. 2. Funding 3.	Include in 2016 HMP	1. 2.
CMC-63 (TM-32): Construction of storm drain pipe to minimize flooding on Goshen Road (CR615) from Johnson Lane to Church Street in Middle Township	County Engineering with municipal support	In Progress	1. 70% complete. County has been extending and upgrading the system over time. The outfall pipe needs to be upgraded and additional connections and extensions are required. 2. Funding 3. County funds	Include in 2016 HMP	1. 2.
CMC-64 (TM-33): Construction of storm sewer system to alleviate flooding on Court House – South Dennis Road (CR657) from Village Drive to College Drive in Middle Township	County Engineering with municipal support	No Progress	1. 2. Funding 3.	Include in 2016 HMP	1. 2.
CMC-65 (TU-23): Construction of storm sewer system to alleviate flooding on Dennisville – Petersburg Road (CR610) from White Pine Lane to Old Tuckahoe Road in Upper Township	County Engineering with municipal support	Complete	1. 100% complete 2. 3. County funds	Discontinue	1. 2. Work is completed.
CMC-66 (TU-24): Construction of additional storm sewer infiltration system to minimize flooding on Hope Corson Road (CR671) from Route NJ 50 to Stagecoach Road in Upper Township	County Engineering with municipal support	Choose an item.	1. Discontinuing - Same as CMC-35(TU-19) 2. 3.	Discontinue	1. 2. Same as CMC-35(TU-19)
CMC-67 (WCM-13): Construction of storm drain pipe to minimize flooding on Bayshore Road (CR607) from Fifth Avenue to railroad crossing in West Cape May	County Engineering with municipal support	Complete	1. Complete 2. 3. County funds	Discontinue	1. 2. Work completed.
CMC-68 (VA-42): Emergency construction to stabilize Ocean Drive (CR619) near Townsends Inlet in Avalon	County Engineering with municipal support	Complete	Complete 2. 3. County funds	Discontinue	1. 2. Work Completed
CMC-69: Through the resources and established forum of the Cape	County Fire Coordinator	In Progress	1. 2.	Include in 2016 HMP	1. 2.



2010 Mitigation Action	Responsible Agency	Status (In progress, No progress, Complete)	Describe Status 1. Please describe what was accomplished and indicate % complete. 2. If there was no progress, indicate what obstacles/delays encountered? 3. If there was progress, how is/was the action being funded (e.g., FEMA HMGP grant, local budget)?	Next Step (Include in 2016 HMP or Discontinue)	Describe Next Step 1. If including action in the 2016 HMP, revise/reword to be more specific (as appropriate). 2. If discontinue, explain why.
<p>May County Fire Chiefs Association working in partnership with the New Jersey Division of Fire Safety and the New Jersey State Forest Fire Service (Firewise Community Liaison), work with those communities with significant wildfire risk to identify and implement wildfire mitigation activities, programs and initiatives, including community participation in the NFPA "Firewise" program</p>			3.		
<p>CMC-70: Within the first year of Plan adoption, request FEMA to conduct a Repetitive Loss/Severe Repetitive Loss mitigation workshop at a central location provided by the County. This program should address the specific interests and concerns of the RL/SRL communities in the County which includes: Gaining a better understanding of the Severe Repetitive Loss mitigation grant program, including the procedural requirements of a RL/SRL community under this program; Understanding how RL/SRL communities can enhance their efforts to encourage and support property owners to mitigate their properties, Understanding how RL/SRL communities can best leverage existing studies (e.g. the FEMA Region II Repetitive Loss Studies) to target specific properties for mitigation, and Learning what resources are available to conduct/complete Repetitive Loss Area Analyses, and</p>	County Hazard Mitigation Coordinator	In Progress	1. Implementation ongoing through the Enhanced RL/SRL Initiative. 2. 3.	Include in 2016 HMP	1. Combine with CMC-1a, -1b under the Enhanced RL/SRL Initiative. 2.



2010 Mitigation Action	Responsible Agency	Status (In progress, No progress, Complete)	Describe Status 1. Please describe what was accomplished and indicate % complete. 2. If there was no progress, indicate what obstacles/delays encountered? 3. If there was progress, how is/was the action being funded (e.g., FEMA HMGP grant, local budget)?	Next Step (Include in 2016 HMP or Discontinue)	Describe Next Step 1. If including action in the 2016 HMP, revise/reword to be more specific (as appropriate). 2. If discontinue, explain why.
gather critical data (e.g. structure elevations) to screen and move properties through the applicable mitigation grant programs. The County shall promote this workshop through established groups and forums including the Cape May County Emergency Management Coordinators, the Cape May County Chapter of the New Jersey League of Municipalities, and the ongoing Cape May County Hazard Mitigation Planning Committee. Further, the County shall continue to conduct meetings as needed with the Cape May RL/SRL communities with the support of NJOEM to assist communities as they work to address their RL/RSL properties.					
CMC-71: Within the first year of plan implementation, identify order of magnitude costs for the large number of county-sponsored infrastructure mitigation projects identified in the County annex, and identify the mitigation benefits associated with each of these initiatives. An updated project prioritization for county-sponsored projects shall be provided as part of the 1st year annual review and update. Further, work with members of the ongoing mitigation planning committee and project implementation leads to complete a similar effort for local initiatives identified in each community's annex.	County Engineer working with local project leads	In Progress	1. This has been done on some projects. 2. 3. County funds	Include in 2016 HMP	1. 2.



Proposed Hazard Mitigation Initiatives for the Plan Update

The County participated in a mitigation action workshop in February 2016 and was provided the following FEMA publications to use as a resource as part of their comprehensive review of all possible activities and mitigation measures to address their hazards: FEMA 551 ‘Selecting Appropriate Mitigation Measures for Floodprone Structures’ (March 2007) and FEMA ‘Mitigation Ideas – A Resource for Reducing Risk to Natural Hazards’ (January 2013).

Table 9.1-8 summarizes the comprehensive-range of specific mitigation initiatives the County would like to pursue in the future to reduce the effects of hazards. Some of these initiatives may be previous actions carried forward for this plan update. These initiatives are dependent upon available funding (grants and local match availability) and may be modified or omitted at any time based on the occurrence of new hazard events and changes in municipal priorities. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table below to further demonstrate the wide-range of activities and mitigation measures selected.

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

It is noted that the Cape May County Strategic Recovery Planning Report (Draft), dated November 3, 2015 (Maser Consulting P.A.) identified the following opportunities to address storm mitigation and resiliency planning:

- Recommend development and redevelopment regulations to reduce development in flood prone areas and elevate development above the flood level.
- Conduct engineering studies to evaluate and address flooding conditions on County roadways, especially evacuation routes.
- Increased protection of shore (e.g. dune protection and reconstruction, beach replenishment, etc.).
- Transportation infrastructure improvements to reduce flood constrained road areas through road elevation measures.
- Install bulkheads in back-bay areas.
- Install backup power to stormwater pumps.
- Prepare an updated Hazard Mitigation Plan and follow through with identified strategies.
- Continue to improve on Emergency Management communication and coordination systems.
- Stormwater protection upgrades to reduce flooding and backup.
- Retrofit or replace county communications towers as needed.
- Identify proper locations for and install water draw (siphon) stations to increase fire-fighting capabilities.
- Recommend development or update of local Stormwater Management Plans.
- Strategic replacement of street trees damaged by Sandy to avoid conflict with overhead wires
- Incorporation of new criteria for sites proposed for County facilities that avoids flood prone areas or requires suitable resilient design techniques.
- Develop new criteria for prioritizing improvements to County and State roads, bridges, and other facilities to emphasize evacuation routes and minimize exposure to flood damage.

Table 9.1-9 provides a summary of the prioritization of all proposed mitigation initiatives for the Plan update.



Table 9.1-8. Proposed Hazard Mitigation Initiatives

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures (Note 1)	Hazard(s) Mitigated (Note 2)	Goals Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
CMC-1 (former CMC-1a, CMC-1b, CMC-70 and SRPR-9)	Continue to support municipalities with the mitigation (elevation, acquisition, flood-proofing, etc.) of flood-vulnerable private property, with repetitive loss and severe repetitive loss properties as priority, specifically through the continued implementation of the County-Wide Enhanced RL/SRL Initiative established during the 2016 update of this plan. Implementation activities to include: <ul style="list-style-type: none"> Continue to support communities with outreach to flood-vulnerable property owners, based on data provided by FEMA (currently working with RL/SRL data per the FMA definition). Maintain the outreach database as updated property owner information is provided by FEMA/NJOEM. Continue to collect interested property owner data, and maintain the property owner database, including the collection of critical data (e.g. structure elevations) to screen and move properties through the applicable mitigation grant programs. Periodically provide the property owner database to municipalities. Support municipalities with public outreach and education, particularly before anticipated mitigation funding opportunities, leveraging established groups and forums such as the Cape May County Emergency Management Coordinators, Atlantic-Cape Coastal Coalition, the Cape May County Chapter of the New Jersey League of Municipalities, and the ongoing Cape May County Hazard Mitigation Planning Committee. Support the development of county-wide or regional grant applications. Support the management and administration of awarded grants, including project management support as applicable. 											
	See above.	Existing	Hurricane & Tropical Storm, Flood, Severe Weather	1, 2, 4, 6	County Hazard Mitigation Coordinator, working with all municipalities (likely through NFIP Floodplain Administrator), including working with regional stakeholders	High	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Long-term DOF; a 2016 FMA grant has been submitted to mitigate 39 private properties (elevations)	High	LPR, EAP	PI, PR
CMC-2 (former CMC-2 and SRPR-10)	Promote municipal participation in incentive-based programs, such as NFIP CRS (including through the ongoing support and lead of the "Enhanced RL/SRL Initiative", NFPA Firewise Program, and NWS StormReady and Tsunami Ready.											
	See above.	New & Existing	Flood	1, 2, 6	CMC Engineering and Emergency Management	Medium - High	Low - Medium	Local Budget	Short- Ongoing	High	LPR, EAP	PI, PR
CMC-3 (former CMC-3 and SRPR-11)	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 7.0. Continue efforts to facilitate the annual plan review and reporting process through improved procedures and tools (e.g. online survey and reporting tools).											
	See above.	New & Existing	All Hazards	All	CMC Engineering and Emergency Management; with the support of municipal mitigation planning point of contacts	Medium	Low - High (for 5-year update)	County and Local Budgets, FEMA Mitigation Grant Funding for 5-year update	Ongoing	High	LPR	PR
	Continue to develop, enhance, and implement existing emergency plans.											



Table 9.1-8. Proposed Hazard Mitigation Initiatives

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures (Note 1)	Hazard(s) Mitigated (Note 2)	Goals Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
CMC-4 (former CMC 5 and SRPR-12)	See above.	New & Existing	All Hazards	1, 3, 4, 6	County OEM and NJOEM	Medium	Low - Medium	County Budget	Ongoing	High		
CMC-5 (SRPR-19)	Prepare a Continuity of Operations Plan (COOP) to ensure that the County can continue to function and provide services to its citizens following an emergency, disaster, or incident that disrupts the County's normal operations. Most municipalities have prepared a COOP/COG plan at this point.											
	See above.	N/A	All Hazards	1, 2, 3, 4	CMC OEM	High	Low	NJDCA; County	Short Term	High	LPR	PR
CMC-6 (SRPR-20)	Update the Disaster Debris Management Plan (DDMP) to ensure the County can continue to function and provide services to its citizens following a debris generating event that disrupts the County's normal operations. DCA funding to prepare this plan has been sought through the SRPR prepared by County Planning.											
	See above.	N/A	All Hazards	1, 2, 3, 4	CMC MUA (Solid Waste)	High	Low	NJDCA; County	Short Term	High	LPR	PR
CMC-7 (SRPR-21)	Update evacuation plan. The County continues to support evacuation planning through exercises.											
	See above.	N/A	All Hazards	1, 2, 3, 4	NJDOT; CMC OEM; State Police	High	Low	State Funding	Short Term	High	LPR	PR
CMC-8 (former CMC-6 and SRPR-13)	Create/enhance/ maintain mutual aid agreements with neighboring Counties, law enforcement, municipal public works and County public works departments. Continue to develop regional post-disaster damage assessment capabilities.											
	See above.	New & Existing	All Hazards	1, 3, 4, 6	CMC Engineering and Emergency Management	Medium - High	Low - Medium	County Budget	Ongoing	High	LPR	PR
CMC-9 (former CMC-71 and SRPR-7 and 14)	Within the first year of plan implementation, identify order of magnitude costs for the large number of county-sponsored infrastructure mitigation projects identified in the County annex, and identify the mitigation benefits associated with each of these initiatives. An updated project prioritization for county-sponsored projects shall be provided as part of the 1st year annual review and update. Further, work with members of the ongoing mitigation planning committee and project implementation leads to complete a similar effort for local initiatives identified in each community's annex.											
	See above.	N/A	All Hazards	All Goals	County Engineer working with local project leads	High	Medium - High	County Funds	Ongoing – this has been completed on some projects	Medium	SIP, LPR	PP, PR
CMC-10 (former CMC-7, TL-14)	Replace three (3) bridges and elevate 2.7 miles of County Route 621 in Lower Township. US Fish and Wildlife obtained property that the initial preferred alternative was proposed for. This resulted in the study having to go back to the beginning. Lack of support by State due to the anticipated cost of the project.											
	See above.	Existing	Hurricane & Tropical Storm, Flooding, Severe Weather	1, 3, 4	County Engineering	High	High (est. ~300M)	TIGER (economic stimulus funding) and other Federal funding sources	Long Term DOF	Medium	SIP	PP
CMC-11 (former CMC-8, TL-)	Elevate ~1.5 miles of CR-606 (Sunset Boulevard) through the South Cape May Meadows (Lower and WCM).											
	See above.	Existing	Hurricane & Tropical Storm,	1, 3, 4	County Engineering	Medium	High	Various, incl. federal grant funding	Long Term DOF (lower priority project – area is	Low	SIP	PP





Table 9.1-8. Proposed Hazard Mitigation Initiatives

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures (Note 1)	Hazard(s) Mitigated (Note 2)	Goals Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
15 and WCM-12)			Flooding, Severe Weather						not as floodprone as many other areas)			
CMC-12 (former CMC-9, TM-18, SRPR-15)	Intersection of State Route 47 and the Garden State Parkway (Middle Township) – Elevate Route 47 roadway and ramps, which will require elevation of the Parkway bridge overpass. The County will continue to support State efforts to mitigate vulnerable State-owned infrastructure, understanding that this is a State led project.											
	See above.	Existing	Hurricane & Tropical Storm, Flooding, Severe Weather	1, 3, 4	NJDOT and NJ Turnpike Authority	Medium	High	State, Tolls	Long Term (not currently under active consideration by State)	Medium	SIP	PP
CMC-13 (former CMC-10, CW-10, SRPR-15)	Elevate State Route 47 from George Redding Bridge to Susquehanna Avenue (Wildwood). Need to include pump station. The limits have been expanded and the project being studied goes from the George Redding Bridge to Park Boulevard. Currently completing the conceptual phase to establish the initial preferred alternative.											
	See above.	Existing	Hurricane & Tropical Storm, Flooding, Severe Weather	1, 3, 4	County Engineering and State DOT	High	High	County Funds	Long Term DOF	Medium	SIP	PP
CMC-14 (former CMC-11, WW-12)	Address flooding on Glenwood Avenue (CR-614) through West Wildwood	Existing	Hurricane & Tropical Storm, Flooding, Severe Weather	1, 3, 4	County Engineering and municipality	High	High	Various, incl. County and federal grant funding	Long Term DOF	Medium	SIP	PP
CMC-15 (former CMC-12, TM-19, SRPR-15)	Intersection of State Route 147 and the Garden State Parkway (Middle Township) – Elevate Route 147 roadway and ramps, which will require elevation of the Parkway bridge overpass											
	See above.	Existing	Hurricane & Tropical Storm, Flooding, Severe Weather	1, 3, 4	State DOT and NJ Turnpike Authority	High	High	State and NJTPA	Long Term DOF	Medium	SIP	PP
CMC-16 (former CMC-13, SRPR-15)	Elevate tie-in section of State Route 147 into North Wildwood	Existing	Hurricane & Tropical Storm, Flooding, Severe Weather	1, 3, 4	State DOT and municipality	High	High	State	Long Term DOF	Medium	SIP	PP



Table 9.1-8. Proposed Hazard Mitigation Initiatives

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures (Note 1)	Hazard(s) Mitigated (Note 2)	Goals Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
CMC-17 (former CMC-14, SH-16)	Elevate Stone Harbor Boulevard (CR-657) from the Parkway into Stone Harbor proper. This will require elevating one residential property on 96th Street (part of CR-657) and potentially others. 96 th Street was elevated in 2008 to the extent possible in consideration of existing home elevations. The 96 th Street portion of the project may need a pump station to address the stormwater.											
	See above.	Existing	Hurricane & Tropical Storm, Flooding, Severe Weather	1, 3, 4	County Engineering and Municipality	High	High	Various, incl. federal grant funding	Long Term DOF	Medium	SIP	PP
CMC-18 (former CMC-15)	Elevate Courthouse-South Dennis Road (CR-657) through the swamps (evacuation route)	Existing	Hurricane & Tropical Storm, Flooding, Severe Weather	1, 3, 4	County Engineering	High	High	Various, incl. County and federal grant funding	Long Term DOF	Medium	SIP	PP
CMC-19 (former CMC-16, TD-14)	Identify and rectify cause of flooding at the intersection of State Route 47 and the newly completed bridge over Dennis Creek. Both improved drainage design and elevation in and near the intersection may be needed. State DOT is aware of the problem and has been pumping down the retention basin before and after a storm event. However a permanent solution is needed to address the nuisance flooding of NJ Route 47											
	See above.	Existing	Hurricane & Tropical Storm, Flooding, Severe Weather	1, 3, 4	State DOT	High	High	NJDOT, Municipal, and HMA grants where applicable	In-progress	Medium	SIP	PP
CMC-20 (former CMC-17, TM-23 and TL-16)	Elevate CR-603 through Lower and Middle Township through Fishing Creek Swamp. Lack of funding and Green Acres encumbered lands have limited progress.											
	See above.	Existing	Hurricane & Tropical Storm, Flooding, Severe Weather	1, 3, 4	County Engineering	High	High	Various, incl. County and federal grant funding	Long Term DOF	Medium	SIP	PP
CMC-21 (former CMC-18, CCM-8)	Install shoreline protection for CR-640 (entrance to Coast Guard Base) along the Cape May Harbor in the City of Cape May. County has met with ACOE and NJDEP on this previously. ACOE is in the process of performing a feasibility study to determine if the project is cost-effective.											
	See above.	Existing	Hurricane & Tropical Storm, Coastal Erosion	1, 3, 4, 5, 6	County Engineering and ACOE	High	High	ACOE Funds to Date	In progress	High	SIP	PP



Table 9.1-8. Proposed Hazard Mitigation Initiatives

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures (Note 1)	Hazard(s) Mitigated (Note 2)	Goals Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
CMC-22 (former CMC-19, Wildwoods)	Upgrade stormwater drainage system along CR-621 and arterials in the Wildwoods (Wildwood Crest, Wildwood and North Wildwood). These are inadequate to even a two-year storm.											
	See above.	Existing	Hurricane & Tropical Storm, Flooding, Severe Weather	1, 3, 4	County Engineering, Municipalities, and ACOE	High	High	Various, incl. County and federal grant funding	Long Term DOF	Medium	SIP	PP
CMC-23 (former CMC-20, TM-20, SRPR-15)	As an interim project prior to implementation of CMC-21 below, elevate the Avalon Boulevard northbound onramp to the GSP (chronic problem area and critical for evacuation). The County will continue to support State efforts to mitigate vulnerable State-owned infrastructure, understanding that this is a State led project.											
	See above.	Existing	Hurricane & Tropical Storm, Flooding, Severe Weather	1, 3, 4	NJ Turnpike Authority	High	High	Various, incl. State and federal grant funding	Long Term DOF	High	SIP	PP
CMC-24 (former CMC-21, TM-21, SRPR-15)	Intersection of Avalon Boulevard and the Garden State Parkway (Middle Township) – Elevate Avalon Boulevard roadway and ramps, which will first require elevation of the Parkway bridge overpass.											
	See above.	Existing	Hurricane & Tropical Storm, Flooding, Severe Weather	1, 3, 4	County Engineering with NJTPA	High	High	Various, incl. County and federal grant funding	Long Term DOF	Medium	SIP	PP
CMC-25 (former CMC-22, TM-24, BA-40)	Elevate Avalon Boulevard from Parkway into Avalon proper (~2.5 miles).											
	See above.	Existing	Hurricane & Tropical Storm, Flooding, Severe Weather	1, 3, 4	County Engineering	High	High	Various, incl. County and federal grant funding	Long Term DOF	Medium	SIP	PP
CMC-26 (former CMC-23, TD-21)	Elevate Sea Isle Boulevard (CR-601) from the Parkway to the Sea Isle bridge. This project is currently in the State Transportation Improvement Plan (TIP) for construction, and is currently in the preliminary engineering phase. Unfortunately it is a 6 year project and is not anticipated to be completed until 2020.											
	See above.	Existing	Hurricane & Tropical Storm, Flooding, Severe Weather	1, 3, 4	County Engineering	High	High	Federal Highway Administration and County funds.	In-progress; 35% complete	High	SIP	PP
CMC-27 (former	Intersection of Sea Isle Boulevard (CR-601) and the Garden State Parkway (Dennis Township) – Elevate Sea Isle Boulevard roadway and ramps, which will first require elevation of the Parkway bridge overpass											



Table 9.1-8. Proposed Hazard Mitigation Initiatives

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures (Note 1)	Hazard(s) Mitigated (Note 2)	Goals Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
CMC-24, TD-15, SRPR-15)	See above.	Existing	Hurricane & Tropical Storm, Flooding, Severe Weather	1, 3, 4	County Engineering and NJ Turnpike Authority	High	High	Various, incl. County, State and federal grant funding	Long Term DOF	Medium	SIP	PP
CMC-28 (former CMC-25, SIC-12)	See above.	Existing	Hurricane & Tropical Storm, Flooding, Severe Weather	1, 3, 4	County Engineering	High	High (\$2M identified for JFK in 2014, trying to move this up as City has a street-scaping project upcoming	Federal Highway Administration and County funds	In progress -	Medium - High	SIP	PP
CMC-29 (former CMC-26, SH-10a, Avalon)	See above.	Existing	Hurricane & Tropical Storm, Flooding, Severe Weather	1, 3, 4	County Engineering with municipalities	High	High	FEMA HMA grant programs, local match	Long Term DOF	Medium	SIP	PP
CMC-30 (former CMC-29, TU-14, OC)	See above.	Existing	Hurricane & Tropical Storm, Coastal Erosion, Flooding,	1, 3, 4	County and ACOE, with municipal support	High	High	See above.	In progress – 50% complete	Medium	SIP	PP



Table 9.1-8. Proposed Hazard Mitigation Initiatives

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures (Note 1)	Hazard(s) Mitigated (Note 2)	Goals Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
			Severe Weather									
CMC-31 (former CMC-30, TU-15, SRPR-15)	Intersection of Roosevelt Boulevard (CR-623) and the Garden State Parkway (Upper Township) – Roosevelt Boulevard Elevate roadway and ramps, which will first require elevation of the Parkway bridge overpass.											
	See above.	Existing	Hurricane & Tropical Storm, Flooding, Severe Weather	1, 3, 4	County Engineering and NJ Turnpike Authority	High	High	HMA grants with local match	Long Term DOF	Medium	SIP	PP
CMC-32 (former CMC-31, TU-16)	Elevate Roosevelt Boulevard (CR-623) from the Parkway into Ocean City proper.	Existing	Hurricane & Tropical Storm, Flooding, Severe Weather	1, 3, 4	County Engineering	High	High	HMA grants with local match	Long Term DOF	Medium	SIP	PP
CMC-33 (former CMC-32, CCM-12)	Install backup power to two stormwater pump stations at Madison Avenue and Grant Avenue in Cape May City. Work with the City to properly site the generator, which could be co-managed with the City to provide backup power for their station on Queen Street and Benton Avenue.											
	See above.	Existing	Hurricane & Tropical Storm, Flooding, Severe Weather	1, 3, 4, 6	County Engineering and Municipality	High	M (not high \$ cost)	HMA grants with local match	Long Term DOF	High	SIP	PP
CMC-34 (former CMC-33, TU-17)	Elevate Tuckahoe Road (CR-636) from Butter Road to CR-610. A conceptual design for this project is available. Study is 80% complete. Funding – the preferred alternative proved to be too costly. Re-evaluating alternatives to avoid replacing existing bridge, however the end result is less than desirable.											
	See above.	Existing	Hurricane & Tropical Storm, Flooding, Severe Weather	1, 3, 4	County Engineering	High	High	Federal Highway Administration funds and County funds	In Progress.	Medium	SIP	PP
CMC-35 (former CMC-34, TU-18, SRPR-15)	Work with the State DOT to address vulnerabilities on SR-50 along Cedar Swamp Creek.	Existing	Hurricane & Tropical Storm, Flooding, Severe Weather	1, 3, 4, 6	State DOT	High	High	Various, incl. State and federal grant funding	Long Term DOF	Medium	SIP	PP



Table 9.1-8. Proposed Hazard Mitigation Initiatives

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures (Note 1)	Hazard(s) Mitigated (Note 2)	Goals Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
CMC-36 (former CMC-35, TU-19, SRPR-15)	Develop an engineering solution for severe flooding problems along NJ Route 50 and Hope Corson Road (CR-671). Project is designed and is expect to go to bid shortly. Progress will require completion of a CAFRA permit.											
	See above.	Existing	Hurricane & Tropical Storm, Flooding, Severe Weather	1, 3, 4	State DOT with County and municipal support	High	\$1.5 MM (High)	County funds; HMA grants with local match	In progress - Work should be completed by the end of 2016	Medium	SIP	PP
CMC-37 (former CMC-36, OC-14)	Upgrade storm drainage in Ocean City, which are currently not designed to handle a 25-year storm event. Ocean City is working on some sections of the City that floods frequently; however much more needs to be done.											
	See above.	Existing	Hurricane & Tropical Storm, Flooding, Severe Weather	1, 3, 4	County Engineering with municipal support	High	High	City and HMP Grant	In progress	Medium	SIP	PP
CMC-38 (former CMC-37, OC-15)	Elevate Bay Avenue (CR-659) in floodprone areas (33rd to 28th, 20th to 18th, 9th to 2nd). This is an evacuation route, and was generally impassable during the recent (Sept. 2009) Nor' Easter. No progress due to lack of funding and limitations due to the elevation of development adjacent to Bay Avenue. Should look at installing stormwater pump stations.											
	See above.	Existing	Hurricane & Tropical Storm, Flooding, Severe Weather	1, 3, 4	County Engineering with municipal support	High	High	HMA and federal programs with local match	Long Term DOF	Medium	SIP	PP
CMC-39 (former CMC-38, CMC-40, SRPR-22)	Retrofit or replace county communications towers (Paris Grant Program towers) including those located on water towers, which are currently rated for winds less than Cat1 strength. These towers are used for emergency communications as well as electronic document archiving (COOP/COG). The main tower for the electronic document archiving has been designed for greater than a Cat 1 storm.											
	See above.	Existing	Hurricane & Tropical Storm, Severe Weather, Severe Winter Weathers	1, 3, 4	CMC OEM & Engineering working with facility owners and municipal support	High	High	County and Paris Grant funds	In progress	High	SIP	PP
CMC-40 (former SRPR-18)	Ensure adequate communication systems and emergency alert systems are available and reliable. Provide redundant methods for Voice/Data transmissions 4G wireless broadband at critical public facilities.											
	See above.	Existing	All Hazards	1, 2	CMC OEM	High	Medium - High	County Budget	Short Term	High	SIP, EAP	PP, PI
CMC-41 (former	Work with municipalities,	Existing	Hurricane & Tropical	1, 3, 4, 6	CMC OEM & Engineering	High	High	Facility owners, including	Long Term DOF	High	EAP	PI



Table 9.1-8. Proposed Hazard Mitigation Initiatives

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures (Note 1)	Hazard(s) Mitigated (Note 2)	Goals Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
CMC-39 and SRPR-23)	Verizon and other wireless tower owners to assess their vulnerability to wind damage.		Storm, Severe Weather, Severe Winter Weathers		working with facility owners and municipal support			municipalities and Verizon				
CMC-42 (former CMC-41, TU-21, Woodbine)	Identify proper locations for and install water draw (siphon) stations to increase fire-fighting capabilities.	N/A	Wildfire	1, 3, 4, 6	County Emergency Management with facility owners	Medium - High	Medium - High	DHS grants; County and Local funding	Long Term DOF	Low-Medium	SIP	PP
CMC-43 (former CMC-42, TD-22)	Conduct an engineering study to understand flooding issues and evaluate possible solutions at low areas along Court House-South Dennis Road (CR657) near Beaver Dam Road in Dennis Township. Topographical survey completed and preliminary design has been initiated. Full implementation limited by funding and permitting issues											
	See above.	Existing	Severe Weather, Flooding	1, 3, 4, 6	County Engineering and Municipality	Medium - High	Medium - High	County and Local Funding	In Progress - 5% complete	High	LPR	PR
CMC-44 (former CMC-43, TM-25)	Conduct an engineering study to understand flooding issues and evaluate possible solutions along the entire length of Shunpike Road (CR620) in Middle Township											
	See above.	Existing	Severe Weather, Flooding	1, 3, 4, 6	County Engineering with municipal support	Medium	Medium	County and Local Funding	Long Term DOF	High	LPR	PR
CMC-45 (former CMC-44, TL-17)	Conduct an engineering study to understand flooding issues and evaluate possible solutions along Fishing Creek/Academy Road (CR639) in Lower Township. 1% complete - County is completing consultant selection process											
	See above.	Existing	Severe Weather, Flooding	1, 3, 4, 6	County Engineering with municipal support	Medium	Medium	County and Local Funding	In progress – 1% complete	High	LPR	PR
CMC-46 (former CMC-45, TD-23)	Conduct an engineering study to understand flooding issues and evaluate possible solutions at low areas along Woodbine-Ocean View Road (CR550) in Dennis Township											
	See above.	Existing	Severe Weather, Flooding	1, 3, 4, 6	County Engineering with municipal support	Medium	Medium	County and Local Funding	Long Term DOF and permitting issues	High	LPR	PR
CMC-47 (former CMC-46, TL-18)	Conduct an engineering study to understand flooding issues and evaluate possible solutions at low areas along Tabernacle Road (CR647) in Lower Township											
	See above.	Existing	Severe Weather, Flooding	1, 3, 4, 6	County Engineering with municipal support	Medium	Medium	County and Local Funding	Long Term DOF	High	LPR	PR
	Conduct an engineering study to understand flooding issues and evaluate possible solutions along Fidler Road (CR638) in Dennis Township											



Table 9.1-8. Proposed Hazard Mitigation Initiatives

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures (Note 1)	Hazard(s) Mitigated (Note 2)	Goals Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
CMC-48 (former CMC-47, TD-24)	See above.	Existing	Severe Weather, Flooding	1, 3, 4, 6	County Engineering with municipal support	Medium	Medium	County and Local Funding	Long Term DOF and permitting issues	High	LPR	PR
CMC-49 (former CMC-48, VW-13)	Conduct an engineering study to understand flooding issues and evaluate possible solutions along Webster Avenue (CR638) in the Village of Woodbine. 10% complete. Topographical survey completed and preliminary design has been initiated.											
	See above.	Existing	Severe Weather, Flooding	1, 3, 4, 6	County Engineering with municipal support	Medium	Medium	County and Local Funding	In Progress - Work should be completed by the end of 2017	High	LPR	PR
CMC-50 (former CMC-49, TL-19)	Conduct an engineering study to understand flooding issues and evaluate possible solutions along Shunpike Road (CR644) in Lower Township											
	See above.	Existing	Severe Weather, Flooding	1, 3, 4, 6	County Engineering with municipal support	Medium	Medium	County and Local Funding	Long Term DOF	High	LPR	PR
CMC-51 (former CMC-51, TM-27)	Conduct an engineering study to understand flooding issues and evaluate possible solutions along Railroad Avenue (CR626) in Middle Township											
	See above.	Existing	Severe Weather, Flooding	1, 3, 4, 6	County Engineering with municipal support	Medium	Medium	County and Local Funding	Long Term DOF	High	LPR	PR
CMC-52 (former CMC-52, TL-20)	Conduct an engineering study to understand flooding issues and evaluate possible solutions along Seashore Road (CR626) in Lower Township											
	See above.	Existing	Severe Weather, Flooding	1, 3, 4, 6	County Engineering with municipal support	Medium	Medium	County and Local Funding	Long Term DOF	High	LPR	PR
CMC-53 (former CMC-53, TM-28)	Conduct an engineering study to understand flooding issues and evaluate possible solutions along Dias Creek Road (CR612) in Middle Township											
	See above.	Existing	Severe Weather, Flooding	1, 3, 4, 6	County Engineering with municipal support	Medium	Medium	County and Local Funding	Long Term DOF	High	LPR	PR
CMC-54 (former CMC-54, TM-29)	Conduct an engineering study to understand flooding issues and evaluate possible solutions along Indian Trail Road (CR618) in Middle Township											
	See above.	Existing	Severe Weather, Flooding	1, 3, 4, 6	County Engineering with municipal support	Medium	Medium	County and Local Funding	Long Term DOF	High	LPR	PR
CMC-55 (former CMC-55, TM-30)	Conduct an engineering study to understand flooding issues and evaluate possible solutions along Goshen-Swanton Road (CR646) in Middle Township											
	See above.	Existing	Severe Weather, Flooding	1, 3, 4, 6	County Engineering with municipal support	Medium	Medium	County and Local Funding	Long Term DOF	High	LPR	PR
CMC-56 (former CMC-56, TD-25)	Conduct an engineering study to understand flooding issues and evaluate possible solutions along Corsons Tavern Road (CR628) in Dennis Township. 5% complete. Topographical survey has been completed											
	See above.	Existing	Severe Weather, Flooding	1, 3, 4, 6	County Engineering with municipal support	Medium	Medium	County and Local Funding	In Progress.	High	LPR	PR
CMC-57 (former	Upgrade stormwater drains and outfalls along Beach Drive (CR603) in Cape May City. 15 % complete. Thus far only one outfall pipe has been eliminated. Several more need to be eliminated.											



Table 9.1-8. Proposed Hazard Mitigation Initiatives

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures (Note 1)	Hazard(s) Mitigated (Note 2)	Goals Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
CMC-57, CCM-23)	See above.	Existing	Hurricane & Tropical Storm, Severe Weather, Flooding	1, 3, 4	County Engineering with municipal support	High	High	County Funds	In progress – full implementation DOF	High	SIP	PP
CMC-58 (former CMC-58, WCM-13)	Develop a stormwater master plan for West Cape May	Existing	Hurricane & Tropical Storm, Severe Weather, Flooding	1, 4	County Engineering/ Planning with municipal support	Medium	Low	County and Local Funding	Short Term	High	LPR	PR
CMC-59 (former CMC-59, SRPR-24)	Support municipalities in either the development or update of local stormwater master plans	Existing	Hurricane & Tropical Storm, Severe Weather, Flooding	1, 4	County Engineering/ Planning with municipal support	Medium	Low	County and Local Funding	Long Term DOF	High	LPR, EAP	PR, PI
CMC-60 (former CMC-60, VA-41)	Install shore protection along Ocean Drive (CR619) at Townsends Inlet in Avalon. Roadway was reconstructed in 2015-16 due to damage from Superstorm Sandy and revetment berm installed along the west side of roadway. The seawall was repaired along the east side. However waves during high tides with an easterly wind crash onto the roadway. A beachfill is needed in front of the seawall to dissipate the waves. Emergency Relief funds from Federal Highway Administration and County funds provided the funding to reconstruct the portion of Ocean Drive that was destroyed during Superstorm Sandy.											
	See above.	Existing	Hurricane & Tropical Storm, Severe Weather, Coastal Erosion	1, 3, 4, 5	County Engineering/ Planning with municipal support	Medium	Low	See above.	In progress – full implementation DOF	High	SIP	PP
CMC-61 (former CMC-61, OC-31 and TU-22)	Install shore protection along Ocean Drive (CR619) at Corsons Inlet in Upper Township and Ocean City	Existing	Hurricane & Tropical Storm, Severe Weather, Coastal Erosion	1, 3, 4, 5	County Engineering with municipal support	High	High	HMA Grants, County and Local Funding	Long Term DOF	High	SIP	PP



Table 9.1-8. Proposed Hazard Mitigation Initiatives

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures (Note 1)	Hazard(s) Mitigated (Note 2)	Goals Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
CMC-62 (former CMC-62, TM-31)	Install shore/roadway protection along Ocean Drive (CR619) in Middle Township	Existing	Hurricane & Tropical Storm, Severe Weather, Coastal Erosion	1, 3, 4, 5	County Engineering with municipal support	High	High	HMA Grants, County and Local Funding	Long Term DOF	High	SIP	PP
CMC-63 (former CMC-63, TM-32)	Construction of storm drain pipe to minimize flooding on Goshen Road (CR615) from Johnson Lane to Church Street in Middle Township. 70% complete. County has been extending and upgrading the system over time. The outfall pipe needs to be upgraded and additional connections and extensions are required.											
	See above.	New & Existing	Flooding, Severe Weather	1, 3, 4, 6	County Engineering with municipal support	High	Medium	County funds	In progress – full implementation DOF	High	SIP	PP
CMC-64 (former CMC-64, TM-33)	Construction of storm sewer system to alleviate flooding on Court House – South Dennis Road (CR657) from Village Drive to College Drive in Middle Township											
	See above.	New & Existing	Flooding, Severe Weather	1, 3, 4, 6	County Engineering with municipal support	High	Medium	HMA Grants, County and Local Funding	Long Term DOF	High	SIP	PP
CMC-65 (former CMC-69)	Through the resources and established forum of the Cape May County Fire Chiefs Association working in partnership with the New Jersey Division of Fire Safety and the New Jersey State Forest Fire Service (Firewise Community Liaison), work with those communities with significant wildfire risk to identify and implement wildfire mitigation activities, programs and initiatives, including community participation in the NFPA “Firewise” program											
	See above	N/A	Wildfire	1, 2, 4, 6	County Fire Coordinator	Medium	Low	Existing Budgets	Short – much of this is ongoing	High	EAP	PI
CMC-66 (SRPR-1)	Develop a five year Post Disaster Recovery Capital Improvement Plan for capital projects directly linked to recovery, mitigation or preparedness.											
	See above.	N/A	All Hazards	1, 3, 4	CMC Planning Department, Working with Engineering/DPW and OEM	Medium	Low	NJDCA Grant	Short Term	High	LPR	PR
CMC-67 (SRPR-2)	Update the County Master Plan with a Community Resiliency Element that reviews the Land Use Plan Element and development standards against the vulnerability issues outlined in this SRPR and adopt as a Master Plan Element											
	See above.	N/A	All Hazards	All Goals	CMC Planning Department	Medium	Low	NJDCA Grant	Short Term	High	LPR	PR
CMC-68 (SRPR-3)	Review zoning and land use regulations against the vulnerability issues outlined in this SRPR and develop amendments to anticipate necessary changes to height, bulk and setback requirements needed to improve resiliency based on recommendations in the Community Resiliency Element											
	See above.	N/A	All Hazards	All Goals	CMC Planning Department	Medium	Low	NJDCA Grant	Short Term	High	LPR	PR
CMC-69 (SRPR-4)	Prepare, modify or replace plans for Local Neighborhoods or specific areas that were impacted by Sandy (i.e. Redevelopment or Rehabilitation Plans, Economic Development Plans and Strategies, Historic District Plans and Open Space/Recreation Plans).											
	See above.	N/A	All Hazards	All Goals	CMC Planning with Municipalities	Medium	Low to Medium	NJDCA Grant	Short Term	High	LPR	PR
CMC-70 (SRPR-5)	Review existing permitting procedures to determine improvements for fast-tracking/streamlining for expediting projects directly related to recovery or mitigation and that are consistent with adopted Design Standards											



Table 9.1-8. Proposed Hazard Mitigation Initiatives

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures (Note 1)	Hazard(s) Mitigated (Note 2)	Goals Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
	See above.	N/A	All Hazards	All Goals	CMC Planning Department	Medium	Low	NJDCA Grant	Short Term	Medium	LPR	PR
CMC-71 (SRPR-6)	Develop design standards to address the visual impact of mitigation measures such as elevating bulkheads, elevating buildings on foundations or pilings, etc. Such design standards might include requirements for skirting exposed pilings, parking under the lowest habitable floor, using exterior decking to stagger stairways to elevated first floor levels, etc.											
	See above.	N/A	All Hazards	All Goals	CMC Planning Department	Medium	Low	NJDCA Grant	Short Term	Medium	LPR	PR
CMC-72 (SRPR-8)	The long term impacts of Future Sea Level Rise should be projected and studied for Cape May County.											
	See above.	New and Existing	CC/SLR, Flood, Hurricane & Tropical Storm	All Goals	CMC Planning Department and OEM, working with NOAA/Rutgers	Medium to High	Low	NOAA/Rutgers	Long Term	Medium	LPR, EAP	PR, PI
CMC-73 (SRPR-25)	Encourage communities to participate in the Getting To Resilience community planning evaluation tool from the Jacques Cousteau National Estuarine Research Reserve.											
	See above.	N/A	All Hazards	All Goals	CMC Planning with Municipalities	Medium	Low	County; Local	Short Term	High	LPR, EAP	PR, PI
CMC-74 (SRPR-16)	Support USACE Beach & Dune replenishment efforts.											
	See above.	New and Existing	CC/SLR, Flood, Hurricane & Tropical Storm, Severe Weather	1, 4, 6	USACE	Medium	Low	Federal funding	Short Term	High	SIP	PP
CMC-75 (SRPR-17)	Obtain backup power to ensure continuity of operations for stormwater, wastewater, public potable water, pumping stations, etc.											
	See above.	Existing	All Hazards	1, 3, 4	CMC Engineering with Municipalities	Medium to High	Medium to High	TBD	Short Term	High	SIP	PP
CMC-76	Install generators on buildings and facilities that operate as temporary shelters.											
	See above.	Existing	All Hazards	1, 3, 4	CMC Engineering, working with facility owners/operators	High	Medium – High (depending on size of unit)	Facility Owner, as supported by available grant funding	Long Term DOF	High	SIP	PP
CMC-77	34 th Street (CR623) in Ocean City - design and install stormwater pump station.	Existing	All Hazards	1, 3, 4	CMC Engineering Working with Ocean City	High	High	County	Long Term DOF	Medium	SIP	PP



Table 9.1-8. Proposed Hazard Mitigation Initiatives

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures (Note 1)	Hazard(s) Mitigated (Note 2)	Goals Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
CMC-78	Install variable message signs on roadways that have a tendency to flood on a somewhat frequent based so as to alert motorists prior to reaching the flooded roadways. Big issue for motorists due the length of alternate routes. The communication system needs to be coordinated with OEM, police and fire departments and other agencies.											
	See above.	N/A	All Hazards	1, 2, 4	CMC Engineering working with local OEM, Police and Fire	High	Low-Medium (per installation)	County; grant funding as available	Short Term	High	SIP	PP
CMC-79	Upgrade and upsize stormwater outfall pipes in Strathmere section of Upper Township.	Existing	All Hazards	1, 2, 4	CMC Engineering Working with Upper Township	High	High	County	Long Term DOF	Medium	SIP	PP
CMC-80	Upgrade and upsize stormwater outfall pipes in Sea Isle City. Due to the low lying nature of portions of Sea Isle City, stormwater pump stations may be warranted.											
	See above.	Existing	All Hazards	1, 2, 4	CMC Engineering Working with Sea Isle City	High	High	County	Long Term DOF	Medium	SIP	PP
CMC-81	Modify traffic signals on evacuation routes to be able to run off small portable generator to free up personnel from having to direct traffic when power is out.											
	See above.	N/A	All Hazards	1, 2, 4	CMC Engineering; working with NJDOT and municipalities as necessary	Medium	Low-Medium (each installation)	County	Long Term DOF	High	SIP	PP
CMC-82	Replace corrugated metal stormwater pipes throughout the County. The corrugated metal pipes were very popular in the 1970's due to their low cost, however many of these pipes are now collapsing due to corrosion from being in the harsh marine environment.											
	See above.	Existing	All Hazards	1, 2, 4	CMC Engineering; working with NJDOT and municipalities as necessary	Medium	High	County and Grant Funding as available	Long Term DOF	Medium	SIP	PP
CMC-83	Install valves on the ends of outfall pipes to prevent tides from backing up through the stormwater drainage systems. Replace valves on outfall pipes that no longer function as intended.											
	See above.	Existing	All Hazards	1, 2, 4	CMC Engineering	High	Medium (per installation)	County and Grant Funding as available	Long Term DOF	High	SIP	PP

Notes:

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

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





(2) While Climate Change and Sea Level rise are not specifically identified as “hazards mitigated” in this table, it is recognized that climate change and sea level rise may exacerbate/amplify the risk of the following identified hazards: Climate Change – Coastal Erosion, Flood Coastal Storms (hurricane, tropical storms, Nor’Easters), Severe Weather, Severe Winter Weather, Wildfire; Sea Level Rise – Coastal Erosion, Flood Coastal Storms (hurricane, tropical storms, Nor’Easters), Tsunami.

Acronyms and Abbreviations:

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

Potential FEMA HMA Funding Sources:

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

Timeline:

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

Costs:

Where actual project costs have been reasonably estimated:

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

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

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

Benefits:

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

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

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

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

Mitigation Category:

- Local Plans and Regulations (LPR) – These actions include government authorities, policies or codes that influence the way land and buildings are being developed and built.
- Structure and Infrastructure Project (SIP)- These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures as well as critical facilities and infrastructure. This type of action also involves projects to construct manmade structures to reduce the impact of hazards.
- Natural Systems Protection (NSP) – These are actions that minimize damage and losses, and also preserve or restore the functions of natural systems.
- Education and Awareness Programs (EAP) – These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as StormReady and Firewise Communities
- Emergency Management (EM) – These actions are identified as an emergency management activity; however, they are not necessarily “mitigation”

CRS Category:

- Preventative Measures (PR) - Government, administrative or regulatory actions, or processes that influence the way land and buildings are developed and built. Examples include planning and zoning, floodplain local laws, capital improvement programs, open space preservation, and storm water management regulations.
- Property Protection (PP) - These actions include public activities to reduce hazard losses or actions that involve (1) modification of existing buildings or structures to protect them from a hazard or (2) removal of the structures from the hazard area. Examples include acquisition, elevation, relocation, structural retrofits, storm shutters, and shatter-resistant glass.
- Public Information (PI) - Actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. Such actions include outreach projects, real estate disclosure, hazard information centers, and educational programs for school-age children and adults.





- *Natural Resource Protection (NR) - Actions that minimize hazard loss and also preserve or restore the functions of natural systems. These actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.*
- *Structural Flood Control Projects (SP) - Actions that involve the construction of structures to reduce the impact of a hazard. Such structures include dams, setback levees, floodwalls, retaining walls, and safe rooms.*
- *Emergency Services (ES) - Actions that protect people and property during and immediately following a disaster or hazard event. Services include warning systems, emergency response services, and the protection of essential facilities*



Table 9.1-9. Summary of Prioritization of Actions

Mitigation Action / Project Number	Mitigation Action/Initiative	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
CMC-1	Support the mitigation of flood vulnerable private property through the continued implementation of the Enhanced RL/SRL Initiative	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	High
CMC-2	Promote municipal participation in incentive-based programs, such as NFIP CRS (including through the ongoing support and lead of the “Enhanced RL/SRL Initiative”, NFPA Firewise Program, and NWS StormReady and Tsunami Ready.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	High
CMC-3	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 7.0. Continue efforts to facilitate the annual plan review and reporting process through improved procedures and tools (e.g. online survey and reporting tools).	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	High
CMC-4	Continue to develop, enhance, and implement existing emergency plans.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	High
CMC-5	Prepare a Continuity of Operations Plan (COOP)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	High
CMC-6	Update the Disaster Debris Management Plan (DDMP)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	High
CMC-7	Update evacuation plan.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	High
CMC-8	Create/enhance/ maintain mutual aid agreements	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	High
CMC-9	Identify order of magnitude costs for the large number of county-sponsored infrastructure mitigation projects	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Medium
CMC-10	Replace three (3) bridges and elevate 2.7 miles of County Route 621 in Lower Township.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Medium
CMC-11	Elevate ~1.5 miles of CR-606 (Sunset Boulevard) through the South Cape May Meadows (Lower and WCM).	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Low
CMC-12	Intersection of State Route 47 and the Garden State Parkway (Middle Township) – Elevate Route 47 roadway and ramps, which will require elevation of the Parkway bridge overpass.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Medium
CMC-13	Elevate State Route 47 from George Redding Bridge to Susquehanna Avenue (Wildwood).	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Medium
CMC-14	Address flooding on Glenwood Avenue (CR-614) through West Wildwood	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Medium
CMC-15	Intersection of State Route 147 and the Garden State Parkway (Middle Township) – Elevate Route 147 roadway and ramps, which will require elevation of the Parkway bridge overpass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Medium
CMC-16	Elevate tie-in section of State Route 147 into North Wildwood	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Medium
CMC-17	Elevate Stone Harbor Boulevard (CR-657) from the Parkway into Stone Harbor proper.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Medium



Table 9.1-9. Summary of Prioritization of Actions

Mitigation Action / Project Number	Mitigation Action/Initiative	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
CMC-18	Elevate Courthouse- South Dennis Road (CR-657) through the swamps	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Medium
CMC-19	Identify and rectify cause of flooding at the intersection of State Route 47 and the newly completed bridge over Dennis Creek	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Medium
CMC-20	Elevate CR-603 through Lower and Middle Township through Fishing Creek Swamp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Medium
CMC-21	Install shoreline protection for CR-640 (entrance to Coast Guard Base) along the Cape May Harbor in the City of Cape May.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	High
CMC-22	Upgrade stormwater drainage system along CR-621 and arterials in the Wildwoods.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Medium
CMC-23	Elevate the Avalon Boulevard northbound onramp to the GSP.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	High
CMC-24	Intersection of Avalon Boulevard and the Garden State Parkway (Middle Township) – Elevate Avalon Boulevard roadway and ramps, which will first require elevation of the Parkway bridge overpass.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Medium
CMC-25	Elevate Avalon Boulevard from Parkway into Avalon proper (~2.5 miles).	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Medium
CMC-26	Elevate Sea Isle Boulevard (CR-601) from the Parkway to the Sea Isle bridge.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	High
CMC-27	Intersection of Sea Isle Boulevard (CR-601) and the Garden State Parkway (Dennis Township) – Elevate Sea Isle Boulevard roadway and ramps, which will first require elevation of the Parkway bridge overpass.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Medium
CMC-28	Elevate JFK Boulevard (CR-625) into Sea Isle City (no funding source currently for project, but is in design phase), and upgrade stormwater system.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Medium - High
CMC-29	Upgrade stormwater system on CR-619 through Stone Harbor and Avalon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Medium
CMC-30	Upgrade exiting 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.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Medium
CMC-31	Intersection of Roosevelt Boulevard (CR-623) and the Garden State Parkway (Upper Township) – Roosevelt Boulevard Elevate roadway and ramps, which will first require elevation of the Parkway bridge overpass.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Medium



Table 9.1-9. Summary of Prioritization of Actions

Mitigation Action / Project Number	Mitigation Action/Initiative	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
CMC-32	Elevate Roosevelt Boulevard (CR-623) from the Parkway into Ocean City proper.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Medium
CMC-33	Install backup power to two stormwater pump stations at Madison Avenue and Grant Avenue in Cape May City. Work with the City to properly site the generator, which could be co-managed with the City to provide backup power for their station on Queen Street and Benton Avenue.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	High
CMC-34	Elevate Tuckahoe Road (CR-636) from Butter Road to CR-610.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Medium
CMC-35	Work with the State DOT to address vulnerabilities on SR-50 along Cedar Swamp Creek.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Medium
CMC-36	Develop an engineering solution for severe flooding problems along NJ Route 50 and Hope Corson Road (CR-671).	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Medium
CMC-37	Upgrade storm drainage in Ocean City, which are currently not designed to handle a 25-year storm event.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Medium
CMC-38	Elevate Bay Avenue (CR-659) in floodprone areas (33rd to 28th, 20th to 18th, 9th to 2nd).	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Medium
CMC-39	Retrofit or replace county communications towers (Paris Grant Program towers) including those located on water towers, which are currently rated for winds less than Cat1 strength	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	High
CMC-40	Ensure adequate communication systems and emergency alert systems are available and reliable.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	High
CMC-41	Work with municipalities, Verizon and other wireless tower owners to assess their vulnerability to wind damage.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	High
CMC-42	Identify proper locations for and install water draw (siphon) stations to increase fire-fighting capabilities.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Low
CMC-43	Conduct an engineering study to understand flooding issues and evaluate possible solutions at low areas along Court House-South Dennis Road (CR657) near Beaver Dam Road in Dennis Township.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	High
CMC-44	Conduct an engineering study to understand flooding issues and evaluate possible solutions along the entire length of Shunpike Road (CR620) in Middle Township.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	High
CMC-45	Conduct an engineering study to understand flooding issues and evaluate possible solutions along Fishing Creek/Academy Road (CR639) in Lower Township.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	High



Table 9.1-9. Summary of Prioritization of Actions

Mitigation Action / Project Number	Mitigation Action/Initiative	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
CMC-46	Conduct an engineering study to understand flooding issues and evaluate possible solutions at low areas along Woodbine-Ocean View Road (CR550) in Dennis Township.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	High
CMC-47	Conduct an engineering study to understand flooding issues and evaluate possible solutions at low areas along Tabernacle Road (CR647) in Lower Township.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	High
CMC-48	Conduct an engineering study to understand flooding issues and evaluate possible solutions along Fidler Road (CR638) in Dennis Township	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	High
CMC-49	Conduct an engineering study to understand flooding issues and evaluate possible solutions along Webster Avenue (CR638) in the Village of Woodbine.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	High
CMC-50	Conduct an engineering study to understand flooding issues and evaluate possible solutions along Shunpike Road (CR644) in Lower Township	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	High
CMC-51	Conduct an engineering study to understand flooding issues and evaluate possible solutions along Railroad Avenue (CR626) in Middle Township	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	High
CMC-52	Conduct an engineering study to understand flooding issues and evaluate possible solutions along Seashore Road (CR626) in Lower Township	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	High
CMC-53	Conduct an engineering study to understand flooding issues and evaluate possible solutions along Dias Creek Road (CR612) in Middle Township	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	High
CMC-54	Conduct an engineering study to understand flooding issues and evaluate possible solutions along Indian Trail Road (CR618) in Middle Township	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	High
CMC-55	Conduct an engineering study to understand flooding issues and evaluate possible solutions along Goshen-Swainton Road (CR646) in Middle Township	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	High
CMC-56	Conduct an engineering study to understand flooding issues and evaluate possible solutions along Corsons Tavern Road (CR628) in Dennis Township.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	High
CMC-57	Upgrade stormwater drains and outfalls along Beach Drive (CR603) in Cape May City.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	High
CMC-58	Develop a stormwater master plan for West Cape May	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	High
CMC-59	Support municipalities in either the development or update of local stormwater master plans	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	High
CMC-60	Install shore protection along Ocean Drive (CR619) at Townsends Inlet in Avalon.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	High





Table 9.1-9. Summary of Prioritization of Actions

Mitigation Action / Project Number	Mitigation Action/Initiative	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
CMC-61	Install shore protection along Ocean Drive (CR619) at Corsons Inlet in Upper Township and Ocean City	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	High
CMC-62	Install shore/roadway protection along Ocean Drive (CR619) in Middle Township	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	High
CMC-63	Construction of storm drain pipe to minimize flooding on Goshen Road (CR615) from Johnson Lane to Church Street in Middle Township.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	High
CMC-64	Construction of storm sewer system to alleviate flooding on Court House – South Dennis Road (CR657) from Village Drive to College Drive in Middle Township.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	High
CMC-65	Work with those communities with significant wildfire risk to identify and implement wildfire mitigation activities, programs and initiatives, including community participation in the NFPA “Firewise” program	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	High
CMC-66	Develop a five year Post Disaster Recovery Capital Improvement Plan for capital projects directly linked to recovery, mitigation or preparedness.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	High
CMC-67	Update the County Master Plan with a Community Resiliency Element that reviews the Land Use Plan Element and development standards against the vulnerability issues outlined in the SRPR and adopt as a Master Plan Element	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	High
CMC-68	Review zoning and land use regulations against the vulnerability issues outlined in this SRPR and develop amendments to anticipate necessary changes to height, bulk and setback requirements needed to improve resiliency based on recommendations in the Community Resiliency Element	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	High
CMC-69	Prepare, modify or replace plans for Local Neighborhoods or specific areas that were impacted by Sandy (i.e. Redevelopment or Rehabilitation Plans, Economic Development Plans and Strategies, Historic District Plans and Open Space/Recreation Plans).	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	High
CMC-70	Review existing Permitting procedures to determine improvements for fast-tracking/streamlining for expediting projects directly related to recovery or mitigation and that are consistent with adopted Design Standards	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	High
CMC-71	Develop design standards to address the visual impact of mitigation measures such as elevating bulkheads, elevating buildings on foundations or pilings, etc. Such design standards might include requirements for skirting exposed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	High



Table 9.1-9. Summary of Prioritization of Actions

Mitigation Action / Project Number	Mitigation Action/Initiative	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
	pilings, parking under the lowest habitable floor, using exterior decking to stagger stairways to elevated first floor levels, etc.																
CMC-72	The long term impacts of Future Sea Level Rise should be projected and studied for Cape May County.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	High
CMC-73	Encourage communities to participate in the Getting To Resilience community planning evaluation tool from the Jacques Cousteau National Estuarine Research Reserve.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	High
CMC-74	Support USACE Beach & Dune replenishment efforts.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	High
CMC-75	Obtain backup power to ensure continuity of operations for stormwater, wastewater, public potable water, pumping stations, etc.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	High
CMC-76	Install generators on buildings and facilities that operate as temporary shelters.	1	1	1	1	1	0	0	0	1	1	1	1	1	0	10	High
CMC-77	34 th Street (CR623) in Ocean City - design and install stormwater pump station.	1	1	1	1	0	0	0	1	1	1	1	0	0	0	8	Medium
CMC-78	Install variable message signs on roadways that have a tendency to flood	1	1	1	1	1	0	0	0	1	1	1	1	1	0	10	High
CMC-79	Upgrade and upsize stormwater outfall pipes in Strathmere section of Upper Township.	1	1	1	1	0	0	0	1	1	1	1	0	0	0	8	Medium
CMC-80	Upgrade and upsize stormwater outfall pipes in Sea Isle City. Due to the low lying nature of portions of Sea Isle City	1	1	1	1	0	0	0	1	1	1	1	0	0	0	8	Medium
CMC-81	Modify traffic signals on evacuation routes to be able to run off small portable generator	1	1	1	1	1	0	0	0	1	1	1	1	1	0	10	High
CMC-82	Replace corrugated metal stormwater pipes throughout the County.	1	1	1	1	0	0	0	1	1	1	1	0	0	0	8	Medium
CMC-83	Install valves on the ends of outfall pipes to prevent tides from backing up through the stormwater drainage systems. Replace valves on outfall pipes that no longer function as intended.	1	1	1	1	1	0	0	0	1	1	1	1	1	0	10	High

Note: Refer to Section 6 which contains the guidance on conducting the prioritization of mitigation actions. Where the community has determined that the original priority ranking for “carry forward” initiatives remains valid, the earlier priority ranking is indicated on the prioritization table, however the 2016 criteria ratings are indicated with a null “-” marking.
 * The municipality recognizes that the mitigation of RL/SRL priorities is a Federal and State priority despite the fact that limited local resources and authority limit the municipality’s ability to implement this project.



9.1.7 Future Needs To Better Understand Risk/Vulnerability

None at this time.

9.1.8 Hazard Area Extent and Location

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

9.1.9 Additional Comments

None at this time.