

# **TOWNSHIP OF BRICK FLOODPLAIN MANAGEMENT PLAN ANNUAL PROGRESS REPORT**

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September 22, 2020

*Prepared for:*  
Township of Brick, New Jersey



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# TOWNSHIP OF BRICK FLOODPLAIN MANAGEMENT PLAN

## ANNUAL PROGRESS REPORT

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### BACKGROUND

The Township of Brick developed a floodplain management plan to enhance floodplain management and mitigate flood impacts in the community by identifying resources, information, and strategies for flood risk reduction. To prepare the plan, the Township of Brick organized resources, assessed risks from flooding, developed planning goals and objectives, reviewed mitigation alternatives, and developed an action plan to address probable impacts from floods. The plan can be viewed on-line at:

<http://bricktownship.net/index.php/floodplain-maps-information/floodplain-management-plan/>

The Floodplain Management Plan was prepared in accordance with the National Flood Insurance Program (NFIP) Community Rating System (CRS) floodplain management planning requirements. As part of the plan development process and as required by CRS, the Township of Brick developed a plan maintenance procedure that describes how the plan will be monitored, evaluated, and updated.

The Township is a member of the CRS program with a Class 6 rating. CRS is a voluntary program that encourages floodplain management activities that exceed the minimum requirements of the NFIP in exchange for flood insurance premium discounts for policy holders within the participating communities. The Township's Class 6 rating means that flood insurance policy holders within special flood hazard areas receive a 20 percent discount on premiums.

### Purpose

The purpose of this report is to provide an update on the implementation of the mitigation initiatives identified in the Floodplain Management Plan. The objective is to ensure that there is a continuing planning process that will keep the Floodplain Management Plan dynamic and responsive to the needs and capabilities of the Township of Brick and stakeholders and to meet a portion of the annual certification requirements for CRS. This report includes the following:

- Summary of any flood hazard events that occurred during the reporting period and the impact these events had on the planning area
- Changes in risk exposure in the planning area
- Review of mitigation success stories
- Review of continuing public involvement
- Brief discussion about why targeted strategies were not completed
- Re-evaluation of the action plan to determine if the timeline for identified projects needs to be amended (such as changing a long-term project to a short-term one because of new funding)
- Recommendations for new projects
- Changes in or potential for new funding options (grant opportunities)
- Impact of any other planning programs or initiatives that involve flood-related hazard mitigation.

### Reporting Period

The reporting period for this progress report is August 2019 through August 2020.



## Planning Committee

It was determined that a Planning Committee, similar to the stakeholder committee that oversaw the plan development, should remain intact through the plan implementation period. The minimum task of the Planning Committee is the evaluation of the progress of the action plan. The membership of the Planning Committee is expected to change overtime and such changes in membership are to be documented in the progress report. For this reporting period, the Planning Committee membership is as indicated in Table 1.

**Table 1. Flood Management Planning Committee**

	Member	Title	Representing	Committee Title	Gov't	Non-Gov't Stakeholder	Non-voting
	John G. Ducey	Mayor	Township of Brick	Ex-Officio Member	-	-	x
	Arthur Halloran	Councilman	Township of Brick	Council Rep. /Barrier Island Resident			x
	Joanne Bergin	Business Administrator	Township of Brick		-	-	x
1	Tara Paxton, AICP	Brick Township Planning	Township of Brick AICP/PP Planner	Chair/Resident	x		
2	Elissa Commins (Alternate- Kurt Otto)	Brick Township Engineer	Township of Brick	Deputy Chair/ Floodplain Administrator	x		
3	Keith Rella	Brick Township Administration	Township of Brick	Environmental Commission/ Green Team	x		
4	Ken Mathis	Brick - DPW Director	Public Works Director/ Resident	Resident	x		
5	Ron Gaskill	Brick Township OEM Coordinator	Brick Township	Office of Emergency Management	x		
6	Dan Newman (Alternate - Ken Kiseli)	Brick - Construction Code Official	Township of Brick/ Resident	Resident	x		
7	Paul Mummolo	Councilman	Township of Brick	Planning Board Representative/ Resident	x		
8	Vanessa Dornisch	JCNRR	Stakeholder/ Academia	Non govt stakeholder		x	
9	L. Stanton Hales, Jr.	Barneget Bay Partnership	Stakeholder/ Watershed Committee	Non-govt stakeholder		x	
10	Rob Karl (Alternate - Steve Specht) (Alternate - Steven Specht)	Brick Township MUA	Brick MUA	Stakeholder		x	



	Member	Title	Representing	Committee Title	Gov't	Non-Gov't Stakeholder	Non-voting
11	Donald Ling	Brick Township Police	Brick Township	Police	x		
12	Thomas Kaczmarek	Public	Resident	Resident		x	
13	Ron Jampel	Public	Resident	Resident		x	
14	H.L Van Varick	Public	Resident	Resident		x	
15	Brian Martin	Public	Resident	Resident		x	
16	Emil Ranaudo	Public	Resident	Resident		x	
17	Chief James Riccio	Brick Township Police	Brick Township	Police	x		
18	Ed Peters	Brick Township GIS	Brick Township	GIS	x		

## Progress Report Approval

The Floodplain Management Planning Committee met on May 28, 2020 and discussed past flooding events, changes in risk exposure, and flood mitigation success stories during the reporting period.

Progress on actions were reported by each department at the end of the reporting period. The final report was reviewed and approved at its semi-annual meeting held on August 27, 2020.

## SUMMARY OVERVIEW OF THE PLAN'S PROGRESS

The performance period for the Floodplain Management Plan became effective on August 9, 2016, with adoption by the Township Council. The Plan had been previously adopted by the Planning Board on March 30, 2016. The initial performance period for this plan will be five years, with an anticipated update to the plan to occur before October 1, 2021. As of this reporting period, the performance progress for this plan is considered to be 58% complete, although some completed actions are ongoing capabilities which need to be revisited each reporting period. At the inception of this reporting period the Floodplain Management Plan identified 140 flood hazard mitigation initiatives. As of this reporting period, the overall progress is summarized below.

- 22 out of 140 initiatives (16%) reported in progress action toward completion during the reporting period.
- 8 out of 140 initiatives (6%) reported no action taken during the reporting period.
- 81 out of 140 initiatives (58%) were completed, either during the reporting period or in previous years.
- Of the 81 completed initiatives, 56 initiatives (40% of the total) were indicated as complete but part of ongoing programs. As these initiatives need to be replicated each year to be considered ongoing, their progress is reported for each individual reporting period.
- 29 out of 140 initiatives (21%) were removed since the inception of the plan due to elimination of a program.
- 13 out of 140 initiatives (9%) were added since the inception of the plan.



## FLOOD EVENTS WITHIN THE PLANNING AREA

During the reporting period, there was one flood event in the planning area that had a measurable impact on people or property reported in the NOAA NCEI database. A summary of these events is as follows:

- **October 10-11, 2019 (Coastal Flood)** - Slow moving low pressure centered well off the coasts of New Jersey and Delaware produced coastal flooding during several consecutive high tide cycles from October 9 through October 12. Moderate coastal flooding occurred with the evening high tide on the 10th, and with the morning and evening high tides on the 11th. Numerous road closures occurred on October 10 with the tide gauge at Barnegat Light reached 4.71 feet MLLW, the tide gauge at Ship Bottom reached 4.21 feet MLLW, and the tide gauge at Tuckerton reached 6.15 feet MLLW. On October 11, the tide gauge at Mantoloking reached 2.84 feet MLLW, the tide gauge at Bayshore (Seaside Heights) reached 3.15 feet MLLW, the tide gauge at Barnegat Light reached 4.83 feet MLLW, the tide gauge at Ship Bottom reached 4.34 feet MLLW, and the tide gauge at Tuckerton reached 6.20 feet MLLW.

In addition to this event, a number of flood occurrences were collected in the Township's Flood Unit Report. This new Police led Unit began compiling flood related events in February 2020. The Planning Committee hopes to use this documentation to track the success of mitigation actions taken to reduce flooding by demonstrating a lower number of flooding events and lesser impacts over time as structural actions are implemented.:

- **February 7, 2020** - The following roadways were obstructed by flooding: Normandy Drive/Broad Avenue, 6<sup>th</sup> Avenue/Broad Avenue, Bay View Drive/Vanard Drive, Mandalay Road/Knoll Crest Avenue, Channel Drive/Woodland Drive, Vanard Drive/Waterway Court
- **March 8, 2020** - The following roadways were obstructed by flooding: Broad Avenue/Normandy Drive, Broad Avenue/Arrow Court, Broad Avenue/7<sup>th</sup> Avenue
- **April 4-5, 2020** - The following locations and roadways were obstructed by flooding: 525 Broad Avenue, Hamilton Drive/Knoll Crest Avenue, 136 Sunset Lane, 541 Broad Avenue
- **April 8-9, 2020** – The following locations and roadways were obstructed by flooding: 541 Broad Avenue, 124 Bayview Drive, 520 Broad Avenue, Vanard Drive/Shore Drive
- **April 13, 2020** - The following locations and roadways were obstructed by flooding: 541 Broad Avenue, Bay View Drive/Shore Pine Drive, Vanard Drive/Mathis Drive, Channel Drive/Woodland Drive, Bay Shore Drive/Knoll Crest Drive, 70 Vanard Drive, Seagoin Road/Port Road
- **April 21, 2020** – The following locations and roadways were obstructed by flooding: Bay View Drive/Shore Pine Drive, Mandalay Road/Knoll Crest Avenue
- **April 30, 2020** – The following locations and roadways were obstructed by flooding: 541 Broad Avenue, Bay Harbor Boulevard/Blue Cedar Drive
- **June 5, 2020** – The following locations and roadways were obstructed by flooding: 421 Mantoloking Road block, 227 Drum Point Road block, Princeton Avenue/Elizabeth Avenue, 574 Baxter Street, 294 Madison Court, 257 Drum Point Road block, Greenwood Loop Road/Connecting Road, Adamston Road/Allison Place
- **June 11, 2020** – The 525 Broad Avenue Block was obstructed by flooding
- **June 27, 2020** – The following locations and roadways were obstructed by flooding: Route 37/7<sup>th</sup> Avenue, 82 Seagoin Road, Knoll Crest Avenue/Hamilton Drive, Mandalay Road/Shore Acres Plaza
- **June 28, 2020** – Broad Avenue/7<sup>th</sup> Avenue was obstructed by flooding
- **July 11, 2020** – Broad Avenue/Arrow Court was obstructed by flooding
- **August 4, 2020** – The following locations and roadways were obstructed by flooding: 7<sup>th</sup> Avenue/Broad Avenue, Bay View Drive/Vanard block, Saint Lawrence Boulevard/Cadiz Drive



In addition to these events, a number of other flood occurrences were noted by the Planning Committee:

- At the Barnegat Bay at Mantaloking USGS tide gauge, there have been 3 flood events have occurred that reached the moderate flooding threshold since August 1, 2019.
- Intrusion from saltwater regularly corrodes Township infrastructure.
- A number of areas in the Township continue to regularly experience nuisance flooding, including Shore Acres, Cherry Quay, Normandy Beach, Beaver Dam Creek Islands and Seawood Harbor.

## CHANGES IN RISK EXPOSURE IN THE PLANNING AREA

The following changes in the Township were noted by the Planning Committee as being relevant to flood risk exposure in the planning area:

- Outfalls in the Township continue to back up at high tide and during storms. Winds continue to push up the Bay exacerbating these issues in fall, winter and spring months. To combat this issue, as an ongoing action, check valves are installed as roads jobs are completed in tidal areas. During the plan performance period, two were installed on Broad Avenue in Normandy Beach, one on South Drive along the Metedeconk River, and one on Shore Drive in Shore Acres. Additionally, a valve was installed on Paul Jones Drive in Shore Acres, but it has been repeatedly knocked out. Additional installation of check valves are planned dependent on funding.
- The Normandy Beach redevelopment on the barrier island is in progress. The redevelopment will result in 21 houses on a lot that was formerly a church. The redevelopment is inside the SFHA but will be constructed in accordance with the Township's flood damage prevention regulations. It is anticipated that the redevelopment will result in a reduction of impervious surface area on the lot.
  - Of the planned 21 homes, 5 have received a Certificate of Occupancy, 6 are under construction, 7 have not yet applied for a permit, and 3 have applied for a permit and applications are being review.
- Beach replenishment on Barnegat Bay Island is complete. The replenishment has resulted in wider beaches and the re-establishment of the dune system lost in Superstorm Sandy. This reduces risk of coastal flooding inputs from overwash.
- Committee members noted that impervious surface and development upstream of Brick is continuing which could exacerbate flooding.
- Township professionals have continued working with property owners to ensure that compliant structures replace those that were destroyed or damaged by Sandy.

## FLOOD MITIGATION SUCCESS STORIES

The Planning Committee would like to highlight the following flood mitigation success stories that occurred during the reporting period:

- ACT Engineering has studied 12 areas that flood regularly within the Township, to determine possible flooding solutions. Areas were selected based on elevation. The study found that backflow prevention valves or roadway elevation is the most cost-effective mitigation action the Township can take in most areas.
  - The projects are focused in the Normandy Beach and Shore Acres area.
- The Township has \$200,000 available to install check valves to prevent backflow using capital funding.
  - 17 locations have been identified with an estimated cost of \$137,000. The balance of funds would be used to address additional locations that are identified.
- The Township is exploring applying for a New Jersey municipal aid grant to raise the roadway at Broad Avenue in Normandy Beach and enter a shared service agreement with Toms River as the



roadway crosses through both municipalities. Both Townships are collaborating on the application. If awarded, Toms River will take the lead on the project.

- At the request of residents, the Township underwent a stormwater outfall plugging exercise in Normandy to determine if stormwater pipes are watertight or are being infiltrated by groundwater. The exercise determined that the pipes are fairly watertight. These two locations were reconstructed in the past 15 years. Other locations may not have the same performance due to their age.
- 400 feet of roadway has been raised at the intersection of Matthis Drive and Shore Drive in the Shore Acres section of the Township.
- Normandy Beach was included in the 2020 CDBG action plan for stormwater upgrades.
- The Ocean County Hazard Mitigation Plan has been updated and adopted, including the identified Brick Township mitigation actions as well as flood related hazards information included in the Township Floodplain Management Plan.
- The Barnegat Bay Partnership Comprehensive Conservation and Management Plan was completed and submitted to EPA for approval.
- Home elevations continue in the Township. The Township has instituted a new policy for the review of elevation certificates to meet and exceed CRS standards. Numerous staff now review elevation certificates multiple times to catch any possible errors.
- Brick Township's Office of Emergency Management has developed a Preparedness Guide which will be distributed at Township schools covering numerous hazardous events, including flooding.
- The Township is currently preparing an update to the Natural Resource Inventory that includes the Natural Beneficial Functions Element in addition to the Open Space & Recreation Plan, etc. Anticipated completion of the document and adoption is scheduled for early 2021. This action could be creditable under the CRS program.
- The Township of Brick has voluntarily entered into the Plan Endorsement Process with the State of New Jersey to renew the CAFRA Coastal Brick Town Center designation and is developing the Resiliency Policy as part of this process.
- The Township has developed estimated costs to install lift stations in Normandy Beach and Shore Acres as a potential long-term goal. The cost is estimated at \$37 million prior to the necessary costs for individual homeowners to elevate their bulkheads and property. The Township continues to explore potential mitigation alternatives to reduce flooding and flooding impacts in this area of the Township.

## CONTINUING PUBLIC INVOLVEMENT

The Planning Committee progress report meetings during this reporting period were open to the public, but no other meetings specific to floodplain management were held specifically on the Floodplain Management Plan; however, the Township conducted a number of outreach activities related to CRS participation and flood education and awareness including the annual flood meeting held in August and keeping flood outreach information available at various locations such as the Brick Library, Senior Center, Recreation Center, Municipal Complex, and various summer events. In addition, the Township continued to provide outreach materials that cover the Six Topics for CRS Flood Information to residents at the Brick Township Farmers Market each Saturday in the Spring and Summer months.

A Flood Information Session called “Know Your Flood Hazard and What You Can Do About it” was held on August 18th via ZOOM which featured a presentation called “Getting to Resilience: Flood Risk and Solutions” by The Jacques Cousteau National Estuarine Research Reserve (JC NERR). Planning Committee member Vanessa Dornisch from JC NERR discussed floodplain management and potential engineering and land use solutions that other coastal communities have used for successful floodplain management. The meeting also included an informational session by the Township staff on how to request and find information relative to flood risks, information and more.



Three public Zoom meetings also took place through ACT Engineering's efforts to study four floodprone areas of the Township and develop potential mitigation actions.

The Planning Committee discussed inviting flood mitigation experts and state representatives to future meetings to keep them apprised of the work of the committee and ask for support where appropriate. This had been a topic of discussion in 2019 but limitations put in place by the coronavirus pandemic made this less feasible. The Committee plans to make this a goal for meetings in 2021. The committee also discussed committee members attending meetings of groups that address flooding issues such as the NJ Coastal Coalition. Planning Committee members had begun to attend meetings for the Ocean County CRS User Group prior to the start of the coronavirus pandemic.

## REVIEW OF THE ACTION PLAN

Table 2 reviews the action plan, reporting the status of each initiative. Readers of this report should refer to the Floodplain Management Plan for more detailed descriptions of each initiative and the prioritization process.



**Table 2. Action Plan Matrix**

Lead Agency	Timeline	Priority	Comment (Describe progress or changed priority)	Status
Initiative BK-001—Generators at the high schools were determined to not be a priority for the municipality. A scope change was approved to install generators at the municipal building to power the police department for essential services and the department of public works.				
BT Police	Short Term (<5yrs.)	High	The purchase and installation of a generator for the municipal building is still being discussed and planned. A generator is being installed at the Department of Public Works, as that site is the command center for all weather-related events. The site has a fully staffed Call Center and the necessary technology infrastructure for essential communications. The purchase and installation of a generator at this site was our primary goal.	In Progress
Initiative BK-002—Priority focus on permanent generator installation is for the Municipal Complex, Department of Public Work and the Police Sub-Station/ Pioneer Hose Fire Company Barrier Island Forward Command Post				
BT Engineering	Short Term (<5yrs.)	High	This initiative is redundant with other initiatives. Installation of generator at Municipal Complex is addressed in BK-001 and Department of Public Works will be added to the list of locations needing generators. The Police Sub-Station/ Pioneer Hose Fire Company Barrier Island Forward Command Post has had a generator installed as addressed in BK-052.	Discontinued in 2017
Initiative BK-003—Develop an alternate fuel supply for the emergency generators at the William Miller Water Treatment Plant				
BT MUA	Short Term (<5yrs.)	High	BTMUA staff assessed the issue and determined that it was preferable to continue with diesel fuel based on specifications of generators. Three generators were installed (with one for redundancy) and storage for fuel for 72 hours was included in project design in 2/2017.	Completed in 2019
Initiative BK-004—Upgrade sewer system generators				
BT MUA	Short Term (<5yrs.)	High	Natural gas generators will be installed for the Laurel Brook, Green Briar II and Burnt Tavern Manor WWPS with funding from the New Jersey Infrastructure Bank (NJIB).	In Progress
Initiative BK-005—Upgrade generators at five of the transition centers, including: Brick Township High School, Ocean County Vocational-Technical School, Emma Havens Young School, and Veterans Memorial Middle School				
BT Board of Education	Short Term (<5yrs.)	Medium	Discontinued in 2019. Generators no longer planned for transition centers.	Discontinued in 2019



Initiative BK-006—Elevate electrical equipment, controls, instrumentation and emergency generators in all municipal facilities above the base flood elevation to continue critical community services during utility interruptions and storm events

BT Engineering	Short Term (<5 yrs.)	High	Final generator being elevated at Traders Cove.	In Progress
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Initiative BK-007—Develop a FEMA 361 Shelter for New Police Department Station

BT OEM	Short Term (<5yrs.)	Medium	Architectural planning is taking place for a FEMA 361 shelter in the construction of the barrier island police, fire and EMS station.	In Progress
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Initiative BK-008—Enhance emergency evacuation route signage, especially in Cherry Quay. However, all routes will be reviewed.

BT OEM	Short Term (<5yrs.)	Medium	Evacuation route signage has been installed and routes have been reviewed.	Completed in 2019
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Initiative BK-009—Elevate evacuation routes, including South Drive in Princeton Midstreams, Snake Road, and the Shore Acres Neighborhood. The elevation would be for approximately 400 feet of South Drive and would eliminate a local low point that causes the repeated flooding of residential structures. This elevation would also provide overland flow relief and allow the road to drain via gravity.

BT Engineering	Short Term (<5yrs.)	High	Roadway Construction Complete	Completed in 2018
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Initiative BK-010—Improve drainage at six locations, including the installation of a floodgate at Brick Beach 3.

BT Engineering	Long Term (5+ yrs.)	Medium	USACE study has been cancelled. Floodgates at BB3 is not practical as a municipal project. Also, the other 5 areas are not specifically identified.	Discontinue
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Initiative BK-011—Maintain current drainage systems at appropriate care level to keep storm drains clear from debris to prevent flooding.

BT DPW	Ongoing	High	This initiative is an ongoing initiative that is considered complete for the reporting period. The DPW uses the Township jet/vac to maintain the approximately 8,600 storm drains in the Township. This is a day to day activity.	Complete
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Initiative BK-012—Increase conveyance through storm sewer and channels by dredging, culvert sizing, debris removal, de-snagging, and sewer flushing

BT DPW	Short Term (<5yrs.)	High	Many of these activities are being conducted as part of the maintenance care discussed in BK-011 and are, therefore, redundant. In addition, the issues associated with flooding and the conveyance system in the Township are a result of tidal flooding, not a result of inadequately sized culverts.	Discontinued in 2018
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Initiative BK-013—Clean all critical storm drains and keep drainage facilities free from debris - This action is duplicative with Action BK-011. We combined the action and will continue cleaning storm drains and reporting progress in Action BK-011.

BT DPW	Ongoing	High	This action is duplicative with Action BK-011. We combined the action and will continue cleaning storm drains and reporting progress in Action BK-011.	Discontinued in 2018
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Initiative BK-014—Improve/repair failing septic systems.

BT Code Enforcement	Short Term (<5yrs.)	Medium	Discontinued in 2018. Approximately 98% of the Township is on the public sewer system. The Township does not have jurisdiction over any septic tanks as they are regulated by the NJ State Department of Health.	Discontinued in 2018
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Initiative BK-015—Promote I&I protection of sewer systems

BT MUA	Ongoing	Medium	This initiative is an ongoing initiative that is considered complete for the reporting period. Sewer mains are continuously monitored using Closed Circuit Television Inspection and sewer replacement/rehabilitation contracts are administered accordingly. This work will continue to occur with regularity given the Township's high water table. The MUA has also purchased an additional truck to assist in I&I protection efforts.	Complete
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Initiative BK-016—Elevate the requirement from dry wells in tidal flood areas

BT Engineering	Short Term (<5yrs.)	Medium	As a result of a policy change, the Township is no longer requiring a dry well system in high water table, tidally influenced areas. No additional action needed.	Completed in 2017
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Initiative BK-017—Valve installation in areas identified completed

BT Engineering	Short Term (<5yrs.)	Medium	This initiative was reported as completed in 2018. However, additional work has been completed during the reporting period and additional work is being identified. Tideflex valves are installed as roads jobs are completed in tidal areas. Two were installed on Broad Ave, one on South Drive and one on Shore Drive in Shore Acres. Additionally, a valve was installed on Paul Jones drive, but it has been repeatedly knocked out. 17 locations have been identified with an estimated cost of \$137,000. Additional money would be used to address additional locations that are continually identified.	In Progress
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Initiative BK-018—Acquire a drainage easement of over 300 square feet of private property abutting Broad Avenue and South Harbor Lagoon to develop a low-lying runoff collection point, reconstruct the drainage system, and provide a tide check valve on the outfall pipe. This would allow the Broad Avenue pavement surface to be elevated to prevent flooding without causing flooding to adjacent properties.

BT Engineering	Long Term (5+yrs.)	High	This initiative was completed in Fall of 2016. An easement was not required as the Township already owns 15 feet of property.	Completed in 2017
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Initiative BK-019—Perform a study to determine the feasibility of the installation of an outlet structure on Cherry Quay by Boom Lane. Such a structure should be constructed to maintain a consistent water surface elevation range. Overflow could be conveyed through the existing drainage system in residential streets and outfall into the Barnegat Bay through an existing drainage outfall. A path of overflow for overland flood relief could be provided for when the pond elevation reaches a flood stage that cannot be conveyed hydraulically through the existing drainage system.

BT Engineeri ng	Short Term (<5yrs.)	High	The Engineer met with a company about a check valve for a pipe at the site and discussions have been held about the feasibility of the project. No official feasibility study has been completed yet.	In Progress
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Initiative BK-020—Upgrade and improve infrastructure and capacity to allow for uninterrupted service during hazard events: i. Flood proof the raw water pump station (RWPS) located on the Metedeconk River; ii. Flood proof the wastewater stations located on Drum Point Road and Riverside Drive; iii. Install emergency generators at three major water booster pump stations; iv. Enhance local communications; v. Convert pump stations to submersible pumps.

BT MUA	Long Term (5+yrs.)	High	Construction is underway for submersible wastewater pump stations for Laurel Brook, Burnt Tavern Manor, Cape Breton, Sea View Village, Lanes Mill, Sloping Hill, Riviera Drive and Pine Meadows. Funding has been secured through the New Jersey Infrastructure Bank (NJIB). Sump pump installation for the electrical manhole adjacent to the raw water pump station (RWPS) is complete. For the Riverside Drive and Drum Point Road wastewater stations, installation of floodproofing equipment was completed in October 2019. FEMA Hazard Mitigation Grant obtained for Laurel Brook.	In Progress
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Initiative BK-021— Elevate roads, particularly those adjacent to waterways.

BT Engineeri ng	Short Term (<5yrs.)	Low	The Township has set aside funding for the design of Shore Drive and Vanard Drive. Construction Funding for elevation of Mathis and Vanard Intersection provided in 2020 Capital Budget	In Progress
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Initiative BK-022— Elevate Snake Road to prevent overtopping of roadway during regular lunar tidal events. Surface elevation needs to be increased by approximately 4,000 feet of the access road. This road is the sole vehicular access point for the Seawood Harbor residential

BT Engineeri ng	Short Term (<5yrs.)	Medium	The center line of Snake Road has been elevated 4 inches. Nuisance flooding has been controlled.	Completed in 2019
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Initiative BK-023—Consider raised roads with side protection, which can dual function as levees, near Barnegat Bay

BT Engineeri ng	Short Term (<5yrs.)	Low	No progress. The Township is considering this action on roads such as Channel Drive. Implementation is dependent on additional funding/grants. The Township is now considering elevated bulkheads over levees due to land constraints.	No Progress
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#### Initiative BK-024—Harden existing infrastructure

BT Engineering	Ongoing	High	Specific improvements have been made as addressed in other initiatives, such as improvements to the police sub-station, road elevations, and pump stations. Specific hardening should be addressed as individual projects.	Discontinued in 2018
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Initiative BK-025—Replace older and unsafe bridges and culverts including the Route 70 and Route 88 culverts, the Jordan Road White Bridge (raise) and those identified in the capital improvement plan.

State of NJ	Ongoing	High	This initiative is considered an ongoing capability and is considered complete for this reporting period. The Jordan Road White Bridge was replaced and completed.	Complete
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#### Initiative BK-026—Improve street sweeping methods and frequencies to reduce pollutants entrained in runoff from impervious streets and parking lots.

BT DPW	Ongoing	Low	This initiative is an ongoing initiative that is considered complete for the reporting period. The DPW regularly seeks to improve street sweeping methods. The Township uses a vacuum based sweeper that allows for year-round street sweeping.	Complete
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Initiative BK-027—Retrofit structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Phase 1: Identify appropriate candidates for retrofitting based on cost-effectiveness versus relocation and inform candidates/public as appropriate. Phase 2: Where retrofitting is determined to be a viable option, work with the property owner to implement that action based on available funding from FEMA and local match availability. This action supports and promotes retrofitting and elevation of 2,000 homes that fall within flood vulnerable areas and the acquisition and demolition of 45 homes as identified by the Township.

BT Planning	Ongoing	High	This initiative is an ongoing capability that is considered complete for this reporting period. No additional structures have been relocated or retrofitted during the reporting period.	Complete
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Initiative BK-028—Support funding for acquisition or elevation of three Severe Repetitive Loss properties. Assistance will be provided to homeowners who are seeking grant or insurance funding to become compliant.

BT Planning	Long Term (5+ yrs.)	High	Recommend to discontinue this action as it is repetitive of action BK-027.	Discontinue
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Initiative BK-029—Support funding for acquisition or elevation of 20 Repetitive Loss properties. Township will continue to assist residents who are applying for grant or insurance funding to elevate their structures to be compliant.

BT Planning	Long Term (5+ yrs.)	High	Recommend to discontinue this action as it is repetitive of action BK-027.	Discontinued in 2019
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#### Initiative BK-030—Support and promote the retrofit of buildings to meet hurricane-force wind needs

BT Code Enforcement	Long Term (5+ yrs.)	High	This initiative was previously an in progress action. It is now considered to be an ongoing capability that is considered complete for this reporting period. This is addressed through uniform construction code as per Bulletin # 13-1A.	Complete
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Initiative BK-031—Support the building of new critical facilities outside of the floodplain and retrofit existing critical facilities that are located within the floodplain to be flood proofed, where possible.

BT Planning	Ongoing	High	This initiative is an ongoing capability and is considered complete for this reporting period. There are no critical facilities within the floodplain but any future critical facilities will be located outside of the floodplain.	Complete
Initiative BK-032—Increase the height of the bulkheads along Barnegat Bay (with or without movable panels) as appropriate				
BT Engineering	Short Term (<5yrs.)	Low	Currently, the State limits bulkheads to 18 inches. Moveable panels may not be technically feasible. The Township has passed an ordinance requiring minimum height of bulkheads (new and replaced) to be at elevation 4.0 NAVD 88	Discontinued in 2018
Initiative BK-033—Construct new metal sheet bulkheads (with or without movable panels) and incorporate check valves inside the bulkheads as appropriate				
BT Engineering	Short Term (<5yrs.)	Low	This initiative is redundant with BK-017.	Discontinued in 2017
Initiative BK-034—Construct new concrete flood walls and flood gates (with or without movable flood panels) and incorporate check valves inside the walls as appropriate				
BT Engineering	Short Term (<5yrs.)	Low	This initiative is not a Township priority and is not likely to be feasible given topographic conditions, amount of private property impacted, and logistical feasibility.	Discontinued in 2017
Initiative BK-035—Construct new levee/dike including culvert or pipe with flap gate/check valve as appropriate				
BT Engineering	Short Term (<5yrs.)	Low	This initiative is not a Township priority and is not likely to be feasible given topographic conditions, amount of private property impacted, and logistical feasibility.	Discontinued in 2017
Initiative BK-036—Construct sluice gates or in-water barriers for dredged lagoons as appropriate				
BT Engineering	Short Term (<5yrs.)	Low	This initiative is beyond the capabilities of the Township and is more appropriately considered as an Army Corps of Engineers project. Removed pending an Army Corps of Engineers study or recommendations.	Discontinued in 2017
Initiative BK-037—Record monitoring of flood events to support safety and potential requests for funding				
BT Police	Long Term (5+yrs.)	High	This initiative was discontinued in 2016. However, the Police Department has established a Flood Unit which began recording flooding event details in the winter of 2020. This initiative will now be considered to be an ongoing capability.	Complete



Initiative BK-038—Add stormwater collection areas and bypass force mains for elevated areas to improve stormwater drainage and prevent issues related to submerged outflow pipes as appropriate

BT Engineering	Short Term (<5yrs.)	High	This initiative is redundant with BK-067.	Discontinued in 2017
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Initiative BK-039—Construct stormwater gravel wetlands, which rely on a dense root mat, crushed stone, and an anaerobic and microbe-rich subsurface.

NJ DOT	Short Term (<5yrs.)	High	A mitigation bank has allowed the construction of gravel wetlands for NJDOT projects within the region. Technique will be considered in future projects as basins are redone or fail.	In Progress
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Initiative BK-040—Township officials provide technical information and guidance, when needed

BT Engineering	Ongoing	Medium	This initiative is an ongoing initiative that is considered complete for the reporting period. The availability of this service has been widely publicized.	Complete
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Initiative BK-041—Provide information on residential, business, and natural resource grant programs to residents

BT Planning	Ongoing	Medium	This initiative is an ongoing capability that is considered complete for this reporting period. The Township conducts mailings, hosts information on the website, hosts a flood info session, etc.	Complete
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Initiative BK-042—Use Nixle or similar service for pre-storm information dissemination, including shelter locations.

BT Planning	Ongoing	Medium	This initiative is an ongoing capability which is considered complete for this reporting period. The Township continues to use Nixle.	Complete
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Initiative BK-043—Create website for pre-storm information dissemination, including shelter locations

BT Planning	Short Term (<5yrs.)	Medium	This information is provided on the Township website.	Completed in 2017
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Initiative BK-044—Acquire computers for senior communities so that residents have access to information on disaster mitigation, preparedness, response and recovery

BT Administrator	Short Term (<5yrs.)	Medium	The need for this initiative is unclear and there is a lack of funding to support implementation.	Discontinued in 2018
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Initiative BK-045—Continue outreach programs in schools to include children in outreach and to improve families' disaster response capabilities. Provide materials.

BT Police	Ongoing	High	This initiative is an ongoing capability and is considered complete for this reporting period. Outreach programs include a coloring book and information packet.	Complete
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Initiative BK-046—Acquire critical warehouse infrastructure components

BT OEM	Short Term (<5yrs.)	Medium	The Township has purchased and installed a canopy to protect critical equipment that has been exposed to the elements at DPW. Canopy design will be able to hold solar panels in the future if so desired. This resulted in the initiative being considered as complete in 2019. However, as of 2020, work is also planned for a storage building at the Drum Point Sports Complex for the parks department and a planned storage facility behind the municipal building. Therefore, this initiative is now considered to be in progress.	In Progress
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Initiative BK-047—Develop field-deployed electronic mapping system

BT GIS/Planning	Short Term (<5yrs.)	Medium	The Township is using field deployed tracking methods. The work flow software is tied to GIS mapping. Updates to mapping are ongoing.	Completed in 2018
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Initiative BK-048—Obtain additional high wheeled vehicles for rescue operations.

BT OEM	Short Term (<5yrs.)	Low	The Township has obtained one mine-resistant ambush protected (MRAP) vehicles and four high-wheeled military box trucks, for a total of five vehicles. Vehicles were obtained as of August 2016.	Completed in 2017
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Initiative BK-049—Upgrade and automate the EOC to ensure state-of-the-art audio/visual equipment, sufficient space and security, and stand-alone ability. Capital funds have been allocated for the design of facilities re-development.

BT OEM	Long Term (5+yrs.)	Medium	There is a plan to move the current Detective's Bureau and build a new EOC, which will be state of the art.	In Progress
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Initiative BK-050—Develop reverse 911 system to assist in communication for all hazards

BT OEM	Short Term (<5yrs.)	High	The Nixle notification system has been deployed in the Township as of August 2016.	Completed in 2017
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Initiative BK-051—Support continuous operations of Emergency Support Services for the Barrier Island

BT OEM	Ongoing	High	This initiative is an ongoing capability which is considered complete for this reporting period. The Barrier Island is a permanent district, so police officers are assigned to the area 24/7.	Complete
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#### Initiative BK-052—Mitigate Barrier Island Police Substation and Pioneer Fire Station to protect from flood related hazards

BT Police	Short Term (<5yrs.)	High	A generator was purchased and it is elevated to at least one foot above the base flood elevation. Architecture plans are in progress. Township staff will research grants that may be used to supplement local funding for construction/equipment for the new station. The generator was installed and is operational at the Barrier Island Sub Station as of 2020.	Completed in 2020
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#### Initiative BK-053—Create system to document FEMA reimbursable expenses.

BT Planning	Short Term	High	An Access database has been developed and there is a dedicated staff person (Planning Board Secretary) assigned to the task of working on FEMA reimbursements for every declared storm event. This resulted in the action being considered complete in 2018. As of 2020, this action continues as the Township is now processing the final payments with FEMA. As a result, this action is now considered an ongoing initiative which is complete for the reporting period.	Complete
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#### Initiative BK-054—Capture/survey high water marks after flood events.

BT Engineering	Ongoing	High	This initiative is an ongoing initiative that is considered complete for the reporting period. The Township routinely captures high water marks after flood events.	Complete
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#### Initiative BK-055—Utilize post-disaster assistance

BT Administrator	Ongoing	High	This initiative is an ongoing capability and is considered complete for this reporting period. The Township is engaged with NJOEM specifically to remain aware of post disaster assistance. The Township recently requested a meeting with NJOEM to address possible funding for flood mitigation projects, but NJOEM will be unable to allocate resources to anything but pandemic response for some time.	Complete
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#### Initiative BK-056—Obtain electric grid maps to assist in recovery after disruption of power - This is completed - OEM has all current paper and GIS mapping.

BT OEM	Short Term (<5yrs.)	High	Completed in 2017: Paper maps have been secured.	Completed in 2017
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#### Initiative BK-057—Implement/participate in regional precipitation monitoring networks and other programs that enhance flood threat recognition capability

BT OEM	Ongoing	Medium	The Township participates in NWS efforts for precipitation monitoring and would be open to joining additional programs/networks.	In Progress
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#### Initiative BK-058—Identify critical facilities/infrastructure that require early notification during flood responses

BT OEM	Ongoing	Medium	This initiative is an ongoing capability that is considered complete for this reporting period. Critical facilities and infrastructure have been identified.	Complete
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#### Initiative BK-059—Maintain existing data and gather new data needed to define risks and vulnerability

BT MUA	Ongoing	High	This initiative is an ongoing capability that is considered complete for the reporting period. BTMUA maintains continuous tide/salinity monitoring stations in the vicinity of Forge Pond and all data are archived in a database to support risk and vulnerability evaluations. The monitoring network currently consists of four stations, and will be expanded as data gaps are identified. New stations are being evaluated for possible installation near Route 70 and/or upstream of BTMUA's drinking water intake.	Complete
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#### Initiative BK-060—Expand the Best Management Practices (BMP) subsection of the Stormwater Management Plan to emphasize green stormwater management techniques, such as bio-swales, rain gardens, offline regional treatment, and vegetative rooftop covers

BT MUA	Short Term (<5yrs.)	High	A draft stormwater ordinance was developed which included an emphasis on Green Infrastructure stormwater management techniques, such as bio-swales, rain gardens, offline regional treatment, and vegetative rooftop covers. The ordinance was submitted to NJDEP for review and comment. In the spring of 2020, the NJDEP adopted amendments to New Jersey's Stormwater Management Rules which included the key concepts from the draft ordinance. As a result, these concepts requiring Green Infrastructure from the draft Brick draft ordinance are now part of new NJ Statewide requirements. NJDEP authorization for use of the full draft ordinance is pending.	In Progress
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#### Initiative BK-061—Assess the stormwater management BMPs in other parts of the country for potential benefit to the Township

BT MUA	Ongoing	High	This initiative is an ongoing capability which is considered complete for this reporting period. Stormwater BMPs have been assessed as part of the model ordinance development. Advances in Stormwater BMP/Green Infrastructure designs are being monitored and opportunities to incorporate these advances locally are continually being explored (e.g., constructed stormwater wetland, blue roof, etc.).	Complete
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#### Initiative BK-062—Supplement the Stormwater Management Plan to include details on drainage system maintenance and keeping channels and storage basins clear of debris for sufficient flood carrying and storage capacity. This is an ongoing project.

BT DPW	Ongoing	High	This is an ongoing action that is considered complete for this reporting period. Information is constantly being gathered. Storm drains are being counted throughout the Township. Storm drains are being retrofitting.	Complete
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#### Initiative BK-063—Encourage compliance with NJ Department of Transportation legislation on state highway stormwater management issues for Routes 9, 35, 37, 70, 72, 88 and 166

BT Engineering	Ongoing	High	This is an ongoing action that is considered complete for this reporting period. NJ DOT was the lead for the basin conversions discussed in BK-039.	Complete
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#### Initiative BK-064—Coordinate County, State, and Federal funding to maximize the effectiveness of stormwater protection and rehabilitation efforts

BT MUA	Ongoing	High	This initiative is an ongoing capability and is considered complete for this reporting period. BTMUA secured a \$950,000 grant for stormwater management improvements in the Metedeconk River watershed and both BTMUA and the Township continue to search for additional funding opportunities to support stormwater protection and rehabilitation efforts.	Complete
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#### Initiative BK-065—Identify and restore impaired stormwater management facilities to improve infiltration and reduce runoff throughout the watershed.

BT MUA	Short Term (<5yrs.)	High	Many project sites are listed in the Metedeconk Watershed Plan and additional sites are continuously being identified through field evaluations. These projects will reduce runoff and improve water quality. BTMUA campus stormwater improvements (Brick Twp) have been completed. Moses Milch Drive stormwater improvements (Howell Twp) have been completed. Ocean County Park stormwater improvements (Lakewood Twp) have been completed. Brick Plaza stormwater BMP demonstration projects (Brick Twp) have been completed. Lake Carasaljo Park stormwater improvements (Lakewood Twp) are completed. The Shonny Drive basin retrofit (Lakewood Twp) has been abandoned. New stormwater improvement projects are expected to get underway during 2020 in Howell and Lakewood Townships.	In Progress
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#### Initiative BK-066—Construct additional facilities to collect and provide temporary storage of stormwater runoff to promote infiltration through highly permeable soils.

BT MUA	Short Term (<5yrs.)	Low	Discontinued in 2019. This action could be combined with BK-065	Discontinued in 2019
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#### Initiative BK-067—Investigate the benefits of bypass force main, tide barriers, stormwater pump systems, surge barriers, and mobile flood barriers.

BT Engineering	Ongoing	Medium	This is an ongoing action that is considered complete for this reporting period. The Engineering Office has looked into the use of mobile flood barriers. The Township doesn't have much critical infrastructure in floodplain where mobile flood barriers would be appropriate. However, information on mobile flood barriers is useful to refer the public to.	Complete
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#### Initiative BK-068—Identify BMPs that individual property owners can implement.

BT MUA	Ongoing	High	This initiative is an ongoing capability which is considered complete for this reporting period. This initiative is conducted as part of outreach. Numerous “build your own” rain barrel workshops have been offered to local residents with the finished rain barrels provided either free of charge or at a discounted cost, and these workshops have been very popular. A workshop for rain gardens took place in Fall 2018. In-person rain barrel workshops have been successfully modified in 2020 to web-based formats to maintain COVID-19 social distancing guidelines.	Complete
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**Initiative BK-069—Enforce minimum National Flood Insurance Program requirements and proactively support floodplain management property protection and outreach requirements**

BT Code	Ongoing	High	This is an ongoing initiative and is considered complete for this reporting process. This action is conducted within the normal work flow process.	Complete
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**Initiative BK-070—Adopt appropriate enhanced regulatory standards, such as increased freeboard standards, cumulative substantial improvement or damage, lower substantial damage threshold, compensatory storage, and non-conversion deed restrictions**

BT Code	Short Term (<5yrs.)	High	The Township has a one foot freeboard requirement. Additional enhanced standards are considered.	In Progress
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**Initiative BK-071—Supplement the Flood Prevention Ordinance or adding regulations to the Township Code requiring removal or securing of boats, floating docks, gangways, etc. from water bodies within a specified period from the issuance of an order from Emergency Management personnel.**

BT Code	Short Term (<5yrs.)	High	A draft ordinance addressing these issues has been developed but has not been implemented. It is being proposed to the Land Use Committee of the Township Council for consideration.	In Progress
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**Initiative BK-072—Prohibit the construction of occupied structures seaward of the mean high water line or on piers or platforms except for essential structures for “functionally dependent uses” such as marinas or boatyards**

BT	Short Term (<5yrs.)	High	Discontinued in 2017. Occupied structures are prohibited per state regulations. Intent of this initiative is unclear.	Discontinued in 2017
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**Initiative BK-073—Update existing regulations to account for the impacts of climate change.**

Land Use	Ongoing	High	This is an ongoing initiative and is considered complete for this reporting period. The Township regularly considers opportunities for updates to regulations and has held discussions about updating the flood damage prevention ordinance.	Complete
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**Initiative BK-074—Continue to implement a “no-adverse impact” floodplain management policy.**

BT Code	Short Term (<5yrs.)	High	Completed in 2018. Township stormwater regulations support this policy.	Completed in 2018
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**Initiative BK-075—Implement as-built regulatory requirements**

BT Code	Ongoing	High	Discontinued in 2018. Changes to requirements are made at the state level. The Township has to follow state standards.	Discontinued in 2018
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#### Initiative BK-076—Use Re-sale Certification of Occupancy to catch up with substantially damaged structures and regulate safe re-building practices

BT Code	Long Term (5+ yrs.)	High	No progress has taken place on this initiative. It is the intent of the staff to continue to request re-sale CO's to the Township Council; however, no progress has been made to date. 6-2020.	No Progress
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#### Initiative BK-077—Utilize the most recent FEMA FIRMs to assist property owners in rebuilding to or above regulatory standards

BT Code	Ongoing	High	This initiative is an ongoing initiative that is considered complete for the reporting period. The Township is utilizing the most recent FIRMs and will continue to do so.	Complete
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#### Initiative BK-078—Join CRS program to complete pro-active floodplain management and assist residents with flood insurance costs

BT Code	Short Term (<5 yrs.)	High	Completed in 2017. The Township applied and was accepted to CRS, obtaining a Class 6 rating on May 1, 2017. The Township has obtained recertification through 2018 and 2019.	Completed in 2017
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#### Initiative BK-079—Implement site review ordinances/requirements

BT Code	Ongoing	High	This is an ongoing initiative and is considered complete for the reporting period. Brick Township has a plot plan review process and inspection procedures in place.	Complete
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#### Initiative BK-080—Integrate climate change considerations into planning guidelines and standards.

BT Planning	Short Term (<5 yrs.)	High	Completed in 2018. Initial guidelines were developed as part of Neighborhood Plans.	Completed in 2018
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#### Initiative BK-081—Develop design standards to address the visual impact of mitigation measures such as elevating bulkheads, elevating buildings on foundations or pilings

BT Code	Short Term (<5 yrs.)	Low	Some standards have been developed for plantings and lattice for elevated homes. This action was previously noted as being completed in 2018. However, this will be discussed shortly at the Land Use Committee of the Township Council.	In Progress
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#### Initiative BK-082—Continue to enforce building codes to require building, renovations, and re-building so that all buildings meet the Uniform Construction Code

BT Code	Ongoing	High	This is an ongoing initiative and is considered complete for this reporting period. Enforcement is part of standard operating procedures.	Complete
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#### Initiative BK-083—Develop low-impact development guidelines for new development and redevelopment.

BT Code	Short Term (<5yrs.)	High	BTMUA is working with a consultant to develop guidelines for low impact development /green infrastructure through a model ordinance. Low impact development (LID) is a common theme throughout the watershed plan and numerous LID strategies are included in Appendix C of the ordinance. BTMUA is also relying on the NJDEP's Stormwater BMP Manual for LID strategies. In addition, BTMUA supported development of a recently-released New Jersey Developers' Green Infrastructure Guide with NJ Future and NJBA, ( <a href="http://www.njfutu.re.org/wp-content/uploads/2017/03/NJ-Developers-Green-Infrastructure-Guide_FINAL_web.pdf">http://www.njfutu.re.org/wp-content/uploads/2017/03/NJ-Developers-Green-Infrastructure-Guide_FINAL_web.pdf</a> ).	In Progress
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#### Initiative BK-084—Develop a Fertilizer Application Ordinance to control reduce the amount of damaging non-point source pollution during storm events

BT Code	Short Term (<5yrs.)	High	Discontinued in 2017. Resolution 475-14, supporting the fertilizer restrictions established by state law, was adopted. Therefore, no further action is required by the Township.	Discontinued in 2017
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#### Initiative BK-085—Ensure post-disaster code enforcement and inspection to protect properties in the process of being re-built and built. This action is ongoing as structures are elevated or newly constructed.

BT Code	Ongoing	High	This initiative is ongoing and is considered complete for this reporting period. The State has an emergency inspection program in place.	Complete
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#### Initiative BK-086—Continue to take a proactive approach to the NJ Soils Health Legislation by working with the Ocean County Soil Conservation District to promote construction practices to maintain soil health and reduce compaction.

Ocean County Soil Conservation District	Ongoing	High	This initiative is ongoing and is considered complete for this reporting period. The Township follows regulatory guidelines. The Township ensures that all buildings that require a soil permit, receive it. Township Engineering would like to see soils guidelines for sites less than 5,000 sq. ft. regulated at the local level. Ordinances would need to be adopted.	Complete
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#### Initiative BK-087—Encourage and support compliance with the NJ Fertilizer Law.

NJ DEP	Ongoing	High	This initiative is ongoing and is considered complete for this reporting period. Resolution 475-14, supporting the fertilizer restrictions established by state law, was adopted.	Complete
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#### Initiative BK-088—Enact tools to help manage development in hazard areas.

BT Planning	Ongoing	High	Discontinued in 2019. The Township will create new actions for specific tools as necessary.	Discontinued in 2019.
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Initiative BK-089—Adopt additional appropriate land use development criteria, such as planned unit developments, density transfers clustering				
BT Planning	Short Term (<5yrs.)	High	The Township has established a Beach Cottage Community overlay zone on the barrier island area which asks for increased density through duplexes and single family residential. The overlay zone was adopted in December 2018. Each portion of the overlay zone has received site plan approval as of May of 2020.	Completed in 2020
Initiative BK-090—Consider the residual risk associated with structural flood control in land use and land development plans. Recent planning and zoning board approvals have been imposing nonstructural flood control measures.				
BT Planning	Ongoing	High	This initiative is ongoing and is considered complete for this reporting period. Continuing progress through development review process.	Complete
Initiative BK-091—Develop and adopt a continuity of operations plan (COOP)				
BT OEM	Short Term (<5yrs.)	High	A continuity of operations plan (COOP) has been adopted.	Completed in 2019
Initiative BK-092—Maintain the all-hazards Emergency Operations Plan (EOP)				
BT OEM	Ongoing	High	This initiative is considered an ongoing capability and is complete for this review period. The next Emergency Operations Plan is not due to be updated until 2021.	Complete
Initiative BK-093—Develop and implement Shelter Management Plans				
BT OEM	Ongoing	High	This initiative is considered an ongoing capability and is complete for this review period. Shelter planning is in progress through coordination with the state.	Complete
Initiative BK-094—Integrate hazard mitigation into the Master Plan				
BT Planning	Short Term (<5yrs.)	High	Completed in 2017. Adopted a hazard mitigation element to the master plan in March of 2016	Completed in 2017
Initiative BK-095—Integrate flood management policies into other Township planning mechanisms				
BT Planning	Ongoing	High	This initiative is an ongoing capability which is considered complete for this reporting period. The Township continues the revision of ordinances, updating planning documents, etc.	Complete
Initiative BK-096—Incorporate retrofitting/replacement of critical system elements in capital improvement planning.				
BT Planning	Ongoing	High	This initiative is an ongoing capability and is considered complete for this reporting period. Retrofitting and improved replacements of critical system elements (roadways, storm drains, stormwater, etc.) are identified through capital improvement planning. Continued incorporation is expected.	Complete



**Initiative BK-097—Continue to work with the Barnegat Bay Partnership to target research and assessment efforts.**

BT Planning	Ongoing	High	This initiative is an ongoing capability and is considered complete for this reporting period. The Barnegat Bay Partnership serves as a member of the plan committee. Brick Township will include any appropriate initiatives in the Comprehensive Conservation Management Plan (CCMP).	Complete
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**Initiative BK-098—Develop a building and elevation inventory of structures in the floodplain**

BT Engineering	Ongoing	Medium	This initiative is an ongoing capability and is considered complete for this reporting period. Elevation certificates are being collected. The Engineering Department would like to do more to develop a database of all first floor elevations.	Complete
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**Initiative BK-099—Improve the Township’s mapping capability to increase access to information and adding additional AutoCAD software, as necessary to support mapping capabilities**

BT Engineering	Ongoing	Medium	This initiative is an ongoing capability which is considered complete for this reporting period. In 2018 the Township purchased CAD and Land Desktop and obtained “read only” access to MUA infrastructure information so that field crews can review information while out in the field.	Complete
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**Initiative BK-100—Conduct Local Emergency Planning Committee (LEPC) meetings every month and perform drills to prevent hazardous materials accidents - This is an ongoing project that is considered complete for the current progress review.**

BT OEM	Ongoing	High	This initiative is an ongoing capability and is considered complete for this reporting period. The LEPC meets quarterly and conducts two drills per year.	Complete
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**Initiative BK-101—Identify agricultural BMPs to control runoff from crops and livestock.**

BT MUA	Short Term (<5yrs.)	High	Discontinued in 2019. Due to lack of agricultural practices and lack of non-protected open space that would be able to be converted to agriculture, this initiative was discontinued.	Discontinued in 2019
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**Initiative BK-102—Implement stronger pet waste and fertilizer management protocols and ordinances to reduce pathogen and nutrient contributions at the household scale. Goose management programs have been recommended for implementation in the fecal coliform and total coliform total maximum daily loads (TMDLs) throughout the watershed.**

BT MUA	Ongoing	High	This initiative is an ongoing capability and is considered complete for this reporting period. The Township secured a \$950,000 grant for stormwater management which includes provisions to track down and reduce pollutants.	Complete
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#### Initiative BK-103—Support the USACE beach repair, restoration, and replenishment project

BT Engineering	Short Term (<5yrs.)	High	The beach replenishment project was completed in the summer of 2018.	Completed in 2018
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#### Initiative BK-104—Provide beach fill as necessary

BT Engineering	Ongoing	High	This initiative is an ongoing capability and is considered complete for the reporting period. Township has capacity to support future beach fill needs.	Complete
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#### Initiative BK-105—Maintain and improve dunes and maintain natural beach habitat and bay habitat

BT Engineering	Ongoing	High	This initiative is an ongoing capability and is considered complete for the reporting period. The Township works with environmental non-profit organizations to schedule and diversify plantings.	Complete
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#### Initiative BK-106—Repair bulkheads and install revetments to protect from coastal erosion.

BT Engineering	Short Term (<5yrs.)	Medium	Repair of bulkheads continues.	In Progress
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#### Initiative BK-107—Construct beach revetment

NJ DEP	Short Term (<5yrs.)	Medium	Completed in 2018. Wall has been completely covered by USACE beachfill	Completed in 2018
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#### Initiative BK-108—Support easements for the ACOE beach replenishment project on the Barrier Island

BT Engineering	Ongoing	High	Completed in 2017: The Township has provided support through exhibits and condemnation paperwork and will continue to support through litigation, if needed. This initiative is considered completed as of December 2016. All easements have been obtained and settlement agreements have been filed and closed out for the acquisition of easements for access and maintenance of the wall, dune and beach.	Completed in 2017.
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#### Initiative BK-109—Implement erosion control projects for Dock Road Beach, such as constructing a minor geotextile system to be installed upstream and downstream of the beach and/or establishing scour protection and velocity control at an existing drainage pipe outfall to Metedeconk River.

BT Engineering	Short Term (<5yrs.)	Medium	This initiative was determined to not be viable.	Discontinued in 2017
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#### Initiative BK-110—Complete soil stabilization project at Bay Harbor Beach.

BT Engineering	Short Term (<5yrs.)	Medium	Completed in 2017. Bay Harbor Beach stabilization project was completed Spring 2016. Completed in 2017. The project was an overwhelming success. The Township will duplicate the project at Cedar Bridge Manor Park and Mallard Point Park. Windward Beach project was included on original wording of initiative, but is not related to flood or erosion control and was removed.	
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Initiative BK-111—Restore a fire break on North Riverside Drive. The current fire break and soil stabilization systems are inadequate to prevent future disaster of the shoreline and to protect the adjacent Vanada Woods neighborhood from potential wildfire. The project would include demolition of the Macintosh House, boathouse, and partial removal of the bulkhead so that the shoreline can be stabilized. Ideally, the entire parcel will be returned to a more natural state.

BT Engineering	Short Term (<5yrs.)	Medium	Completed in 2015. The Township will continue to maintain the fire break.	Completed in 2015
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#### Initiative BK-112—Maintain Mallard Park to avoid coastal geotech erosion and mitigate flood related hazards.

BT DPW	Ongoing	Medium	This initiative is ongoing and is considered complete for this reporting period. The DPW has installed blacktop berms and a drain in the street with the goal of reducing the amount of sand that is lost.	Complete
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#### Initiative BK-113—Redesign pond in Cherry Quay to provide increased flood retention

BT Engineering	Short Term (<5yrs.)	Low	This initiative is redundant with BK-019.	Discontinued in 2017
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#### Initiative BK-114—Redesign the islands in Beaver Dam Creek for Princeton Midstreams to provide increased flood retention

Private	Short Term (<5yrs.)	Low	No progress has taken place on this initiative. The initiative requires financial opportunities.	No Progress
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#### Initiative BK-115—Strategize responsible land protection methods to maintain/restore natural floodplain functions

BT Planning	Ongoing	High	This initiative is ongoing and is considered complete for this reporting period.	Complete
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#### Initiative BK-116—Manage sediment and debris removal and provide regional retention, detention, infiltration and constructed wetland areas.

BT Engineering	Ongoing	High	No progress for this reporting period. All basins were inspected in Summer of 2017 with punch-lists for Township owned basins sent to parks and DPW.	No Progress
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#### Initiative BK-117—Participate in regional watershed management

BT MUA	Ongoing	Low	This is an ongoing initiative that is considered complete for this reporting period. BTMUA facilitates regional watershed management planning. Brick Township is actively working with BTMUA and the other watershed stakeholders on the Metedeconk Watershed Management Plan. There is discussion about the development of additional watershed plans in the Barnegat Bay region for which Brick Township may be a stakeholder.	Complete
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#### Initiative BK-118—Promote open space or flood-compatible land uses in identified high hazard areas via techniques such as: planned unit development, easements, setbacks, greenways, sensitive area tracts, community education, natural resource inventory; comprehensive planning; zoning provisions; floodplain protection ordinance; and the environmental review process.

BT Planning	Short Term (<5yrs.)	High	Completed in 2018. The Township is updating the NJDEP Recreation and Open Space Inventory to incorporate more than 400 acres located in the Special Flood Hazard Area that are owned by the Township. These parcels will now be protected from any development into perpetuity.	Completed in 2018
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#### Initiative BK-119—Provide dredging, levee and bulkhead construction, revetments or channelization where appropriate

BT Engineering	Ongoing	Medium	Discontinued in 2017. This initiative is redundant with BK-106.	Discontinued in 2017
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#### Initiative BK-120—Maintain vegetated riparian buffer zones. Prioritize implementation by using parcels identified as protection priority from the Trust for Public Land.

BT Planning	Ongoing	High	This initiative is an ongoing capability and is considered complete for this reporting period. No new development near riparian areas has taken place in the past year.	Complete
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#### Initiative BK-121—Restore upland and riparian forests to capture rainfall, protect soil from erosion, maximize infiltration, and sequester nutrients.

BT Planning	Long Term (5+ yrs.)	Medium	Discontinued in 2017. The Township does not have upland riparian forests.	Discontinued in 2017
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#### Initiative BK-122—Construct stormwater wetlands to maximize removal of pollutants from stormwater runoff. Not Applicable.

BT Planning	Short Term (<5yrs.)	Low	Discontinued in 2017. This initiative is not needed as there are natural stormwater wetlands.	Discontinued in 2017
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#### Initiative BK-123—Require upon site plan approvals, installation of bio retention system in lawns, median strips, parking lot islands, unused lot areas, certain easements, or other areas that would benefit from stormwater mitigation.

BT Planning	Short Term (<5yrs.)	Medium	Discontinued in 2017. This initiative is complementary with previously identified initiatives assigned to MUA.	Discontinued in 2017
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**Initiative BK-124—Retrofit existing stormwater basins to extend detention or bio retention areas.**

BT Planning	Ongoing	Medium	This initiative is an ongoing capability and is considered complete for this reporting period. Such retrofits are recommended by Township staff as redevelopment occurs. The MUA retrofit took place during the reporting period. As site plan applications come in to the Planning and Zoning Boards, the Township has been requiring rain garden technology and bio retention areas of existing and new site plan developments.	Complete
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**Initiative BK-125—Remove un-utilized or under-utilized impervious surfaces, such as extra parking, with native or maintained vegetation. Where possible redirect runoff to these new pervious surfaces.**

BT Planning	Ongoing	Low	This initiative is an ongoing capability and is considered complete for this reporting period. As a general policy during site plan and subdivision review, the Township requires curb cuts, pervious pavement, etc.	Complete
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**Initiative BK-126—Restore fluvial systems and streams to approach pre-development conditions where a sinuous channel is reconnected to an expansive floodplain, ideally integrated with riparian wetlands. Not an achievable goal.**

BT Planning	Short Term (<5yrs.)	Low	Discontinued in 2017. This initiative is not applicable as most stream systems are already preserved. Those that are not are developed.	Discontinued in 2017
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**Initiative BK-127—Support the use and installation of green energies and sustainable technologies, where appropriate and affordable. Green improvements can include: i.) Green roofs ii.) Bioswales iii.) Planter boxes iv.) Vegetated filter strips v.) Permeable/pervious paving vi.) Rain gardens vii.) Overall increased vegetation viii.) Rain barrels or cisterns ix.) Soil amendment x.) Bulkhead/vertical walls xi.) Vegetated filter strip**

BT Planning	Ongoing	High	This initiative is an ongoing capability and is considered to be complete for this reporting period. Through the development review process, the Township encourages the use of sustainable development.	Complete
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**Initiative BK-128—Continue tree vegetation maintenance for hazardous tree removal by parks crew is ongoing and tree planting to replace damaged trees and supplement has also been an ongoing project through the No Net Loss Program. Over 550 trees have been planted between 2017 and 2018.**

BT DPW	Ongoing	High	This initiative is an ongoing initiative that is considered complete for the reporting period. Tree and vegetation maintenance takes place at municipal facilities.	Complete
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**Initiative BK-129—Develop and prepare disaster response information packets to distribute post-disaster regarding retro-fit information and funding.**

BT Planning	Short Term (<5yrs.)	High	Completed in 2019. The Township has an electronic version of disaster response information packets ready for printing in the event of a disaster.	Completed in 2019
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#### Initiative BK-130—Conduct watershed conservation education and outreach.

BT MUA	Ongoing	High	This initiative is an ongoing initiative that is considered complete for the reporting period. Extensive public education and outreach is being conducted. These outreach activities include exhibits, presentations and educational materials targeting a variety of age groups and interests, with particular focus on water conservation, and nonpoint source pollution/stormwater management awareness.	Complete
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#### Initiative BK-131—Evaluate and build resiliency for the long-term implications of sea-level rise for water supply operations.

BT MUA	Short Term (<5yrs.)	High	BTMUA has completed a water supply master plan with a planning horizon of 20 years. In Progress As part of the planning effort, projections of sea-level rise and expected impacts on the water supply were evaluated through statistical modeling. These constraints, along with other water supply stressors such as demand patterns and climate change, have been translated into a series of recommendations and actions that will result in greater resilience.	
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#### Initiative BK-132—Regularly evaluate development and construction in the watershed to ensure no impacts on natural floodplain function or water quality.

BT MUA	Ongoing	Medium	This initiative is an ongoing capability which is considered complete for this reporting period. BTMUA evaluates proposed development projects and activities regulated by NJDEP's Division of Land Use Regulation within the Metedeconk River floodplain or areas adjacent to the riparian zone. Comments and concerns are submitted to the local planning/zoning board of adjustment and/or regulatory agency, as necessary.	Complete
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#### Initiative BK-133—Pursue funding to conduct hydrological studies of stormwater system problem areas.

BT Planning	Ongoing	This action was previously identified as in progress. However, as of 2020, this is considered to be an ongoing capability which is considered complete for this reporting period.  Stormwater systems are required for site plan review and subdivision applications. As site plans and subdivisions are submitted to the boards for review, hydrologic studies are required. A study was conducted this past year including a mound analysis in an area outside of the floodplain	Complete
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#### Initiative BK-134— Pursue funding for post-disaster recovery plan to outline alternatives for prudent recovery from flood events.

BT Planning	Short Term (<5yrs.)	No progress has been made during this reporting period.	No Progress
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#### Initiative BK-135— Increase communication and improve coordination with utility providers.

BT OEM	Short Term (<5yrs.)	Communication and coordination with utility providers continues.	In Progress
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#### Initiative BK-136—Develop stormwater education component for educational outreach.

BT Planning	Short Term (<5yrs.)	Planning and Engineering budgeting to update stormwater element within the master plan and to be compliant in the stormwater management requirements. Funding was included in this year's capital budget to update our Stormwater Management Plan.	In Progress
Initiative BK-137—Exercise the Township CRS Activity 610 Plan annually. The Township will submit this activity for CRS FWRP Points in the 2018 review cycle.			
BT OEM	Ongoing	High	This initiative is an ongoing capability and is considered to be complete for this reporting period. The Township exercised the Activity 610 Plan in September of 2018. A dam exercise took place in 2019. An exercise is being planned for 2020.
Initiative BK-138— Regularly evaluate development and construction in the watershed to ensure no impacts on natural floodplain function or water quality.			
BT MUA	Ongoing	High	No Progress
Initiative BK-139— Conduct stream cleanings to remove garbage and debris that may contribute to jams that could cause flood events.			
Environmental Commission	Ongoing	High	No Progress
Initiative BK-140— Conduct outreach to residents that live near streams, culverts, etc. where debris and dumping of yard waste is problematic.			
Environmental Commission	Ongoing	High	No Progress

## NEW ACTIONS

Table 3 shows new actions developed by the Planning Committee during this reporting period.

**Table 3. New Actions**

Lead Agency	Timeline	Priority	Comment (Describe progress or changed priority)	Status
Initiative BK-141— Adopt an impervious surface limit ordinance for residential properties.				
BT Planning	Short Term (<5yrs.)	High	Brick Township Planning has drafted an ordinance to establish impervious surface coverage limits for residential properties. Limits have already been adopted for commercial properties within the Township.	New



## RECOMMENDATIONS FOR CHANGES OR ENHANCEMENTS

Based on the review of this report, the Planning Committee has noted the following recommendations for future updates or revisions to the plan:

- Review, update and rework the Natural and Beneficial Functions elements of the Floodplain Management Plan so that it is creditable under CRS Activity 510. This may be undertaken by the Environmental Commission or Sustainable Brick. The Township has recently added additional staff that would be capable of supporting this initiative and are currently preparing an update to the Natural Resource Inventory that includes the Natural Beneficial Functions Element in addition to the Open Space & Recreation Plan. Anticipated completion of the document and adoption is scheduled for early 2021.
- Add an observed versus projected sea level rise chart into the climate change discussion.
- Enhance the discussion of economic impacts of sea level rise.
- Contemplate developing post-disaster policies and ordinances.
- Insert information on recent studies showing that a dollar spent in mitigation saves ten dollars in future damages.
- Start outline for a long-term infrastructure plan for sea level rise and climate change. The plan could focus on infrastructure improvements such as raising roadways, the removal of stormwater pipes and outfalls that are submerged and cause backflow flooding issues, the increased use of natural systems for flooding attenuation, etc.
- Consider the concept of creating wetlands out of upland areas in the open space areas of the Sawmill Tract and Airport Tract to capture stormwater upstream of residential development to reduce flood risks.
- Incorporate resilience concepts identified in the Township's Resiliency Policy which is currently under development. The Township of Brick has voluntarily entered into the Plan Endorsement Process with the State of New Jersey to renew the CAFRA Coastal Brick Town Center designation and is developing the Resiliency Policy as part of this process.

***Public review notice:*** The contents of this report are considered to be public knowledge and have been prepared for total public disclosure. Minutes of meetings and sign-ins are provided as Appendix A.

***Copies of the report have been provided to the Township Council, the report is posted on the Township of Brick Floodplain Management Plan website and notice of its completion have been provided to local media outlets. Any questions or comments regarding the contents of this report should be directed to:***

Tara B. Paxton, MPA, PP, AICP  
Township Planner/Affordable Housing Administrator  
Township of Brick  
401 Chambers Bridge Road  
Brick, NJ 08723  
[tpaxton@bricktownship.net](mailto:tpaxton@bricktownship.net)  
p.732-262-4783 x1344  
f.732-262-8954



## ATTACHMENT

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### Meeting Documentation

(Sign-in Sheets, Minutes of Meetings)



# AGENDA

**Township of Brick Floodplain Management Plan  
Floodplain Management Planning Committee  
Progress Report Meeting**

**Thursday, May 28, 2020 | 4:00 p.m.**

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- 1. Introduction**
  - a. Committee reorganization
  - b. New committee members
- 2. Flood Management Plan Purpose/Background**
- 3. BATool use for updating progress on actions**
- 4. Floodplain Management Planning Process**
  - a. Flood Event History
  - b. Changes in Risk Exposure
  - c. Flood Mitigation Success Stories
  - d. Review of Action Plan and Action Progress
  - e. Recommended Changes or Enhancements
  - f. Impact of Other Planning Programs/Initiatives Involving Flood Hazard Mitigation
  - g. Public/Stakeholder Comments and Input
- 5. Conclusion**





## **Township of Brick Floodplain Management Plan Floodplain Management Planning Committee Progress Report Meeting Minutes**

**Thursday, May 28, 2020 | 4:00 p.m.**

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### **Attendees:**

Tara Paxton, Township of Brick  
Joann Bergin, Township of Brick Business Administrator  
Keith Rella, Township of Brick Administration, Environmental Commission, Green Team  
Robert Karl, Brick Township MUA  
Paul Mummolo, Township of Councilman, Planning Board  
Elissa Commins, Township of Brick Engineer  
Ken Mathis, Township of Brick DPW Director  
Arthur Halloran, Township of Brick Councilman  
Dan Newman, Township of Brick Construction Code Official  
Cynthia Addonizio-Bianco, Tetra Tech, Inc.  
Lisa Auermuller, Jacques Cousteau National Estuarine Research Reserve (JC NERR)  
Chris Huch, Tetra Tech, Inc.  
Steve Spect, Township of Brick MUA  
Ron Gaskill, Township of Brick OEM Coordinator  
Chief Riccio, Township of Brick Police Chief  
Ed Peters Township of Brick GIS  
Vinny Palmeri, Township of Brick Planning

- 1. Introduction**
  - Committee organization
    - Tara Paxton remains the lead, assisted by Elissa Commins
  - New committee members
    - Ron Gaskill-New OEM Director
- 2. Floodplain Management Plan Purpose/Background**
  - Chris Huch reviewed the original Floodplain Management Plan purpose and connections to the Community Rating System.
- 3. Timeline of Progress Reports**
  - For the 2020 process, the progress report will need to be completed prior to the October 15 CRS review date. The report will be prepared for September's meeting and in time for CRS recertification.
- 4. BATool<sup>SM</sup> Use for Updating Action Progress**





- Tetra Tech will be initiating the BATool<sup>SM</sup> to document specific action progress and sharing the log in and instructions after the meeting.
- Department heads should update their action status as soon as possible and will update mid-summer if need be.

## 5. Floodplain Management Planning Process

### a. Flood Event History

- The past year had numerous minor flooding events but no major flooding events and only 3 low end moderate flooding events.
- The Township of Brick Police Department has developed a Flood Unit Reporting system which will compile flooding events that the department receives calls about or responds to. This will be used to monitor flood events moving forward. The system was launched in February.
  - Chief Riccio is going to look to see if the Department has records prior to February to add to the report.
- No major flash flooding events occurred during the planning period.

### b. Changes in Risk Exposure

- Beach replenishment on Barnegat Bay Island is complete. The replenishment has resulted in wider beaches and the re-establishment of the dune system lost in Superstorm Sandy. This reduces risk of coastal flooding inputs from overwash.

### c. Flood Mitigation Success Stories

- ACT Engineering has studied 12 areas that flood regularly within the Township, to determine possible flooding solutions. Areas were selected based on elevation. The study found that backflow prevention valves or roadway elevation is the most cost-effective mitigation action the Township can take in most areas.
  - Focused in the Normandy Beach and Shore Acres area
- The Township has \$200,000 available for check valves to prevent backflow using capital funding.
  - 17 locations have been identified with an estimated cost of \$137,000. Additional money would be used to address additional locations that are continually identified.
- The Township is exploring applying for a New Jersey municipal aid grant to raise the roadway at Broad Avenue in Normandy Beach and enter a shared service agreement with Toms River as the roadway crosses through both municipalities. Both Townships are applying together. If awarded, Toms River would take the lead on the project.
- At the request of residents, the Township underwent a stormwater outfall plugging exercise in Normandy to determine if stormwater pipes are watertight or are being infiltrated by groundwater. The exercise





determined that the pipes are fairly watertight. These two locations. Were reconstructed in the past 15 years. Other locations may not have the same performance.

- 400 feet of roadway has been raised.
  - Normandy Beach was included in 2020 CDBG action plan for stormwater upgrades.
  - The Ocean County Hazard Mitigation Plan has been updated and adopted, resulting in the identification of Brick Township mitigation actions and the profiling of flood related hazards.
  - The Barnegat Bay Partnership Comprehensive Conservation and Management Plan was completed and submitted to EPA for approval.
  - Home elevations continue in the Township.
  - The Flood Warning and Response Plan was exercised and will be exercised again this summer.
- d. Review of Action Plan and Action Progress
- BATool<sup>SM</sup> will be used to review action plan progress in the next week. If updates are necessary in August, these will be made at that time.
- e. Recommended Changes or Enhancements?
- The Committee noted the desire to include information on sea level rise and future flooding conditions in the FMP update
- f. Impact of Other Planning Programs/Initiatives Involving Flood Hazard Mitigation?
- The Ocean County Hazard Mitigation Plan update was approved in 2019.
  - Flood Warning and Response Plan
    - Will require a tabletop exercise
  - USACE Back-Bay Study Interim Report
    - After the Interim Report was released, the Study lost its funding and is no longer moving forward.
- g. Public/Stakeholder Comments and Input
- Tara Paxton requested that Lisa Auermuller from JC NERR join the Township for a modified version of the annual flood information meeting to discuss the tools Rutgers has available to visualize current and future flood risk. JC NERR and the Township will work together to develop a format that is effective and within the state's coronavirus guidance.

## 6. Conclusion

- a. The meeting concluded at 4:50.





# AGENDA

## Township of Brick Floodplain Management Plan Floodplain Management Planning Committee Progress Report Meeting

Thursday, August 27, 2020 | 4:00 p.m.

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1. Introduction
2. Review of flood meeting
3. Flood Management Plan Progress Report Timeline
4. Review of Progress Report
  - a. Planning Committee
  - b. Flood Event History
    - i. Any additional flood events this summer?
  - c. Changes in Risk Exposure
    - i. Any additional mitigation actions undertaken?
    - ii. Status of redevelopment projects
  - d. Review of Action Plan and Action Progress
    - i. Recommended discontinues?
    - ii. Recommended new actions?
  - e. Recommended Changes or Enhancements
  - f. Miscellaneous
  - g. Public/Stakeholder Comments and Input
5. Final Draft of Progress Report
  - a. Complete edits
  - b. Submit report and letter to Council
6. Invites to future meetings
  - a. State representatives
  - b. Communities with similar flood exposure (Toms River?)
7. Conclusion





## **Township of Brick Floodplain Management Plan Floodplain Management Planning Committee Progress Report Meeting Minutes**

**Thursday, August 27, 2020 | 4:00 p.m.**

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### **Attendees:**

Tara Paxton, Township of Brick  
Joann Bergin, Township of Brick Business Administrator  
Elissa Commins, Township of Brick Engineer  
Arthur Halloran, Township of Brick Councilman  
Dan Newman, Township of Brick Construction Code Official  
Cynthia Addonizio-Bianco, Tetra Tech, Inc.  
Vanessa Dornisch, Jacques Cousteau National Estuarine Research Reserve (JC NERR)  
Chris Huch, Tetra Tech, Inc.  
Steve Spect, Township of Brick MUA  
H.L. Van Varick, Resident  
Ron Jampel, Resident  
Ron Gaskill, Township of Brick OEM Coordinator  
Chief Riccio, Township of Brick Police Chief  
Donal Ling, Township of Brick Deputy Chief of Police  
Ed Peters Township of Brick GIS  
Stan Hales, Barnegat Bay Partnership

- 1. Introduction**
  - Tara Paxton welcomed attendees to the meeting.
  - Chris Huch from Tetra Tech discussed the agenda for the meeting.
- 2. Review of Flood Meeting**
  - Ms. Paxton discussed the annual Flood Meeting. A Flood Information Session called “Know Your Flood Hazard and What You Can Do About It” was held on August 18th via ZOOM which featured a presentation called “Getting to Resilience: Flood Risk and Solutions” by The Jacques Cousteau National Estuarine Research Reserve ( JC NERR). Planning Committee member Vanessa Dornisch from JC NERR discussed floodplain management and potential engineering and land use solutions that other coastal communities have used for successful floodplain management. The meeting also included an informational session by the Township staff on how to request and find information relative to flood risks, information and more.





### 3. Floodplain Management Plan Progress Report Timeline

- Mr. Huch explained that the report update process is on schedule. For the 2020 process, the progress report will need to be completed prior to the October 15th CRS submittal deadline. The report will be prepared for September's Board meeting and in time for CRS recertification. This meeting represents the second and final FMP Planning Committee meeting of the year prior to the finalization of the draft report.

### 4. Review of Progress Report

- Mr. Huch guided attendees through a review of the sections of the FMP Progress Report, discussing what each section entailed and asking for additional input from the committee.
  - Flood events from the Township's Flood Unit Report are being included in the plan.
    - Arthur Halloran asked if this information could be used in the future to help prove that mitigation actions such as roadway elevations and check valves are effectively reducing flooding. Mr. Huch explained that it is likely this could be done in the long term due to the level of detail provided by the reporting about specific flooding. Similar flood events could be compared before and after mitigation to determine if the Flood Unit is required to respond at the same rate and to the same conditions.
    - Ms. Paxton let Mr. Huch know that additional events are now available. Mr. Huch will add these events to the final progress report.
  - Additional information was provided on the status of development for the Normandy Beach and Camp Osbourne sites.
  - Clarification was provided on roadway elevations at Mathis & Shore Drive
  - Ms. Paxton explained the Township's new elevation certificate review process. Numerous staff now review elevation certificates multiple times to catch any possible errors.
  - Ms. Paxton explained that Brick Township's Office of Emergency Management has developed a Preparedness Guide which will be distributed at Township schools covering numerous hazardous events, including flooding.
  - Mr. Huch noted that all of the actions in the Floodplain Management Plan were successfully reviewed using the BATool<sup>SM</sup> by Brick Township Department heads.
  - Mr. Verrick recommended a new action be added to the action plan to address impervious surfaces in the Township which contribute to flooding. Mr. Verrick noted that limitations have already been adopted





for commercial properties within the Township. Ms. Paxton let the committee know that impervious surface coverage limits recently came up during a Planning Board meeting. As such, Brick Township Planning has drafted an ordinance to establish impervious surface coverage limits for residential properties. The committee agreed to add the adoption of an ordinance as a new action in the action plan.

**5. Final Draft of Progress Report**

- a. Mr. Huch will complete edits to the draft of the progress report based upon the meeting discussions. The final draft will be recirculated to the Planning Committee before being forwarded to the Township Committee

**6. Invites to Future Meetings**

- a. Mr. Huch reminded the committee that in the previous year, the Planning Committee discussed inviting State representatives and other relevant experts to FMP Committee meetings. Due to coronavirus limitations, this was not acted upon in 2020, but the Committee agreed this should be a goal for 2021 meetings.

**7. Conclusion**

- a. The meeting concluded at 4:55.

