



September 2013 - UPDATE

Mayor George C. Nebel  
Borough of Mantoloking  
P.O. Box 487  
202 Downer Avenue  
Mantoloking, NJ 08872

**RE: Borough of Mantoloking  
Floodplain Management Plan  
2013 Annual Progress Report (October 2012 – September 2013)  
Community Rating System – Activity 510**

Prepared and Reviewed By:

NFIP Flood Hazard Mitigation Planning Committee;

Dear Mayor:

As you are aware, the Borough of Mantoloking has developed, adopted and is implementing its Flood Mitigation Plan (the Plan) to serve as a guidance document to mitigate flood damage to properties and the environment within the Borough. The Plan not only establishes the goals and guidelines for future flood protection throughout the community, but provides a summary of past efforts made by the Borough throughout the years to control flood damage. This Plan defines the Borough's continued commitment towards the protection, health, safety and welfare of its residents and their property, as well as the Borough's commitment towards the improvement of their environment. The Plan has been reviewed by the Federal Emergency Management Agency (FEMA) and the New Jersey Office of Emergency Management (State OEM) to ensure that the plan is in accordance with the State's mitigation program. Additionally, the Plan has been reviewed by multiple Municipal, State and County Government agents and offices, along with neighboring Towns and utility companies, to not only obtain additional suggestions to further better the Borough's plan, but to educate and inform the surrounding areas of the Borough's intentions towards mitigation issues.

The Plan is a document that continuously implements measures to aid in mitigating flood issues and has been prepared based on an approved schedule to enact these activities. As such a review of these activities is conducted every year to ensure that the goals and objectives of the Plan are achieved. Accordingly, the NFIP Flood Hazard Mitigation Planning Committee conducted its annual meeting and prepared a report, contained herewith, of the activities for 2013 (October 2012 through September 2013) and reviewed proposed activities for 2014.



**2012/2013 Annual Report for the Flood Mitigation Plan**

Representatives of the Committee met on August 20, 2013 to discuss the Flood Mitigation Plan and the progress of the goals and objectives represented. Provided below is a summary of the meeting and a brief explanation of the activities conducted during 2012/2013:

1. Modify human susceptibility to flood damage and disruption by avoiding hazardous, uneconomical, or unwise use of floodplains.

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 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. 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 adopted this measure and enact accordingly. It should be noted that this was attempted previously and legal construction code restrictions prevented it.

With the implementation of the new FIRMS (scheduled for release in 2014) which are increasing the base flood elevation, it has been decided to no longer pursue potentially increasing the Borough's freeboard to 2' above the Base Flood Elevation (BFE). 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.



2. Mitigate the impact of flooding by assisting individuals and communities to prepare for, respond to, and recover from floods.

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 NFIP premium reductions in the most 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 the events of Hurricane Irene 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 alarms. As a location for the alarms was difficult due to the limited availability of open space and the inability to install the device 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.

With the completion of the Herbert Street Bridge and the NJDOT paving of Route 35 scheduled for implementation for Fall 2013, the Committee/Borough has been reviewing the evacuation route and has suggested various improvements. These suggestions have been collected and submitted to the appropriate County and State parties to implement. As the Multi Jurisdictional All County Hazards Plan is implemented, it will be reviewed and then determined if the revised route should be enacted.

Similar to Hurricane Irene, another report/study will be prepared by the Borough OEM based on the response associated with Super Storm Sandy. This too will be reviewed by the Committee and suggestions will be addressed accordingly as funds become available and are cost effective.

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 losses is to inform every property owner of the flood hazard area that they lie 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 receive flyers twice annually while various brochures are made available at public events and informative literature is updated regularly; posted and made available at the Borough Hall. A "Welcome Package" is prepared and submitted to all new families who purchase property within the Borough. With the increased renting activities occurring within Town, said information is also provided to the owner for distribution to the renter(s) to ensure the knowledge is transferred.

Information is also distributed to realtors within the area requesting that potential buyers are to be advised that the property is within the Special Flood Hazard Area and that flood insurance is required.

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

### 3. Mitigate flooding through projects that control flood waters

- 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 will consider 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 entertained the option of purchasing a jet-vacuum truck to conduct storm sewer system cleanings. This was not finalized so the Borough cleans the storm sewers through alternative methods. A maintenance schedule is followed.

Old Bridge Street and Bay Avenue from Downer Avenue to Herbert Street was paved with the associated storm systems improved as well. This procedure will continue each year as a roadway is improved. Roadways are improved based on the amount of funds available to the Municipality and the associated cost benefit. State Highway 35 will be improved by the NJDOT (commence Fall 2013) and the appropriate storm water facilities will be upgraded accordingly inclusive of two (2) significant storm water



pump stations to be constructed by the NJDOT.

Backbay Backflow Check Valve Program

Please see item 3e below.

- 3b. Develop Atlantic Ocean flood protection features to meet a 100 year coastal storm flood resistance level.

100 year coastal flood resistance is anticipated to be completed with the conclusion of the anticipated NJDEP/USACE/Mantoloking project, which will enhance the Atlantic oceanfront beach and dune system. Enhancement work, until this project is completed, has been conducted as standard operating procedure under the Borough's beach and dune maintenance program.

UPDATE: The Borough, in conjunction with the County of Ocean and neighboring communities continues to pursue implementation of a regional beach fill as the results of the Borough's beach renourishment feasibility study indicates that financially a regional project makes the most sense to the Borough. In this regard, the Borough, through efforts of the Mayor and as endorsed by the Beach Protection Committee have spearheaded communication with the County and neighboring committees to explore the potential of a regional program in conjunction with aid from the County and the NJDEP. The initial effort by the Mayor and Committee culminated in a meeting with the County and our neighboring beachfront communities who concurred with the proposed program.

Due to the impacts of Superstorm "Sandy" the federal government has allocated funds to implement the regional beach renourishment program.

The Borough's biggest hurdle was the acquisition of the Public Easement as the language has been viewed as unfriendly. The Borough has engaged the NJDEP and property owners in several meetings regarding the revision of this language and with a strong public outreach program minor revisions of the language has been accomplished.

The Borough has now acquired all but five (5) oceanfront easements. The balance of the easements will be acquired by condemnation if needed with support from the State of New Jersey under the Disaster Declaration Act (DCA).

The Borough is also working with the FHA and NJDEP to install a steel sheetpile wall across the oceanfront of the Borough.

- 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 level to prevent



flooding of the Borough from the back bay area (protection of near this magnitude already exists on the ocean frontage).

Elevation of backbay bulkheads cannot be completed immediately, as 95% of these are privately owned and 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 30 years, and the fact that some are new, the project may take over 30 years to become fully implemented.

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 adoption 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 has been determined that efforts should be concentrated on establishing resistance against ocean flooding (Atlantic Ocean) then addressing the back bay.

3d. Review application of modular pump station systems to relieve flooding in Mantoloking 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 backbay areas. The implementation of this project is slated to be evaluated as part of the NJDOT Route 35 upgrades.

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

Once this system is in place, the Borough will review 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 conveyance. However, with the bayside barrier being of varying conditions such as unimproved bay front, bulkheads, revetment, and beach, the installation of pump stations will have to be reviewed further 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 continued its check valve installations at Old Bridge Street. It is anticipated that other valves will be upgraded/installed in 2014.

4. Preserve and restore the natural resources and functions of floodplains by maintaining and reestablishing floodplain environments in their natural state

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 and which will allow the Borough to adopt and execute the required agreements to implement the plan.

UPDATE: It now appears that the State of New Jersey will provide all matching funds for the project, however, the Borough will maintain its funds for the time being should the State program be revised.

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 Super Storm Sandy and its devastation of the Borough's beach and dune system, 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 USACE when the beach replenishment project is constructed. The USACE will be responsible to monitor and maintain as necessary.

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 continues to monitor and survey the movement of sand on the dune and beach. They produce a quarterly 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.

An evaluation of the Borough's dune system is conducted every year to determine the overall status. Each resident is notified of specific recommendations to aid in the development of their dune. A report is generated detailing the overall condition of the dune system which is mailed to the resident. The Borough has also initiated a program where residents have been notified of various dune ordinance violations to increase awareness and accelerate the dune preservation program.

As the USACE beach replenishment project moves forward, the USACE will be responsible to monitor the beach and dune system and the Stockton program may be eliminated.

5. Additional Programs or Projects

- 5a. Conduct storm sewer inspection and clean accordingly. (Completed – see item 3a above)
- 5b. Investigate the bulkhead at Albertson Street and implement improvements.
- 5c. Review locations for the implementation of storm pumping stations.
- 5d. Implement the installation of a steel sheet pile system along the Borough's beach system buried within the landward side (backslope) of the USACE dune system.

# TIMETABLE FOR OBJECTIVES

Activity	Responsible Parties	Year					
		2008	2009	2010	2011	2012	2013
1) Modify human susceptibility to flood damage and disruption by avoiding hazardous, uneconomical, or unwise use of floodplains							
a) Upgrade all new and redeveloping construction in conformance with adopted CRS repetitive loss reduction program	Borough Code Official, E.M.O., Borough Engineer		X <sup>1</sup>		X <sup>1</sup>		X <sup>1</sup>
b) Continue with all commitments adopted under the National Flood Insurance program inclusive of all implemented building code regulations for development or redevelopment	Borough Code Official, E.M.O., Borough Engineer		X		X		X
2) Modify the impact of flooding by assisting individuals and communities to prepare for, respond to, and recover from floods							
a) Conform to, and implement CRS program mitigation measures in planned systematic approach	Borough Engineer, Borough Planner	X		X		X	X
b) Encourage public awareness and education by various means of communication with its residents and property owners	Flood Mitigation Committee	X	X	X	X	X	X
3) Modify flooding through projects that control flood waters							
a) Develop rainwater conveyance facilities to meet 25 year storm event loading in non-critical areas	Borough Engineer, Borough Code Official	X <sup>2</sup>					
b) Develop Atlantic Ocean flood protection features to meet a 100-year coastal storm flood resistance level.	Borough Engineer, Borough Dune Inspector						X
c) Develop backbay bulkhead system to meet a 25 year coastal storm flood level	Borough Engineer	X <sup>3</sup>					
d) Review application of modular pump station systems to relieve flooding in Mantoloking Bayside areas	Borough Engineer		X	X		X	X
e) Implementation of backbay backflow check valve program	Borough Engineer			X			X
4) Preserve and restore the natural resources and functions of floodplains by maintaining and reestablishing floodplain environments in their natural state							
a) Adopt and support USACE/NJDEP Coastal Protection Plan and appropriate moneys as necessary to implement same	Mayor, Borough Council				X		
b) Evaluate all dune systems and augment improvement to same	Borough Dune Inspector	X <sup>4</sup>		X <sup>4</sup>			
c) Continuation of monitoring and study by Stockton College, Coastal Research Center, on beach and dune erosion and beach and dune performance	Borough Dune Inspector	X	X	X	X	X	X

Notes: 1 - This task will be dependent on updates that are enforced under the CRS program; 2 - Phased program, to be conducted annually as roadways are improved; 3 - Improvement to be conducted by homeowner as bulkhead is replaced; 4 - Multiple phased project.



The Committee will update the Flood Mitigation Plan over the next several months with the activities mentioned herewith and arrange for the revised Plan to be adopted by the Borough at the beginning of the calendar year. Over the course of the year the Committee will continue to meet to discuss the success of various projects and actions that are necessary to aid other objectives and goals. As this date is finalized, advanced notification will be provided.

To ensure that Council is aware of the progress of the Flood Mitigation Committee, please arrange for distribution of this report to Council. In addition, for compliance with Community Rating System Activity Section 500, please arrange for this report to be viewed on the Borough's website and provide notification in the local newspaper that this report has been prepared and is available at the Borough Hall. We are providing the following language for use in notifying the public of the availability of this document:

"The NFIP Flood Hazard Mitigation Planning Committee of Mantoloking Borough has completed their annual report of the objectives and goals for 2012/2013 of the Borough's Flood Mitigation Plan. Members of the public are welcome to view the report as it is available on the Borough's website ([www.mantoloking.org](http://www.mantoloking.org)) as well as available for viewing at the Borough Hall."

Should you require any additional information, please do not hesitate to contact this office.

Very truly yours,

Hatch Mott MacDonald

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File Mantoloking M700906-III-3 (2013 Flood Mitigation Plan – Annual Report)