

## 9.4: City of Brigantine – Jurisdictional Annex

### Summary of Hazards and Actions

Summary of Hazard Ranking and Actions, City of Brigantine			
Hazard	Hazard Ranking	# of Related Actions	Action #s
<b>Atmospheric Hazards</b>			
Extreme Temperatures	M	7	1, 3, 4, 7, 8, 11, 15
Extreme Wind	M	7	1, 3, 4, 7, 8, 11, 15
Hail	L	7	1, 3, 4, 7, 8, 11, 15
Hurricane & Tropical Storm	H	7	1, 3, 4, 7, 8, 11, 15
Lightning	L	7	1, 3, 4, 7, 8, 11, 15
Nor'easter	M	7	1, 3, 4, 7, 8, 11, 15
Tornado	L	7	1, 3, 4, 7, 8, 11, 15
Winter Storm	M	7	1, 3, 4, 7, 8, 11, 15
<b>Hydrologic Hazards</b>			
Coastal Erosion	M	9	1, 3, 4, 7, 8, 11, 15, 18, 19
Sea Level Rise	H	8	1, 3, 4, 7, 8, 11, 15, 24
Dam Failure	N/A		
Levee Failure	N/A		
Drought	L	7	1, 3, 4, 7, 8, 11, 15
Flood	H	23	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23
Tsunami	L	7	1, 3, 4, 7, 8, 11, 15
Storm Surge	H	11	1, 3, 4, 5, 6, 7, 8, 11, 15, 19, 24
Wave Action	M	7	1, 3, 4, 7, 8, 11, 15
<b>Geologic Hazards</b>			
Earthquake	L	7	1, 3, 4, 7, 8, 11, 15
<b>Other Natural Hazards</b>			
Wildfire	L	7	1, 3, 4, 7, 8, 11, 15

# Mitigation Strategy for Risk Reduction

Overview of Municipal Mitigation Strategy, City of Brigantine				
Project Number	Project Description	Hazard(s) Addressed	Priority	Goals
1	Periodic review of plans and codes, and changes <b>(Action 5 in 2016 Plan)</b>	All	H	4
2	Targeted area for Blue Acres Acquisition primarily on Brigantine Avenue, Harbor Beach Boulevard and East Evans Avenue. <b>(New)</b>	Flood	H	3
3	Maintain active training schedules for all relative officials <b>(Action 3 in 2016 Plan)</b>	All	H	2
4	Continue to revise local codes that needed to be adjusted to mitigate potential damages and loss of life <b>(Action 4 in 2016 Plan)</b>	All	H	4
5	Emergency Generator Installation-City Hall, South End Sewer Lift Station, Jenkins Parkway Sewer, Harbor Beach Boulevard Stormwater Lift Station, Public Works SCADA Control Center, 12th Street Stormwater Pumping Station. <b>(New)</b>	Flood	H	3
6	Inspect all check valves and replace/repair as needed. <b>(New)</b>	Flood	H	3
7	Utilize existing "reverse 911", Nixle service, social media accounts, local emergency AM radio system. Ensure local websites are up to date and information linked to AC Install City-Wide Warning System/Implement IPAWS notifications using cell towers OEM. Install remotely actuated road flood barrier warning system <b>(Action 7 in 2016 Plan)</b>	All	H	2
8	Continue to revise the Floodplain Management Plan, Repetitive Loss Analysis, Natural Resources Plan, Watershed Management Plan, mapping elevation certificates, and other actions. <b>(New)</b>	All	H	4
9	Close bulkhead gaps; Elevate bulkheads (Public and Private) Poinsettia Way, Lilac Way, Golf Course, Pepper Cove, 13th Street North to 14th Street North, Bayside Gabion, 9th Street North to 5th Street North - Oceanside <b>(New)</b>	Flood	H	3
10	Continue the apply for FEMA Funding to elevate homes. <b>(New)</b>	Flood	H	3
11	Support floodproofing for commercial buildings in the Business District <b>(New)</b>	Flood	H	3
12	Install and maintain inlet grate, debris collectors, and outlet structures. <b>(New)</b>	Flood	H	3
13	Install and maintain inlet grate, debris collectors, and outlet structures. <b>(New)</b>	Flood	H	3
14	Maintain golf course drainage area <b>(New)</b>	Flood	H	3
15	Install City wide warning system and implement IPAWS notifications using cell towers. <b>(New)</b>	Flood	H	2
16	Elevate evacuation routes <b>(new)</b>	Flood	H	3
17	Elevate selected roads with drainage improvements - Brigantine Boulevard by Edgewater; Harbor Beach Boulevard; Sarazen Boulevard; Evans Boulevard; Lafayette Boulevard <b>(new)</b>	Flood	H	3

## Overview of Municipal Mitigation Strategy, City of Brigantine

Project Number	Project Description	Hazard(s) Addressed	Priority	Goals
18	Extend North End Seawall by 275 feet northward and to Bayside, Create vehicle crossover; implement beachfill from 15th Street North to 4 WD entrance. <b>(new)</b>	Flood, Coastal Erosion	H	3
19	Continue back passing operation for beach replenishment - North End <b>(new)</b>	Flood, Storm surge	H	3
20	Complete drainage improvements and inlet installation (for example 32nd - 40th Street South). <b>(new)</b>	Flood	H	3
21	Install flood wall at City dock (2519-2601 Bayshore Avenue) <b>(new)</b>	Flood	H	3
22	Road Elevation/Berm Transformation - identify and construct streets that can also function as berms or floodwalls. <b>(new)</b>	Flood	H	3
23	Real estate disclosure of hazards <b>(new)</b>	Flood	H	2
24	Integrated flood hazard/sea level mapping <b>(new)</b>	Flood, Sea level rise, Storm surge	H	24

More detailed information on these individual actions is presented at the end of this annex.

## Contact Information

City of Brigantine's Statement of Authority to Participate identified a Primary Point of Contact and an Alternate for this hazard mitigation plan update. These individuals represented the jurisdiction on the county-wide Core Planning Group and led a local team of Jurisdictional Assessment Team Members who undertook various local activities related to the plan update.

HAZARD MITIGATION PLAN POINTS OF CONTACT						
Primary Point of Contact			Alternate Point of Contact			
Name: William Stroby Title: Lieutenant, OEM Coordinator Department: Brigantine Police Department Address: 1417 W. Brigantine Avenue, Brigantine, NJ 08203 Phone Number: 609-266-7414, 609-266-1066 E-mail Address: wstroby@brigantinebeachnj.com			Name: James Rutala Title: Grants Coordinator Department: Rutala Associates, LLC Address: 717 River Drive, Linwood, NJ 08221 Phone Number: 609- 743-0354 E-mail Address: jmrutala@comcast.net			
Jurisdictional Assessment Team Members						
Local Jurisdiction Role/Position	Name	Email	Phone	Date of Invitation	Method of Invitation	Agreed to participate?
Mayor/Supervisor	Vince Sera	<a href="mailto:vsera@brigantinebeachnj.com">vsera@brigantinebeachnj.com</a>	(609)266-7600	06/01/21	email	Y
Administrator	James Bennett	<a href="mailto:jbennett@brigantinebeachnj.com">jbennett@brigantinebeachnj.com</a>	(609)266-7600 ext 212	06/01/21	email	Y
Clerk	Lynn Sweeney	<a href="mailto:lsweeney@brigantinebeachnj.com">lsweeney@brigantinebeachnj.com</a>	(609) 266-7600 ext 220	06/01/21	email	Y
Engineer	Matt Doran	<a href="mailto:mdoran@brigantinebeachnj.com">mdoran@brigantinebeachnj.com</a>	(609) 266-7600	06/01/21	email	Y
Attorney	Alfred Scemi	<a href="mailto:fscemi@parkermccay.com">fscemi@parkermccay.com</a>	(609) 347-8002	06/01/21	email	Y
Building Code Official	Richard Stevens	<a href="mailto:rstevens@brigantinebeachnj.com">rstevens@brigantinebeachnj.com</a>	(609)266-7600 ext 261	06/01/21	email	Y
Emergency Manager	Lt. William Stroby	<a href="mailto:wstroby@brigantinebeachnj.com">wstroby@brigantinebeachnj.com</a>	(609) 266-7600 ext 268	06/01/21	coordinator	Y
Fiscal/Budget Officer	Roxanne Tosto	<a href="mailto:rtosto@brigantinebeachnj.com">rtosto@brigantinebeachnj.com</a>	(609) 266-7600 ext 213	06/01/21	email	Y
Floodplain Manager	Richard Stevens	<a href="mailto:rstevens@brigantinebeachnj.com">rstevens@brigantinebeachnj.com</a>	(609) 266-7600 ext 261	06/01/21	email	Y
Planner	Lance Landgraf	<a href="mailto:lblandgraf@gmail.com">lblandgraf@gmail.com</a>	(609) 335-0505	06/01/21	email	Y
Public Works Director	John Doring	<a href="mailto:jdoring@brigantinebeachnj.com">jdoring@brigantinebeachnj.com</a>	(609) 266-7800	06/01/21	email	Y
CRS Consultant	Jim Rutala	<a href="mailto:jmrutala@comcast.net">jmrutala@comcast.net</a>	609.743.0354	06/01/21	email	Y
CRS Coordinator	Ed Stinson	<a href="mailto:estinson@ventnorcit.org">estinson@ventnorcit.org</a>	609.377.1369	06/01/21	email	Y

Brigantine has reported undertaking the following internal activities in preparation of its mitigation plan:

Subject of JAT Activity (Meeting Notice, Emails, Etc.)	Date	INVOLVED PARTIES - Place an 'x' for any position title that participated										
		Mayor/ Supervisor	Administrator	Clerk	Engineer	Attorney	Building Code Official	Emergency Manager	Fiscal /Budget Officer	Floodplain Manager	Planner	Public Works Director
Opening email and invitations sent	06/01/21	X	X	X	X	X	X	X	X	X	X	X
City Council Meeting Resolution Passed	06/02/21	X	X	X	X	X			X			X
Kick off Meeting with AECOM	06/14/21							X			X	
Prepare Worksheets	06/20/21		X		X			X		X	X	

## Governing Body Format

The governing body in the City of Brigantine is comprised of the Mayor (elected at large), two at-large council members and four ward council members, all of whom serve terms of office of four years. The mayor and the two at-large council seats come up for vote as part of the November general election in leap years, with the four ward seats up for vote simultaneously two years later.

## Land Use and Development Trends

An evaluation of growth and development trends was undertaken by each participating jurisdiction as part of the development of the initial plan in 2010, and the last update in 2016. As part of this second plan update, Brigantine reviewed and updated its prior feedback to reflect current conditions as of mid-2021.

### Atlantic County Multi-Jurisdictional Hazard Mitigation Plan Update *Worksheet #3 – Growth and Development Trends Update*

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Performing an assessment of Growth and Development Trends is one step of a FEMA-approved hazard mitigation plan update. This look into the future is important because development in hazard areas could put more assets at risk and, in turn, could work to increase potential disaster-related damages at a time when the mitigation plan's purpose is to reduce the potential for damages emanating from natural disasters. Growth/development trends are based on the construction of new buildings, demolition of old buildings, or the planning, zoning or subdivision of new areas for development. A stagnant or decreasing population alone is not reason for stating that no development has occurred, unless backed up by a lack of development.

An evaluation of growth/development trends was undertaken by each participating jurisdiction as part of the development of the 2016 plan. Your municipality's prior response from 2016 is included on the next page in Part 1. Please review your community's prior feedback, and identify any changes that have occurred since that time so the most current information can be reflected in this 2021 plan update. In addition, please provide responses for Part 2.

Information for the 2016 plan was provided to us by: James Bennett, OEM Coordinator

□

Your Name: [William Stroby]

Title: [Lieutenant / OEM Coordinator]

Community: [City of Brigantine]

Email and Phone: [wstroby@brigantinebeachnj.com]

Part 1 – Please update your response from 2016 to reflect current conditions in the community.

Community	<p><b>1. Land Uses and Development Trends in Hazard Areas as Reported in the 2016 Plan.</b>  <i>Please describe development trends occurring within your jurisdiction, such as the predominant types of development occurring, location, expected intensity, and pace by land use. While details are preferred, it is ok if your feedback is qualitative and quite general, such as "high-occupancy, high-density residential development is occurring near the waterfront".</i></p>	<p><b>1a. Please update your response to reflect conditions in 2021</b></p>	<p><b>2. Regulations/Codes/Ordinances To Protect New Development From Natural Hazards as Reported in the 2016 Plan.</b> <i>Does your jurisdiction enforce regulations/ordinances/codes to protect new development from the effects of natural hazards? (Some examples might be floodplain management ordinances enforcing FEMA's NFIP for new development or substantial improvements in the floodplain; steep slope ordinances for community's which may have landslide hazards; earthquake resistant design criteria and/or high wind design criteria; or buffer zones in wildfire hazard areas.) If so, please describe.</i></p>	<p><b>2a. Please update your response to reflect conditions in 2021</b></p>
Brigantine, City of	<p>The current development trend within the City of Brigantine is predominantly single family residential development. Most of the new construction is occurring on properties which had an existing structure demolished for the new construction.</p> <p>Development trends remain the same. Post Sandy approximately 400 homes were identified as substantially damaged, with approximately 200 being raised.</p>	<p>As of 2021 the City has seen a high influx of full time residents. In post Covid time families are able to work from home via computers. Several homes which in the past were considered weekend rentals are being bought and occupied by full time residents. New homes are being built across the island at a rapid pace.</p>	<p>Yes, the City of Brigantine enforces regulations and ordinances to protect new development from the effects of natural hazards. The natural hazards that threaten the City are mainly flooding, wave velocity, and high wind. The City participates in FEMA's NFIP and the construction department enforces regulations for minimum floor height, foundation construction and flood vents. The construction department also enforces the IBC-IRC codes that provide construction criteria for structures within high wind areas. (Information provided by City Engineer and Deputy Coordinator Edward Stinson.)</p> <p>Adopted ABFE and FIRM elevations. 70% of new or substantially renovated homes are required to have a finished floor of 12 feet with 3 feet of freeboard, dependent on their ABFE location rating (AE9, AE10 X, etc.)</p>	<p>New codes and ordinances are being developed to adjust for new flood regulations. The city also provides NIXLE awareness for pending floods and storms. The PPI committee meets regularly to find ways to reach out to the public. Mainly social media outlets.</p>

## National Flood Insurance Program Summary

Brigantine has participated in FEMA's National Flood Insurance program (NFIP) since 1970.

National Flood Insurance Program Data City of Brigantine	
Total number of policies <sup>1</sup>	6,338
Insurance in force <sup>2</sup>	\$1,532,508,600
Total number of losses during NFIP participation	4,216
Total claims paid during NFIP participation	\$99,720,550
Non-Mitigated Repetitive Loss Properties	114
Non-Mitigated Severe Repetitive Loss Properties	9

Brigantine also participates in the NFIP's Community Rating System (CRS). City of Brigantine entered the CRS in 1992, and is presently a Class 5 community receiving a 25% premium discount for policyholders in the Special Flood Hazard Area (SFHA) and a 10% premium discount for policyholders outside of the SFHA.

Brigantine provided the following NFIP Administrator Input in 2021, for inclusion in the 2022 Plan.

<sup>1</sup> Policies in Force from [www.fema.gov](http://www.fema.gov) NFIP Insurance Report, data current as of 06/03/21.

<sup>2</sup> Insurance in Force from [www.fema.gov](http://www.fema.gov) NFIP Insurance Report, data current as of 06/03/21

Name: [ City of Brigantine ] Title: Floodplain Manager/Floodplain Administrator/NFIP Coordinator



[Community: City of Brigantine] Email and Phone: construction@brigantinebeachnj.com (609) 266-7600

**Atlantic County Multi-Jurisdictional Hazard Mitigation Plan Update - *Worksheet #2 - NFIP***

Adoption Date of your Current Floodplain Management Ordinance	Date of Entry into NFIP <sup>1</sup>	Position or Title of Your Jurisdiction's Designated Floodplain Manager/Administrator (may also be called NFIP Coordinator)		Is this person is a Certified Floodplain Manager?	Is floodplain management an auxiliary function?	Is your community in good standing with the NFIP?	
2018	1971	Construction Official		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Provide an explanation of NFIP administration services (i.e., permit review, GIS, education or outreach, inspections, engineering capability, etc.):							
All permits are reviewed, engineering utilizes ArcGIS for planning assistance, inspections are conducted, and city has a designated engineer and a pool of contract firms							
Describe barriers to running an effective NFIP program in the community (if applicable):							
[							
When was most recent FEMA Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?*	Is a CAV or CAC scheduled or needed?	Does the current floodplain management ordinance exceed FEMA or State minimum requirements? If so, describe how.	Is training of staff regarding NFIP issues planned?	Does your community intend to continue to enforce the floodplain management requirements including regulating new construction in Special Flood Hazard Areas (SFHAs)?	Does your community participate in the CRS? If so, state your Class.	Does your community intend to continue its participation in the CRS program?	If your community is not currently participating in the CRS program, are you intending to initiate the process during the next planning cycle?
2019	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes* <input type="checkbox"/> No * Class 5	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
*Describe any outstanding compliance issues (i.e., current violations):							
Floodplain Ordinance exceeds height and code limits							

Name: [ Richard Stevens ]Title: Floodplain Manager/Floodplain Administrator/NFIP Coordinator

Representing: [ City of Brigantine ]Email and Phone:[ rstevens@brigantinebeachnj.com 609-266-7600 x282 ]



**Provide an explanation of your local floodplain permitting process:**

[All permitting is in full compliance with CAFRA, DEP, UCC and local laws/ordinances.]

Does your community intend to continue floodplain identification and mapping services including any local requests for map updates?	Does your community intend to initiate/continue the buyouts of repetitive loss properties?	Does your community intend to commit staff or resources to improve local mapping or code administration in the future?	Does your community intend to provide local outreach to promote the sale of flood insurance?	Does your community intend to participate in RiskMAP meetings and planning initiatives?	Does your community intend to continue to implement structural improvements to mitigate against flooding - culverts, drainage basins, etc.?	Does your community intend to continue to implement home improvement programs designed to minimize basement flooding?	Does your community intend to continue to implement roadway improvements to reduce damage from future flooding events?	Does your community intend to implement plans and programs in coordination with a local or regional drainage/sewer authority?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Does your community intend to adopt the new FEMA Advisory Base Flood Elevations?	As Floodplain Manager, did you (or your predecessor at the time) actively participate in the development of the initial Hazard Mitigation Plan?		As Floodplain Manager, are you actively participating in the development of this Hazard Mitigation Plan Update?		Have there been any changes to your community's local floodplain management program since the last version of the plan?			
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			

\* If you answered "yes", that there have been changes to your local program since the last version of the plan, please describe:

[ ]

**Provide a description of your community assistance and monitoring activities:**

[Periodic workshops and meetings offered to public]

NFIP participating communities are required to update/revise their floodplain management ordinance to ensure that it complies with the latest FEMA regulations. Will your community continue to commit to this program requirement?

Yes  No

NFIP participating communities are also required to update/revise their floodplain management ordinance to be consistent with the latest FIRMs. Will your community continue to commit to this program requirement?

Yes  No

Note: All NFIP participating communities should encourage local residents to purchase and maintain flood insurance.

## Critical Facilities in Delineated Hazard Areas

Note that all assets and facilities in the City of Brigantine are considered to be at risk from County-wide hazards: Hurricane/Tropical Storm, Nor' easter, Extreme Wind, Tornado, Winter Weather, Lightning, Extreme Temperatures and Earthquake.

Facility Name	Location	Facility Type	Flood, A Zone	Flood, V Zone (Wave)	Category 1-4 Storm Surge	Coastal Erosion	Sea Level Rise, 1 Ft	Sea Level Rise, 3 Ft	Dam Failure	Low to Moderate Wildfire	High to Extreme Wildfire
<b>City of Brigantine</b>											
Brigantine Fire Dept.	1417 West Brigantine Avenue	Fire Station	1	0	1	0	0	0	0	0	0
Brigantine City	1417 W Brigantine Ave	Police Station	1	0	1	0	0	0	0	0	0
Brigantine City	38 St & Bayshore Ave	Public Works	1	0	1	0	0	1	0	0	0
Brigantine Elementary School	301 E. Evans Blvd.	School	1	0	1	0	0	0	0	0	0
Brigantine North School	301 E. Evans Blvd.	School	1	0	1	0	0	0	0	0	0
St. Philip the Apostle	42nd & Brigantine Ave	School	0	0	1	0	0	0	0	0	0
<b>Total</b>			<b>5</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>

## Summary of Estimated Potential Losses from Hazards

Estimated annual losses provided in this section are based on best available data, and the methodologies applied result in an approximation of risk. Loss estimates should be used to understand relative risk from hazards.

Uncertainties are inherent in any loss estimation methodology, arising in part from incomplete scientific knowledge concerning natural hazards and their effects on the built environment. Uncertainties also result from approximations and simplifications that are necessary for a comprehensive analysis (i.e., incomplete inventories, demographics or economic parameters).

It is important to note that this table reflects estimates of average annual damages. For any hazard, individual event damages could be substantially (orders of magnitude) higher.

Only hazards for which annual losses were quantified and presented in Section 3C are included in this table.

Summary of Estimated Potential Losses From Hazards		
City of Brigantine		
Quantified Hazard	Annualized Loss	Annual Loss Ratio
Extreme Wind	\$443,000	0.033%
Hurricane and Tropical Storm	\$1,921,000	0.080%
Lightning	\$3,800	0.000%
Tornado	\$1,100	0.000%
Drought*	\$0	0.000%
Winter Storm	\$12,100	0.001%
Coastal Erosion**	\$161,000	0.020%
Flooding (Riverine)	\$0	0.000%
Storm Surge (Coastal Flooding)	\$33,742,000	1.320%
Earthquake	\$19,000	0.001%

\*Derived from crop values

\*\*Assuming absence of current beach nourishment and stabilization actions.

## Outreach to the Public and Other Stakeholders

As part of this 2022 Plan Update, Brigantine undertook various activities to: (a) alert the public and other stakeholders to the fact that the HMP Planning Committee was working to develop the update; and (b) provide the public and other stakeholders with a forum to ask questions and submit comments and suggestions on the process. Outreach activities undertaken by Brigantine included those listed below. comments were recorded as a result of the outreach activities.

Outreach Activities			
Date of Activity	Type of Activity	Activity Details	Lead Department and/or Staff Title who Undertook Activity
May 2021	Social Media Blitz	Several posts on social media in relation to Hurricane Preparedness week. Including how to sign up for alerts for weather related info and general information from OEM	Brigantine FD Captain Tim Daley / Deputy Brigantine OEM
June 2021	NIXLE test	Sent out a test to all registered NIXLE subscribers to test the system	Brigantine PD Sgt. Jack Glasser / Deputy OEM
July 2021	PPI and CRS Floodplain meeting	Met with city officials to discuss the upcoming review of the HMP.	City Manager – OEM personnel – City Engineer – Hired consultant
Aug 2021	National Night Out	Set up a booth to hand out Hazard and Flood preparedness materials. Supplied a scan and directions for signing up for the NIXLE notification system	Brigantine OEM personnel
Sept 2021	Public Flood Plain Review	Met with city officials and public members of the PPI committee. Discussed public portion of the HMP and recorded their input	City Manager – OEM personnel – City Engineer – Hired consultant- Members of the public who volunteered for committee

## Capability Assessment

This section describes the following capabilities of Brigantine:

- Legal and regulatory capability
- Administrative and technical capability
- Fiscal capability
- Community resiliency
- Community political capability

As part of the 2022 Plan update, each participating jurisdiction reevaluated the capabilities they had provided for the 2016 Plan, and sent updates to the consultant for incorporation into this plan section. Brigantine has reviewed its responses from the 2016 Plan and has updated its prior feedback to reflect present-day conditions.

Legal and Regulatory Capability	
Regulatory Tools (Codes, Ordinances, Plans)	Do you have this?
Building Code	Y
Zoning Ordinance	Y
Subdivision Ordinance	Y
Special Purposes Ordinance	Y
Growth Management Ordinance	Y
Site Plan Review Requirements	Y
Comprehensive Plan	Y
Capital Improvements Plan	Y
Economic Development Plan	Y
Emergency Response Plan	Y
Post-Disaster Recovery Plan	Y
Post-Disaster Recovery Ordinance	N
Real Estate Disclosure Ordinance	Y
Evacuation Plan	N

<b>Administrative and Technical Capability</b>	
<b>Regulatory Tools (Codes, Ordinances, Plans)</b>	<b>Do you have this?</b>
Planner(s) with knowledge of land development and management practices	N
Engineer(s) with knowledge of land development and management practices	N
Planner(s) or engineer(s) with knowledge of land development and management practices	Y
Engineer(s) or professional(s) trained in construction practices related to buildings and/or infrastructure	Y
Planner(s) or engineer(s) with an understanding of natural and/or human caused hazards	Y
Floodplain manager	Y
Surveyors	Y
Staff with education or expertise to assess the community's vulnerability to hazards	Y
Personnel skilled in GIS and/or HAZUS	Y
Scientists familiar with the hazards of the community	N
Emergency Manager	Y
Code Enforcement Official	N
Public Works or Highway Superintendent	N
Emergency Management Coordinator	N

<b>Fiscal Capability</b>	
<b>Financial Resources</b>	<b>Accessible or Eligible to use</b>
Community Development Block Grants (CDBG)	Y
Capital Improvements Project Funding	Y
Authority to Levy Taxes for Specific Purposes	Y
Fees for Water, Sewer, Gas, or Electric Service	Y
Impact Fees for Homebuyers or Developers for New Developments/Homes	Y
Incur Debt through General Obligation Funds	Y
Incur Debt through Special Tax and Revenue Bonds	Y
Incur Debt through Private Activity Bonds	N
Withhold Spending in Hazard-Prone Areas	N
Other (i.e., coastal, sustainability, or climate change initiatives; or Brownfield funds)	N

Would you classify your community's <u>legal and regulatory</u> capability to implement hazard mitigation strategies as high, moderate, or low?#	Would you classify your community's overall <u>technical</u> capability to implement hazard mitigation strategies as high, moderate, or low?#	Would you classify your community's overall <u>fiscal</u> capability to implement hazard mitigation strategies as high, moderate, or low?#	Would you classify your community's overall <u>administrative</u> capability to implement hazard mitigation strategies as high, moderate, or low?#	Would you classify your political leadership's willingness to enact policies and programs that reduce hazard vulnerabilities in your community as high, moderate, or low... even if met with opposition? (i.e., guiding development away from identified hazard areas)?#
MODERATE#	MODERATE#	MODERATE#	MODERATE#	MODERATE#
Discuss ways of bridging identified gaps in your local capabilities to ensure that they are in-line with your mitigation actions and goals.#				
<p>We have a good working relationship with all members of council, department heads and other NGO entities. As items arise (such as the need to raise the normal 1<sup>st</sup> floor elevation, all parties are brought into the discussion to forge the solution. If additional people (ie: divisions within the city), employees are given the task or a consultant is brought on board.¶</p>				
¶				
<p>PPI committee has enabled city officials as well as hired consultants to get real time information from the public. The learned information can then be applied to any ongoing projects.#</p>				

## **Plan Integration**

It is the intention of Brigantine to incorporate mitigation planning as an integral component of daily municipal operations. The balance of this subsection describes local accomplishments over the last planning cycle (2016-2021), and targeted activities for the next planning cycle (2022-2027), as reported by the city's CPG member and shared with the consultant for incorporation here.

Demonstration of Progress over the Last Planning Cycle (2016-2021) – Brigantine reported the following actions as plan integration plan integration mechanisms over the last planning cycle:

### ***Installation of Emergency Generators – Completed***

*The City of Brigantine is served by three sanitary sewer lift stations, three potable wells and two stormwater pumps, which all required emergency generators. In addition, the police/fire/Emergency Management Office did not have an emergency generator. Finally, City Hall is used for emergency purposes during storms, hurricanes, electric outages and other natural disasters, and a generator was required for this building as well. All of these facilities required emergency generators so that service can be provided during emergency situations.*

*The following emergency generators were recently installed:*

- 1. A Station Sewer Lift Station, 100 Bayshore Avenue*
- 2. Potable Well #9, 4201 Bayshore Avenue*
- 3. Potable Well #7, 203 Vernon Place*
- 4. Caverly Drive Stormwater Pump Station, Sheridan Boulevard at Caverly Drive (shares a portable generator with Lincoln Drive)*
- 5. Lincoln Drive Stormwater Pump Station, Lincoln Drive at Caverly Drive (portable)*
- 6. Police/Fire/Emergency Medical Services, 1417 West Brigantine Avenue*

### ***Bulkheads - Completed***

*This project included replacement of various deteriorated timber bulkheads with vinyl bulkheads or living shorelines to raise the elevation to 9 feet. New vinyl bulkheads or living shorelines were installed at:*

- 1. Cherokee Boulevard*
- 2. Unnamed Street End adjacent to 4104 Atlantic Boulevard*
- 3. Unnamed Street End adjacent to 4200 Atlantic Boulevard*
- 4. 24<sup>th</sup> Street South*
- 5. 6<sup>th</sup> Street South*

### ***Replacement of Well #9 - Completed***

*Well #9 is located at 42<sup>nd</sup> Street and Bayshore Avenue and serves the entire south section of the island of Brigantine. This water-supply system was close to being impacted by Superstorm Sandy since flood waters reached the top of the well system due to the existing low elevation. State regulations require that the well head be 18 inches above the flood elevation. The new Well #9 now meets this requirement to ensure that future storms will not jeopardize the City's water system.*

### ***Pump Station and Flood Gates at Boat Ramp at 5<sup>th</sup> Street South – Completed***

*This project was listed as Community Action No. 2 in the 2016 Atlantic County Natural Hazard Mitigation Plan. The Boat Ramp is located at 5th Street South and Bayshore Avenues.*

*Historically, street flooding led to damage to surrounding homes, businesses, and vehicles. This project included a pump station and emergency generator to service the stormwater needs of this area along with waterproofing the boat ramp by installing floodgates. Also included was the elevation of the boat ramp apron and Bayshore Avenue to reduce flooding.*

### ***Pump Stations at Hackney Place, 34<sup>th</sup> Street South, Jenkins Parkway - Completed***

*The City installed a stormwater pump station in 1980 and alleviated the flooding in one area. Two additional stormwater pump stations were installed in 2007 with funding support from FEMA. Three additional stormwater management projects were completed recently. Each of the pump stations described below included an emergency generator to ensure operation during electric power outages:*

- 1. New Lighthouse Circle Stormwater Pump Station – This project was listed as Community Action No. 6 in the 2016 Atlantic County Natural Hazard Mitigation Plan. The new pump station is located at 34<sup>th</sup> Street and Bayshore Avenue. This pump serves a drainage area that includes portions of Brigantine Boulevard, the only access route off of the island.*
- 2. New Hackney Place Stormwater Pump Station – This project was listed as Community Action No. 5 in the 2016 Atlantic County Natural Hazard Mitigation Plan. The new pump station is located off of West Shore Drive in the Golf Course Section of the City.*
- 3. New Pump Station at Jenkins Parkway, 12<sup>th</sup> Street North.*

### ***Pump Station at 6<sup>th</sup> Street North and East Evans Boulevard – Completed***

*The city constructed a new stormwater pump station at the intersection of 6<sup>th</sup> Street North and East Evans Boulevard. The station includes an emergency generator, all constructed above 500 yr. flood elevation.*

Targeted Plan Integration Activities for the Next Planning Cycle (2022-2027) – Brigantine reported the following actions as integration mechanisms to be implemented from this point forward through the next planning cycle:

### ***South End Flood Control Improvements***

*Currently the outlet structure that serves the Ocean Drive and Lagoon Boulevard section of the Inlet area of the City is totally clogged and non-functional. The current 60-inch outfall pipe is buried, and the system no longer functions as designed. It is estimated that the current system operates at or near 25 percent capacity, resulting in localized flooding. This project calls for a new outlet system to be designed that will reroute stormwater within the Seaport Area Drainage Basin to a new outfall.*

*This project is designed to improve and protect groundwater, as well as provide for a functional stormwater system.*

### ***Golf Course Neighborhood Improvements***

*This project will provide for the removal of accumulated sand from municipal drainage basins in the Golf Course Section of the City of Brigantine. The Golf Course Section of the City was significantly flooded by Superstorm Sandy, and silts and sand washed into the underground drainage system. This project is designed to improve and protect groundwater, as well as provide for a functional stormwater system.*

*The entire Golf Course Section of the City was under water during and after Superstorm Sandy. More than 32,000 cubic yards of sand and silts washed into the drainage system, making it inoperable. The planned improvements will help to prevent future damage caused by natural disasters. By making these improvements, the need for emergency protective and public-works services in this area will be reduced. Damage to roads and structures in the area will be reduced, and property owners will suffer fewer instances of being denied access/egress to their properties. In addition, this project will provide adequate environmental infrastructure to improve resiliency of Sandy-damaged systems in future natural disasters.*

### ***Bulkhead Reconstruction at City Dock located at 26<sup>th</sup> Street South***

*The City Dock is located at 26<sup>th</sup> Street South and provides for kayaking, boating, swimming, and other water sports. The City Dock was severely damaged by Superstorm Sandy and has not been operational since the storm.*

*The project includes replacing the bulkhead that is severely damaged and raising it from 7 feet to 9 feet along the park water frontage. The entire project will occur on public property. The public benefits of this project are to protect critical public infrastructure, namely the City Dock and Bayshore Avenue, reduce flooding in this low-lying area and improve access for emergency services to residents and visitors.*

### ***Bulkheads***

*Bulkheads provide a crucial aspect of the City's flood protection infrastructure. Bulkheads keep sediment and fill in place and help to attenuate wave action from water bodies. Bulkheads are found along nearly the entirety of Brigantine's back bay area. Some bulkheads owned by the City, though most are owned by private property owners with a home or marina upland of the Boardwalk. Over the years, these bulkheads fell into varying states of disrepair and were constructed to various heights, resulting in inconsistent protection.*

*Since Superstorm Sandy, the City has strived to replace existing bulkheads with those that comply with its standards. In 2018, the City took another step by designating the back-bay waterfront area as an "Area in Need of Redevelopment". The Redevelopment Area designation will allow the City to enter into redevelopment agreements with waterfront property owners to fix and elevate bulkheads. This enables financial arrangements, such as the City fixing bulkheads and placing a special assessment on waterfront properties.*

*Chapter 127 of the City Code addresses bulkheads, setting the minimum height and construction/design standards. Currently oceanfront properties are required to have a bulkhead of 11 feet above Mean Sea level and nine feet above Mean Sea Level in all other areas (including the back-bay waterfront). The 14<sup>th</sup> Street South bulkhead is being permitted and is fully funded. The City has identified bulkhead replacement as a priority and will continue to advocate and facilitate bulkhead replacements.*

## **Mitigation Strategy**

This subsection sets forth the mitigation strategy for Brigantine. It describes, in the following order:

- Progress on 2016 Plan Actions
- Hazard Mitigation Accomplishments
- Proposed 2022 Plan Mitigation Actions
- Action Worksheets

### **Progress on 2016 Plan Actions**

The following table was completed by the Brigantine JAT Committee Members. It summarizes the progress that was made on the local hazard mitigation initiatives that were set forth in the last version of the plan in 2016.

Brigantine has identified no major changes in priorities since the last version of the plan.

PROGRESS ON 2016 HAZARD MITIGATION PLAN INITIATIVES												
2016 Plan Initiative Number	Mitigation Initiative Description	2016 Plan Priority	Hazard(s) Mitigated	Lead and Support Agencies	Status				Status Details	Relevance		Relevance Details
					Completed	Initiated but Not Completed	Ongoing Type of Activity	Not Initiated		Still Relevant - Carry Forward to Updated Mitigation Strategy	No Longer Relevant - Omit from Updated Mitigation Strategy	
1	Periodic review of plans and codes, and changes (Post Sandy inspections and damages revealed items in the local codes that needed to be adjusted to mitigate potential damages and loss of life)	High	All	Code Enforcement/ Construction Official			x			x		Continue to periodically review plans and codes.
2	Modify existing boat ramp to install a wooden flood gate	High	Flooding	City Engineer	x						x	
3	Maintain active training schedules for all relative officials ('Continuing training on State and Local laws and codes)	High	All	Code Enforcement/ Construction Official			x			x		Maintain active training schedules for all relative officials ('Continuing training on State and Local laws and codes)
4	Revised Flood Prevention codes, construction codes and planning guidance	High	All	City Engineer/ Floodplain Manager/ Construction Official			x			x		Continue to revise Flood Prevention codes, construction codes and planning guidance as needed.
5	Repair and upgrade storm drain infrastructure, installation of flood pump station at bulkhead/street end (Hackney Place)	High	Flooding	City Engineer	x						x	Completed as per Worksheet 6
6	Repair and upgrade storm drain infrastructure, installation of flood pump station at bulkhead/street end (34th St)	High	Flooding	City Engineer	x						x	Completed as per Worksheet 6
7	Utilize existing "reverse 911", Nixle service, social media accounts, local emergency AM radio system. Ensure local websites are up to date and information linked to ACOEM	High	All	Local OEM Staff			x			x		Continue to utilize existing "reverse 911", Nixle service, social media accounts, local emergency AM radio system. Ensure local websites are up to date and information linked to ACOEM

## Hazard Mitigation Accomplishments (2016-2021)

The State of New Jersey 2019 HMP (Section 3, Page 3-30) requires identification of mitigation activities as an essential element of a local plan review. Information on the status of long-range mitigation strategies shall be contained in the original plan. Self-funded mitigation initiatives as well as past FEMA funded projects should be documented. The following table summarizes past mitigation accomplishments in Brigantine since the last version of the plan was adopted in 2016.

Past Mitigation Accomplishments				
Project	Status		Funding Source	Relationship to Plan
	Approved/Active Year	Completed Year		
Modify existing boat ramp to install a wooden flood gate	2016	2020	Use of local capital improvement funds	In the Plan
Multiple mitigation and related accomplishments were also reported by the city as plan integration actions (see "Plan Integration" above).				

## Proposed 2022 Plan Mitigation Actions

The process for selection and prioritization of mitigation actions is described in greater detail in Section 6 of the main text. The outcomes of that overall process are summarized here.

This plan proposes the actions determined to be the most appropriate for the resources and capabilities of Brigantine based on the experience of local officials, with input from the public and other stakeholders. Potential actions were reviewed relative to potential financial as well as administrative and legal costs and the degree to which they would be endorsed by the public. Potential actions were reviewed during the meetings relative to their potential benefit of effectiveness in saving lives, protecting the natural environment, and reducing disruption and damage. Actions selected by each jurisdiction include activities to protect existing and future structures and infrastructure and enhance community resilience.

Part of enhancing community resilience involves adapting to a changing climate. This plan's risk assessment includes information on climate change as part of the hazard vulnerability analysis and contain strategies/projects to address increased vulnerability that may result from climate change. By developing mitigating strategies and/or projects for hazards that are exacerbated by climate change, jurisdictions will better protect residents, avoid, or reduce damage to property and public infrastructure, and reduce personal hardship. Previous sections of this plan have presented information on how climate change may affect jurisdictional vulnerability or increased frequency of occurrence and/or severity in exposure to the identified hazards. Climate change is addressed by mitigating the various hazards that it exacerbates. Brigantine has proposed a range of hazard mitigation initiatives to address their highest hazards including those hazards that are exacerbated by a changing climate.

Action priorities were determined by a qualitative prioritization process. A higher priority was assigned to projects where: the life/safety risk of taking no action was deemed to be unacceptably high; the project addresses one of the community's highest hazards and/or key risks; benefits were projected to equal or exceed project costs; critical facilities or key local assets were being protected; funding and staff resources were deemed to be sufficient and/or accessible for project implementation; the project is technically feasible and the community determined their legal authority to implement the action; negative environmental and/or social impacts were not identified during the assessment, or were very minimal; and/or where there was overall support for the project from the local community (government officials, public, and stakeholders).

Detailed Action Worksheets for each action item in the strategy are presented in the following pages.

<b>Action Worksheet</b>	
Your plan name	<i>Atlantic County Multi-jurisdictional Hazard Mitigation Plan</i>
Your community name	<i>City of Brigantine</i>
Community action number	1
<b>Assessing the Risk</b>	
Hazard(s) addressed	<i>All Hazards (i.e., wind, flooding)</i>
Risk finding	<i>Post Sandy inspections and damages revealed items in the local codes that needed to be adjusted to mitigate potential damages and loss of life</i>
<b>Describing the Action</b>	
Action category	<i>Prevention</i>
Action type	<i>Review of comprehensive natural disaster plans and resiliency techniques</i>
Action description	<i>Periodic review of plans and codes, and changes</i>
Existing, future &/or NA	<i>Existing</i>
<b>Evaluating the Action</b>	
Losses avoided (i.e., benefits)	<i>Mitigate and minimize flooding and damage to property and life</i>
Cost estimate	<i>Minimal cost for reviews as we are using a governmental agency</i>
Cost effectiveness (i.e., benefit/cost)	<i>As there is virtually no cost to us, any benefits derived from improved resiliency measures.</i>
Technical	<i>Technically feasible, no impediments</i>
Political	<i>We have 100% support of City Council, residential and commercial interests</i>
Legal	<i>No apparent legal issues</i>
Environmental	<i>No adverse effects, any potential issues are approved by NJDEP or CAFRA before being approved by local Government body</i>
Social	<i>No adverse effects</i>
Administrative capability	<i>Local capability, but outside agencies for design, construction and legal guidance</i>
Local champion	<i>City Council, Code/Building Official, City Engineer</i>
Other community objectives	<i>Maintain all ordinances and codes so that they are in line with State laws</i>
<b>Implementing the Action</b>	
Priority	<i>HIGH</i>
Local planning mechanism	<i>Planning Board, Ordinance changes, Code Enforcement Officials</i>
Responsible party	<i>Code Enforcement/Construction Official</i>
Potential funding sources	<i>Budgetary line items</i>
Time line	<i>On Going</i>
<b>Reporting on Progress</b>	
Action progress status	<i>On Going</i>

<b>Action Worksheet</b>	
Your plan name	<i>Atlantic County Multi-jurisdictional Hazard Mitigation Plan</i>
Your community name	<i>City of Brigantine</i>
Community action number	2
<b>Assessing the Risk</b>	
Hazard(s) addressed	<i>Flooding (Tidal and Rain)</i>
Risk finding	<i>There may be areas that can be targeted for Blue Acres Acquisition primarily on Brigantine Avenue, Harbor Beach Boulevard and East Evans Avenue.</i>
<b>Describing the Action</b>	
Action category	<i>Natural Resource Protection</i>
Action type	<i>Acquisition</i>
Action description	<i>There may be areas that can be targeted for Blue Acres Acquisition primarily on Brigantine Avenue, Harbor Beach Boulevard and East Evans Avenue.</i>
Existing, future &/or NA	<i>Future Development</i>
<b>Evaluating the Action</b>	
Losses avoided (i.e., benefits)	<i>Effective in preventing development in floodprone areas.</i>
Cost estimate	<i>NA, depends on the parcel, All cost to be funded by Blue Acres</i>
Cost effectiveness (i.e., benefit/cost)	<i>Reduction of repetitive loss claims, reduction of continual DPW costs and eligibility for CRS credits leading to lower NFIP rates for all residents and businesses</i>
Technical	<i>Technically feasible, Mitigates tidal and rainfall flooding for the long term</i>
Political	<i>We have 100% support of City Council, residential and commercial interests</i>
Legal	<i>No apparent legal issues</i>
Environmental	<i>No adverse effects, full permitting has been granted by NJDEP and CAFRA</i>
Social	<i>No adverse effects</i>
Administrative capability	<i>Local capability, but outside agencies for design and construction</i>
Local champion	<i>City Council, Committee(Floodplain) and Residents</i>
Other community objectives	<i>It will also mitigate flooding in local evacuation routes</i>
<b>Implementing the Action</b>	
Priority	<i>HIGH</i>
Local planning mechanism	<i>NJDEP Blue Acres Program</i>
Responsible party	<i>NJDEP Blue Acres Program</i>
Potential funding sources	<i>NJDEP Blue Acres Program</i>
Time line	<i>2024</i>
<b>Reporting on Progress</b>	
Action progress status	<i>New action</i>

<b>Action Worksheet</b>	
Your plan name	<i>Atlantic County Multi-jurisdictional Hazard Mitigation Plan</i>
Your community name	<i>City of Brigantine</i>
Community action number	3
<b>Assessing the Risk</b>	
Hazard(s) addressed	<i>All Hazards (i.e.: wind, flooding)</i>
Risk finding	<i>Continue to revise local codes that needed to be adjusted to mitigate potential damages and loss of life</i>
<b>Describing the Action</b>	
Action category	<i>Education</i>
Action type	<i>Continuing training on State and Local laws and codes</i>
Action description	<i>Maintain active training schedules for all relative officials</i>
Existing, future &/or NA	<i>Existing</i>
<b>Evaluating the Action</b>	
Losses avoided (i.e., benefits)	<i>Property damage from wind and flooding is mitigated by adopting new or updated building codes(i.e.: 3 feet of Free Board, elevation heights to current ABFE Maps)</i>
Cost estimate	<i>Minimal cost for training</i>
Cost effectiveness (i.e., benefit/cost)	<i>Reduction of repetitive loss claims, CRS credits leading to lower NFIP rates for all residents and businesses</i>
Technical	<i>Technically feasible, no impediments</i>
Political	<i>We have 100% support of City Council, residential and commercial interests</i>
Legal	<i>No apparent legal issues</i>
Environmental	<i>No adverse effects, any potential issues are approved by NJDEP or CAFRA before being approved by local Government body</i>
Social	<i>No adverse effects</i>
Administrative capability	<i>Local capability, but outside agencies for design, construction and legal guidance</i>
Local champion	<i>City Council, Code/Building Official, City Engineer</i>
Other community objectives	<i>Maintain all ordinances and codes so that they are in line with State laws</i>
<b>Implementing the Action</b>	
Priority	<i>HIGH</i>
Local planning mechanism	<i>Planning Board, Ordinance changes, Code Enforcement Officials</i>
Responsible party	<i>Code Enforcement/Construction Official</i>
Potential funding sources	<i>Budgetary line items</i>
Time line	<i>On Going</i>
<b>Reporting on Progress</b>	
Action progress status	<i>On Going</i>

<b>Action Worksheet</b>	
Your plan name	<i>Atlantic County Multi-jurisdictional Hazard Mitigation Plan</i>
Your community name	<i>City of Brigantine</i>
Community action number	<i>4</i>
<b>Assessing the Risk</b>	
Hazard(s) addressed	<i>All Hazards (i.e.: wind, flooding)</i>
Risk finding	<i>Continue to revise local codes that needed to be adjusted to mitigate potential damages and loss of life</i>
<b>Describing the Action</b>	
Action category	<i>Planning</i>
Action type	<i>Code update</i>
Action description	<i>Revised Flood Prevention codes, construction codes and planning guidance</i>
Existing, future &/or NA	<i>Future along with substantially damage or lifted structures</i>
<b>Evaluating the Action</b>	
Losses avoided (i.e., benefits)	<i>Property damage from wind and flooding is mitigated by adopting new or updated building codes(i.e.: 3 feet of Free Board, elevation heights to current ABFE Maps)</i>
Cost estimate	<i>Approximately \$3-5,000 for outside counsel and consultants</i>
Cost effectiveness (i.e., benefit/cost)	<i>Reduction of repetitive loss claims, CRS credits leading to lower NFIP rates for all residents and businesses</i>
Technical	<i>Technically feasible, no impediments</i>
Political	<i>We have 100% support of City Council, residential and commercial interests</i>
Legal	<i>No apparent legal issues</i>
Environmental	<i>No adverse effects, any potential issues are approved by NJDEP or CAFRA before being approved by local Government body</i>
Social	<i>No adverse effects</i>
Administrative capability	<i>Local capability, but outside agencies for design, construction and legal guidance</i>
Local champion	<i>City Council, Code/Building Official, City Engineer</i>
Other community objectives	<i>Reduction in NFIP rates with CRS credits and lower Flood insurance for all properties</i>
<b>Implementing the Action</b>	
Priority	<i>HIGH</i>
Local planning mechanism	<i>Planning Board, Ordinance changes, Code Enforcement Officials</i>
Responsible party	<i>City Engineer/Floodplain Manager/Construction Official</i>
Potential funding sources	<i>Budgetary line items</i>
Time line	<i>On Going</i>
<b>Reporting on Progress</b>	
Action progress status	<i>On Going</i>

<b>Action Worksheet</b>	
Your plan name	<i>Atlantic County Multi-jurisdictional Hazard Mitigation Plan</i>
Your community name	<i>City of Brigantine</i>
Community action number	5
<b>Assessing the Risk</b>	
Hazard(s) addressed	<i>Flooding (Tidal and Rain)</i>
Risk finding	<i>Emergency generator are needed in various locations</i>
<b>Describing the Action</b>	
Action category	<i>Infrastructure</i>
Action type	<i>Flood mitigation, reduction</i>
Action description	<i>Emergency Generator Installation-City Hall, South End Sewer Lift Station, Jenkins Parkway Sewer, Harbor Beach Boulevard Stormwater Lift Station, Public Works SCADA Control Center, 12<sup>th</sup> Street Stormwater Pumping Station.</i>
Existing, future &/or NA	<i>Existing structures</i>
<b>Evaluating the Action</b>	
Losses avoided (i.e., benefits)	<i>Loss of electric, down time for pump stations.</i>
Cost estimate	<i>250000 @</i>
Cost effectiveness (i.e., benefit/cost)	<i>Reduction of repetitive loss claims, reduction of continual DPW costs and eligibility for CRS credits leading to lower NFIP rates for all residents and businesses</i>
Technical	<i>Technically feasible, Mitigates tidal and rainfall flooding for the long term</i>
Political	<i>We have 100% support of City Council, residential and commercial interests</i>
Legal	<i>No apparent legal issues</i>
Environmental	<i>No adverse effects, full permitting has been granted by NJDEP and CAFRA</i>
Social	<i>No adverse effects</i>
Administrative capability	<i>Local capability, but outside agencies for design and construction</i>
Local champion	<i>City Council, Committee(Floodplain) and Residents</i>
Other community objectives	<i>It will also mitigate flooding in local evacuation routes</i>
<b>Implementing the Action</b>	
Priority	<i>HIGH</i>
Local planning mechanism	<i>Capital Improvement Plan</i>
Responsible party	<i>City Engineer</i>
Potential funding sources	<i>FEMA, NJDEP, NJIT, etc.</i>
Time line	<i>2024</i>
<b>Reporting on Progress</b>	
Action progress status	<i>New Action</i>

<b>Action Worksheet</b>	
Your plan name	<i>Atlantic County Multi-jurisdictional Hazard Mitigation Plan</i>
Your community name	<i>City of Brigantine</i>
Community action number	6
<b>Assessing the Risk</b>	
Hazard(s) addressed	<i>Flooding (Tidal and Rain)</i>
Risk finding	<i>Check valves and outlet structures may be not operating as designed.</i>
<b>Describing the Action</b>	
Action category	<i>Infrastructure</i>
Action type	<i>Flood mitigation, reduction</i>
Action description	<i>Inspect all check valves and replace/repair as needed.</i>
Existing, future &/or NA	<i>Existing structures</i>
<b>Evaluating the Action</b>	
Losses avoided (i.e., benefits)	<i>Reduce/eliminate flooding to roadways and homes</i>
Cost estimate	<i>\$250,000</i>
Cost effectiveness (i.e., benefit/cost)	<i>Reduction of repetitive loss claims, reduction of continual DPW costs and eligibility for CRS credits leading to lower NFIP rates for all residents and businesses</i>
Technical	<i>Technically feasible, Mitigates tidal and rainfall flooding for the long term</i>
Political	<i>We have 100% support of City Council, residential and commercial interests</i>
Legal	<i>No apparent legal issues</i>
Environmental	<i>No adverse effects.</i>
Social	<i>No adverse effects</i>
Administrative capability	<i>Local capability, but outside agencies for design and construction</i>
Local champion	<i>City Council, Committee(Floodplain) and Residents</i>
Other community objectives	<i>It will also mitigate flooding in local evacuation routes</i>
<b>Implementing the Action</b>	
Priority	<i>HIGH</i>
Local planning mechanism	<i>Capital Improvement Plan</i>
Responsible party	<i>City Engineer</i>
Potential funding sources	<i>FEMA, NJDEP, NJIT, etc.</i>
Time line	<i>2024</i>
<b>Reporting on Progress</b>	
Action progress status	<i>New Action</i>

<b>Action Worksheet</b>	
Your plan name	<i>Atlantic County Multi-jurisdictional Hazard Mitigation Plan</i>
Your community name	<i>City of Brigantine</i>
Community action number	7
<b>Assessing the Risk</b>	
Hazard(s) addressed	<i>All Hazards</i>
Risk finding	<i>In previous years, pertinent information and warnings were not disseminated as widely as possible, information on our websites were not linked to ACOEM</i>
<b>Describing the Action</b>	
Action category	<i>Public Education</i>
Action type	<i>Public Information</i>
Action description	<i>Utilize existing "reverse 911", Nixle service, social media accounts, local emergency AM radio system. Ensure local websites are up to date and information linked to AC Install City-Wide Warning System/Implement IPAWS notifications using cell towersOEM. Install remotely actuated road flood barrier warning system</i>
Existing, future &/or NA	<i>N/A</i>
<b>Evaluating the Action</b>	
Losses avoided (i.e., benefits)	<i>Potential is there to mitigate loss of life and property. By notifying residents and providing information on a wide basis, we will give them the most opportunities to take appropriate actions. That would lead to a lower likelihood that our First Responders would be put in harms way</i>
Cost estimate	<i>Only ongoing cost is our Code Red system at approximately \$1300.00 per year. Maintenance on low power AM is minimal to mill. \$40,000 for IPAWS system.</i>
Cost effectiveness (i.e., benefit/cost)	<i>Highly cost effective, for a small outlay of funds, a much wider audience can be reached and reached in a near real time frame.</i>
Technical	<i>Technically feasible, no issues multiple employees on staff to utilize systems</i>
Political	<i>We have 100% support of City Commissioners, residential and commercial interests</i>
Legal	<i>No apparent legal issues</i>
Environmental	<i>No adverse effects</i>
Social	<i>No adverse effects</i>
Administrative capability	<i>Local capability</i>
Local champion	<i>Local OEM Office along with First Responders and City Administrative Staff</i>
Other community objectives	<i>Provide up to date, near real time information when needed</i>
<b>Implementing the Action</b>	
Priority	<i>HIGH</i>
Local planning mechanism	<i>Local EOM Staff</i>
Responsible party	<i>Local OEM Staff</i>
Potential funding sources	<i>Budgetary line items</i>
Time line	<i>Ongoing</i>
<b>Reporting on Progress</b>	
Action progress status	<i>In progress</i>

<b>Action Worksheet</b>	
Your plan name	<i>Atlantic County Multi-jurisdictional Hazard Mitigation Plan</i>
Your community name	<i>City of Brigantine</i>
Community action number	<i>8</i>
<b>Assessing the Risk</b>	
Hazard(s) addressed	<i>All Hazards</i>
Risk finding	<i>Continue to work towards a lower CRS rating to reduce flood insurance cost for City property owners</i>
<b>Describing the Action</b>	
Action category	<i>Public Education</i>
Action type	<i>Planning</i>
Action description	<i>Continue to revise the Floodplain Management Plan, Repetitive Loss Analysis, Natural Resources Plan, Watershed Management Plan, mapping elevation certificates, and other actions.</i>
Existing, future &/or NA	<i>N/A</i>
<b>Evaluating the Action</b>	
Losses avoided (i.e., benefits)	<i>Reduce the potential for flooding, improve planning for futher resiliency needs.</i>
Cost estimate	<i>\$25,000</i>
Cost effectiveness (i.e., benefit/cost)	<i>Highly cost effective, for a small outlay of funds, a much wider audience can be reached and reached in a near real time frame.</i>
Technical	<i>Technically feasible, no issues multiple employees on staff to utilize systems</i>
Political	<i>We have 100% support of City Council, residential and commercial interests</i>
Legal	<i>No apparent legal issues</i>
Environmental	<i>No adverse effects</i>
Social	<i>No adverse effects</i>
Administrative capability	<i>Local capability</i>
Local champion	<i>Local OEM Office along with First Responders and City Administrative Staff</i>
Other community objectives	<i>Provide up to date, near real time information when needed</i>
<b>Implementing the Action</b>	
Priority	<i>HIGH</i>
Local planning mechanism	<i>Local EOP</i>
Responsible party	<i>Local OEM Staff</i>
Potential funding sources	<i>FEMA and local budget</i>
Time line	<i>Ongoing</i>
<b>Reporting on Progress</b>	
Action progress status	<i>Ongoing</i>

<b>Action Worksheet</b>	
Your plan name	<i>Atlantic County Multi-jurisdictional Hazard Mitigation Plan</i>
Your community name	<i>City Of Brigantine</i>
Community action number	9
<b>Assessing the Risk</b>	
Hazard(s) addressed	<i>All</i>
Risk finding	<i>Flooding in low lying areas</i>
<b>Describing the Action</b>	
Action category	<i>Human Life and structure and Infrastructure</i>
Action type	<i>preservation of public health and safety, structures and natural resources</i>
Action description	<i>Close bulkhead gaps; Elevate bulkheads (Public and Private) Poinsettia Way, Lilac Way, Golf Course, Pepper Cove, 13th Street North to 14th Street North, Bayside Gabion, 9th Street North to 5th Street North - Oceanside</i>
Existing, future &/or NA	<i>Future</i>
<b>Evaluating the Action</b>	
Losses avoided (i.e., benefits)	<i>Damage to homes and infrastructure would be avoided.</i>
Cost estimate	<i>\$1,500/lf</i>
Cost effectiveness (i.e., benefit/cost)	<i>Project is cost effective compared to overall health and safety to citizens and emergency workers.</i>
Technical	<i>Technically feasible</i>
Political	<i>Public support and council support</i>
Legal	<i>City has legal authority</i>
Environmental	<i>yes, all are environment actions are positive. Mitigation to storm events</i>
Social	<i>none</i>
Administrative capability	<i>City Engineer</i>
Local champion	<i>City Council</i>
Other community objectives	<i>Serve as an environmental benefit.</i>
<b>Implementing the Action</b>	
Priority	<i>High</i>
Local planning mechanism	<i>City Engineer</i>
Responsible party	<i>administration</i>
Potential funding sources	<i>FEMA, NJDEP, NJIT, etc.</i>
Time line	<i>Pending funding</i>
<b>Reporting on Progress</b>	
Action progress status	<i>New action</i>

<b>Action Worksheet</b>	
Your plan name	<i>Atlantic County Multi-jurisdictional Hazard Mitigation Plan</i>
Your community name	<i>City Of Brigantine</i>
Community action number	<i>10</i>
<b>Assessing the Risk</b>	
Hazard(s) addressed	<i>All</i>
Risk finding	<i>Localized Flooding</i>
<b>Describing the Action</b>	
Action category	<i>Human Life and structure and Infrastructure</i>
Action type	<i>preservation of public health and safety, structures and natural resources</i>
Action description	<i>Continue the apply for FEMA Funding to elevate homes.</i>
Existing, future &/or NA	<i>Future</i>
<b>Evaluating the Action</b>	
Losses avoided (i.e., benefits)	<i>Damage to homes and infrastructure would be avoided.</i>
Cost estimate	<i>Approximately \$200,000 per home, all cost are paid by FEMA and the property owner, no cost to the City.</i>
Cost effectiveness (i.e., benefit/cost)	<i>Project is cost effective compared to overall health and safety to citizens and emergency workers.</i>
Technical	<i>Technically feasible as long as the FEMA funding is available and the property owner pays all matching costs.</i>
Political	<i>public support and council support</i>
Legal	<i>City has authority</i>
Environmental	<i>yes, all are environment actions are positive. Mitigation to storm events</i>
Social	<i>none</i>
Administrative capability	<i>Program is managed by outside consultants and paid for by FEMA and the home owners.</i>
Local champion	<i>City Council</i>
Other community objectives	<i>Serve as an environmental benefit.</i>
<b>Implementing the Action</b>	
Priority	<i>High</i>
Local planning mechanism	<i>Program is managed by outside consultants and paid for by FEMA and the home owners.</i>
Responsible party	<i>administration</i>
Potential funding sources	<i>FEMA, Private Property owners</i>
Time line	<i>Pending funding</i>
<b>Reporting on Progress</b>	
Action progress status	<i>New action</i>

<b>Action Worksheet</b>	
Your plan name	<i>Atlantic County Multi-jurisdictional Hazard Mitigation Plan</i>
Your community name	<i>City Of Brigantine</i>
Community action number	<i>11</i>
<b>Assessing the Risk</b>	
Hazard(s) addressed	<i>All</i>
Risk finding	<i>Localized Flooding</i>
<b>Describing the Action</b>	
Action category	<i>Human Life and structure and Infrastructure</i>
Action type	<i>preservation of public health and safety, structures and natural resources</i>
Action description	<i>Support floodproofing for commercial buildings in the Business District</i>
Existing, future &/or NA	<i>Future</i>
<b>Evaluating the Action</b>	
Losses avoided (i.e., benefits)	<i>Damage to buildings and infrastructure would be avoided.</i>
Cost estimate	<i>Approximately \$100,000 per building, all cost are paid by FEMA and the property owner, no cost to the City.</i>
Cost effectiveness (i.e., benefit/cost)	<i>Project is cost effective compared to overall health and safety to citizens and emergency workers.</i>
Technical	<i>Technically feasible as long as the FEMA funding is available and the property owner pays all matching costs.</i>
Political	<i>public support and council support</i>
Legal	<i>City has authority</i>
Environmental	<i>yes, all are environment actions are positive. Mitigation to storm events</i>
Social	<i>none</i>
Administrative capability	<i>Program is managed by outside consultants and paid for by FEMA and the home owners.</i>
Local champion	<i>City Council</i>
Other community objectives	<i>Serve as an environmental benefit.</i>
<b>Implementing the Action</b>	
Priority	<i>High</i>
Local planning mechanism	<i>Program is managed by consultants and paid for by FEMA and property owners.</i>
Responsible party	<i>administration</i>
Potential funding sources	<i>FEMA, Private Property owners</i>
Time line	<i>Pending funding</i>
<b>Reporting on Progress</b>	
Action progress status	<i>New action</i>

<b>Action Worksheet</b>	
Your plan name	<i>Atlantic County Multi-jurisdictional Hazard Mitigation Plan</i>
Your community name	<i>City Of Brigantine</i>
Community action number	<i>12</i>
<b>Assessing the Risk</b>	
Hazard(s) addressed	<i>All</i>
Risk finding	<i>Stormwater system clogging</i>
<b>Describing the Action</b>	
Action category	<i>Human Life and structure and Infrastructure</i>
Action type	<i>Preservation of public health and safety, structures and natural resources</i>
Action description	<i>Install and maintain inlet grate, debris collectors, and outlet structures.</i>
Existing, future &/or NA	<i>Existing &amp; Future</i>
<b>Evaluating the Action</b>	
Losses avoided (i.e., benefits)	<i>Damage to buildings and infrastructure would be avoided.</i>
Cost estimate	<i>Capital - NA, \$5,500/yr. for ongoing maintenance of system by DPW</i>
Cost effectiveness (i.e., benefit/cost)	<i>Project is cost effective compared to overall flood damage.</i>
Technical	<i>Yes.</i>
Political	<i>Public support and council support</i>
Legal	<i>City has authority</i>
Environmental	<i>yes, all are environment actions are positive. Mitigation to storm events</i>
Social	<i>none</i>
Administrative capability	<i>Program is managed by DPW and paid for by outside and City funds.</i>
Local champion	<i>City Council</i>
Other community objectives	<i>Serve as an environmental benefit.</i>
<b>Implementing the Action</b>	
Priority	<i>High</i>
Local planning mechanism	<i>Program is managed by consultants and paid for by FEMA and property owners.</i>
Responsible party	<i>administration</i>
Potential funding sources	<i>FEMA, NJDEP, NJIT, City Budget</i>
Time line	<i>Pending funding</i>
<b>Reporting on Progress</b>	
Action progress status	<i>New action</i>

<b>Action Worksheet</b>	
Your plan name	<i>Atlantic County Multi-jurisdictional Hazard Mitigation Plan</i>
Your community name	<i>City Of Brigantine</i>
Community action number	<i>13</i>
<b>Assessing the Risk</b>	
Hazard(s) addressed	<i>All</i>
Risk finding	<i>Localized Flooding</i>
<b>Describing the Action</b>	
Action category	<i>Human Life and structure and Infrastructure</i>
Action type	<i>Preservation of public health and safety, structures and natural resources</i>
Action description	<i>Install and maintain inlet grate, debris collectors, and outlet structures.</i>
Existing, future &/or NA	<i>Future</i>
<b>Evaluating the Action</b>	
Losses avoided (i.e., benefits)	<i>Damage to buildings and infrastructure would be avoided.</i>
Cost estimate	<i>Approximately \$500 per lf</i>
Cost effectiveness (i.e., benefit/cost)	<i>Project is cost effective compared to overall flood damage.</i>
Technical	<i>Yes</i>
Political	<i>public support and council support</i>
Legal	<i>City has authority</i>
Environmental	<i>yes, all are environment actions are positive. Mitigation to storm events</i>
Social	<i>none</i>
Administrative capability	<i>Program is managed by outside consultants and City Engineer.</i>
Local champion	<i>City Council</i>
Other community objectives	<i>Serve as an environmental benefit.</i>
<b>Implementing the Action</b>	
Priority	<i>High</i>
Local planning mechanism	<i>Program is managed by consultants and paid for by outside funding sources.</i>
Responsible party	<i>administration</i>
Potential funding sources	<i>FEMA, NJDEP, NJIT, City Budget</i>
Time line	<i>Pending funding</i>
<b>Reporting on Progress</b>	
Action progress status	<i>New action</i>

<b>Action Worksheet</b>	
Your plan name	<i>Atlantic County Multi-jurisdictional Hazard Mitigation Plan</i>
Your community name	<i>City Of Brigantine</i>
Community action number	<i>14</i>
<b>Assessing the Risk</b>	
Hazard(s) addressed	<i>All</i>
Risk finding	<i>Localized Flooding</i>
<b>Describing the Action</b>	
Action category	<i>Human Life and structure and Infrastructure</i>
Action type	<i>preservation of public health and safety, structures and natural resources</i>
Action description	<i>Maintain golf course drainage area</i>
Existing, future &/or NA	<i>Existing</i>
<b>Evaluating the Action</b>	
Losses avoided (i.e., benefits)	<i>Damage to buildings and infrastructure would be avoided.</i>
Cost estimate	<i>\$900,000</i>
Cost effectiveness (i.e., benefit/cost)	<i>Project is cost effective compared to overall flood damage.</i>
Technical	<i>Yes</i>
Political	<i>public support and council support</i>
Legal	<i>City has authority</i>
Environmental	<i>yes, all are environment actions are positive. Mitigation to storm events</i>
Social	<i>none</i>
Administrative capability	<i>Program is managed by outside consultants and City Engineer</i>
Local champion	<i>City Council</i>
Other community objectives	<i>Serve as an environmental benefit.</i>
<b>Implementing the Action</b>	
Priority	<i>High</i>
Local planning mechanism	<i>Program is managed by consultants and paid for by outside funding sources.</i>
Responsible party	<i>administration</i>
Potential funding sources	<i>FEMA, NJDEP, NJIT, City Budget</i>
Time line	<i>Pending funding</i>
<b>Reporting on Progress</b>	
Action progress status	<i>New action</i>

<b>Action Worksheet</b>	
Your plan name	<i>Atlantic County Multi-jurisdictional Hazard Mitigation Plan</i>
Your community name	<i>City Of Brigantine</i>
Community action number	15
<b>Assessing the Risk</b>	
Hazard(s) addressed	<i>All</i>
Risk finding	<i>Localized Flooding</i>
<b>Describing the Action</b>	
Action category	<i>Human Life and structure and Infrastructure</i>
Action type	<i>preservation of public health and safety, structures and natural resources</i>
Action description	<i>Install City wide warning system and implement IPAWS notifications using cell towers.</i>
Existing, future &/or NA	<i>Future</i>
<b>Evaluating the Action</b>	
Losses avoided (i.e., benefits)	<i>Damage to buildings and infrastructure would be avoided.</i>
Cost estimate	<i>\$40,000</i>
Cost effectiveness (i.e., benefit/cost)	<i>Project is cost effective compared to overall flood damage.</i>
Technical	<i>Yes</i>
Political	<i>public support and council support</i>
Legal	<i>City has authority</i>
Environmental	<i>yes, all are environment actions are positive. Mitigation to storm events</i>
Social	<i>none</i>
Administrative capability	<i>Program is managed by outside consultants and City Engineer</i>
Local champion	<i>City Council</i>
Other community objectives	<i>Serve as an environmental benefit.</i>
<b>Implementing the Action</b>	
Priority	<i>High</i>
Local planning mechanism	<i>Program is managed by consultants and paid for by outside funding sources.</i>
Responsible party	<i>administration</i>
Potential funding sources	<i>FEMA, NJDEP, NJIT, City Budget, Nature Conservancy</i>
Time line	<i>Pending funding</i>
<b>Reporting on Progress</b>	
Action progress status	<i>New action</i>

<b>Action Worksheet</b>	
Your plan name	<i>Atlantic County Multi-jurisdictional Hazard Mitigation Plan</i>
Your community name	<i>City Of Brigantine</i>
Community action number	<i>16</i>
<b>Assessing the Risk</b>	
Hazard(s) addressed	<i>All</i>
Risk finding	<i>Localized Flooding</i>
<b>Describing the Action</b>	
Action category	<i>Human Life and structure and Infrastructure</i>
Action type	<i>preservation of public health and safety, structures and natural resources</i>
Action description	<i>Elevate evacuation routes</i>
Existing, future &/or NA	<i>Future</i>
<b>Evaluating the Action</b>	
Losses avoided (i.e., benefits)	<i>Damage to buildings and infrastructure would be avoided.</i>
Cost estimate	<i>NA</i>
Cost effectiveness (i.e., benefit/cost)	<i>Project is cost effective compared to overall flood damage.</i>
Technical	<i>Yes</i>
Political	<i>public support and council support</i>
Legal	<i>City has authority</i>
Environmental	<i>yes, all are environment actions are positive. Mitigation to storm events</i>
Social	<i>none</i>
Administrative capability	<i>Program is managed by outside consultants and City Engineer</i>
Local champion	<i>City Council</i>
Other community objectives	<i>Serve as an environmental benefit.</i>
<b>Implementing the Action</b>	
Priority	<i>High</i>
Local planning mechanism	<i>Program is managed by consultants and paid for by outside funding sources.</i>
Responsible party	<i>administration</i>
Potential funding sources	<i>FEMA, NJDEP, NJIT, City Budget, Atlantic County</i>
Time line	<i>Pending funding</i>
<b>Reporting on Progress</b>	
Action progress status	<i>New action</i>

<b>Action Worksheet</b>	
Your plan name	<i>Atlantic County Multi-jurisdictional Hazard Mitigation Plan</i>
Your community name	<i>City Of Brigantine</i>
Community action number	<i>17</i>
<b>Assessing the Risk</b>	
Hazard(s) addressed	<i>All</i>
Risk finding	<i>Localized Flooding</i>
<b>Describing the Action</b>	
Action category	<i>Human Life and structure and Infrastructure</i>
Action type	<i>preservation of public health and safety, structures and natural resources</i>
Action description	<i>Elevate selected roads with drainage improvements - Brigantine Boulevard by Edgewater; Harbor Beach Boulevard; Sarazen Boulevard; Evans Boulevard; Lafayette Boulevard</i>
Existing, future &/or NA	<i>Future</i>
<b>Evaluating the Action</b>	
Losses avoided (i.e., benefits)	<i>Damage to buildings and infrastructure would be avoided.</i>
Cost estimate	<i>NA</i>
Cost effectiveness (i.e., benefit/cost)	<i>Project is cost effective compared to overall flood damage.</i>
Technical	<i>Yes</i>
Political	<i>public support and council support</i>
Legal	<i>City has authority</i>
Environmental	<i>yes, all are environment actions are positive. Mitigation to storm events</i>
Social	<i>none</i>
Administrative capability	<i>Program is managed by outside consultants and City Engineer</i>
Local champion	<i>City Council</i>
Other community objectives	<i>Serve as an environmental benefit.</i>
<b>Implementing the Action</b>	
Priority	<i>High</i>
Local planning mechanism	<i>Program is managed by consultants and paid for by outside funding sources.</i>
Responsible party	<i>administration</i>
Potential funding sources	<i>FEMA, NJDEP, NJIT, County</i>
Time line	<i>Pending funding</i>
<b>Reporting on Progress</b>	
Action progress status	<i>New action</i>

<b>Action Worksheet</b>	
Your plan name	<i>Atlantic County Multi-jurisdictional Hazard Mitigation Plan</i>
Your community name	<i>City Of Brigantine</i>
Community action number	<i>18</i>
<b>Assessing the Risk</b>	
Hazard(s) addressed	<i>All</i>
Risk finding	<i>Localized Flooding</i>
<b>Describing the Action</b>	
Action category	<i>Human Life and structure and Infrastructure</i>
Action type	<i>preservation of public health and safety, structures and natural resources</i>
Action description	<i>Extend North End Seawall by 275 feet northward and to Baysidel Create vehicle crossover; implement beachfill from 15th Street North to 4 WD entrance.</i>
Existing, future &/or NA	<i>Future</i>
<b>Evaluating the Action</b>	
Losses avoided (i.e., benefits)	<i>Damage to buildings and infrastructure would be avoided.</i>
Cost estimate	<i>\$1,200,000</i>
Cost effectiveness (i.e., benefit/cost)	<i>Project is cost effective compared to overall flood damage.</i>
Technical	<i>Yes</i>
Political	<i>public support and council support</i>
Legal	<i>City has authority</i>
Environmental	<i>yes, all are environment actions are positive. Mitigation to storm events</i>
Social	<i>none</i>
Administrative capability	<i>Program is managed by outside consultants and City Engineer</i>
Local champion	<i>City Council</i>
Other community objectives	<i>Serve as an environmental benefit.</i>
<b>Implementing the Action</b>	
Priority	<i>High</i>
Local planning mechanism	<i>Program is managed by consultants and paid for by outside funding sources.</i>
Responsible party	<i>administration</i>
Potential funding sources	<i>Army Corps, FEMA, NJDEP</i>
Time line	<i>Pending funding</i>
<b>Reporting on Progress</b>	
Action progress status	<i>New action</i>

<b>Action Worksheet</b>	
Your plan name	<i>Atlantic County Multi-jurisdictional Hazard Mitigation Plan</i>
Your community name	<i>City Of Brigantine</i>
Community action number	<i>19</i>
<b>Assessing the Risk</b>	
Hazard(s) addressed	<i>All</i>
Risk finding	<i>Localized Flooding</i>
<b>Describing the Action</b>	
Action category	<i>Human Life and structure and Infrastructure</i>
Action type	<i>preservation of public health and safety, structures and natural resources</i>
Action description	<i>Continue back passing operation for beach replenishment - North End</i>
Existing, future &/or NA	<i>Existing</i>
<b>Evaluating the Action</b>	
Losses avoided (i.e., benefits)	<i>Damage to buildings and infrastructure would be avoided.</i>
Cost estimate	<i>\$100,000/yr.</i>
Cost effectiveness (i.e., benefit/cost)	<i>Project is cost effective compared to overall flood damage.</i>
Technical	<i>Yes</i>
Political	<i>public support and council support</i>
Legal	<i>City has authority</i>
Environmental	<i>yes, all are environment actions are positive. Mitigation to storm events</i>
Social	<i>none</i>
Administrative capability	<i>Program is managed by outside consultants and City Engineer</i>
Local champion	<i>City Council</i>
Other community objectives	<i>Serve as an environmental benefit.</i>
<b>Implementing the Action</b>	
Priority	<i>High</i>
Local planning mechanism	<i>Program is managed by consultants and paid for by outside funding sources.</i>
Responsible party	<i>administration</i>
Potential funding sources	<i>Army Corps, FEMA, NJDEP</i>
Time line	<i>Pending funding</i>
<b>Reporting on Progress</b>	
Action progress status	<i>New action</i>

<b>Action Worksheet</b>	
Your plan name	<i>Atlantic County Multi-jurisdictional Hazard Mitigation Plan</i>
Your community name	<i>City Of Brigantine</i>
Community action number	<i>20</i>
<b>Assessing the Risk</b>	
Hazard(s) addressed	<i>All</i>
Risk finding	<i>Localized Flooding</i>
<b>Describing the Action</b>	
Action category	<i>Human Life and structure and Infrastructure</i>
Action type	<i>preservation of public health and safety, structures and natural resources</i>
Action description	<i>Complete drainage improvements and inlet installation (for example 32nd - 40th Street South).</i>
Existing, future &/or NA	<i>Future</i>
<b>Evaluating the Action</b>	
Losses avoided (i.e., benefits)	<i>Damage to buildings and infrastructure would be avoided.</i>
Cost estimate	<i>\$300,000</i>
Cost effectiveness (i.e., benefit/cost)	<i>Project is cost effective compared to overall flood damage.</i>
Technical	<i>Yes</i>
Political	<i>public support and council support</i>
Legal	<i>City has authority</i>
Environmental	<i>yes, all are environment actions are positive. Mitigation to storm events</i>
Social	<i>none</i>
Administrative capability	<i>Program is managed by outside consultants and City Engineer</i>
Local champion	<i>City Council</i>
Other community objectives	<i>Serve as an environmental benefit.</i>
<b>Implementing the Action</b>	
Priority	<i>High</i>
Local planning mechanism	<i>Program is managed by consultants and paid for by outside funding sources.</i>
Responsible party	<i>administration</i>
Potential funding sources	<i>FEMA, NJDEP, NJIT, City Budget</i>
Time line	<i>Pending funding</i>
<b>Reporting on Progress</b>	
Action progress status	<i>New action</i>

<b>Action Worksheet</b>	
Your plan name	<i>Atlantic County Multi-jurisdictional Hazard Mitigation Plan</i>
Your community name	<i>City Of Brigantine</i>
Community action number	<i>21</i>
<b>Assessing the Risk</b>	
Hazard(s) addressed	<i>All</i>
Risk finding	<i>Localized Flooding</i>
<b>Describing the Action</b>	
Action category	<i>Human Life and structure and Infrastructure</i>
Action type	<i>preservation of public health and safety, structures and natural resources</i>
Action description	<i>Install flood wall at City dock (2519-2601 Bayshore Avenue)</i>
Existing, future &/or NA	<i>Future</i>
<b>Evaluating the Action</b>	
Losses avoided (i.e., benefits)	<i>Damage to buildings and infrastructure would be avoided.</i>
Cost estimate	<i>\$200,000</i>
Cost effectiveness (i.e., benefit/cost)	<i>Project is cost effective compared to overall flood damage.</i>
Technical	<i>Yes</i>
Political	<i>public support and council support</i>
Legal	<i>City has authority</i>
Environmental	<i>yes, all are environment actions are positive. Mitigation to storm events</i>
Social	<i>none</i>
Administrative capability	<i>Program is managed by outside consultants and City Engineer</i>
Local champion	<i>City Council</i>
Other community objectives	<i>Serve as an environmental benefit.</i>
<b>Implementing the Action</b>	
Priority	<i>High</i>
Local planning mechanism	<i>Program is managed by consultants and paid for by outside funding sources.</i>
Responsible party	<i>administration</i>
Potential funding sources	<i>FEMA, NJDEP, NJIT, City Budget</i>
Time line	<i>Pending funding</i>
<b>Reporting on Progress</b>	
Action progress status	<i>New action</i>

<b>Action Worksheet</b>	
Your plan name	<i>Atlantic County Multi-jurisdictional Hazard Mitigation Plan</i>
Your community name	<i>City Of Brigantine</i>
Community action number	22
<b>Assessing the Risk</b>	
Hazard(s) addressed	<i>All</i>
Risk finding	<i>Localized Flooding</i>
<b>Describing the Action</b>	
Action category	<i>Human Life and structure and Infrastructure</i>
Action type	<i>preservation of public health and safety, structures and natural resources</i>
Action description	<i>Road Elevation/Berm Transformation - identify and construct streets that can also function as berms or floodwalls.</i>
Existing, future &/or NA	<i>Future</i>
<b>Evaluating the Action</b>	
Losses avoided (i.e., benefits)	<i>Damage to buildings and infrastructure would be avoided.</i>
Cost estimate	<i>NA</i>
Cost effectiveness (i.e., benefit/cost)	<i>Project is cost effective compared to overall flood damage.</i>
Technical	<i>Yes</i>
Political	<i>public support and council support</i>
Legal	<i>City has authority</i>
Environmental	<i>yes, all are environment actions are positive. Mitigation to storm events</i>
Social	<i>none</i>
Administrative capability	<i>Program is managed by outside consultants and City Engineer</i>
Local champion	<i>City Council</i>
Other community objectives	<i>Serve as an environmental benefit.</i>
<b>Implementing the Action</b>	
Priority	<i>High</i>
Local planning mechanism	<i>Program is managed by consultants and paid for by outside funding sources.</i>
Responsible party	<i>administration</i>
Potential funding sources	<i>FEMA, NJDEP, NJIT, NJDOT, City Budget</i>
Time line	<i>Pending funding</i>
<b>Reporting on Progress</b>	
Action progress status	<i>New Action</i>

<b>Action Worksheet</b>	
Your plan name	<i>Atlantic County Multi-jurisdictional Hazard Mitigation Plan</i>
Your community name	<i>City Of Brigantine</i>
Community action number	23
<b>Assessing the Risk</b>	
Hazard(s) addressed	<i>All</i>
Risk finding	<i>Localized Flooding</i>
<b>Describing the Action</b>	
Action category	<i>Human Life and structure and Infrastructure</i>
Action type	<i>preservation of public health and safety, structures and natural resources</i>
Action description	<i>Require real estate disclosure of flood hazards</i>
Existing, future &/or NA	<i>Future</i>
<b>Evaluating the Action</b>	
Losses avoided (i.e., benefits)	<i>Damage to buildings and infrastructure would be avoided.</i>
Cost estimate	<i>NA</i>
Cost effectiveness (i.e., benefit/cost)	<i>Project is cost effective compared to overall flood damage.</i>
Technical	<i>Yes</i>
Political	<i>public support and council support</i>
Legal	<i>City has authority</i>
Environmental	<i>yes, all are environment actions are positive. Mitigation to storm events</i>
Social	<i>none</i>
Administrative capability	<i>Program is managed by outside consultants and City Engineer</i>
Local champion	<i>City Council</i>
Other community objectives	<i>Serve as an environmental benefit.</i>
<b>Implementing the Action</b>	
Priority	<i>High</i>
Local planning mechanism	<i>Building Department</i>
Responsible party	<i>administration</i>
Potential funding sources	<i>City Budget</i>
Time line	<i>Pending funding</i>
<b>Reporting on Progress</b>	
Action progress status	<i>New action</i>

<b>Action Worksheet</b>	
Your plan name	<i>Atlantic County Multi-jurisdictional Hazard Mitigation Plan</i>
Your community name	<i>City Of Brigantine</i>
Community action number	<i>24</i>
<b>Assessing the Risk</b>	
Hazard(s) addressed	<i>All</i>
Risk finding	<i>Localized Flooding</i>
<b>Describing the Action</b>	
Action category	<i>Planning Mechanism</i>
Action type	<i>preservation of public health and safety, structures and natural resources</i>
Action description	<i>Integrated flood hazard/sea level mapping</i>
Existing, future &/or NA	<i>Future</i>
<b>Evaluating the Action</b>	
Losses avoided (i.e., benefits)	<i>Damage to buildings and infrastructure would be avoided.</i>
Cost estimate	<i>\$10,000</i>
Cost effectiveness (i.e., benefit/cost)	<i>Project is cost effective compared to overall flood damage.</i>
Technical	<i>Yes</i>
Political	<i>public support and council support</i>
Legal	<i>City has authority</i>
Environmental	<i>yes, all are environment actions are positive. Mitigation to storm events</i>
Social	<i>none</i>
Administrative capability	<i>Program is managed by outside consultants and City Engineer</i>
Local champion	<i>City Council</i>
Other community objectives	<i>Serve as an environmental benefit.</i>
<b>Implementing the Action</b>	
Priority	<i>High</i>
Local planning mechanism	<i>Managed by City Engineer</i>
Responsible party	<i>administration</i>
Potential funding sources	<i>FEMA, NJDEP, NJIT, City Budget</i>
Time line	<i>Pending funding</i>
<b>Reporting on Progress</b>	
Action progress status	<i>New action</i>