

## **Borough of Mantoloking**

### **NFIP Flood Mitigation Planning Committee**

#### **Status of Flood Mitigation Plan**

**Downer Avenue  
Mantoloking, NJ 08903**

#### **2017 Annual Report for the Flood Mitigation Plan**

Representatives of the Borough's Flood Committee and Michael Yaffe of Michael Baker International, representative for Ocean County that will be completing the Ocean County Multi-Jurisdictional All Hazards Mitigation Plan, met on December 6, 2017 to discuss the Borough's Flood Mitigation Plan and the Ocean County Multi-Jurisdictional All Hazards Mitigation Plan to discuss the progress of the goals and objectives represented. Provided below is a summary of the meeting and a brief explanation of the activities discussed/conducted:

- 1. Resolution Appointing Committee Members (Include New/Updated Members);**
- 2. Ocean County Multi-Jurisdictional All Hazards Mitigation Plan**
  - **Adopted by the Borough May 20, 2014 – Resolution No. 5/20/14 - 07**
  - The purpose of this project is to develop a FEMA-approvable Hazard Mitigation Plan that aids in the reduction or elimination of risk caused by hazards, or disaster, such as floods, fires, hurricanes, etc;
  - Deem the Borough eligible for various FEMA grants/assistance;
  - The 2014 Multi-jurisdictional All Hazard Mitigation Plan for Ocean County represents the first approved hazard mitigation plan (HMP) for the County. The Plan will expire in five years from the approval date. The update to the Multi-Jurisdictional All Hazard Mitigation Plan for Ocean County is targeted for submission to FEMA for review by August 2018. Final Adoption is anticipated to occur in 2019 before the current plan expires. A meeting was conducted with the Borough's Flood Mitigation Committee and Michael Yaffe of Michael Baker International, representative for Ocean County that will be completing the Plan update, on December 6<sup>th</sup> to review the activities affiliated with the Borough's hazard mitigation efforts.
- 3. Review the Strategies/Goals of the Plan;**
  - The Plan has adopted Strategies/Goals from the Unified National Program for Floodplain Management. These Goals include:
    - A. Modify human susceptibility to flood damage and disruption by avoiding hazardous, uneconomic, or unwise use of the floodplain.

- B. Mitigate the impact of flooding by assisting individuals and communities to prepare for, respond to, and recover from floods.
- C. Mitigate flooding through projects that control flood waters
- D. Preserve and restore the natural resources and functions of the floodplains by maintaining and reestablishing floodplain environments in their natural state.

**4. In Depth Review of the Objectives/Activities Conducted During 2017;**

- Summary of the activities conducted during 2017
- Activities include:
  - 1a. Upgrade all new and redeveloping construction in conformance with adopted CRS repetitive loss reduction program.

This program would enforce pile installations and floor flood resistance elevations to mitigate future flood damage, inclusive of rebuilding, elevating, or even demolition and property purchases, if feasible.

UPDATE: The Borough continues to implement and enforce CRS related activities while addressing improvements of its own properties.

There was further in-depth discussion relating to the issue of implementing pile foundation requirements throughout the Borough, not just in V-Zone areas. Since it was determined through past discussions of this issue that International Building Code allows the use of other foundations if tests reveal piles are not needed, enforcement would have to be through other means; Land Use, Flood Prevention, etc. The Committee requested action on the pile foundation issue which included reaching out to DCA for clarification and determination if additional CRS credit could be achieved for the stricter construction standard. The Committee also would research if other communities have adopted this measure and enact accordingly. It should be noted that this was attempted previously and construction code legal restrictions prevented it. The present Borough Construction Official has determined that no such actions can be enforced as the DCA regulations allow the usage of other foundations. It is recommended that this action be removed from consideration.

However, it was discussed about possibly increasing the Borough's freeboard to 2' above the Base Flood Elevation (BFE) as this would be a change that would impact the entire Borough rather than a selected flood zone. The Borough still maintains and regulates to a 1' freeboard per State requirements.

- 1b. Continue to conform to all requirements adopted under the National Flood Insurance Program inclusive of all implemented building code regulations for development or redevelopment.

As the years progress, the Borough continuously strives to be in full conformance with the NFIP. The Borough also allocates funds to achieve these tasks.

UPDATE: All NFIP commitments are continuing to be performed.

B. 2a. Conform to and implement the CRS program mitigation measures in a planned systematic approach.

Implement the CRS program in accordance with yearly identifiable tasks which will allow Borough wide flood mitigation and achieve associated NFIP flood insurance premium reductions in the a cost effective manner. Under this program a Repetitive Loss Reduction Plan will be prepared, along with improving the addressable siren system, public address system and emergency broadcast system, acquisition of aquatic or flood response vehicle, increase identification of emergency evacuation route and flood preparedness plan.

UPDATE: The Borough collected feedback and comments based upon storm events in an effort to improve the evacuation/emergency broadcast system. Upon review of the comments, the Committee determined to address some of these issues specifically the possible implementation of two (2) more audible alarm and installation. As locations for the alarms were difficult to identify due to the limited availability of open space and the inability to install the devices on private property, an alternative approach of transmitting a AM-radio broadcast was researched. This information system would be operated by Borough personnel and will relay information specific to Mantoloking. Since it is a radio signal, service would be operational even through the loss of power as long as source power is available at the station. **The AM-radio broadcast system has been implemented and is fully operational.**

With the completion of the Herbert Street Bridge and the NJDOT paving of Route 35, the Committee/Borough continues to implement an evacuation route that has been reviewed and approved by the appropriate County and State parties. The identified route has the entire Borough utilizing Route 35 to get to Herbert Street and then taking Herbert Street West over the bridge to the mainland as their evacuation route.

2b. Encourage public awareness and education by various means of communication with its residents and property owners.

Mantoloking realizes the first step in reducing property and personal losses is to inform every property owner of the flood

hazard area that they reside in. All Mantoloking residents have been informed by a flyer mailed to them to make them aware that the property they own is in a special flood hazard area and that, historically, the Borough floods during storms. The public display in Borough Hall has a collection of information for property owners which cover flood preparedness, protecting a building from flooding, flood prevention, flood plain management, retrofitting and natural and beneficial functions of flood plains.

UPDATE: Property owners continue to receive flyers twice annually, information is posted on the Borough's official Facebook Page, disseminated as a non-emergency email blast (reverse 911), while various brochures are made available at public events and informative literature is updated regularly; posted and made available at the Borough Hall and Local Public Library in the Bay Head Branch of the Ocean County Library system.

A "Welcome Package" is prepared and provided to all new families who purchase property within the Borough. With renting activities occurring within Town, this information is also provided to the owner for distribution to the renter(s) to ensure the knowledge is transferred. In an effort that the most up-to-date information is provided in this flyer, the flyer is continuously updated.

Information is also distributed to realtors and rental agents within the area requesting that potential buyers and renters are to be advised that the property is within the Special Flood Hazard Area and that flood insurance and flood awareness is required. It was also suggested that when a Deed is transferred, the flyer should be provided to the new owners as well.

The Borough's website is constantly updated to include this information for viewing by the general public and is advertised as well.

- C. 3a. Develop rainwater conveyance facilities to meet 25 year storm event loading in non-critical areas in accordance with floodplain management regulations.

Work under this task will be implemented in conjunction with the Borough's roadway reconstruction program that considers raising the elevation of roads to resist flooding. Presently, the Borough has an identified phased roadway program. The first phase of the present program is on file with the Borough Engineer. In addition, as each phase of the program is developed, any specific non-critical rainwater conveyance problems that can be remedied in conjunction with this program, as brought to light by public or private complaint, are included.

UPDATE: The Borough cleans the storm sewers on an annual basis and maintained schedule.

Roadways are improved based on the amount of funds available to the Municipality and the associated cost benefit. As the roads are paved the associated storm systems are improved as well.

State Highway 35 has been improved by the NJDOT and the appropriate storm water facilities were upgraded in conjunction with this project inclusive of the addition of two (2) significant storm water pump stations constructed by the NJDOT at the bayside (westerly) ends of Downer and Lyman Streets.

#### Backbay Backflow Check Valve Program

Please see Item 3e below.

3b. Develop Atlantic Ocean flood protection features to meet a 1% chance return period coastal storm flood resistance level.

Resistance to flood hazard from a 1% chance return period storm flood resistance is anticipated to be achieved with the conclusion of the anticipated NJDEP/USACE/Mantoloking Dune and Beachfill Storm Damage Reduction project, which will enhance the Atlantic oceanfront beach and dune system. Maintenance dune and beach work, until this project is completed, is conducted as standard operating procedure under the Borough's beach and dune maintenance program.

UPDATE:

Steel Sheet Pile Dune Restoration Project: The 3.5 mile steel sheet pile project commenced construction in June 2014, was functional in 2014 and was fully completed in March 2015.

USACE - Beachfill, Initial Construction – Manasquan Inlet to Barnegat Inlet, Ocean County, New Jersey: The Dune and Beachfill Construction Project that will protect the reach from the Manasquan Inlet to the Barnegat Inlet was issued a Notice to Proceed on January 20, 2017. The beachfill operations commenced within the Borough of Mantoloking on October 5, 2017. The entire Brough will be completed in three phases: Southern Municipal Limit to 1071 Ocean Avenue; 1071 Ocean Avenue to Stevens Place; Stevens Place to the Northern Municipal limit.

3c. Develop back bay bulkhead system to meet a 25 year coastal storm flood level

Backbay bulkheads must be elevated to the 25-year storm flood

elevation level to mitigate impacts from flooding of the Borough from the back bay area (protection of this level already exists on the ocean frontage).

Elevation of backbay bulkheads in all probability cannot be completed immediately, as 95% of these are privately owned and this would be a very costly undertaking. Accordingly, the Borough is reviewing adopting an Ordinance which requires bulkheads to be raised as they come up for replacement. Since the average life of a bulkhead is approximately 30 years, and the fact that some are new, the project may take over 30 years to become fully implemented if adopted.

Through review of the stillwater elevations for the municipality, it was determined that the 25-year stillwater backbay flood level will be approximately Elevation 3.88 NAVD88 (5.0 NGVD 29).

UPDATE: With the initial introduction of the Bulkhead Ordinance experiencing resistance, the Committee determined the possible implementation of a Permit Application process where the Borough could then regulate the minimum height. It was previously determined that efforts should be concentrated on establishing resistance against ocean flooding (Atlantic Ocean) then addressing the back bay. With prevention of ocean flooding in the process of being addressed through Item 3b of this summary, the Committee determined that this action should be moved forward.

Some actions that will be necessary to implement this program include: review of the stillwater elevation along the bayside; update to the previously prepared draft bulkhead ordinance; and review of DCA codes which will support this effort.

### 3d. Review application of modular pump station systems to relieve flooding in low Mantoloking storm water impounding Bayside areas

25-year storm conveyance systems in critical areas (sanitary sewer pump station, NJ American Water Well and Pump Station Site, Borough Hall, etc.) would require the implementation of storm water pumping systems to overcome the disabling of gravity systems due to storm elevated water levels in the backbay area. The implementation of this project was evaluated as part of the NJDOT Route 35 upgrades.

UPDATE: Through the improvements of Route 35, two storm water pump stations were installed by the NJDOT: one at Lyman Street and one at Downer Avenue.

With the NJDOT Pump Stations now in Place, the Borough will review the balance of local flooding not alleviated by the NJDOT

system.

Various other locations within the Borough will be investigated to determine if additional pump station installations will be implemented to address municipal storm water conveyance. However, with the bayside barrier being of varying conditions such as unimproved bay front areas, bulkheads, revetments, and beaches, the installation of pump stations will have to be reviewed in further detail prior to implementation.

3e. Implementation of backbay backflow check valve program.

This project requires the continued analysis and evaluation of Borough and State outfall systems, formulation of appropriate replacement locations and installation of check valves as required.

UPDATE: The Borough will continue to review the status of their check valve and update and repair as needed.

D. 4a. Adopt and support NJDEP Coastal Protection Plan and appropriate moneys as necessary to implement same

In order to assure adoption and the availability of matching funds to put the NJDEP/Mantoloking Coastal Protection Plan and project in place in accordance with Item #3 above, the Borough is presently working on reliable funding sources to support this program which will allow the Borough to adopt and execute the required agreements to implement the plan.

UPDATE: The Borough has procured these funds and the Plan is progressing accordingly.

4b. Evaluate all dune systems and augment improvements to same.

This project goal requires implementation over a longer term period, in conjunction with additional engineering and computer analysis followed by physical augmentation of the dune system in conjunction with the Richard Stockton College Coastal Resource Center (RSCCRC). Phase 1 of the project entails the dune computer analysis; Phase 2, dune augmentation in critical areas; Phase 3, mass dune system augmentation where necessary accompanied by planting and fence work. Project development to be implemented as follows:

UPDATE: Due to the impacts of various storm events after Super Storm Sandy, the results of this study are void. As the Committee recommended the possibility of re-evaluating Phase 1, it was determined moot since this will be a requirement of the USACE when the beach replenishment project is constructed. The

USACE will be responsible to monitor the beach and dune system and the Borough maintain as necessary between scheduled USACE renourishment activities or USACE repairs related to declared Federal disasters.

However, due to the impacts of Sandy, and in the interim as the USACE project is complete, the Borough has implemented a non-stop aggressive dune rebuilding and sand importation program which started in October 2012 and continues to present.

4c. Continuation of monitoring and study by Richard Stockton College, Coastal Research Center, on beach and dune erosion and beach and dune performance

With the ever changing shoreline, due to ocean currents and seasonal storms, the dunes are monitored to ensure the needed protection is present.

UPDATE: Stockton State College continued to monitor and survey the movement of sand on the dune and beach through 2017. They produce a report throughout the year while producing an annual summary at the end of the fourth quarter. After severe storm events, an additional evaluation is conducted to determine the damage sustained.

Upon completion of the USACE beach replenishment project, the USACE will be responsible to monitor the beach and dune system and the Stockton program may be eliminated.