



TOWNSHIP OF BRICK FLOODPLAIN MANAGEMENT PLAN ANNUAL PROGRESS REPORT 2022

Approved
September 8th, 2022

Prepared by:
Township of Brick, New Jersey

Tara B. Paxton, MPA, PP, AICP
Township Planner
CRS Coordinator

Vinnie Palmieri
Planning Analyst

Ed Peters
GIS Analyst

| | |
|---|-----------|
| TOWNSHIP OF BRICK FLOODPLAIN MANAGEMENT PLAN | 1 |
| ANNUAL PROGRESS REPORT 2022 | 1 |
| TOWNSHIP OF BRICK FLOODPLAIN MANAGEMENT PLAN | 3 |
| ANNUAL PROGRESS REPORT | 3 |
| BACKGROUND..... | 3 |
| <i>Purpose</i> | 3 |
| <i>Reporting Period</i> | 4 |
| <i>Planning Committee</i> | 4 |
| <i>Progress Report Approval</i> | 5 |
| SUMMARY OVERVIEW OF THE PLAN’S PROGRESS | 5 |
| FLOOD EVENTS WITHIN THE PLANNING AREA | 6 |
| CHANGES IN RISK EXPOSURE IN THE PLANNING AREA | 8 |
| FLOOD MITIGATION SUCCESS STORIES | 8 |
| CONTINUING PUBLIC INVOLVEMENT..... | 9 |
| REVIEW OF THE ACTION PLAN | 9 |
| RECOMMENDATIONS FOR CHANGES OR ENHANCEMENTS | 31 |
| ATTACHMENTS..... | 32 |

TOWNSHIP OF BRICK FLOODPLAIN MANAGEMENT PLAN ANNUAL PROGRESS REPORT

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 2021 Floodplain Management Plan was produced for our Cycle Review. The plan can be viewed on-line at:

<https://www.bricktownship.net/wp-content/uploads/2022/06/2021-Township-of-Brick-Floodplain-Management-Plan.pdf>

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. The 2021 Cycle Review the Township staff achieved a Class 5 rating through point performance, earning 2,602 credit points, however the NFIP is keeping the Township at a Class 6 rating until a compliance audit is completed in 2023. 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. Upon completion and compliance with the NFIP after the audit, the Township will be eligible for a 25% 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 2021 through August 2022.

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 |
|----|---|--------------------------------|----------------------------------|--|-------|-----------------------|------------|
| 1 | Tara Paxton, | Brick Township Planning | Township of Brick | Chair/Resident | x | | |
| 2 | Elissa Commins | 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 | Steve Krakovsky | Brick - DPW Director | Public Works Director/ Resident | Resident | x | | |
| 5 | Ron Gaskill | Brick Township OEM Coordinator | Brick Township | Office of Emergency Management | x | | |
| 6 | Arthur Halloran | Councilman | Township of Brick | Council Rep. / Resident | | | x |
| 7 | Chief James Riccio (Alt. Don Ling) | Brick Township Police | Brick Township | Police | x | | |
| 8 | Lisa Auermuller | JCNRR | Stakeholder/ Academia | Non govt stakeholder | | x | |
| 9 | L. Stanton Hales, Jr. | Barnegat Bay Partnership | Stakeholder/ Watershed Committee | Non-govt stakeholder | | x | |
| 10 | Rob Karl (Steve Specht) (Alternate - Steven Specht) | Brick Township MUA | Brick MUA | Stakeholder | | x | |
| 11 | David Chadwick | Board of Adjustment Chairman | Township of Brick | Zoning Board Representative/ Resident | x | | |

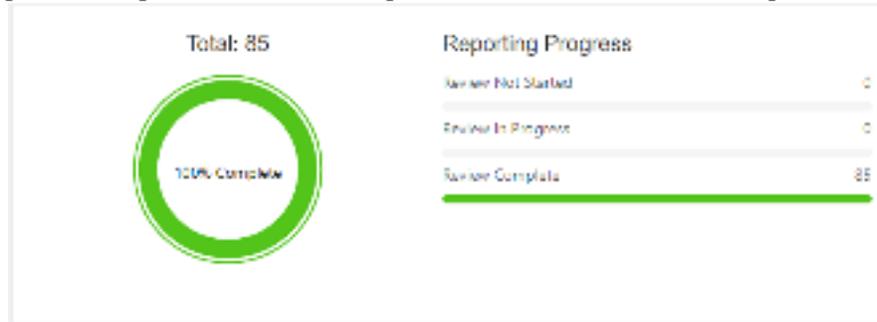
| | Member | Title | Representing | Committee Title | Gov't | Non-Gov't Stakeholder | Non-voting |
|----|------------------|----------------------|---|-----------------|-------|-----------------------|------------|
| 12 | Brian Michigan | Public | Resident/Penn State Meteorology Student | Resident | | x | |
| 13 | Ron Jampel | Public | Resident | Resident | | x | |
| 14 | Emil Ranaudo | Public | Resident | Resident | | x | |
| 15 | Brian Jones | Public/Teacher MATES | Resident | Resident | | x | |
| 16 | Christina Weaver | Public | Resident | Resident | | x | |

Progress Report Approval

The Floodplain Management Planning Committee met on March 10, 2022, June 2, 2022, July 14, 2022 and September 8, 2022 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 final meeting held on September 8, 2022.

SUMMARY OVERVIEW OF THE PLAN'S PROGRESS

The performance period for the 2021 Township of Brick Floodplain Management Plan became effective on October 10, 2021 with the final approval of the plan by FEMA. The initial performance period for this plan will be 5 years, with an anticipated update to the plan to occur before January 26, 2026. As of this reporting period, the performance period for this plan is considered to be 2% complete. As of this reporting period, the performance for this plan is considered to be 2% complete; most significant is that 56% of our



actions are conducted as ongoing capabilities. The 2021 Township of Brick Floodplain Management Plan has targeted 85 hazard mitigation actions to be pursued during the 5-year performance period. As of the reporting period, the following overall progress

can be reported:

- 29 out of 85 initiatives (34%) reported progress toward completion.
- 4 out of 85 initiatives (5%) reported no action taken.
- 2 out of 85 initiatives (2%) were completed.
- 48 out of 85 initiatives (56%) indicated work is conducted as an ongoing capability.
- 2 initiatives were removed due to elimination of a program.

The Township Floodplain Management Planning Committee works with the Township Staff to complete the reporting in a software program called BATool. The BATool program packages the tracking of each of

the mitigation actions and provides the opportunity to record the Action ID, Description of the Action, Review Status, Lead Agency and the date of the review. More importantly, it helps to organize the specific problems mitigated by goals and



objectives, address prioritization and the CRS category addressed by the action. This tool provides the municipality with a way to manage the CRS program and all Floodplain Mitigation activities in one place and track them to effectively manage programs, projects, activities, funding and priorities in one place where multiple departments can view and assess progress.

FLOOD EVENTS WITHIN THE PLANNING AREA

During the reporting period, there was one coastal flood event, one snow storm event and one blizzard event recorded 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 excerpted as follows:

October 28-30, 2021 Coastal Flood Event -Strong high pressure located in eastern Canada and slow-moving low pressure approaching from the southeastern states resulted in a prolonged onshore flow along the Middle Atlantic coast. There were three rounds of moderate flooding in the tidal areas of Ocean County from October 28 through October 30. Widespread moderate flooding occurred in the tidal areas around Barnegat Bay in Ocean County. There were many road closures with the flood waters affecting numerous homes and businesses. The tide gauge at Mantoloking reached a level of 3.11 feet MLLW. The same slow moving, strengthening low pressure strong high pressure located in eastern Canada and approaches from the southeastern states resulted in a prolonged onshore flow along the Middle Atlantic coast. The easterly to northeasterly winds became strong as the pressure gradient tightened between the nearby high- and low-pressure centers. High wind conditions were mainly confined to near-coastal portions of the mid-Atlantic. This system was also responsible for producing significant coastal flooding due to the prolonged onshore flow. A wind gust of 69 mph was measured at the Tuckerton Weatherflow gauge. Several other gusts near or above 60 mph were also measured in eastern Ocean County.

January 6-7, 2022 – Snow Storm Event- A developing wave of low pressure brought a period of snow to the eastern mid-Atlantic during the overnight of January 6 into the morning of January 7. The developing low was fast-moving, with steady precipitation lasting only 6 to 8 hours in many areas. However, the storm brought a widespread swath of 3 to 6 inches of snow to most of the eastern mid-Atlantic. Some portions of eastern New Jersey saw some slightly higher amounts of 6 to 7 inches, but in general it was a fairly uniform snowfall for most areas. With most of the accumulation occurring near or before dawn, roadway conditions were rendered poor for the Friday morning commute on the 7th, causing many businesses and schools to close or shift to virtual operations for the day. One notable aspect of this event was its higher than usual snow to liquid ratios for the mid-Atlantic. Temperatures were cold enough for precipitation to fall as all snow. With plenty of cold air at the surface and aloft, snow tended to be light and fluffy, causing it to pile up quickly despite liquid equivalents being a rather paltry 0.20 to 0.50 inches in most of the region. The snowfall ratio, which often averages close to 10:1 or lower (i.e., 1 inch of liquid would equate to 10 inches

of snow) was closer to 15:1 or even 20:1 in most reports containing both a snowfall and liquid equivalent measurement. A widespread 3 to 5 inches of snow fell.

January 29-30, 2022 – Blizzard Event -A strong coastal storm affected the eastern mid-Atlantic and Northeast US on January 28-29, 2022. As a deep trough moved into the Southeast US, low pressure began to develop off the coast of the Carolinas during the afternoon of January 28. A high amplitude upper level steering pattern caused the developing low to begin moving north-northeastward, paralleling the US East Coast. In a classic Nor'easter evolution, the developing low phased with a frontal system over the mid-Atlantic as it moved north. This frontal system had brought light snow to portions of the mid-Atlantic during the day on the 28th, and it also brought a fresh influx of cold air to the region. As it phased with the developing coastal storm, the coastal storm began to explosively intensify as it passed offshore of Delmarva. The strengthening storm spread precipitation back into the region, which fell as all snow thanks to the fresh injection of Arctic air. With the center of the low passing a few hundred miles offshore, the heaviest snow fell near the coast, from the night of the 28th through the morning of the 29th. In eastern New Jersey and coastal Delaware, several hours of heavy snow resulted in a widespread swath of 12 to 18 inches of snow. Amounts steadily tapered off heading further inland, though some snow fell in all of the local area. In addition, with the rapid strengthening of the low, strong winds also occurred, especially near the coast. Gusts of 40 to 50 mph with a few over 60 mph were observed. The combination of strong winds and heavy snow led to whiteout conditions along the coast, and was sufficient for blizzard criteria to be met along both the New Jersey coast and the Delaware Beaches, making this the first blizzard to affect any portion of the region since 2018. Snow gradually lost intensity and came to an end during the afternoon of the 29th, as the still strengthening low continued moving northward, bringing blizzard conditions and even heavier snow to southeast New England. A widespread 12 to 18 inches of snow fell. A trained spotter in Point Pleasant Beach reported 17.5 inches of snow. In addition, numerous coastal mesonets with wind data along with webcams to verify visibility were used to confirm a period of blizzard conditions occurred from around 7AM to 11AM on the 29th.

In addition, the Township Police Department utilizes the NIXLE system to provide advanced warning to residents when there are road closures due to flooding. The following incidents resulted in NIXLE alerts, Facebook posts and website notices:

- **September 1, 2021** - The following roadways were obstructed by flooding: 6th Avenue, Broad Avenue and 7th Avenue and Broad Avenue
- **October 26th, 27th, 28th, 29th & 30th 2021** - The following roadways were obstructed by flooding: Princeton Avenue, Bayview Drive, holly Acres Drive, Vanard Drive, Drum Point Road, 7th Avenue, Broad Avenue, Knoll Crest Avenue, Hamilton Drive, Mandalay Road, 5th Street, Blue Cedar Drive, Bay Harbor Boulevard, State Route 35, West Marion Street, Mathis Drive, Island Drive, Island Court, Carrol Fox Road, Hartford Place, and 98 Seagoing Road
- **November 12, 2021** - The following locations and roadways were obstructed by flooding: 7th Avenue and 541 Broad Avenue
- **January 17, 2022** – The following locations and roadways were obstructed by flooding: Bayview Drive, Shore Pine Drive, Knoll Crest Avenue, Hamilton Drive, Saint Lawrence Boulevard and Cadiz Drive
- **April 18, 2022** - The following locations and roadways were obstructed by flooding: Vanard Drive and Mathis Drive
- **June 27th, 2022** – The following locations and roadways were obstructed by flooding: Adamston Road, Drum Point Road, Normandy Drive and Broad Avenue.

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

- At the Barnegat Bay at Mantoloking 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, check valves are continually being installed and replaced 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. Additional installation of check valves are planned dependent on funding.
- The redevelopment of single-family homes on the barrier island continues to progress. The redevelopment of the Camp Osborn Sea Bay property on the median between Rt. 35N and Rt. 35S is nearing completion. The Oceanside development is in the permitting stage and is anticipated to begin in the Spring of 2023. The redevelopment is inside the SFHA.
- Beach replenishment on Barnegat Bay Island is being planned for re-nourishment. The replenishment will result in wider beaches and re-nourishment of areas that have lost sand since the last project. This reduces risk of coastal flooding inputs from over-wash.
- Committee members noted that impervious surface and development upstream of Brick is continuing. The Township adopted its own impervious cover limits on residential properties and has begun enforcing those standards.
- Township professionals have continued working with property owners to ensure 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:

- The Township contracted with TetraTech, Inc. to utilize the software BaTool to track and prepare the Annual Update to this report. Staff were able to utilize and manage the software to complete this process without the need for a consultant.
- The Township Engineering Division submitted a Township Wide Dredge Permit that we are anticipating to be approved by NJDEP and the ACOE. The Division is also in the process of drafting a Back-Bay Management Plan.
- The Township Engineering and Planning Divisions prepared and submitted a grant application to the Ocean Wind Pro-NJ Grantor Trust to complete a Resiliency Project in the Seawood Harbor Neighborhood that would result in the raising of roadways that regularly flood, restore marshes, stabilize shorelines and restore beaches with suitable dredge materials.
- The Township partnered with the Department of the Interior to apply for a NOAA grant to conduct the Edwin B. Forsythe National Wildlife Refuge Restoration Project to restore marshes with dredge materials to stabilize wetland shorelines. This project is permitted and shovel ready.
- The Township Staff completed the CRS 5 Year Cycle review and earned 2,602 Points increasing our points by over 100 to meet Class 5 category. However, will be held at a Class 6 until FEMA completes a compliance audit.
- 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 approved by the EPA.
- Home elevations continue in the Township.
- 2,700 mailings were sent to residents in the Repetitive Loss Analysis Area providing them with flood information and invitations to the Flood Info Session held on June 23, 2022.
- 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. As a result, both Normandy Beach and Shore Acres areas have been identified as potential candidates for BRIC funding.
- The Township has spent \$120,619 for check valves to prevent backflow using capital funding in various low-lying areas throughout the municipality.
- The Township received a New Jersey municipal aid grant in the amount of \$417,028 to raise the roadway at Broad Avenue in Normandy Beach and entered into a shared service agreement with Toms River because the roadway crosses through both municipalities. Toms River has taken the lead on the project.
- The intersection of Mathis Drive and Vanard Drive has been elevated by over a foot to allow for passage at typical high tides.
- BTMUA completed the improvements to the Laurel Brook Wastewater Pump Station that was severely impact by Hurricane Irene. Funding was provided through FEMA and the New Jersey Water Bank.
- BTMUA conducted several Metedeconk Watershed public education and outreach programs involving stormwater and floodplain management, these include build-your-own rain barrel workshops in Brick, Jackson and Lakewood Townships, exhibits at the Brick Green Fair, and school-age programs at St. Dominic’s School and Midstreams Elementary School.

CONTINUING PUBLIC INVOLVEMENT

The Township held a Flood Information Session on June 23, 2022 at the Municipal Complex. It was moderately attended by approximately 10 residents. The Township sent out 2,700 mailings to the residents in the Repetitive Loss Areas, surveyors, insurers and bankers, and advertised on social media sites.

Four Planning Committee progress report meetings were held specifically on the Floodplain Management Plan during the reporting period and the Township conducted a number of outreach activities related to CRS participation and flood education and awareness these include 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 have flood information available at the Green Fair, 4 SummerFest events, multiple Farmers Markets, and Summer Concerts at Traders Cove. A total of 8 events were attended where information was made widely available.

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

**TABLE 2
ACTION PLAN MATRIX**

| Action Taken? | Timeline | Priority Changed? | Comment (Describe progress or changed priority) | Status |
|--|---------------------|-------------------|--|--------------------|
| Township of Brick | | | | |
| 2021-BFMP-1 - Mandate Removal of Floatable Property Prior to Storm Events: BT Code Enforcement will work to supplement the Flood Prevention Ordinance or add 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. 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. | | | | |
| Yes | Short Term (<5yrs.) | No | The recommendation from this office is to consider the ordinance, however to include the Police Department as an enforcing agency. Code Enforcement has a limited staff. Prior to a storm it would be extremely difficult to check every floating dock. Manpower would need to be supplemented with other Township Employees. The suggestion is to list the Police in addition to Code Enforcement as divisions responsible for the enforcement of the regulation. | In Progress |
| 2021-BFMP-10 - Long-Term Infrastructure Plan for Sea Level Rise and Climate Change: BT Engineering will start an outline for a long-term infrastructure plan for sea level rise and climate change. The plan would 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, etc. | | | | |
| Yes | Long Term (5+yrs.) | Yes | Several lower intersections are planned are in the process of being elevated to a minimum elevation of 2.0. Additionally, neighborhood development plans have been prepared to seek grant funding to assist with the tremendous costs associated with roadway elevation and property restoration. | Ongoing Capability |
| 2021-BFMP-11 - Construct Stormwater Gravel Wetlands: BT Engineering will consider the construction of stormwater gravel wetlands, which rely on a dense root mat, crushed stone, and an anaerobic and microbe-rich subsurface when replacing or constructing new stormwater basins. | | | | |

| | | | | |
|--|---------------------|-----|---|--------------------|
| Yes | Long Term (5+yrs.) | No | NR | Ongoing Capability |
| 2021-BFMP-12 - Create Wetlands in the Upland Areas to Capture Stormwater: BT Engineering consider the concept of creating wetlands out of open space in upland areas to capture stormwater upstream of residential development to reduce flood risks. | | | | |
| Yes | Long Term (5+yrs.) | Yes | | Ongoing Capability |
| 2021-BFMP-13 - Coordinate with USACE Back Bay Study: The Township will coordinate with the USACE as it completes the Back Bay Study and consider partnering on implementation of measures developed by the study that result in cost-effective protections for the Township. | | | | |
| Yes | Long Term (5+yrs.) | Yes | This project was placed on hold for lack of funding in 2020-2021; however, it looks as though funding for its continuance has been secured for 2022. | Ongoing Capability |
| 2021-BFMP-14 - Update Flood Damage Prevention Ordinance: BT Engineering will oversee the update of the Flood Damage Prevention Ordinance to meet updated CRS and NJ DEP model language. | | | | |
| Yes | Short Term (<5yrs.) | No | This ordinance has been drafted and reviewed by the NJDEP. It is ready to present to the Land Use Committee of Council for consideration at an upcoming meeting. | In Progress |
| 2021-BFMP-15 - Natural and Beneficial Floodplain Function Integration: The BT Environmental Commission will provide recommendations to integrate natural and beneficial floodplain function to appropriate Township plans including the Natural Resource Inventory and Open Space & Recreation Plan. | | | | |
| Yes | Short Term (<5yrs.) | Yes | The NRI/ERI has been revised and a draft plan has been circulated to the Environmental Commissioners and Township staff for review. The Natural and Beneficial Function assessment will be added to the NRI/ERI as an addendum. | In Progress |
| 2021-BFMP-16 - Incorporate Flood Resistant Design in Baywood Sewer Main: BT MUA will complete a sewer main replacement in the Township's Baywood section. The replacement will incorporate flood resistant design to prevent flood damage and I&I. | | | | |
| Yes | Short Term (<5yrs.) | Yes | | In Progress |

| | | | | |
|--|---------------------|-----|--|-------------|
| 2021-BFMP-17 - Provide Input on Potential Stormwater Management Ordinance Best Management Practices: BT MUA will supply BT Planning with a draft stormwater ordinance for the Township to consider which provides additional emphasis on Green Infrastructure stormwater management techniques, such as bio-swales, rain gardens, offline regional treatment, and vegetative rooftop covers. | | | | |
| Yes | Short Term (<5yrs.) | Yes | The latest draft of the model ordinance has been shared with Brick Township Planning and Engineering Departments. Elements of the model ordinance have been incorporated into the NJDEP's model ordinance. | In Progress |
| 2021-BFMP-18 - Identify and Restore Impaired Stormwater Management Facilities: BT MUA will identify and restore impaired stormwater management facilities to improve infiltration and reduce runoff throughout the watershed. Many project sites are listed in the Metedeconk Watershed Plan and additional sites are continually being identified through field evaluations. These projects will reduce runoff and improve water quality. Completed projects within the Township include: • BTMUA campus stormwater improvements (Brick Twp) • Brick Plaza stormwater BMP demonstration projects (Brick Twp) New stormwater improvement projects are underway in neighboring Howell and Lakewood Townships. | | | | |
| Yes | Short Term (<5yrs.) | No | Stormwater management facility improvement/retrofit projects from the Metedeconk River Watershed Protection & Restoration Plan are currently underway in Howell, Lakewood and Jackson Townships. | In Progress |
| 2021-BFMP-19 - Increase Sea Level Rise Resiliency for Water Supply Operations: For H2O supply operations BT MUA will work to evaluate and build resiliency for the long-term implications of sea-level rise for water supply operations. BTMUA has completed a water supply master plan with a planning horizon of 20 years. 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. Two high-priority projects were initiated during 2020. The first project is the expansion of the normal operating range of the Brick Reservoir, for which grant funding has been received from FEMA PDM. The second project is an evaluation of the Metedeconk River surface water intake's vulnerability to sea-level rise and potential relocation alternatives. | | | | |
| Yes | Long Term (5+yrs.) | No | | In Progress |
| 2021-BFMP-2 - Use Re-sale Certification of Occupancy to Regulate safe Re-Building Practices: BT Code Enforcement will establish a system to use re-sale certification of occupancy to catch up with substantially damaged structures and regulate safe re-building practices It is the intent of the staff to continue to request re-sale CO's to the Township Council for their approval. | | | | |

| | | | | |
|---|---------------------|-----|---|--------------------|
| Yes | Long Term (5+yrs.) | Yes | The Township Council is not in favor of requiring retail Certificate of Occupancy certificates. We educate the public and encourage them to inquire about the property's history before buying to determine its flood zone location and its history as a substantially damaged property. | Discontinued |
| 2021-BFMP-20 - Complete Communications Shed Installation: BT OEM will oversee completion of the installation of a communication shed to increase communications capacity during emergency events. | | | | |
| Yes | Short Term (<5yrs.) | Yes | A construction contract is expected to be awarded at the May 24 Council meeting for the completion of a Special Operations Building at Town Hall. This building includes a secondary communication area for dispatch, OEM and PD. | In Progress |
| 2021-BFMP-21 - Retrofit Structures Located in Hazard-Prone Areas: BT Planning continues work to reduce the number of repetitive and severe repetitive properties within the Township. BT Planning will lead efforts to 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. | | | | |
| Yes | Long Term (5+yrs.) | No | The Township continues to update the Repetitive Loss property documentation for the CRS annual process. The Township now has recorded a reduction in the repetitive loss properties from 94 in 2018 to 68 in 2021. The Township completed its 2021 Repetitive Loss Area Analysis based on these properties and continues to send out 2,700 mailings to these areas to inform the property owners of the availability of information and resources available to mitigate these properties. | Ongoing Capability |
| 2021-BFMP-22 - Post-Disaster Recovery Plan: BT Planning will pursue funding for a post-disaster recovery plan to outline alternatives for prudent recovery from flood events. Emphasis will be to guide redevelopment of impacted areas to reduce future vulnerabilities. | | | | |
| Yes | Short Term (<5yrs.) | No | The Township is continuing to research funding opportunities to develop post-disaster recovery plans to supplement the capacity and capability of the Township's inspections, engineering, emergency management and public works departments to | Ongoing Capability |

| | | | | |
|---|---------------------|-----|---|--------------------|
| | | | most adequately respond to disasters through reconstruction, public safety and debris management. | |
| 2021-BFMP-23 - Post-Disaster Policies and Ordinances: BT Planning will consider the development of post-disaster policies and ordinances to guide safer redevelopment after major disaster events. | | | | |
| Yes | Ongoing | Yes | The Township continually reviews post-disaster policies and draft ordinances to guide safer redevelopment after major disaster events and remains in compliance with State of New Jersey and FEMA development regulations. The latest Flood Damage Prevention Ordinance was adopted in December of 2021. | Ongoing Capability |
| 2021-BFMP-24 - Incorporate Resilience Concepts Identified in the Township’s Resiliency Policy: BT Planning will 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. | | | | |
| Yes | Short Term (<5yrs.) | No | The Township's Plan Endorsement Application is being reviewed and we anticipate adoption of our Resiliency Policy. "The mission of the Township of Brick is to promote a safe, protected and well-informed community with a comprehensive set of tools and the necessary capacity to identify and address vulnerability for flood related hazards. The Township of Brick will strive to protect and improve the health, safety and quality of life of community members and remain a safe, resilient and prosperous place to live." | In Progress |
| 2021-BFMP-25 - Restore Bayside Shorelines and Islands to Provide for Increased Flood Protection: BT Planning will explore the possibility of reinforcing degraded shorelines and islands with dredge material, thin layer deposition, living shorelines, and other appropriate methods. The Township proposes to utilize a nearby source of dredge material authorized by the New Jersey Department of Environmental Protection and the U.S. Army Corps of Engineers through a Township-wide Dredge Permit to put to beneficial reuse within the community the object is to improve resiliency, restore wetlands and sandy beaches and provide flood protection. The sediment sampling indicates that there is material suitable to support a three-pronged approach for this project: 1. roadway base material to utilize in elevating the access road, 2. silty sand suitable for marsh restoration and shoreline stabilization. 3. sand deposits suitable for beach restoration. This project will occur in the Seawood Harbor neighborhood of the Shore Acres neighborhood on the Barnegat Bay. | | | | |

| | | | | |
|---|------------------------|-----|---|-------------|
| Yes | Short Term (<5yrs.) | No | The Township has submitted an expression of interest for grant funding to the Ocean Wind Pro-NJ Grantor Trust to complete a project to utilize dredge materials for the following resiliency components: roadway elevation and coastal evacuation improvement, coastal wetland and habitat restoration, beach replenishment and wave attenuation through restoration of sandy beaches and shorebird habitat. | In Progress |
| 2021-BFMP-26 - Develop a Program for Public Information: The Township will develop a Program for Public Information (PPI) to develop, oversee, and improve on the Township's flood-related outreach. The PPI will be made up of a committee similar to the Floodplain Management Planning Committee and explore new outreach methods and populations that are not reached by current methods. | | | | |
| Yes | Short Term (<5yrs.) | No | The Township will explore the possibility of creating a PPI over the next few years in order to obtain magnified credits in the CRS 5-year Cycle Review in 2026. | In Progress |
| 2021-BFMP-27 - Consider a Hazard Disclosure Policy: Although disclosure is a state requirement, surveying has revealed that many homebuyers are not alerted to flood risk when they purchase their home. BT Planning will explore different options to increase the disclosure of hazards during real estate transactions. | | | | |
| Yes | Short Term (<5yrs.) | Yes | The Township will discuss the Hazard Disclosure Policy with the Floodplain Management Committee to determine recommendations for a requirement for hazard disclosure at time of property sales. The Township does not require a resale certificate; therefore, it would not be achievable until such time that we institute a resale certificate for residential properties. | No Progress |
| 2021-BFMP-28 - Develop Hazard Disclosure Outreach for Realtors: BT Planning will develop and carry out outreach to realtors on the state's hazard disclosure policy and where the necessary information that is required to be transmitted to prospective buyers can be found. | | | | |
| Yes | Short Term (<5yrs.) | No | As with the Hazard Disclosure Policy, the Township does not currently have a mechanism to provide hazard disclosures at the point of sale for residential properties due to the fact that we do not have resale certificates as a requirement. We do provide hazard disclosures to inquirers and to real estate agents and we also provide annual mailings to realtors to inform them of our flood information services and mandatory purchase of flood insurance requirements. | No Progress |

| | | | | |
|---|---------------------|-----|---|-------------|
| 2021-BFMP-29 - Develop Elevation Certificate Outreach for Surveyors: BT Planning will develop and carry out outreach to surveyors on the proper way to complete and submit elevation certificates. | | | | |
| Yes | Short Term (<5yrs.) | No | The Township Engineering and Planning department completed mailings to over 30 surveying companies in the area in May of 2022. Annually, we will continue the mailings to inform surveyors of resources available to them to complete and submit accurate elevation certificates. These mailings were sent out as a component of our mailings to lenders, realtors and insurance companies to meet the targeted mailing requirement in CRS. This outreach will be an on-going capability. | Completed |
| 2021-BFMP-3 - Develop Design Standards to Address the Visual Impact of Property Mitigation: BT Code Enforcement will develop design standards to address the visual impact that property mitigation measures, such as elevated bulkheads, building elevation, elevating buildings, have on the Township. Some standards have been developed for plantings and lattice for elevated homes. A complete set of standards will need to be developed. This work is expected to coincide with updates to the Township's Neighborhood Plans. | | | | |
| Yes | Long Term (5+yrs.) | Yes | The Township has not developed design standards independent of the Township Neighborhood Plans. The Township Neighborhood Plans have design standards and have been provided to residents when requested. Planning Staff will pursue specific design standards in the coming years with the Land Use Committee. | In Progress |
| 2021-BFMP-30 - Consider Use of Citizen Reporting Applications to Record Flooding Events: BT Planning will consider crowdsourced data gathering of flooding events through applications like the MyCoast application advocated by NJ DEP and the JCNERR. | | | | |
| Yes | Short Term (<5yrs.) | No | The Township participated in the King Tide data gathering in 2021 through JCNEER and NJDEP by advertising the My Coast app through the Township website and Facebook. https://mycoast.org/nj . | Completed |
| 2021-BFMP-4 - Training and Implementation of View Works Application for Drainage Maintenance: BT DPW will train DPW and Parks staff on how to use the View Works application for drainage maintenance. The application will allow for recording of drainage system maintenance to support CRS reporting and increase efficiency. | | | | |
| Yes | Short Term (<5yrs.) | No | | In Progress |

| | | | | |
|--|------------------------|-----|---|--------------------|
| 2021-BFMP-5 - Elevate Municipal Facility Electrical Equipment above the Base Flood Elevation: BT Engineering will 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. This includes elevation of the final generator at Traders Cove. | | | | |
| Yes | Short Term (<5yrs.) | Yes | Annually, the Township addresses the elevation of electrical equipment during its capital planning annually. | Ongoing Capability |
| 2021-BFMP-6 - Tide Valve and Check Valve Installation: BT Engineering will lead the installation of tide valves and check valves to prevent backflow of the stormwater system in coastal areas. The Township has contract for purchase of check-valves and has been installing as manpower permits. | | | | |
| Yes | Short Term (<5yrs.) | No | Check Valves are currently funded for storm drains with grate elevations at or below elevation 2.0 in the NAVD. | In Progress |
| 2021-BFMP-7 - Perform Feasibility Study for the Installation of an Outlet Structure on Cherry Quay by Cross Trees Road: BT Engineering will perform a study to determine the feasibility of the installation of an outlet structure on Cherry Quay by Cross Trees Road. 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. 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. | | | | |
| Yes | Short Term (<5yrs.) | Yes | This installation is being considered with the resurfacing of the roadways in the immediate vicinity, which is currently funded for construction. | In Progress |
| 2021-BFMP-8 - Elevate Floodprone Roads: BT Engineering will identify and roads, particularly those adjacent to waterways. The Township has set aside funding for the design of Shore Drive and Vanard Drive. | | | | |
| Yes | Short Term (<5yrs.) | No | The elevation of this intersection is under construction. | In Progress |
| 2021-BFMP-9 - Consider Raised Roads with Side Protection: BT Engineering will consider raised roads with side protection, which can dually function as levees, near Barnegat Bay. The Township is considering this action on roads such as Channel Drive. Implementation is dependent on additional funding/grants. | | | | |

| | | | | |
|--|------------------------|-----|--|-------------|
| Yes | Short Term (<5yrs.) | Yes | Bay Shore Drive bulkhead was completed and the Channel Drive Bulkhead is funded for construction, | In Progress |
| 2021-BFMPO-1 - Utilize Post-Disaster Assistance: The Township Administration will engage with NJOEM, FEMA, and other applicable agencies to remain aware of post disaster assistance. | | | | |
| Yes | Other, please specify | No | The Township remains aggressive with its funding applications. Currently, the Township has a BRIC (Building Resilient Infrastructure & Communities) grant pending with NJOEM/FEMA. This application is requests funds for roadway elevation in low-lying areas. We also have a grant application submitted in the Ocean Wind Pro-NJ Grant program for Resiliency in the Seawood Harbor Neighborhood. The idea would be to put the areas dredge material to beneficial re-use for marsh restoration, beach replenishment and roadway elevation. | In Progress |
| 2021-BFMPO-10 - Improve Street Sweeping to Reduce Entry of Pollutants and Sediment into the Stormwater System: The BT DPW will regularly seek to improve street sweeping (currently employed through a vacuum based sweeper that allows for year-round street sweeping) methods and the frequency of sweeping in order to reduce pollutants and sediment entrained in runoff from impervious streets and parking lots. | | | | |
| Yes | Other, please specify | Yes | | In Progress |
| 2021-BFMPO-11 - Supplement the Stormwater Management Plan to Include Drainage System Maintenance: BT DPW will 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. | | | | |
| Yes | Other, please specify | No | | In Progress |
| 2021-BFMPO-12 - Conduct Tree Vegetation Maintenance: Tree and vegetation maintenance takes place at municipal facilities. BT DPW will continue tree vegetation maintenance for hazardous tree removal by the Parks crew in order to reduce falling trees and debris from causing blockages and snags in the natural and man-made drainage system. | | | | |

| | | | | |
|--|-----------------------|-----|---|--------------------|
| Yes | Other, please specify | No | | In Progress |
| 2021-BFMPO-13 - Promote Construction Practices to Maintain Soil Health and Reduce Compaction: BT Engineering will 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 that maintain soil health and reduce compaction. The Township will continue to follow regulatory guidelines and ensure that all buildings that require a soil permit, receive it. | | | | |
| Yes | Other, please specify | No | | Ongoing Capability |
| 2021-BFMPO-14 - Provide Technical Information and Guidance to Homeowners Interested in Flood Mitigation Techniques: BT Engineering will continue to publicize and offer technical information and guidance to homeowners interested in personal flood mitigation options. | | | | |
| Yes | Other, please specify | Yes | The Township continues to provide technical information and guidance to Homeowners Interested in Flood Mitigation Techniques: The Township has requested an audit of our compliance with the NFIP and will be evaluating properties that are listed on the non-compliance list. | In Progress |
| 2021-BFMPO-15 - Capture/Survey High Watermarks after Flood Events: BT Engineering, with support from BT DPW, will continue to capture high water marks after flood events. | | | | |
| Yes | Other, please specify | No | | Ongoing Capability |
| 2021-BFMPO-16 - Support NJ DOT Stormwater Improvements on State Highways: BT Engineering will offer information and coordinate with the NJ Department of Transportation on state highway stormwater management issues for Routes 9, 35, 37, 70, 72, 88 and 166. The Township will encourage the replacement of older and unsafe bridges and culverts. | | | | |
| Yes | Other, please specify | No | | Ongoing Capability |

| | | | | |
|---|-----------------------|----|--|--------------------|
| 2021-BFMPO-17 - Investigate New Technologies for Structural Flood Protection: BT Engineering will regularly explore the benefits of emerging structural flood protection techniques and technologies such as bypass force main, tide barriers, stormwater pump systems, surge barriers, and mobile flood barriers to protect Township infrastructure and provide information to homeowners. | | | | |
| Yes | Other, please specify | No | BT Engineering and Planning will regularly explore the benefits of emerging structural flood protection techniques and technologies such as bypass force main, tide barriers, stormwater pump systems, surge barriers, and mobile flood barriers to protect Township infrastructure and provide information to homeowners. The Township contracted with ACT Engineers to develop plans and studies for flood control and continues to implement those recommendations. | Ongoing Capability |
| 2021-BFMPO-18 - Develop the Building and Elevation Inventory of Structures in the Floodplain: BT Engineering will continue the collection of elevation certificates and use ForeRunner software to integrate finished floor elevations into a database. | | | | |
| Yes | Other, please specify | No | Brick has imported 85%-90% of its elevation certificates into Forerunner. The remaining estimated certificates are imbedded in archived building permit application jackets. We import them on a case by case basis as we uncover them. New Flood Elevation Certificates are imported daily. | Ongoing Capability |
| 2021-BFMPO-19 - Continue to Improve the Township's Mapping Capabilities: BT Engineering will work to improve the Township's mapping capabilities (currently through CAD and Land Desktop and "read only" access to MUA infrastructure information) to support field crews and other initiatives. | | | | |
| Yes | Other, please specify | No | Recently Brick Township awarded a contract to Colliers Engineering to help us improve our interactive storm water mapping tool for public interface as well as utilizing it to advance routine maintenance inspections. | Ongoing Capability |
| 2021-BFMPO-2 - Support and Promote the Retrofit of Buildings to Meet Hurricane-Force Wind Needs: Code Enforcement will support the retrofit of buildings to withstand hurricane-force wind through enforcing the uniform construction code as per Bulletin # 13-1A. | | | | |
| Yes | Other, please specify | No | This is an ongoing process required under the Uniform Construction Code NJAC 5:23 and the adopted model codes. The Division of Inspections continue to enforce the code. | Ongoing Capability |

| | | | | |
|---|-----------------------|-----|--|--------------------|
| 2021-BFMPO-20 - Repair Bulkheads and Install Revetments to Protect from Coastal Erosion: BT Engineering will oversee bulkhead construction and reconstructions as necessary. | | | | |
| Yes | Other, please specify | Yes | Last year, bulkheads were replaced at Bay Shore Drive, East Coral Drive, South Drive, Lawndale Drive and Brower Drive. All bulkheads were installed to a minimum elevation of 4.0 in the NAVD to assist with flood control. Additional bulkheads are funded in the 2022 capital improvement program. | Ongoing Capability |
| 2021-BFMPO-21 - Manage Sediment and Debris Removal in Retention/Detention Basins and Constructed Wetland Areas: BT Engineering will manage inspections of basins and constructed wetland areas. Where maintain is required (sediment and debris removal needed), BT Engineering will instruct BT DPW of necessary actions to carry out. | | | | |
| Yes | Other, please specify | No | | Ongoing Capability |
| 2021-BFMPO-22 - Maintain and Improve Dunes, Natural Beaches, and Bay Habitats: BT Engineering will lead coordination with environmental non-profit organizations to schedule and diversify plantings and maintenance of critical natural floodplain habitats. | | | | |
| Yes | Other, please specify | No | Brick Township has adopted a Beach Management plan to enhance our dune system and provide additional protection for the potential habitats of state and federal endangered species of birds and plants. Also, plant protection strips were established at the eastern base of the dune. | Ongoing Capability |
| 2021-BFMPO-23 - Provide Beach Replenishment as Necessary: BT Engineering will lead coordination with the USACE and NJ DEP to support future beach fill needs. | | | | |
| Yes | Other, please specify | No | Brick Township has allocated funding for their cost share portion of the ACE scheduled renourishment on or about the fall of 2022. | In Progress |
| 2021-BFMPO-24 - Promote I&I Protection of Sewer Systems: BT MUA will continue to monitor sewer mains using Closed Circuit Television Inspection. 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. | | | | |

| | | | | |
|---|-----------------------|-----|--|--------------------|
| Yes | Other, please specify | Yes | | Ongoing Capability |
| 2021-BFMPO-25 - Maintain Continuous Monitoring Network for Tide and Salinity: BTMUA will continue to maintain tide/salinity monitoring stations in the vicinity of Forge Pond. 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. | | | | |
| Yes | Other, please specify | No | | Ongoing Capability |
| 2021-BFMPO-26 - Assess and Evaluate BMPs for Stormwater Management: BT MUA will continually assess and evaluate stormwater BMPs 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.). | | | | |
| Yes | Other, please specify | No | | Ongoing Capability |
| 2021-BFMPO-27 - Provide Outreach on Stormwater BMPs and Watershed Conservation: BT MUA will continue to provide outreach on Stormwater BMPs for property owners. These include "build your own" rain barrel workshops. Extensive public education and 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. Outreach efforts will be supported by BT Planning. | | | | |
| Yes | Other, please specify | No | | Ongoing Capability |
| 2021-BFMPO-28 - Participate in Regional Watershed Management: BT MUA will continue to facilitate regional watershed management planning. Brick Township is actively working with BT MUA 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. | | | | |
| Yes | Other, please specify | No | | Ongoing Capability |

| | | | | |
|--|-----------------------|----|---|--------------------|
| 2021-BFMPO-29 - Evaluate Development and Construction Impacts on Natural Floodplain Function and Water Quality: BT MUA will evaluate development and construction in the watershed to ensure no impacts on natural floodplain function or water quality. 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 will be submitted to the local planning/zoning board of adjustment and/or regulatory agency, as necessary. | | | | |
| Yes | Other, please specify | No | | Ongoing Capability |
| 2021-BFMPO-3 - Enforce Minimum National Flood Insurance Program Requirements: As part of the Township's floodplain administration, Code Enforcement will enforce minimum National Flood Insurance Program requirements and proactively support floodplain management property protection and outreach requirements | | | | |
| Yes | Other, please specify | No | | Ongoing Capability |
| 2021-BFMPO-30 - Coordinate Funding to Maximize the Effectiveness of Stormwater Protection and Rehabilitation Efforts: BT MUA will continue to search for additional funding opportunities to support stormwater protection and rehabilitation efforts. | | | | |
| Yes | Other, please specify | No | | Ongoing Capability |
| 2021-BFMPO-31 - Support Continuous Operations of Emergency Support Services for the Barrier Island: BT OEM will continue to maintain the Barrier Island as a permanent district, so police officers are assigned to the area 24/7. | | | | |
| Yes | Other, please specify | No | Brick PD has made the Barrier Island its own district which means Brick PD and EMS are stationed there 24/7. Last year we tried to acquire a former First Aid Squad building to use as a home base, but lacked a willing seller. In a future capital budget, we hope to construct a more permanent base for PD a first responders on property we own on Rt. 35. | Ongoing Capability |
| 2021-BFMPO-32 - Support Precipitation Monitoring and Flood Threat Recognition Networks: BT OEM will oversee the Township's participation in NWS efforts for precipitation monitoring and will explore opportunities to join additional programs/networks. | | | | |

| | | | | |
|---|-----------------------|-----|--|--------------------|
| Yes | Other, please specify | Yes | | Ongoing Capability |
| 2021-BFMPO-33 - Critical Facilities/Infrastructure Early Flood Notification: BT OEM will continue to maintain and update the list of facilities and their contacts that require early flood notification. | | | | |
| Yes | Other, please specify | Yes | | Ongoing Capability |
| 2021-BFMPO-34 - Maintain the All-Hazards Emergency Operations Plan (EOP): BT OEM will continue to maintain the EOP and incorporate information from the Floodplain Management Plan and Ocean County Hazard Mitigation Plan as appropriate. | | | | |
| Yes | Other, please specify | No | | Ongoing Capability |
| 2021-BFMPO-35 - Develop and Implement Shelter Management Plans: BT OEM will continue shelter planning through coordination with the state. | | | | |
| Yes | Other, please specify | No | | Ongoing Capability |
| 2021-BFMPO-36 - Conduct Local Emergency Planning Committee (LEPC) Meetings: BT OEM will ensure the LEPC meets quarterly and conducts two drills per year. Drills will include how to prevent hazardous materials accidents during flooding events. | | | | |
| Yes | Other, please specify | No | | Ongoing Capability |
| 2021-BFMPO-37 - Increase Communication and Coordination with Utility Providers: BT OEM will work to maintain open communication and data sharing with utility providers to increase emergency response and mitigation of vulnerabilities to flooding. | | | | |
| Yes | Ongoing | No | BT OEM continues to work on coordination and open communications with utility providers. | Ongoing Capability |

| | | | | |
|--|-----------------------|-----|---|--------------------|
| 2021-BFMPO-38 - Annually Exercise the Township Flood Warning and Response Plan: The Township will exercise the CRS Activity 610 Flood Warning and Response Plan annually during years where there is no flood event which triggers the plan to be used. | | | | |
| Yes | Other, please specify | No | | Ongoing Capability |
| 2021-BFMPO-39 - Site New Critical Facilities Outside of the Floodplain: BT Planning will work to ensure that new critical facilities are located outside of the floodplain. In the event that critical facilities must be located within the floodplain, BT Planning will work to ensure they are flood proofed, where possible. | | | | |
| Yes | Other, please specify | No | The Township is primarily built out and does not have any plans to construct any new critical facilities. | Discontinued |
| 2021-BFMPO-4 - Adopt Appropriate Enhanced Regulatory Standards: Code Enforcement will present the Administration with appropriate enhanced regulatory standards for consideration and adoption, as recommended by outside agencies and supported by best available science, such as increased freeboard standards, cumulative substantial improvement or damage, lower substantial damage threshold, compensatory storage, and non-conversion deed restrictions. Enhanced standards will account for potential impacts from climate change and sea level rise. | | | | |
| Yes | Other, please specify | Yes | The Township continually examines and considers enhanced regulatory standards when appropriate. Most recently, the Township adopted an impervious cover limitation on residential properties. | Ongoing Capability |
| 2021-BFMPO-40 - Provide Grant Program Information to Residents: BT Planning will provide information on residential, business, and natural resource grant programs to residents through mailings, hosting information on the website, hosting flood information sessions, etc. | | | | |
| Yes | Other, please specify | No | The Township Planning staff provides grant funding information to residents on an individual basis, through mailings, at flood information sessions and on the Township's website when funding becomes available. | Ongoing Capability |
| 2021-BFMPO-41 - Implement Nonstructural Flood Control Measures: Recent planning and zoning board approvals have been imposing nonstructural flood control measures. The Township will continue progress through the development review process. | | | | |

| | | | | |
|--|-----------------------|----|---|--------------------|
| Yes | Other, please specify | No | This action has been implemented during the development and review process and is continuing. | Ongoing Capability |
| 2021-BFMPO-42 - Integrate Floodplain Management Policies into Township Plans and Procedures: BT Planning will continue the revision of ordinances, updating planning documents, etc. to integrate floodplain management. | | | | |
| Yes | Other, please specify | No | The Township Planning Staff has implemented a revision of the Flood Damage Prevention Ordinance in cooperation with the Engineering Staff, has updated planning documents, including the Floodplain Management Plan, adopted in 2021 and integrates floodplain management in the development and review of applications before both the Planning and Zoning Board of Adjustment. | Ongoing Capability |
| 2021-BFMPO-43 - Support Retrofitting/Replacement of Critical Stormwater System Elements through Capital Improvement Planning: BT Planning will support retrofitting and improved replacements of critical system elements (roadways, storm drains, stormwater, etc.) through capital improvement planning. | | | | |
| Yes | Other, please specify | No | The Township is developing a Drainage System Management Plan in cooperation with the Department of Public Works to map, manage and report upgrades, maintenance and replacement of critical stormwater systems in the Township's drainageways and stormwater management infrastructure. | In Progress |
| 2021-BFMPO-44 - Strategize Responsible Land Protection Methods to Maintain/Restore Natural Floodplain Functions: BT Planning will explore opportunities and strategize implementation of responsible land protection methods and funding sources to maintain/restore natural floodplain functions. | | | | |
| Yes | Other, please specify | No | The Township has ongoing projects to protect floodplains to maintain and restore natural floodplain functions. Privately owned lands are monitored by code enforcement and the engineering division in cases where wetlands are encroached upon for enforcement actions. In addition, the Township is conducting a project to request donations of lands in natural function floodplains in the Snake Road/Mandalay area thorough an outreach project to request homeowners donate parcels that are mapped as coastal wetlands. | In Progress |

| | | | | |
|--|-----------------------|-----|--|--------------------|
| 2021-BFMPO-45 - Maintain Vegetated Riparian Buffer Zones: BT Planning will maintain vegetated riparian buffer zones and prioritize implementation by using parcels identified as protection priority from the Trust for Public Land. | | | | |
| Yes | Other, please specify | No | The Township has an ordinance requiring riparian buffer protection in new waterfront development applications and is working with the Open Space Savers committee to identify lands that should be targeted for preservation due to their riparian location. | In Progress |
| 2021-BFMPO-46 - Retrofit Existing Stormwater Basins to Extend Detention or Bioretention Areas:BT Planning will recommend retrofits as redevelopment occurs. As site plan applications come in to the Planning and Zoning Boards, the Township will work to require rain garden technology and bioretention areas of existing and new site plan developments. | | | | |
| Yes | Other, please specify | Yes | The Township has adopted a new Municipal Stormwater Management Plan that incorporates recommendations and requirements for utilization of retrofitting of Stormwater Infrastructure with non-structural activities. | Ongoing Capability |
| 2021-BFMPO-47 - Convert Unnecessary Impervious Surfaces to Permeable Surfaces: BT Planning will oversee the removal of un-utilized or under-utilized impervious surfaces, such as extra parking, with native or maintained vegetation. Where possible, the Township will redirect runoff to these new pervious surfaces. As a general policy during site plan and subdivision review, the Township will continue to require curb cuts, pervious pavement, etc. | | | | |
| Yes | Other, please specify | Yes | The Township regularly recommends and/or requires site plan developments to decrease runoff and implement recharge from impervious surfaces and convert impervious surfaces to permeable surfaces through redevelopment. | Ongoing Capability |
| 2021-BFMPO-48 - 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: Through the development review process, the Township encourages the use of sustainable development. | | | | |
| Yes | Other, please specify | No | Through the development review process, the Township encourages the use of sustainable development. | Ongoing Capability |

| | | | | |
|---|-----------------------|----|--|--------------------|
| 2021-BFMPO-49 - Pursue Funding to Conduct Hydrological Studies of Stormwater System Problem Areas: 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. BT Planning will pursue funding to conduct hydrological studies of stormwater problem areas identified by BT DPW, BT MUA, and BT Engineering. | | | | |
| Yes | Other, please specify | No | BT Planning and BT Engineering have encouraged NJ and FEMA to conduct hydrological studies of stormwater problem areas identified by BT DPW, BT MUA, and BT Engineering. Currently, the Mullica/Kettle Creek Study is looking at a number of areas where the Township has requested study. | In Progress |
| 2021-BFMPO-5 - Utilize FEMA FIRMs to Assist Property Owners in Rebuilding: BT Code Enforcement will utilize the most recent FEMA FIRMs to assist property owners in rebuilding to or above regulatory standards. Future Preliminary FIRMs will be considered where appropriate. | | | | |
| Yes | Other, please specify | No | | Ongoing Capability |
| 2021-BFMPO-50 - Work with the Barnegat Bay Partnership to Target Research and Assessment Efforts: BT Planning will lead the Township's continued cooperation with the Barnegat Bay Partnership to target research and assessment efforts throughout the Barnegat Bay watershed. | | | | |
| Yes | Other, please specify | No | The Township continually looks for opportunities to partner with the Barnegat Bay Partnership but has not conducted any research or assessment efforts in this year. | No Progress |
| 2021-BFMPO-51 - Record Flood Event Emergency Responses to Support Future Planning: BT Police will continue to use the established a Flood Unit which began recording flooding event details in the winter of 2020. Flood event details and emergency response that was required will be recorded to support future planning. | | | | |
| Yes | Other, please specify | No | | Ongoing Capability |
| 2021-BFMPO-52 - Outreach for Schools on Family Disaster Planning: BT Police will continue outreach programs in schools to include children in outreach and to improve families' disaster response capabilities. Outreach programs include a coloring book and information packet. | | | | |
| Yes | Other, please specify | No | | Ongoing Capability |

| | | | | |
|---|-----------------------|----|---|--------------------|
| 2021-BFMPO-53 - Emergency Alert System Use for Effective Storm Information Dissemination: BT Police will continue to use Nixle or a similar service for pre-storm information dissemination, including shelter locations, evacuation routes. | | | | |
| Yes | Other, please specify | No | | Ongoing Capability |
| 2021-BFMPO-54 - Conduct Stream Cleanings to Prevent Jams: The Environmental Commission will conduct stream cleanings to remove garbage and debris that may contribute to jams that could cause flood events. Efforts will also include anti-littering campaigns to prevent garbage from entering streams. | | | | |
| Yes | Other, please specify | No | The Environmental Commission has implemented an on-going program called Pick Up Brick that incorporates stream cleanings to remove garbage and debris that may contribute to jams that could cause flood events. Efforts will also include anti-littering campaigns to prevent garbage from entering streams. | In Progress |
| 2021-BFMPO-55 - Anti-Littering and Dumping Outreach: The Environmental Commission will conduct outreach to residents that live near streams, culverts, etc. where debris and dumping of yard waste is problematic. Outreach will outline how littering and dumping contribute to flooding and how residents can monitor for potential clogs of the stormwater system or jams in streams and report them to the Township for them to be addressed. | | | | |
| Yes | Other, please specify | No | This is an annual program called Pick Up Brick that the Environmental Commission and the Sustainable Brick Green Team conduct. In addition, the Township is now documenting the Drainage Maintenance activities for CRS points. | Ongoing Capability |
| 2021-BFMPO-6 - Implement Site Review Ordinances/Requirements: BT Code Enforcement will continue to support the plot plan review process and carry out inspection procedures. | | | | |
| Yes | Other, please specify | No | | Ongoing Capability |
| 2021-BFMPO-7 - Ensure Building, Renovations, Retrofits, Reconstructions, and New Construction Meet the Standards of the Uniform Construction Code: BT Code Enforcement will continue to enforce building codes to require building renovations, retrofits, reconstruction, and new construction so that all buildings meet the Uniform Construction Code. This will include post-disaster events through the emergency inspection program. | | | | |

| Yes | Other, please specify | No | | Ongoing Capability |
|---|-----------------------|----|---|--------------------|
| 2021-BFMPO-8 - Encourage and Support Compliance with the NJ Fertilizer Law: BT Code Enforcement, with support from NJ DEP, will encourage and support compliance with the fertilizer restrictions established by state law. | | | | |
| Yes | Other, please specify | No | The Township has not yet addressed fertilizer use on private properties, however, utilizes best management practices on public lands. | No Progress |
| 2021-BFMPO-9 - Maintain and Clear Debris from Drainage Systems: BT DPW will work to maintain current drainage systems at appropriate care levels to keep storm drains clear from debris to prevent flooding. The DPW will use the Township jet/vac to maintain the approximately 8,600 storm drains in the Township as part of DPW's a day-to-day activity. | | | | |
| Yes | Other, please specify | No | | In Progress |

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:

- Continue long-term infrastructure planning for sea level rise and climate change. 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.
 - Continue to apply for grant applications that utilize dredge materials to nourish wetlands to restore protective barriers to flood waters and wave action.
- 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.
- Enhance the discussion of economic impacts of sea level rise.
- Contemplate developing post-disaster policies and ordinances in concert with the Ocean County All Hazards Mitigation Plan.
- Insert information on recent studies showing that a dollar spent in mitigation saves ten dollars in future damages.
- Incorporate Drainage Maintenance Program into document.
- Conduct a Flood Warning Exercise that involves the public.

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
Township of Brick
401 Chambers Bridge Road
Brick, NJ 08723
tpaxton@bricktownship.net
p.732-262-4783 x1344
f.732-262-8954*

ATTACHMENTS

Meeting Documentation

AGENDAS,
MEETING NOTES
&
SIGN IN SHEETS

Township of Brick Floodplain Management Plan Planning Committee Kickoff Meeting

Thursday, March 10, 2022 | 4:00 – 5:00 p.m.

1. Introductions – New Members

2. CRS (FEMA) Classification 5 achieved

- A. NFIP/CRS - ISO Comments
- B. 2,517 total points awarded (where did we lose and where did we earn points?)
- C. What does this mean for residents?
- D. Expectations of 5-year plan cycle compared to Annual Plan submission

3. Project Scope Review

- A. Baseline Assessment Tool (BAToolSM) Program – Measuring Mitigation Success
- B. Schedule of Department updates for Floodplain Management Plan – Beginning in May/June for October Submission
- C. Elevation Certificates Review

4. Project Schedule Review

5. Next Steps

- A. Scheduled Meeting: Tentatively May 12th, 4:00 p.m.
- B. Document Request: Township to provide Letter to Surveyors involving **Elevation Certificate** review
- C. Snake Road Property Donation Inquiry
- D. Outreach Events – May 21, Green Fair
Flood Information Session – Summer??

6. Questions

7. Conclusion

Next Meeting: **May 12th, 4:00 p.m.**

Future Meeting dates: **July 14th & September 8th**

Township of Brick Floodplain Management Plan Planning Committee Meeting

Thursday, May 16, 2022 | 4:00 – 5:00 p.m.
AB Conference Room

1. Introduction Refresher

2. CRS (FEMA) Classification 5 achieved -Update on more points received

3. Project Scope Review

- A. (BAToolSM) Program – Measuring Mitigation Success – Contract Approved
- B. Schedule of Department updates for Floodplain Management Plan – Beginning in May/June -Emails sent out to Department Heads
- C. Elevation Certificates Review -Update

4. Project Schedule Review

5. Next Steps

- A. Document Request: Status - Township Letter to Surveyors involving Elevation Certificate
- B. Mailings- Realtors, Lenders, Insurers – Annual Information Packet
- C. Repetitive Loss Area Mailing in progress
- D. Snake Road Property Donation Inquiry Update – 5 properties
- E. Outreach Events – May 21, Green Fair – Tables for Land Use & Planning - Flood Information – Anyone Interested in Attending and manning table?
- F. Flood Information Session – June 16th @ 6pm – See Press Release

6. Questions

7. Conclusion

- A. Next Meeting: Tentatively July 14th @ 4:00 p.m.

Future Meeting dates: **September 8th**

Township of Brick Floodplain Management Plan Planning Committee Meeting

Thursday, June 2nd, 2022 | 4:00 – 5:00 p.m.
AB Conference Room

1. Introduction Refresher

2. CRS (FEMA) Classification 5 achieved -Update on more points received

3. Project Scope Review

- A. (BAToolSM) Program – Measuring Mitigation Success – Contract Approved
- B. Department updates for Floodplain Management Plan – underway – June 30th deadline – Status as of today:
- C. Elevation Certificates Review -Update
- D. Drainage System Management -Update
- E. Township Letter to Surveyors involving Elevation Certificate -Mailed
- F. Mailings- Realtors, Lenders, Insurers – Annual Information Packet -Mailed or being mailed as we speak
- G. Repetitive Loss Area Mailing in progress
- H. Snake Road Property Donation Inquiry Update – 5 properties
- I. Outreach Events – May 21, Green Fair – Tables for Land Use & Planning - Flood Information – well attended – informed public of Flood Information Session on June 23rd.
- J. Grant Application – Seawood Harbor Wetland Restoration Project – Ocean Wind Pro-NJ Grantor Trust
- K. Table Top Flood Emergency Exercise – August – Ideas?

4. Project Schedule Review

5. Next Steps

- A. Flood Information Session – June 23rd @ 6pm – See Press Release -AB Conf. Room
- B. Summer Fest Events

6. Questions

7. Conclusion

- A. Next Meeting: Tentatively July 14th @ 4:00 p.m.

Future Meeting dates: **September 8th**

Township of Brick Floodplain Management Plan
Planning Committee Meeting

Thursday, July 14, 2022 | 4:00 – 5:00 p.m.
AB Conference Room

1. Introduction Refresher

2. CRS (FEMA) Classification 5 achieved -Update on more points received – FEMA NFIP Audit

3. Project Scope Review

- A. (BAToolSM) Program – Department updates for Floodplain Management Plan Completed
- B. Need information on Flood Events from PD – Need Update on projects from PW and Engineering for report completion
- C. Elevation Certificates Review -Update
- D. Snake Road Property Donation Inquiry Update – 6 properties
- E. Outreach Events –Flood Information Session on June 23rd – 10 residents attended
- F. Farmers Markets, SummerFest, Traders Cove Concert Series – Need to attend
- G. Grant Application – Seawood Harbor Wetland Restoration Project – Ocean Wind Pro-NJ Grantor Trust - Submitted
- H. Table Top Flood Emergency Exercise – August – Status?
- I. Bay Head, Lavallette, Point Pleasant Boro & Beach PPI participation

4. Project Schedule Review

5. Next Steps

- A. Draft Floodplain Management Plan Review – Committee Members – Department Heads – **Deadline – AUGUST 18**
- B. Summer Fest Events -Farmers Market – Traders Cove Concerts

6. Questions

7. Conclusion

- A. Next Meeting: September 8th @ 4:00 p.m. – PLAN ADOPTION

Future Meeting dates: **2023 TBD**

**Township of Brick Floodplain Management Plan
Planning Committee Meeting
Thursday, September 8, 2022 – 4pm-5pm**

1. Committee Review of Annual Report

2. Project Scope Review

- A. Information on Flood Events from PD - Update
- B. Elevation Certificates Review -Update (62 Total)
- C. Snake Road Property Donation Inquiry Update – 7 properties - Letter to be written and formulated for property owners
- D. Farmers Markets, SummerFest, Traders Cove Concert Series – Update -5 total attended
- E. Grant Application – US DOI NOAA Edwin B Forsythe Refuge Marsh Restoration Project
- F. Table Top Flood Emergency Exercise – Completed
- G. Bay Head, Lavallette, Point Pleasant Boro & Beach PPI participation OR Ocean County CRS Users Group PPI participation – meeting next week.

3. Questions

4. Next Steps

- A. Potential Meeting Dates for 2023

5. January, April, June & September

6. Conclusion & Thank You!

**Township of Brick Floodplain Management Plan
Planning Committee Kickoff Meeting**

Thursday, March 10, 2022 | 4:00 – 5:00 p.m.

1. Introductions – New Members

- Council President Vince Minichino
- Mr. Chadwick to be added to the group.

2. CRS (FEMA) Classification 5 achieved

- A. NFIP/CRS - ISO Comments
- B. 2,517 total points awarded (where did we lose and where did we earn points?)
- C. What does this mean for residents?
 - Previously \$600,000 in community savings on insurance
 - Now \$800,000 in community savings on insurance
- D. Expectations of 5-year plan cycle compared to Annual Plan submission
 - Group will meet 4x a year for the next 5 years to stay active with the FMP

3. Project Scope Review

- A. Baseline Assessment Tool (BAToolSM) Program – Measuring Mitigation Success
- B. Schedule of Department updates for Floodplain Management Plan – Beginning in May/June for October Submission
 - Under engineering review – almost ready to submit
- C. Elevation Certificates Review
 - Currently have 37 EC's for the 2022 CRS cycle (anticipated 75 total EC's by August 14 submission date)
 - Cycle dates Open: August 1st 2021 – July 31st 2022
 - 2019 Approx 160 EC's, 2020 Approx 120 EC's, 2021 Approx 100 EC's
 - Vin and Russell will meet on March 30th to review EC's for 1/2 year review

4. Project Schedule Review

5. Next Steps

- A. Scheduled Meeting, Tentatively May 12th 4:00 p.m.
- B. Document Request: Township to provide Letter to Surveyors involving **Elevation Certificate** review



C. Snake Road Property Donation Inquiry

- LP/TP - Will work on this project and have an update for the next meeting. May need to reach out to these properties

D. Outreach Events – May 21, Green Fair

Flood Information Session – Summer??

- TP/VP- We will host both events. Find a date for the Flood Info Session that works best in the Summer
- VP- Will meet with Keith on potential location for Green Fair Table

6. Questions

- SH- Will we be aggressive to move up again as a CRS community group
- TP/ ECC- Flood Info session will be a stand-alone event - we will try to make this event more inclusive to gain greater participation.
- We will discuss streams and river areas (Beaverdam Creek, Lake Riv, Sawmill Creek, Greenbriar).

7. Conclusion

Next Meeting: **May 12th 4:00 p.m., A/B Conference Room**

Future Meeting dates: **July 14th & September 8th**

Township of Brick Floodplain Management Plan Planning Committee Meeting- Meeting Notes

Thursday, June 2nd, 2022 | 4:00 – 5:00 p.m.

1. Introduction Refresher

2. CRS (FEMA) Classification 5 achieved – Update on more points received

- Previously a class 6 moved up to a class 5.
- Insurance rate discounts now increase from 20% to 25% for all Brick residents (As of May 2022).
- EP & TP – Mandalay project will allow us to preserve additional wetlands and street vacation from donations of property owners
- TP- Additional actions ultimately means more points accumulated for future CRS submissions, furthering Brick to maintain a class 5.

3. Projects Scope Review

- A. (BATool) Program – Measuring Mitigation Success -Contact Approved
- TP- Explained to the group what percent we have accomplished so far, and how much we have left on each initiative.
- B. Department updates for Floodplain Management Plan- underway-June 30th deadline -Status as of today:
- C. Elevation Certificates Review -Update
 - VP- 48 total EC's have been collected through 10 months
 - On pace for approximately 60 EC's for the year 2022
 - Forrunner is available on Township webpage for residents to view elevation certificates
- D. Drainage System Maintenance -Update
 - Public Works, Parks and Planning met to discuss mapping, policy and procedure
 - Colliers targeted (5) areas for Drainage System Maintenance
 - Removing debris and inspecting areas under a 5-year cycle
- E. Township Letter to Surveyors involving Elevation Certificate - Mailed
 - TP- Letter to surveyors will inform all local surveyors performing elevation certificate inspections before the Engineering Departments review. Should prevent mistakes before CRS submission.
- F. Mailings- Realtors, Lenders, Insurers- Annual Information Packet -Mailed or being mailed as we speak
- G. Repetitive Loss Area Mailing in progress
 - EP- approximately 700 envelopes left to send out in total.
- H. Snake Road property Donation Inquiry Update -5 properties
 - TP- With 5 of the 20 indicated properties willing to donate, we can already begin consolidating blocks within this wetland area. Thus, gaining more points.

-
- I. Outreach Events -May 21st, Green Fair -Tables for Land Use & Planning -Flood Information -well attended -informed public of Flood Information Session on June 23rd
 - J. Grant Application- Seawood Harbor Wetland Restoration Project - Ocean Wind Pro -NJ Grantor Trust
 - ECC & TP – Working on Grant project for various restoration and dredging projects
 - K. Table Top Flood Emergency Exercise -August Ideas?
 - TP- Potential Table Top Project with OEM?

4. Project Schedule Review

5. Next Steps

- A. Flood information Session -June 23rd @6PM -See Press Release -AB Conf. Room
- B. Summer Fest Events
 - Dates needed for outreach and Farmers Market events

6. Questions

7. Conclusion

Next Meeting: Tentatively July 14th @ 4:00 p.m.

Future Meeting dates: September 8th

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

Thursday, July 14, 2022 | 4:00 – 5:00 p.m.

1. Introductions – Refresher

2. CRS (FEMA) Classification 5 achieved – Update on more points received -FEMA NFIP Audit

3. Project Scope Review

A. (BATool) Program – Department updates for Floodplain Management Plan Completed

TP -

- BATool complete – progress complete
- Class 6 audit needs to be completed to improve class rank
- Once complete residents will then be eligible for 25% discount towards their insurance
- This past cycle we increased our points by nearly 200 points- making Brick a Class 5
- This set precedent on a national level- recognizing preserved federal lands

SH / CW- Can we request this be retroactive due to COVID issues?

Councilman Minichino – Will this be retroactive?

B. Need information on Flood Events from PD- Need update on projects from PW and Engineering for report completion

TP- Nixle reports and messages need to be put on record

JB – Joe Pawlowicz will have a list or specific report with an email address list that is sent to barrier island residents.

C. Elevation Certificates Review – Update

VP- Gave an update to group about EC review and the status of current review

CW- Elevation Certificates – Do I have to send a sealed copy of my certificate for permits if I have already submitted it.

ECC – Confirms that engineering accepts copies of elevation certificate or can make a copy if certificate already exists.

D. Snake Road Property Donation Inquiry Update – 6 properties

E. Outreach Events – Flood Information Session on June 23rd – 10 residents

**Township of Brick Floodplain Management Plan
Planning Committee Meeting
– MEETING NOTES**

Thursday, September 8, 2022 | 4:00 – 5:00 p.m.

1. Committee review - Township for Brick Floodplain Management Plan Annual

Progress Report 2022 – Tara Paxton went over the entire Annual Report, highlighting a number of items, namely the flood event information provided by the Police Department, the Table Top Exercise Held on August 31st and went over the Recommendations at the end of the report that come out of the previous meetings and review of the actions.

Don Casbill of OEH discussed the table-top exercise and explained how the exercise is performed and the after-action report – these are all items needed to be completed for the Flood Warning & Response Plan.

Elissa Gammone asked if any other recommendation could be added to help an action of Emergency Drill with the public's participation. Don Casbill said that could be done and he will look into it with the Chief for compliance for next year.

Unanimously, the committee recommended the Annual Report be transmitted to the Township Council via email, a press release to be sent out to the press and for the report to be posted online.

2. Project Super Review

- A. Elevation Certificate Review – Update (B3 Total) – Vince Folomireff completion with Russell Maris by the September 13th deadline.
- B. Seaside Road Property Division Query Update – 7 properties = letters to be written and forwarded for property owners
- C. Former Shabelle, Brunswick, Tanners Cove Council Review – Update – 5 total events attended by Staff
- D. Grant Application – Seawood Harbor Restoration Project- Ocean Wind Pro- NJ Grantor Trust – Update – We did not get approved, but have submitted two other grant applications.
- E. Bay Head, Lavallette, Point Pleasant Boro & Beach PPI participation or Ocean County

3. Questions

4. Next Steps

Potential meeting dates for 2023 – We will meet four times again, starting in January – we will have meetings at 3pm instead of 4pm.

5. Conclusion

Next Meeting: 2023 TBD

Future Meeting dates: 2023 TBD (Preliminary dates)

- ◆ January 19th, 2023
- ◆ April 20th, 2023
- ◆ June 22nd, 2023
- ◆ September 21st, 2023



SIGN IN SHEET

Township of Brick Floodplain Management Plan Planning Committee Meeting

Thursday, July 14th, 2022 | 4:00 – 5:00 p.m.
AB Conference Room

| NAME | PHONE | EMAIL |
|------------------|--------------|-----------------------------|
| Vincent Palmieri | | |
| Brian D Jones | | |
| Kasey Marchion | | |
| Robert Kart | | |
| Stan Hales | | |
| Art Hallock | | |
| Joanne Beigun | | |
| Vince Marchion | | |
| Elissa Commuro | | |
| Tara Paxton | | |
| Kathy Rella | | |
| Marjorie Werner | 732-221-0468 | central@townshipofbrick.net |
| Eric Lawrence | | |
| | | |
| | | |
| | | |
| | | |



SIGN IN SHEET

Township of Brick Floodplain Management Plan Planning Committee Meeting

Thursday, September 8th, 2022 | 4:00 – 5:00 p.m.
AB Conference Room

NAME

PHONE

EMAIL

Vince Michikine

DAVID CROWDER

Brian P. Jones

Arthur Halloran

Lou Gaskin

Stephen Krakowski

Robert Karl

Joanna Ben

Tara Payton

Elissa Commas

EMIL RANAUO

Christina Weaver 732-221-0168 ceuweaver1@comcast.net

MEETING PRESENTATIONS



Floodplain Management Planning Committee

June 2, 2022

4:00 – 5:00 pm

AB Conference Room

Floodplain Management Plan Annual Update Report – BaTool Progress

As of today, the following overall progress can be reported:

- 26 out of 85 initiatives (31%) reported progress toward completion.
- 21 out of 85 initiatives (25%) reported no action taken.
- 2 out of 85 initiatives (2%) were completed.
- 35 out of 85 initiatives (41%) indicated work is conducted as an ongoing capability.
- 1 initiative was removed due to elimination of a program.

<https://www.tbatool.org/>

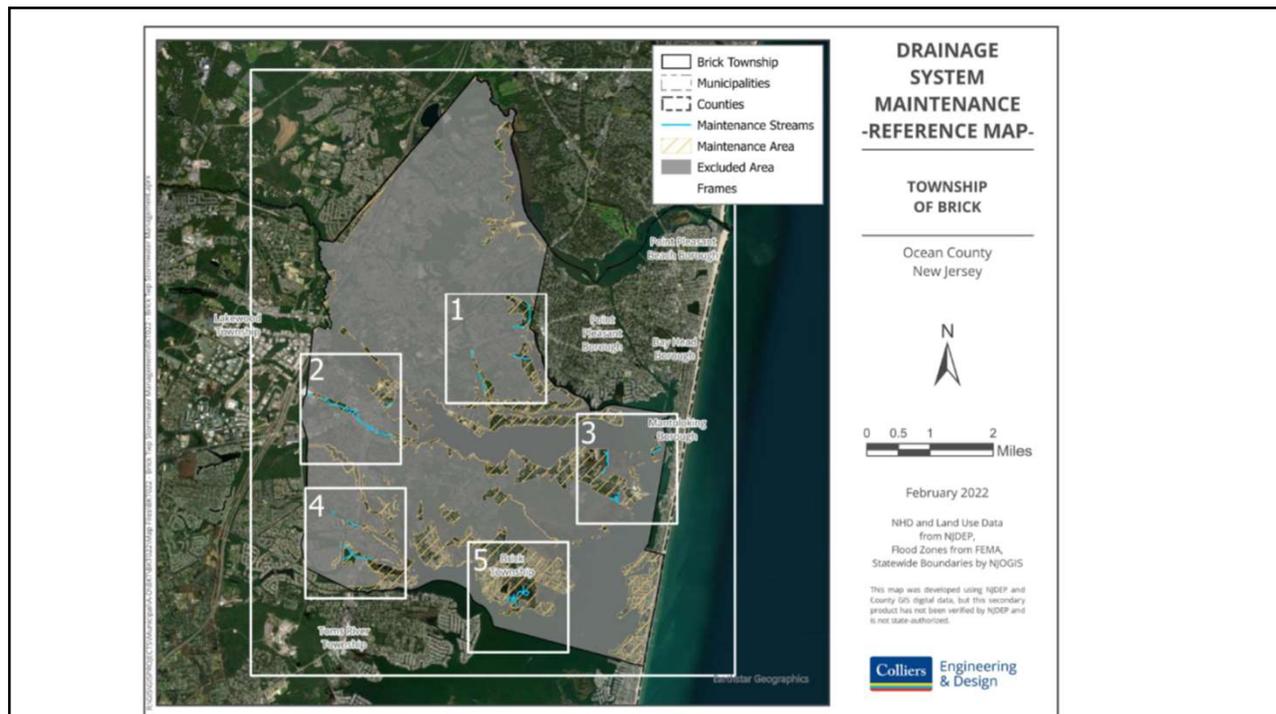


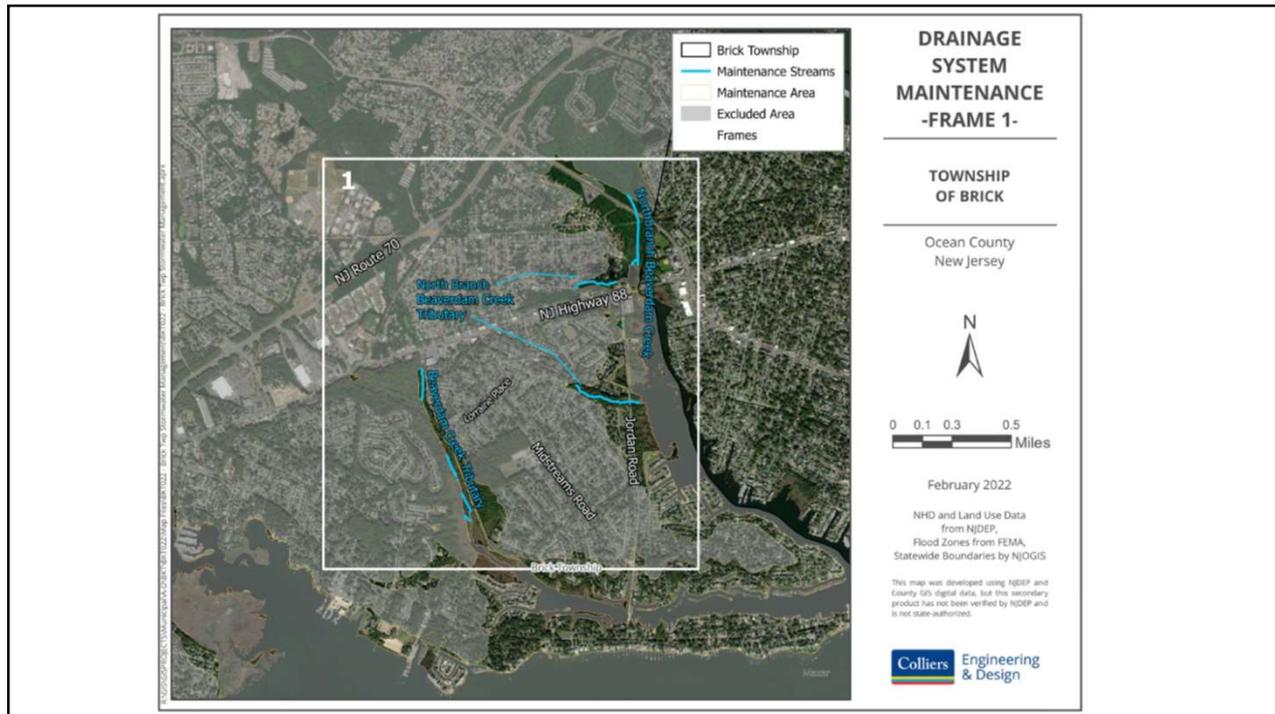
Elevation Certificates Review

- # of EC's submitted since Cycle Review
- Forerunner on Township Website :
 - [Flood Information | Brick, NJ \(withforerunner.com\)](#)

Drainage System Management

- For next Cycle Review – DPW & Planning Working on mapping, policy & procedure





Outreach Events

- 2022 Green Fair – Haven's Homestead – well attended
- Upcoming Flood Information Session @ Municipal Building – in this room – June 23rd 6-8pm



Grant Application

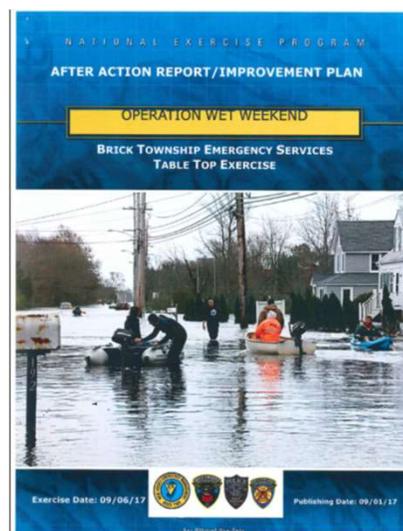
Ocean Wind Pro-NJ
Grantor Trust -
Expression of
Interest – Resiliency
Projects - Seawood
Harbor Resiliency
Project



Table Top Exercise – Flood Warning & Response Plan -August

- Last four exercises:
 - BTMUA Reservoir Failure
 - Rainbow Dam Emergency Repair
 - Operation Wet Weekend
 - Rain Event King Tide

IDEAS for Next Exercise Topic?



Next Steps

- Next meeting we will have draft Annual Report for review
- Flood Information Session – in this room on June 23, 2022 – 6-8 pm
 - Letters sent to 2,700 residents inviting them. We only ever get a few.
 - Laptops with access to look up EC's, Flood Zones & Information available
 - SummerFest
 - Traders Cove Concerts
 - Farmers Markets
- NEXT MEETING –July 14, 2022 4pm in this room!

THANK YOU!



Floodplain Management Planning Committee

July 14, 2022

4:00 – 5:00 pm

AB Conference Room

Floodplain Management Plan Annual Update Report – BaTool Progress – 100% Complete

- 29 out of 85 initiatives (34%) reported progress toward completion.
- 4 out of 85 initiatives (5%) reported no action taken.
- 2 out of 85 initiatives (2%) were completed.
- 48 out of 85 initiatives (56%) indicated work is conducted as an ongoing capability.
- 2 initiatives were removed due to elimination of a program.

<https://www.ttbatool.org/>





COMMUNITY RATING SYSTEM

VERIFICATION REPORT

Township of Brick, NJ
NFIP #: 345285

Township of Brick, NJ
NFIP Number: 345285
Date of Verification Visit: July 26, 2021

This Verification Report is provided to explain the recommendations of Insurance Services Office, Inc. (ISO) to DHS/FEMA concerning credits under the Community Rating System (CRS) for the above named community.

A total of 2602 credit points are verified which results in a recommendation that the community remain a CRS Class 6. Although the community has enough points to warrant a Class 5, DHS/FEMA is withholding that classification at this time due to potential NFIP violations. The community has met all Class 6 prerequisites. The following is a summary of our findings with the total CRS credit points for each activity listed in parenthesis:

Activity 310 – Construction Certificate Management: Credit is provided for having written construction certificate management procedures for all new and substantially improved/substantially damaged buildings. (38 points)

Activity 320 – Map Information Service: Credit is provided for furnishing inquirers with basic flood zone information from the community's latest Flood Insurance Rate Map (FIRM). Credit is also provided for the community offering additional FIRM information, flood depth data, and natural floodplain functions. The service is publicized annually, and records are maintained. (90 points)

Activity 330 – Outreach Projects: Credit is provided for informational outreach projects, general outreach projects, and targeted outreach projects. These projects are disseminated annually. (200 points)

Activity 340 – Hazard Disclosure: Credit is provided for state regulations requiring disclosure of flood hazards. (15 points)

Activity 350 – Flood Protection Information: Documents relating to floodplain management are available in the reference section of the Ocean County Library System. Credit is also provided for floodplain information displayed on the community's website. (94 points)

Activity 410 – Floodplain Mapping: Credit is provided for conducting and adopting flood studies for areas not included on the FIRMs and that exceed minimum mapping standards. (18 points)

Activity 420 – Open Space Preservation: Credit is provided for preserving approximately 48 percent of the Special Flood Hazard Area (SFHA) as open space, protecting open space land with deed restrictions and preserving open space land in a natural state. (915 points)

Activity 430 – Higher Regulatory Standards: Credit is provided for enforcing regulations that require freeboard for new construction and substantial improvement, local drainage protection and elevation of new and replacement homes in coastal A Zone structures to meet V Zone building criteria. Credit is also provided for the enforcement of building codes, a Building Code Effectiveness Grading Schedule (BCEGS) Classification, and regulations administration. (221 points)

Activity 440 – Flood Data Maintenance: Credit is provided for maintaining and using additional map data in the day-to-day management of the floodplain. Credit is also provided for maintaining copies of all previous FIRMs. (132 points)

Activity 450 – Stormwater Management: The community enforces regulations for stormwater management, soil and erosion control, and water quality. (229 points)

Section 502 – Repetitive Loss Category: Based on the updates made to the NFIP Report of Repetitive Losses as of November 30, 2018 the Township of Brick, NJ has 68 repetitive loss properties and is a Category C community for CRS purposes. The community is required to submit either a Repetitive Loss Area Analysis or Floodplain Management Plan. (No credit points are applicable to this section)

Activity 510 – Floodplain Management Planning: Credit is provided for the Brick Township Floodplain Management Plan, adopted on October 12, 2021 and the repetitive loss area analyses adopted on December 10, 2021. A progress report for each plan must be submitted on an annual basis. (440 points)

Activity 610 – Flood Warning and Response: Credit is provided for a program that provides timely identification of impending flood threats, disseminates warnings to appropriate floodplain residents, and coordinates flood response activities. A description of the flood exercise or After-Action Report from an actual flood event must be submitted on an annual basis. Warning information and safety measures must be publicized annually. (165 points)

Activity 630 – Dams: Credit is provided for a State Dam Safety Program. (45 points)

Activity 710 – County Growth Adjustment: All credit in the 400 series is multiplied by the growth rate of the county to account for growth pressures. The growth rate for Ocean County, NJ is 1.08.

Community : Township of Brick, NJ

NFIP Number : 345285

720 COMMUNITY CREDIT CALCULATIONS (Cycle-Phone Verification):

CALCULATION SECTION :

| Verified Activity Calculations: | Credit |
|---------------------------------|--------|
| c310 38 | 38 |
| c320 90 | 90 |
| c330 200 | 200 |
| c340 15 | 15 |
| c350 94 | 94 |
| c360 | |
| c370 | |
| c410 17 x CGA 1.08 = | 18 |
| c420 847 x CGA 1.08 = | 915 |
| c430 205 x CGA 1.08 = | 221 |
| c440 122 x CGA 1.08 = | 132 |
| c450 212 x CGA 1.08 = | 229 |
| c510 440 | 440 |
| c520 | |
| c530 | |
| c540 | |
| c610 165 | 165 |
| c620 | |
| c630 45 | 45 |

Community Classification Calculation:

cT = total of above cT = 2602

Community Classification (from Table 110-1): Class = *6

* CRS Class 6 applies in lieu of Class 5 due to potential DHS/FEMA violations.

CEO Name/Address:
The Honorable John G. Ducey
Major of the Township of Brick
401 Chambers Bridge Road
Brick, New Jersey 08723

CRS Coordinator Name/Address:
Tara Paxton
Township Planner
401 Chambers Bridge Road
Brick, New Jersey 08723
(732) 262-4783

Date Report Prepared: June 23, 2022

AW-720

Flood Events 2021-2022

- Need information for Annual Report regarding Flood Events that we had to respond –DPW, OEM & PD
 - Nixle Messages – Weather Alerts, Flood Alerts, Moving Cars to higher ground alerts, etc.
 - Road closures
 - Other responses

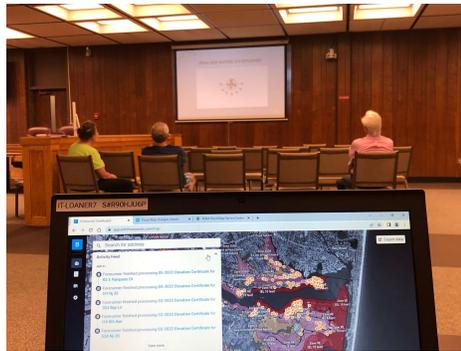
Elevation Certificates Review

- # of EC's submitted since Cycle Review
- Forerunner on Township Website :
 - [Flood Information | Brick, NJ \(withforerunner.com\)](https://www.withforerunner.com/)



Outreach Events

- 2022 Flood Information Session @ Municipal Building – in this room – June 23rd 6-8pm
- SummerFest, Farmers Market, Traders Cove Concert Series – Provide info and will attend



PPI Participation-

Invited by Chris Parlo of Bay Head to participate in Point Pleasant Boro, Beach, Lavallette and Bay Head's PPI

The PPI credit comes in the form of bonus points added to outreach projects and other CRS public information activities, such as the website, that are included in the public information program and implemented by the community and/or other organizations or agencies.

- The bonus is a 40% increase in the credit under Activity 330 for outreach project (OP) and/or flood response preparations projects (FRP) that are listed in the public information program document. Other activities have different increases in credit.
- For example, website contents covered in the PPI-credited public information program will increase WEB1 credit from a maximum of 47 points to 75 points, if the website includes additional creditable topics.
- If the PPI-credited public information program identifies stakeholders as implementing outreach projects, those projects receive a 30% STK bonus in addition to the 40% PPI bonus.
- STK credit is only provided for those projects and messages listed in the PPI-credited document as involving stakeholders.
- The stakeholder organization does not need to be on the public information program committee, but it does need to be listed in the description of the project in the PPI-credited document.

Next Steps

- Next meeting we will have reviewed and be ready to adopt the Annual Report
- NEXT MEETING –September 8, 2022 4pm in this room!

THANK YOU!

FLOOD WARNING & RESPONSE PLAN
EXERCISE & AFTER-ACTION REPORT



Severe Flooding Tabletop (TTX) Exercise

After-Action Report/Improvement Plan 08-31-22

The After-Action Report/Improvement Plan (AAR/IP) aligns exercise objectives with preparedness doctrine to include the National Preparedness Goal and related frameworks and guidance. Exercise information required for preparedness reporting and trend analysis is included; users are encouraged to add additional sections as needed to support their own organizational needs.

EXERCISE OVERVIEW

| | |
|--------------------------|---|
| Exercise Name | Severe Flooding Tabletop (TTX) Exercise |
| Exercise Dates | 08-31-2022 |
| Scope | This exercise is a Tabletop, planned for one hour at Station 23 RT 88 Firehouse. Exercise play is limited to exercise parameters. |
| Mission Area(s) | Warning / Notification Response |
| Core Capabilities | Situational Assessment Operational Communications Operational Coordination |
| Objectives | (Public Information and Warning) Assess the ability to effectively deliver relevant and appropriate information to the whole community partners regarding the hazard, the status of actions taken by government, and the assistance being made available, as appropriate (Operational Coordination) Assess the ability to effectively establish and maintain a unified and coordinated operational structure that integrates critical whole community partners in planning and implementation of response and recovery actions. (Planning) Assess the roles, responsibilities and procedures listed in the Brick Township FWRP and develop future planning improvement actions |
| Threat or Hazard | Heavy Rain/Flooding |
| Scenario | Tuesday, 10:00 a.m.: Heavy rains over the past several days have saturated the ground, leaving waterways in the area at dangerously high levels. The National Weather Service issues a Flood Watch for |

| | |
|------------------------------------|--|
| | <p>Brick Township. The forecast calls for additional heavy rainfall, perhaps as much as 8–12 inches during the next 24 hours.</p> <p>Normal areas Along Route 35 and End of Drum Point Road that normally experience flooding are areas of concern.</p> <p>State Hwy 88 at the entrance to the Brick Township Municipal Utilities Authority, Forge Pond and Laurelbrook developments are beginning to flood, roadways in these areas are becoming impassable</p> |
| Sponsor | <p>Brick Township Office of Emergency Management</p> |
| Participating Organizations | <p>Brick Township O.E.M Brick Township Administration Brick Township Fire Brick Township EMS Brick Township Public Works</p> |
| Point of Contact | <p>Joseph J. Pawlowicz Jr Deputy O.E.M Coordinator Brick Township Emergency Management 401 Chambersbridge Road Brick New Jersey 08723 732-262-1167</p> <p>Ronald Gaskill Deputy Coordinator Brick Township Emergency Management 401 Chambersbridge Road 732-262-1181 rgaskill@brickpd.com</p> |

ANALYSIS OF CORE CAPABILITIES

Aligning exercise objectives and core capabilities provides a consistent taxonomy for evaluation that transcends individual exercises to support preparedness reporting and trend analysis. Table 1 includes the exercise objectives, aligned core capabilities, and performance ratings for each core capability as observed during the exercise and determined by the evaluation team.

| Objective | Core Capability | (P) | (S) | (M) | (U) |
|---|--------------------------------|-----|-----|-----|-----|
| 1. Assess the ability to effectively deliver relevant and appropriate information to whole community partners regarding the hazard, the status of action taken by the government, and the assistance being made available, as appropriate. | Public Information and Warning | | S | | |
| 2. Assesses the ability to effectively establish and maintain a unified and coordinated operational structure that integrates critical whole community partners in planning and implementation response and recovery actions. | Operation Coordination | P | | | |
| 3. Assess the roles, responsibilities and procedures listed in the Brick Township FWRP and develop future planning improvement actions | Planning | P | | | |
| | | | | | |
| | | | | | |
| <p>Ratings Definitions:</p> <ul style="list-style-type: none"> • Performed without Challenges (P): The targets and critical tasks associated with the core capability were completed in a manner that achieved the objective(s) and did not negatively impact the performance of other activities. Performance of this activity did not contribute to additional health and/or safety risks for the public or for emergency workers, and it was conducted in accordance with applicable plans, policies, procedures, regulations, and laws. • Performed with Some Challenges (S): The targets and critical tasks associated with the core capability were completed in a manner that achieved the objective(s) and did not negatively impact the performance of other activities. Performance of this activity did not contribute to additional health and/or safety risks for the public or for emergency workers, and it was conducted in accordance with applicable plans, policies, procedures, regulations, and laws. However, opportunities to enhance effectiveness and/or efficiency were identified. • Performed with Major Challenges (M): The targets and critical tasks associated with the core capability were completed in a manner that achieved the objective(s), but some or all of the following were observed: demonstrated performance had a negative impact on the performance of other activities; contributed to additional health and/or safety risks for the public or for emergency workers; and/or was not conducted in accordance with applicable plans, policies, procedures, regulations, and laws. • Unable to be Performed (U): The targets and critical tasks associated with the core capability were not performed in a manner that achieved the objective(s). | | | | | |

Table 1. Summary of Core Capability Performance

The following sections provide an overview of the performance related to each exercise objective and associated core capability, highlighting strengths and areas for improvement

Objective 1

The strengths and areas for improvement for each core capability aligned to this objective are described in this section.

Core Capability 1: Public Information and Warning

Strengths

The partial capability level can be attributed to the following strengths:

Strength 1: Current use of Nixle Alert System

Strength 2: Current use of Public Information and Warning Plan

Areas for Improvement

The following areas require improvement to achieve the full capability level:

Area for Improvement 1: Need to ensure for timely communication in support of security, and situational awareness for ALL residents. Joint PIO message.

Analysis: Nixel is limited to only those who register for the service. Continued ongoing outreach to assure our residents are aware about the service.

Core Capability 2: Operational Coordination

Strengths

The full capability level can be attributed to the following strengths:

Strength 1: Township Emergency Services use of NIMS/ICS system on a daily basis

Strength 2: Township Emergency Services yearly joint exercises

Strength 3: Township Emergency Services past handling of these and other major emergencies.

Areas for Improvement

The following areas require improvement to achieve the full capability level:

Area for Improvement 1: There is always room for improvement. Continued multi Agency exercises and training including public entities.

Reference:

Analysis:

Core Capability 3: Planning

Strengths

The partial capability level can be attributed to the following strengths:

Strength 1: Current Update Township E.O.P

Strength 2: Current Flood Warning Plan. B.T.M.U.A plan to water proof and secure the power at the lower pump Station located on Forge Pond. This pump station is secured when flooding is anticipated. B.T.M.U.A then uses water from the reservoir on Herbertsville Road.

Strength 3: B.T.M.U.A mitigation after Super Storm Sandy raising pump stations and generators. (Making water and sewer system protected against flooding.

Areas for Improvement

The following areas require improvement to achieve the full capability level:

Area for Improvement 1: There is always room for improvement. Continued update to existing plans. All Hazard approach

Analysis:

APPENDIX A: IMPROVEMENT PLAN

This IP has been developed specifically for Brick Township as a result of Severe Flooding Tabletop Exercise conducted on 08-31-22

| Core Capability | Issue/Area for Improvement | Corrective Action | Capability Element ¹ | Primary Responsible Organization | Organization POC | Start Date | Completion Date |
|---|----------------------------|---------------------------------|---------------------------------|----------------------------------|------------------|------------|-----------------|
| Core Capability 1: Public Information and Warning | Nixle Communication | Public Outreach | Training | Brick Township O.E.M | Joseph Pawlowicz | 09-01-22 | Ongoing |
| | | | | | | | |
| | | Sign-Up | | | | | |
| Core Capability | Issue/Area for Improvement | Corrective Action | Capability Element ² | Primary Responsible Organization | Organization POC | Start Date | Completion Date |
| Core Capability 2: Operational Coordination | Coordination | Continued Joint Yearly Exercise | Exercise | Brick Township O.E.M | Joseph Pawlowicz | 09-01-22 | 09-01-23 |
| | | Training | Exercise | Brick Township O.E.M | Joseph Pawlowicz | 09-01-22 | 09-01-23 |

| Core Capability | Issue/Area for Improvement | Corrective Action | Capability Element ³ | Primary Responsible Organization | Organization POC | Start Date | Completion Date |
|-----------------------------|----------------------------|---------------------------------|---------------------------------|----------------------------------|------------------|------------|-----------------|
| Core Capability 3: Planning | Updating existing plans | Continued Joint Yearly Exercise | Planning | Brick Township O.E.M | Joseph Pawlowicz | 09-01-22 | Ongoing |

APPENDIX B: EXERCISE PARTICIPANTS

| Participating Organizations |
|---|
| Brick Township |
| Brick Township Office of Emergency Management |
| Brick Township Police Department |
| Brick Township Administration |
| Brick Township Fire Department |
| Brick Township EMS |
| Brick Township Public Works |
| |
| |
| |
| |
| |
| |
| |
| |



Severe Flooding Tabletop (TTX) Exercise

Situation Manual

August 31st, 2022

This Situation Manual (SitMan) provides exercise participants with all the necessary tools for their roles in the exercise. Some exercise material is intended for the exclusive use of exercise planners, facilitators, and evaluators, but players may view other materials that are necessary to their performance. All exercise participants may view the SitMan.



This page is intentionally left bl

EXERCISE AGENDA

| Start Time | End Time | Activity |
|------------|----------|---|
| 10:00 | 10:05 | Welcome and Participant Briefing Registration |
| | | |
| | 11:00 | Exercise Ends |
| 11:00 | 11:30 | Hot Wash |
| | | |
| | | |
| | | |
| | | |

EXERCISE OVERVIEW

| | |
|-------------------------|---|
| Exercise Name | Severe Flooding TTX Exercise |
| Exercise Dates | August 26th, 2022 |
| Scope | This exercise is a TTX exercise, planned for 2 hours for Brick Township Emergency Management First Responders. Exercise play is limited to communication and coordination of the plans, policies, and procedures to respond to a severe weather event. |
| Focus Area(s) | Response |
| Capabilities | Operational Communications Operational Coordination Situational Assessment |
| Objectives | <ol style="list-style-type: none"> 1. Identify critical issues, timeframes, and processes to evaluate situational information in relation to the continuity event. 2. Discuss communications processes and procedures to ensure continuity of operations. 3. Identify policies, procedures, and resources essential during a cascading continuity event. |
| Threat or Hazard | Severe weather and flooding. |
| Scenario | This Severe Flooding TTX was designed around the realistic scenario of flash flooding with warning and builds to a significant flooding impact which causes significant effort and actions by the participating jurisdictions and agencies. |
| Sponsor | Brick Township Emergency Management |

**Point of
Contact(s)**

Joseph J. Pawlowicz Jr.,
Deputy Coordinator
732-262-1167
Joepawlowicz@brickpd.com

Ronald Gaskill
Deputy Coordinator
732-262-1181
rgaskill@brickpd.com

GENERAL INFORMATION

Exercise Objectives and Capabilities

The following exercise objectives in Table 1 describe the expected outcomes for the exercise. The objectives are linked to capabilities, which are the means to accomplish a mission, function, or objective based on the performance of related tasks, under specified conditions, to target levels of performance. The objectives and aligned capabilities are guided by senior leaders and selected by the Exercise Planning Team.

| Exercise Objectives | Capability |
|--|----------------------------|
| Identify critical issues, timeframes, and processes to evaluate situational information in relation to the continuity event. | Situational Assessment |
| Discuss communications processes and procedures to ensure continuity of operations. | Operational Communications |
| Identify policies, procedures, and resources essential to maintaining MEFs during a cascading continuity event. | Operational Coordination |

Table 1. Exercise Objectives and Associated Capabilities

Participant Roles and Responsibilities

The term *participant* encompasses many groups of people, not just those playing in the exercise. Groups of participants involved in the exercise, and their respective roles and responsibilities, are as follows:

- **Players:** Personnel who have an active role in discussing or performing their regular roles and responsibilities during the exercise. Players discuss or initiate actions in response to the simulated emergency.
- **Observers:** Do not directly participate in the exercise. However, they may support the development of player responses to the situation during the discussion by asking relevant questions or providing subject matter expertise.
- **Facilitators:** Provide situation updates and moderate discussions. They also provide additional information or resolve questions as required. Key Exercise Planning Team members also may assist with facilitation as subject matter experts (SMEs) during the exercise.
- **Evaluators:** Are assigned to observe and document certain objectives during the exercise. Their primary role is to document player discussions, including how and if those discussions conform to plans, policies, and procedures.

Exercise Structure

This exercise will be a facilitated exercise. Players will participate in the following module:

- Module: Flash Flood Warning & Response

Each module begins with an update that summarizes key events occurring within that time period. After the updates, participants review the situation and engage in functional group discussions of appropriate response issues. For this exercise, the functional groups are as follows:

After these functional group discussions, participants will engage in a moderated plenary discussion in which a spokesperson from each group will present a synopsis of the group's actions, based on the scenario.

Exercise Guidelines

- This exercise will be held in an open, no-fault environment wherein capabilities, plans, systems, and processes will be evaluated. Varying viewpoints, even disagreements, are expected.
- Respond to the scenario using your knowledge of current plans and capabilities (i.e., you may use only existing assets) and insights derived from your training.
- Decisions are not precedent setting and may not reflect your jurisdiction's/organization's final position on a given issue. This exercise is an opportunity to discuss and present multiple options and possible solutions.

- Issue identification is not as valuable as suggestions and recommended actions that could improve response efforts. Problem-solving efforts should be the focus.
- The assumption is that the exercise scenario is plausible and events occur as they are presented. All players will receive information at the same time.

Exercise Evaluation

Evaluation of the exercise is based on the exercise objectives and aligned capabilities, capability targets, and critical tasks, which are documented in Exercise Evaluation Guides (EEGs). Evaluators have EEGs for each of their assigned areas. Additionally, players will be asked to complete participant feedback forms. These documents, coupled with facilitator observations and notes, will be used to evaluate the exercise and compile the After-Action Report (AAR)/Improvement Plan (IP)

WARNING & SEVERE FACILITIES IMPACT

Scenario

Tuesday, 10:00 a.m.: Heavy rains over the past several days have saturated the ground, leaving waterways in the area at dangerously high levels. The National Weather Service issues a Flood Watch for Brick Township. The forecast calls for additional heavy rainfall, perhaps as much as 8–12 inches during the next 24 hours.

Normal areas Along Route 35 and End of Drum Point Road that normally experience flooding are areas of concern.

State Hwy 88 at the entrance to the Brick Township Municipal Utilities Authority, Forge Pond and Laurelbrook developments are beginning to flood, roadways in these areas are becoming impassable.

Questions:

- 1) Who in the organization is responsible for monitoring or would likely hear or receive a bulletin or alert from the National Weather Service or other alerting authority? How would you receive this information?
- 2) What information are you sharing with your [employees/volunteers] at this time? What is the current process and communications platform(s) used to notify them of potential threats or hazards, including those who are out of the building?
- 3) When you hear that a Flood Watch has been issued, what are your immediate concerns?
- 4) What if any, decisions should be made at this time? Who can make those decisions (name, position/role)?

Update #1

Tuesday, 12:00 p.m.: As the rain continues to fall, the National Weather Service issues a Flood Warning for Brick Township and estimates that major flooding will occur within 12 hours. Areas around Brick Municipal Utility Authority facility are experiencing flooding, including the parking lot/ garage and main entrance. There are reports from maintenance staff of water in the lower level. The Emergency Management Coordinator has issued a voluntary evacuation for affected areas of Brick Township and, as a result, many employees and volunteers are asking to return home or are not coming to work at all. In addition, many local schools and child care facilities are closing early today. Delivery drivers are unable to access your facility and, as such, you are not receiving critical shipments.

Questions:

- 1) Based on this updated information, how have your concerns changed?
- 2) What and how is your organization communicating about the flood with [employees/volunteers] at this time?
- 3) What expectations do you have regarding [employees/volunteers] attendance under these circumstances? Are you prepared to operate with a limited number of [employees/volunteers]?
- 4) Do you have a process in place to account for all your employees and visitors? If people cannot be located or contacted, what—if any—processes do you have to account for them?
- 5) Based on the forecast, it seems likely that your facility could experience damage in the next 24 hours. What decisions need to be made at this time, and who needs to make them?

Update #2

Wednesday, 11:00 a.m.: Floodwaters reach the facility and cause minor damage. It continues to rain, although the rain is expected to taper off throughout the day. Some portions of Brick Township are without power. In some areas, residents had to be rescued from flooded homes and vehicles. Roadways remain flooded and impassable. Police officers have established a perimeter around heavily damaged areas, including B.T.M.U.A, and are not allowing anyone to enter for safety reasons. Status of pump stations and water distribution facility.

Questions:

- 1) What are your immediate actions and priorities in the first 10-15 minutes?
- 2) What information are you sharing with [employees/volunteers]?
- 3) How are you communicating about the status of your operations?
- 4) Is your organization continuing to operate in any capacity?

Update #3

Wednesday, 4 p.m.: Floodwaters are beginning to recede from much of Brick Township. Several major roadways are open, including those that access your facility. Residents have begun to return home and police have lifted restrictions on travel in damaged areas. You are able to access your facility and inspect the damage. There is flood damage to the lowest level and some of your IT infrastructure is not functioning. Based on the inspection, it is determined that your facility will not be operational for several days.

Questions:

- 1) Now that you know the extent of the damage, do you have options that allow you to continue operations?
- 2) How are you communicating with [employees/volunteers] regarding their work status? What are your expectations for [employees/volunteers] who cannot work, either because your business is not operational or because they have suffered personal losses?
- 3) What are the critical services your employees rely upon to be at work (e.g., power, transit, schools/ day care)?
- 4) What can you do to support the community as it recovers? How can you improve your network and relationships to be better connected to the community to prepare for future events?

Player Feedback Form Exercise

Name: _____ Exercise Date: _____

Name (Optional): _____ Organization: _____

Current Responsibilities: _____

1. Using a scale of 1 to 5, please assess the exercise by indicating your agreement with each statement that follows. 1 indicates strong disagreement with the statement and 5 indicates strong agreement.

| | | | | | |
|---|---|---|---|---|---|
| The exercise was well-structured and organized | 1 | 2 | 3 | 4 | 5 |
| The exercise scenario was plausible and as realistic as possible. | 1 | 2 | 3 | 4 | 5 |
| The facilitator(s) was knowledgeable about the area of play and kept the exercise on target. | 1 | 2 | 3 | 4 | 5 |
| This exercise allowed players to practice, identify, or improve their capabilities. | 1 | 2 | 3 | 4 | 5 |
| This exercise helped players identify strengths and weaknesses in the execution of their plans, protocols, or procedures. | 1 | 2 | 3 | 4 | 5 |
| This exercise will allow players to make needed changes to their current plans, protocols, or procedures. | 1 | 2 | 3 | 4 | 5 |

1. Using a scale of 1 to 5, please assess the exercise by indicating your agreement with each statement that follows. 1 indicates strong disagreement with the statement and 5 indicates strong agreement.

2. Identify key strengths that you observed during the exercise.

3. Identify areas for improvement that you observed during the exercise.

4. Please provide recommendations for how this exercise or future exercises could be improved or enhanced.

5. Please identify any major problems with player participation that might have been detrimental to exercise play OR potentially led to poor outcomes.

6. Please identify any major problems with facilitation that might have been detrimental to exercise play OR potentially led to a poor learning experience.

7. Please provide any other feedback you feel is important and beneficial.

Evaluator Feedback Form Exercise

Name: _____ Exercise Date: _____

Name (Optional): _____ Organization: _____

Current Responsibilities: _____

1. Using a scale of 1 to 5, please assess the exercise by indicating your agreement with each statement that follows. 1 indicates strong disagreement with the statement and 5 indicates strong agreement.

| | | | | | |
|---|---|---|---|---|---|
| The exercise was well-structured and organized | 1 | 2 | 3 | 4 | 5 |
| The exercise scenario was plausible and as realistic as possible. | 1 | 2 | 3 | 4 | 5 |
| The facilitator(s) was knowledgeable about the area of play and kept the exercise on target. | 1 | 2 | 3 | 4 | 5 |
| This exercise allowed players to practice, identify, or improve their capabilities. | 1 | 2 | 3 | 4 | 5 |
| This exercise helped players identify strengths and weaknesses in the execution of their plans, protocols, or procedures. | 1 | 2 | 3 | 4 | 5 |
| This exercise will allow players to make needed changes to their current plans, protocols, or procedures. | 1 | 2 | 3 | 4 | 5 |

1. Using a scale of 1 to 5, please assess the exercise by indicating your agreement with each statement that follows. 1 indicates strong disagreement with the statement and 5 indicates strong agreement.

2. Identify key strengths that you observed during the exercise.

3. Identify areas for improvement that you observed during the exercise.

4. Please provide recommendations for how this exercise or future exercises could be improved or enhanced.

5. Please identify any major problems with player participation that might have been detrimental to exercise play OR potentially led to poor outcomes.

6. Please identify any major problems with facilitation that might have been detrimental to exercise play OR potentially led to a poor learning experience.

7. Please provide any other feedback you feel is important and benefic

APPENDIX B: ACRONYMS

| Acronym | Term |
|----------------|---------------------------------|
| AAR | After-Action Report |
| ARC | American Red Cross |
| DHS | Department of Homeland Security |
| EPT | Exercise Planning Team |
| IP | Improvement Plan |
| JIB | Joint Intelligence Bulletin |
| NGO | Non-Governmental Organization |
| NWS | National Weather Service |
| POC | Point of Contact |
| SitMan | Situation Manual |
| SME | Subject Matter Expert |
| TTX | Tabletop Exercise |



**BRICK TOWNSHIP
EMERGENCY MANAGEMENT
MEETING SIGN-IN**

| | |
|---------------------------------|--|
| DATE: 08-23-2022 | LOCATION: Station 23 Laurelton Fire Co. #1 |
| EVENT: Severe Flooding Tabletop | BRIEFING 10:00-12:00 |
| TYPE: Tabletop | Severe Flooding |

AGENDA

DEBRIEFING

| | NAME | SIGNATURE |
|----|-------------------------------|-----------|
| 1 | Chief James Riccio | |
| 2 | Deputy Chief Donald Ling | |
| 3 | OEM 1 Joseph Pawlowicz Jr. | |
| 4 | OEM 3 Ronald Gaskill | |
| 5 | Kevin Batzel- Fire Safety | |
| 6 | Rick Orlando-Fire Safety | |
| 7 | Chief David Bahrenburg | |
| 8 | Michael Botts-EMS | |
| 9 | Stephen Krakovsky-dpw | |
| 10 | Tara Paxton- Township Planner | |
| 11 | John Rouse-B.T.M.U.A | |
| 12 | | |
| 13 | | |
| 14 | | |
| 15 | | |
| 16 | | |