



9.14 Borough of West Wildwood

This section presents the jurisdictional annex for the Borough of West Wildwood.

9.14.1 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
Christopher Ridings 701 W Glenwood Ave West Wildwood NJ (609) 522-4845 Ext 308 cridings@westwildwood.org	Francis Pellegrino 701 W. Glenwood Ave West Wildwood NJ (609) 522-4845 fpellegrino@westwildwood.org

9.14.2 Municipal Profile

The Borough of West Wildwood is located on a barrier island along the Atlantic Ocean coastline of Cape May County, New Jersey. It is bounded on the north and west by the Township of Middle and the Richardson and Grassy Sound, on the east by the City of North Wildwood and the Atlantic Ocean, and on the south by the City of Wildwood and the Atlantic Ocean. West Wildwood is a small island connected to Wildwood by a two-lane bridge.

The Borough of West Wildwood and its neighboring communities of the City of Wildwood, City of North Wildwood, and the Borough of Wildwood Crest make up "The Wildwoods" resort, a popular vacation destination for those living in all parts of New Jersey as well as within the New York City and Philadelphia, Pennsylvania metropolitan areas.

According to the U.S. Census Bureau, the borough has a total area of 0.3 square miles, with 0.3 square miles of it land and 0.1 square miles of it (20.2-percent) water. As of July 1, 2014, there were estimated to be 579 people residing in the Borough.

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 9.14.8 of this annex, which illustrates the hazard areas along with the location of potential new development.

Table 9.14-1. 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						
Install 26 th Street Bulkhead	Municipal	N/A	N/A	N/A	AE10	Install 1200' of new bulkhead along north side of street
Neptune Ave Project	Municipal	N/A	N/A	N/A	AE9	Raise street and replace storm drainage to outfall pipes
Known or Anticipated Development in the Next Five (5) Years						



Property or Development Name	Type (e.g. Res., Comm.)	# of Units / Structures	Address	Block / Lot	Known Hazard Zone(s)	Description/Status of Development
R/Q Ave Project	Municipal	N/A	N/A		AE10	Install new storm drainage and outfall pipe

* Only location-specific hazard zones or vulnerabilities identified.

9.14.3 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 9.14-2. Hazard Event History

Date(s) of Event	Event Type	FEMA Declaration # (If Applicable)	County Designated?	Summary of Damages/Losses
February 5-6, 2010	Severe Winter Storm and Snowstorm (blizzard)	DR-1889	Yes	Public Assistance Requested - \$18,340 (Labor - \$3918.03, Equipment - \$7038.45, Contract - \$5120.00, Rented Equipment- \$1330.00, Supplies - \$800.00, Direct Admins Costs- 134.05) Record snowfall disrupted transportation and public safety. Road were impassable for a long period of time. Wide scale loss of power for 6 continuous days. Coordinated long term recovery effort with police/fire/ems/DPW
December 26-27, 2010	Severe Winter Storm and Snowstorm	DR-1954	Yes	Public Assistance requested - \$8,101 (Labor - \$3642.98, Equipment - \$3442.20, Materials - 1014.20) Resources used to respond to emergency conditions brought about by event to include impassable roads due to heavy wet snow.
August 27-28, 2011	Hurricane Irene	DR-4021	Yes	Labor \$6,137 (equipment - \$3277, materials- \$2860) Mandatory evacuation of entire community 24 hours prior to impact. No local sheltering as Borough is a barrier island. No reported injuries or deaths. All roads were closed and impassable during the event due to major back-bay flooding.
October 28, 2012	Hurricane Sandy	DR-4086	Yes	\$178,098 Mandatory evacuation of entire community 24 hours prior to landfall. No local sheltering as the Borough is a barrier island. No reported injuries or deaths. All roads were closed and impassable during the event due to major back-bay flooding. Public Facility Damage: Roof damage to municipal center/police headquarters. Approximately 6 inches of water in municipal meeting room.



Date(s) of Event	Event Type	FEMA Declaration # (If Applicable)	County Designated?	Summary of Damages/Losses
				Private facility damage: Approximately 100 homes sustained substantial damage due to intrusion of flood waters into the residences. Public Assistance Requested: Debris Removal - \$18082.61, Labor - \$2646.82, Equip.-\$46428.50, Contract - 41429.58, Direct Admin Costs - 5413.72, Debris Collection - 19325.00 Total - \$137,526.23

9.14.4 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 Wildwood. 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 Wildwood.

Table 9.14-3. 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: \$377,088,793	Frequent	48	High
Coastal Erosion	RCV in CEHA: \$11,861,963	Frequent	18	Medium
Flood	1% Annual Chance: \$390,167,036	Frequent	54	High
Hurricanes & Tropical Storms	Category 1 SLOSH: \$379,307,895 Category 2 SLOSH: \$379,307,895 Category 3 SLOSH: \$379,307,895 Category 4 SLOSH: \$379,307,895	Frequent	54	High
Nor'Easter	Damage estimate not available	Frequent	48	High
Severe Weather	100-Year MRP: \$1,707,223 500-year MRP: \$12,185,375 Annualized: \$136,108	Frequent	48	High
Severe Winter Weather	1% GBS: \$2,578,537 5% GBS: \$12,892,684	Frequent	51	High
Tsunami	Damage estimate not available	Rare	6	Low
Wildfire	Estimated Value Exposed to Extreme, \$0 Very High and High:	Frequent	18	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.

National Flood Insurance Program (NFIP) Summary

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

Table 9.14-4. 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 Wildwood Borough	486	1,867	\$23,486,641	81	60	486

Source: FEMA Region 2, 2015

(1) Policies, claims, repetitive loss and severe repetitive loss statistics provided by FEMA Region 2, and are current as of July 31, 2015. Please note the total number of repetitive loss properties includes the severe repetitive loss properties. The number of claims represents claims closed by 7/31/15.

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

(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.

Notes: 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.

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

Critical Facilities

Table 9.14-5. 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 Wildwood Borough	-	-	-	-	-	-	1	-	5	-	1	-	1	-	-	1	-	-

Source: Cape May County

Note: EMS – Emergency Medical Services

Other Vulnerabilities Identified by Municipality

The entire community is in a floodplain. Currently, the Police Administration building is without a generator backup. The peninsula along 26th street which serves as a breakwater for homes on the north side of Poplar Ave is eroding exposing a greater risk to those homes of storm damage. The Borough is working with the Nature Conservancy under the N.J. Resilient Coastline Initiative to develop a Nature Based Living Shoreline Project to address the erosion. This will enhance the Borough's resiliency during weather events.

9.14.5 Capability Assessment

This section identifies the following capabilities of the local jurisdiction:

- Planning and regulatory capability
- Administrative and technical capability



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- 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 Wildwood.

Table 9.14-6. 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	Engineer	Master plan adopted 8-2008
Capital Improvements Plan	Yes	Local	CFO	Budget
Floodplain Management/Basin Plan	No	Local, County	Floodplain Admin.	
Stormwater Management Plan	Yes	Local	Utility Supervisor	Borough of West Wildwood Stormwater Management Plan adopted 4/2/15. Stormwater Pollution Prevention Plan (SPPP) adopted 3/17/15
Open Space Plan	Yes	Local, County	County	Recreation and Conservation Plan
Stream Corridor Management Plan	No	N/A	N/A	
Watershed Management or Protection Plan	No	N/A	N/A	
Economic Development Plan	Yes	Local	Local	Master Plan adopted 8-2008
Comprehensive Emergency Management Plan	Yes	Local	Local	Emergency Response plan initially adopted 9-16-1999
Emergency Operations Plan	Yes	State, County, Local	Local	Plan adopted 9-6-1999
Post-Disaster Recovery Plan	No	N/A	N/A	
Transportation Plan	Yes	Local, County	Local	Master Plan Circulation Element adopted 8-2008
Strategic Recovery Planning Report	No	N/A	N/A	
Other Plans:	No	N/A	N/A	
Regulatory Capability				
Building Code	Yes	State & Local	Construction Official	State Uniform Construction Code Act (N.J.S. 52:27D-119 et seq.)
Zoning Ordinance	Yes	Local	Zoning Official	Ordinance #398 Adopted 2/4/2000
Subdivision Ordinance	Yes	Local	Zoning Offc.	Ordinance #398 Adopted 2/4/2000
NFIP Flood Damage Prevention Ordinance	Yes	Federal, State, Local	Floodplain mgr.	Ordinance #356 Adopted 2/4/2000
NFIP: Cumulative Substantial Damages	Yes	State, Local	Floodplain Mgr.	Land Use Ord. Amended 2014 specific section for substantial loss
NFIP: Freeboard	Yes	State, Local	Planning Board	Land Use Ord. Amended 2014 2014



Table 9.14-6. 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.)
Growth Management Ordinances	No	N/A	N/A	
Site Plan Review Requirements	Yes	State, Local	Planning Board	Land Use Ord. Amended 2014 2014
Stormwater Management Ordinance	Yes	Local	Utility Super.	Ordinance#455 Adopted 3-3-2006
Municipal Separate Storm Sewer System (MS4)	No	N/A	N/A	
Natural Hazard Ordinance	No	N/A	N/A	
Post-Disaster Recovery Ordinance	No	N/A	N/A	
Real Estate Disclosure Requirement	No	N/A	N/A	
Other [Special Purpose Ordinances (i.e., sensitive areas, steep slope)]	No	N/A	N/A	

Administrative and Technical Capability

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

Table 9.14-7. Administrative and Technical Capabilities

Resources	Is this in place? (Yes or No)	Department/Agency/Position
Administrative Capability		
Planning Board	Yes	Planning Board
Mitigation Planning Committee	No	
Environmental Board/Commission	No	
Open Space Board/Committee	Yes	Cape May County
Economic Development Commission/Committee	No	
Maintenance Programs to Reduce Risk	No	
Mutual Aid Agreements	Yes	City of Wildwood/ Cape May County
Technical/Staffing Capability		
Planner(s) or Engineer(s) with knowledge of land development and land management practices	Yes	Borough Engineer Remington& Vernick
Engineer(s) or Professional(s) trained in construction practices related to buildings and/or infrastructure	Yes	Borough Engineer Remington& Vernick
Planners or engineers with an understanding of natural hazards	Yes	Borough Engineer Remington& Vernick
NFIP Floodplain Administrator	Yes	Ray Poudrier, Construction Official
Surveyor(s)	Yes	Borough Engineer
Personnel skilled or trained in GIS and/or Hazus-MH applications	Yes	Borough Engineer
Scientist familiar with natural hazards	No	
Emergency Manager	Yes	Francis Pellegrino, OEM
Grant Writer(s)	Yes	Business Administrator
Staff with expertise or training in benefit/cost analysis	Yes	Business Administrator & CFO
Professionals trained in conducting damage assessments	Yes	Business Administrator OEM



Fiscal Capability

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

Table 9.14-8. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use (Yes/No/Don't Know)
Community Development Block Grants (CDBG, CDBG-DR)	Yes/ None currently
Capital Improvements Project Funding	Yes – Through Bond Ordinance
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas, or electric service	Yes-sewer
Impact Fees for homebuyers or developers of new development/homes	No
Stormwater Utility Fee	Yes
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	Yes
Incur debt through private activity bonds	No
Withhold public expenditures in hazard-prone areas	No
Other Federal or State Funding Programs	Yes FEMA/USDA
Open Space Acquisition Funding Programs	Yes - Cape May County Open Space Board
Other	

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 Wildwood.

Table 9.14-9. 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	TBD	In progress
Building Code Effectiveness Grading Schedule (BCEGS)	-	-	-
Public Protection (ISO Fire Protection Classes 1 to 10)	NP		
Storm Ready	NP		
Firewise	NP		
Disaster/Safety Programs in/for Schools	NA		
Organizations with Mitigation Focus (advocacy group, non-government)	NP		
Public Education Program/Outreach (through website, social media)	Yes		
Public-Private Partnerships	NP		

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 Wildwood's capability to work in a hazard-mitigation capacity and/or effectively implement hazard mitigation strategies to reduce hazard vulnerabilities.

Table 9.14-10. 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)

Ray Poudrier, Construction Official

Flood Vulnerability Summary

The entire Borough lies within a Special Flood Hazard Area.

The Borough maintains a list of all substantially damaged homes along with negative rated properties by the NFIP. Approximately 71 structures were damaged by Hurricane Sandy or other recent events. These included approximately 70 homes and 1 commercial property. Substantial damage estimates were provided by homeowner's insurance company and reviewed by Floodplain Administrator. Approximately 70 homes were declared substantially damaged. All of the property owners are interested in elevation. Most have been or are in the process of being elevated for mitigations purposes. None are under acquisition. Funding sources for these mitigation efforts include Flood Insurance, ICC funding, FEMA REIM Program and the property owner.



Resources

The Flood Damage Prevention Ordinance (FDPO) identifies the Construction Official as the NFIP Floodplain Administrator. The floodplain administrator is assisted by the Borough Business Administrator and the local office of OEM in assuming responsibilities for floodplain administration including, permit review, inspections, damage assessment, and education and outreach. As part of public outreach efforts, three island-wide flood related workshops have been held with over 200 people in attendance. There are no barriers identified to effective floodplain management in the community. The floodplain administrator is adequately trained for floodplain management responsibilities, although additional training would be welcome.

Compliance History

The Borough is currently in good standing with the NFIP. The most recent Community Assistance Visit was held in 2008.

Regulatory

The Borough of West Wildwood's floodplain regulations exceed the minimum State and FEMA requirements. The Planning and Zoning Board supports the Borough's floodplain management program. The Land Use Ordinance has been updated to meet FEMA best available data for elevation and building.

Community Rating System

The Borough of West Wildwood is currently in the process of being accepted into the Community Rating System (CRS) program.

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 Wildwood has a Master Plan that was most recently revised in 2008. The Master Plan considers areas of natural hazard risk and refers to the hazard mitigation plan. Hazard mitigation concerning heights and building requirements have been adopted through the Land Use Ordinance to comply with FEMA standards.

Stormwater Management: The Borough is a MS4 Regulated Community and has stormwater management plan that identifies projects, actions or initiatives to mitigate stormwater flooding. (Note: Capability assessment said Borough was not an MS4 community)

Open Space: The Borough continues to work with the County of Cape May concerning open space acquisition. The latest is the Bay Ave waterfront Development Plan which will allow for the acquisition of three water front building lots which will be restricted as Open Space.

Comprehensive Emergency Management Plan: In conjunction with and support of the Cape May County Office of Emergency Management, the Borough maintains a CEMP. The Cape May County Multi-jurisdictional All Hazards Mitigation Plan was adopted by Resolution 11-16 on February 4, 2011.



Regulatory and Enforcement (Ordinances)

The Borough has multiple chapters pertaining to the mitigation of hazards. These ordinances include the Flood Damage Prevention Chapter, Cumulative Damage Ordinance, Building Code and others. The Planning Board and Zoning Board of Appeals address natural hazard risk management through Comprehensive Land Use Ordinance in conjunction with DEP regulations. Developers in the Borough are required to take additional steps to mitigate natural hazard risk including adopted base flood elevations which meet FEMA standards. Pilings required on all waterfront structures and 8.5 elevation required on all new bulkheads.

Operational and Administration

Land Use Planning: The City has a municipal planner that assists with and reviews any related issues to natural hazard risk reduction along with local planning board. Planning Board reviews all variances and all new development to ensure compliance with all regulations related to the project to include Coastal Area Facility Review Act.

Stormwater Management: Stormwater Management functions in the community are performed by Francis Pellegrino, Supervisor, Department of Public Works.

Floodplain Management: Ray Poudrier, Construction Official / Floodplain Manager, performs the NFIP Floodplain Management functions.

Technical Resources: The City has staff that can perform Substantial Damage estimates, and grant application preparation. Benefit-cost analysis is provided by contract support. City staff receive training and education in support of natural hazard risk reduction through the Nature Conservatory along with membership and monthly participation in the Coastal Coalition Group of Atlantic and Cape May County.

Administration: Staff participate in associations and organizations the support natural hazard risk reduction capabilities including the Coastal Coalition Group of Atlantic and Cape May County.

Funding

Operating Budget: The City's operating budget contains line items for mitigation projects/activities.

Capital Improvements Budget: The City's capital improvements budget contains mitigation-related projects.

Grants: The City has received grant funding for projects including the 26th Street Shoreline Stabilization Project Grant from DEP- \$1,220,000 (No local match required) and Neptune Ave Project Grant DEP-\$292,500 -local match of \$97,500 raised through Bond Ordinance.

Education and Outreach

Periodic public outreach/ presentations advertised and performed at Borough Hall to specifically address and educate on flood hazard risks.

9.14.6 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



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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 9.14-11. Past Mitigation Initiative Status

Initiative Number	2010 Mitigation Action	Responsible Party	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 HMP 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.
WW-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.	Borough (likely through NFIP Floodplain Administrator)	No Progress	1.0% complete 2. 3.	Discontinue	1. Repetitive loss properties will be retrofitted by private property owner. 2.
WW-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.	Borough	No Progress	1.0 % 2. 3.	Discontinue	1.No apparent viable candidates 2.
WW-2	Work with FEMA and ISO to re-establish participation in CRS.	Borough	In Progress	1.25 % complete 2. 3. Funded local budget	Include in 2016 HMP	1. We are working towards acceptance with the goal of 2016 for completion 2.





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Initiative Number	2010 Mitigation Action	Responsible Party	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.
WW-3	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 7.0	Borough (through mitigation planning point of contacts)	In Progress	1. 50% 2. 3. Funded local budget	Include in 2016 HMP	1. Continue to work through the Cape May County Office of OEM 2.
WW-4	Strive to maintain compliance with, and good-standing in the National Flood Insurance program.	Municipality (likely through NFIP Floodplain Administrator)	Complete	1. 100% 2. 3.	Include in 2016 HMP	1. Continued compliance 2.
WW-5	Continue to develop, enhance, and implement existing emergency plans.	Municipal Emergency Manager with support from County OEM and NJOEM	In Progress	1. Continued support 100% 2. 3.	Include in 2016 HMP	1. Continue to cooperate and support ensuring we are NIMS compliant 2.
WW-6	Create/enhance/ maintain mutual aid agreements with neighboring communities.	Borough	Complete	1. 100 % 2. 3.	Include in 2016 HMP	1. Continued cooperation and support with the City of Wildwood 2.
WW-7	Support County-wide initiatives identified in Section 9.1 of the County Annex. Support county-wide initiatives identified in the Cape May County Hazard Mitigation Plan	Local departments (as applicable for specific initiative)	Complete	1. Continued 100 % 2. 3.	Include in 2016 HMP	1. Continued cooperative efforts with the County OEM and County initiatives 2.
WW-8	Extended stabilization project for 26 th Street to reduce storm surge and prevent debris from entering the municipality	Borough	Complete	1. 100 % 2. 3.	Discontinue	1. Project was completed in 2012 2.
WW-9	Regional Project with all Wildwoods: Elevate bulkhead heights and replace all municipal bulkhead to new ordinance elevations	Municipality (engineering and DPW)	In Progress	1. 25 % complete 2. 3.	Include in 2016 HMP	1. Changes have been made to Land Use Ordinance. 2. Secondary ordinance being developed to allow local code official to issue summons for non-compliance





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Initiative Number	2010 Mitigation Action	Responsible Party	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.
WW-10	Evaluate the substructure of the Public Safety Building / Borough Hall for water damage from past flood events to determine if repair/mitigation is necessary	Municipality	Complete	1. 100% 2. 3.	Discontinue	1. Determined that mitigation for lowest portion necessary and completed in 2011 with flood proofing measures 2.
WW-11	New siren system with voice-over tone at 3 locations to increase reliability, increase coverage and improve effectiveness: Public Works Recreation Complex Public Safety/Borough Hall Current siren system failed last year and 155 cars were damaged.	Municipality	Complete	1. 100% 2. 3.	Discontinue	1. Entire system replaced in 2011 2.
WW-12 (CMC-11)	Address flooding on Glenwood Avenue (CR-614) through West Wildwood	County Engineering with municipal support	No Progress	1. 0 % complete 2. 3.	Include in 2016 HMP	1. Borough does not have authority to complete this project as this would be County venue 2.
WW-13	Reconstruction of Neptune Avenue from Glenwood Avenue to the North Drive entrance to the Fire House – Public Works site.	Municipal engineering	In Progress	1. 90 % complete 2. 3.	Include in 2016 HMP	1. Project nearly completed at this time with the final punch list to be completed by January 2016 2.





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:

- Address erosion of protective peninsula on north side of island (project led by the Borough, not currently funded but assistance from USDA is possible, 0 percent complete)
- Purchase of trailer mounted pump to assist with recovery after major flooding event (project led by the Borough, not currently funded, but is expected to be jointly funded through local budget along with financial assistance from USDA Grant, 0 percent complete)

Proposed Hazard Mitigation Initiatives for the Plan Update

Table 9.14-12 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 9.14-13 provides a summary of the prioritization of all proposed mitigation initiatives for the Plan update.



Table 9.14-12. Proposed Hazard Mitigation Initiatives

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
BW-1a (former WW-1a)	<p>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.</p> <p>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.</p>										
	See above.	Existing	Coastal Storm, Flood, Severe Weather	1, 2, 4, 6	Borough (likely through NFIP Floodplain Administrator)	High	High	See above.	Long-term DOF	Medium-High*	EAP, SIP, PI, PP
BW-1b (former WW-1b)	<p>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.</p> <p>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.</p>										
	See above.	Existing	Coastal Storm, Flood, Severe Weather	1, 2, 4, 6	Borough	High	High	See above.	Long-term DOF	Medium-High*	EAP, SIP, PI, PP
BW-2 (former WW-2)	Work with FEMA and ISO to re-establish participation in CRS.	New & Existing	Flood	1, 2, 6	Borough	Medium	Low - Medium	Local Budget	Short	High – In progress.	LPR, EAP, NSP, PR, PP, PI, NR
BW-3 (former WW-3)	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 7.0	New & Existing	All Hazards	1 through 6	Borough (through mitigation planning point of contacts)	Medium	Low – High (for 5-year update)	Local Budget, possibly FEMA Mitigation Grant Funding for 5-year update	Ongoing	Medium	LPR, EAP, PR, PI
BW-4 (former WW-4)	NFIP Continued Compliance: Continue to maintain compliance with, and good-standing in the National Flood Insurance program.	New & Existing	Flood	1, 2, 4, 5, 6	Municipality (likely through NFIP Floodplain Administrator)	High	Low - Medium	Local Budget	Ongoing	High	LPR, EAP, PP, PI, NR





Table 9.14-12. 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
BWW-5 (former WW-5)	Emergency Management Plans: Continue to develop, enhance, and implement existing emergency plans and ensure NIMS compliance.	New & Existing	All Hazards	1, 3, 4, 6	Municipal Emergency Manager with support from County OEM and NJOEM	Medium	Low - Medium	Local Budget	Ongoing	High	LPR	PR, ES
BWW-6 (former WW-6)	Mutual Aid: Create/enhance/maintain mutual aid agreements with neighboring communities and continue cooperation and support with the City of Wildwood.	New & Existing	All Hazards	1, 3, 4, 6	Borough	Medium	Low - Medium	Local Budget	Ongoing	High	LPR	PR
BWW-7 (former WW-7)	Continue to 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)	Medium-High	Low - High	Existing programs and grant funding where applicable	Ongoing - Long-term depending on initiative	Medium-High (dependent)	LPR, NSP, SIP, EAP	PR, PP, PI, NR, ES, SP
BWW-8 (former WW-9)	Regional Bulkheading Project with all Wildwoods: Elevate bulkhead heights and replace all municipal bulkhead to new ordinance elevations. Borough to develop ordinance to allow local code official to issue summons for non-compliance regarding bulkhead heights.											
BWW-9 (former WW-12 (CMC-11))	See above.	New & Existing	Coastal Storm, Flood, Severe Weather	1, 2, 6	Municipality (engineering and DPW)	High	High	HMA grant programs (if applicable) with local budget match	Long-term DOF	Medium	LPR	PR, PP, PI
BWW-10 (former WW-13)	Work with the County of Cape May to address flooding on Glenwood Avenue (CR-614) through West Wildwood	Existing	Coastal Storms, Flooding, Severe Weather	1, 3, 4	County of Cape May, Borough	High	High	Various, incl. federal grant funding	Longterm DOF	Medium	SIP	PP
BWW-10 (former WW-13)	Reconstruction of Neptune Avenue from Glenwood Avenue to the North Drive entrance to	Existing	Coastal Storms, Flooding, Severe Weather	1, 3, 4	Municipal Engineering and DPW	High	High (~\$370k)	HMA; local budgets for match	90% complete; Final punch-list to be	High	SIP	PP





Table 9.14-12. 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 completed Jan. 2016	Priority	Mitigation Category	CRS Category
	the Fire House – Public Works site.											
BWW-11	Backup power for Police Administration Building.	Existing	All hazards resulting in loss of power	1, 3, 4	Municipal Engineering and DPW	High – Maintain critical facilities and services; public health/safety	Medium - High	FEMA HMA; local budget for match	Long Term DOF	High	EM*	ES
BWW-12	The peninsula along 26th street which serves as a breakwater for homes on the north side of Poplar Ave is eroding exposing a greater risk to those homes of storm damage. The Borough is working with the Nature Conservancy under the N.J. Resilient Coastline Initiative to develop a Nature Based Living Shoreline Project to address the erosion. This will enhance the Borough's resiliency during weather events.											
	See above	Existing	CC/SLR, Coastal Storms, Coastal Erosion	1, 5, 6	Borough, working with Nature Conservancy	Medium to High	High	Grant funding where available; municipal budget	DOF	Medium	NSP, SIP	NR, PP
BWW-13	Continue to enhance public outreach and education on natural hazard risk, preparedness and mitigation, specifically through the following activities: <ul style="list-style-type: none"> Continue to update emergency contact information for Borough residents (from website) Provide information regarding natural hazards on the Borough website 											
	See above	N/A	All hazards	1, 2, 4	Emergency Management, Borough Administration	Medium to High	Low	Municipal Budget	Short Term	High	EAP	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

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





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Acronyms and Abbreviations:

NFIP National Flood Insurance Program
OEM Office of Emergency Management

Potential FEMA HMA Funding Sources:

Timeline:

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"

CBS 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 9.14-13. 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 Involvement	Other Community	Total	High / Medium / Low
BWW-1a (former WW-1a)	Property Mitigation Support – Retrofit	1	1	1	1	1	0	0	0	1	1	1	1	1	0	10	Medium-High*
BWW-1b (former WW-1b)	Property Mitigation Support – Acquisition/Relocation	1	1	1	1	0	0	0	0	1	1	1	1	1	0	9	Medium-High*
BWW-2 (former WW-2)	Work with FEMA and ISO to re-establish participation in CRS	0	1	0	1	1	1	0	0	1	1	0	1	1	1	9	High – In progress.
BWW-3 (former WW-3)	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 7.0	0	1	1	1	1	1	-1	0	1	1	1	1	1	1	9	Medium
BWW-4 (former WW-4)	NFIP Continued Compliance	1	1	1	1	1	0	0	1	1	-1	1	1	1	1	10	High
BWW-5 (former WW-5)	Emergency Management Plans	1	1	1	1	1	1	0	0	1	0	1	1	1	1	11	High
BWW-6 (former WW-6)	Mutual Aid	1	1	1	1	1	1	0	0	1	0	1	1	1	1	11	High
BWW-7 (former WW-7)	Continue to support County-wide initiatives identified in Section 9.1 of the County Annex.	1	1	0	1	0	1	0	0	1	0	1	1	1	1	9	Medium-High (dependent)
BWW-8 (former WW-9)	Regional Bulkheading Project with all Wildwoods	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Medium
BWW-9 (former WW-12 (CMC-11))	Glenwood Avenue (CR-614) flood mitigation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Medium
BWW-10 (former WW-13)	Reconstruction of Neptune Avenue from Glenwood Avenue to the North Drive entrance to the Fire House – Public Works site	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	High
BWW-11	Backup power for Police Administration Building.	1	1	1	1	1	0	0	1	1	1	1	0	1	0	10	High





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Table 9.14-13. 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 Collaboration	Other Community	Total	High / Medium / Low
BWW-12	26th street N.J. Resilient Coastline Initiative to develop a Nature Based Living Shoreline Project to address erosion	1	1	1	0	0	0	0	1	1	1	1	0	0	0	7	Medium
BWW-13	Public Education and Awareness Enhancements	1	1	1	1	0	0	1	0	1	1	1	1	0	0	9	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.



9.14.7 Future Needs To Better Understand Risk/Vulnerability

None at this time.

9.14.8 Hazard Area Extent and Location

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

9.14.9 Additional Comments

None at this time.



Figure 9.14-1. Borough of West Wildwood Hazard Area Extent and Location Map 1

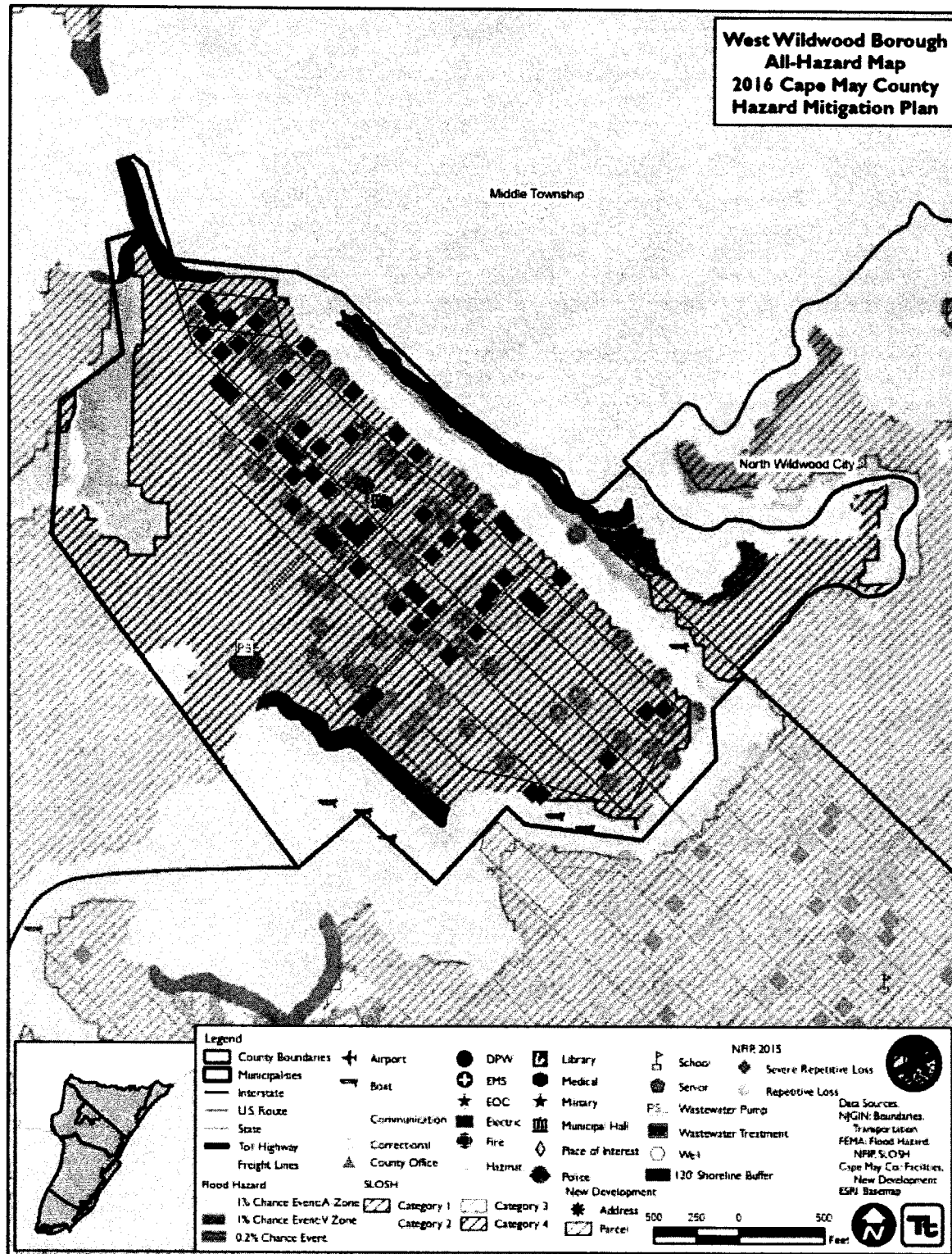




Figure 9.14-2. Borough of West Wildwood Hazard Area Extent and Location Map 2

