



9.13 Borough of West Cape May

This section presents the jurisdictional annex for the Borough of West Cape May.

9.13.1 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 |
|---|---|
| Ed Belski, OEM 732 Broadway West Cape May, New Jersey 08204 (609) 315-2145 ed.belski@gmail.com | Elaine Wallace, Clerk 732 Broadway West Cape May, New Jersey 08204 (609) 884-1005 ext. 100 ewallace@westcapemay.us |

9.13.2 Municipal Profile

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

According to the U.S. Census Bureau, the borough has a total area of 1.2 square miles including 1.2 square miles of land and less than 0.1 square miles of water. The population was estimated to be 1,015 people as of July 1, 2014.

Growth/Development Trends

The following table summarizes recent residential/commercial development since 2010 to present and any known or anticipated major residential/commercial development and major infrastructure development that has been identified in the next five years within the municipality. Refer to the map in Section 9.13.8 of this annex, which illustrates the hazard areas along with the location of potential new development.

Table 9.13-1. Growth and Development

| Property or Development Name | Type (e.g. Res., Comm.) | # of Units / Structures | Address | Block / Lot | Known Hazard Zone(s) | Description/Status of Development |
|--|-------------------------|-------------------------|---------|-------------|----------------------|-----------------------------------|
| Recent Development from 2010 to Present | | | | | | |
| None identified | | | | | | |
| Known or Anticipated Development in the Next Five (5) Years | | | | | | |
| None identified | | | | | | |

** Only location-specific hazard zones or vulnerabilities identified.*

9.13.3 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. For the purpose of this plan update, events that have occurred in the County from 2010 to present were summarized to indicate the range and impact of hazard events in the community. Information regarding specific damages is included, if available, based on reference



material or local sources. This information is presented in the table below. For details of these and additional events, refer to Volume I, Section 5.0 of this plan.

Table 9.13-2. Hazard Event History

| Date(s) of Event | Event Type | FEMA Declaration # (If Applicable) | County Designated? | Summary of Damages/Losses |
|----------------------|--|------------------------------------|--------------------|--|
| November 12-13, 2009 | Severe Weather and Flooding associated with Tropical Depression Ida and a Nor'Easter | DR-1867 | Yes | \$4,294.02 |
| February 5-6, 2010 | Severe Winter Weather and Snowstorm (blizzard) | DR-1889 | Yes | <p>\$13,049.13</p> <p>Life Safety: February 5 to 10, 2010 – The referenced storm resulted in an extended loss of electric service for 98% of West Cape May residents. Residents who have no secondary source of heat were forced to seek shelter at the West Cape May Fire Company. The Fire Company provided food, lodging and first aid to as many as 45 residents of West Cape May, Cape May, and Cape May Point for a period of up to five days. (Estimated Cost \$35,000)</p> <p>Loss of Service: For a brief period ninety percent of roads in WCM were not passable. Clearing was completed by Public Works over a 5 day period. (Estimated cost \$10,000)</p> <p>Public Assistance Requested: Approximately 30 requests for transportation to the emergency shelter were received from residents of West Cape May, Cape May, Cape May Point and Lower Township. Public assistance was provided by Public Works and the Volunteer Fire Company. (Estimated Cost \$10,000)</p> <p>Other Loss Information: Snow removal, police overtime, and debris removal (Estimated Cost: \$10,000)</p> |
| December 26-27, 2010 | Severe Winter Weather and Snowstorm | DR-1954 | Yes | \$10,579.49 |
| October 28, 2012 | Hurricane Sandy | DR-4086 | Yes | \$4,977.86 |

9.13.4 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 Borough of West 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 Borough of West Cape May.

Table 9.13-3. Hazard Risk/Vulnerability Risk Ranking

| Hazard type | Estimate of Potential Dollar Losses to Structures Vulnerable to the Hazard ^{a, c} | Probability of Occurrence | Risk Ranking Score (Probability x Impact) | Hazard Ranking ^b |
|---------------------------------|--|---------------------------|---|-----------------------------|
| Climate Change & Sea Level Rise | RCV in +3 feet: \$93,463,756 | Frequent | 27 | Medium |
| Coastal Erosion | RCV in CEHA: \$0 | Frequent | 18 | Medium |
| Flood | 1% Annual Chance: \$281,913,176 | Frequent | 54 | High |
| Hurricanes & Tropical Storms | Category 1 SLOSH: \$528,820,011 Category 2 SLOSH: \$789,575,581 Category 3 SLOSH: \$802,060,161 Category 4 SLOSH: \$802,060,161 | Frequent | 54 | High |
| Nor'Easter | Damage estimate not available | Frequent | 48 | High |
| Severe Weather | 100-Year MRP: \$1,681,108 500-year MRP: \$10,052,414 Annualized: \$159,856 | Frequent | 48 | High |
| Severe Winter Weather | 1% GBS: \$5,110,979 5% GBS: \$25,554,894 | Frequent | 51 | High |
| Tsunami | Damage estimate not available | Rare | 6 | Low |
| Wildfire | Estimated Value Exposed to Extreme, Very High and High: \$869,754 | Frequent | 18 | Medium |

National Flood Insurance Program (NFIP) Summary

The following table summarizes the NFIP statistics for the Borough of West Cape May.

Table 9.13-4. NFIP Summary

| Municipality | # Policies (1) | # Claims (Losses) (1) | Total Loss Payments (2) | # Rep. Loss Prop. (1) | # Severe Rep. Loss Prop. (1) | # Policies in 1% Flood Boundary (3) |
|-----------------------|----------------|-----------------------|-------------------------|-----------------------|------------------------------|-------------------------------------|
| West Cape May Borough | 324 | 94 | \$399,868 | 4 | 0 | 206 |

Source: FEMA, 2015

Note (1) Policies, claims, repetitive loss and severe repetitive loss statistics provided by FEMA and are current as of July 31, 2015 and are summarized by Community Name. Please note the total number of repetitive loss properties excludes the severe repetitive loss properties. The number of claims represents claims closed by 7/31/2015.

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

Note (3) The policies inside and outside of the flood zones is based on the latitude and longitude provided by FEMA Region 2 in the policy file.

Note (4) FEMA noted that where there is more than one entry for a property, there may be more than one policy in force or more than one GIS possibility.

Note (5) A zero percentage denotes less than 1/100th percentage and not zero damages or vulnerability as may be the case.



Critical Facilities

Table 9.13-5. Number of Critical Facilities Located in the 1-Percent Annual Chance Flood Zone

| Municipality | Facility Types | | | | | | | | | | | | | | | | | |
|-----------------------|----------------|---------------|---------------|-----|----------------------------|-------|--------------|---------|--------|----------|----------------|-------------------|----------------|--------|-----------------|-----------------|----------------------|------|
| | Airport | Communication | County Office | EMS | Emergency Operation Center | Ferry | Fire Station | Library | Marina | Military | Municipal Hall | Place of Interest | Police Station | School | Senior Facility | Wastewater Pump | Wastewater Treatment | Well |
| West Cape May Borough | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

Source: Cape May County

Note: EMS – Emergency Medical Services

Other Vulnerabilities Identified by Municipality

The Borough did not identify additional vulnerable areas within the municipality.

9.13.5 Capability Assessment

This section identifies the following capabilities of the local jurisdiction:

- Planning and regulatory capability
- Administrative and technical capability
- Fiscal capability
- Education/Outreach and Community classification
- Self-Assessment of Capability
- National Flood Insurance Program
- Integration of Mitigation Planning into Existing and Future Planning Mechanisms

Planning and Regulatory Capability

The table below summarizes the regulatory tools that are available to the Borough of West Cape May.

Table 9.13-6. Planning and Regulatory Tools

| Tool/Program (code, ordinance, plan) | Do you have this? (Yes/No) | Authority (local, county, state, federal) | Dept./Agency Responsible | Code Citation and Comments (Code Chapter, name of plan, explanation of authority, etc.) |
|--------------------------------------|----------------------------|---|--------------------------|--|
| Planning Capability | | | | |
| Master Plan | Yes | Local | Planning Board | Comprehensive Master Plan Update for the Borough of West Cape May; last updated 2005; last examined 2015 |
| Capital Improvements Plan | No | N/A | N/A | N/A |
| Floodplain Management/Basin Plan | Yes | County | County PB | 2015 |
| Stormwater Management Plan | Yes | Local | Code Enforcement | Element of the 2005 Master Plan; worksheet listed 1982, please verify |
| Open Space Plan | Yes | Local, County | Code Enforcement | Open Space, Recreation & Conservation Element of Master Plan; worksheet listed 1982, please verify |



Table 9.13-6. Planning and Regulatory Tools

| Tool/Program (code, ordinance, plan) | Do you have this? (Yes/No) | Authority (local, county, state, federal) | Dept./Agency Responsible | Code Citation and Comments (Code Chapter, name of plan, explanation of authority, etc.) |
|--|-------------------------------|---|------------------------------------|---|
| Stream Corridor Management Plan | No | N/A | N/A | N/A |
| Watershed Management or Protection Plan | No | N/A | N/A | N/A |
| Economic Development Plan | No | N/A | N/A | N/A |
| Comprehensive Emergency Management Plan | Yes | Local, County | EMC | 2015 |
| Emergency Operations Plan | Yes | Local | EMC | 2015 |
| Post-Disaster Recovery Plan | Yes | Local | EMC | 2015 |
| Transportation Plan | No | N/A | N/A | N/A |
| Strategic Recovery Planning Report | No | N/A | N/A | N/A |
| Other Plans: | | | | |
| Regulatory Capability | | | | |
| Building Code | Yes | State & Local | Building Code Official | State Uniform Construction Code Act (N.J.S. 52:27D-119 et seq.) |
| Zoning Ordinance | Yes | Local | Code Enforcement | Chapter XXVII Zoning 2015 |
| Subdivision Ordinance | Yes | Local | Code Enforcement | Chapter XXV Subdivision 2015 |
| NFIP Flood Damage Prevention Ordinance | Yes | Local, State, Federal | Code Enforcement | Chapter XXIII Flood Hazard Protection |
| NFIP: Cumulative Substantial Damages | No | N/A | N/A | N/A |
| NFIP: Freeboard | Yes | Local, State | | In progress |
| Growth Management Ordinances | No | | | |
| Site Plan Review Requirements | Yes | Local and County | Planning Board | Chapter XXIV Site Plan Regulations |
| Stormwater Management Ordinance | Yes | Local and County | Water and Sewer, Engineer | Chapter XXII Stormwater Control |
| Municipal Separate Storm Sewer System (MS4) | No | | | |
| Natural Hazard Ordinance | No | N/A | N/A | N/A |
| Post-Disaster Recovery Ordinance | No | N/A | N/A | N/A |
| Real Estate Disclosure Requirement | Yes | State | Division of Consumer Affairs | N.J.A.C. 13:45A-29.1 |
| Other [Special Purpose Ordinances (i.e., sensitive areas, steep slope)] | No | N/A | N/A | N/A |

Administrative and Technical Capability

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



Table 9.13-7. Administrative and Technical Capabilities

| Resources | Is this in place? (Yes or No) | Department/Agency/Position |
|---|----------------------------------|-------------------------------------|
| Administrative Capability | | |
| Planning Board | Yes | Planning/Zoning Board Commissioners |
| Mitigation Planning Committee | No | |
| Environmental Board/Commission | Yes | Environmental Commission |
| Open Space Board/Committee | No | County PD |
| Economic Development Commission/Committee | No | |
| Maintenance Programs to Reduce Risk | Yes | Shade Tree Commission |
| Mutual Aid Agreements | Yes | Surrounding municipalities |
| Technical/Staffing Capability | | |
| Planner(s) or Engineer(s) with knowledge of land development and land management practices | Yes | Municipal engineer |
| Engineer(s) or Professional(s) trained in construction practices related to buildings and/or infrastructure | Yes | Municipal engineer |
| Planners or engineers with an understanding of natural hazards | Yes | Municipal engineer; Planning Board |
| NFIP Floodplain Administrator | Yes | Construction Code Official |
| Surveyor(s) | No | Not on staff/Consultant available |
| Personnel skilled or trained in GIS and/or Hazus-MH applications | No | County |
| Scientist familiar with natural hazards | No | |
| Emergency Manager | Yes | Edward Belski, Coordinator |
| Grant Writer(s) | No | |
| Staff with expertise or training in benefit/cost analysis | Yes | |
| Professionals trained in conducting damage assessments | No | |

Fiscal Capability

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

Table 9.13-8. 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 | Yes |
| Impact Fees for homebuyers or developers of new development/homes | Yes |
| Stormwater Utility Fee | No |
| Incur debt through general obligation bonds | Yes |
| Incur debt through special tax bonds | Yes |
| Incur debt through private activity bonds | Yes |
| Withhold public expenditures in hazard-prone areas | Yes |
| Other Federal or State Funding Programs | Yes |
| Open Space Acquisition Funding Programs | Yes |
| Other | 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 the Borough of West Cape May.

Table 9.13-9. Education/Outreach and Community Classifications

| Program | Do you have/participate in this? (Yes/No) | Classification (if applicable) | Date Classified (if applicable) |
|--|---|--------------------------------|---------------------------------|
| Community Rating System (CRS) | No | NP | N/A |
| Building Code Effectiveness Grading Schedule (BCEGS) | No | | |
| Public Protection (ISO Fire Protection Classes 1 to 10) | No | | |
| Storm Ready | No | NP | N/A |
| Firewise | No | NP | N/A |
| Disaster/Safety Programs in/for Schools | No | | |
| Organizations with Mitigation Focus (advocacy group, non-government) | No | | |
| Public Education Program/Outreach (through website, social media) | Yes | | |
| Public-Private Partnerships | No | | |

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 Community Rating System (CRS) class applies to flood insurance while the Building Code Effectiveness Grading Schedule (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 1,000 feet of a creditable fire hydrant and is within five 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 Borough of West Cape May’s capability to work in a hazard-mitigation capacity and/or effectively implement hazard mitigation strategies to reduce hazard vulnerabilities.





Table 9.13-10. Self-Assessment of Capability

| Area | Degree of Hazard Mitigation Capability | | |
|--|---|----------|------|
| | Limited (If limited, what are your obstacles?) | Moderate | High |
| Planning and Regulatory Capability | | | X |
| Administrative and Technical Capability | | | X |
| Fiscal Capability | | X | |
| Community Political Capability | | X | |
| Community Resiliency Capability | | X | |
| Capability to Integrate Mitigation into Municipal Processes and Activities | | | X |

National Flood Insurance Program

NFIP Floodplain Administrator (FPA)

Donald Arndt (Lower Township), Construction Code Official

Flood Vulnerability Summary and Resources

The Flood Damage Prevention Ordinance (FDPO) identifies the Construction Official as the NFIP Floodplain Administrator. The floodplain administrator assumes responsibilities for floodplain administration including, permit review, inspections, and damage assessments. Technical consultants are available on an “as needed” basis. The floodplain administrator is currently adequately trained for floodplain management responsibilities, although additional training would be welcome.

The Borough is currently working with FEMA to finalize a list of property owners that have been flood damaged and are interested in mitigation.

Staff are trained and able to make substantial damage estimates. Funding has been identified as a barrier to running an effective floodplain management program in the Borough.

Compliance History

The Borough is currently in good standing with the NFIP; however, the most recent compliance audits were April 2nd and November 5th, 2014.

Regulatory

The Borough of West Cape May’s floodplain regulations meet the minimum State and FEMA requirements. The Planning and Zoning Boards consider efforts to reduce flood risk when making decisions.

Community Rating System

The Borough of West Cape May does not participate in the Community Rating System (CRS) program; but would consider joining the program. If offered locally, Borough staff would consider attending a local seminar.

Integration of Hazard Mitigation into Existing and Future Planning Mechanisms

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





addition, the community identified specific integration activities that will be incorporated into municipal procedures.

Planning

Land Use Planning: The Borough of West Cape May has a Master Plan that was most recently adopted in 2005 and reexamined in 2015. The plan does not refer directly to the Natural Hazard Mitigation Plan, but does discuss related elements such as floodplain regulations and steep slopes.

The Borough's zoning ordinances and master plan are under review and will be updated within the next 12 months.

Stormwater Management: The Borough has included a mitigation initiative to develop a stormwater master plan for West Cape May (WCM-13, CMC-58), which will refer to the HMP update and support the mitigation of localized stormwater flooding in the Borough. Stormwater management in the Borough is performed by Raymond Roberts and Remington and Vernick.

Continuity of Operations: The Borough has a Continuity of Operations plan that will serve to protect the local government and operations from natural hazard disruptions.

Comprehensive Emergency Management Plan: The Borough's CEMP and SOPs were reviewed and updated in 2015. These documents refer to the hazard mitigation plan.

Regulatory and Enforcement (Ordinances)

The Borough has multiple chapters pertaining to the mitigation of hazards including the building code, zoning code, subdivision and stormwater requirements and the flood damage prevention ordinance.

Operational and Administration

Land Use Planning: The Planning and Zoning boards use design and stormwater management requirements to guide their decisions. The Borough has a municipal planner who reviews subdivision and site plan applications. Developers are required to take additional actions to guide their decisions with respect to natural hazard risk management.

Floodplain Management: NFIP Floodplain Management issues are performed by the Floodplain Administrator, Donald Arndt who is the Construction Code Official.

Vegetation Maintenance: The Borough's Shade Tree Commission is working with utilities to develop and implement an improved tree maintenance program (updated mitigation strategy – WCM-11).

Other Boards and Committees: The Board of Commissioners and Environmental Committee both have functions with respect to managing natural hazard risk.

Technical Resources: Staff are trained to perform substantial damage estimates and have experience in preparing grant applications for mitigation projects.

The Borough Emergency Management Coordinators and Deputies have job descriptions that specifically include identifying and/or implementing mitigation projects.



Funding

The Borough operating budget does not include line items for mitigation projects/activities; however, the Borough Capital Improvements Budget does include budget for mitigation-related projects.

In the past, the Borough has been awarded mitigation grants for the Fire House, Emergency Shelter and Municipal Building and back-up generators at pump stations.

Education and Outreach

Borough staff receive training and continuing education to support natural hazard risk reduction, such as through the New Jersey League of Municipalities. Additional training regarding opportunities for grants and grant writing would be beneficial.

The Water Department distributes mailers that include information on reducing natural hazard risk.

The Borough has a reverse 911 system that can be utilized during an emergency.

Additional public mailings to inform residents of risks from natural hazards and mitigation opportunities would be beneficial.

9.13.6 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 9.13-11. Past Mitigation Initiative Status

| Description | Status | Review Comments |
|--|--|-----------------------------|
| WCM-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. | Ongoing. No SRL properties have been identified in the Borough. No property damage due to flooding was reported to the Borough since the 2010 HMP. | Include in 2016 HMP Update. |
| WCM-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. | Ongoing. No SRL properties have been identified in the Borough. No property damage due to flooding was reported to the Borough since the 2010 HMP. | Include in 2016 HMP Update. |



Table 9.13-11. Past Mitigation Initiative Status

| Description | Status | Review Comments |
|--|---|---|
| WCM-2 (CMC-2): Consider participation in the incentive-based program CRS. | In progress. The Borough has attended CRS informational workshops and shall continue to evaluate the cost-effectiveness of participation in the program. | Include in 2016 HMP Update. |
| WCM-3: Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 7.0 | Ongoing. The Borough has participated in the implementation and monitoring of the plan over the past 5 years and is participating in the plan update. | This initiative is being removed from the updated mitigation strategy as it refers to activities that are a now an ongoing and normal part of municipal operations. |
| WCM-4: Strive to maintain compliance with, and good-standing in the National Flood Insurance program. | Ongoing. The Borough is currently in good standing with the NFIP and will continue to adhere to NFIP requirements for maintaining good standing. | This initiative is being removed from the updated mitigation strategy as it refers to activities that are a now an ongoing and normal part of municipal operations. |
| WCM-5: Continue to develop, enhance, and implement existing emergency plans. | In progress. The EMP and SOPs were reviewed and updated in 2015. The zoning ordinances and master plan are under review and will be updated within the next 12 months. | A modified version of this initiative is being included in the 2016 HMP update, specifically identifying that the zoning ordinances and master plan are under review and will be updated within the next 12 months. |
| WCM-6: Create/enhance/ maintain mutual aid agreements with neighboring communities. | In progress. Mutual aid agreements for fire protection have been created with Cape May and Cape May Point. | Include in 2016 HMP Update. |
| WCM-7: Support County-wide initiatives identified in Section 9.1 of the County Annex. Support county-wide initiatives identified in the Cape May County Hazard Mitigation Plan | In progress. The Borough has supported County-wide mitigation initiatives over the course of the performance period of the plan and will continue to do so after the plan update. | Include in 2016 HMP Update. |
| WCM-8: Retrofit school to reduce vulnerability to natural hazards, including wind-resistant glazing and addition of backup power. | In progress. | Include in 2016 HMP Update. |
| WCM-9: Retrofit City Hall to reduce vulnerability to natural hazards, including wind-resistant glazing, improved communications system, backup power and emergency lighting. | In progress. Backup generator installed in 2015 | Include in 2016 HMP Update. |



Table 9.13-11. Past Mitigation Initiative Status

| Description | Status | Review Comments |
|---|--|--|
| WCM-10: Elevate Bayshore Road (CR-607). This road floods even in light rainstorms. | Complete. Road elevated in 2015 | |
| WCM-11: Work with Shade Tree Commission and utilities to develop and implement an improved tree maintenance program | In progress. Under development by the Shade Tree Commission. | |
| WCM-12 (CMC-8 and TL-15): Elevate ~1.5 miles of CR-606 (Sunset Boulevard) through the South Cape May Meadows (Lower and WCM). | No progress. County-led project. | Determination of the continued viability of this project will be provided by County DPW/Engineering. |
| WCM-13 (CMC-58): Develop a stormwater master plan for West Cape May. | In progress. | Include in 2016 HMP Update. |
| WCM-14 (CMC-67): Construction of storm drain pipe to minimize flooding on Bayshore Road (CR607) from Fifth Avenue to railroad crossing in West Cape May | Complete. | |
| WCM-15: Purchase and installation of an emergency generator for pump station power outages. (USDA FY 2008 Water & Sewer Replacement Project) | No progress. | Include in 2016 HMP Update. |
| WCM-16 (CMC-69): Work directly with residents of the community located in a mixed interface next to phragmites to become a National Fire Protection Association (NFPA) “Firewise” community. Participation in the NFPA “Firewise” program shall be supported by countywide and regional resources including the Cape May County Fire Chiefs Association and the New Jersey State Forest Fire Service (Firewise Community Liaison) by providing information on the “Firewise” program, facilitating public outreach and awareness programs, and supporting community fire risk reduction activities as appropriate (see County Initiative CMC-69). | In progress. | Include in 2016 updated strategy. |

Completed Mitigation Initiatives not Identified in the Previous Mitigation Strategy

The Borough has identified the following mitigation projects/activities that have also been completed but were not identified in the previous mitigation strategy in the 2010 Plan:

- None identified at this time.

Proposed Hazard Mitigation Initiatives for the Plan Update

Table 9.13-12 summarizes the comprehensive-range of specific mitigation initiatives the Borough 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.

Table 9.13-13 provides a summary of the prioritization of all proposed mitigation initiatives for the Plan update.



Table 9.13-12. Proposed Hazard Mitigation Initiatives

| Initiative | Mitigation Initiative | Applies to New and/or Existing Structures (1) | Hazard(s) Mitigated (2) | Goals Met | Lead and Support Agencies | Estimated Benefits | Estimated Cost | Sources of Funding | Timeline | Priority | Mitigation Category | CRS Category |
|------------------------------------|--|---|--------------------------------------|------------|---|--|----------------|--------------------|---------------|----------|---------------------|--------------|
| WCM-1a (former WCM-1a) | Property Mitigation Support – Retrofit: Where appropriate, support retrofitting (e.g. elevation) 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. | | | | | | | | | | | |
| | Funding sources: FEMA Mitigation Grant Programs (primarily HMGP and FMA); local property owner for match as supported by ICC and other non-Federal match sources as available. | | | | | | | | | | | |
| | See above. | Existing | Coastal Storm, Flood, Severe Weather | 1, 2, 4, 6 | Borough (likely through NFIP Floodplain Administrator); State OEM, County OEM | High - Reduced risk of property damage from flooding | High | See above. | Long-term DOF | M-H | EAP, SIP | PI, PP |
| WCM-1b (former WCM-1b) | Property Mitigation Support – Acquisition/Relocation: Where appropriate, support acquisition and/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 acquisition/relocation based on cost-effectiveness versus retrofitting. Where acquisition/relocation is determined to be a viable option, consider implementation of that action based on available funding. | | | | | | | | | | | |
| | Funding sources: FEMA Mitigation Grant Programs (primarily HMGP and FMA); local property owner for match as supported by ICC and other non-Federal match sources as available. | | | | | | | | | | | |
| | See above. | Existing | Coastal Storm, Flood, Severe Weather | 1, 2, 4, 6 | Borough (likely through NFIP Floodplain Administrator); State OEM, County OEM | High - Eliminate risk of property damage from flooding | High | See above. | Long-term DOF | M-H | SIP, EAP | PP, NR |
| WCM-2 (former WCM-2) (CMC-2) | Continue to evaluate the cost-effectiveness of participation in the incentive-based CRS program. | New & Existing | Flood | 1, 2, 6 | Borough | High | Low - Medium | Local Budget | Short | High | LPR, EAP | PR, PI |
| WCM-3 (former WCM-5) | The zoning ordinances and master plan are under review and will be updated within the next 12 months. | New & Existing | All Hazards | 1, 3, 4, 6 | Municipal Emergency Manager with support from County OEM and NJOEM | High | Low - Medium | Local Budget | Ongoing | Medium | LPR | PR |
| WCM-4 (former WCM-6) | Create/enhance/maintain mutual aid agreements with neighboring communities. | New & Existing | All Hazards | 1, 3, 4, 6 | Borough | High – increased response and recovery capabilities | Low - Medium | Local Budget | Ongoing | Medium | LPR, EM | PR, ES |



Table 9.13-12. Proposed Hazard Mitigation Initiatives

| Initiative | Mitigation Initiative | Applies to New and/or Existing Structures (1) | Hazard(s) Mitigated (2) | Goals Met | Lead and Support Agencies | Estimated Benefits | Estimated Cost | Sources of Funding | Timeline | Priority | Mitigation Category | CRS Category |
|--|--|---|---|-------------|---|---|----------------|--|---|-----------------|---------------------|--------------|
| WCM-5 (former WCM-7) | Support County-wide initiatives identified in Section 9.1 of the County Annex. | New & Existing | All Hazards | 1 through 6 | Local departments (as applicable for specific initiative) | High | Low - High | Existing programs and grant funding where applicable | Ongoing – Long-term depending on initiative | M-H (dependent) | All | All |
| WCM-6 (former WCM-8) | Retrofit school to reduce vulnerability to natural hazards, including wind-resistant glazing and addition of backup power. | Existing | Coastal Storms, Severe Weather, Severe Winter Weather | 1, 3, 6 | School Board with assistance from local departments | High | Medium | FEMA HMA funding with local match | Longterm DOF | Medium | SIP | PP |
| WCM-7 (former WCM-9) | Retrofit City Hall to reduce vulnerability to natural hazards, including wind-resistant glazing, improved communications system, and emergency lighting. Backup generator installed was in 2015. | Existing | Coastal Storms, Severe Weather, Severe Winter Weather | 1, 3 | Engineering Department with support from Emergency Management | High | Medium - High | FEMA HMA funding with local match | Longterm DOF | Medium | SIP | PP |
| WCM-8 (former WCM-11) | Work with Shade Tree Commission and utilities to develop and implement an improved tree maintenance program | Existing | Coastal Storms, Severe Weather, Severe Winter Weather | 1, 3, 6 | County Engineering with support from Shade Tree Commission and electric utility (AC Electric) | Medium | Low-Medium | Local and ratepayers | Short | High | LPR, NSP | PR, NR |
| WCM-9 (former WCM-12 (CMC-8 and TL-15) | Elevate ~1.5 miles of CR-606 (Sunset Boulevard) through the South Cape May Meadows (Lower and WCM). | Existing | Severe Weather, Flooding | 1, 3, 4, 6 | County Engineering with municipal support | Reduced vulnerability of critical transportation infrastructure to flooding; potential life-safety (evacuation) | High | County and Local Funding | Longterm DOF (lower priority project – area is not as floodprone as many other areas) | L-M | SIP | PP |



Table 9.13-12. Proposed Hazard Mitigation Initiatives

| Initiative | Mitigation Initiative | Applies to New and/or Existing Structures (1) | Hazard(s) Mitigated (2) | Goals Met | Lead and Support Agencies | Estimated Benefits | Estimated Cost | Sources of Funding | Timeline | Priority | Mitigation Category | CRS Category |
|---------------------------------|--|---|--|------------|--|---|----------------|--------------------------|-------------|----------|---------------------|--------------|
| WCM-10 (former WCM-13 (CMC-58)) | Develop a Stormwater Master Plan for West Cape May. | Existing | Coastal Storms, Severe Weather, Flooding | 1, 4 | County Engineering/ Planning with municipal support | Medium | Low | County and Local Funding | Short-term | High | LPR, NSP | PR, NR |
| WCM-11 (former WCM-15) | Purchase and installation of an emergency generator for pump station power outages. (USDA FY 2008 Water & Sewer Replacement Project) | Existing | Flooding, Coastal Storms, Severe Weather | 1, 3, 4, 6 | Engineering with USDA | High | High | USDA and local | In-progress | High | SIP | PP |
| WCM-12 (former WCM-16 (CMC-69)) | Work directly with residents of the community located in a mixed interface next to phragmites to become a National Fire Protection Association (NFPA) "Firewise" community. Participation in the NFPA "Firewise" program shall be supported by countywide and regional resources including the Cape May County Fire Chiefs Association and the New Jersey State Forest Fire Service (Firewise Community Liaison) by providing information on the "Firewise" program, facilitating public outreach and awareness programs, and supporting community fire risk reduction activities as appropriate (see County Initiative CMC-69). | | | | | | | | | | | |
| | See above. | N/A | Wildfire | 1, 2, 4, 6 | Local Fire Chiefs working with County Fire Coordinator | Improved local capabilities to manage wildfire risk | L-M | Existing Budgets | Short-term | High | EM, EAP | ES, PI |

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 9.13-13. Summary of Prioritization of Actions

| Mitigation Action / Project Number | Mitigation Action/Initiative | Life Safety | Property Protection | Cost-Effectiveness | Technical | Political | Legal | Fiscal | Environmental | Social | Administrative | Multi-Hazard | Timeline | Agency Champion | Other Community Objectives | Total | High / Medium / Low |
|---|--|-------------|---------------------|--------------------|-----------|-----------|-------|--------|---------------|--------|----------------|--------------|----------|-----------------|----------------------------|-------|---------------------|
| WCM-1a (former WCM-1a) | Property Mitigation Support – Retrofit | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | M-H* |
| WCM-1b (former WCM-1b) | Property Mitigation Support – Acquisition/Relocation | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | M-H* |
| WCM-2 (former WCM-2 (CMC-2)) | Continue to evaluate the cost-effectiveness of participation in the incentive-based CRS program. | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | High |
| WCM-3 (former WCM-5) | The zoning ordinances and master plan are under review and will be updated within the next 12 months. | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | Medium |
| WCM-4 (former WCM-6) | Create/enhance/ maintain mutual aid agreements with neighboring communities. | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | Medium |
| WCM-5 (former WCM-7) | Support County-wide initiatives identified in Section 9.1 of the County Annex. | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | M-H (dependent) |
| WCM-6 (former WCM-8) | Retrofit school to reduce vulnerability to natural hazards, including wind-resistant glazing and addition of backup power. | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | Medium |
| WCM-7 (former WCM-9) | Retrofit City Hall to reduce vulnerability to natural hazards, including wind-resistant glazing, improved communications system, and emergency lighting. Backup generator installed was in 2015. | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | Medium |
| WCM-8 (former WCM-11) | Work with Shade Tree Commission and utilities to develop and implement an improved tree maintenance program | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | High |
| WCM-9 (former WCM-12 (CMC-8 and TL-15)) | Elevate ~1.5 miles of CR-606 (Sunset Boulevard) through the South Cape May Meadows (Lower and WCM). | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | L-M |
| WCM-10 (former WCM-13 (CMC-58)) | Develop a Stormwater Master Plan for West Cape May. | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | High |



Table 9.13-13. Summary of Prioritization of Actions

| Mitigation Action / Project Number | Mitigation Action/Initiative | Life Safety | Property Protection | Cost-Effectiveness | Technical | Political | Legal | Fiscal | Environmental | Social | Administrative | Multi-Hazard | Timeline | Agency Champion | Other Community Objectives | Total | High / Medium / Low |
|------------------------------------|--|-------------|---------------------|--------------------|-----------|-----------|-------|--------|---------------|--------|----------------|--------------|----------|-----------------|----------------------------|-------|---------------------|
| WCM-11 (former WCM-15) | Purchase and installation of an emergency generator for pump station power outages. (USDA FY 2008 Water & Sewer Replacement Project) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | High |
| WCM-12 (former WCM-16 (CMC-69)) | Become a National Fire Protection Association (NFPA) "Firewise" community | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 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.



9.13.7 Future Needs To Better Understand Risk/Vulnerability

None at this time.

9.13.8 Hazard Area Extent and Location

Hazard area extent and location maps have been generated for the Borough of West 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 Borough of West Cape May has significant exposure. These maps are illustrated in the hazard profiles within Section 5.4, Volume I of this Plan.

9.13.9 Additional Comments

None at this time.



Figure 9.13-1. Borough of West Cape May Hazard Area Extent and Location Map 1

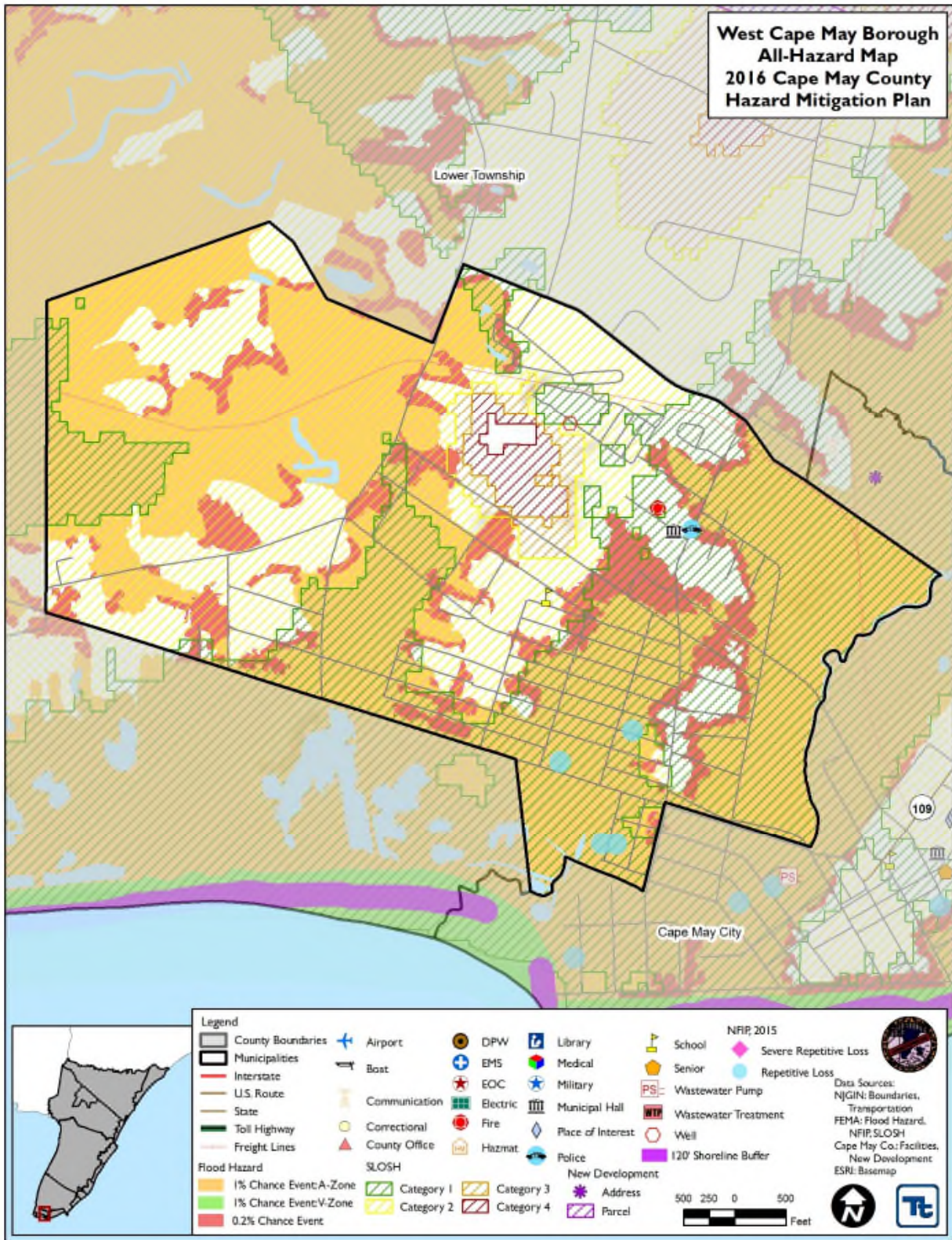




Figure 9.13-2. Borough of West Cape May Hazard Area Extent and Location Map 2

