

## *Appendix Vol I.37 Neptune Township*

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

**761** *Policies In-force*

**396** *Total Losses*

**\$22,901,625** *Total Payments*

**19** *Number of RL Properties*

**2** *Number Mitigated  
RL Properties*

**46** *RL - Total Losses*

**\$2,242,882** *RL - Total Paid*



**0** *Number of SRL Properties*

**0** *Number Mitigated SRL  
Properties*

**0** *SRL - Total Losses*

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

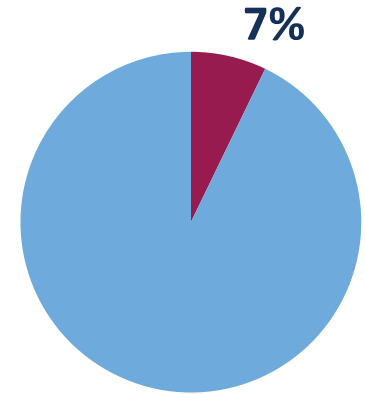
## Critical Facilities

**50** *Critical Facilities*

**1** *Critical Infrastructure*



**1,836** *Historic & Cultural Resources*



Percent Land Area Within SFHA

**22**

*Total Mitigation  
Actions*

**2**



*Education and Awareness Programs*

**12**



*Structure and Infrastructure Projects*

**0**



*Local Plans and Regulations*

**8**



*Natural Systems Protection*



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

**341** *Population at Risk (2017)*

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
37_01	Purchase and Install a Generator at North Island Pump Station	Create elevated platform for new emergency generator to service pump station.		Structure and Infrastructure Project	Flood, Nor'easter, Hurricane and Tropical Storm, Storm Surge			Neptune Township Engineering Department/Neptune Sewer		\$18,500.00		Completed
37_02	De-snag and Desilt Wesley Lake	Remove/desilt the lake.	Maintenance/Response/Recovery	Natural Systems Protection	Flood, Hurricane and Tropical Storm, Storm Surge	Medium	Low	Township Engineering	Municipal budget	\$1,500,000.00	5 + years	New
37_03	Construct an Elevated Bulkhead and a Living Shoreline Around Wesley Lake	Construct or elevate a structural or earth berm bulkhead around the lake along with a living shoreline.	Mitigation - Risk Reduction	Natural Systems Protection	Flood, Hurricane and Tropical Storm, Storm Surge	High	Medium	Neptune Township Engineering Department; Neptune	FEMA HMA, The Nature Conservancy (TNC)	\$2,500,000.00	2 years	New
37_04	Construct a Living Shoreline along Shark River	Construct a living shoreline along the Shark River, located in the Shark River Hills neighborhood of the Township, connecting into the bordering town of Neptune City.	Mitigation - Continuity of Functional Use	Natural Systems Protection	Flood, Nor'easter, Hurricane and Tropical Storm, Storm Surge	Medium	Medium	Neptune Township Engineering Department	FEMA HMA, The Nature Conservancy (TNC)	\$6,000,000.00	1 year	Ongoing
37_05	De-snag and Desilt Fletcher Lake	Remove/desilt the lake.	Maintenance/Response/Recovery	Natural Systems Protection	Flood, Nor'easter, Hurricane and Tropical Storm	Medium	Low	Township Engineering	Municipal budget	\$1,500,000.00	5 + years	New
37_06	Construct an Elevated Bulkhead and a Living Shoreline Around Fletcher Lake	Construct or elevate a structural or earth berm bulkhead around the lake along with a living shoreline.	Mitigation - Risk Reduction	Natural Systems Protection	Flood, Nor'easter, Hurricane and Tropical Storm, Storm Surge	High	Medium	Neptune Township Engineering Department; Neptune	FEMA HMA, The Nature Conservancy (TNC)	\$2,500,000.00	2 years	New
37_07	Establish and Install Warning System and Flood Gauges	Install flood gauges with warning lights in rivers and lakes in or near flood-prone areas, specifically along Shark River, Alberta Lake, and Fletcher Lake. Connect the flood gauges to automatically communicate warnings.	Maintenance/Response/Recovery	Structure and Infrastructure Project	Flood, Hurricane and Tropical Storm, Storm Surge	Low	Low	Engineering and Planning/OEM	Municipal budget	\$700,000.00	3 years	Ongoing
37_08	Acquire and Demolish or Relocate Buildings and Infrastructure in flood-prone areas, with a focus on Repetitive Loss (RL) and Severe Repetitive Loss (SRL) properties	Identify and target properties of willing sellers in Special Flood Hazard Areas or flood-prone areas, especially Repetitive Loss and Severe Repetitive Loss properties, and obtain appraisals and funding for acquisition. Upon acquisition, maintain as dedicated open space.	Mitigation - Risk Reduction	Structure and Infrastructure Project	Flood, Nor'easter, Hurricane and Tropical Storm, Storm Surge	High	Medium	Neptune Township Administration	FEMA HMA	\$1,200,000.00	3 years	Ongoing
37_09	De-snag and Desilt Hollow Brook	Removal of dense overgrown vegetation, dead fallen trees, silt, and sediment from Hollow Brook	Maintenance/Response/Recovery	Natural Systems Protection	Flood, Nor'easter, Hurricane and Tropical Storm	Low	Low	Township Engineering, DPW	Municipal budget	\$4,000,000.00	5 + years	New

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
37_10	Target Harden Critical Facilities by Installing Surveillance Cameras, Barriers, Window Film, an Access Control System, and/or Bulletproof Glass	Install and improve surveillance equipment and CCTV, barriers, bulletproof glass, access control, window film on entrance-facing access points, and surveillance footprints on the ground for Township schools and municipal buildings.	Maintenance/Response/Recovery	Structure and Infrastructure Project	Terrorism	Medium	Low	Township	Homeland Security grants		1 year	New
37_11	Elevate 23 Flood-prone Properties, with a focus on Repetitive Loss and Severe Repetitive Loss Properties	Elevate 23 flood-prone residential properties, especially Repetitive Loss and Severe Repetitive Loss properties.	Mitigation - Risk Reduction	Structure and Infrastructure Project	Flood, Hurricane and Tropical Storm, Storm Surge	High	Medium	Homeowners, Neptune Township Engineering Department,	FEMA HMA	\$57,500.00	1 year	Ongoing
37_12	Construct a Living Shoreline along Seaview Island	Construct a living shoreline along the Seaview Island.	Mitigation - Continuity of Functional Use	Natural Systems Protection	Wave Action, Nor'easter, Hurricane and Tropical Storm, Storm Surge	Medium	High	Township Engineering, DPW	FEMA HMA, The Nature Conservancy (TNC)	\$3,000,000.00	5 + years	New
37_13	Purchase and Install Generators for Critical Infrastructure	Generators for stormwater pumps and at the Township EOC center.	Maintenance/Response/Recovery	Structure and Infrastructure Project	All Hazards	Low	Low	Township	FEMA HMA	\$100,000.00	2 years	New
37_14	De-s snag and Desilt Alberta Lake	Remove/desilt the lake.	Maintenance/Response/Recovery	Structure and Infrastructure Project	Flood, Nor'easter, Hurricane and Tropical Storm, Storm Surge	Medium	Low	Neptune Township Engineering Department; Neptune	Municipal budget	\$1,500,000.00	5 + years	Ongoing
37_15	Reconstruct Deteriorating Bulkheads on S. Riverside Drive and Retrofit Stormwater Infrastructure	Reconstruct deteriorating bulkheads, extend drainage pipes, and retrofit storm drains with Tideflex valves.	Mitigation - Continuity of Functional Use	Structure and Infrastructure Project	Flood, Nor'easter, Hurricane and Tropical Storm, Storm Surge	Medium	Medium	Neptune Township Engineering Department, Neptune	FEMA HMA	\$2,500,000.00	5 + years	Ongoing
37_16	Retrofit Pump stations with Watertight Doors and/or Windows	Retrofit existing pump stations in flood zones with watertight doors and/or windows.	Mitigation - Risk Reduction	Structure and Infrastructure Project	Flood, Nor'easter, Hurricane and Tropical Storm, Storm Surge	Medium	Medium	Neptune Township Engineering Department/Neptune Sewer	FEMA HMA	\$100,000.00	2 years	Ongoing
37_17	De-s snag and Desilt the Shark River Tributary, Jumping Brook, and Musquash Brook	Removal of dense overgrown vegetation, dead fallen trees, silt, and sediment from the Shark River Tributary, Jumping Brook, and Musquash Brook.	Maintenance/Response/Recovery	Natural Systems Protection	Flood, Hurricane and Tropical Storm, Storm Surge	Low	Low	Neptune Township, Neptune City, Wall, Belmar, and NJDEP	Municipal budget	\$4,000,000.00	5 + years	Ongoing

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
37_18	Create a Permanent Confined Disposal Facilities (CDF) and Structural Earthen Berm	Identify and target properties that have the characteristics that can be used for a Confined Disposal Facility (CDF) and construct an Earthen Berms out of materials and form a stable slope. Berm to be stabilized with seed.	Maintenance/Response/Recovery	Structure and Infrastructure Project	Flood, Hurricane and Tropical Storm, Storm Surge	Low	Medium	Engineering and Planning	Municipal budget	\$350,000.00	2 years	Ongoing
37_19	Desilt and Dredge Shark River	Dredge or pump siltation from entire Shark River Basin to Confined Disposal Facility (CDF).	Maintenance/Response/Recovery	Structure and Infrastructure Project	Flood, Hurricane and Tropical Storm, Storm Surge	Medium	Low	Neptune Township, Neptune City, NJDEP, Wall, Belmar. NJDOT	Municipal budget	\$10,000,000.00	1 year	Ongoing
37_20	Create Hazard Overlay Zones and Update ArcGIS Online	Work with GIS Consultant and in-house staff to overlay Special Flood Hazard Zones on Township Maps. Distribute as handouts to residents at Neptune Day, at Township counters, and to Homeowners Associations in Special Flood Hazard Zones. Update ArcGIS online and publish on Township website to increase hazard awareness and evacuation routes.	Administrative	Education and Awareness Programs	Flood, Nor'easter, Hurricane and Tropical Storm, Storm Surge	Low	Low	Neptune Township Engineering Department/GIS Consultant	Municipal budget	\$12,000.00	1 year	Ongoing
37_21	Update ArcGIS Online	Update ArcGIS online and publish on Township website to increase hazard awareness and evacuation routes.	Administrative	Education and Awareness Programs	Flood, Hurricane and Tropical Storm, Storm Surge	High		Neptune Township Engineering Department	FEMA HMA	\$2,000.00	1 year	Withdrawn
37_22	Purchase Stormwater Pumps and Appurtenances	Purchase stormwater pumps and appurtenances to reduce flood risk in the special flood hazard area.	Maintenance/Response/Recovery	Structure and Infrastructure Project	Flood, Nor'easter, Hurricane and Tropical Storm, Storm Surge	Low	Low	Neptune Township Engineering Department, DPW	Municipal budget	\$100,000.00	1 year	New

# Monmouth County Mitigation Action Worksheets

Community Action Number: 37\_01

Neptune, Township of

## Describing the Action

Action Name: Purchase and Install a Generator at North Island Pump Station

Action Category:

Action Type: Structure and Infrastructure Project

HMA Eligible Activity: Localized Flood Risk Reduction Projects

Action Description: Create elevated platform for new emergency generator to service pump station.

## Evaluating the Action

Hazard(s) Addressed: Flood, Nor'easter, Hurricane and Tropical Storm, Storm Surge

Goals: 3, 7

Risk Reduction: Superstorm Sandy highlighted pump stations that are in need of power back up at an elevation that will not avoid flooding. The existing at-grade emergency generator was flooded beyond repair as a result of storm surge during Sandy.

Technical: Technically feasible. Need planning and local building permit.

Political: Neptune Township Sewer Department and Township Committee in support of project.

Legal: No apparent legal issues; Township owns property.

Environmental: No NJDEP permitting required.

Social: This action does not adversely affect any particular neighborhood, social group or organization. It would serve to further protect property and infrastructure.

Administrative Capability: Township can administer action.

Local Champion: Neptune Township, Neptune Township Sewer Department

Other Community Objectives: Project furthers the protection of critical infrastructure and local neighborhood by alleviating failure and sewer back-ups due to flooding.

STAPLEE Evaluation: N/A

## Implementing the Action

Cost Estimate: \$18,500.00

Priority:

Scale of Ease of Implementation:

Responsible Party: Neptune Township Engineering Department/Neptune Sewer Department

Local Planning Mechanism: Local Building code

Likely Funding Source(s):

Timeline:

Action Status: Completed

Notes: HMGP grant of \$85k for Generator Improvements. Additionally, the Township was awarded FEMA 406 Public Assistance funding for repairs to the North Island Pump Station post-Sandy.

# Monmouth County Mitigation Action Worksheets

Community Action Number: 37\_02

Neptune, Township of

## Describing the Action

Action Name: De-snag and Desilt Wesley Lake  
Action Category: Maintenance/Response/Recovery  
Action Type: Natural Systems Protection  
HMA Eligible Activity: Miscellaneous/Other/NA  
Action Description: Remove/desilt the lake.

## Evaluating the Action

Hazard(s) Addressed: Flood, Hurricane and Tropical Storm, Storm Surge  
Goals: 2, 3, 5, 6  
Risk Reduction: During Superstorm Sandy significant storm surge flooded areas near Wesley Lake. Both private homes and public infrastructure were impacted. The removal of silt and sediment will enable the lake to hold more water.  
Technical: Technically feasible. Need planning and permitting.  
Political: No adverse political ramifications are expected.  
Legal: No legal impediments anticipated.  
Environmental: No adverse environmental impact anticipated.  
Social: Does not adversely affect any particular social group.  
Administrative Capability: Borough has sufficient capacity and experience to administer this action  
Local Champion: Neptune Township, Wesley Lake Commission, Asbury Park  
Other Community Objectives: Adds capacity, reduces flooding, and increases water quality.  
STAPLEE Evaluation: N/A

## Implementing the Action

Cost Estimate: \$1,500,000.00  
Priority: Medium  
Scale of Ease of Implementation: Low  
Responsible Party: Township Engineering  
Local Planning Mechanism: Hazard Mitigation Plan  
Likely Funding Source(s): Municipal budget  
Timeline: 5 + years  
Action Status: New  
Notes: Township's top priority; ranked in order from highest priority (this action) to lowest priority.

# Monmouth County Mitigation Action Worksheets

Community Action Number: 37\_03

Neptune, Township of

## Describing the Action

Action Name:	Construct an Elevated Bulkhead and a Living Shoreline Around Wesley Lake
Action Category:	Mitigation - Risk Reduction
Action Type:	Natural Systems Protection
HMA Eligible Activity:	Localized Flood Risk Reduction Projects
Action Description:	Construct or elevate a structural or earth berm bulkhead around the lake along with a living shoreline.

## Evaluating the Action

Hazard(s) Addressed:	Flood, Hurricane and Tropical Storm, Storm Surge
Goals:	2, 3, 5, 6
Risk Reduction:	During Superstorm Sandy significant storm surge flooded areas near Wesley Lake. Both private homes and public infrastructure were impacted. Superstorm Sandy highlighted gaps in the existing bulkhead system and its associated flood impacts. The areas that need bulkheading reconstruction are areas where there are no existing bulkheads, or the elevations are too low. Backflow of tidewaters into the drainage system at the outfalls creates flooding when the system is full of tidewater instead of runoff.
Technical:	Technically feasible.
Political:	No adverse issues anticipated
Legal:	No apparent legal issue.
Environmental:	NJDEP permitting required.
Social:	This action would serve to protect a neighborhood that was severely damaged by Sandy. It would not adversely affect them, it would further protect them.
Administrative Capability:	Township can administer action but will need consultants for permitting and plans.
Local Champion:	Neptune Township, Neptune Township Sewer Department, Wesley Lake Commission, Asbury Park, homeowners
Other Community Objectives:	Project furthers the protection of critical infrastructure and local neighborhood by alleviate flooding and evacuations.
STAPLEE Evaluation:	12

## Implementing the Action

Cost Estimate:	\$2,500,000.00
Priority:	High
Scale of Ease of Implementation:	Medium
Responsible Party:	Neptune Township Engineering Department; Neptune Township Committee
Local Planning Mechanism:	Hazard Mitigation Plan
Likely Funding Source(s):	FEMA HMA, The Nature Conservancy (TNC)
Timeline:	2 years
Action Status:	New
Notes:	The Township was awarded HMGP funding of \$430,176 for outfall valve and bulkhead installation project.



# Monmouth County Mitigation Action Worksheets

Community Action Number: 37\_04

Neptune, Township of

## Describing the Action

Action Name:	Construct a Living Shoreline along Shark River
Action Category:	Mitigation - Continuity of Functional Use
Action Type:	Natural Systems Protection
HMA Eligible Activity:	Localized Flood Risk Reduction Projects
Action Description:	Construct a living shoreline along the Shark River, located in the Shark River Hills neighborhood of the Township, connecting into the bordering town of Neptune City.

## Evaluating the Action

Hazard(s) Addressed:	Flood, Nor'easter, Hurricane and Tropical Storm, Storm Surge
Goals:	2, 3, 5, 6
Risk Reduction:	Neptune Township is a coastal community with a substantial amount of land within the mapped flood and storm surge hazard areas. During Superstorm Sandy, significant storm surge flooded areas near the Shark River, Fletcher Lake, Wesley Lake, and Atlantic Ocean. Both private homes and public infrastructure were impacted. Sea Level Rise and climate change will contribute to more frequent and severe flooding and surge events over a larger area. Climate change will contribute to more frequent and severe weather events.
Technical:	Technically feasible. Conceptual plan completed for grants, properties owned by the Township and bordering municipalities.
Political:	Neptune Township, Neptune City, and Belmar support the living shorelines along portions of their boundaries.
Legal:	Proposed properties for the living shoreline are owned by the Township.
Environmental:	May require NJDEP permitting
Social:	This action does not adversely affect any particular neighborhood, social group or organization. The project would be completely on publicly-owned property. It would serve to further protect property and infrastructure.
Administrative Capability:	Township can administer action with help from consultants.
Local Champion:	Planning, Emergency Management, Harbor Commission, Governing Bodies, neighborhood groups in favor of project
Other Community Objectives:	This action furthers environmental quality, furthers the use of open space preservation, helps support fish habitat.
STAPLEE Evaluation:	N/A

## Implementing the Action

Cost Estimate:	\$6,000,000.00
Priority:	Medium
Scale of Ease of Implementation:	Medium
Responsible Party:	Neptune Township Engineering Department
Local Planning Mechanism:	Plans and Specifications
Likely Funding Source(s):	FEMA HMA, The Nature Conservancy (TNC)
Timeline:	1 year
Action Status:	Ongoing
Notes:	Ongoing 2015 action: first phase (design) is complete.

# Monmouth County Mitigation Action Worksheets

Community Action Number: 37\_05

Neptune, Township of

## Describing the Action

Action Name: De-snag and Desilt Fletcher Lake  
Action Category: Maintenance/Response/Recovery  
Action Type: Natural Systems Protection  
HMA Eligible Activity: Miscellaneous/Other/NA  
Action Description: Remove/desilt the lake.

## Evaluating the Action

Hazard(s) Addressed: Flood, Nor'easter, Hurricane and Tropical Storm  
Goals: 2, 3, 5, 6  
Risk Reduction: During Superstorm Sandy significant storm surge flooded areas near Fletcher Lake. Both private homes and public infrastructure were impacted. The removal of silt and sediment will enable the lake to hold more water.  
Technical: Technically feasible. Need planning and permitting.  
Political: No adverse political ramifications are expected.  
Legal: No legal impediments anticipated.  
Environmental: No adverse environmental impact anticipated.  
Social: Does not adversely affect any particular social group.  
Administrative Capability: Borough has sufficient capacity and experience to administer this action  
Local Champion: Fletcher Lake Commission, HOA, Bradley Beach  
Other Community Objectives: Adds capacity, reduces flooding, and increases water quality.  
STAPLEE Evaluation: N/A

## Implementing the Action

Cost Estimate: \$1,500,000.00  
Priority: Medium  
Scale of Ease of Implementation: Low  
Responsible Party: Township Engineering  
Local Planning Mechanism: Hazard Mitigation Plan  
Likely Funding Source(s): Municipal budget  
Timeline: 5 + years  
Action Status: New

Notes:

# Monmouth County Mitigation Action Worksheets

Community Action Number: 37\_06

Neptune, Township of

## Describing the Action

Action Name:	Construct an Elevated Bulkhead and a Living Shoreline Around Fletcher Lake
Action Category:	Mitigation - Risk Reduction
Action Type:	Natural Systems Protection
HMA Eligible Activity:	Localized Flood Risk Reduction Projects
Action Description:	Construct or elevate a structural or earth berm bulkhead around the lake along with a living shoreline.

## Evaluating the Action

Hazard(s) Addressed:	Flood, Nor'easter, Hurricane and Tropical Storm, Storm Surge
Goals:	2, 3, 5, 6
Risk Reduction:	During Superstorm Sandy significant storm surge flooded areas near Fletcher Lake. Both private homes and public infrastructure were impacted. Superstorm Sandy highlighted gaps in the existing bulkhead system and its associated flood impacts. The areas that need bulkheading reconstruction are areas where there are no existing bulkheads, or the elevations are too low. Backflow of tidewaters into the drainage system at the outfalls creates flooding when the system is full of tidewater instead of runoff.
Technical:	Technically feasible.
Political:	Neptune Township Committee, TNHA, OEM, Ocean Grove Homeowners Association.
Legal:	No apparent legal issue.
Environmental:	NJDEP permitting required.
Social:	This action would serve to protect a neighborhood that was severely damaged by Sandy. It would not adversely affect them, it would further protect them.
Administrative Capability:	Township can administer action but will need consultants for permitting and plans.
Local Champion:	Neptune Township, Neptune Township Sewer Department, HOA, Fletcher Lake Commission, Bradley Beach
Other Community Objectives:	Project furthers the protection of critical infrastructure and local neighborhood by alleviate flooding and evacuations.
STAPLEE Evaluation:	12

## Implementing the Action

Cost Estimate:	\$2,500,000.00
Priority:	High
Scale of Ease of Implementation:	Medium
Responsible Party:	Neptune Township Engineering Department; Neptune Township Committee
Local Planning Mechanism:	Hazard Mitigation Plan
Likely Funding Source(s):	FEMA HMA, The Nature Conservancy (TNC)
Timeline:	2 years
Action Status:	New

Notes:

# Monmouth County Mitigation Action Worksheets

Community Action Number: 37\_07

Neptune, Township of

## Describing the Action

Action Name:	Establish and Install Warning System and Flood Gauges
Action Category:	Maintenance/Response/Recovery
Action Type:	Structure and Infrastructure Project
HMA Eligible Activity:	Miscellaneous/Other/NA
Action Description:	Install flood gauges with warning lights in rivers and lakes in or near flood-prone areas, specifically along Shark River, Alberta Lake, and Fletcher Lake. Connect the flood gauges to automatically communicate warnings.

## Evaluating the Action

Hazard(s) Addressed:	Flood, Hurricane and Tropical Storm, Storm Surge
Goals:	1, 2, 3, 4, 7, 8
Risk Reduction:	Residents living and working in flood hazard areas do not always have enough time to prepare and evacuate flood-prone areas. This warning system would increase public preparedness.
Technical:	Technically feasible. Township would have to locate lake or tide gauges on Township-owned property.
Political:	Neptune Township Committee Adjacent property owners
Legal:	All work would have to be located on Township owned property. AM station would have to be obtained.
Environmental:	Local permitting required for post with warning light.
Social:	Proposed action will help to warn certain flood prone neighborhoods. These would be strategically be located in 4 separate sectors of the Township.
Administrative Capability:	Township can administer would have to prepare bids and specs for radio station and proposed gauges with lights and warning system tied to radio station.
Local Champion:	Neptune Township, Homeowners Associations, TNHA, OEM
Other Community Objectives:	Provides advanced warning for people and business to prepare or evacuate to higher ground prior to an event. Minimizes use of Police and OEM personal for detours and evacuations.
STAPLEE Evaluation:	N/A

## Implementing the Action

Cost Estimate:	\$700,000.00
Priority:	Low
Scale of Ease of Implementation:	Low
Responsible Party:	Engineering and Planning/OEM
Local Planning Mechanism:	Plans, specifications, technology and infrastructure
Likely Funding Source(s):	Municipal budget
Timeline:	3 years
Action Status:	Ongoing
Notes:	Ongoing 2015 action; the Township is searching for funding.

# Monmouth County Mitigation Action Worksheets

Community Action Number: 37\_08

Neptune, Township of

## Describing the Action

Action Name:	Acquire and Demolish 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:	Property Acquisition and Structure Demolition
Action Description:	Identify and target properties of willing sellers in Special Flood Hazard Areas or flood-prone areas, especially Repetitive Loss and Severe Repetitive Loss properties, and obtain appraisals and funding for acquisition. Upon acquisition, maintain as dedicated open space.

## Evaluating the Action

Hazard(s) Addressed:	Flood, Nor'easter, Hurricane and Tropical Storm, Storm Surge
Goals:	2, 3, 6
Risk Reduction:	During Superstorm Sandy significant storm surge flooded areas near the Shark River, Fletcher Lake, Wesley Lake, Lake Alberta, and Atlantic Ocean. Bath private homes and public infrastructure were impacted. Some structures need to be elevated; others in more low-lying areas would seem to be good candidates for acquisition (particularly: Shark River Hills, South Riverside Drive, and Shark River Memorial Park). Sea level rise and climate change will contribute to more frequent and severe flooding and surge events over a larger area. Climate change will contribute to more frequent and severe weather events.
Technical:	Technically feasible. Need appraisals and funding.
Political:	Neptune Township Committee, willing property owners.
Legal:	Appraisals have to be obtained and negotiations are needed with property owners.
Environmental:	Depending on prior use, may have some environmental issues to remediate.
Social:	This action would serve to protect a neighborhood that was severely damaged by Sandy. It would serve to have properties preserved and not be developed in the future as some parcels have approved subdivisions on them.
Administrative Capability:	Township can administer action but will need appraisals for properties
Local Champion:	Neptune Township, Willing Property Owners
Other Community Objectives:	Project furthers the protection of critical infrastructure and local neighborhood by alleviate flooding and evacuations.
STAPLEE Evaluation:	10

## Implementing the Action

Cost Estimate:	\$1,200,000.00
Priority:	High
Scale of Ease of Implementation:	Medium
Responsible Party:	Neptune Township Administration
Local Planning Mechanism:	Appraisals and Attorneys
Likely Funding Source(s):	FEMA HMA
Timeline:	3 years
Action Status:	Ongoing
Notes:	Ongoing 2015 action; Green Acres for funding and Monmouth County Funding: closed by end of May 2019.

# Monmouth County Mitigation Action Worksheets

Community Action Number: 37\_09

Neptune, Township of

## Describing the Action

Action Name:	De-snag and Desilt Hollow Brook
Action Category:	Maintenance/Response/Recovery
Action Type:	Natural Systems Protection
HMA Eligible Activity:	Miscellaneous/Other/NA
Action Description:	Removal of dense overgrown vegetation, dead fallen trees, silt, and sediment from Hallow Brook

## Evaluating the Action

Hazard(s) Addressed:	Flood, Nor'easter, Hurricane and Tropical Storm
Goals:	2, 3,5,6
Risk Reduction:	Debris and siltation in Hallow Brook obstruct flood flows. Limited capacity causes evacuations, road closures, property damage. During Superstorm Sandy, areas near the Hallow Brook were flooded. Both private homes and public infrastructure were severely impacted.
Technical:	Technically Feasible.
Political:	No adverse political ramifications are expected
Legal:	No legal impediments anticipated.
Environmental:	NJDEP, Army Corp of Engineers, and Freehold Soil Conservation District may require permits.
Social:	Does not adversely affect any particular social group.
Administrative Capability:	Township has sufficient capacity and experience to administer this action.
Local Champion:	Neptune Township and HOA
Other Community Objectives:	Adds capacity, reduces flooding, and increases water quality.
STAPLEE Evaluation:	N/A

## Implementing the Action

Cost Estimate:	\$4,000,000.00
Priority:	Low
Scale of Ease of Implementation:	Low
Responsible Party:	Township Engineering, DPW
Local Planning Mechanism:	Hazard Mitigation Plan
Likely Funding Source(s):	Municipal budget
Timeline:	5 + years
Action Status:	New

Notes:

# Monmouth County Mitigation Action Worksheets

Community Action Number: 37\_10

Neptune, Township of

## Describing the Action

Action Name:	Target Harden Critical Facilities by Installing Surveillance Cameras, Barriers, Window Film, an Access Control System, and/or Bulletproof Glass
Action Category:	Maintenance/Response/Recovery
Action Type:	Structure and Infrastructure Project
HMA Eligible Activity:	Miscellaneous/Other
Action Description:	Install and improve surveillance equipment and CCTV, barriers, bulletproof glass, access control, window film on entrance-facing access points, and surveillance footprints on the ground for Township schools and municipal buildings.

## Evaluating the Action

Hazard(s) Addressed:	Terrorism
Goals:	1, 2, 3, 4, 5, 7
Risk Reduction:	Schools are the most vulnerable for a terrorist attack.
Technical:	Technically feasible.
Political:	No adverse political ramifications are expected.
Legal:	No legal impediments anticipated; schools are owned by the Township.
Environmental:	No adverse environmental impact anticipated
Social:	Does not adversely affect any particular social group. Perceived by the public to be a good thing because it supports local services during emergencies.
Administrative Capability:	Township has sufficient capacity and experience to administer this action.
Local Champion:	Police, OEM, Schools
Other Community Objectives:	
STAPLEE Evaluation:	N/A

## Implementing the Action

Cost Estimate:	
Priority:	Medium
Scale of Ease of Implementation:	Low
Responsible Party:	Township
Local Planning Mechanism:	Hazard Mitigation Plan
Likely Funding Source(s):	Homeland Security grants
Timeline:	1 year
Action Status:	New
Notes:	

# Monmouth County Mitigation Action Worksheets

Community Action Number: 37\_11

Neptune, Township of

## Describing the Action

Action Name:	Elevate 23 Flood-prone Properties, with a focus on Repetitive Loss and Severe Repetitive Loss Properties
Action Category:	Mitigation - Risk Reduction
Action Type:	Structure and Infrastructure Project
HMA Eligible Activity:	Structure Elevation
Action Description:	Elevate 23 flood-prone residential properties, especially Repetitive Loss and Severe Repetitive Loss properties.

## Evaluating the Action

Hazard(s) Addressed:	Flood, Hurricane and Tropical Storm, Storm Surge
Goals:	2, 3, 6
Risk Reduction:	Several residential structures throughout the community are prone to flooding, with their main floor elevations below current BFEs. Sea Level Rise and climate change will contribute to more frequent and severe flooding and surge events.
Technical:	Technically feasible. Need planning and permitting.
Political:	Neptune Township Committee, Shark River Hills Homeowners Association, OEM
Legal:	While the municipality does not own the structures in questions, we fully support the homeowners in moving forward.
Environmental:	No environmental impacts are anticipated as a result of elevating the home.
Social:	No particular social group in our community is likely to be disproportionately impacted by this project. This action would serve to protect a neighborhood that was severely damaged by Sandy. It would not adversely affect them, it would further protect them.
Administrative Capability:	Township can administer action but will need cooperation from affected homeowners.
Local Champion:	Affected homeowners and Neptune Township
Other Community Objectives:	Project furthers the protection of critical infrastructure and local neighborhood by alleviate failure and sewer back ups.
STAPLEE Evaluation:	12

## Implementing the Action

Cost Estimate:	\$57,500.00
Priority:	High
Scale of Ease of Implementation:	Medium
Responsible Party:	Homeowners, Neptune Township Engineering Department, Neptune Township Administration
Local Planning Mechanism:	Local building code and permits
Likely Funding Source(s):	FEMA HMA
Timeline:	1 year
Action Status:	Ongoing
Notes:	Ongoing action; the Township deems this action necessary and is searching for potential funding.



# Monmouth County Mitigation Action Worksheets

Community Action Number: 37\_12

Neptune, Township of

## Describing the Action

Action Name:	Construct a Living Shoreline along Seaview Island
Action Category:	Mitigation - Continuity of Fuctional Use
Action Type:	Natural Systems Protection
HMA Eligible Activity:	Localized Flood Risk Reduction Projects
Action Description:	Construct a living shoreline along the Seaview Island.

## Evaluating the Action

Hazard(s) Addressed:	Wave Action, Nor'easter, Hurricane and Tropical Storm, Storm Surge
Goals:	2, 3, 5, 6
Risk Reduction:	Neptune Township is a coastal community with a substantial amount of land within the mapped flood and storm surge hazard areas. Sea Level Rise and climate change will contribute to more frequent and severe flooding and surge events over a larger area. Climate change will contribute to more frequent and severe weather events. Seaview Island is surrounded completely by Shark River; a living shoreline will help absorb rising waters and provide a natural buffer for the island.
Technical:	Technically Feasible. Conceptual plan completed for grants
Political:	Neptune Township, Neptune City, and Belmar support the living shorelines along portions of their boundaries.
Legal:	Proposed properties for the living shoreline are owned by the Township.
Environmental:	May require NJDEP permitting. ACOE permitting
Social:	This action does not adversely affect any particular neighborhood, social group or organization. The project would be completely on publicly-owned property. It would serve to further protect property and infrastructure.
Administrative Capability:	Township can administer this action with the help from consultants.
Local Champion:	Planning, Emergency Management, Homeowners Association, Governing Bodies, neighborhood groups in favor of project.
Other Community Objectives:	This action furthers environmental quality, furthers the use of open space preservation, and helps support fish habitat.
STAPLEE Evaluation:	N/A

## Implementing the Action

Cost Estimate:	\$3,000,000.00
Priority:	Medium
Scale of Ease of Implementation:	High
Responsible Party:	Township Engineering, DPW
Local Planning Mechanism:	Hazard Mitigation Plan
Likely Funding Source(s):	FEMA HMA, The Nature Conservancy (TNC)
Timeline:	5 + years
Action Status:	New

Notes:

# Monmouth County Mitigation Action Worksheets

Community Action Number: 37\_13

Neptune, Township of

## Describing the Action

Action Name:	Purchase and Install Generators for Critical Infrastructure
Action Category:	Maintenance/Response/Recovery
Action Type:	Structure and Infrastructure Project
HMA Eligible Activity:	Generators
Action Description:	Generators for stormwater pumps and at the Township EOC center.

## Evaluating the Action

Hazard(s) Addressed:	All Hazards
Goals:	1, 2, 3, 7
Risk Reduction:	Stormwater pumps and the EOC center need generators in order to keep functioning during a severe storm. If either fail, human life and property will be at risk.
Technical:	Technically feasible, area around building exists.
Political:	No adverse political ramifications are expected.
Legal:	No legal impediments anticipated.
Environmental:	No adverse environmental impact anticipated, but may require construction permits.
Social:	Does not adversely affect any particular social group. Perceived by the public to be a good thing because it supports local services during emergencies.
Administrative Capability:	Township has sufficient capacity and experience to administer this action.
Local Champion:	EOC, OEM, Public Works
Other Community Objectives:	Keeps Township critical facilities operational during an event.
STAPLEE Evaluation:	N/A

## Implementing the Action

Cost Estimate:	\$100,000.00
Priority:	Low
Scale of Ease of Implementation:	Low
Responsible Party:	Township
Local Planning Mechanism:	Hazard Mitigation Plan
Likely Funding Source(s):	FEMA HMA
Timeline:	2 years
Action Status:	New
Notes:	Shark River Municipal Marina Building was awarded a HMGP grant of \$83,113.00 for Generator Improvements

# Monmouth County Mitigation Action Worksheets

Community Action Number: 37\_14

Neptune, Township of

## Describing the Action

Action Name: De-snag and Desilt Alberta Lake  
Action Category: Maintenance/Response/Recovery  
Action Type: Structure and Infrastructure Project  
HMA Eligible Activity: Miscellaneous/Other/NA  
Action Description: Remove/desilt the lake.

## Evaluating the Action

Hazard(s) Addressed: Flood, Nor'easter, Hurricane and Tropical Storm, Storm Surge  
Goals: 2, 3, 5, 6  
Risk Reduction: During Superstorm Sandy significant storm surge flooded areas near Alberta Lake. Both private homes and public infrastructure were impacted. The removal of silt and sediment will enable the lake to hold more water.  
Technical: Technically feasible. Need planning and permitting.  
Political: Neptune Township Committee, OEM  
Legal: No apparent legal issues; Township owns property.  
Environmental: NJDEP and possibly Freehold Soil Conservation District may require permits.  
Social: This action would serve to protect a neighborhood that is evacuated during large storm events. It would further protect them and reduce evacuation costs and the displacement of residents.  
Administrative Capability: Township can administer action but will need consultants for permitting and plans.  
Local Champion: Neptune Township, Neptune Township Sewer Department, TNHA  
Other Community Objectives: Project furthers the protection of critical infrastructure and local neighborhood by alleviate flooding and evacuations. It also improves the ecosystem.  
STAPLEE Evaluation: N/A

## Implementing the Action

Cost Estimate: \$1,500,000.00  
Priority: Medium  
Scale of Ease of Implementation: Low  
Responsible Party: Neptune Township Engineering Department; Neptune Township Committee  
Local Planning Mechanism: Hazard Mitigation Plan  
Likely Funding Source(s): Municipal budget  
Timeline: 5 + years  
Action Status: Ongoing  
Notes: Ongoing 2015 action; the Township is still interested in this action and once funds are available, will implement. The Alberta Basin was awarded HMGP funding (\$683,055)

# Monmouth County Mitigation Action Worksheets

Community Action Number: 37\_15

Neptune, Township of

## Describing the Action

Action Name:	Reconstruct Deteriorating Bulkheads on S. Riverside Drive and Retrofit Stormwater Infrastructure
Action Category:	Mitigation - Continuity of Fuctional Use
Action Type:	Structure and Infrastructure Project
HMA Eligible Activity:	Infrastructure Retrofit
Action Description:	Reconstruct deteriorating bulkheads, extend drainage pipes, and retrofit storm drains with Tideflex valves.

## Evaluating the Action

Hazard(s) Addressed:	Flood, Nor'easter, Hurricane and Tropical Storm, Storm Surge
Goals:	2,3,5,6
Risk Reduction:	During Superstorm Sandy significant storm surge flooded areas near the Shark River. Superstorm Sandy highlighted gaps in the existing bulkhead system and its associated flood impacts. The areas that need bulkheading reconstruction are areas where there are no existing bulkheads, or the elevations are too low. Backflow of tidewaters into the drainage system at the outfalls creates flooding when the system is full of tidewater instead of runoff.
Technical:	Technically feasible. Need planning and permitting.
Political:	Neptune Township Committee, Shark River Hills Homeowners Association, OEM.
Legal:	No apparent legal issues; Township owns property.
Environmental:	NJDEP, Army Corp of Engineers, and possibility the Freehold Soil Conservation District may require permits.
Social:	This action would serve to protect a neighborhood that was severely damaged by Sandy. It would not adversely affect them it would further protect them.
Administrative Capability:	Township can administer action.
Local Champion:	Neptune Township, Neptune Township DPW, HOA
Other Community Objectives:	Project furthers the protection of critical infrastructure and local neighborhood.
STAPLEE Evaluation:	N/A

## Implementing the Action

Cost Estimate:	\$2,500,000.00
Priority:	Medium
Scale of Ease of Implementation:	Medium
Responsible Party:	Neptune Township Engineering Department, Neptune Township Committee
Local Planning Mechanism:	Plans and specification for bid required
Likely Funding Source(s):	FEMA HMA
Timeline:	5 + years
Action Status:	Ongoing
Notes:	Ongoing 2015 action; the Township is still interested in bulkhead reconstruction and will research potential funding opportunities. 25 Neptune Blvd was awarded HMGP funding for Outfall Valve and Bulkhead Installation.

# Monmouth County Mitigation Action Worksheets

Community Action Number: 37\_16

Neptune, Township of

## Describing the Action

Action Name:	Retrofit Pump stations with Watertight Doors and/or Windows
Action Category:	Mitigation - Risk Reduction
Action Type:	Structure and Infrastructure Project
HMA Eligible Activity:	Non-structural Retrofitting of Existing Buildings and Facilities
Action Description:	Retrofit existing pump stations in flood zones with watertight doors and/or windows.

## Evaluating the Action

Hazard(s) Addressed:	Flood, Nor'easter, Hurricane and Tropical Storm, Storm Surge
Goals:	3, 7
Risk Reduction:	Superstorm Sandy highlighted pump stations that are in need of water-tight doors. When water enters the pump station, the controls and the pumps themselves get damaged or destroyed and service is interrupted.
Technical:	Technically feasible. Need plans and local building permit.
Political:	Neptune Township Sewer Department and Township Committee in support of project.
Legal:	Properties where pump stations are located are owned by the Township of Neptune, no legal issue.
Environmental:	No NJDEP permitting required.
Social:	This action does not adversely affect any particular neighborhood, social group or organization. It would serve to further protect property and infrastructure.
Administrative Capability:	Township can administer action.
Local Champion:	Neptune Township, Neptune Township Sewer Department
Other Community Objectives:	Project furthers the protection of critical infrastructure and local neighborhood by alleviate failure and sewer backups.
STAPLEE Evaluation:	N/A

## Implementing the Action

Cost Estimate:	\$100,000.00
Priority:	Medium
Scale of Ease of Implementation:	Medium
Responsible Party:	Neptune Township Engineering Department/Neptune Sewer Department
Local Planning Mechanism:	Local Building Code
Likely Funding Source(s):	FEMA HMA
Timeline:	2 years
Action Status:	Ongoing
Notes:	Ongoing 2015 action; designed with dry pit submergible pumps so that even if the building floods, the pump system will still work. Electronics are elevated above the BFE and the building has been mitigated. This project is expensive. Additionally, the Township was awarded \$450k of FEMA Funding 406 Public Assistance funding for repairs to the North Riverside Pump Station, North Island Pump Station, and the South Island Pump Station post-Sandy.

# Monmouth County Mitigation Action Worksheets

Community Action Number: 37\_17

Neptune, Township of

## Describing the Action

Action Name:	De-slag and Desilt the Shark River Tributary, Jumping Brook, and Musquash Brook
Action Category:	Maintenance/Response/Recovery
Action Type:	Natural Systems Protection
HMA Eligible Activity:	Floodplain and Stream Restoration
Action Description:	Removal of dense overgrown vegetation, dead fallen trees, silt, and sediment from the Shark River Tributary, Jumping Brook, and Musquash Brook.

## Evaluating the Action

Hazard(s) Addressed:	Flood, Hurricane and Tropical Storm, Storm Surge
Goals:	2, 3, 5, 6
Risk Reduction:	Debris and siltation in Shark River Tributary, Jumping Brook, and Musquash Brook obstructs flood flows. Limited capacity causes evacuations, road closures, property damage. During Superstorm Sandy areas near the Shark River were flooded. Both private homes and public infrastructure were severely impacted.
Technical:	Technically feasible. Cooperation needed from NJDEP, adjacent property owners and adjoining municipalities.
Political:	Neptune Township Committee would have to jointly work on this project with Neptune City, Wall, Belmar and NJDEP.
Legal:	Legal issue is the ownership of the sections of the Shark River tributaries
Environmental:	No adverse environmental effects because project involves no structural changes and should clean and repair the watershed
Social:	Proposed action will help to protect flood prone neighborhoods in Neptune Township, Neptune City, Wall, & Belmar
Administrative Capability:	Township can administer with an outside consulting preparing plans and specifications for public bid of the improvements by a contractor.
Local Champion:	Neptune Township, Neptune City, Wall, Belmar, Friends of Belmar Harbor, Shark River Yacht Club, Homeowners Associations
Other Community Objectives:	Provides not only additional capacity and flood protection but helps to reestablish the existing waterways, their natural habitat and its wildlife. Provide better cleansing of the river and improved stormwater management.
STAPLEE Evaluation:	N/A

## Implementing the Action

Cost Estimate:	\$4,000,000.00
Priority:	Low
Scale of Ease of Implementation:	Low
Responsible Party:	Neptune Township, Neptune City, Wall, Belmar, and NJDEP
Local Planning Mechanism:	Plans and specifications
Likely Funding Source(s):	Municipal budget
Timeline:	5 + years
Action Status:	Ongoing
Notes:	Ongoing 2015 action; the Township is searching for funding.

# Monmouth County Mitigation Action Worksheets

Community Action Number: 37\_18

Neptune, Township of

## Describing the Action

Action Name:	Create a Permanent Confined Disposal Facilities (CDF) and Structural Earthen Berm
Action Category:	Maintenance/Response/Recovery
Action Type:	Structure and Infrastructure Project
HMA Eligible Activity:	Miscellaneous/Other/NA
Action Description:	Identify and target properties that have the characteristics that can be used for a Confined Disposal Facility (CDF) and construct an Earthen Berms out of materials and form a stable slope. Berm to be stabilized with seed.

## Evaluating the Action

Hazard(s) Addressed:	Flood, Hurricane and Tropical Storm, Storm Surge
Goals:	2, 3, 5, 6
Risk Reduction:	Debris and siltation in Shark River obstruct flood flows. Limited capacity causes evacuations, road closures, property damage. During Superstorm Sandy, areas near the Shark River were flooded. Both private homes and public infrastructure were severely impacted.
Technical:	Technically feasible. Township has property that could be utilized needs prelim. design.
Political:	Neptune Township Committee, adjacent homeowners' associations.
Legal:	Township owned property, CDF can be built.
Environmental:	NJDEP permitting will be required.
Social:	This action does not adversely affect any particular social group.
Administrative Capability:	Township can administer and prepare CDF plan with consultant permitting help.
Local Champion:	Neptune Township, Homeowners Association
Other Community Objectives:	This project provides a permanent facility for dredging water bodies so continued maintenance dredging can take place.
STAPLEE Evaluation:	N/A

## Implementing the Action

Cost Estimate:	\$350,000.00
Priority:	Low
Scale of Ease of Implementation:	Medium
Responsible Party:	Engineering and Planning
Local Planning Mechanism:	Plans and specification
Likely Funding Source(s):	Municipal budget
Timeline:	2 years
Action Status:	Ongoing
Notes:	Ongoing 2015 action; the Township still prioritizes this project and is searching for funding.

# Monmouth County Mitigation Action Worksheets

Community Action Number: 37\_19

Neptune, Township of

## Describing the Action

Action Name:	Desilt and Dredge Shark River
Action Category:	Maintenance/Response/Recovery
Action Type:	Structure and Infrastructure Project
HMA Eligible Activity:	Miscellaneous/Other/NA
Action Description:	Dredge or pump siltation from entire Shark River Basin to Confined Disposal Facility (CDF).

## Evaluating the Action

Hazard(s) Addressed:	Flood, Hurricane and Tropical Storm, Storm Surge
Goals:	3, 5, 6
Risk Reduction:	Debris and siltation in Shark River obstruct flood flows. Limited capacity causes evacuations, road closures, property damage. During Superstorm Sandy, areas near the Shark River were flooded. Both private homes and public infrastructure were severely impacted.
Technical:	Technically feasible. Cooperation needed from NJDEP, ACOE and adjoining municipalities.
Political:	Neptune Township Committee would have to jointly work on this project with Neptune City, Belmar and NJDEP and NJDOT.
Legal:	Legal issue is the ownership of the Shark River Basin.
Environmental:	NJDEP, ACOE permitting required.
Social:	Proposed action will help to protect flood prone neighborhoods.
Administrative Capability:	State would have to administer in conjunction with Township. Would have to be a joint effort between Neptune, Neptune City, Belmar, Wall, NJDEP and NJDOT.
Local Champion:	Neptune Township, Neptune City, NJDOT, Belmar, Friends of Belmar Harbor, Shark River Yacht Club, Homeowners Associations.
Other Community Objectives:	Provides not only additional capacity and flood protection but helps to reestablish the marine environment through better cleansing of the river and improved Tidal flow. Also alleviates safety issues associated with the siltation of the river with regards to the boating and recreational communities (i.e. paddle boarders, jet skiers, etc.) who are at risk with no water and siltation of the river).
STAPLEE Evaluation:	N/A

## Implementing the Action

Cost Estimate:	\$10,000,000.00
Priority:	Medium
Scale of Ease of Implementation:	Low
Responsible Party:	Neptune Township, Neptune City, NJDEP, Wall, Belmar, NJDOT
Local Planning Mechanism:	Plans and specifications
Likely Funding Source(s):	Municipal budget
Timeline:	1 year
Action Status:	Ongoing
Notes:	The Township was awarded \$1,137,038.28 of FEMA Funding 406 Public Assistance to restore the Shark River Municipal Piers & Docks back to their pre-disaster design, function, and capacity.



# Monmouth County Mitigation Action Worksheets

Community Action Number: 37\_20

Neptune, Township of

## Describing the Action

Action Name:	Create Hazard Overlay Zones and Update ArcGIS Online
Action Category:	Administrative
Action Type:	Education and Awareness Programs
HMA Eligible Activity:	Miscellaneous/Other/NA
Action Description:	Work with GIS Consultant and in-house staff to overlay Special Flood Hazard Zones on Township Maps. Distribute as handouts to residents at Neptune Day, at Township counters, and to Homeowners Associations in Special Flood Hazard Zones. Update ArcGIS online and publish on Township website to increase hazard awareness and evacuation routes.

## Evaluating the Action

Hazard(s) Addressed:	Flood, Nor'easter, Hurricane and Tropical Storm, Storm Surge
Goals:	1, 2, 3, 4
Risk Reduction:	Property owners and residents are not always aware of the zones that they live in, how they will be impacted by storms, or where their evacuation route is located. A lack of understanding the risks from hazards and what to do in an emergency can lead to a loss of life or property.
Technical:	Technically feasible with in house engineering department. Need coordination with in house staff and GIS consultant.
Political:	The project should have the support of the Governing body as its implementation would serve to aid the residents.
Legal:	No apparent legal issue.
Environmental:	No NJDEP permitting required.
Social:	This action does not adversely affect any particular neighborhood, social group or organization. It would serve to further protect property and infrastructure.
Administrative Capability:	Township can administer action.
Local Champion:	Neptune Township Committee; Neptune Township OEM; Neighborhood Groups, Engineering Department, and DPW
Other Community Objectives:	Project furthers the protection of critical infrastructure and local neighborhood by furthering public education. Project also serves to help us satisfy some of our annual NJDEP Stormwater Permitting requirement.
STAPLEE Evaluation:	N/A

## Implementing the Action

Cost Estimate:	\$12,000.00
Priority:	Low
Scale of Ease of Implementation:	Low
Responsible Party:	Neptune Township Engineering Department/GIS Consultant
Local Planning Mechanism:	Hazard Mitigation Plan
Likely Funding Source(s):	Municipal budget
Timeline:	1 year
Action Status:	Ongoing
Notes:	Partially complete; haven't published information on the Township's website yet.

# Monmouth County Mitigation Action Worksheets

Community Action Number: 37\_21

Neptune, Township of

## Describing the Action

Action Name:	Update ArcGIS Online
Action Category:	Administrative
Action Type:	Education and Awareness Programs
HMA Eligible Activity:	Miscellaneous/Other
Action Description:	Update ArcGIS online and publish on Township website to increase hazard awareness and evacuation routes.

## Evaluating the Action

Hazard(s) Addressed:	Flood, Hurricane and Tropical Storm, Storm Surge
Goals:	1, 2, 3, 4
Risk Reduction:	Property owners and residents are not always aware of the zones that they live in, how they will be impacted by storms, or where their evacuation route is located. A lack of understanding the risks from hazards and what to do in an emergency can lead to a loss of life or property.
Technical:	Technically feasible. Need coordination with in house staff and GIS consultant.
Political:	Neptune Township Committee
Legal:	No apparent legal issues.
Environmental:	No NJDEP permitting required.
Social:	This action does not adversely affect any particular neighborhood, social group or organization. It would serve to further protect property and infrastructure.
Administrative Capability:	Township can administer action
Local Champion:	Neptune Township Committee, Neptune Township OEM, Neptune Township Department of Engineering
Other Community Objectives:	Project furthers the protection of critical infrastructure and local neighborhood by furthering public education.
STAPLEE Evaluation:	N/A

## Implementing the Action

Cost Estimate:	\$2,000.00
Priority:	High
Scale of Ease of Implementation:	
Responsible Party:	Neptune Township Engineering Department
Local Planning Mechanism:	Neptune Township Committee, Neptune Township Engineering Department
Likely Funding Source(s):	FEMA HMA
Timeline:	1 year
Action Status:	Withdrawn
Notes:	Combine with Action 37_20

# Monmouth County Mitigation Action Worksheets

Community Action Number: 37\_22

Neptune, Township of

## Describing the Action

Action Name:	Purchase Stormwater Pumps and Appurtenances
Action Category:	Maintenance/Response/Recovery
Action Type:	Structure and Infrastructure Project
HMA Eligible Activity:	Miscellaneous/Other/NA
Action Description:	Purchase stormwater pumps and appurtenances to reduce flood risk in the special flood hazard area.

## Evaluating the Action

Hazard(s) Addressed:	Flood, Nor'easter, Hurricane and Tropical Storm, Storm Surge
Goals:	1,2,4,5,6
Risk Reduction:	
Technical:	Technically feasible with in house engineering department and DPW. Need quotes for pumps, hoses, and deployment materials.
Political:	The project should have the support of the Governing body as its implementation would serve to aid the residents.
Legal:	No apparent legal issues
Environmental:	No NJDEP permitting required
Social:	This action does not adversely affect any particular neighborhood, social group or organization. It would serve to further protect property and infrastructure.
Administrative Capability:	Township can administer action
Local Champion:	Neptune Township Committee; OEM, Neighborhood Groups, Engineering Department, and DPW
Other Community Objectives:	Project furthers the protection of critical infrastructure and local neighborhood by mitigating flooding. Keeps roads open and minimizes debris.
STAPLEE Evaluation:	N/A

## Implementing the Action

Cost Estimate:	\$100,000.00
Priority:	Low
Scale of Ease of Implementation:	Low
Responsible Party:	Neptune Township Engineering Department, DPW
Local Planning Mechanism:	Hazard Mitigation Plan
Likely Funding Source(s):	Municipal budget
Timeline:	1 year
Action Status:	New

Notes:

# CAPABILITY ASSESSMENT WORKSHEET

Name: Leanne R. Hoffmann

Title: Director of Engineering & Planning

Jurisdiction: Neptune Township

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	1. 2011
Capital Improvements Plan	Yes	
Economic Development Plan	Yes	1. An element of the 2011 Master Plan
Local Emergency Operations Plan	Yes	
Continuity of Operations Plan		
Post-Disaster Recovery Plan	No	
Transportation Plan	Yes	1. An element of the 2011 Master Plan
Stormwater Management Plan	Yes	1. 2009
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>• Getting to Resilience (2016)</li> <li>• Strategic Recovery Planning Report (2014)</li> </ul>
<b>Building Code, Permitting, and Inspections</b>	<b>Yes/No</b>	<b>Are codes adequately enforced?</b>
Building Code	Yes	Version/Year:
Building Code Effectiveness Grading Schedule (BCEGS) Score		Score:
Fire Department ISO rating		Rating:
Site Plan Review Requirements	Yes	1. 2013
<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)	Yes	Steep slope ordinance
Flood Insurance Rate Maps		
Acquisition of Land for Open Space and Public Recreation Uses		
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		
Mitigation Planning Committee		
Maintenance Programs to Reduce Risk (e.g., tree trimming, clearing drainage systems)	Yes	Shade Tree Commission
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		
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)		
Hazard Data and Information		
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	Yes	
Community Development Block Grant	Yes	
Other Federal Funding Programs	No	
State Funding Programs		
Other (e.g., withhold spending in hazard-prone areas)	No	Incur Debt through General Obligation and Incur Debt through Special Tax and Revenue Bonds
<b>How can these capabilities be expanded and improved to reduce risk?</b>		





# CAPABILITY ASSESSMENT WORKSHEET

## Education and Outreach

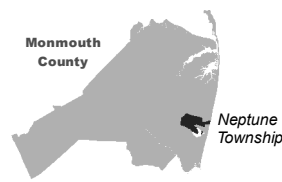
Identify education and outreach programs and methods already in place that could be used to implement mitigation activities and communicate hazard-related information.

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)		
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>		
Working towards a new classification in the CRS Program		



# NEPTUNE TOWNSHIP FLOOD VULNERABILITY

MONMOUTH COUNTY HAZARD MITIGATION PLAN



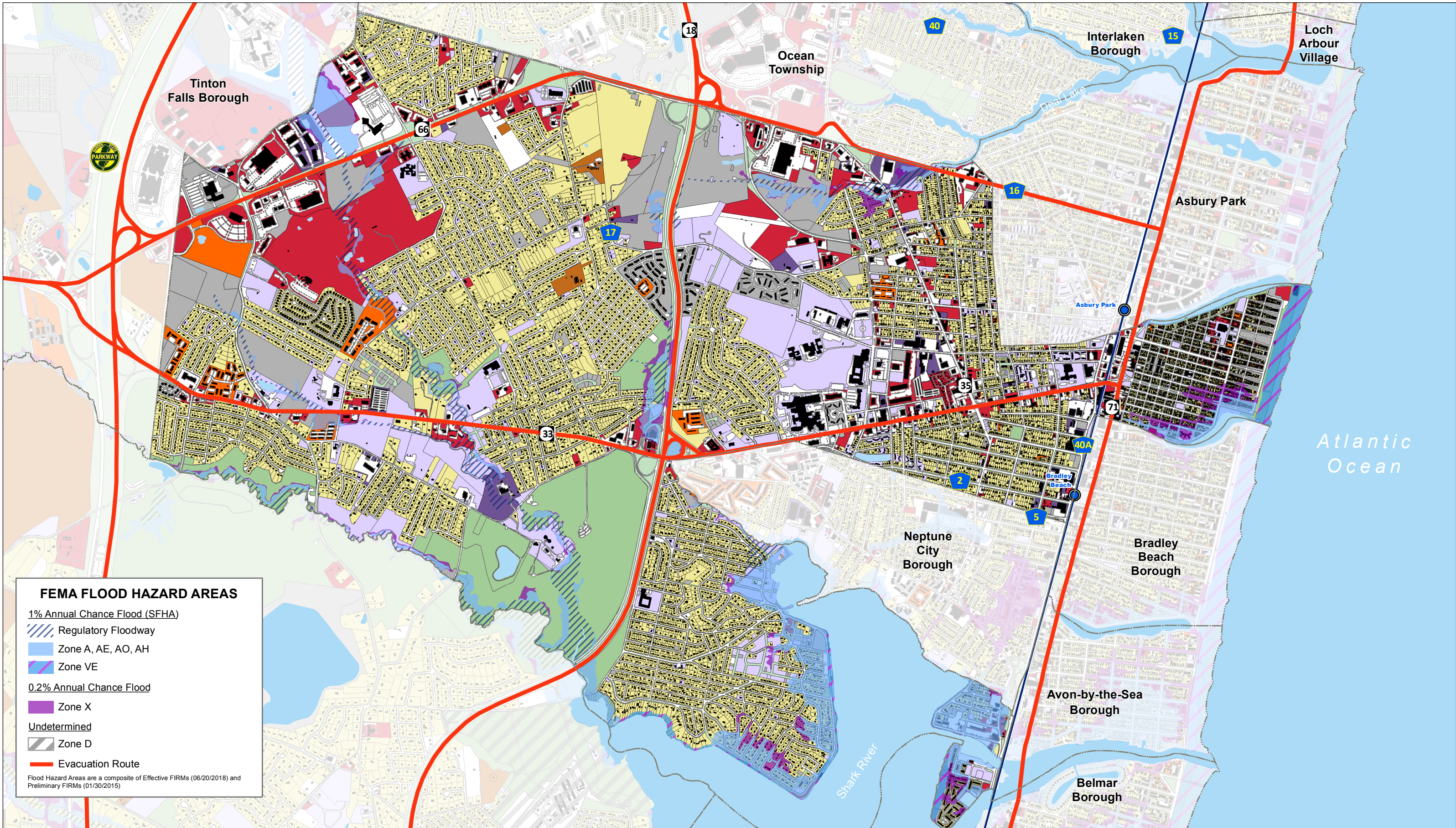
- Parcel Classification**
- Industrial
  - Commercial
  - Apartment
  - Residential (four families or less)
  - Farm
  - Vacant
  - Civic/Public (Tax Exempt)
  - Unclassified
  - Open Space

0 1,000 2,000 Feet



Michael Baker INTERNATIONAL

Source: 2014 Esri; Monmouth County; NJOIT-OGIS; NJIN 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

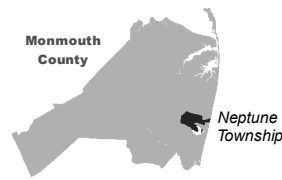
Evacuation Route

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.

# NEPTUNE TOWNSHIP FLOOD VULNERABILITY

MONMOUTH COUNTY HAZARD MITIGATION PLAN



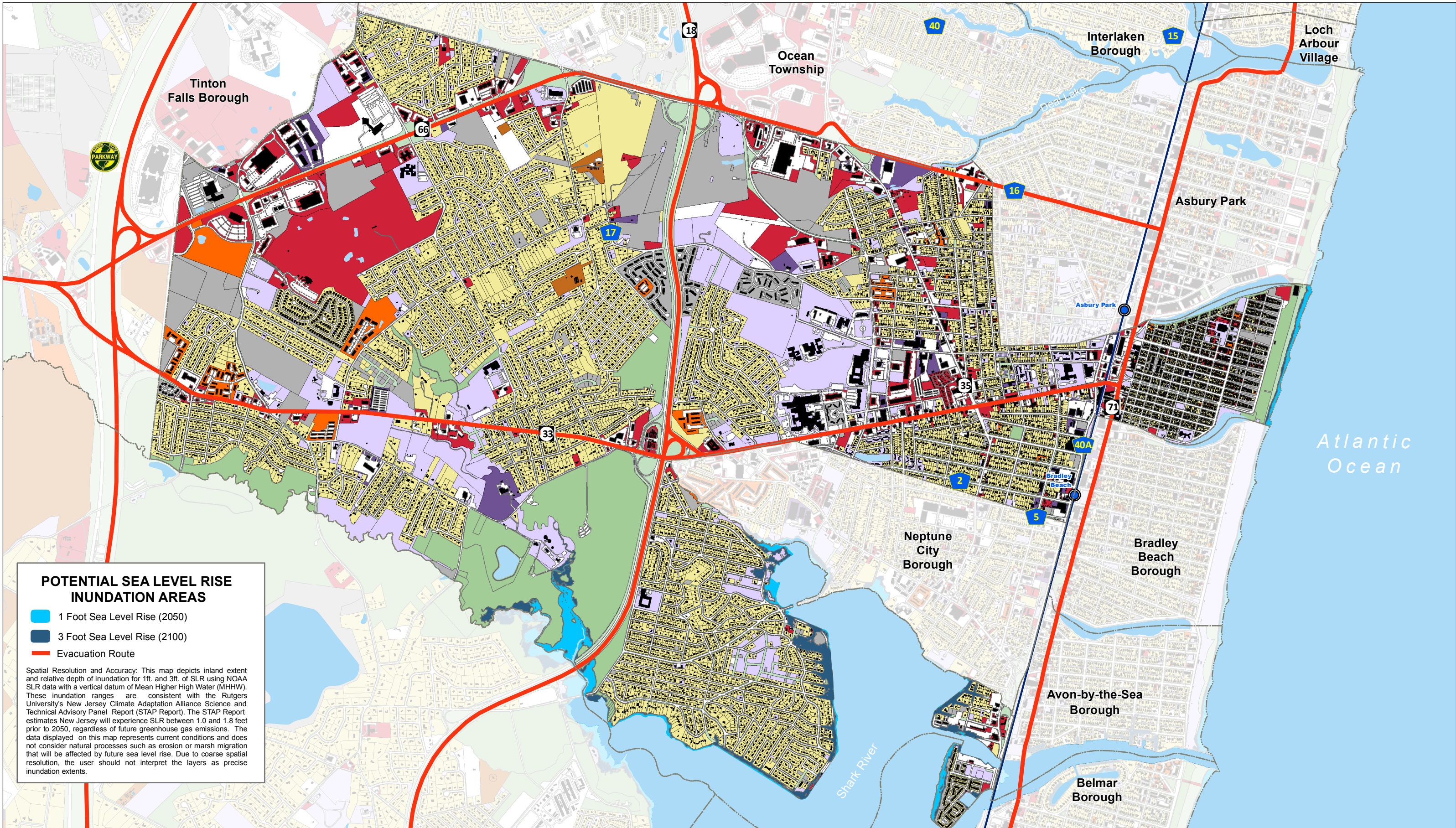
- Parcel Classification**
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0 1,000 2,000 Feet



Michael Baker INTERNATIONAL

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:** Neptune City- Monmouth County HMP Meeting

**Date:** May 6, 2019

**Time:** 1:00 PM- 2:00 PM

**Location:** Neptune City Borough Hall 106 W Sylvania Ave.

**Attendees:**

Mark	Balzarano	DPW Director
Joe	Barris	Assistant Director, Planning
Michael	Bascom	OEM Coordinator
Kyle	Bascom	PIO
Randy	Bishop	Director
John	Bleck	Assistant Super
Steve	Colombo	Operations Director
Michael	DiLeo	Deputy Coordinator
Bill	Doolittle	Construction Official
Ed	Finley	Harbor Master
Vito	Gadaleta	BA/Cert. Coordinator
Leanne	Hoffman	Director of Engineering & Planning
Joseph	Maro	Director of Operations
Michael	McGhee	Captain of Police
Michael	Oppegaard	Coordinator
Steph	Oppegaard	Human Resources
Sharon	Rowe	OEM Security
Douglas	Rowen	Fire Official
Stephen	Vetrand	Medical Director
Mike	Zagory	Security/Safety
Brittany	Ashman	MB Planner
Michael	Yaffe	MB Planner
Craig	Wenger	MB Project Manager

**Drafted by:** Paige Kaspar

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### Introductions (Michael):

- What is Hazard Mitigation?
- Matching actions with Goals
- New Hazards
- HMP Pamphlet
- Funding

### 2015 Mitigation Actions:

- Community Action 37\_01 - Living Shoreline Ongoing
  - 1<sup>st</sup> phase is complete → the design phase is complete
- Community Action 37\_02 - Floodproofing Pump Station Doors Ongoing
  - Designed with dry pit submersible pumps → even if the building floods the pump system will still work
  - Electronics elevated above the floodplain
  - Flood of the building has been mitigated
  - Expensive
- Community Action 37\_03 - Bulkheading of S. Riverside Drive Ongoing
  - Would rather do a Living Shoreline in marine area
- Community Action 37\_04 - Bulkheading Berm around local Lake Alberta, Fletcher Lake, and Wesley Lake Ongoing
  - Separate out the lakes J
  - Structural lakes
  - Living shorelines
  - Will be three separate priorities
- Community Action 37\_05 - Acquisition of Flood Prone Properties Ongoing
  - Green Acres for funding and Monmouth County Funding → closed by end of May 2019
- Community Action 37\_06 - Creation of a Permanent Confined Disposal Facilities (CDF) - Structural Earthen Berm Ongoing
- Community Action 37\_07 - Establish AM Radio station install warning system and flood gauges Ongoing
- Community Action 37\_08 - Removal of silt and sediment from the Shark River Basin Ongoing
  - Medium priority
- Community Action 37\_09 - Desnagging/Desilting of Shark River Tributary, Jumping Brook, and Musquosh Brook Ongoing
- Community Action 37\_10 - Elevation of Floodprone Properties Ongoing
  - Allow funds to go back to property owners
  - Rescind access
  - Property owners to select contractor
  - Acquisitions
- Community Action 37\_10 - Generator at North Island Pump Station - Complete
- Community Action 37\_11 - Preparation of Hazard Overlay Zones Partially complete
  - Not rolled out on public website
- Community Action 37\_12 - Updating online GIS on Township's website Ongoing



- Hazard overlay

### 2020 Mitigation Actions (NEW):

- Living Shoreline along Seaview
- Generators for Emergency OEM
- Generators for stormwater pumps
- Microgrid BPU supports critical facilities
- Largest hospital in County is in Neptune Twp
  - Points of distribution
- Stormwater into sewer service park flows
- Target hardening
  - Schools
  - Municipal buildings
  - Surveillance equipment
  - Barriers
  - Bullet proof glass
  - Access control
  - Facilities for school → access controls/visitor management
  - CCTV
  - Ballard's where there are high volumes of people → events
  - Window film on entrance
  - Surveillance footprints on the ground
  - Parking lot
  - Schools identified as being the most vulnerable
    - Special needs and low functioning students
    - Socially vulnerable

### Repetitive Loss Properties:

- There are struggles in the Ocean Grove historic district
  - Small lots, 30x60 ft
  - Close proximity to other homes
  - Negates the historic value
- Rules elevating home before or after ICC money
- Spike in fraud insurance
- Paid by insurance is the biggest battle



Monmouth County  
Multi-Jurisdictional Hazard Mitigation Plan Update



Michael Baker  
INTERNATIONAL

Meeting: Neptune Township

Date: May 6, 2019

Initial	Last Name	First Name	Title	Organization	Email Address
ny	YAFFE	Michael	Flavorer	Michael Baker	michael.yaffe@mbakerintl.com
cu	WENGER	CRAIG	Project manager	Michael Baker	cwenger@mbakerintl.com
sv	Vetran	Steph	Medical Director	Nippon EMS/VIEN	SSV02@etnail.com
VG	GASALETA	VITO	BA/CELT BOARD	NEPTUNE DEM	VGASALETA@NEPTUNETOWNSHIP.ORG
ED	Finlay	Ed	Harbor Master	Neptune	EFinlay@neptunefriendship.org
WZ	ZAGORY	WILLIE	SECURITY/SWIFT	NEPTUNE SCHOOL DISTRICT	WZAGORY@GMAIL.COM
SC	Colombo	Steve	operations Director	O.G.C.M.A.	Steve@oceangrove.org
SP	Howe	Sharon	DEM Secretary	NTDEM	Sharon@neptunetownship.org
MB	BASCOM	Michael	DEM coord.	Neptune	MBascom@neptunetownship.org

opprcawd Michael MC DEM coord MOD mouth court Mopperawd @MCSORS-OUT



Monmouth County  
Multi-Jurisdictional Hazard Mitigation Plan Update



Michael Baker  
INTERNATIONAL

Meeting: Neptune Twp.

Date: \_\_\_\_\_

Initial	Last Name	First Name	Title	Organization	Email Address
OR	Rosen	Douglas	Fire Chief	Fire	drosell@neptunefiredistrict1.org
AD	Witte	Michael	Deputy Construction	DCM	ml.witte@neptuneconstruction.org
JP	Huffman	Leanne	Dir. Eng. Planning	Engineering	lhuffman@neptuneuniversity.org
BP	Batters	Randy	Director	Se Ctr	rbishop@neptuneuniversity.org
JP	DoLittle	Bill	Construction Officer	code	bdolittle@neptuneuniversity.org
JB	Bleck	John	Asst Supper	TNSA	John.Bleck@TNSA-NJ.org
MBS	BARTHANNO	MARC	Dir Director	Township	MBarthanno@NeptuneTownship.org
	Bakers	Joe	Asst Director	Police	--
SO	Spiegel	Steph	HR	Neptune	Spiegel@neptuneuniversity.org
JMW	Mario	Joseph	Director of Operations	TNTHL	DMR@TNTHA.ORG
MP	McGhee	Michael	Admin of Police	NTPD	mmeeghee@neptuneuniversity.org
BP	Bascom	Kyle	PIO	NTPD	kbascow@neptuneuniversity.org





**Monmouth County**  
Multi-Jurisdictional Hazard Mitigation Plan Update



**Michael Baker**  
INTERNATIONAL

Meeting: Allenhurst Borough

Date: May 2, 2019

Initial	Last Name	First Name	Title	Organization	Email Address
	Yaffe	Michael	Planner	MSB Intl.	Michael.Yaffe@msbakerintl-
	Marians	William	Engineer	USA Inc	William.Marians@clearsolutions.com
	Lumpkins	Donna	Administrative	Allenhurst Borough	dlumpkins@allenhurstnj.org
	Schneider	Michael	Pollia Chief	Allenhurst	mschneider@allenhurstnj.org
	McGlennon	Michael	Deputy Coordinator	Mon. City O&M	mmcglennon@mcsonj.org



Monmouth County  
Multi-Jurisdictional Hazard Mitigation Plan Update



Michael Baker  
INTERNATIONAL

Meeting: Neptune City

Date: May 6, 2019

Initial	Last Name	First Name	Title	Organization	Email Address
	Yaffe	Michael	Plumber	MSI	Michael.Yaffe@msbakert.com
	Mirrele	Kerri	Deputy OEM Deputy Coordinator	NEFD/NOEM	Kmirrele@neptunecitypolice.org
	Russell	Bryan	Boro Administrator	Neptune City	brussell@neptune.city.nj.gov
	Shafai	Matt	Engineer	LSA Inc.	MattShafai@AOL.com



Meeting: Wall Twp. HMP Mtg

Date: 05-15-19

Initial	Last Name	First Name	Title	Organization	Email Address
	Ashman	Brihany	<del>MRB</del> Planner	MRB	
	Kasper	Paige	A Planner	MRB	
	Lentini	Joseph	Director of Public Works	Wall Township	lentinio@townshipofwall.com
LB	Brown	Ken	Chief of Police/DEM	Wall Twp	kbrown@wallpolice.org
HC	Carpinus	Greg	Captain	Wall Twp	gcarpinus@wallpolice.org
M	Harden	Michael	Lt. / Ser. DC	Wall Twp	mharden@wallpolice.org
	Granulich	Jack	Sgt / DEM AOC	Wall Twp	jgranulich@wallpolice.org
8	Newberry	George	Dep. Mayor Wall	Wall Twp	gnewberry@townshipofwall.com
	Barris	De	Asst Dir.	MEPS	DE.BARRIS@CO.MONMOUTH.NJ.US