

Monmouth County Mitigation Action Worksheets

Community Action Number: 52_07

Wall, Township of

Describing the Action

| | |
|------------------------|--|
| Action Name: | Develop an Active Shooter and Civil Unrest Response Plan |
| Action Category: | Administrative |
| Action Type: | Education and Awareness Programs |
| HMA Eligible Activity: | Miscellaneous/Other |
| Action Description: | This Active Shooter and Civil Unrest Response Plan will need to provide training, instructions, and guidance to effectively address the response of police personnel to an active shooter and civil unrest incident. |

Evaluating the Action

| | |
|-----------------------------|--|
| Hazard(s) Addressed: | Terrorism |
| Goals: | 1,2,3,4,5,7 |
| Risk Reduction: | Wall Township Racetrack is a large facility that hosts many popular events throughout the year. Being prepared for any type of violent event can decrease harm to the public and property. |
| Technical: | This mitigation is technically feasible. |
| Political: | No apparent political issue. |
| Legal: | No apparent legal issues. |
| Environmental: | No adverse environmental impacts. |
| Social: | There is no negative social impacts. |
| Administrative Capability: | The community does have the personnel and administrative capability to implement this action as well as maintain it. |
| Local Champion: | Wall Township, Police |
| Other Community Objectives: | |
| STAPLEE Evaluation: | N/A |

Implementing the Action

| | |
|---------------------------|---|
| Cost Estimate: | |
| Priority: | Medium |
| Local Planning Mechanism: | Hazard Mitigation Plan |
| Responsible Party: | Wall Township, Monmouth County |
| Likely Funding Source(s): | Wall Township, Monmouth County, Homeland Security grant |
| Timeline: | 1 year |
| Action Status: | New |
| Notes: | |

Monmouth County Mitigation Action Worksheets

Community Action Number: 52_08

Wall, Township of

Describing the Action

| | |
|------------------------|---|
| Action Name: | Repair, Remove, or Rehabilitate the Glendola Reservoir Dam |
| Action Category: | Mitigation - Risk Reduction |
| Action Type: | Structure and Infrastructure Project |
| HMA Eligible Activity: | Localized Flood Risk Reduction Projects |
| Action Description: | Repair, remove, or rehabilitate the Glendola Reservoir Dam, a High-Hazard Potential Dam, located on the Robins Swamp Brook. |

Evaluating the Action

| | |
|----------------------------|--|
| Hazard(s) Addressed: | Dam Failure |
| Goals: | 1, 2, 3 |
| Risk Reduction: | NJDEP classifies both the Glendola Reservoir Dam to be a High-Hazard Potential, meaning failure of the dam may result in probable loss of life and/or extensive property damage. |
| Technical: | Technically feasible. |
| Political: | There are no anticipated political implications. |
| Legal: | May require coordination with NJDEP. |
| Environmental: | Minor environmental impacts expected. |
| Social: | No adverse social impact anticipated. |
| Administrative Capability: | Township has sufficient capacity and experience to administer this action. |
| Local Champion: | OEM |

Other Community Objectives:

STAPLEE Evaluation: 10

Implementing the Action

| | |
|---------------------------|--|
| Cost Estimate: | \$0.00 |
| Priority: | High |
| Local Planning Mechanism: | Hazard Mitigation Plan |
| Responsible Party: | New Jersey-American Water Company |
| Likely Funding Source(s): | Municipal budget, NJDEP Bureau of Dam Safety and Flood Control |
| Timeline: | 3 years |
| Action Status: | New |
| Notes: | FEMA has a National Dam Safety Program with funding available to High-Hazard Potential Dams, however, the Glendola Reservoir Dam does not qualify for funding at the time of this plan update. |

CAPABILITY ASSESSMENT WORKSHEET

Name: Jonathan Gramlich

Title: Sergeant

Jurisdiction: Wall Township

Organization: Wall Township Police Department (OEM)

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. Plan date: August 2018 2. Does the plan address hazards? Yes 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 | 2015 Reexamination Report 1999 Master Plan |
| Capital Improvements Plan | Yes | |
| Economic Development Plan | Yes | |
| Local Emergency Operations Plan | Yes | |
| Continuity of Operations Plan | No | |
| Post-Disaster Recovery Plan | Yes | |
| Transportation Plan | Yes | Plan exists in Master Plan |
| Stormwater Management Plan | Yes | Stormwater Management Plan- 2009 Stormwater Pollution Prevention Plan- 2019 |
| Community Wildfire Protection Plan | No | |



CAPABILITY ASSESSMENT WORKSHEET

| | | |
|--|---------------|---|
| Other special plans (e.g., brownfields redevelopment, disaster recovery, coastal zone management, climate change adaptation) | Yes | Debris Management Plan |
| Building Code, Permitting, and Inspections | Yes/No | Are codes adequately enforced? |
| Building Code | Yes | Version/Year: NJ Building Code |
| Building Code Effectiveness Grading Schedule (BCEGS) Score | | Score: 3 |
| Fire Department ISO rating | | District 1: 3, District 2: 5, District 3: 3 |
| Site Plan Review Requirements | Yes | |
| Land Use Planning and Ordinances | Yes/No | Is the ordinance an effective measure for reducing hazard impacts? Is the ordinance adequately administered and enforced? |
| Zoning Ordinance | Yes | |
| Subdivision Ordinance | Yes | |
| Floodplain Ordinance | Yes | It is the purpose of this ordinance to promote the public health, safety, and general welfare, and to minimize public and private losses due to flood conditions in specific areas by provisions designed |
| Natural hazard ordinance (stormwater, steep slope, wildfire) | Yes | |
| Flood Insurance Rate Maps | Yes | |
| Acquisition of Land for Open Space and Public Recreation Uses | Yes | |
| Post-Disaster Recovery Ordinance | Yes | |
| Real Estate Disclose Ordinance | Yes | |



CAPABILITY ASSESSMENT WORKSHEET

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

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 | Environmental Advisory Committee |
| Maintenance Programs to Reduce Risk (e.g., tree trimming, clearing drainage systems) | Yes | Department of Public Works Debris Management |
| Mutual Aid Agreements | Yes | |
| 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 | Full time |
| Floodplain Administrator | Yes | |
| Emergency Manager | Yes | Full time |
| Community Planner | Yes | |



CAPABILITY ASSESSMENT WORKSHEET

| | | |
|--|---------------|--|
| Civil Engineer | Yes | |
| Surveyor | Yes | |
| GIS Coordinator | Yes | |
| Scientists familiar with the hazards of the community | No | |
| Other | | |
| Technical | Yes/No | Describe capability Has capability been used to access/mitigate risk in the past? |
| Warning Systems/Services (Reverse 911, outdoor warning signals) | Yes | Alert Center- Notify Me & RSS Reverse 911 |
| Hazard Data and Information | Yes | Flood Hazard Information on Wall Township Website |
| Grant Writing | Yes | |
| Hazus Analysis | Yes | |
| Other | | |
| How can the above capabilities be expanded and improved to reduce risk? | | |
| | | |



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 | No | |
| Fees for Water, Sewer, Gas, or Electric Services | Yes | |
| Impact Fees for New Development | No | |
| Stormwater Utility Fee | No | |
| Incur Debt Through Private Activities | No | |
| Community Development Block Grant | Yes | |
| Other Federal Funding Programs | No | |
| State Funding Programs | Yes | |
| Other (e.g., withhold spending in hazard-prone areas) | Yes | Incur Debt through General Obligation Funds and Incur Debt through Special Tax and Revenue Bonds |
| How can these capabilities be expanded and improved to reduce risk? | | |
| | | |



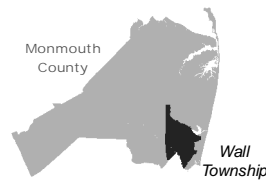
CAPABILITY ASSESSMENT WORKSHEET

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. | Yes | |
| 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 | No | |
| StormReady Certification | No | |
| Firewise Communities Certification | No | |
| Public-Private Partnership Initiatives Addressing Disaster Related Issues | Yes | |
| Other | Yes | Monmouth county rapid deployment force Monmouth County emergency response training |
| How can these capabilities be expanded and improved to reduce risk? | | |
| | | |





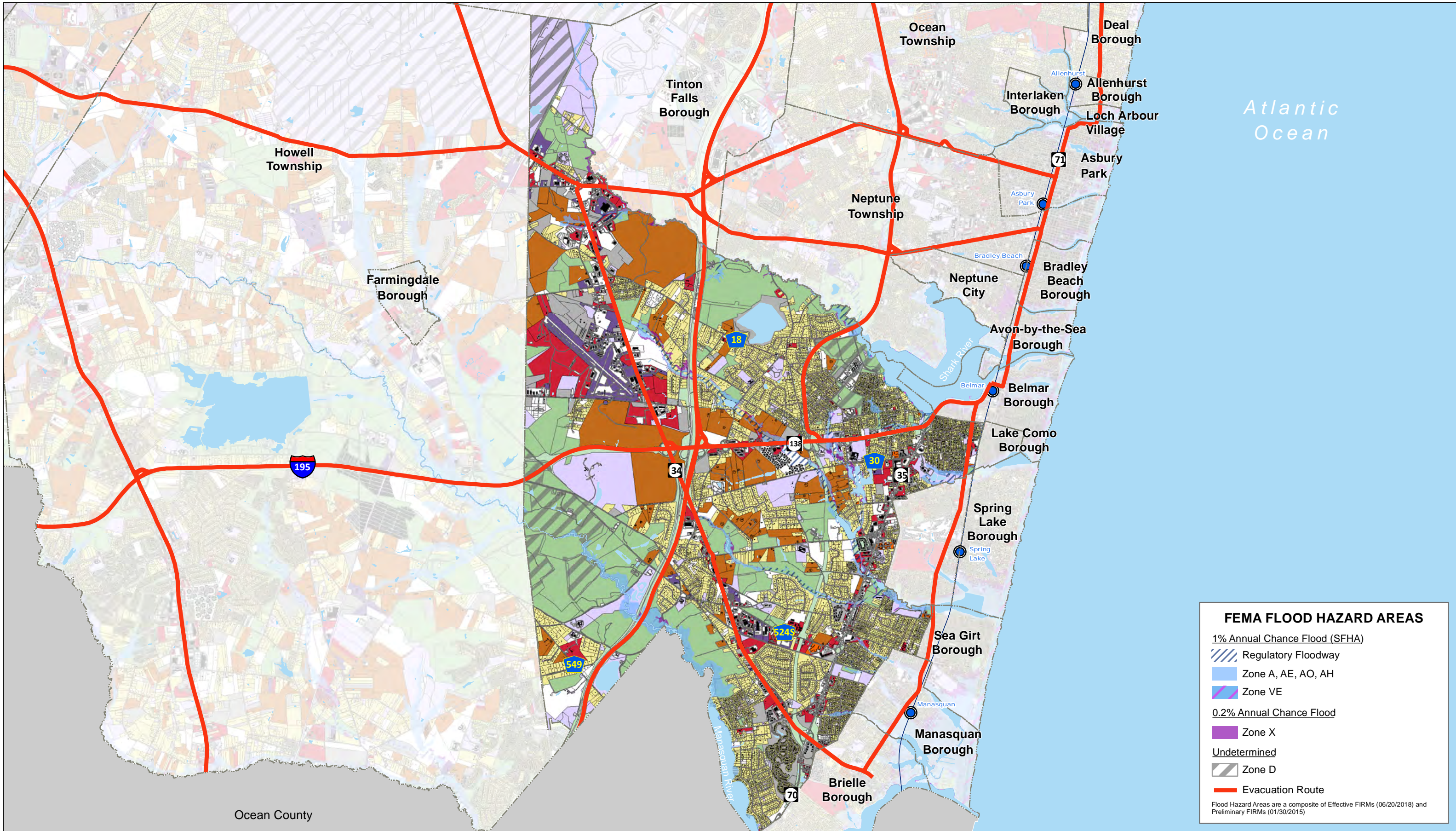
Parcel Classification

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

0 3,000 6,000 Feet



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

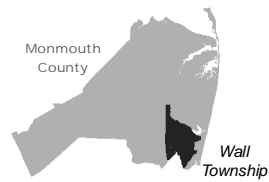
Evacuation Route

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.

WALL TOWNSHIP FLOOD VULNERABILITY

MONMOUTH COUNTY HAZARD MITIGATION PLAN



Parcel Classification

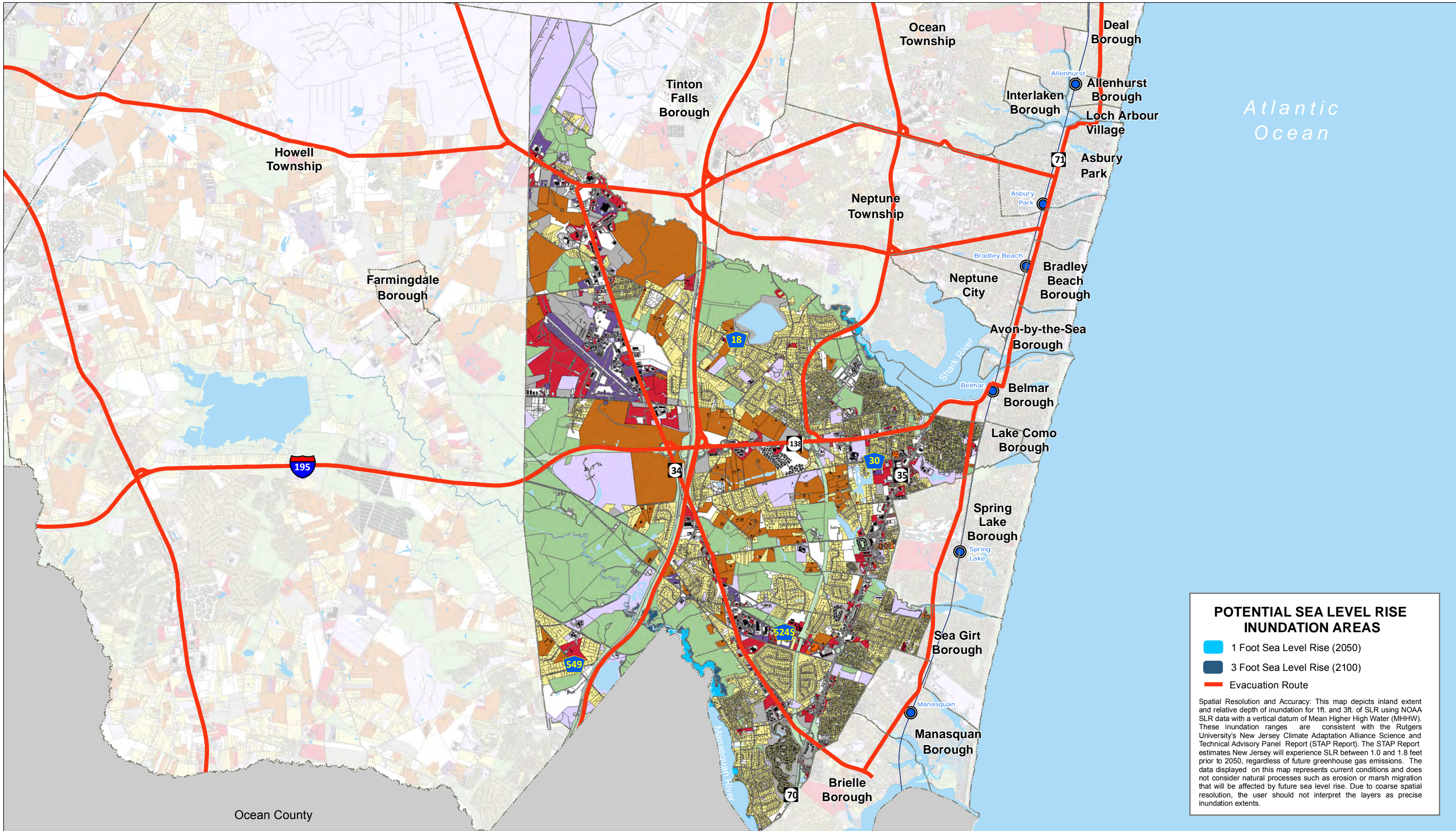
- Industrial
- Commercial
- Apartment
- Residential (four families or less)
- Farm
- Vacant
- Civic/Public (Tax Exempt)
- Unclassified
- Open Space

0 3,000 6,000 Feet



Michael Baker INTERNATIONAL

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



Atlantic Ocean

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

Topic: Wall Township- Monmouth County HMP Meeting

Date: May 15, 2019

Time: 10:00 AM- 11:00 AM

Location: Police Headquarters; 2700 Allaire Rd, Wall Township, NJ 07719

Drafted by: Paige Kaspar

Introductions (Brittany):

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

Elevations:

- Went thru blue acres and were denied for all 4 properties. Blue Acres denied the elevations because there weren't enough homes that needed to be elevated.
- Butternut and Old Mill home was raised.

Race Track:

- State Police regulates the racing division
- Generic plans on evacuation
- If there's a bigger event sponsored by Nascar there has to be a plan by nascar
- There are critical response procedures in place if there was an event.
- Township wants a stationary license plate reader. Wall township is in the middle of a lot of access points (35, 34, 18, garden state parkway, 195)

Flooding Issues:

- Collinwood and Butternut flooding.
- Flooding Near Manasquan river.
- 138. DOT is dumping water at highschool, Allenwood rd and 138, rt 34 by Atlantic ave, Brighten Ave, Hospital Road, and other areas of town.
- Capacity of Drainage
- Putting in generators in all three municipal buildings, and backup generators for all wells and sewer stations.
- Put in a gate near the damn near osporns pond. West of new milfred road. Paid for by Wall
- There have more water problems then they use to have. Water table has risen



Critical Facilities:

- Schools as shelters- Code Blue, Power Outages

2015 Mitigation Actions:

- Action 1: Ongoing most of work is complete of underway.
 - Wastewater treatment plant has been awarded contract and paperwork underway. Only received 25 of funds thru grant.
- Action 2: Ongoing action
 - Debris Management Site and temporary sites. Will receive a list
- Action 3: It is spearheaded by the county. Wall township has spent \$300,000 on it
- Action 4: May want it to be withdraw action. This is a Spring Lake issue → may be completed.
- Action 5: Discussed above about flooding issues

2020 Mitigation Actions:

- Mosquito issues near west Belmar.
- The deer in the neighborhoods are becoming an issue. Danger to drivers, crop failure, and disease issues
- Township wants a stationary license plate reader. Wall township is in the middle of a lot of access points (35, 34, 18, garden state parkway, 195)
- Funding for civil unrest and active shooter training.
 - Monmouth County rapid deployment force
 - Monmouth County emergency response training
 - Target Harding on structures
 - Airport emergency response plans?



Monmouth County
Multi-Jurisdictional Hazard Mitigation Plan Update



Michael Baker
INTERNATIONAL

Meeting: Wall Twp. HMP Mtg

Date: 05-15-19

| Initial | Last Name | First Name | Title | Organization | Email Address |
|---------|-----------|------------|--------------------------|---------------|------------------------------|
| | Ashman | Brihany | AB 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 | Harder | Michael | Ut. / Sr. DC | Wall Twp | mharder@wallpolice.org |
| | Granulich | Jack | Sr. DC / DEM AOC | Wall Twp | jgranulich@wallpolice.org |
| 8 | Newberry | George | Dep. Mayor Wall | Wall Twp | gnewberry@townshipofwall.com |
| | Barris | De | Asst Dir. | MEPG | DE.BARRIS@CJ.CONNENT. |

Appendix Vol I.53 West Long Branch 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

40 *Policies In-force*

15 *Total Losses*

\$31,846 *Total Payments*

1 *Number of RL Properties*

0 *Number Mitigated
RL Properties*

2 *RL - Total Losses*

\$7,773 *RL - Total Paid*

0 *Number of SRL Properties*

0 *Number Mitigated SRL
Properties*

0 *SRL - Total Losses*

\$0 *SRL - Total Paid*

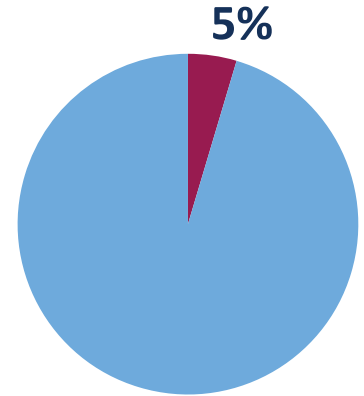


Critical Facilities

14 *Critical Facilities*

0 *Critical Infrastructure*

38 *Historic & Cultural Resources*



Percent Land Area Within SFHA

8

*Total Mitigation
Actions*

0



Education and Awareness Programs

8



Structure and Infrastructure Projects

0



Local Plans and Regulations

0



Natural Systems Protection



0 *SV Population At Risk (2017)*

367 *Population at Risk (2017)*

| Community Action # | Action Name | Action Description | Action Category | Action Type | Hazard(s) Addressed | Priority | Responsible Party | Potential Funding Sources | Cost Estimate | Timeline | Action Status |
|--------------------|---|--|---|--------------------------------------|---|----------|------------------------|-------------------------------------|---------------|----------|---------------|
| 53_01 | Clean the Turtle Mill Brook and Design a New Drainage System for the Brook | Develop a drainage remediation project servicing Turtle Mill Floodway as well as stream cleaning. | Mitigation - Continuity of Functional Use | Structure and Infrastructure Project | Flood, Extreme Wind, Nor'easter, Hurricane and Tropical Storm | High | Borough Engineer | Borough Funding | \$66,667.00 | 1 year | Ongoing |
| 53_02 | Coordinate a Drainage Remediation Project for Whale Pond Brook | Coordinate a drainage remediation project with West Long Branch, Long Branch, Monmouth County properties, and Monmouth University. | Mitigation - Continuity of Functional Use | Structure and Infrastructure Project | Flood, Extreme Wind, Nor'easter, Hurricane and Tropical Storm | Medium | Borough Engineer | Borough Funding, FEMA grant funding | \$125,000.00 | 1 year | Ongoing |
| 53_03 | Acquire, elevate, or relocate buildings and infrastructure in flood prone areas, with a focus on Repetitive Loss (RL) and Severe Repetitive Loss (SRL) properties | Elevation and/or Acquisition of flood prone residential structures, with a focus on those in our community that are on FEMA's Repetitive Loss List. | Mitigation - Risk Reduction | Structure and Infrastructure Project | Flood, Wave Action, Hurricane and Tropical Storm, Storm Surge, Winter Storm | High | Mayor and Council | FEMA HMA | | 1 year | Ongoing |
| 53_04 | Purchase DPW Equipment for Stream Restoration | Improve or acquire better equipment for DPW to remove trees and clear the stream. With additional funding, man power and equipment, DPW would be able to develop an efficient schedule for these stream cleanings. | Maintenance/Response/Recovery | Structure and Infrastructure Project | Flood, Lightening, Nor'easter, Hurricane and Tropical Storm | Low | Borough DPW | Municipal budget | | 1 year | New |
| 53_05 | Target Harden Critical Facilities by Installing Surveillance Cameras and Backup Servers | Harden the Municipal Building and DPW Yard with stronger security (cameras) and possibly relocate backup servers to a more secure location. | Maintenance/Response/Recovery | Structure and Infrastructure Project | Terrorism | Medium | Borough Administration | Homeland Security grants | | 2 years | New |
| 53_06 | Create an Evacuation Plan and Purchase and Install a Generator for the Peter Cooper Village Senior Center | Create an evacuation plan and upgrade generator at Peter Cooper Village Senior Center. | Mitigation - Continuity of Functional Use | Structure and Infrastructure Project | All Hazards | High | Borough Administration | FEMA HMA, CDBG-DR | | 2 years | New |
| 53_07 | Install an Emergency Communications System Specific to West Long Branch | West Long Branch needs their own response system for emergency responders to properly communicate with each other. Right now, the Borough uses the County's system. | Maintenance/Response/Recovery | Structure and Infrastructure Project | All Hazards | Medium | County, Borough | County budget, municipal budget | | 1 year | New |
| 53_08 | Construct Flood Reduction Measures (e.g., floodwalls or small berms) along Turtle Mill Brook and Whale Pond Brook | Construct minor structural project (e.g., floodwalls or small berms) along Turtle Mill Brook and Whale Pond Brook to protect Repetitive Loss Properties. | Mitigation - Risk Reduction | Structure and Infrastructure Project | Flood, Lightening, Hurricane and Tropical Storm, Storm Surge | High | Borough | FEMA HMA | \$0.00 | 2 years | New |

| Community Action # | Action Name | Action Description | Action Category | Action Type | Hazard(s) Addressed | Priority | Responsible Party | Potential Funding Sources | Cost Estimate | Timeline | Action Status |
|--------------------|-------------|--------------------|-----------------|-------------|---------------------|----------|-------------------|---------------------------|---------------|----------|---------------|
|--------------------|-------------|--------------------|-----------------|-------------|---------------------|----------|-------------------|---------------------------|---------------|----------|---------------|

Monmouth County Mitigation Action Worksheets

Community Action Number: 53_01

West Long Branch, Borough of

Describing the Action

| | |
|------------------------|---|
| Action Name: | Clean the Turtle Mill Brook and Design a New Drainage System for the Brook |
| Action Category: | Mitigation - Continuity of Functional Use |
| Action Type: | Structure and Infrastructure Project |
| HMA Eligible Activity: | Floodplain and Stream Restoration |
| Action Description: | Develop a drainage remediation project servicing Turtle Mill Floodway as well as stream cleaning. |

Evaluating the Action

| | |
|-----------------------------|--|
| Hazard(s) Addressed: | Flood, Extreme Wind, Nor'easter, Hurricane and Tropical Storm |
| Goals: | 2, 3, 5 |
| Risk Reduction: | Sedimentation and debris accumulation along Turtle Mill Brook impede stormwater and result in flooding. West Long Branch is not on the immediate coast but is subject to storm surge flooding via Turtle Mill Brook, a tributary to the Shrewsbury River. While a large portion of the northern area of the Borough lies within mapped storm surge hazard areas, flooding during Superstorm Sandy remained largely constrained to the areas immediately adjacent to the Turtle Mill Brook. Some development was impacted. Joline Avenue was flooded in the vicinity of Victor and Oceanport Avenues. |
| Technical: | This mitigation is technically feasible. |
| Political: | This project was advised by council and the Mayor. |
| Legal: | May require coordination with Monmouth County and NJDOT. |
| Environmental: | There are no negative environmental impacts caused by this project and it will comply with all federal state and local regulations. |
| Social: | There are no social impacts of this action. |
| Administrative Capability: | The community does have the personnel and administrative capability implement this action as well as maintain it. Borough would have to bid the engineering and construction. |
| Local Champion: | Council and the Mayor |
| Other Community Objectives: | Capital Improvements |
| STAPLEE Evaluation: | N/A |

Implementing the Action

| | |
|---------------------------|---|
| Cost Estimate: | \$66,667.00 |
| Priority: | High |
| Local Planning Mechanism: | Hazard Mitigation Plan |
| Responsible Party: | Borough Engineer |
| Likely Funding Source(s): | Borough Funding |
| Timeline: | 1 year |
| Action Status: | Ongoing |
| Notes: | Ongoing 2015 action; Monmouth County has done some work but the Borough would like an engineering study to reduce flood along Turtle Mill vertical walls. |

Monmouth County Mitigation Action Worksheets

Community Action Number: 53_02

West Long Branch, Borough of

Describing the Action

| | |
|------------------------|--|
| Action Name: | Coordinate a Drainage Remediation Project for Whale Pond Brook |
| Action Category: | Mitigation - Continuity of Functional Use |
| Action Type: | Structure and Infrastructure Project |
| HMA Eligible Activity: | Floodplain and Stream Restoration |
| Action Description: | Coordinate a drainage remediation project with West Long Branch, Long Branch, Monmouth County properties, and Monmouth University. |

Evaluating the Action

| | |
|-----------------------------|--|
| Hazard(s) Addressed: | Flood, Extreme Wind, Nor'easter, Hurricane and Tropical Storm |
| Goals: | 2, 3, 5 |
| Risk Reduction: | Certain areas of flooding in West Long Branch Borough have been identified by the Borough a result of drainage issues on a multi-jurisdictional level (West Long Branch, Long Branch, Monmouth County, and Monmouth University). |
| Technical: | This mitigation is technically feasible. |
| Political: | This project was advised by council and the Mayor. |
| Legal: | May require coordination with West Long Branch, Long Branch, Monmouth County, and Monmouth University. |
| Environmental: | There are no negative environmental impacts caused by this project and it will comply with all federal, state, and local regulations. |
| Social: | There are no social impacts of this action. |
| Administrative Capability: | The community does have the personnel and administrative capability implement this action as well as maintain it. Borough would have to bid the engineering and construction. |
| Local Champion: | Council and the Mayor |
| Other Community Objectives: | Capital Improvements |
| STAPLEE Evaluation: | N/A |

Implementing the Action

| | |
|---------------------------|---|
| Cost Estimate: | \$125,000.00 |
| Priority: | Medium |
| Local Planning Mechanism: | Hazard Mitigation Plan |
| Responsible Party: | Borough Engineer |
| Likely Funding Source(s): | Borough Funding, FEMA grant funding |
| Timeline: | 1 year |
| Action Status: | Ongoing |
| Notes: | Ongoing 2015 action; Borough DPW cleans out brook at least once a year as needed however the regional Whale Pond Watershed's drainage needs to be improved. |

Monmouth County Mitigation Action Worksheets

Community Action Number: 53_03

West Long Branch, 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: | Structure Elevation |
| Action Description: | Elevation and/or Acquisition of flood prone residential structures, with a focus on those in our community that are on FEMA's Repetitive Loss List. |

Evaluating the Action

| | |
|-----------------------------|---|
| Hazard(s) Addressed: | Flood, Wave Action, Hurricane and Tropical Storm, Storm Surge, Winter Storm |
| Goals: | 2, 3, 4, 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: | Elevation and acquisition are both technically feasible project types. |
| Political: | Our political leadership supports this type of project. |
| Legal: | While the municipality does not own the structures in question, we fully support the homeowners in moving forward. |
| Environmental: | No environmental impacts are anticipated at this time; this would be confirmed as specific homeowners come forward and their property details are reviewed. It is likely that environmental impacts would be positive, as household hazardous wastes are no longer introduced into floodwaters. |
| Social: | No particular social group in our community is likely to be disproportionately impacted by this project; this would be re-evaluated as particular interested homeowners come forward. |
| Administrative Capability: | Our municipality has the administrative capabilities to manage an elevation and/or acquisition project. |
| Local Champion: | Affected homeowners, elected officials |
| Other Community Objectives: | Improve and protect lifestyles of residents; reduction of costly property damage; resiliency; floodplain management; capital improvements |
| STAPLEE Evaluation: | N/A |

Implementing the Action

| | |
|---------------------------|--|
| Cost Estimate: | |
| Priority: | High |
| Local Planning Mechanism: | Homeowners; Mayor; Council; Administrator; Engineer; local ordinance; Hazard Mitigation Plan |
| Responsible Party: | Mayor and Council |
| Likely Funding Source(s): | FEMA HMA |
| Timeline: | 1 year |
| Action Status: | Ongoing |
| Notes: | Ongoing 2015 action; the Borough has on RL properties on their list that they will work with the property owner in mitigating. |

Monmouth County Mitigation Action Worksheets

Community Action Number: 53_04

West Long Branch, Borough of

Describing the Action

| | |
|------------------------|--|
| Action Name: | Purchase DPW Equipment for Stream Restoration |
| Action Category: | Maintenance/Response/Recovery |
| Action Type: | Structure and Infrastructure Project |
| HMA Eligible Activity: | Floodplain and Stream Restoration |
| Action Description: | Improve or acquire better equipment for DPW to remove trees and clear the stream. With additional funding, man power and equipment, DPW would be able to develop an efficient schedule for these stream cleanings. |

Evaluating the Action

| | |
|----------------------------|---|
| Hazard(s) Addressed: | Flood, Lightening, Nor'easter, Hurricane and Tropical Storm |
| Goals: | 3, 6, 7 |
| Risk Reduction: | Sedimentation and debris accumulation along Turtle Mill Brook and Whale Pond Brook impede stormwater and result in flooding. DPW needs more equipment to clear these streams. |
| Technical: | Technically feasible. |
| Political: | Politically supported by OEM and the Council. |
| Legal: | No major legal ramifications |
| Environmental: | No environmental impacts anticipated. |
| Social: | Does not adversely affect any particular social group. |
| Administrative Capability: | Borough has sufficient capacity and experience to administer this action |
| Local Champion: | DPW, Council, OEM |

Other Community Objectives:

STAPLEE Evaluation: N/A

Implementing the Action

| | |
|---------------------------|------------------------|
| Cost Estimate: | |
| Priority: | Low |
| Local Planning Mechanism: | Hazard Mitigation Plan |
| Responsible Party: | Borough DPW |
| Likely Funding Source(s): | Municipal budget |
| Timeline: | 1 year |
| Action Status: | New |

Notes:

Monmouth County Mitigation Action Worksheets

Community Action Number: 53_05

West Long Branch, Borough of

Describing the Action

| | |
|------------------------|---|
| Action Name: | Target Harden Critical Facilities by Installing Surveillance Cameras and Backup Servers |
| Action Category: | Maintenance/Response/Recovery |
| Action Type: | Structure and Infrastructure Project |
| HMA Eligible Activity: | Miscellaneous/Other |
| Action Description: | Harden the Municipal Building and DPW Yard with stronger security (cameras) and possibly relocate backup servers to a more secure location. |

Evaluating the Action

| | |
|-----------------------------|--|
| Hazard(s) Addressed: | Terrorism |
| Goals: | 1, 2, 3, 7 |
| Risk Reduction: | Critical facilities are vulnerable to a terrorist attack or smaller crimes, such as vandalism. These areas need to be monitored by emergency responders and police officers. |
| Technical: | Technically feasible. |
| Political: | Politically acceptable. |
| Legal: | No major legal ramifications. |
| Environmental: | No environmental impacts anticipated. |
| Social: | Does not adversely affect any particular social group. Perceived by the public to be a good thing because it reduces risk for residents. |
| Administrative Capability: | Borough has sufficient capacity and experience to administer this action |
| Local Champion: | Police, Council, OEM |
| Other Community Objectives: | |
| STAPLEE Evaluation: | N/A |

Implementing the Action

| | |
|---------------------------|--------------------------|
| Cost Estimate: | |
| Priority: | Medium |
| Local Planning Mechanism: | Hazard Mitigation Plan |
| Responsible Party: | Borough Administration |
| Likely Funding Source(s): | Homeland Security grants |
| Timeline: | 2 years |
| Action Status: | New |
| Notes: | |

Monmouth County Mitigation Action Worksheets

Community Action Number: 53_06

West Long Branch, Borough of

Describing the Action

Action Name: Create an Evacuation Plan and Purchase and Install a Generator for the Peter Cooper Village Senior Center

Action Category: Mitigation - Continuity of Functional Use

Action Type: Structure and Infrastructure Project

HMA Eligible Activity: Generators

Action Description: Create an evacuation plan and upgrade generator at Peter Cooper Village Senior Center.

Evaluating the Action

Hazard(s) Addressed: All Hazards

Goals: 1, 3, 7

Risk Reduction: The Peter Cooper Village Senior Center needs an upgraded generator when there is power loss. In the case of a severe storm, there needs to be an evacuation plan adopted so pre-and-post storm operations runs smoothly, since this is a vulnerable population.

Technical: Technically feasible.

Political: Politically acceptable and encouraged.

Legal: No legal issues anticipated.

Environmental: Does not adversely affect the environment.

Social: Does not adversely affect any particular social group. Perceived by the public to be a good thing because it reduces risk for a vulnerable population.

Administrative Capability: Borough has sufficient capacity and experience to administer this action.

Local Champion: OEM, Council

Other Community Objectives:

STAPLEE Evaluation: N/A

Implementing the Action

Cost Estimate:

Priority: High

Local Planning Mechanism: Hazard Mitigation Plan

Responsible Party: Borough Administration

Likely Funding Source(s): FEMA HMA, CDBG- DR

Timeline: 2 years

Action Status: New

Notes:

Monmouth County Mitigation Action Worksheets

Community Action Number: 53_07

West Long Branch, Borough of

Describing the Action

| | |
|------------------------|---|
| Action Name: | Install an Emergency Communications System Specific to West Long Branch |
| Action Category: | Maintenance/Response/Recovery |
| Action Type: | Structure and Infrastructure Project |
| HMA Eligible Activity: | Miscellaneous/Other |
| Action Description: | West Long Branch needs their own response system for emergency responders to properly communicate with each other. Right now, the Borough uses the County's system. |

Evaluating the Action

| | |
|-----------------------------|--|
| Hazard(s) Addressed: | All Hazards |
| Goals: | 1, 3, 7 |
| Risk Reduction: | DPW is segregated from other services because there is no dispatch and they are not able to communicate with the County. |
| Technical: | Technically feasible. |
| Political: | Politically acceptable and encouraged. |
| Legal: | No legal issues anticipated. |
| Environmental: | Does not adversely affect the environment. |
| Social: | Does not adversely affect any particular social group. Perceived by the public to be a good thing because it reduces risk for residents. |
| Administrative Capability: | Borough has sufficient capacity and experience to administer this action |
| Local Champion: | OEM, DPW, Council |
| Other Community Objectives: | |
| STAPLEE Evaluation: | N/A |

Implementing the Action

| | |
|---------------------------|---------------------------------|
| Cost Estimate: | |
| Priority: | Medium |
| Local Planning Mechanism: | Hazard Mitigation Plan |
| Responsible Party: | County, Borough |
| Likely Funding Source(s): | County budget, municipal budget |
| Timeline: | 1 year |
| Action Status: | New |

Notes:

Monmouth County Mitigation Action Worksheets

Community Action Number: 53_08

West Long Branch, Borough of

Describing the Action

| | |
|------------------------|--|
| Action Name: | Construct Flood Reduction Measures (e.g., floodwalls or small berms) along Turtle Mill Brook and Whale Pond Brook |
| Action Category: | Mitigation - Risk Reduction |
| Action Type: | Structure and Infrastructure Project |
| HMA Eligible Activity: | Infrastructure Retrofit |
| Action Description: | Construct minor structural project (e.g., floodwalls or small berms) along Turtle Mill Brook and Whale Pond Brook to protect Repetitive Loss Properties. |

Evaluating the Action

| | |
|-----------------------------|---|
| Hazard(s) Addressed: | Flood, Lightening, Hurricane and Tropical Storm, Storm Surge |
| Goals: | 2, 3 |
| Risk Reduction: | The Borough is at risk of repetitive flooding. |
| Technical: | Technically feasible. |
| Political: | There are no anticipated political implications. |
| Legal: | May require coordination with NJDEP. |
| Environmental: | Minor environmental impacts expected. |
| Social: | No adverse social impact anticipated. |
| Administrative Capability: | Borough has sufficient capacity and experience to administer this action. |
| Local Champion: | OEM |
| Other Community Objectives: | |
| STAPLEE Evaluation: | 12 |

Implementing the Action

| | |
|---------------------------|------------------------|
| Cost Estimate: | \$0.00 |
| Priority: | High |
| Local Planning Mechanism: | Hazard Mitigation Plan |
| Responsible Party: | Borough |
| Likely Funding Source(s): | FEMA HMA |
| Timeline: | 2 years |
| Action Status: | New |
| Notes: | |

CAPABILITY ASSESSMENT WORKSHEET

Name: Steven Cioffi

Title: Councilman

Jurisdiction: Borough of West Long Branch

Organization: Borough of West Long Branch

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 | |
| Capital Improvements Plan | Yes | |
| Economic Development Plan | No | |
| Local Emergency Operations Plan | Yes | |
| Continuity of Operations Plan | | |
| Post-Disaster Recovery Plan | Yes | |
| Transportation Plan | | |
| Stormwater Management Plan | Yes | 1. 2005 |
| Community Wildfire Protection Plan | | |



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"> • Stormwater Pollution Prevention Plan (2018) • NJ FRAMES |
| Building Code, Permitting, and Inspections | Yes/No | Are codes adequately enforced? |
| Building Code | Yes | Version/Year: |
| Building Code Effectiveness Grading Schedule (BCEGS) Score | | Score: |
| Fire Department ISO rating | | Rating: |
| Site Plan Review Requirements | Yes | |
| Land Use Planning and Ordinances | Yes/No | Is the ordinance an effective measure for reducing hazard impacts? Is the ordinance adequately administered and enforced? |
| Zoning Ordinance | Yes | |
| Subdivision Ordinance | Yes | |
| Floodplain Ordinance | Yes | Flood Damage Prevention |
| Natural hazard ordinance (stormwater, steep slope, wildfire) | Yes | Stormwater Management |
| Flood Insurance Rate Maps | | |
| Acquisition of Land for Open Space and Public Recreation Uses | | |
| Post-Disaster Recovery Ordinance | No | |
| Real Estate Disclose Ordinance | Yes | |



CAPABILITY ASSESSMENT WORKSHEET

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

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 | Stream cleaning as needed |
| Mutual Aid Agreements | Yes | Fire/EMS w/ county (county dispatch) shared with Long Branch |
| 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 | No | |
| Emergency Manager | Yes | |
| Community Planner | Yes | |



CAPABILITY ASSESSMENT WORKSHEET

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



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 | No | |
| Impact Fees for New Development | No | |
| 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 Funds and Incur Debt through Special Tax and Revenue Bonds |
| How can these capabilities be expanded and improved to reduce risk? | | |
| | | |



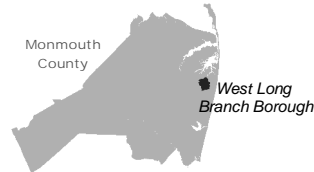
CAPABILITY ASSESSMENT WORKSHEET

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 | | |
| How can these capabilities be expanded and improved to reduce risk? | | |
| | | |



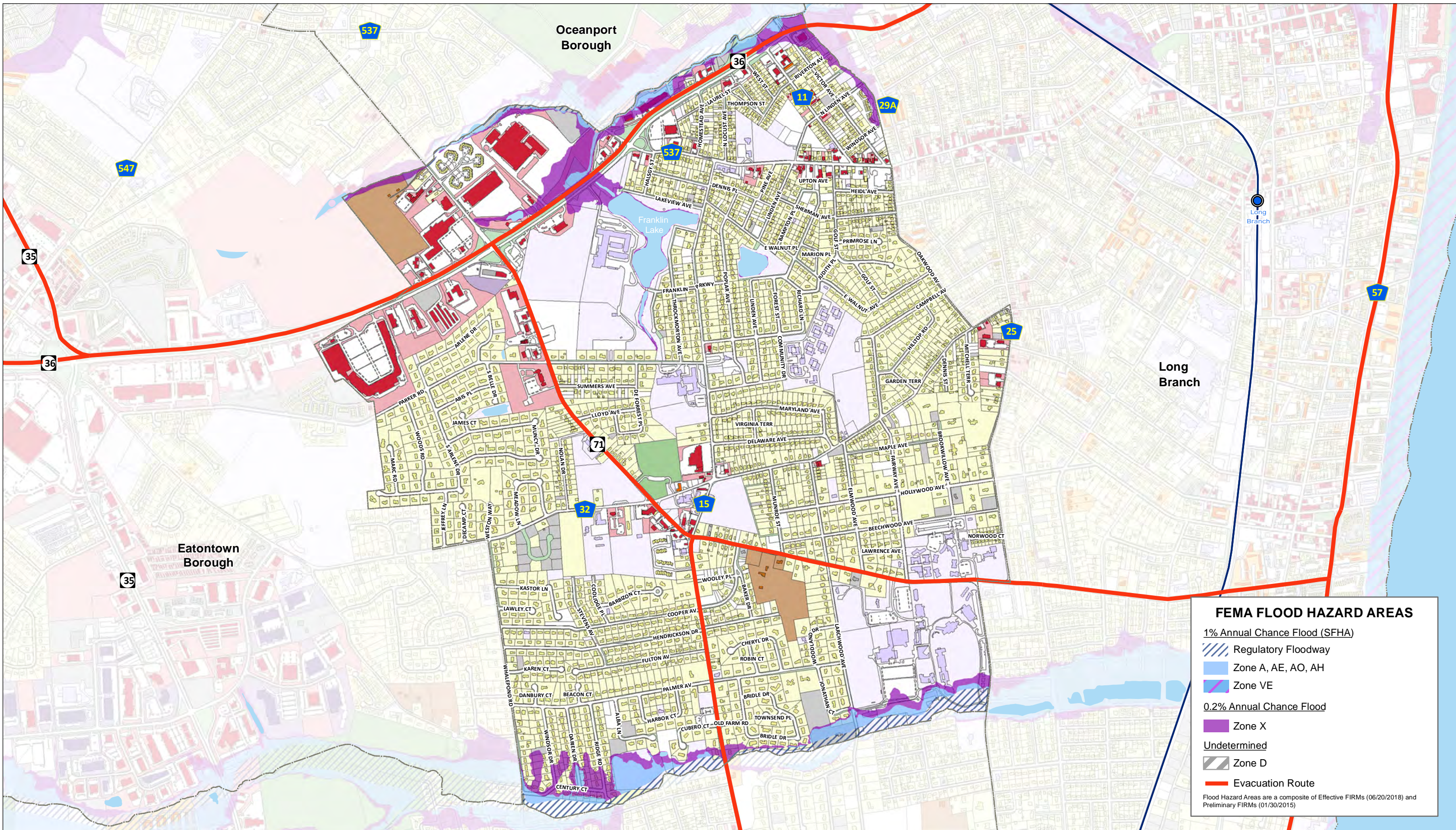


- Building Classification**
- Industrial (Purple)
 - Commercial (Red)
 - Apartment (Orange)
 - Residential (four families or less) (Yellow)
 - Farm (Brown)
 - Vacant (Grey)
 - Civic/Public (Tax Exempt) (Light Blue)
 - Unclassified (White)
- Parcel Classification**
- Industrial (Purple)
 - Commercial (Red)
 - Apartment (Orange)
 - Residential (four families or less) (Yellow)
 - Farm (Brown)
 - Vacant (Grey)
 - Civic/Public (Tax Exempt) (Light Blue)
 - Unclassified (White)
 - Open Space (Green)

0 650 1,300 Feet



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 (Blue hatched)
- Zone A, AE, AO, AH (Light Blue)
- Zone VE (Blue/Purple)

0.2% Annual Chance Flood

- Zone X (Purple)

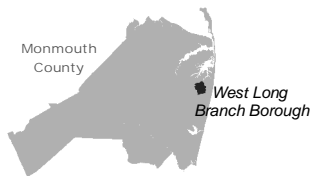
Undetermined

- Zone D (Grey hatched)

Evacuation Route (Thick Red Line)

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.

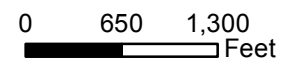


Building Classification

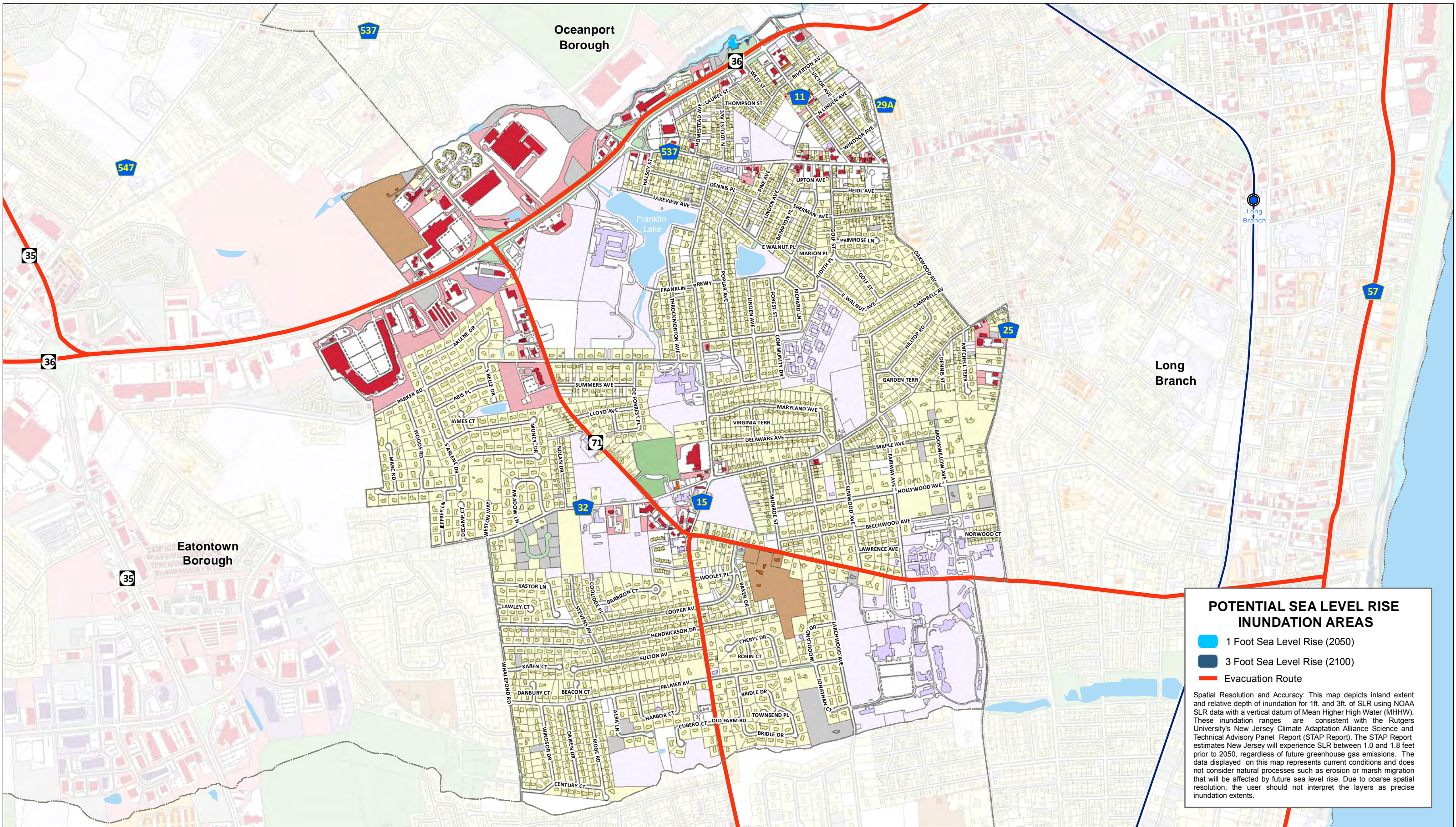
- Industrial (Dark Purple)
- Commercial (Red)
- Apartment (Orange)
- Residential (four families or less) (Light Green)
- Farm (Brown)
- Vacant (Grey)
- Civic/Public (Tax Exempt) (Light Blue)
- Unclassified (White)

Parcel Classification

- Industrial (Dark Purple)
- Commercial (Red)
- Apartment (Orange)
- Residential (four families or less) (Light Green)
- Farm (Brown)
- Vacant (Grey)
- Civic/Public (Tax Exempt) (Light Blue)
- Unclassified (White)
- Open Space (Light Green)



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.



MEETING NOTES

Topic: West Long Beach- Monmouth County HMP Update Meeting

Date: July 2, 2019

Time: 2:00 PM- 3:00 PM

Location: West Long Branch Boro Hall: 965 Broadway, West Long Branch NJ

Attendees:

| | | |
|-----------|-----------|--------------------------|
| Steven | Cioffi | OEM Coordinator |
| Stephanie | Dollinger | Administrator |
| Fran | Mullan | Borough Engineer |
| Gerald | Paige | Grants Manager |
| Earl | Reed | Director of Public Works |
| Craig | Wenger | Project Manager MB |
| Michael | Yaffe | MB Planner |
| Brittany | Ashman | MB Planner |

Drafted by: Paige Kaspar

Introductions (Paige):

- Goals and Hazards
- What is Mitigation Hazard Planning?
- Funding Available
 - HMA
- Mitigation Strategies

2015 Mitigation Action:

- Community Action 53_01 Drainage remediation and stream cleaning (Turtle Mill) Ongoing
 - County has done some work
 - Possible county coordination, State DOT
 - Engineering study to reduce flood along Turtle Mill vertical walls
- Community Action 53_02 Drainage remediation ongoing
 - DPW cleans out brook at least once a year as needed
 - Work with Monmouth University
- Community Action 53_03 Elevation of Residential Structures Ongoing



- DPW needs equipment assistance

2020 Mitigation Actions (NEW):

- 4 Improve or acquire better DPW equipment for removal of trees and stream cleaning → ie: wood chippers
 - Might need tree maintenance program, downed trees are biggest hazard
- 5 Harden Municipal Building, DPW Yard, stronger protection, cameras, possible relocate backup servers
 - Parking lot lighting is inadequate
- 6 Evacuation plan and upgrade generator at Peter Cooper Village Senior Center
- 7 Improve communications between DPW and County, DPW is segregated from other services, there is no dispatch and they are not able to communicate with county, no repetitor system
 - Need county band



Monmouth County
Multi-Jurisdictional Hazard Mitigation Plan Update



Michael Baker
INTERNATIONAL

Meeting: West Long Branch Borough

Date: 7/2/19

| Initial | Last Name | First Name | Title | Organization | Email Address |
|---------|-----------|------------|--------------------------|--------------|----------------------------------|
| SJC | CIOFFI | Soren | DEP Commissioner | WLB Board | SCIOFFI@westlongbranch.nj.gov |
| GP | PRIGÉ | GERARD | GARMS MGR. | TMM | GPRIGÉ@fundmassociates.com |
| SK | REEDS | EARL | Director of Public works | WLB | |
| | Ashman | Brittany | Planner | MB | |
| SD | Dollinger | Stefanie | Administrator | WCB | sdollinger@westlongbranch.nj.gov |
| FM | McLellan | Fran | Baro Engr. | T+M Assess | fmclellan@fundmassociates.com |
| | | | | | |
| | | | | | |
| | | | | | |

Appendix Vol I.54 Monmouth County

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

- Mitigation Action Table
- Mitigation Action Worksheets
- Capability Assessment
- Meeting Material

Monmouth County

NFIP Statistics

22,004 *Policies In-force*

19,658 *Total Losses*

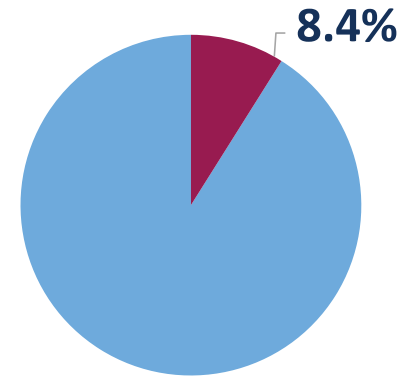
\$929,608,790 *Total Payments*

4,642 *RL - Total Losses*

\$214,147,202 *RL - Total Paid*

407 *SRL - Total Losses*

\$18,504,579 *SRL - Total Paid*



Percent Land Area Within SFHA

30

Total Mitigation Actions

4



Education and Awareness Programs

13



Structure and Infrastructure Projects

7



Local Plans and Regulations

6



Natural Systems Protection



1,978 *SV Population At Risk (2017)*

52,552 *Population at Risk (2017)*

| Community Action # | Action Name | Action Description | Action Category | Action Type | Hazard(s) Addressed | Priority | Responsible Party | Potential Funding Sources | Cost Estimate | Timeline | Action Status |
|--------------------|---|--|---|----------------------------------|--|----------|---|--|------------------|-----------|---------------|
| 54_01 | Provide Assistance to the National Flood Insurance Program's (NFIP) Community Rating System (CRS) Program | Provide technical and professional assistance to local municipalities for their engagement and advancement in the NFIP CRS program. Assistance includes hazard mitigation planning, community outreach, public information, flood protection information, mapping assistance, and floodplain regulations. | Administrative | Local Plans and Regulations | Flood, Wave Action, Coastal Erosion, Nor'easter, Hurricane and Tropical Storm, Storm Surge | High | Monmouth County Division of Planning and Office and Emergency | Dedicated staff time | \$50,000.00 | 5 + years | Ongoing |
| 54_02 | Support Municipal Floodplain Management Planning | Assist municipalities in identifying and executing floodplain management activities that improve flood hazard mitigation, community resiliency, and recovery from storm events. Expand understanding, capabilities, and expertise in floodplain management. Monmouth County staff members would welcome more advanced training and certifications in areas such as floodplain management strategies and land use development in the SFHA. Training and certification would be necessary to provide resource support to reduce these costs and bridge the planning gap. | Administrative | Local Plans and Regulations | Flood, Wave Action, Coastal Erosion, Nor'easter, Hurricane and Tropical Storm, Storm Surge | Medium | Monmouth County Division of Planning and Office and Emergency | Dedicated staff time, FEMA HMA | \$25,000.00 | 5 + years | Ongoing |
| 54_03 | Expand Online Mapping Services | Many municipalities rely on GIS assistance from Monmouth County. This system can be improved to provide municipal access with online services. This requires new software and/or software licenses, hardware and equipment, data updates, and upgrades as well as investments in the existing technology infrastructure. This system would also allow the public to access GIS information and customize maps showing risks to their property and community. It also ties back to CRS mapping requirements as well as to information used in the development of local master plans, planning, hazard response, community outreach, public information, flood information, mapping, municipal training, and CRS Support. Support development of interactive, online mapping services for public use provides municipalities with technical assistance and training, improves inhouse GIS system network, provides mapping and analysis services to CRS engaged communities, and enhances information assimilation and distribution. | Administrative | Education and Awareness Programs | Flood, Wave Action, Coastal Erosion, Nor'easter, Hurricane and Tropical Storm, Storm Surge | Medium | Monmouth County Division of Planning, GIS Section | Dedicated staff time, FEMA HMA | \$100,000,000.00 | 5 + years | Ongoing |
| 54_04 | Protect and Restore Claypit Creek and Portland Place | Re-establish, restore, and stabilize the eroded bluff and establish a living shoreline at the river edge to further provide protection of the slope to future storm events as well as provide and enhance habitat for fish and wildlife. | Mitigation - Continuity of Functional Use | Natural Systems Protection | Wave Action, Coastal Erosion, Nor'easter, Hurricane and Tropical Storm, Storm Surge | High | Monmouth County Park System | FEMA HMA, The Nature Conservancy (TNC), National Fish and Wildlife | \$700,000.00 | 2 years | Ongoing |

| Community Action # | Action Name | Action Description | Action Category | Action Type | Hazard(s) Addressed | Priority | Responsible Party | Potential Funding Sources | Cost Estimate | Timeline | Action Status |
|--------------------|--|---|---|----------------------------|--|----------|--|--|------------------|-----------|---------------|
| 54_05 | Acquire Flood-prone Properties, especially Repetitive Loss and Severe Repetitive Loss Properties | To create a county-wide public open space system that will help meet park and recreation needs and conserve vital natural resources, the Monmouth County Park System will continue to acquire properties within project areas designated in the Monmouth County Open Space Plan (2008). Properties subject to flooding, severe winter weather, and associated storm surges are considered for purchase to meet the goals of the Monmouth County Open Space Plan. By purchasing these properties, any buildings located in the flood zone are removed and the land is restored to a natural condition. | Mitigation - Risk Reduction | Natural Systems Protection | Flood, Wave Action, Nor'easter, Hurricane and Tropical Storm, Storm Surge, Winter Storm | High | Monmouth County Park System | FEMA HMA | \$100,000,000.00 | 5 + years | Ongoing |
| 54_06 | Improve Coastal Dune Systems at Four County Parks | Regrade sand fencing to establish dune topography and increase vegetation management to establish native coastal vegetation adapted to coastal hazard and slopes for Fisherman's Cove Conservation Area, Seven Presidents Oceanfront Park, Henry Hudson Trail at Popamora Point, and Bayshore Waterfront Park. | Mitigation - Continuity of Functional Use | Natural Systems Protection | Flood, Wave Action, Coastal Erosion, Nor'easter, Hurricane and Tropical Storm, Storm Surge | Medium | Monmouth County Park System, US Fish & Wildlife Service, NOAA, FEMA, HRERP | New Jersey Corporate Wetlands Restoration Partnership | \$1,400,000.00 | 3 years | Ongoing |
| 54_07 | Install Stream Bank Stabilization Techniques for the Ramanessin Brook, Pine Brook, and Manasquan River | A proposal has been in the planning phase for many years to reintroduce stream form and function in the upper reaches of the watershed where extensive straightening occurred in the past. This will result in more stream stability and improved water quality with improved stream function. | Mitigation - Continuity of Functional Use | Natural Systems Protection | Flood, Nor'easter, Hurricane and Tropical Storm | Medium | Monmouth County Park System | FEMA HMA, County budget | \$2,300,000.00 | 2 years | Ongoing |
| 54_08 | Conduct Scheduled Burning and Mechanical Thinning at Three County Parks | Conduct scheduled burning and mechanical thinning at Fisherman's Cove Conservation Area (Manasquan Borough), Turkey Swamp Park (Freehold Township), and Bayshore Waterfront Park (Middletown Township). | Maintenance/Response/Recovery | Natural Systems Protection | Wildfire | Medium | Monmouth County Park System | County budget, State Forest Fire Service | \$55,000.00 | 1 year | Ongoing |
| 54_09 | Implement Slope Stabilization Techniques Along the Henry Hudson Shoreline | A one-mile segment of the coastal trail will be the target area of this project. Various living shoreline techniques and wave attenuation structures will be investigated to find the "best fit" approach that will be permissible, economic, and supported by adjacent residents. Additional work of stabilization of the slope will also be investigated that will replant or restore the slope for adjacent public owned properties. | Mitigation - Continuity of Functional Use | Natural Systems Protection | Flood, Wave Action, Coastal Erosion, Nor'easter, Hurricane and Tropical Storm, Storm Surge | High | Monmouth County Park System | FEMA Hazard Mitigation Assistance (HMA), NJDEP Blue Acres, Environmental | \$20,000,000.00 | 3 years | Ongoing |

| Community Action # | Action Name | Action Description | Action Category | Action Type | Hazard(s) Addressed | Priority | Responsible Party | Potential Funding Sources | Cost Estimate | Timeline | Action Status |
|--------------------|---|---|-------------------------------|--------------------------------------|---|----------|---|---------------------------|-----------------|-----------|---------------|
| 54_10 | Improve County Evacuation Preparations | Improve the physical (signage, striping, conversion of traffic signals to LED) and operational preparation (identifying severe inundation zones as priority areas) to place first responders at key intersections and check points and coordinate of highway advisory radio. This is in addition to Long Term Improvements (widening and elevating of roads and bridges) of the County Evacuation Routes, as documented in the 2009 Monmouth County Coastal Evacuation Routes Improvement Study. This study provided a transportation system condition and assessment of 12 Portal Evacuation Routes within the County. Some targeted improvements based on the recommendations would likely result in substantial benefits on roadway capacity, balancing travel demand and safety along the overall length of each portal route. Physical and operational preparations would be in addition to promoting Monmouth County's Know Your Zone initiative. | Maintenance/Response/Recovery | Structure and Infrastructure Project | Flood, Wave Action, Nor'easter, Hurricane and Tropical Storm, Storm Surge, All Hazards | Medium | Monmouth County Department of Public Works & Engineering and | County budget | \$20,000,000.00 | 5 + years | Ongoing |
| 54_11 | Increase Hazard Education and Risk Awareness at the County Level | Delivering preparedness education and community outreach on programs geared towards preparedness and small-scale mitigation efforts. This action will be the delivering of preparedness education in the form of mitigation seminars discussing mitigation options (i.e. flood vents, wet and dry floodproofing, elevation of utilities). The action will involve community focus meetings targeting the most at-risk communities and working through each area of the County. | Administrative | Education and Awareness Programs | All Hazards | High | Monmouth County Office and Emergency Management | County budget | \$582,000.00 | 5 + years | Ongoing |
| 54_12 | Provide Wind-Resistant Building Retrofits for the County Evacuation Centers | Provide building retrofits with hurricane-proof glass and storm shutters for the exterior windows and any applicable doors. | Mitigation - Risk Reduction | Structure and Infrastructure Project | Extreme Wind, Nor'easter, Hurricane and Tropical Storm | Medium | Monmouth County Office and Emergency Management | FEMA HMA | \$1,000,000.00 | 1 year | Ongoing |
| 54_13 | Create a Repetitive Loss (RL) and Severe Repetitive Loss (SRL) Bundle Project | Create a project that groups together RL and SRL Properties and then the County applies for a regional level mitigation project. | Mitigation - Risk Reduction | Structure and Infrastructure Project | Flood, Wave Action, Nor'easter, Hurricane and Tropical Storm, Storm Surge, Winter Storm | High | Monmouth County Division of Planning; Monmouth County Office of Emergency | County budget | | 2 years | New |
| 54_14 | Improve Financial Management of Grant Monies | Hire new staff or rearrange existing staff's responsibilities to improve financial management of grant monies allotted to the County. | Administrative | Local Plans and Regulations | All Hazards | Medium | Monmouth County Division of Planning; Monmouth County Office of Emergency | County budget | | 2 years | New |

| Community Action # | Action Name | Action Description | Action Category | Action Type | Hazard(s) Addressed | Priority | Responsible Party | Potential Funding Sources | Cost Estimate | Timeline | Action Status |
|--------------------|---|--|-----------------|----------------------------------|---|----------|---|---------------------------|---------------|----------|---------------|
| 54_15 | Create 3D digital Elevation Models of Structures and Infrastructure within the 500-year Flood Zones | Use mobile LiDAR Technology to create current 3D digital elevation models of all homes, businesses and infrastructure within Monmouth County coastal communities located within the 500 year flood zones. This project will collect digital images and develop models that provide an accurate assessment of flood damages that have been incurred by residents, businesses and infrastructure as a result of specific past events. Additional information to be included within each property/parcels data set will be first floor elevations of mitigated properties, affixing property elevation certificates, NFIP information and creating an ArcGIS online web application for viewing. In addition, the project will overlay FIRM data on the first floor elevation data to help identify which buildings and infrastructure are at future risk of flooding. All in the effort of building smarter more efficient ways of working towards greater resiliency. This also enhances various components of CRS program. | Administrative | Education and Awareness Programs | Flood, Nor'easter, Hurricane and Tropical Storm | Medium | Monmouth County OEM | County budget | \$250,000.00 | 2 years | New |
| 54_16 | Strengthen Damage Assessment Teams | Monmouth County has established regional Damage Assessment Teams that are comprised of the Building and Construction Officials from within the municipal jurisdictions. This action is focused on increasing the training, exercising and further implementation costs associated with this program. The overall intent is to provide team members with the requisite FEMA training for accurately assessing damaged properties, appropriate personal protective equipment, a cache of tablets for utilizing ESRI ARCGIS web-based assessment tool and the required storage and sever capacity to maintain data. | Administrative | Education and Awareness Programs | All Hazards | Medium | Monmouth County | County budget | \$56,000.00 | 2 years | New |
| 54_17 | Assist the NJ State Council for the Arts, NJ Cultural Alliance for Response (NJCAR), and Monmouth Arts in Improving Disaster Preparedness and Response for Arts, Cultural and Historic Buildings, Structures, and Institutions. | Prepare an action plan for arts organizations that support post disaster programs that support individual's emotional well-being, community engagement, assists with conflict resolution, and improve public health by channeling post-traumatic stress and anxiety into creative and productive community outcomes. Identify which cultural assets are threatened by storm surge; severe flooding, and/or sea level rise. | Administrative | Local Plans and Regulations | All Hazards | Low | New Jersey State Council for the Arts, NJCAR, and Monmouth Arts | County budget | | 2 years | New |

| Community Action # | Action Name | Action Description | Action Category | Action Type | Hazard(s) Addressed | Priority | Responsible Party | Potential Funding Sources | Cost Estimate | Timeline | Action Status |
|--------------------|---|---|-------------------------------|--------------------------------------|---------------------|----------|--|---|---------------|-----------|---------------|
| 54_18 | During Non-emergency Events, Continue to Support and Strengthen the Relationships between Government Agencies, Non-profits Organizations, and Volunteers that are Community Partners in the County's Long-Term Recovery Group | Continue to build their capacity to respond to acute and chronic post-emergency situations as well as improve means of providing redundant support, coordination, and communications in times of need. | Maintenance/Response/Recovery | Local Plans and Regulations | All Hazards | Low | Monmouth County Long-Term Recovery Group | Robin Hood Foundation, County budget | | 5 + years | New |
| 54_19 | Work with State Agencies to Update Regional Risk Maps for Risks that Extend Past the County Boundary | Work with State agencies to update regional risk maps, such as dam inundation flood limit maps. | Administrative | Local Plans and Regulations | Dam Failure | Low | Monmouth County | County budget | \$0.00 | 3 years | New |
| 54_20 | Coordinate with the Monmouth County Chamber of Commerce to Improve Business Response Post Disaster | Work with the Chamber of Commerce to improve business response to disruption and preparedness from disasters. | Administrative | Local Plans and Regulations | All Hazards | Low | Monmouth County, Monmouth Regional Chamber of Commerce | County budget | | 3 years | New |
| 54_21 | Repair, Remove, or Rehabilitate the Allentown Dam | Repair, remove, or rehabilitate Allentown Dam, a High-Hazard Potential Dam, located along Doctors Creek. | Mitigation - Risk Reduction | Structure and Infrastructure Project | Dam Failure | High | Monmouth County, owns dam | County budget, NJDEP Bureau of Dam Safety and Flood Control | \$0.00 | 3 years | New |
| 54_22 | Repair, Remove, or Rehabilitate the Lake Topanemus Dam in Freehold Township | Repair, remove, or rehabilitate Lake Topanemus Dam, a High-Hazard Potential Dam, located along McGellaird's Brook. | Mitigation - Risk Reduction | Structure and Infrastructure Project | Dam Failure | High | Monmouth County, owns dam | County budget, NJDEP Bureau of Dam Safety and Flood Control | \$0.00 | 3 years | New |
| 54_23 | Construct a Fueling Station at Highway District #6 in Eatontown | Monmouth County has strategically located highway district yards throughout the County, which have provided fuel not only to County Municipal fleets, but during disaster events, to the National Guard, Federal Emergency Management Agency, and Local Police, Fire, Ambulatory, and Rescue vehicles. The construction of a fueling station at Highway District #6 in Eatontown would provide fuel in a central and critical area of Monmouth County. To mitigate (i.e. lessen the damage/cost) the results as a flooding event it is necessary to have a source of available fuel for vehicles. | | Structure and Infrastructure Project | All Hazards | | Monmouth County Department of Public Works & Engineering | County funded only. | \$500,000.00 | | Completed |

| Community Action # | Action Name | Action Description | Action Category | Action Type | Hazard(s) Addressed | Priority | Responsible Party | Potential Funding Sources | Cost Estimate | Timeline | Action Status |
|--------------------|---|--|---|--------------------------------------|---|----------|--|--|----------------|----------|---------------|
| 54_24 | Purchase and Install Generators at County Highway District Facilities | Purchase and install permanent emergency generators at critical County Highway District facilities and the County Complex, which houses the administration buildings of the Department of Public Works & Engineering (including Bridge, Highway, and Traffic Safety Sections) which ensure the continuity of services during a disaster or crisis. The Highway Districts and Department of Public Works & Engineering maintain and repair approximately 1,000 miles of county roadways and nearly 1,000 bridges and culverts, as well as the associated traffic signals and signs. Many roads and bridges are also considered critical infrastructure, particularly those providing ingress and egress for evacuees and those allowing emergency vehicles access to those in need. These roads are located in areas vulnerable to storm surge and inundation. | Mitigation - Continuity of Functional Use | Structure and Infrastructure Project | All Hazards | Medium | Monmouth County Department of Public Works & Engineering | FEMA HMA | \$2,000,000.00 | 1 year | Ongoing |
| 54_25 | Rehabilitate and Upgrade Dams to Meet Current NJDEP Bureau of Dam Safety Standards | Rehabilitate and upgrade dams to meet current NJDEP Bureau of Dam Safety Standards for spillway, embankment, low level outlet structure downstream channel improvements. Replace the adjoining County-owned bridge raise the roadway profile to address the safety issue associated with a potential dam failure or improve passage during flood events. Project locations include, but are not limited to, the following: 1) Lake Lefferts Dam, County Bridge MA-9, Ravine Dr. (CR 6A), Matawan; 2) Matawan Lake Dam, County Bridge MA-13, Main St. (CR 516), Matawan; 3) Perrineville Dam, County Bridge MS-48, Perrineville Rd. (CR 1), Millstone; 4) Shadow Lake Dam, County Bridges MT - 30 MT-45, Hubbard Ave. (CR 12), Middletown; 5) Indian Dam, County Bridge U-18, Church St. (CR 526), Allentown; and 6) Hurley Pond Dam, County Bridge W18, Allenwood Rd., Wall. | Mitigation - Continuity of Functional Use | Structure and Infrastructure Project | Dam Failure, Flood, Nor'easter, Hurricane and Tropical Storm | High | Monmouth County Department of Public Works & Engineering | FEMA HMA, NJDEP Bureau of Dam Safety and Flood Control, FEMA's High-Hazard | | 3 years | Ongoing |
| 54_26 | Purchase and Install Generator at Monmouth County Hall of Records Building and Human Services | Installation of permanent emergency generators at Monmouth County Hall of Records (Freehold Borough) and Human Services Building (Freehold Township). These generators will be designed to handle all potential electrical loads at these buildings thereby ensuring uninterrupted continuity of County government and response to the emergency at hand. | Mitigation - Continuity of Functional Use | Structure and Infrastructure Project | All Hazards | | Monmouth County Department of Public Works & Engineering | HMGP, PDM, and County match, whether it be financial or in-kind in- | \$1,110,000.00 | | Completed |
| 54_27 | Replace or Elevate County Bridges and Culverts | Projects may include the replacement of a County bridge or culvert and/or elevating the approach roadway above the flood elevation or to accommodate the new bridge structure. Project locations include, but are not limited to, the following: County Bridge H-5 H-5A, Palmer Ave (CR 7), Holmdel Middletown; County Bridge MA-11, Aberdeen Road, Matawan; County Bridges ML-17, ML-18, ML-19, Station Rd., Marlboro; County Bridge R-5, Florence Ave (CR 39), Union Beach; Union Ave (CR 39), Union Beach. | Mitigation - Continuity of Functional Use | Structure and Infrastructure Project | Flood, Wave Action, Nor'easter, Hurricane and Tropical Storm, Storm Surge | Medium | Monmouth County Department of Public Works & Engineering | FEMA HMA, NJDOT | | 3 years | Ongoing |

| Community Action # | Action Name | Action Description | Action Category | Action Type | Hazard(s) Addressed | Priority | Responsible Party | Potential Funding Sources | Cost Estimate | Timeline | Action Status |
|--------------------|---|---|---|--------------------------------------|---|----------|--|---------------------------|---------------|----------|---------------|
| 54_28 | Inspect and Maintain the Structural Integrity of County Infrastructure | Hard armoring of creek and river banks and shorelines is not always possible or desirable. In most areas of the County, the only way to mitigate the results of flooding is to anticipate for, maintain, and provide efforts to recover after an extreme event. Thus, it is essential to inspect and maintain the structural integrity of county infrastructure and to perform activities to remove debris and sediment that may negatively affect the flow of surface water in and around this infrastructure. This includes activities such as removing debris from underneath low-lying bridges and culverts, clearing sediment build-up, or repairing embankment erosion on riverbanks near county infrastructure. Also, repairing and cleaning stormwater drains and other drainage systems. | Maintenance/Response/Recovery | Structure and Infrastructure Project | Flood, Extreme Wind, Nor'easter, Hurricane and Tropical Storm | Medium | Monmouth County Department of Public Works & Engineering and | County budget | | 2 years | Ongoing |
| 54_29 | Install Hard-armoring on County Bridges that Experience Coastal Erosion | Due to the location of coastal bridges, the substructure is highly susceptible to scour and the effects of waves, tides, and storm surges. Installing hard-armoring (i.e. rip rap, jetty stone, and/or steel sheeting) would mitigate this coastal erosion that jeopardizes County bridges and the roads they carry. One such bridge is Monmouth County Bridge W- 43 over the Shark River in the Boroughs of Avon-by-the-Sea and Belmar. Bridge W-43 carries Ocean Ave. (CR 18). Other potential bridges include, but are not limited to; S-31 (Middletown, Rumson), S-32 (Rumson, Sea Bright), and W-9 (Brielle, Manasquan). | Mitigation - Continuity of Functional Use | Structure and Infrastructure Project | Wave Action, Coastal Erosion, Nor'easter, Hurricane and Tropical Storm, Storm Surge | Medium | Monmouth County Department of Public Works & Engineering | FEMA HMA | | 2 years | Ongoing |
| 54_30 | Elevate Highway District #8 Office in Hazlet | The office building and garage at Highway District #8, in the Township of Hazlet, is prone to flooding. This project is for the design and reconstruction of the building and garage at a higher elevation to ensure the continuity of services during a disaster or crisis. | Mitigation - Risk Reduction | Structure and Infrastructure Project | Flood, Nor'easter, Hurricane and Tropical Storm | Medium | Monmouth County Public Works & Engineering | FEMA HMA | \$600,000.00 | 2 years | Ongoing |

Monmouth County Mitigation Action Worksheets

Community Action Number: 54_01

Monmouth County

Describing the Action

| | |
|------------------------|---|
| Action Name: | Provide Assistance to the National Flood Insurance Program's (NFIP) Community Rating System (CRS) Program |
| Action Category: | Administrative |
| Action Type: | Local Plans and Regulations |
| HMA Eligible Activity: | Miscellaneous/Other |
| Action Description: | Provide technical and professional assistance to local municipalities for their engagement and advancement in the NFIP CRS program. Assistance includes hazard mitigation planning, community outreach, public information, flood protection information, mapping assistance, and floodplain regulations. |

Evaluating the Action

| | |
|-----------------------------|--|
| Hazard(s) Addressed: | Flood, Wave Action, Coastal Erosion, Nor'easter, Hurricane and Tropical Storm, Storm Surge |
| Goals: | 1, 2, 3, 5, 7, 8 |
| Risk Reduction: | Towns that take action steps to increase their resiliency to future storm events can help residents and businesses increase their eligibility for policyholder discounts. Many communities in Monmouth County lack the in-house resources to undertake the more technical aspects of the program. In turn, many communities have either not accessed the program at all or have entered at only the lowest levels. Many homeowners and businesses in Monmouth County may see an increase in their flood insurance premiums as the new FEMA Flood Maps are adopted. |
| Technical: | This program is technically feasible including the production of public information material for distribution, outreach meetings, website and document maintenance, ordinance and master plan preparation assistance, GIS mapping, and land use analysis. |
| Political: | The CRS program has been formalized by the Monmouth County Board of Chosen Freeholders; 19 local municipalities are either current participants in CRS or have taken actions to implement CRS. |
| Legal: | No known legal impediments. |
| Environmental: | No known negative environmental impacts. |
| Social: | Any property owner in a flood-prone area of a CRS community may directly benefit from this type of assistance; those outside flood prone areas benefit from overall improved community resiliency, minimized storm impacts, lower cleanup repair/replacement costs over time. |
| Administrative Capability: | Monmouth County has the staff to assist but requires additional training and expertise on some CRS and floodplain subject matters. |
| Local Champion: | Monmouth County Division of Planning and Office of Emergency Management |
| Other Community Objectives: | Integrate mitigation activities and practices into county and local master plans, improve public awareness and involvement in mitigation activities and flood preparedness |
| STAPLEE Evaluation: | N/A |

Implementing the Action

| | |
|---------------------------|---|
| Cost Estimate: | \$50,000.00 |
| Priority: | High |
| Local Planning Mechanism: | Participation in the NFIP Community Rating System (CRS), Monmouth County Master Plan (2016) |
| Responsible Party: | Monmouth County Division of Planning and Office and Emergency Management |
| Likely Funding Source(s): | Dedicated staff time |
| Timeline: | 5 + years |
| Action Status: | Ongoing |
| Notes: | This action is ongoing from the 2015 plan as the County continues to assist the municipalities through the Monmouth County Community Rating System Assistance Program, which was recognized as a National Association of Counties (NACo) 2016 Achievement Award Winner in the Category of County Resiliency: Infrastructure, Energy & Sustainability. There are currently 16 municipalities in the CRS program. |

Monmouth County Mitigation Action Worksheets

Community Action Number: 54_02

Monmouth County

Describing the Action

| | |
|------------------------|--|
| Action Name: | Support Municipal Floodplain Management Planning |
| Action Category: | Administrative |
| Action Type: | Local Plans and Regulations |
| HMA Eligible Activity: | Miscellaneous/Other |
| Action Description: | Assist municipalities in identifying and executing floodplain management activities that improve flood hazard mitigation, community resiliency, and recovery from storm events. Expand understanding, capabilities, and expertise in floodplain management. Monmouth County staff members would welcome more advanced training and certifications in areas such as floodplain management strategies and land use development in the SFHA. Training and certification would be necessary to provide resource support to reduce these costs and bridge the planning gap. |

Evaluating the Action

| | |
|-----------------------------|--|
| Hazard(s) Addressed: | Flood, Wave Action, Coastal Erosion, Nor'easter, Hurricane and Tropical Storm, Storm Surge |
| Goals: | 1, 2, 4, 5, 8 |
| Risk Reduction: | Many communities and residents suffer from flooding events on a regular basis and incur significant damages and costs associated with preparation, response, and recovery from these events. There also tends to be to disconnect between local master plans and floodplain management issues. |
| Technical: | This program is technically feasible as there are numerous staff members with educational backgrounds that support this type of activity including degrees in planning, environmental science, environmental policy, engineering. |
| Political: | This activity supports advancement of the County's CRS program which has received support from County officials. |
| Legal: | No known legal impediments |
| Environmental: | No known negative environmental impacts |
| Social: | This action benefits multiple municipal jurisdictions in Monmouth County by providing certified staff to assist with local floodplain management strategies including ordinance preparation master plans, and outreach. Communities benefit from having certified experts to call upon at the regional level to assist in floodplain management and reducing flood risk. |
| Administrative Capability: | Monmouth County has the staff to assist but requires additional training and expertise on some CRS and floodplain subject matters. |
| Local Champion: | Monmouth County Division of Planning and Office of Emergency Management |
| Other Community Objectives: | Better integration of floodplain management issues and recommendations into county and local master plans as well as local ordinances. This effort improves County effectiveness to support efforts in the CRS program. |
| STAPLEE Evaluation: | N/A |

Implementing the Action

| | |
|---------------------------|--|
| Cost Estimate: | \$25,000.00 |
| Priority: | Medium |
| Local Planning Mechanism: | Master Plan and ordinances, Hazard Mitigation Plan, Monmouth County Master Plan (2016) |
| Responsible Party: | Monmouth County Division of Planning and Office and Emergency Management |
| Likely Funding Source(s): | Dedicated staff time, FEMA HMA |
| Timeline: | 5 + years |
| Action Status: | Ongoing |
| Notes: | Ongoing 2015 action; the County would also like to join the New Jersey Coastal Coalition, a group of New Jersey waterfront communities that meet monthly in a workshop setting, to discuss common municipal flooding issues. |

Monmouth County Mitigation Action Worksheets

Community Action Number: 54_03

Monmouth County

Describing the Action

| | |
|------------------------|--|
| Action Name: | Expand Online Mapping Services |
| Action Category: | Administrative |
| Action Type: | Education and Awareness Programs |
| HMA Eligible Activity: | Miscellaneous/Other |
| Action Description: | Many municipalities rely on GIS assistance from Monmouth County. This system can be improved to provide municipal access with online services. This requires new software and/or software licenses, hardware and equipment, data updates, and upgrades as well as investments in the existing technology infrastructure. This system would also allow the public to access GIS information and customize maps showing risks to their property and community. It also ties back to CRS mapping requirements as well as to information used in the development of local master plans, planning, hazard response, community outreach, public information, flood information, mapping, municipal training, and CRS Support. Support development of interactive, online mapping services for public use provides municipalities with technical assistance and training, improves inhouse GIS system network, provides mapping and analysis services to CRS engaged communities, and enhances information assimilation and distribution. |

Evaluating the Action

| | |
|-----------------------------|--|
| Hazard(s) Addressed: | Flood, Wave Action, Coastal Erosion, Nor'easter, Hurricane and Tropical Storm, Storm Surge |
| Goals: | 1, 2, 3, 4, 5, 8 |
| Risk Reduction: | Many local officials in Monmouth County lack direct access to mapping services. This creates a gap in their full understanding of natural hazards in their communities, significant costs are incurred each year for hazard response, recovery, and damage repair. Lack of access to mapping services creates a situation in some communities where mitigation project development is sometimes hindered, and public education/warning programs are not as efficient or targeted as they could be. |
| Technical: | This program is technically feasible including the development of online mapping services, providing technical outreach assistance, and map assistance with CRS program requirements. |
| Political: | A GIS program and CRS program including is available to municipalities through the County. This would enhance existing capabilities. |
| Legal: | No known legal impediments. |
| Environmental: | No known negative environmental impacts. |
| Social: | Communities and the public would benefit from risk awareness and analysis. Communities could include mapping and modeling their community master plans, land use studies, environmental resources inventories, etc. |
| Administrative Capability: | Monmouth County has the staff to assist but requires additional training and GIS capabilities. |
| Local Champion: | Monmouth County Division of Planning |
| Other Community Objectives: | Risk identification and analysis, community planning, public information and awareness, remote access to information, asset inventory, and impact modeling. |
| STAPLEE Evaluation: | N/A |

Implementing the Action

| | |
|---------------------------|---|
| Cost Estimate: | \$100,000,000.00 |
| Priority: | Medium |
| Local Planning Mechanism: | Monmouth County GIS Program, Monmouth County Master Plan (2016) |
| Responsible Party: | Monmouth County Division of Planning, GIS Section |
| Likely Funding Source(s): | Dedicated staff time, FEMA HMA |
| Timeline: | 5 + years |
| Action Status: | Ongoing |
| Notes: | Ongoing 2015 action; the County is working on setting up Open Source Mapping. |

Monmouth County Mitigation Action Worksheets

Community Action Number: 54_04

Monmouth County

Describing the Action

| | |
|------------------------|--|
| Action Name: | Protect and Restore Claypit Creek and Portland Place |
| Action Category: | Mitigation - Continuity of Functional Use |
| Action Type: | Natural Systems Protection |
| HMA Eligible Activity: | Soil Stabilization |
| Action Description: | Re-establish, restore, and stabilize the eroded bluff and establish a living shoreline at the river edge to further provide protection of the slope to future storm events as well as provide and enhance habitat for fish and wildlife. |

Evaluating the Action

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|-----------------------------|---|
| Hazard(s) Addressed: | Wave Action, Coastal Erosion, Nor'easter, Hurricane and Tropical Storm, Storm Surge |
| Goals: | 3, 5, 6 |
| Risk Reduction: | Within Hartshorne Woods Park in Middletown Township, there are two unique sites: Claypit Creek and Portland Place. The sites are protected by coastal river edge bluffs which were severely eroded during Superstorm Sandy. Both sites offer passive recreation activities for county residents and have a south-eastern orientation steep bluff, which received the most direct exposure of winds, flooding, and wave action from the storm. |
| Technical: | Technically feasible by proven methods of river coastal restoration and case studies. |
| Political: | No political opposition is known. Previous support by other conservation organizations was obtained. |
| Legal: | No legal obstacles. |
| Environmental: | Must conform to NJDEP and US Army Corps of Engineers regulations. |
| Social: | Recreational facilities provide benefits for a wide age and ability cross section of the public. Natural resources are protected for the public good. |
| Administrative Capability: | Monmouth County has the personnel and administrative capabilities to begin planning and permitting for such a project. Additional specialty consultants will be hired on as needed basis. |
| Local Champion: | Monmouth County, NJDEP |
| Other Community Objectives: | Protects existing recreational features or public natural areas adjacent to project sites. |
| STAPLEE Evaluation: | N/A |

Implementing the Action

| | |
|---------------------------|--|
| Cost Estimate: | \$700,000.00 |
| Priority: | High |
| Local Planning Mechanism: | NJ Municipal Land Use Law (MLUL), NJDEP Permitting, Monmouth County Open Space Plan (2008), Monmouth County |
| Responsible Party: | Monmouth County Park System |
| Likely Funding Source(s): | FEMA HMA, The Nature Conservancy (TNC), National Fish and Wildlife Foundation (NFWF) |
| Timeline: | 2 years |
| Action Status: | Ongoing |
| Notes: | Ongoing 2015 action; planning has been underway for two years. Construction is scheduled to begin in September 2019. |

Monmouth County Mitigation Action Worksheets

Community Action Number: 54_05

Monmouth County

Describing the Action

| | |
|------------------------|---|
| Action Name: | Acquire Flood-prone Properties, especially Repetitive Loss and Severe Repetitive Loss Properties |
| Action Category: | Mitigation - Risk Reduction |
| Action Type: | Natural Systems Protection |
| HMA Eligible Activity: | Property Acquisition and Structure Demolition |
| Action Description: | To create a county-wide public open space system that will help meet park and recreation needs and conserve vital natural resources, the Monmouth County Park System will continue to acquire properties within project areas designated in the Monmouth County Open Space Plan (2008). Properties subject to flooding, severe winter weather, and associated storm surges are considered for purchase to meet the goals of the Monmouth County Open Space Plan. By purchasing these properties, any buildings located in the flood zone are removed and the land is restored to a natural condition. |

Evaluating the Action

| | |
|-----------------------------|--|
| Hazard(s) Addressed: | Flood, Wave Action, Nor'easter, Hurricane and Tropical Storm, Storm Surge, Winter Storm |
| Goals: | 1, 2, 5, 6 |
| Risk Reduction: | The County Park System acquires land for open space preservation, public park and recreation purposes and natural resources conservation. Some of the properties that are identified for acquisition are ones that are subject to flooding, winter storms or associated storm surges. These properties may be located in coastal zones or located along stream and river corridors throughout the county. When many properties along a watercourse are acquired, they form a protected greenway along the stream or river. By purchasing these properties, any buildings located in the flood zone are removed and the land is restored to a natural condition. Protected lands adjacent to coastal zones and river courses helps to reduce regional flooding by not increasing impervious cover and also allows natural systems of forests and marshes to mitigate some of the effects of flooding. |
| Technical: | Technically feasible and proven technique to reduce flooding and the elimination of flood prone structures. |
| Political: | This is a continuing program that has always had favorable support since its inception. |
| Legal: | No legal obstacles. |
| Environmental: | Program provides for the protection of natural resources from development. |
| Social: | Recreational facilities provide benefits for a wide age and ability cross section of the public. Natural resources are protected for the public good. |
| Administrative Capability: | Monmouth County has the personnel and administrative capabilities to continue in the purchasing properties for Open Space Conservation and Recreational needs. |
| Local Champion: | Monmouth County |
| Other Community Objectives: | Provides additional recreational opportunities, land conservation, open space preservation, flood mitigation, and natural resources protection) |
| STAPLEE Evaluation: | 11 |

Implementing the Action

| | |
|---------------------------|---|
| Cost Estimate: | \$100,000,000.00 |
| Priority: | High |
| Local Planning Mechanism: | Monmouth County Open Space Plan (2008), Monmouth County Master Plan (2016) |
| Responsible Party: | Monmouth County Park System |
| Likely Funding Source(s): | FEMA HMA |
| Timeline: | 5 + years |
| Action Status: | Ongoing |
| Notes: | Ongoing 2015 action; the County has acquired 225 properties in Aberdeen since the last plan update. Monmouth County will continue to purchase properties. |

Monmouth County Mitigation Action Worksheets

Community Action Number: 54_06

Monmouth County

Describing the Action

| | |
|------------------------|--|
| Action Name: | Improve Coastal Dune Systems at Four County Parks |
| Action Category: | Mitigation - Continuity of Functional Use |
| Action Type: | Natural Systems Protection |
| HMA Eligible Activity: | Soil Stabilization |
| Action Description: | Regrade sand fencing to establish dune topography and increase vegetation management to establish native coastal vegetation adapted to coastal hazard and slopes for Fisherman's Cove Conservation Area, Seven Presidents Oceanfront Park, Henry Hudson Trail at Popamora Point, and Bayshore Waterfront Park. |

Evaluating the Action

| | |
|-----------------------------|---|
| Hazard(s) Addressed: | Flood, Wave Action, Coastal Erosion, Nor'easter, Hurricane and Tropical Storm, Storm Surge |
| Goals: | 2, 3, 5, 6 |
| Risk Reduction: | Fisherman's Cove Conservation Area, Seven Presidents Oceanfront Park, Henry Hudson Trail at Popamora Point, and Bayshore Waterfront Park experience coastal dunes loss, erosion of coastal zone open space, real estate loss, a reduction in sedimentation of adjacent channels, and protective features for adjacent private properties. |
| Technical: | Technically feasible, Seven Presidents Oceanfront Park and Bayshore Waterfront Park have constructed dune systems. |
| Political: | Political and popular support. |
| Legal: | County owned property, permissible actions. |
| Environmental: | No impacts, compliant with land use regulations. |
| Social: | No specific populations affected. No permanent disruptions to communities. |
| Administrative Capability: | The County of Monmouth has the personnel and administrative capabilities to plan and coordinate implementation for such a project. |
| Local Champion: | Monmouth County, Borough of Atlantic Highlands, Manasquan Borough, City of Long Branch, and Middletown Township. |
| Other Community Objectives: | Structural Project, Natural Resource Protection |
| STAPLEE Evaluation: | N/A |

Implementing the Action

| | |
|---------------------------|--|
| Cost Estimate: | \$1,400,000.00 |
| Priority: | Medium |
| Local Planning Mechanism: | Monmouth County Open Space Plan (2008), Monmouth County Master Plan (2016) |
| Responsible Party: | Monmouth County Park System, US Fish & Wildlife Service, NOAA, FEMA, HRERP |
| Likely Funding Source(s): | New Jersey Corporate Wetlands Restoration Partnership (NJCWRP), FEMA HMA, National Fish and Wildlife Foundatio |
| Timeline: | 3 years |
| Action Status: | Ongoing |
| Notes: | The County was awarded \$50,000 for repairs to Bayshore Waterfront Park, \$6,500 for Fisherman's Cove Conservation Area, \$223,000 for Seven Presidents Park, and \$1.2M for Henry Hudson Park through FEMA's 406 Public Assistance funding. |

Monmouth County Mitigation Action Worksheets

Community Action Number: 54_07

Monmouth County

Describing the Action

| | |
|------------------------|--|
| Action Name: | Install Stream Bank Stabilization Techniques for the Ramanessin Brook, Pine Brook, and Manasquan River |
| Action Category: | Mitigation - Continuity of Functional Use |
| Action Type: | Natural Systems Protection |
| HMA Eligible Activity: | Floodplain and Stream Restoration |
| Action Description: | A proposal has been in the planning phase for many years to reintroduce stream form and function in the upper reaches of the watershed where extensive straightening occurred in the past. This will result in more stream stability and improved water quality with improved stream function. |

Evaluating the Action

| | |
|-----------------------------|--|
| Hazard(s) Addressed: | Flood, Nor'easter, Hurricane and Tropical Storm |
| Goals: | 1,2,6 |
| Risk Reduction: | Pine Brook (Pine Brook Golf Course, Manalapan) and Ramanessin Brook (Holmdel Park, Holmdel) need stream bank stabilization and the Manasquan River (Turkey Swamp Park, Freehold) needs floodplain restoration. The Manasquan River has been increasingly more flood prone and suffers potable water quality issues related to increased watershed development and past stream channel straightening impacts. |
| Technical: | Technically feasible by proven methods of stream and river restoration case studies. |
| Political: | No political opposition is known. Previous support by other conservation organizations was obtained. |
| Legal: | Proposal utilizes existing public property under the stewardship of the County. |
| Environmental: | No impacts. With proper review and design is permissible. |
| Social: | No specific populations affected. No permanent disruptions to communities. |
| Administrative Capability: | Monmouth County has the personnel and administrative capabilities to begin planning and studies for such a project and to determine or identify additional partnerships and funding needs. Additional specialty consultants will be hired on an as needed basis. |
| Local Champion: | Monmouth County Park System and Engineering |
| Other Community Objectives: | Protects existing recreational features or public natural areas adjacent to project sites. |
| STAPLEE Evaluation: | N/A |

Implementing the Action

| | |
|---------------------------|---|
| Cost Estimate: | \$2,300,000.00 |
| Priority: | Medium |
| Local Planning Mechanism: | NJDEP |
| Responsible Party: | Monmouth County Park System |
| Likely Funding Source(s): | FEMA HMA, County budget |
| Timeline: | 2 years |
| Action Status: | Ongoing |
| Notes: | Ongoing 2015 action; the County prioritizes floodplain and stream restoration and is searching for funding. |

Monmouth County Mitigation Action Worksheets

Community Action Number: 54_08

Monmouth County

Describing the Action

| | |
|------------------------|---|
| Action Name: | Conduct Scheduled Burning and Mechanical Thinning at Three County Parks |
| Action Category: | Maintenance/Response/Recovery |
| Action Type: | Natural Systems Protection |
| HMA Eligible Activity: | Wildfire Mitigation |
| Action Description: | Conduct scheduled burning and mechanical thinning at Fisherman's Cove Conservation Area (Manasquan Borough), Turkey Swamp Park (Freehold Township), and Bayshore Waterfront Park (Middletown Township). |

Evaluating the Action

| | |
|-----------------------------|---|
| Hazard(s) Addressed: | Wildfire |
| Goals: | 1, 2, 3, 6 |
| Risk Reduction: | Certain wild lands and urban interface areas pose a risk to losses by fire. Fisherman's Cove Conservation Area, Turkey Swamp Park, Bayshore Waterfront Park, and Naval Weapons Station Earle properties are subject to wildfires which have potential to destroy adjacent residential properties as well as park building infrastructure. |
| Technical: | Technically feasible. |
| Political: | Public support moderate, local authorities high support. |
| Legal: | Proposal utilizes existing public property under the stewardship of the County. |
| Environmental: | No impacts. With proper review and design is permissible. |
| Social: | No specific populations affected. No permanent disruptions to communities. |
| Administrative Capability: | Monmouth County has the personnel and administrative capabilities to implement the Community Wildfire Protection Plans prepared for Turkey Swamp Park (2011) and Bayshore Waterfront Park (2010). Fisherman's Cove Conservation Area still needs to be developed |
| Local Champion: | Monmouth County, NJ Forest Fire Service, Freehold Township., Manasquan Borough, and Middletown Township |
| Other Community Objectives: | Augments local fire marshal community protection efforts. |
| STAPLEE Evaluation: | N/A |

Implementing the Action

| | |
|---------------------------|--|
| Cost Estimate: | \$55,000.00 |
| Priority: | Medium |
| Local Planning Mechanism: | Community Wildfire Prevention Plan |
| Responsible Party: | Monmouth County Park System |
| Likely Funding Source(s): | County budget, State Forest Fire Service |
| Timeline: | 1 year |
| Action Status: | Ongoing |
| Notes: | Ongoing 2015 action; the County performed land clearing and controlled burns two years ago in Turkey Swamp Park. There needs to be more coordination with the Fire Marshall and State Forest Fire Service. |

Monmouth County Mitigation Action Worksheets

Community Action Number: 54_09

Monmouth County

Describing the Action

| | |
|------------------------|---|
| Action Name: | Implement Slope Stabilization Techniques Along the Henry Hudson Shoreline |
| Action Category: | Mitigation - Continuity of Functional Use |
| Action Type: | Natural Systems Protection |
| HMA Eligible Activity: | Soil Stabilization |
| Action Description: | A one-mile segment of the coastal trail will be the target area of this project. Various living shoreline techniques and wave attenuation structures will be investigated to find the "best fit" approach that will be permissible, economic, and supported by adjacent residents. Additional work of stabilization of the slope will also be investigated that will replant or restore the slope for adjacent public owned properties. |

Evaluating the Action

| | |
|-----------------------------|--|
| Hazard(s) Addressed: | Flood, Wave Action, Coastal Erosion, Nor'easter, Hurricane and Tropical Storm, Storm Surge |
| Goals: | 1, 2, 3, 6 |
| Risk Reduction: | A section of the Henry Hudson Trail located in Atlantic Highlands along Sandy Hook Bay was destroyed by Superstorm Sandy. The adjacent coastal bluff experienced erosion at the base of slope from wave action and storm surge. Above the trail, located on the bluff, there are numerous residences that have taken advantage of the unique location. The bluff is subject to slump block failure usually associated with a rain event and disruption of the slope. |
| Technical: | Technically feasible as other similar structures, and improvements have been installed in other coastal locations. |
| Political: | Public support for the repair and protection of the trail has been great since the damage from Superstorm Sandy. Additional support has been noted from the local town Environmental Commission. |
| Legal: | Joint project with Borough of Atlantic Highlands and the State of New Jersey as proposed project will be located on lands owned by same. |
| Environmental: | Must conform to NJDEP and US Army Corps of Engineers permitting issues. |
| Social: | Recreational facilities such as this trail, provide benefits for a wide age and ability cross section of the public. No displacement of adjacent residents is required. |
| Administrative Capability: | Monmouth County has the personnel and administrative capabilities to begin initial planning and studies for such a project and to determine or identify additional partnerships and permitting needs. Additional specialty consultants will be hired on an as needed basis. |
| Local Champion: | Monmouth County, local residents, Atlantic Highlands Administrator and Environmental Commission |
| Other Community Objectives: | May provide additional recreational opportunities for the public along shoreline. |
| STAPLEE Evaluation: | N/A |

Implementing the Action

| | |
|---------------------------|--|
| Cost Estimate: | \$20,000,000.00 |
| Priority: | High |
| Local Planning Mechanism: | Hazard Mitigation Plan |
| Responsible Party: | Monmouth County Park System |
| Likely Funding Source(s): | FEMA Hazard Mitigation Assistance (HMA), NJDEP Blue Acres, Environmental Protection Agency (EPA), National Oceanic and Atmospheric Administration (NOAA) |
| Timeline: | 3 years |
| Action Status: | Ongoing |
| Notes: | Ongoing 2015 action and remains a high priority for the County, as the risk to the County and Atlantic Highlands is getting larger with each storm. The County added a floodwall along the access route. This project is one of 11 projects listed in the 2019 Raritan/Sandy Hook Bay Coastal Resilience Planning Study (by Monmouth County) and is supported by the County, the Township, NWS Earle, and the Planning Study Technical Advisory Committee. |

Monmouth County Mitigation Action Worksheets

Community Action Number: 54_10

Monmouth County

Describing the Action

| | |
|------------------------|---|
| Action Name: | Improve County Evacuation Preparations |
| Action Category: | Maintenance/Response/Recovery |
| Action Type: | Structure and Infrastructure Project |
| HMA Eligible Activity: | Miscellaneous/Other |
| Action Description: | Improve the physical (signage, striping, conversion of traffic signals to LED) and operational preparation (identifying severe inundation zones as priority areas) to place first responders at key intersections and check points and coordinate of highway advisory radio. This is in addition to Long Term Improvements (widening and elevating of roads and bridges) of the County Evacuation Routes, as documented in the 2009 Monmouth County Coastal Evacuation Routes Improvement Study. This study provided a transportation system condition and assessment of 12 Portal Evacuation Routes within the County. Some targeted improvements based on the recommendations would likely result in substantial benefits on roadway capacity, balancing travel demand and safety along the overall length of each portal route. Physical and operational preparations would be in addition to promoting Monmouth County's Know Your Zone initiative. |

Evaluating the Action

| | |
|-----------------------------|--|
| Hazard(s) Addressed: | Flood, Wave Action, Nor'easter, Hurricane and Tropical Storm, Storm Surge, All Hazards |
| Goals: | 1, 2, 5, 7 |
| Risk Reduction: | Monmouth County has an active history of hurricanes and tropical storms. Implementation of evacuation orders related to an impending hurricane would have a significant impact on travel patterns and operating conditions on the area's transportation system. For example, prevailing directional patterns would be altered substantially as westbound and coastal residents and visitors traveling away from the coast to higher ground would heavily utilize northbound travel lanes. Congestion levels at locations that already have constrained service rate issues, such as merge junctions, ramps, and signalized major intersections would be exacerbated. The timing of an evacuation order would have a significant effect on traffic flows, the shorter the timeframe, the more intense delays and queuing potential. Operational, physical, and long-term improvements (either by route or by type) would greatly enhance to capacity of these evacuation routes during an evacuation order. |
| Technical: | Technically feasible, study completed, recommendations documented. |
| Political: | Positive public support and political will to support this action. |
| Legal: | No known legal impediments. |
| Environmental: | No negative environmental impacts. |
| Social: | Residents would benefit from safer evacuation routes not affected by natural hazards. |
| Administrative Capability: | Monmouth County has the capability to oversee this action. |
| Local Champion: | Monmouth County Planning, DPW, Highway, OEM and DOT; Municipal Governments. |
| Other Community Objectives: | Overall effort to protect residents and visitors from the hazards of coastal flooding by evaluating how the current evacuation route system can be improved to help move people away from flood zones. |
| STAPLEE Evaluation: | N/A |

Implementing the Action

| | |
|---------------------------|---|
| Cost Estimate: | \$20,000,000.00 |
| Priority: | Medium |
| Local Planning Mechanism: | 2009 Monmouth County Coastal Evacuations Routes Improvement Study, Monmouth County's Know Your Zone initia |
| Responsible Party: | Monmouth County Department of Public Works & Engineering and Monmouth County Planning Division |
| Likely Funding Source(s): | County budget |
| Timeline: | 5 + years |
| Action Status: | Ongoing |
| Notes: | Ongoing 2015 action; the County has purchased lights and updated GIS maps with the coastal evacuation signs/zones. ☑route completed: CR 14 (West Park AveCorridor ☑routes ongoing: CR 8A & CR 8B, CR 12 & CR 50, CR 12A, CR 14 from SR 18 to Cotswold Circle, CR 16 & Fox Chase Dr, |

Monmouth County Mitigation Action Worksheets

Community Action Number: 54_11

Monmouth County

Describing the Action

| | |
|------------------------|--|
| Action Name: | Increase Hazard Education and Risk Awareness at the County Level |
| Action Category: | Administrative |
| Action Type: | Education and Awareness Programs |
| HMA Eligible Activity: | Miscellaneous/Other |
| Action Description: | Delivering preparedness education and community outreach on programs geared towards preparedness and small-scale mitigation efforts. This action will be the delivering of preparedness education in the form of mitigation seminars discussing mitigation options (i.e. flood vents, wet and dry floodproofing, elevation of utilities). The action will involve community focus meetings targeting the most at-risk communities and working through each area of the County. |

Evaluating the Action

| | |
|-----------------------------|--|
| Hazard(s) Addressed: | All Hazards |
| Goals: | 1, 2, 3, 4, 5 |
| Risk Reduction: | The general public's understanding of natural hazards and mitigation possibilities could be improved. The community's overall level of disaster resistance would increase if a greater number of households undertook low-cost or no-cost, small-scale mitigation activities (including, but not limited to, projects such as flood vents, residential floodproofing, and elevation of utilities). |
| Technical: | Technically feasible. |
| Political: | The program is already being conducted and has had enormous support from every aspect including that of political leaders. |
| Legal: | This is an outreach community education program with no legal issues. |
| Environmental: | No negative environmental impacts from this action. |
| Social: | This action supports all population segments but is focused on the elderly and or at risk population. This program will actually bring neighborhoods closer together. |
| Administrative Capability: | The County has committed personnel to this program, however if this were to be implemented on this scale, outside assistance would be needed. |
| Local Champion: | The County Board of Chosen Freeholders and numerous County departments have bought into the concept and are currently supporting its action. |
| Other Community Objectives: | Preparedness and public education for high risk individuals. |
| STAPLEE Evaluation: | N/A |

Implementing the Action

| | |
|---------------------------|---|
| Cost Estimate: | \$582,000.00 |
| Priority: | High |
| Local Planning Mechanism: | Superstorm Sandy After Action Report and County Emergency Operations Plan |
| Responsible Party: | Monmouth County Office and Emergency Management |
| Likely Funding Source(s): | County budget |
| Timeline: | 5 + years |
| Action Status: | Ongoing |
| Notes: | Ongoing 2015 action; programs or mechanisms that have been initiated since the last plan update include the High-Water Mark sign, Know Your Zone, and CRS Users Group. This action will continue to be an ongoing action. |

Monmouth County Mitigation Action Worksheets

Community Action Number: 54_12

Monmouth County

Describing the Action

| | |
|------------------------|---|
| Action Name: | Provide Wind-Resistant Building Retrofits for the County Evacuation Centers |
| Action Category: | Mitigation - Risk Reduction |
| Action Type: | Structure and Infrastructure Project |
| HMA Eligible Activity: | Structural Retrofitting of Existing Buildings |
| Action Description: | Provide building retrofits with hurricane-proof glass and storm shutters for the exterior windows and any applicable doors. |

Evaluating the Action

| | |
|-----------------------------|--|
| Hazard(s) Addressed: | Extreme Wind, Nor'easter, Hurricane and Tropical Storm |
| Goals: | 1, 2, 7 |
| Risk Reduction: | Monmouth County has established a large county evacuation center at Brookdale Community College in addition to Fort Monmouth Recreation Center and Bio-Technology High School. The buildings, although structurally sound, do have some exterior windows and doors that could become compromised during a wind generating event. |
| Technical: | Through careful planning and using a qualified architect to design the project, this project is technically feasible. |
| Political: | There are no anticipated negative political issues with this action. In fact, it is anticipated that this action would draw strong political support. |
| Legal: | No legal challenges are anticipated. The building that is the focus of this project is at the county-owned college which is under the auspices of the County Board of Freeholders. |
| Environmental: | There are no environmental impacts with this project. |
| Social: | Does not adversely affect any particular social group. |
| Administrative Capability: | Since the building is under county control, this project is administratively feasible. |
| Local Champion: | Municipalities in the County support the OEM's desire to establish county-wide regional shelters. |
| Other Community Objectives: | This action does not provide benefit to any other community objectives. |
| STAPLEE Evaluation: | 11 |

Implementing the Action

| | |
|---------------------------|---|
| Cost Estimate: | \$1,000,000.00 |
| Priority: | Medium |
| Local Planning Mechanism: | Local and state building codes will be followed when implementing this project. |
| Responsible Party: | Monmouth County Office and Emergency Management |
| Likely Funding Source(s): | FEMA HMA |
| Timeline: | 1 year |
| Action Status: | Ongoing |
| Notes: | Ongoing 2015 action; the County prioritizes hardening a county shelter and is searching for funding. The following shelters were awarded HMGP grants in the following amounts: Brookdale Shelter: \$457,560.00 Shelter Site - Brookdale Student Life Center: amount not known Shelter Site # 3 - Monmouth Park Racetrack: amount not known Shelter Site #4 - Monmouth County Bio-technology High School: amount not known Shelter Site - Brookdale Student Life Center: \$220,674.00 Shelter Site # 3 - Monmouth Park Racetrack: \$440,627.00 Shelter Site #4 - Monmouth County Bio-technology High School: \$219,323.00 |

Monmouth County Mitigation Action Worksheets

Community Action Number: 54_13

Monmouth County

Describing the Action

| | |
|------------------------|--|
| Action Name: | Create a Repetitive Loss (RL) and Severe Repetitive Loss (SRL) Bundle Project |
| Action Category: | Mitigation - Risk Reduction |
| Action Type: | Structure and Infrastructure Project |
| HMA Eligible Activity: | Localized Flood Risk Reduction Projects |
| Action Description: | Create a project that groups together RL and SRL Properties and then the County applies for a regional level mitigation project. |

Evaluating the Action

| | |
|-----------------------------|--|
| Hazard(s) Addressed: | Flood, Wave Action, Nor'easter, Hurricane and Tropical Storm, Storm Surge, Winter Storm |
| Goals: | 1, 2, 3, 5, 7, 8 |
| Risk Reduction: | Monmouth County municipalities are finding that the Cost Benefit Analysis is not always above 1 and therefore it doesn't make fiscal sense to mitigate their RL and SRL properties. If the County could bundle these high-risk properties together and apply for funding, the Cost Benefit Analysis would make fiscal sense. |
| Technical: | Technically feasible. |
| Political: | No adverse political ramifications are expected. |
| Legal: | No legal impediments anticipated. |
| Environmental: | No known adverse environmental impacts. |
| Social: | Does not adversely affect any particular social group. Perceived by the public to be a good thing because of repetitive nature of flooding in the project area. |
| Administrative Capability: | Monmouth County has the personnel and administrative capabilities to begin planning and permitting for such a project. |
| Local Champion: | Monmouth County OEM and Planning Division |
| Other Community Objectives: | |
| STAPLEE Evaluation: | N/A |

Implementing the Action

| | |
|---------------------------|--|
| Cost Estimate: | |
| Priority: | High |
| Local Planning Mechanism: | Hazard Mitigation Plan, Monmouth County Master Plan (2016) |
| Responsible Party: | Monmouth County Division of Planning; Monmouth County Office of Emergency Management |
| Likely Funding Source(s): | County budget |
| Timeline: | 2 years |
| Action Status: | New |
| Notes: | |

Monmouth County Mitigation Action Worksheets

Community Action Number: 54_14

Monmouth County

Describing the Action

| | |
|------------------------|---|
| Action Name: | Improve Financial Management of Grant Monies |
| Action Category: | Administrative |
| Action Type: | Local Plans and Regulations |
| HMA Eligible Activity: | Miscellaneous/Other |
| Action Description: | Hire new staff or rearrange existing staff's responsibilities to improve financial management of grant monies allotted to the County. |

Evaluating the Action

| | |
|-----------------------------|---|
| Hazard(s) Addressed: | All Hazards |
| Goals: | 3, 5, 7 |
| Risk Reduction: | After Superstorm Sandy, the responsibility of passing on grant money to all local jurisdictions fell on the County Community Development Department, which is at capacity coordinating, implementing, and monitoring compliance under several federal grant programs. |
| Technical: | Technically feasible. |
| Political: | No political ramifications anticipated. |
| Legal: | No legal impediments anticipated. |
| Environmental: | No adverse environmental impacts. |
| Social: | Does not adversely affect any particular social group. |
| Administrative Capability: | The County of Monmouth has the personnel and administrative capabilities to begin planning and permitting for such a project. |
| Local Champion: | Monmouth County Division of Planning |
| Other Community Objectives: | |
| STAPLEE Evaluation: | N/A |

Implementing the Action

| | |
|---------------------------|--|
| Cost Estimate: | |
| Priority: | Medium |
| Local Planning Mechanism: | Hazard Mitigation Plan |
| Responsible Party: | Monmouth County Division of Planning; Monmouth County Office of Emergency Management |
| Likely Funding Source(s): | County budget |
| Timeline: | 2 years |
| Action Status: | New |
| Notes: | |

Monmouth County Mitigation Action Worksheets

Community Action Number: 54_15

Monmouth County

Describing the Action

| | |
|------------------------|--|
| Action Name: | Create 3D digital Elevation Models of Structures and Infrastructure within the 500-year Flood Zones |
| Action Category: | Administrative |
| Action Type: | Education and Awareness Programs |
| HMA Eligible Activity: | Localized Flood Risk Reduction Projects |
| Action Description: | Use mobile LiDAR Technology to create current 3D digital elevation models of all homes, businesses and infrastructure within Monmouth County coastal communities located within the 500 year flood zones. This project will collect digital images and develop models that provide an accurate assessment of flood damages that have been incurred by residents, businesses and infrastructure as a result of specific past events. Additional information to be included within each property/parcels data set will be first floor elevations of mitigated properties, affixing property elevation certificates, NFIP information and creating an ArcGIS online web application for viewing. In addition, the project will overlay FIRM data on the first floor elevation data to help identify which buildings and infrastructure are at future risk of flooding. All in the effort of building smarter more efficient ways of working towards greater resiliency. This also enhances various components of CRS program. |

Evaluating the Action

| | |
|-----------------------------|---|
| Hazard(s) Addressed: | Flood, Nor'easter, Hurricane and Tropical Storm |
| Goals: | 1, 2, 3, 4, 5, 8 |
| Risk Reduction: | Monmouth County is vulnerable to coastal flooding. |
| Technical: | Technically feasible. |
| Political: | No political ramifications anticipated. |
| Legal: | No legal impediments anticipated. |
| Environmental: | No adverse environmental impacts. |
| Social: | Does not adversely affect any particular social group. |
| Administrative Capability: | The County of Monmouth has the personnel and administrative capabilities to begin planning and permitting for such a project. |
| Local Champion: | Monmouth County OEM |
| Other Community Objectives: | |
| STAPLEE Evaluation: | N/A |

Implementing the Action

| | |
|---------------------------|------------------------|
| Cost Estimate: | \$250,000.00 |
| Priority: | Medium |
| Local Planning Mechanism: | Hazard Mitigation Plan |
| Responsible Party: | Monmouth County OEM |
| Likely Funding Source(s): | County budget |
| Timeline: | 2 years |
| Action Status: | New |
| Notes: | |

Monmouth County Mitigation Action Worksheets

Community Action Number: 54_16

Monmouth County

Describing the Action

| | |
|------------------------|--|
| Action Name: | Strengthen Damage Assessment Teams |
| Action Category: | Administrative |
| Action Type: | Education and Awareness Programs |
| HMA Eligible Activity: | Miscellaneous/Other |
| Action Description: | Monmouth County has established regional Damage Assessment Teams that are comprised of the Building and Construction Officials from within the municipal jurisdictions. This action is focused on increasing the training, exercising and further implementation costs associated with this program. The overall intent is to provide team members with the requisite FEMA training for accurately assessing damaged properties, appropriate personal protective equipment, a cache of tablets for utilizing ESRI ARCGIS web-based assessment tool and the required storage and sever capacity to maintain data. |

Evaluating the Action

| | |
|-----------------------------|--|
| Hazard(s) Addressed: | All Hazards |
| Goals: | 1, 2, 3, 4, 7 |
| Risk Reduction: | The assessment tool is integrated with the electronic shelter registration tool and is expected to decrease short term recovery of disaster survivors. |
| Technical: | Technically feasible. |
| Political: | No political ramifications anticipated. |
| Legal: | No legal impediments anticipated. |
| Environmental: | No adverse environmental impacts. |
| Social: | Does not adversely affect any particular social group. |
| Administrative Capability: | The County of Monmouth has the personnel and administrative capabilities to begin planning and permitting for such a project. |
| Local Champion: | Monmouth County OEM |
| Other Community Objectives: | |
| STAPLEE Evaluation: | N/A |

Implementing the Action

| | |
|---------------------------|------------------------------|
| Cost Estimate: | \$56,000.00 |
| Priority: | Medium |
| Local Planning Mechanism: | Hazard Mitigation Plan, COOP |
| Responsible Party: | Monmouth County |
| Likely Funding Source(s): | County budget |
| Timeline: | 2 years |
| Action Status: | New |
| Notes: | |

Monmouth County Mitigation Action Worksheets

Community Action Number: 54_17

Monmouth County

Describing the Action

| | |
|------------------------|--|
| Action Name: | Assist the NJ State Council for the Arts, NJ Cultural Alliance for Response (NJCAR), and Monmouth Arts in Improving Disaster Preparedness and Response for Arts, Cultural and Historic Buildings, Structures, and Institutions. |
| Action Category: | Administrative |
| Action Type: | Local Plans and Regulations |
| HMA Eligible Activity: | Miscellaneous/Other/NA |
| Action Description: | Prepare an action plan for arts organizations that support post disaster programs that support individual's emotional well-being, community engagement, assists with conflict resolution, and improve public health by channeling post-traumatic stress and anxiety into creative and productive community outcomes. Identify which cultural assets are threatened by storm surge; severe flooding, and/or sea level rise. |

Evaluating the Action

| | |
|-----------------------------|---|
| Hazard(s) Addressed: | All Hazards |
| Goals: | 1, 2, 3 |
| Risk Reduction: | N/A |
| Technical: | Technically feasible. |
| Political: | No political opposition is known. |
| Legal: | No legal obstacles. |
| Environmental: | No known negative environmental impacts. |
| Social: | Communities would benefit from public health programming. |
| Administrative Capability: | Monmouth County to cooperate with the New Jersey State Council for the Arts, NJCAR, and Monmouth Art. |
| Local Champion: | Monmouth County Division of Planning |
| Other Community Objectives: | |
| STAPLEE Evaluation: | N/A |

Implementing the Action

| | |
|---------------------------|---|
| Cost Estimate: | |
| Priority: | Low |
| Local Planning Mechanism: | Hazard Mitigation Plan |
| Responsible Party: | New Jersey State Council for the Arts, NJCAR, and Monmouth Arts |
| Likely Funding Source(s): | County budget |
| Timeline: | 2 years |
| Action Status: | New |
| Notes: | |

Monmouth County Mitigation Action Worksheets

Community Action Number: 54_18

Monmouth County

Describing the Action

| | |
|------------------------|---|
| Action Name: | During Non-emergency Events, Continue to Support and Strengthen the Relationships between Government Agencies, Non-profits Organizations, and Volunteers that are Community Partners in the County's Long-Term Recovery Group |
| Action Category: | Maintenance/Response/Recovery |
| Action Type: | Local Plans and Regulations |
| HMA Eligible Activity: | Miscellaneous/Other/NA |
| Action Description: | Continue to build their capacity to respond to acute and chronic post-emergency situations as well as improve means of providing redundant support, coordination, and communications in times of need. |

Evaluating the Action

| | |
|-----------------------------|--|
| Hazard(s) Addressed: | All Hazards |
| Goals: | 5,7 |
| Risk Reduction: | The Monmouth County Long-Term Recovery Group provides assistance to County residents by addressing and prioritizing unmet needs. |
| Technical: | Technically feasible. |
| Political: | No political opposition is known. |
| Legal: | No legal obstacles. |
| Environmental: | No known negative environmental impacts. |
| Social: | Communities and the public would benefit from increased government capacity. |
| Administrative Capability: | Administrative capacity would be strengthened. |
| Local Champion: | Monmouth County Division of Planning |
| Other Community Objectives: | |
| STAPLEE Evaluation: | N/A |

Implementing the Action

| | |
|---------------------------|--|
| Cost Estimate: | |
| Priority: | Low |
| Local Planning Mechanism: | Hazard Mitigation Plan |
| Responsible Party: | Monmouth County Long-Term Recovery Group |
| Likely Funding Source(s): | Robin Hood Foundation, County budget |
| Timeline: | 5 + years |
| Action Status: | New |
| Notes: | |

Monmouth County Mitigation Action Worksheets

Community Action Number: 54_19

Monmouth County

Describing the Action

Action Name: Work with State Agencies to Update Regional Risk Maps for Risks that Extend Past the County Boundary

Action Category: Administrative

Action Type: Local Plans and Regulations

HMA Eligible Activity: Miscellaneous/Other/NA

Action Description: Work with State agencies to update regional risk maps, such as dam inundation flood limit maps.

Evaluating the Action

Hazard(s) Addressed: Dam Failure

Goals: 3, 4, 5

Risk Reduction: There is an absence of regional risk maps which could help assess local risk.

Technical: Technically feasible.

Political: No political opposition is known.

Legal: No legal obstacles.

Environmental: No known negative environmental impacts.

Social: Communities and the public would benefit from increased government capacity.

Administrative Capability: Administrative capacity would be strengthened.

Local Champion: Monmouth County Division of Planning

Other Community Objectives:

STAPLEE Evaluation: N/A

Implementing the Action

Cost Estimate: \$0.00

Priority: Low

Local Planning Mechanism: Hazard Mitigation Plan

Responsible Party: Monmouth County

Likely Funding Source(s): County budget

Timeline: 3 years

Action Status: New

Notes:

Monmouth County Mitigation Action Worksheets

Community Action Number: 54_20

Monmouth County

Describing the Action

| | |
|------------------------|---|
| Action Name: | Coordinate with the Monmouth County Chamber of Commerce to Improve Business Response Post Disaster |
| Action Category: | Administrative |
| Action Type: | Local Plans and Regulations |
| HMA Eligible Activity: | Miscellaneous/Other/NA |
| Action Description: | Work with the Chamber of Commerce to improve business response to disruption and preparedness from disasters. |

Evaluating the Action

| | |
|-----------------------------|--|
| Hazard(s) Addressed: | All Hazards |
| Goals: | 2, 3, 7 |
| Risk Reduction: | |
| Technical: | Technically feasible. |
| Political: | No political opposition is known. |
| Legal: | No legal obstacles. |
| Environmental: | No known negative environmental impacts. |
| Social: | Communities and the public would benefit from increased government capacity. |
| Administrative Capability: | Administrative capacity would be strengthened. |
| Local Champion: | Monmouth County Division of Planning |
| Other Community Objectives: | |
| STAPLEE Evaluation: | N/A |

Implementing the Action

| | |
|---------------------------|--|
| Cost Estimate: | |
| Priority: | Low |
| Local Planning Mechanism: | |
| Responsible Party: | Monmouth County, Monmouth Regional Chamber of Commerce |
| Likely Funding Source(s): | County budget |
| Timeline: | 3 years |
| Action Status: | New |
| Notes: | |

Monmouth County Mitigation Action Worksheets

Community Action Number: 54_21

Monmouth County

Describing the Action

| | |
|------------------------|--|
| Action Name: | Repair, Remove, or Rehabilitate the Allentown Dam |
| Action Category: | Mitigation - Risk Reduction |
| Action Type: | Structure and Infrastructure Project |
| HMA Eligible Activity: | Localized Flood Risk Reduction Projects |
| Action Description: | Repair, remove, or rehabilitate Allentown Dam, a High-Hazard Potential Dam, located along Doctors Creek. |

Evaluating the Action

| | |
|----------------------------|--|
| Hazard(s) Addressed: | Dam Failure |
| Goals: | 1, 2, 3 |
| Risk Reduction: | NJDEP classifies Allentown Dam to be a High-Hazard Potential, meaning failure of the dam may result in probable loss of life and/or extensive property damage. |
| Technical: | Technically feasible. |
| Political: | No adverse political ramifications are expected. |
| Legal: | May require coordination with NJDEP. |
| Environmental: | Minor environmental impacts expected. |
| Social: | No adverse social impact anticipated. |
| Administrative Capability: | County has sufficient capacity and experience to administer this action. |
| Local Champion: | OEM, Engineering |

Other Community Objectives:

| | |
|---------------------|----|
| STAPLEE Evaluation: | 10 |
|---------------------|----|

Implementing the Action

| | |
|---------------------------|---|
| Cost Estimate: | \$0.00 |
| Priority: | High |
| Local Planning Mechanism: | Hazard Mitigation Plan |
| Responsible Party: | Monmouth County, owns dam |
| Likely Funding Source(s): | County budget, NJDEP Bureau of Dam Safety and Flood Control |
| Timeline: | 3 years |
| Action Status: | New |

Notes: FEMA has a National Dam Safety Program with funding available to High-Hazard Potential Dams, however, the Allentown Dam does not qualify for funding at the time of this plan update.

Monmouth County Mitigation Action Worksheets

Community Action Number: 54_22

Monmouth County

Describing the Action

| | |
|------------------------|--|
| Action Name: | Repair, Remove, or Rehabilitate the Lake Topanemus Dam in Freehold Township |
| Action Category: | Mitigation - Risk Reduction |
| Action Type: | Structure and Infrastructure Project |
| HMA Eligible Activity: | Localized Flood Risk Reduction Projects |
| Action Description: | Repair, remove, or rehabilitate Lake Topanemus Dam, a High-Hazard Potential Dam, located along McGellaird's Brook. |

Evaluating the Action

| | |
|----------------------------|---|
| Hazard(s) Addressed: | Dam Failure |
| Goals: | 1, 2, 3 |
| Risk Reduction: | NJDEP classifies Lake Topanemus Dam to be a High-Hazard Potential, meaning failure of the dam may result in probable loss of life and/or extensive property damage. |
| Technical: | Technically feasible. |
| Political: | There are no anticipated political implications. |
| Legal: | May require coordination with NJDEP. |
| Environmental: | Minor environmental impacts expected. |
| Social: | No adverse social impact anticipated. |
| Administrative Capability: | County has sufficient capacity and experience to administer this action. |
| Local Champion: | OEM, Engineering |

Other Community Objectives:

STAPLEE Evaluation: 10

Implementing the Action

| | |
|---------------------------|--|
| Cost Estimate: | \$0.00 |
| Priority: | High |
| Local Planning Mechanism: | Hazard Mitigation Plan |
| Responsible Party: | Monmouth County, owns dam |
| Likely Funding Source(s): | County budget, NJDEP Bureau of Dam Safety and Flood Control |
| Timeline: | 3 years |
| Action Status: | New |
| Notes: | FEMA has a National Dam Safety Program with funding available to High-Hazard Potential Dams, however, the Lake Topanemus Dam does not qualify for funding at the time of this plan update. |

Monmouth County Mitigation Action Worksheets

Community Action Number: 54_23

Monmouth County Public Works & Engineering

Describing the Action

| | |
|------------------------|---|
| Action Name: | Construct a Fueling Station at Highway District #6 in Eatontown |
| Action Category: | |
| Action Type: | Structure and Infrastructure Project |
| HMA Eligible Activity: | Structure Elevation |
| Action Description: | Monmouth County has strategically located highway district yards throughout the County, which have provided fuel not only to County Municipal fleets, but during disaster events, to the National Guard, Federal Emergency Management Agency, and Local Police, Fire, Ambulatory, and Rescue vehicles. The construction of a fueling station at Highway District #6 in Eatontown would provide fuel in a central and critical area of Monmouth County. To mitigate (i.e. lessen the damage/cost) the results as a flooding event it is necessary to have a source of available fuel for vehicles. |

Evaluating the Action

| | |
|-----------------------------|--|
| Hazard(s) Addressed: | All Hazards |
| Goals: | 3, 7 |
| Risk Reduction: | Lack of fuel supply in a key location of Monmouth County, which is detrimental to operational and emergency services provided during a time of disaster or crisis. |
| Technical: | Technically feasible. |
| Political: | No adverse political implications. |
| Legal: | No legal impediments. |
| Environmental: | Does not adversely affect the environment. |
| Social: | Does not adversely affect any particular social group. The benefits of adding this fuel facility includes, but is not be limited to, direct fuel access for emergency vehicles during disaster events, significantly improved emergency response time, and overall enhanced effectiveness of the County's ability to respond to the community's needs both during critical events and continuing through recovery efforts. |
| Administrative Capability: | Staff of Monmouth County Division of Public Works Engineering would oversee and coordinate the activities of the various consulting firms hired to perform the required work. |
| Local Champion: | Monmouth County Public Works Engineering |
| Other Community Objectives: | |
| STAPLEE Evaluation: | N/A |

Implementing the Action

| | |
|---------------------------|--|
| Cost Estimate: | \$500,000.00 |
| Priority: | |
| Local Planning Mechanism: | Hazard Mitigation Plan |
| Responsible Party: | Monmouth County Department of Public Works & Engineering |
| Likely Funding Source(s): | County funded only. |
| Timeline: | |
| Action Status: | Completed |
| Notes: | |

Monmouth County Mitigation Action Worksheets

Community Action Number: 54_24

Monmouth County Public Works & Engineering

Describing the Action

| | |
|------------------------|---|
| Action Name: | Purchase and Install Generators at County Highway District Facilities |
| Action Category: | Mitigation - Continuity of Functional Use |
| Action Type: | Structure and Infrastructure Project |
| HMA Eligible Activity: | Generators |
| Action Description: | Purchase and install permanent emergency generators at critical County Highway District facilities and the County Complex, which houses the administration buildings of the Department of Public Works & Engineering (including Bridge, Highway, and Traffic Safety Sections) which ensure the continuity of services during a disaster or crisis. The Highway Districts and Department of Public Works & Engineering maintain and repair approximately 1,000 miles of county roadways and nearly 1,000 bridges and culverts, as well as the associated traffic signals and signs. Many roads and bridges are also considered critical infrastructure, particularly those providing ingress and egress for evacuees and those allowing emergency vehicles access to those in need. These roads are located in areas vulnerable to storm surge and inundation. |

Evaluating the Action

| | |
|-----------------------------|--|
| Hazard(s) Addressed: | All Hazards |
| Goals: | 3, 7 |
| Risk Reduction: | Telecommunication and electrical systems at key Monmouth County Operational Buildings are negatively impacted during periods of power failure (interruption or loss of electrical service caused by disruption of power transmission caused by accident, sabotage, natural hazards, or equipment failure). |
| Technical: | The installation of emergency generators is technically feasible. |
| Political: | There are no anticipated political implications. |
| Legal: | There are no anticipated legal implications. |
| Environmental: | There are no anticipated negative environmental implications. |
| Social: | Does not adversely affect any particular social group. The social benefit would be both tangible (i.e. the real effects of a coordinated effort during a disaster resulting in power outages) as well as intangible (i.e. the security of the public in knowing the government offices responsible for their health and well-being are operational and emergency services are being provided). |
| Administrative Capability: | Staff of Monmouth County Division of Engineering & Traffic Safety would oversee and coordinate the activities of the various consulting firms hired to perform the required work to install the generators are to provide any maintenance to the equipment needed following installation. |
| Local Champion: | Monmouth County Public Works & Engineering |
| Other Community Objectives: | |
| STAPLEE Evaluation: | N/A |

Implementing the Action

| | |
|---------------------------|--|
| Cost Estimate: | \$2,000,000.00 |
| Priority: | Medium |
| Local Planning Mechanism: | Hazard Mitigation Plan |
| Responsible Party: | Monmouth County Department of Public Works & Engineering |
| Likely Funding Source(s): | FEMA HMA |
| Timeline: | 1 year |
| Action Status: | Ongoing |
| Notes: | Ongoing 2015 action; funding has been an issue however the County will continue to search for grants. Currently none of the highway districts have generators. |

Monmouth County Mitigation Action Worksheets

Community Action Number: 54_25

Monmouth County Public Works & Engineering

Describing the Action

| | |
|------------------------|--|
| Action Name: | Rehabilitate and Upgrade Dams to Meet Current NJDEP Bureau of Dam Safety Standards |
| Action Category: | Mitigation - Continuity of Functional Use |
| Action Type: | Structure and Infrastructure Project |
| HMA Eligible Activity: | Infrastructure Retrofit |
| Action Description: | Rehabilitate and upgrade dams to meet current NJDEP Bureau of Dam Safety Standards for spillway, embankment, low level outlet structure downstream channel improvements. Replace the adjoining County-owned bridge raise the roadway profile to address the safety issue associated with a potential dam failure or improve passage during flood events. Project locations include, but are not limited to, the following: 1) Lake Lefferts Dam, County Bridge MA-9, Ravine Dr. (CR 6A), Matawan; 2) Matawan Lake Dam, County Bridge MA-13, Main St. (CR 516), Matawan; 3) Perrineville Dam, County Bridge MS-48, Perrineville Rd. (CR 1), Millstone; 4) Shadow Lake Dam, County Bridges MT - 30 MT-45, Hubbard Ave. (CR 12), Middletown; 5) Indian Dam, County Bridge U-18, Church St. (CR 526), Allentown; and 6) Hurley Pond Dam, County Bridge W18, Allenwood Rd., Wall. |

Evaluating the Action

| | |
|-----------------------------|---|
| Hazard(s) Addressed: | Dam Failure, Flood, Nor'easter, Hurricane and Tropical Storm |
| Goals: | 1,2,3,5,7 |
| Risk Reduction: | Dam overtopping and downstream flooding. Address the capacity and integrity of NJDEP defined Class 1 dams (those structures which, should they fail, would likely cause loss of life) and Class 2 dams (those structures which, should they fail, would likely cause substantial downstream property damage but are not considered to be a threat to life) as well as the associated bridge and roadways. |
| Technical: | Technical feasibility will be addressed during the design phase. |
| Political: | Monmouth County does not own the primary dam structure however is identified as a co-owner of various dams with respective municipalities. Appropriate agreements will be executed prior to design rehabilitation of each dam. |
| Legal: | Jurisdictional issues would be identified and addressed, and the appropriate agreements executed prior to project commencement. |
| Environmental: | Construction would be in accordance with all related laws and authorities and would be in compliance with any of the permitting issued by the appropriate regulatory agencies. The results of the project would ultimately benefit the environment, as less roadway debris would be washed into the surrounding surface waters. |
| Social: | These projects would provide for safe passage to all members of the public who utilize these roadways, as well as maintain the recreational value derived from the water impounded to create the associated lakes (i.e. fishing, canoeing and other active and passive recreation). |
| Administrative Capability: | Staff of Monmouth County Public Works Engineering would oversee and coordinate the activities of the various consulting firms hired to perform the required work or work in coordination with the consultants hired by the local municipality. |
| Local Champion: | Monmouth County Department of Public Works Engineering, with the cooperation with the local municipalities. |
| Other Community Objectives: | |
| STAPLEE Evaluation: | N/A |

Implementing the Action

| | |
|---------------------------|--|
| Cost Estimate: | |
| Priority: | High |
| Local Planning Mechanism: | Hazard Mitigation Plan |
| Responsible Party: | Monmouth County Department of Public Works & Engineering |
| Likely Funding Source(s): | FEMA HMA, NJDEP Bureau of Dam Safety and Flood Control, FEMA's High-Hazard Potential Dam Grant Program |
| Timeline: | 3 years |
| Action Status: | Ongoing |
| Notes: | Ongoing 2015 action; dam status below. Lake Lefferts: ongoing, revised agreement to advance design and rehabilitation Matawan Lake ongoing, in discussion phase to advance design and rehabilitation |

■errineville Rd: ongoing, preparing RFP, reviewing scope work with County Park System
■shadow Lake: in discussion with Middletown
■Indian Lake: initiating discussions with owners regarding cost sharing for design phase
■urley Pond: initiating discussions with owners regarding cost sharing for design phase
■ake Louise: agreement with Howell, design phase iongoing

Monmouth County Mitigation Action Worksheets

Community Action Number: 54_26

Monmouth County Public Works & Engineering

Describing the Action

| | |
|------------------------|---|
| Action Name: | Purchase and Install Generator at Monmouth County Hall of Records Building and Human Services |
| Action Category: | Mitigation - Continuity of Functional Use |
| Action Type: | Structure and Infrastructure Project |
| HMA Eligible Activity: | Generators |
| Action Description: | Installation of permanent emergency generators at Monmouth County Hall of Records (Freehold Borough) and Human Services Building (Freehold Township). These generators will be designed to handle all potential electrical loads at these buildings thereby ensuring uninterrupted continuity of County government and response to the emergency at hand. |

Evaluating the Action

| | |
|-----------------------------|---|
| Hazard(s) Addressed: | All Hazards |
| Goals: | 1, 2, 5, 7 |
| Risk Reduction: | Telecommunication and electrical systems at key Monmouth County Administration Buildings are negatively impacted during periods of power failure (interruption or loss of electrical service caused by disruption of power transmission caused by accident, sabotage, natural hazards, or equipment failure). |
| Technical: | The installation of emergency generators is technically feasible. |
| Political: | There are no anticipated political implications. |
| Legal: | There are no anticipated legal implications. |
| Environmental: | There are no anticipated negative environmental implications. |
| Social: | The social benefit would be both tangible (i.e. the real effects of a coordinated effort during a disaster resulting in power outages) as well as intangible (i.e. the security of the public in knowing the government offices responsible for their health and well-being are operational and emergency services are being provided). |
| Administrative Capability: | Staff of Monmouth County Public Works & Engineering would oversee and coordinate the activities of the various consulting firms hired to perform the required work to install the generators or to provide any maintenance to the equipment needed following installation. |
| Local Champion: | Monmouth County |
| Other Community Objectives: | |
| STAPLEE Evaluation: | N/A |

Implementing the Action

| | |
|---------------------------|---|
| Cost Estimate: | \$1,110,000.00 |
| Priority: | |
| Local Planning Mechanism: | Hazard Mitigation Plan |
| Responsible Party: | Monmouth County Department of Public Works & Engineering |
| Likely Funding Source(s): | HMGP, PDM, and County match, whether it be financial or in-kind in-house labor or both. |
| Timeline: | |
| Action Status: | Completed |
| Notes: | HMGP grant awarded to Hall of Records: \$400,000 HMGP grant awarded to Monmouth County Clerk's Office \$12,096 |

Monmouth County Mitigation Action Worksheets

Community Action Number: 54_27

Monmouth County Public Works & Engineering

Describing the Action

| | |
|------------------------|---|
| Action Name: | Replace or Elevate County Bridges and Culverts |
| Action Category: | Mitigation - Continuity of Functional Use |
| Action Type: | Structure and Infrastructure Project |
| HMA Eligible Activity: | Infrastructure Retrofit |
| Action Description: | Projects may include the replacement of a County bridge or culvert and/or elevating the approach roadway above the flood elevation or to accommodate the new bridge structure. Project locations include, but are not limited to, the following: County Bridge H-5 H-5A, Palmer Ave (CR 7), Holmdel Middletown; County Bridge MA-11, Aberdeen Road, Matawan; County Bridges ML-17, ML-18, ML-19, Station Rd., Marlboro; County Bridge R-5, Florence Ave (CR 39), Union Beach; Union Ave (CR 39), Union Beach. |

Evaluating the Action

| | |
|-----------------------------|--|
| Hazard(s) Addressed: | Flood, Wave Action, Nor'easter, Hurricane and Tropical Storm, Storm Surge |
| Goals: | 1, 2, 3, 5, 6, 7 |
| Risk Reduction: | Road flooding results in damage to infrastructure reduced safe passage and isolation of neighborhoods by flood waters. |
| Technical: | Technical feasibility will be addressed during the design phase. |
| Political: | There are no known political implications, at this time. All work would be in agreement with the local municipalities. |
| Legal: | Following design, jurisdictional issues would be identified and addressed, and the appropriate agreements and right-of-entries would be acquired. |
| Environmental: | Construction would be in accordance with all related laws and authorities and would be in compliance with any of the permitting issued by the appropriate regulatory agencies. The result of the projects would ultimately benefit the environment, as less roadway chemicals and debris would wash into the surface waters. |
| Social: | These projects would provide for safe passage to all members of the public who utilize these roadways. |
| Administrative Capability: | Staff of Monmouth County Public Works Engineering would oversee and coordinate the activities of the various consulting firms hired to perform the required work. |
| Local Champion: | Monmouth County Public Works Engineering and local municipalities |
| Other Community Objectives: | |
| STAPLEE Evaluation: | N/A |

Implementing the Action

| | |
|---------------------------|---|
| Cost Estimate: | |
| Priority: | Medium |
| Local Planning Mechanism: | Hazard Mitigation Plan |
| Responsible Party: | Monmouth County Department of Public Works & Engineering |
| Likely Funding Source(s): | FEMA HMA, NJDOT |
| Timeline: | 3 years |
| Action Status: | Ongoing |
| Notes: | Ongoing 2015 action; status of bridges and culverts below. Palmer Ave (CR-7): bridge H-5A, construction is ongoing, should be completed in Fall 2019 Aberdeen Rd – Bridge (MA-11): cost share agreement in place, will advance to design phase once cost share is executed (Lake Lefferts issue) Station Rd – Bridges (ML-17, ML-18, & ML-19): design phase is ongoing Union Ave – Bridge (R-5): design phase is ongoing, DEP permit issues |

Monmouth County Mitigation Action Worksheets

Community Action Number: 54_28

Monmouth County Public Works & Engineering

Describing the Action

| | |
|------------------------|---|
| Action Name: | Inspect and Maintain the Structural Integrity of County Infrastructure |
| Action Category: | Maintenance/Response/Recovery |
| Action Type: | Structure and Infrastructure Project |
| HMA Eligible Activity: | Floodplain and Stream Restoration |
| Action Description: | Hard armoring of creek and river banks and shorelines is not always possible or desirable. In most areas of the County, the only way to mitigate the results of flooding is to anticipate for, maintain, and provide efforts to recover after an extreme event. Thus, it is essential to inspect and maintain the structural integrity of county infrastructure and to perform activities to remove debris and sediment that may negatively affect the flow of surface water in and around this infrastructure. This includes activities such as removing debris from underneath low-lying bridges and culverts, clearing sediment build-up, or repairing embankment erosion on riverbanks near county infrastructure. Also, repairing and cleaning stormwater drains and other drainage systems. |

Evaluating the Action

| | |
|-----------------------------|---|
| Hazard(s) Addressed: | Flood, Extreme Wind, Nor'easter, Hurricane and Tropical Storm |
| Goals: | 1, 2, 4, 5, 6, 7 |
| Risk Reduction: | Storm events and subsequent flooding wash substantial amounts of debris and sedimentation in creeks and waterways, compounding the effects of natural siltation and buildup of debris and fallen trees, which obstruct the natural flow of some surface waters, resulting in increased inland and coastal flooding. |
| Technical: | These activities are economically defensible and technically sound. |
| Political: | There are no anticipated political implications. Coordination with the municipalities would be arranged prior to activities, if necessary. |
| Legal: | Work is typically performed in the County Right-of-Way. |
| Environmental: | There are no anticipated environmental detriments. Activities to reduce or address surface water flow blockages enhance the environment, as surface waters that flood adjacent lands (including residential, commercial and agricultural areas) decrease water quality through increased turbidity and nonpoint source pollution. |
| Social: | This project would provide for safe passage to all members of the public who utilize this roadway and protect surrounding property owners. |
| Administrative Capability: | Work is routinely performed with staff and equipment from the Monmouth County Department of Public Works & Engineering. |
| Local Champion: | Monmouth County Department of Public Works & Engineering and local municipalities. |
| Other Community Objectives: | |
| STAPLEE Evaluation: | N/A |

Implementing the Action

| | |
|---------------------------|---|
| Cost Estimate: | |
| Priority: | Medium |
| Local Planning Mechanism: | Hazard Mitigation Plan |
| Responsible Party: | Monmouth County Department of Public Works & Engineering and local municipalities. |
| Likely Funding Source(s): | County budget |
| Timeline: | 2 years |
| Action Status: | Ongoing |
| Notes: | Ongoing 2015 action; the County is searching for funding to remove debris from underneath low-lying bridges and culverts, clear sediment build-up, repair embankment erosion, and repair and clean stormwater drains. |

Monmouth County Mitigation Action Worksheets

Community Action Number: 54_29

Monmouth County Public Works & Engineering

Describing the Action

| | |
|------------------------|--|
| Action Name: | Install Hard-armoring on County Bridges that Experience Coastal Erosion |
| Action Category: | Mitigation - Continuity of Functional Use |
| Action Type: | Structure and Infrastructure Project |
| HMA Eligible Activity: | Soil Stabilization |
| Action Description: | Due to the location of coastal bridges, the substructure is highly susceptible to scour and the effects of waves, tides, and storm surges. Installing hard-armoring (i.e. rip rap, jetty stone, and/or steel sheeting) would mitigate this coastal erosion that jeopardizes County bridges and the roads they carry. One such bridge is Monmouth County Bridge W-43 over the Shark River in the Boroughs of Avon-by-the-Sea and Belmar. Bridge W-43 carries Ocean Ave. (CR 18). Other potential bridges include, but are not limited to; S-31 (Middletown, Rumson), S-32 (Rumson, Sea Bright), and W-9 (Brielle, Manasquan). |

Evaluating the Action

| | |
|-----------------------------|--|
| Hazard(s) Addressed: | Wave Action, Coastal Erosion, Nor'easter, Hurricane and Tropical Storm, Storm Surge |
| Goals: | 1, 2, 3, 5, 6 |
| Risk Reduction: | Structural integrity of bridges that are exposed to wave action, tidal, and storm surges. These bridges may carry coastal evacuation routes and any damage to the bridge may impair safe passage, ultimately jeopardizing human life. |
| Technical: | Technical feasibility will be addressed during the design phase. |
| Political: | There are no known political implications, at this time. All work would be in agreement with the local municipalities. |
| Legal: | Following design, jurisdictional issues would be identified and addressed, and the appropriate agreements and right-of-entries would be required, if needed. |
| Environmental: | Construction would be in accordance with all related laws and authorities and would be in compliance with any of the permitting issued by the appropriate regulatory agencies. The results of the project would ultimately benefit the environment, as less roadway debris and fill would be washed into the surrounding surface waters. |
| Social: | This project would provide for safe passage to all members of the public who utilize this roadway. |
| Administrative Capability: | Staff of Monmouth County Public Works Engineering would oversee and coordinate the activities of the various consulting firms hired to perform the required work. |
| Local Champion: | Monmouth County Department of Public Works Engineering, with the cooperation of and/or agreement with the local municipalities. |
| Other Community Objectives: | These coastal bridges are highly trafficked during the summer months by vehicles, bicycles, and pedestrians alike and experience increased use due to seasonal tourism. These bridges also span navigable waterways that accommodate boat traffic. The foot of these bridges may also serve as a place for fishermen, sunbathers, and those enjoying other beach activities. |
| STAPLEE Evaluation: | N/A |

Implementing the Action

| | |
|---------------------------|--|
| Cost Estimate: | |
| Priority: | Medium |
| Local Planning Mechanism: | Hazard Mitigation Plan |
| Responsible Party: | Monmouth County Department of Public Works & Engineering |
| Likely Funding Source(s): | FEMA HMA |
| Timeline: | 2 years |
| Action Status: | Ongoing |
| Notes: | Ongoing 2015 action; the County is searching for funding to improve the structural integrity of their bridges. |

Monmouth County Mitigation Action Worksheets

Community Action Number: 54_30

Monmouth County Public Works & Engineering

Describing the Action

| | |
|------------------------|--|
| Action Name: | Elevate Highway District #8 Office in Hazlet |
| Action Category: | Mitigation - Risk Reduction |
| Action Type: | Structure and Infrastructure Project |
| HMA Eligible Activity: | Structure Elevation |
| Action Description: | The office building and garage at Highway District #8, in the Township of Hazlet, is prone to flooding. This project is for the design and reconstruction of the building and garage at a higher elevation to ensure the continuity of services during a disaster or crisis. |

Evaluating the Action

| | |
|-----------------------------|--|
| Hazard(s) Addressed: | Flood, Nor'easter, Hurricane and Tropical Storm |
| Goals: | 1, 2, 3, 5, 7 |
| Risk Reduction: | The critical equipment stored in these buildings may be compromised by floodwater, therefore could be detrimental to operational and emergency services provided during a time of disaster or crisis. |
| Technical: | Technical feasibility would be vetted out during design. |
| Political: | There are no anticipated political implications. |
| Legal: | There are no anticipated legal implications. |
| Environmental: | Construction would be in accordance with all related laws and authorities and would be in compliance with any of the permitting issued by the appropriate regulatory agencies. |
| Social: | The social benefit would be both tangible (i.e. the real effects of a coordinated effort during a disaster) as well as intangible (i.e. the security of the public in knowing that government facilities are operational and emergency services are being provided). |
| Administrative Capability: | Staff of Monmouth County Division of Public Works & Engineering would oversee and coordinate the activities of the various consulting firms hired to perform the required work. |
| Local Champion: | Monmouth County Public Works & Engineering |
| Other Community Objectives: | |
| STAPLEE Evaluation: | 10 |

Implementing the Action

| | |
|---------------------------|---|
| Cost Estimate: | \$600,000.00 |
| Priority: | Medium |
| Local Planning Mechanism: | Hazard Mitigation Plan |
| Responsible Party: | Monmouth County Public Works & Engineering |
| Likely Funding Source(s): | FEMA HMA |
| Timeline: | 2 years |
| Action Status: | Ongoing |
| Notes: | Ongoing 2015 action; the County is searching for funding to mitigate Highway District #8. |

CAPABILITY ASSESSMENT WORKSHEET

Name: Michael Oppegaard

Title: Emergency Management Coordinator

Jurisdiction: Monmouth County

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 | <ol style="list-style-type: none"> 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 | <ol style="list-style-type: none"> 1. 2016; there is a Community Resiliency chapter of the master plan in each chapter of the plan, resiliency is discussed (e.g. resiliency and art, resiliency and transportation) 2. Yes, adopted HMP 3. Yes 4. Yes |
| Capital Improvements Plan | Yes | <ol style="list-style-type: none"> 1. 2019 2. No 3. No 4. Yes |
| Economic Development Plan | Yes | Yes, an element of the Monmouth County Master Plan (2016); discusses the relationship between economic development and resiliency. |
| Local Emergency Operations Plan | Yes | <ol style="list-style-type: none"> 1. 2017 2. Yes 3. Yes 4. Yes |
| Continuity of Operations Plan | Yes | |
| Post-Disaster Recovery Plan | No | |
| Transportation Plan | Yes | Yes, an element of the Monmouth County Master Plan (2016); discusses the relationship between transportation and resiliency. |



CAPABILITY ASSESSMENT WORKSHEET

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| Stormwater Management Plan | Yes | Wastewater Management Plan (WMP) for Monmouth County Future Wastewater Service Area (FWSA) Map (2013); each jurisdiction is required by NJDEP to adopt their own stormwater plan. |
| Community Wildfire Protection Plan | No | Municipalities enforce their own local wildfire protection plans. |
| Other special plans (e.g., brownfields redevelopment, disaster recovery, coastal zone management, climate change adaptation) | Yes | <ul style="list-style-type: none"> • Disaster Debris Management Plan (2017): the first Debris Management Plan in NJ • Monmouth County Multi-Jurisdictional Coastal Flood Evacuation Plan (2017) • Monmouth-Ocean County Building Officials Association Incident Action Plan (2015) • Shore Re-Entry Plan (2012) • Coastal Monmouth Plan (2010) • Monmouth Coastal Evacuation Routes Study (2009) • Damage Assessment Plan • Short Term Recovery Plan • State Rodeo MCSO-PSC |
| Building Code, Permitting, and Inspections | Yes/No | Are codes adequately enforced? |
| Building Code | No | Enforced by NJ Department of Community Affairs. |
| Building Code Effectiveness Grading Schedule (BCEGS) Score | No | Enforced by NJ Department of Community Affairs. |
| Fire Department ISO rating | No | Enforced by NJ Department of Community Affairs. |
| Site Plan Review Requirements | Yes | Enforced by the Monmouth County Development Regulations (2004). |
| Land Use Planning and Ordinances | Yes/No | Is the ordinance an effective measure for reducing hazard impacts? Is the ordinance adequately administered and enforced? |
| Zoning Ordinance | No | Municipalities enforce their own local zoning ordinances. |
| Subdivision Ordinance | No | Municipalities enforce their own subdivision ordinances. |
| Floodplain Ordinance | No | Municipalities enforce their own local floodplain ordinances. |



CAPABILITY ASSESSMENT WORKSHEET

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| Natural hazard ordinance (stormwater, steep slope, wildfire) | No | Municipalities enforce their own natural hazard ordinances. |
| Flood Insurance Rate Maps | No | Each municipality must adopt FEMA's FIRMs. |
| Acquisition of Land for Open Space and Public Recreation Uses | Yes | Enforced by the Monmouth County Farmland Preservation Program. |
| Post-Disaster Recovery Ordinance | No | Municipalities enforce their own post-disaster recovery ordinances. |
| Real Estate Disclose Ordinance | No | Municipalities enforce their own natural hazard ordinances. |
| Other (ie. Special Purposes Ordinance) | Yes | Special Purposes Ordinance |
| How can the above capabilities be expanded and improved to reduce risk? | | |
| Monmouth County could adopt a Continuity of Operations and Post-Disaster Recovery Plan to increase their capabilities. | | |

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 | The Monmouth County Planning Board adopted the 2015 Hazard Mitigation Plan as an element of their Master Plan (2016). |
| Mitigation Planning Committee | Yes | Stormwater Technical Advisory Committee JLUS TAC |
| Maintenance Programs to Reduce Risk (e.g., tree trimming, clearing drainage systems) | Yes | Effective coordination through the Public Works & Engineering Department on county-owned drainage cleaning programs. M. Extermination – Vicki Thompson Route desnagging & ditching |
| Mutual Aid Agreements | Yes | Effective coordination through the Emergency Intra-County Mutual Aid Agreement. This is a FEMA approved agreement. 53 mutual aid agreements. When towns update their EOP (every 4 years) they must also recertify the mutual aid agreement with the County. |



CAPABILITY ASSESSMENT WORKSHEET

| 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 | No | Regulated NJ Department of Community Affairs |
| Floodplain Administrator | Yes | The County has Certified Floodplain Managers (CFM) on staff including the Assistant Director of Planning. |
| Emergency Manager | Yes | <ol style="list-style-type: none"> 1. Full time, Office of Emergency Management 2. Yes 3. Yes 4. Yes |
| Community Planner | Yes | <ol style="list-style-type: none"> 1. Full time, Division of Planning 2. Yes 3. Yes 4. Yes |
| Civil Engineer | Yes | <ol style="list-style-type: none"> 1. Full time, Department of Public Works & Engineering 2. Yes 3. Yes 4. Yes |
| Surveyor | Yes | <ol style="list-style-type: none"> 1. Full time, Department of Public Works & Engineering 2. Yes 3. Yes 4. Yes |
| GIS Coordinator | Yes | <ol style="list-style-type: none"> 1. Full time, Division of Planning 2. Yes 3. Yes 4. Yes |
| Scientists familiar with the hazards of the community | Yes | The County partners with local universities, colleges, and research centers on mitigation projects |
| Other | No | |
| Technical | Yes/No | Describe capability Has capability been used to access/mitigate risk in the past? |
| Warning Systems/Services (Reverse 911, outdoor warning signals) | Yes | County OEM has Code Blue and Code Red which effectively alerts residents of extreme temperatures. |
| Hazard Data and Information | Yes | Monmouth County Division of Planning and Office of Emergency Management websites have a lot of emergency information including Know Your Zone (a public education campaign implemented by County OEM) and the High Water Mark Story Map. |
| Grant Writing | Yes | Internal County staff apply for grants. |



CAPABILITY ASSESSMENT WORKSHEET

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| Hazus Analysis | Yes | The Division of Planning, GIS Section, has Hazus capabilities |
| Other | Yes | <ul style="list-style-type: none"> • CERT Leaders Meeting • ETEAM Training • Active Shooter Partnerships and Training for County Staff • Training and Implementation of Fire and EMS operation improvements • EOC Activation Levels • All Hazard Planning Regions • Family Assistance/Reunification • EMAA Grant funded trainings, exercises, and salary reimbursements for emergency responders |
| How can the above capabilities be expanded and improved to reduce risk? | | |
| The County has ample Administrative & Technical capabilities. | | |

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 | Capital Improvements Project Funding can be used to fund future mitigation actions. |
| Authority to Levy Taxes for Specific Purposes | Yes | |
| Fees for Water, Sewer, Gas, or Electric Services | No | Regulated at the municipal level and/or through MUAs. |
| Impact Fees for New Development | Yes | |
| Stormwater Utility Fee | No | Regulated at the municipal level and/or through MUAs. |
| Incur Debt Through Private Activities | Yes | Incur Debt through Special Taxes and Revenue Bonds. |
| Community Development Block Grant | Yes | Community Development Block Grant Disaster Recovery Program can be used to fund future mitigation actions. |



CAPABILITY ASSESSMENT WORKSHEET

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| Other Federal Funding Programs | Yes | DOD Office of Economic Adjustment REPI Funding, ACE funding REPI Funds – DOD |
| State Funding Programs | Yes | |
| Other (e.g., withhold spending in hazard-prone areas) | No | |
| How can these capabilities be expanded and improved to reduce risk? | | |
| | | |

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. | Yes | The County partners with local non-profits such as NJ Sea Grant Consortium, American Littoral Society, Surfrider Foundation, and Clean Ocean Action. MCEC- eco tips Storm Water Management Stream Corridor Management Watershed Management |
| Ongoing Public Education or Information Programs (e.g., responsible water use, fire safety, household preparedness, environmental education) | Yes | The County OEM hosts Hurricane Training Day (pre-landfall, landfall, recovery scenarios); the County Division of Planning administrates the CRS Assistant Program which provides mapping services, outreach, and training to its municipalities. |
| Natural Disaster or Safety Related School Programs | No | Regulated at the municipal level. Two round tables a year Environmental newsletter High Water Mark |
| StormReady Certification | No | Certification occurs at the municipal level. |
| Firewise Communities Certification | No | Certification occurs at the municipal level. |
| Public-Private Partnership Initiatives Addressing Disaster Related Issues | No | |



CAPABILITY ASSESSMENT WORKSHEET

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| Other | | |
| How can these capabilities be expanded and improved to reduce risk? | | |
| | | |





MEETING NOTES

Topic: Monmouth County HMP Meeting

Date: July 25, 2019

Time: 2:30 PM- 3:30 PM

Location: County OEM Office; 2000 Kozloski Rd. Freehoild,, NJ

Drafted by: Paige Kaspar

Introductions:

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

Mitigation Actions:

Monmouth County Public Works & Engineering = #55

- Community Action 54_01 – Provide assistance to NFIP’s Community Rating system (CRS) – Ongoing
 - Add to capabilities
 - Will receive a write up on MoCo’s program
- Community Action 54_02 – Support Municipal Floodplain Management Planning – Ongoing
 - Compliments CRS
- Community Action 54_03 – Online Mapping Services – Ongoing
 - Add to capabilities
 - County is working on setting up Open Source Mapping
- Community Action 54_04 – Protect and Restore Claypiut Creek and Portland Place – Ongoing
 - Plans have taken two years to put in place
 - Work should be beginning in September
- Community Action 54_05 – Acquisition of flood prone properties – Ongoing
 - Continue to purchase properties
 - Manasquan, Metedeconk
 - Acquired 225 Forno Park in Aberdeen
- Community Action 54_06 – Create and repair coastal dunes – Ongoing



- Community Action 54_07 – Floodplain restoration and re-stabilizing for Ramanessin Brook, Pine Brook, Meandering Creek, and Manasquan River – Ongoing
 - ENA program Earle/County
- Community Action 54_08 – Fire Hazard Reduction – Ongoing
 - Land clearing and controlled burns in Turkey Swamp Park two years ago
 - Coordination with Fire Marshal Office & State Forest Fire
 - Add FireWise
- Community Action 54_09 – Henry Hudson Shoreline and Slope Stabilization – Ongoing
 - Floodwall along access route
- Community Action 54_10 – Improve physical and operational preparation and county evacuation routes – Ongoing
 - Purchase lights
 - GIS – coastal evacuation signs/zones
 - Know your zones
 - Route completed: CR 14 (West Park Ave) Corridor
 - Routes ongoing: CR 8A & CR 8B, CR 12 & CR 50, CR 12A, CR 14 from SR 18 to Cotswold Circle, CR 16 & Fox Chase Dr, CR 516, CR 520 (Bridge S-32), CR 520 (Bridge H-39), CR 520 & Conover Rd, CR 520 & Wyncrest Rd, CR 537 (Bridge A-44), CR 537 & SR 34 (Bridge A-18 & 1308-152), CR 537 & Jackson Ter & Jackson St, CR 537 (between SR 9 & Sentinel Rd), CR 537 & CR 524 (Elton-Adelphia Rd), CR 537 & CR 524 (Stage Coach Rd.)
- Community Action 54_11– Hazard Education and Risk Awareness – Ongoing
 - High water mark sign
 - Know your zone
 - CRS outreach
- Community Action 54_12– Shelter Hardening for Wind Damage – Ongoing
 -
- Community Action 54_13 – Construct a fueling station at highway district #6 in Eatontown – Completed
 - County funded only
- Community Action 54_14– Generators at county highway district facilities - Ongoing
 - Currently no facilities have generators
 - Looking for funding
 - Need a list
- Community Action 54_15 – Rehabilitate and upgrade dams – Ongoing
 - Dam spillways is connected to county bridge
 - High Hazard Dam
 - Lake Lefferts – ongoing, revised agreement to advance design and rehabilitation
 - Matawan Lake – ongoing, in discussion to advance design and rehabilitation
 - Perrineville Rd – ongoing, preparing RFP, reviewing scope of work with MC Park System
 - Shadow Lake – in discussion with Middletown
 - Indian Lake – Initiating discussions with owners regarding cost sharing for design phase



- Hurley Pond – Initiating discussions with owners regarding cost sharing for design phase
- Lake Louise – Agreement with Howell, design phase is ongoing
- Community Action 54_16– Generator at Monmouth County Hall of Records building and human services – Completed
 - Sandy Infrastructure
 - Will check status?
- Community Action 54_17– Replace or elevate county bridges and culverts – Ongoing
 - Palmer Ave (CR 7) – Bridge H-5A, construction is ongoing, should be completed in Fall 2019
 - Aberdeen Rd – Bridge MA-11, cost share agreement in place, will advance to design phase once cost share is executed (Lake Lefferts issue)
 - Station Rd – Bridges ML-17, ML-18, & ML-19, design phase is ongoing
 - Union Ave – Bridge R-5, design phase is ongoing, DEP permit issues
- Community Action 54_18– Inspect and Maintain the structural integrity of county infrastructure – Ongoing
 - Need to get an update from DPW
- Community Action 54_19 – Scour/Embankment protection and repairs – Ongoing
- Community Action 54_20– Elevate highway district #8 office in Hazlet – Ongoing
- New Actions:
 - Bundled RL/SRL action
 - Managing of finances surge
 - How to distribute funds and maintain
 - What is the capacity for the county to manage the money that is coming in for the grants
 - More staff
 - The responsibility for passing on grant money fell on the Community Development office
 -
- Successes
 - Received funding and will begin work on restoring Claypiut Creek and Portland Place in September 2019
 - Rehabilitating dams are ongoing with several dams in the design phase