

## *Appendix Vol I.40 Red Bank Borough*

Please find below the following documents specific to this jurisdiction that have been included as part of the plan update process.

- Summary Sheet
- Mitigation Action Table
- Mitigation Action Worksheets
- Capability Assessment
- Flood Zone Map
- Sea Level Rise Vulnerability Map
- Meeting Material





## NFIP Statistics

**72** *Polices In-force*

**33** *Total Losses*

**\$4,884,528** *Total Payments*

**3** *Number of RL Properties*

**0** *Number Mitigated  
RL Properties*

**8** *RL - Total Losses*

**\$1,487,369** *RL - Total Paid*

**0** *Number of SRL Properties*

**0** *Number Mitigated SRL  
Properties*

**0** *SRL - Total Losses*

**\$0** *SRL - Total Paid*

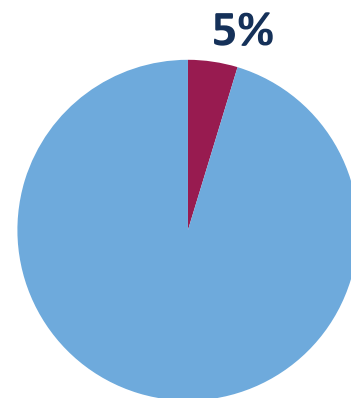


## Critical Facilities

**28** *Critical Facilities*

**10** *Critical Infrastructure*

**99** *Historic & Cultural Resources*



Percent Land Area Within SFHA

**10**

*Total Mitigation  
Actions*

**3**



*Education and Awareness Programs*

**5**



*Structure and Infrastructure Projects*

**2**



*Local Plans and Regulations*

**0**



*Natural Systems Protection*



**409** *SV Population At Risk (2017)*

**575** *Population at Risk (2017)*



Red Bank, Borough of

Monmouth County HMP Mitigation Action Summary

Community Action #	Action Name	Action Description	Action Category	Action Type	Hazard(s) Addressed	Priority	Ease of Implementation	Responsible Party	Potential Funding Sources	Cost Estimate	Timeline	Action Status
40_01	Acquire, elevate, or relocate buildings and infrastructure in flood prone areas, with a focus on Repetitive Loss (RL) and Severe Repetitive Loss (SRL) properties	At the discretion of facility owners, encourage mitigation activities for at-risk properties, specifically Repetitive Loss (RL) and Severe Repetitive Loss (SRL) properties, including: (a) removal of existing structures from flood hazard areas; (b) elevate or retrofit structures and utilities; and (c) flood proofing (wet floodproofing, dry floodproofing, ring walls, etc.). The Borough does not own these properties or have jurisdiction over them. Our action will be to initiate contact with facility owners and work to educate them on various grant programs that can be used for mitigation, types of mitigation activities that could be applicable for their structures, determine their level of interest, and submit grant applications to FEMA on their behalf as funding streams become available. Hotel, convalescent home, school, nursing home and office building would be potential candidates for floodproofing (wet or dry floodproofing, ring walls); elevation or retrofit of utilities; or relocation. Potential locations include: Red Bank Board of Education and Majestic Rehab and Nursing Center at Red Bank. Work to come up with a plan to address flooding issues due to its location in the flood zone.	Mitigation - Risk Reduction	Structure and Infrastructure Project	Flood, Nor'easter, Hurricane and Tropical Storm, Storm Surge	High	Medium	The borough needs to identify the position title of a party responsible for	FEMA HMA		5 + years	Ongoing
40_02	New Communication Tower at Tower Hill Water Plant	New communication tower, radio room, and water plant replacing damaged structures located at the Tower Hill Water Plant. Possibility of adding Radio frequency for use with battery transistors.		Education and Awareness Programs	All Hazards			Construction Official	Grants, Insurance, local budget.	\$350,000.00		Completed
40_03	Drainage Improvements in Marine Park	Need to maintain integrity of existing bulkhead, as it has been replaced and structurally withheld the last three storm surges, flooding still occurs. Also, electrical equipment needs to be relocated. Pump lift station operation for sewage was inoperative as a result of lost power and the fact that generators would be ineffective at grade due to the rise of water over the station itself. A "All Clay" public tennis court approximately 30 yards from the bulkhead has been destroyed by the rising water from Superstorm Sandy and has not yet been restored.		Structure and Infrastructure Project	Flood, Wave Action, Nor'easter, Hurricane and Tropical Storm, Storm Surge			Mayor and Council	Grants	\$4,000,000.00		Completed
40_04	Implement Stormwater Management Maintenance Plan	Perform regular sediment and debris clearance to help ensure that the system is kept unimpaired and therefore functioning properly.	Maintenance/Response/Recovery	Structure and Infrastructure Project	Flood, Nor'easter, Hurricane and Tropical Storm	Medium	Low	DPW	Municipal budget	\$150,000.00	1 year	Ongoing
40_05	Evaluate Water and Sewer Infrastructure and Make Improvements as Needed	Maintain inadequate and decomposing materials and increase capacity where applicable.	Maintenance/Response/Recovery	Structure and Infrastructure Project	Flood, Nor'easter, Hurricane and Tropical Storm	Medium	Low	DPW	Municipal budget	\$10,000,000.00	1 year	Ongoing



Red Bank, Borough of

Monmouth County HMP Mitigation Action Summary

Community Action #	Action Name	Action Description	Action Category	Action Type	Hazard(s) Addressed	Priority	Ease of Implementation	Responsible Party	Potential Funding Sources	Cost Estimate	Timeline	Action Status
40_06	Coordinate with Red Bank Primary School on Flood Mitigation Strategies	Work with the Board of Education on coming up with a plan to addressing the flooding issues. Examples of mitigation can include flood proofing or elevations.	Administrative	Education and Awareness Programs	All Hazards	Medium	Low	Board of Education, Borough	Municipal budget, Homeland Security grants		2 years	New
40_07	Coordinate with Chapin Hill Nursing Home on Mitigation Strategies to Address Flooding, including partnering with the Salvation Army	Coordinate with the Chapin Hill Nursing Home (100 Chapin Ave.) to mitigate the facility's flooding issue. During Hurricane Irene, the Borough coordinated with the Nursing Home and the Salvation Army to partner together for evacuations and shelters.	Administrative	Local Plans and Regulations	Flood, Wave Action, Nor'easter, Hurricane and Tropical Storm, Storm Surge	Medium	Low	Hackensack Meridian Health, Borough	CDBG-DR or other HUD funding		5 + years	New
40_08	Implement Impervious Cover Reduction Action Plan	Implement green infrastructure practices listed in Rutgers' Impervious Cover Reduction Action Plan for Red Bank (2017).	Administrative	Local Plans and Regulations	Flood, Nor'easter, Hurricane and Tropical Storm, Storm Surge, Winter Storm	Medium	Low	Borough of Red Bank	Municipal budget		5 + years	New
40_09	Establish a Tree Trimming Program and Create a Wind Shield Survey	Through the Borough's existing Shade Tree Committee, establish a tree trimming program and create a Wind Shield Survey for public inventory.	Maintenance/Response/Recovery	Education and Awareness Programs	Extreme Wind, Lightening, Nor'easter, Hurricane and Tropical Storm, Wildfire, Tornado	Medium	Low	Shade Tree Committee, Borough Administrator, DPW	Municipal budget		5 + years	New
40_10	Construct Flood Measure (e.g. floodwalls or bulkhead) along the Navesink River	Construct Flood Measure (e.g. floodwalls or bulkhead ) along the Navensink River, which causes repetitive flooding to critical facilities.	Mitigation - Risk Reduction	Structure and Infrastructure Project	Flood, Lightening, Nor'easter, Hurricane and Tropical Storm, Storm Surge	High	Medium	Borough	FEMA HMA		3 years	New



# Monmouth County Mitigation Action Worksheets

Community Action Number: 40\_01

Red Bank, Borough of

## Describing the Action

Action Name:	Acquire, elevate, or relocate buildings and infrastructure in flood prone areas, with a focus on Repetitive Loss (RL) and Severe Repetitive Loss (SRL) properties
Action Category:	Mitigation - Risk Reduction
Action Type:	Structure and Infrastructure Project
HMA Eligible Activity:	Structural Retrofitting of Existing Buildings
Action Description:	At the discretion of facility owners, encourage mitigation activities for at-risk properties, specifically Repetitive Loss (RL) and Severe Repetitive Loss (SRL) properties, including: (a) removal of existing structures from flood hazard areas; (b) elevate or retrofit structures and utilities; and (c) flood proofing (wet floodproofing, dry floodproofing, ring walls, etc.). The Borough does not own these properties or have jurisdiction over them. Our action will be to initiate contact with facility owners and work to educate them on various grant programs that can be used for mitigation, types of mitigation activities that could be applicable for their structures, determine their level of interest, and submit grant applications to FEMA on their behalf as funding streams become available. Hotel, convalescent home, school, nursing home and office building would be potential candidates for floodproofing (wet or dry floodproofing, ring walls); elevation or retrofit of utilities; or relocation. Potential locations include: Red Bank Board of Education and Majestic Rehab and Nursing Center at Red Bank. Work to come up with a plan to address flooding issues due to its location in the flood zone.

## Evaluating the Action

Hazard(s) Addressed:	Flood, Nor'easter, Hurricane and Tropical Storm, Storm Surge
Goals:	1, 2, 3, 5, 6
Risk Reduction:	Several commercial properties, a Primary School, residential units (including a 90-bed convalescent center), and a Hotel are within the flood zone. Substantial surge will cause imminent damage to all structures in the flood zone unless structures are raised mitigated. During Superstorm Sandy, storm surge flooding was observed along the immediate shoreline of the Navesink and Swimming River. The marina area was heavily impacted. The Red Bank Primary School located on the banks of the Swimming River, was flooded. The flooring was damaged significantly. Students of the primary school were transferred to the middle school, where split sessions were held for middle and primary school students while repairs were being made. The Chapin Hill nursing home and rehabilitation facility is located within the Swimming River floodplain. During Superstorm Sandy, storm surge entered the first floor of the building. The facility was also impacted during Hurricane Irene, when 80 residents were moved to the Salvation Army at Red Bank for temporary shelter.
Technical:	Structure elevation not feasible for Hotel, Convalescent home, school, and Office building but is likely to be feasible for small commercial properties and apartment complex.
Political:	Political attentiveness for residential property. School board is handling their issues with the Primary School and has not partnered with the town. Public Works maintaining drainage and improvements for the same.
Legal:	No legal authority; Borough will work with willing private property owners.
Environmental:	No adverse environmental impact anticipated.
Social:	Does not adversely affect any particular social group.
Administrative Capability:	Outside assistance would be needed to complete this action.
Local Champion:	Private property owners.
Other Community Objectives:	Furthers goals of participating in the National Flood Insurance Program.
STAPLEE Evaluation:	10

## Implementing the Action

Cost Estimate:	
Priority:	High
Scale of Ease of Implementation:	Medium
Responsible Party:	The borough needs to identify the position title of a party responsible for moving forward with this activity.
Local Planning Mechanism:	Mayor and Council
Likely Funding Source(s):	FEMA HMA



Timeline:	5 + years
Action Status:	Ongoing
Notes:	Ongoing action from 2015; mitigation actions have occurred at the Oyster Point Hotel (146 Bodman Pl), 40 Riverside Ave. (flood panels), Riverview Hospital, 28 Riverside Ave., 30 Hubbard Park, and the Red Bank Library however the Borough would like to continue to support property owners in mitigating their properties.

## Monmouth County Mitigation Action Worksheets

Community Action Number: 40\_02

Red Bank, Borough of

### Describing the Action

Action Name:	New Communication Tower at Tower Hill Water Plant
Action Category:	
Action Type:	Education and Awareness Programs
HMA Eligible Activity:	Miscellaneous/Other
Action Description:	New communication tower, radio room, and water plant replacing damaged structures located at the Tower Hill Water Plant. Possibility of adding Radio frequency for use with battery transistors.

### Evaluating the Action

Hazard(s) Addressed:	All Hazards
Goals:	3, 4, 5, 6, 7
Risk Reduction:	The Borough lacks a means of notifying residents of impending severe weather in cases where methods of Media broadcasting or other conventional means of warning have been compromised. Red Bank's population is projected to increase by 10.1% by 2040.
Technical:	Technically Feasible.
Political:	Supported by both political and publicly.
Legal:	Borough has the authority to implement.
Environmental:	Complies with environmental regulations.
Social:	Will not disrupt or negatively impact any segment of the population.
Administrative Capability:	Borough has sufficient capacity and experience to coordinate this action.
Local Champion:	Local Police, Fire, and OEM Other
Other Community Objectives:	Will be maintained on current location. No impact on new development.
STAPLEE Evaluation:	N/A

### Implementing the Action

Cost Estimate:	\$350,000.00
Priority:	
Scale of Ease of Implementation:	
Responsible Party:	Construction Official
Local Planning Mechanism:	Construction regulated under current codes and regulations.
Likely Funding Source(s):	Grants, Insurance, local budget.
Timeline:	
Action Status:	Completed
Notes:	Completed action; tower has repetitive systems and generator. The Borough was awarded \$1,475 of FEMA Funding 406 Public Assistance for repairs to the roof of the plant.



# Monmouth County Mitigation Action Worksheets

Community Action Number: 40\_03

Red Bank, Borough of

## Describing the Action

Action Name:	Drainage Improvements in Marine Park
Action Category:	
Action Type:	Structure and Infrastructure Project
HMA Eligible Activity:	Localized Flood Risk Reduction Projects
Action Description:	Need to maintain integrity of existing bulkhead, as it has been replaced and structurally withheld the last three storm surges, flooding still occurs. Also, electrical equipment needs to be relocated. Pump lift station operation for sewage was inoperative as a result of lost power and the fact that generators would be ineffective at grade due to the rise of water over the station itself. A "All Clay" public tennis court approximately 30 yards from the bulkhead has been destroyed by the rising water from Superstorm Sandy and has not yet been restored.

## Evaluating the Action

Hazard(s) Addressed:	Flood, Wave Action, Nor'easter, Hurricane and Tropical Storm, Storm Surge
Goals:	2, 3, 5, 6
Risk Reduction:	Flooding and wave action are a significant issue in the Marine Park area. The existing bulkhead has been unable to prevent storm surges from damaging infrastructure but has prevent wave induced erosion to the park.
Technical:	Technically Feasible.
Political:	Supported politically and publicly.
Legal:	Borough of Red Bank
Environmental:	Does and will comply with environmental standards.
Social:	No disruption
Administrative Capability:	Outside help
Local Champion:	Environmental and Borough
Other Community Objectives:	Open space preservation.
STAPLEE Evaluation:	N/A

## Implementing the Action

Cost Estimate:	\$4,000,000.00
Priority:	
Scale of Ease of Implementation:	
Responsible Party:	Mayor and Council
Local Planning Mechanism:	Engineering
Likely Funding Source(s):	Grants
Timeline:	
Action Status:	Completed
Notes:	Electrical equipment relocated to garage, generator for pump station installed, and tennis court created. The Borough was awarded FEMA Funding 406 Public Assistance for repairs to Marine Park post-Sandy. The Borough was awarded HMGP funding for the Marine Park Pump Station Generator and Equipment Protection Measure Project (\$345,985) post-Sandy.



# Monmouth County Mitigation Action Worksheets

Community Action Number: 40\_04

Red Bank, Borough of

## Describing the Action

Action Name:	Implement Stormwater Management Maintenance Plan
Action Category:	Maintenance/Response/Recovery
Action Type:	Structure and Infrastructure Project
HMA Eligible Activity:	Miscellaneous/Other/NA
Action Description:	Perform regular sediment and debris clearance to help ensure that the system is kept unimpaired and therefore functioning properly.

## Evaluating the Action

Hazard(s) Addressed:	Flood, Nor'easter, Hurricane and Tropical Storm
Goals:	2, 3, 4, 5, 6
Risk Reduction:	The existing water and sewer system does not allow for efficient and effective drainage and flooding occurs. Storm drains become overwhelmed and flood the streets. When the system is impaired, water can enter structures at the grade level.
Technical:	Technically Feasible.
Political:	Supported politically and publicly
Legal:	Borough of Red Bank has authority.
Environmental:	Does and will comply with environmental standards.
Social:	Will not disrupt the population.
Administrative Capability:	Borough DPW
Local Champion:	Borough of Red Bank elected Officials.
Other Community Objectives:	Supports environmental quality
STAPLEE Evaluation:	N/A

## Implementing the Action

Cost Estimate:	\$150,000.00
Priority:	Medium
Scale of Ease of Implementation:	Low
Responsible Party:	DPW
Local Planning Mechanism:	DPW
Likely Funding Source(s):	Municipal budget
Timeline:	1 year
Action Status:	Ongoing
Notes:	Ongoing action from 2015; plan has been created however the Borough would like to keep this as an action to maintain the plan.



# Monmouth County Mitigation Action Worksheets

Community Action Number: 40\_05

Red Bank, Borough of

## Describing the Action

Action Name:	Evaluate Water and Sewer Infrastructure and Make Improvements as Needed
Action Category:	Maintenance/Response/Recovery
Action Type:	Structure and Infrastructure Project
HMA Eligible Activity:	Miscellaneous/Other/NA
Action Description:	Maintain inadequate and decomposing materials and increase capacity where applicable.

## Evaluating the Action

Hazard(s) Addressed:	Flood, Nor'easter, Hurricane and Tropical Storm
Goals:	3, 5, 7
Risk Reduction:	The existing water and sewer system are inadequate and in need of upgrades, and has areas where materials are decomposing. Failure of sewer system would cause biological and environmental harm to the residents and property of the Borough of Red Bank.
Technical:	Technically Feasible.
Political:	No adverse political ramifications are expected.
Legal:	Borough of Red Bank and TRSA.
Environmental:	Will comply with environmental regulations.
Social:	Equal impact throughout Borough
Administrative Capability:	Outside help is necessary.
Local Champion:	Borough of Red Bank Elected Officials
Other Community Objectives:	Sustains environmental quality
STAPLEE Evaluation:	N/A

## Implementing the Action

Cost Estimate:	\$10,000,000.00
Priority:	Medium
Scale of Ease of Implementation:	Low
Responsible Party:	DPW
Local Planning Mechanism:	Engineering and DPW
Likely Funding Source(s):	Municipal budget
Timeline:	1 year
Action Status:	Ongoing
Notes:	<p>The Borough is currently reevaluating infrastructure and has installed a secondary well and a fixed water meter system.</p> <p>The Borough was awarded HMGP for Pump Station Generators post-Sandy (\$248,991)</p> <p>The Borough was also rewarded FEMA Funding 406 Public Assistance for repair of the lift station control panel and sewage pump at the Marine Park Lift Station.</p>



# Monmouth County Mitigation Action Worksheets

Community Action Number: 40\_06

Red Bank, Borough of

## Describing the Action

Action Name:	Coordinate with Red Bank Primary School on Flood Mitigation Strategies
Action Category:	Administrative
Action Type:	Education and Awareness Programs
HMA Eligible Activity:	Infrastructure Retrofit
Action Description:	Work with the Board of Education on coming up with a plan to addressing the flooding issues. Examples of mitigation can include flood proofing or elevations.

## Evaluating the Action

Hazard(s) Addressed:	All Hazards
Goals:	1, 3, 6, 7
Risk Reduction:	Adding an additional emergency access road will reduce the risk of flooding for students, a vulnerable population.
Technical:	Technically Feasible.
Political:	No adverse political ramifications are expected
Legal:	The school is a public school.
Environmental:	Will comply with environmental regulations.
Social:	This action furthers protection of a vulnerable population
Administrative Capability:	Borough has sufficient capacity and experience to administer this action.
Local Champion:	OEM
Other Community Objectives:	
STAPLEE Evaluation:	N/A

## Implementing the Action

Cost Estimate:	
Priority:	Medium
Scale of Ease of Implementation:	Low
Responsible Party:	Board of Education, Borough
Local Planning Mechanism:	Hazard Mitigation Plan
Likely Funding Source(s):	Municipal budget, Homeland Security grants
Timeline:	2 years
Action Status:	New
Notes:	



# Monmouth County Mitigation Action Worksheets

Community Action Number: 40\_07

Red Bank, Borough of

## Describing the Action

Action Name:	Coordinate with Chapin Hill Nursing Home on Mitigation Strategies to Address Flooding, including partnering with the Salvation Army
Action Category:	Administrative
Action Type:	Local Plans and Regulations
HMA Eligible Activity:	Structural Retrofitting of Existing Buildings
Action Description:	Coordinate with the Chapin Hill Nursing Home (100 Chapin Ave.) to mitigate the facility's flooding issue. During Hurricane Irene, the Borough coordinated with the Nursing Home and the Salvation Army to partner together for evacuations and shelters.

## Evaluating the Action

Hazard(s) Addressed:	Flood, Wave Action, Nor'easter, Hurricane and Tropical Storm, Storm Surge
Goals:	1, 2, 3, 4, 5, 6, 7
Risk Reduction:	Nursing home is located in a Special Flood Hazard Zone and floods frequently.
Technical:	Technically feasible.
Political:	No adverse political ramifications are expected
Legal:	The nursing home is privately owned by Hackensack Meridian Health; the Borough can only encourage the facility to protect themselves against flood events.
Environmental:	Will comply with environmental regulations.
Social:	This action furthers protection of a vulnerable population
Administrative Capability:	Borough has sufficient capacity and experience to administer this action.
Local Champion:	OEM
Other Community Objectives:	
STAPLEE Evaluation:	N/A

## Implementing the Action

Cost Estimate:	
Priority:	Medium
Scale of Ease of Implementation:	Low
Responsible Party:	Hackensack Meridian Health, Borough
Local Planning Mechanism:	Hazard Mitigation Plan
Likely Funding Source(s):	CDBG-DR or other HUD funding
Timeline:	5 + years
Action Status:	New
Notes:	



# Monmouth County Mitigation Action Worksheets

Community Action Number: 40\_08

Red Bank, Borough of

## Describing the Action

Action Name:	Implement Impervious Cover Reduction Action Plan
Action Category:	Administrative
Action Type:	Local Plans and Regulations
HMA Eligible Activity:	Miscellaneous/Other/NA
Action Description:	Implement green infrastructure practices listed in Rutgers' Impervious Cover Reduction Action Plan for Red Bank (2017).

## Evaluating the Action

Hazard(s) Addressed:	Flood, Nor'easter, Hurricane and Tropical Storm, Storm Surge, Winter Storm
Goals:	2, 3, 5, 6
Risk Reduction:	The Borough is highly dense and stormwater cannot always infiltrate into the ground due to development. Green infrastructure practices will strengthen stormwater management and therefore reduce local flooding.
Technical:	Technically feasible.
Political:	No adverse political ramifications are expected.
Legal:	No legal impediments anticipated.
Environmental:	This action will improve the environment's stormwater quality.
Social:	Does not adversely affect any particular social group.
Administrative Capability:	Borough has sufficient capacity and experience to administer this action.
Local Champion:	Borough Engineer
Other Community Objectives:	
STAPLEE Evaluation:	N/A

## Implementing the Action

Cost Estimate:	
Priority:	Medium
Scale of Ease of Implementation:	Low
Responsible Party:	Borough of Red Bank
Local Planning Mechanism:	Hazard Mitigation Plan, Impervious Cover Reduction Action Plan for Red Bank (2017)
Likely Funding Source(s):	Municipal budget
Timeline:	5 + years
Action Status:	New

Notes:



# Monmouth County Mitigation Action Worksheets

Community Action Number: 40\_09

Red Bank, Borough of

## Describing the Action

Action Name:	Establish a Tree Trimming Program and Create a Wind Shield Survey
Action Category:	Maintenance/Response/Recovery
Action Type:	Education and Awareness Programs
HMA Eligible Activity:	Miscellaneous/Other/NA
Action Description:	Through the Borough's existing Shade Tree Committee, establish a tree trimming program and create a Wind Shield Survey for public inventory.

## Evaluating the Action

Hazard(s) Addressed:	Extreme Wind, Lightening, Nor'easter, Hurricane and Tropical Storm, Wildfire, Tornado
Goals:	1, 2, 3, 4, 5, 6, 7
Risk Reduction:	There are several large, old trees in the Borough that are hazards to life and property during storms.
Technical:	Technically feasible.
Political:	No adverse political ramifications are expected.
Legal:	No legal impediments anticipated.
Environmental:	Will comply with environmental regulations.
Social:	Does not adversely affect any particular social group.
Administrative Capability:	Borough has sufficient capacity and experience to administer this action.
Local Champion:	Shade Tree Committee
Other Community Objectives:	This action furthers the Shade Tree Committee's Powers & Duties.
STAPLEE Evaluation:	N/A

## Implementing the Action

Cost Estimate:	
Priority:	Medium
Scale of Ease of Implementation:	Low
Responsible Party:	Shade Tree Committee, Borough Administrator, DPW
Local Planning Mechanism:	Shade Tree Committee
Likely Funding Source(s):	Municipal budget
Timeline:	5 + years
Action Status:	New
Notes:	



# Monmouth County Mitigation Action Worksheets

Community Action Number: 40\_10

Red Bank, Borough of

## Describing the Action

Action Name:	Construct Flood Measure (e.g. floodwalls or bulkhead) along the Navesink River
Action Category:	Mitigation - Risk Reduction
Action Type:	Structure and Infrastructure Project
HMA Eligible Activity:	Localized Flood Risk Reduction Projects
Action Description:	Construct Flood Measure (e.g. floodwalls or bulkhead ) along the Navensink River, which causes repetitive flooding to critical facilities.

## Evaluating the Action

Hazard(s) Addressed:	Flood, Lightening, Nor'easter, Hurricane and Tropical Storm, Storm Surge
Goals:	1, 2, 3
Risk Reduction:	Properties along the Navensink River are subject to repetitive flooding and need protection.
Technical:	Technically feasible.
Political:	No adverse political implications.
Legal:	No legal impediments.
Environmental:	Minor affects to the envioronment.
Social:	Does not adversely affect any particular social group.
Administrative Capability:	Borough has sufficient capacity and experience to administer this action.
Local Champion:	OEM, Emergency Response Services
Other Community Objectives:	
STAPLEE Evaluation:	9

## Implementing the Action

Cost Estimate:	
Priority:	High
Scale of Ease of Implementation:	Medium
Responsible Party:	Borough
Local Planning Mechanism:	Hazard Mitigation Plan
Likely Funding Source(s):	FEMA HMA
Timeline:	3 years
Action Status:	New
Notes:	



## CAPABILITY ASSESSMENT WORKSHEET

Name: Ziad Shehady

Title: Business Administrator

Jurisdiction: Red Bank Borough

Organization:

Local Mitigation Capabilities are existing authorities, policies, programs, and resources that reduce hazard impacts or that could be used to implement hazard mitigation activities. Please complete the tables and questions in the worksheet as completely as possible.

### Planning & Regulatory

Planning and Regulatory Capabilities are the plans, policies, codes, and ordinances that prevent and reduce the impacts of hazards. Please indicate which of the following your jurisdiction currently has in place.

Plan	Yes/No	1. What is the date/year of the plan? 2. Does the plan address hazards? 3. Does the plan identify projects to include in the mitigation strategy? 4. Can the plan be used to implement mitigation actions?
Comprehensive/Master Plan	Yes	2019 Re-Examination Plan; does not address hazards.
Capital Improvements Plan	Yes	
Economic Development Plan	No	
Local Emergency Operations Plan	Yes	
Continuity of Operations Plan	No	
Post-Disaster Recovery Plan	No	
Transportation Plan	No	
Stormwater Management Plan	Yes	2007
Community Wildfire Protection Plan	No	





## CAPABILITY ASSESSMENT WORKSHEET

Other special plans (e.g., brownfields redevelopment, disaster recovery, coastal zone management, climate change adaptation)	Yes	<ul style="list-style-type: none"> <li>• Red Bank Marine Park Plan (2019)</li> <li>• Areas in Need of Rehabilitation Map</li> <li>• Impervious Cover Reduction Action Plan for Red Bank (2017)</li> <li>• Tree Management Plan (2016-2020)</li> <li>• NJ FRAMES</li> </ul>
<b>Building Code, Permitting, and Inspections</b>	<b>Yes/No</b>	<b>Are codes adequately enforced?</b>
Building Code	Yes	Version/Year: (as adopted by NJAC 5:23)
Building Code Effectiveness Grading Schedule (BCEGS) Score		Score:
Fire Department ISO rating		Rating:
Site Plan Review Requirements	Yes	
<b>Land Use Planning and Ordinances</b>	<b>Yes/No</b>	<b>Is the ordinance an effective measure for reducing hazard impacts? Is the ordinance adequately administered and enforced?</b>
Zoning Ordinance	Yes	
Subdivision Ordinance	Yes	
Floodplain Ordinance	Yes	
Natural hazard ordinance (stormwater, steep slope, wildfire)		
Flood Insurance Rate Maps	Yes	
Acquisition of Land for Open Space and Public Recreation Uses	Yes	
Post-Disaster Recovery Ordinance	No	
Real Estate Disclose Ordinance	No	





## CAPABILITY ASSESSMENT WORKSHEET

Other (ie. Special Purposes Ordinance)	Yes	Special Purposes Ordinance and Growth Management Ordinance
<b>How can the above capabilities be expanded and improved to reduce risk?</b>		

### Administrative & Technical

Identify whether your community has the following administrative and technical capabilities. These include staff and their skills and tools that can be used for mitigation planning and to implement specific mitigation actions. For smaller jurisdictions without local staff resources, if there are public resources at the next higher-level government that can provide technical assistance, indicate so in your comments.

Administration	Yes/No	Describe capability Is coordination effective?
Planning Commission	Yes	
Mitigation Planning Committee	Yes	Emergency Management Committee
Maintenance Programs to Reduce Risk (e.g., tree trimming, clearing drainage systems)	Yes	Shade Tree Committee, Stormwater Management/ Clearing drainage system
Mutual Aid Agreements		
Staff	Yes/No FT/PT	Is the staff full time or part time? Is staffing adequate to enforce regulations? Is the staff trained on hazards and mitigation? Is coordination between agencies and staff effective?
Chief Building Official	Yes FT	Construction Official (FT) Subcode Officials: Building, Plumbing, Electrical, and Fire Protection (FT)
Floodplain Administrator	Yes	
Emergency Manager	Yes	
Community Planner	Yes	





## CAPABILITY ASSESSMENT WORKSHEET

Civil Engineer	Yes	
Surveyor	Yes	
GIS Coordinator	Yes	
Scientists familiar with the hazards of the community	Yes	
Other		
<b>Technical</b>	<b>Yes/No</b>	<b>Describe capability Has capability been used to access/mitigate risk in the past?</b>
Warning Systems/Services (Reverse 911, outdoor warning signals)	Yes	
Hazard Data and Information	Yes	
Grant Writing	Yes	
Hazus Analysis	Yes	
Other		
<b>How can the above capabilities be expanded and improved to reduce risk?</b>		





## CAPABILITY ASSESSMENT WORKSHEET

### Financial

Identify whether your jurisdiction has access to or is eligible to use the following funding resources for hazard mitigation.

Funding Resource	Access / Eligibility (Yes/No)	Has the funding resource been used in the past and for what type of activities? Could the resource be used to fund future mitigation actions?
Capital Improvements Project Funding	Yes	
Authority to Levy Taxes for Specific Purposes	Yes	
Fees for Water, Sewer, Gas, or Electric Services	Yes	
Impact Fees for New Development	Yes	
Stormwater Utility Fee		
Incur Debt Through Private Activities	No	
Community Development Block Grant	Yes	
Other Federal Funding Programs	No	
State Funding Programs		
Other (e.g., withhold spending in hazard-prone areas)	Yes	Incur Debt through General Obligation and Incur Debt through Special Taxes and Revenue Bonds
<b>How can these capabilities be expanded and improved to reduce risk?</b>		





## CAPABILITY ASSESSMENT WORKSHEET

### Education and Outreach

Identify education and outreach programs and methods already in place that could be used to implement mitigation activities and communicate hazard-related information.

Program/Organization	Yes/No	Describe program/organization and how it relates to disaster resilience and mitigation. Could the program/organization help implement future mitigation activities?
Local Citizen Groups or Non-Profit Organizations Focused on Environmental Protection, Emergency Preparedness, Access and Functional Needs Populations, etc.		
Ongoing Public Education or Information Programs (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes	
Natural Disaster or Safety Related School Programs		
StormReady Certification		
Firewise Communities Certification		
Public-Private Partnership Initiatives Addressing Disaster Related Issues		
Other		
<b>How can these capabilities be expanded and improved to reduce risk?</b>		

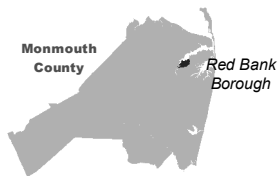






# RED BANK BOROUGH FLOOD VULNERABILITY

MONMOUTH COUNTY HAZARD MITIGATION PLAN



**Building Classification**

Industrial

Commercial

Apartment

Residential (four families or less)

Farm

Vacant

Civic/Public (Tax Exempt)

Unclassified

**Parcel Classification**

Industrial

Commercial

Apartment

Residential (four families or less)

Farm

Vacant

Civic/Public (Tax Exempt)

Unclassified

Open Space

0450900

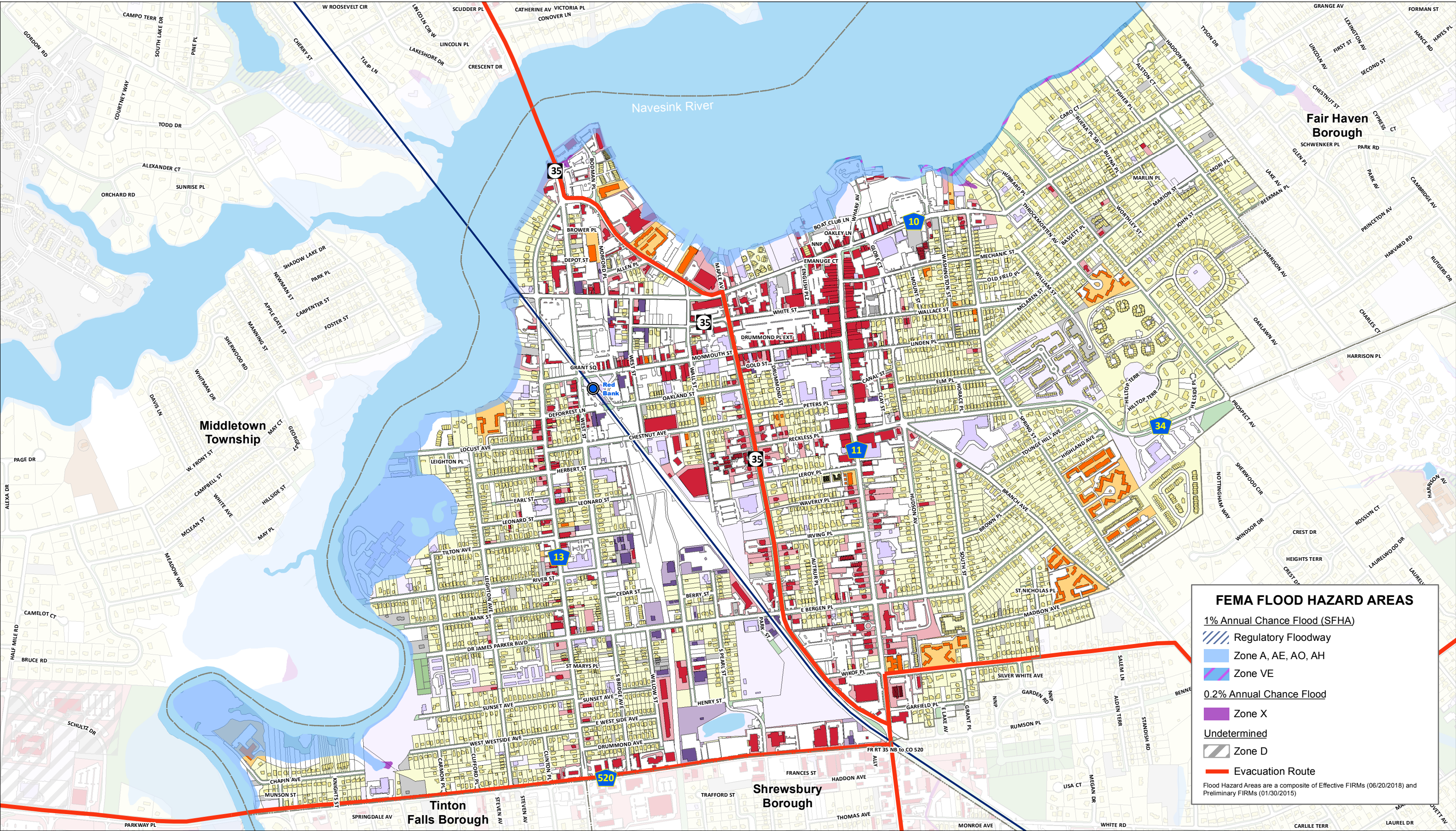
Feet

N

North Arrow

Source: 2014 Esri; Monmouth County; NJOIT-OGIS; NJGIN MODIV Parcel, FEMA

Projection: New Jersey State Plane, NAD 1983



**FEMA FLOOD HAZARD AREAS**

**1% Annual Chance Flood (SFHA)**

- Regulatory Floodway
- Zone A, AE, AO, AH
- Zone VE

**0.2% Annual Chance Flood**

- Zone X

**Undetermined**

- Zone D

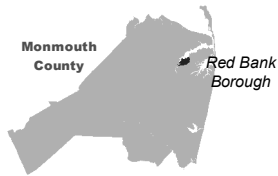
**Evacuation Route**

Flood Hazard Areas are a composite of Effective FIRMs (06/20/2018) and Preliminary FIRMs (01/30/2015)

This map was developed using the 10-04-18 statewide composite of parcel data published by the NJOIT-OGIS. The State of New Jersey makes great effort to provide secure, accurate, and complete data and metadata. However, portions of the data and metadata may be incorrect or not current. Any errors or omissions should be reported for investigation to OGIS.



**RED BANK BOROUGH**  
**FLOOD VULNERABILITY**  
MONMOUTH COUNTY HAZARD MITIGATION PLAN



**Building Classification**

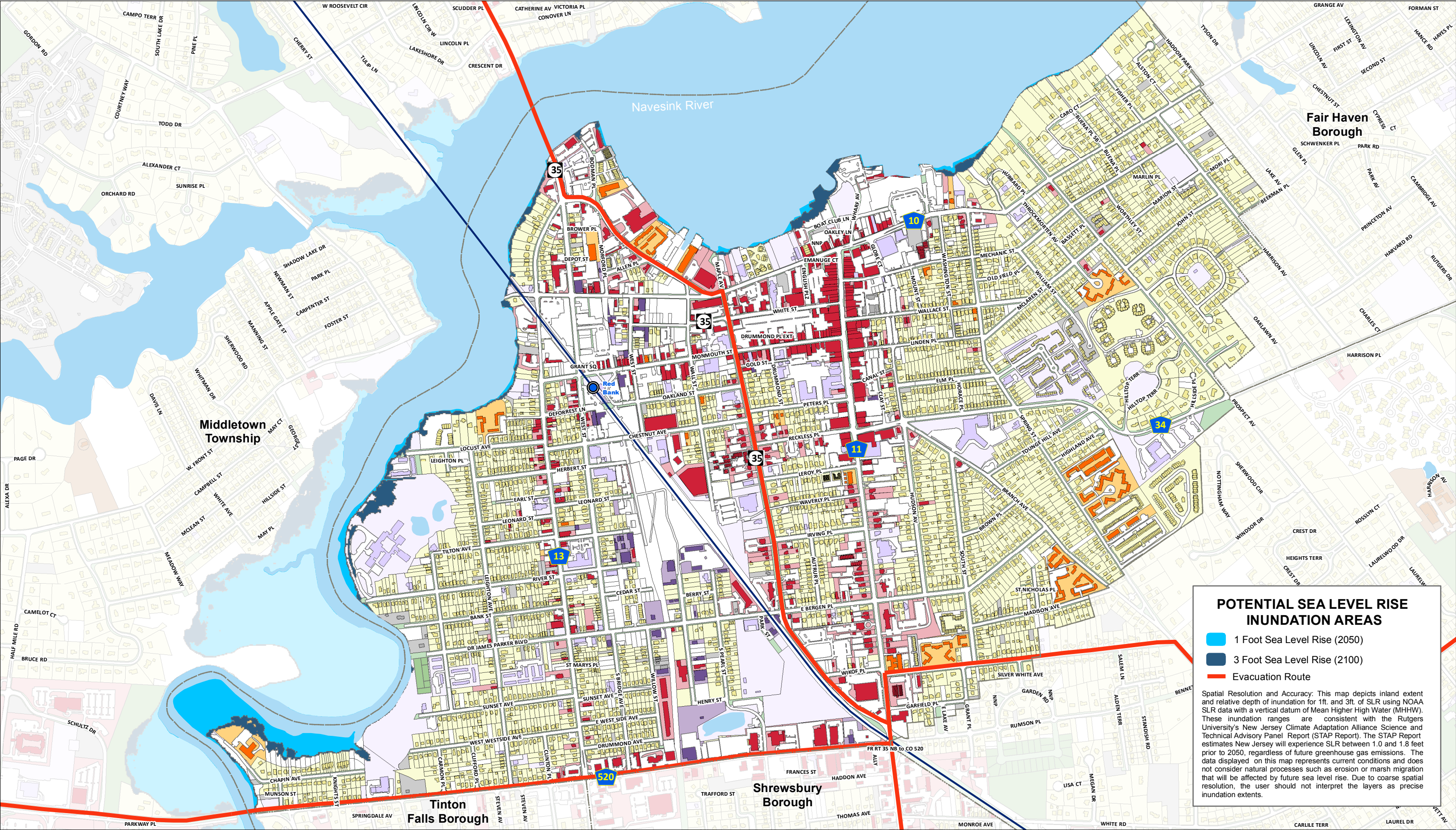
Industrial	Commercial	Apartment	Residential (four families or less)
Farm	Vacant	Civic/Public (Tax Exempt)	Unclassified

**Parcel Classification**

Industrial	Commercial	Apartment	Residential (four families or less)
Farm	Vacant	Civic/Public (Tax Exempt)	Unclassified
			Open Space

0 450 900 Feet

Source: 2014 Esri; Monmouth County; NJOIT-OGIS; NJGIN MODIV Parcel, FEMA  
Projection: New Jersey State Plane, NAD 1983



**POTENTIAL SEA LEVEL RISE INUNDATION AREAS**

- 1 Foot Sea Level Rise (2050)
- 3 Foot Sea Level Rise (2100)
- Evacuation Route

Spatial Resolution and Accuracy: This map depicts inland extent and relative depth of inundation for 1ft. and 3ft. of SLR using NOAA SLR data with a vertical datum of Mean Higher High Water (MHHW). These inundation ranges are consistent with the Rutgers University's New Jersey Climate Adaptation Alliance Science and Technical Advisory Panel Report (STAP Report). The STAP Report estimates New Jersey will experience SLR between 1.0 and 1.8 feet prior to 2050, regardless of future greenhouse gas emissions. The data displayed on this map represents current conditions and does not consider natural processes such as erosion or marsh migration that will be affected by future sea level rise. Due to coarse spatial resolution, the user should not interpret the layers as precise inundation extents.

This map was developed using the 10-04-18 statewide composite of parcel data published by the NJOIT-OGIS. The State of New Jersey makes great effort to provide secure, accurate, and complete data and metadata. However, portions of the data and metadata may be incorrect or not current. Any errors or omissions should be reported for investigation to OGIS.





## MEETING NOTES

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**Topic:** Red Bank- Monmouth County HMP Meeting

**Date:** May 13, 2019

**Time:** 2:00 AM- 3:00 PM

**Location:** Fair Haven, NJ Police Headquarters

**Attendees:** Joseph, McGovern, OEM/ Police Chief

Michael McGlennon, Monmouth County Deputy OEM Coordinator

Richard Gardella, Borough Engineer

Brittany Ashman, MB Planner

Paige Kaspar, MB Planner

**Drafted by:** Paige Kaspar

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### Introductions:

- What is Hazard Mitigation?
- Did Monmouth county receive any money from the HMP plan over the last five years?
  - Did receive generators
- Matching actions with Goals
- New Hazards
- HMP Pamphlet
- Funding

### Status of 2015 Mitigation Actions:

1. Mitigation Activities for At-Risk Properties→ ongoing
2. New communication tower at Towerhill Water Plant→ completed
3. Drainage Improvements in Marine Park→ completed
4. Implement Storm Management Maintenance Plan→ update wording and keep as ongoing/capability
5. Upgrade and replace inadequate and decomposing existing water and sewer systems→ update wording and keep as ongoing





### **2020 Mitigation Actions (NEW):**

1. Relocating School is not possible. Work with the Board of Education on coming up with a plan to addressing the flooding issues. Examples of mitigation can include flood proofing or elevations.
2. Adding an additional road at the school to have an emergency access road; allowing citizens to be able to safely evacuate.
3. Work with Majestic Rehabilitation and Nursing at Red Bank to come up with a plan to address the facility's flooding issues and its location in the flood zone.

### **Repetitive Loss Properties:**

1. 146 Bodman Place, RED BANK, NJ, 07701
2. 117 Broad St, Red Bank Borough, NJ, 07702
3. 1 Marine Park, RED BANK, NJ, 07701

### **Problems:**

- Issues with flooding at the school. In need of adding an additional road for exiting
- Issues with flooding at 100 Chaplin Ave (Majestic Rehabilitation and Nursing Center)

### **Successes:**

- Marine Park Concept plan includes:
  - Relocating the parking lot to the westerly area of the park, now the site of the tennis courts, which have sat unused since they were damaged by Hurricane Sandy more than six years ago.
  - In place of the existing lot would be added open green space, raised some two feet from its present elevation and rimmed by a sea wall to reduce impacts of tidal surges.
  - Raise the electric on top of the hill
- Flood walls installed at Oyster Point Hotel (146 Bodman Pl)
- Flood panels built 1ft above BFE at 40 Riverside Ave.
- Mitigation actions at Riverview Hospital, 28 Riverside Ave., 30 Hubbard Park, and the Red Bank Library
- Applying for HMGP funds to flood proof Marine Park Pump Station
- Applying for HMGP funds for three (3) emergency generators for pump stations located at East Newman Springs Road, West Newman Springs Road and River Street.
- Raising/ Rebuilding of bulkhead / living shore line application at Hubbard Park
- North Prospect Ave and Library Bulkhead Replacement Project
- Riverside Hospital in process of rebuilding/raising bulkhead

### **Capabilities:**

- Storm Management Maintenance Plan
- Stormwater Pollution Prevention Plan
- Shade Tree Maintenance
- Emergency Management Committee
- Impervious Surface Action Study





# Monmouth County Multi-Jurisdictional Hazard Mitigation Plan Update



**Michael Baker**  
INTERNATIONAL

- Environmental Commission
- Hurricane Checklist

## **Vulnerable Populations:**

- Properties along the Navesink River





Monmouth County  
Multi-Jurisdictional Hazard Mitigation Plan Update



Michael Baker  
INTERNATIONAL

Meeting: Red Bank HMP

Date: 05-13-19

Initial	Last Name	First Name	Title	Organization	Email Address
	Neumann	Laura	Borough Engineer	CME Associates	lneumann@cmeusa1.com
	McGlennon	Michael	Deputy Coordinator	MC OEM	mcmglennon@mcsonj.org
	Kaspar	Paige	Planner	MB	paige.kaspar@mbakerintl.com
	Ashman	Brittany	Planner	MB	
	Keen	Cliff	Director of Public Utilities	Red Bank	ckeene@redbanknj.org
	McConnell	Darren	Chief of Police	RBPD	dmcconnell@redbanknj.org
	Welsh	Tammy	Fire Marshal/OEM	RBCEM/FM	twelsh@redbanknj.org
	Shehady	Ziad	Administrator	Red Bank	zshehady@redbanknj.org
	Corcione	Fred	Const. OFF.	Red Bank	fcorcione@redbanknj.org