Monmouth Beach Borough

Strategic Recovery Planning Report

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Executive Summary

When Superstorm Sandy struck the coast of New Jersey on October 29, 2012, it brought extensive damage to Monmouth Beach Borough from both storm surge and wind damage, and forced the evacuation of hundreds of Borough residents. The Borough sustained winds in excess of 80 miles per hour and a tidal surge of approximately nine feet above the high tide level. Fifteen hundred feet of protective dunes along the Borough's coastline were damaged. The Borough lost utility services, in some areas ranging from 10 to 45 days, and the public water supply was deemed unsafe for consumption for days following the storm. This list of Superstorm Sandy impacts that Monmouth Beach sustained is not exhaustive; the impacts are extensive and will be discussed throughout this Strategic Recovery Planning Report.

Both in preparation for and in response to Superstorm Sandy, Monmouth Beach Borough's actions have been comprehensive. The Borough posted mandatory evacuations between 4:00pm on October 28th through 12:00 noon on October 31st, and set up Borough emergency systems in the lobby of Borough Hall to assist residents with food, supplies, contacts for special assistance, and arrangements for shelter. In the days and weeks immediately following Superstorm Sandy, Monmouth Beach barricaded flooded roads and hazards, patrolled the community, and secured evacuated areas. The Borough also removed debris, including 26,000 cubic yards of vegetative debris, 4,854.98 tons of construction and demolition debris, 85.43 tons of white goods, and 5,100 cubic yards of sand.

In the weeks and months following Superstorm Sandy, Monmouth Beach has taken the following recovery actions (some of which are ongoing and continue to date): adopted FEMA Advisory Base Flood Elevations; passed an ordinance requiring new construction to meet the elevation standard of three feet above the ABFE ("ABFE +3"); applied to participate in the Community Rating System (CRS); and applied for FEMA grants fund restoration of Borough Hall, the Police Station and Annex, the Library, the Cultural Center, the salt shed, Griffin Park, among other grants.

Monmouth Beach Borough's recommended municipal actions to promote recovery from Superstorm Sandy and to reduce vulnerabilities from future storms include (but are not limited to) the following resiliency actions: updating the Borough's Master Plan Elements (including a floodplain management element); revising and updating the Borough's Emergency Operating Plan and Hazard Mitigation Plan; automating and updating the zoning and construction permit process; preparing a Capital Improvement Plan; preparing a Debris Management Plan; and developing a GIS database to support future planning efforts.

Acknowledgements

Mayor and Commission

Susan Howard, Mayor

James F. Cunniff, Borough Commissioner

William J. McBride, Jr., Borough Commissioner

Borough Officials

Gerald Chismar, Borough Administrator

John Antonides, Chief Financial Officer

Joyce Escalante, Borough Clerk

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Dennis Collins, Attorney

Don Clare, Floodplain Management

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Introduction

This Strategic Recovery Planning Report (SRPR) will serve as a blueprint to guide Monmouth Beach Borough's recovery from the effects of Superstorm Sandy and to reduce vulnerabilities to future storms. Accordingly, the report:

- Evaluates the impacts on affected community features in Monmouth Beach and addresses the conditions created or exacerbated by the storm;
- Articulates the planning goals, strategies, and priority actions that are most urgently needed to improve public safety, increase resistance to damage from future storms, and stimulate economic recovery; and
- Contains detailed descriptions of each of the projects proposed; a statement of need that demonstrates how each project relates to the impacts of Superstorm Sandy; why the project is important to the economic and environmental health of the community; the major tasks associated with each project; identification of potential or actual funding sources to pay for project implementation; and estimated implementation dates.

Description of Monmouth Beach Borough

Monmouth Beach Borough is located on a barrier spit of land in northeastern Monmouth County. It is bordered to the north by Sea Bright Borough, to the west by the Shrewsbury River (across which are Rumson and Oceanport Boroughs), to the south by the Manhasset Creek and Long Branch City, and to the east by the Atlantic Ocean (as seen in Figure 1). The Borough has approximately 1.6 miles of frontage on the Atlantic Ocean. Within the Borough are the tidal waters of Jim's Creek and several man-made lagoons which connect with the Shrewsbury River to the northwest.

As Monmouth Beach Borough is a coastal community, it is low lying and is subject to flooding from heavy rain, surface runoff, tidal events, hurricanes, and tropical storms. The flat grade of the streams and the low relief of the adjacent area also exacerbate these vulnerabilities. The Borough has been vulnerable to tidal flooding from the Atlantic Ocean, and seawall segments covering about 6,000 linear feet of shoreline and standing about 20 feet in height protect the Borough. Roughly 83% of the Borough's buildings are located in a flood hazard area. This includes the majority of public and community facilities, as seen in Figure 2, which uses FEMA's Preliminary Flood Insurance Rate Map data.

Originally developed as a resort community, Monmouth Beach is now an established community for year-round residents who are attracted by the waterfront and harbor facilities. The Borough has a population of approximately 3,298 (according to the U.S. Census Bureau's American Community Survey 2012 estimate) and 2,100 housing units. The Borough's population peaked at around 3,595 in the year 2000, before dropping slightly in 2012. These estimates do not take into consideration changes in population as a result of Superstorm Sandy.

Monmouth Beach's land area consists of approximately 1.1 square miles of land. The Borough is nearly fully developed and has very little land available for development that is not impacted by environmental constraints. Land use in Monmouth Beach is mainly residential with single family homes being the predominant residential building type. The Borough also has three high-rise developments. Approximately 10.2 percent of land in Monmouth Beach is vacant, consisting of both private land and land on the sedge islands in the Shrewsbury River. Remaining land uses in the Borough include commercial/ office/ marina (4.3 percent), public/ community facilities (0.6 percent), utility/ sewerage authority (6.3 percent), and quasi-public (3.9 percent).

Furthermore, the entire Borough is in the Coastal Area Facility Review Act (CAFRA) zone. The CAFRA zone applies to development projects near coastal waters, and generally the closer an area is to the coast, the more heavily it is regulated by CAFRA law. The CAFRA law regulates almost all development activities involved in residential, commercial, or industrial development, including construction, relocation, enlargement of buildings, excavation, grading, shore protection structures, and site preparation.

Figure 1: Regional Location

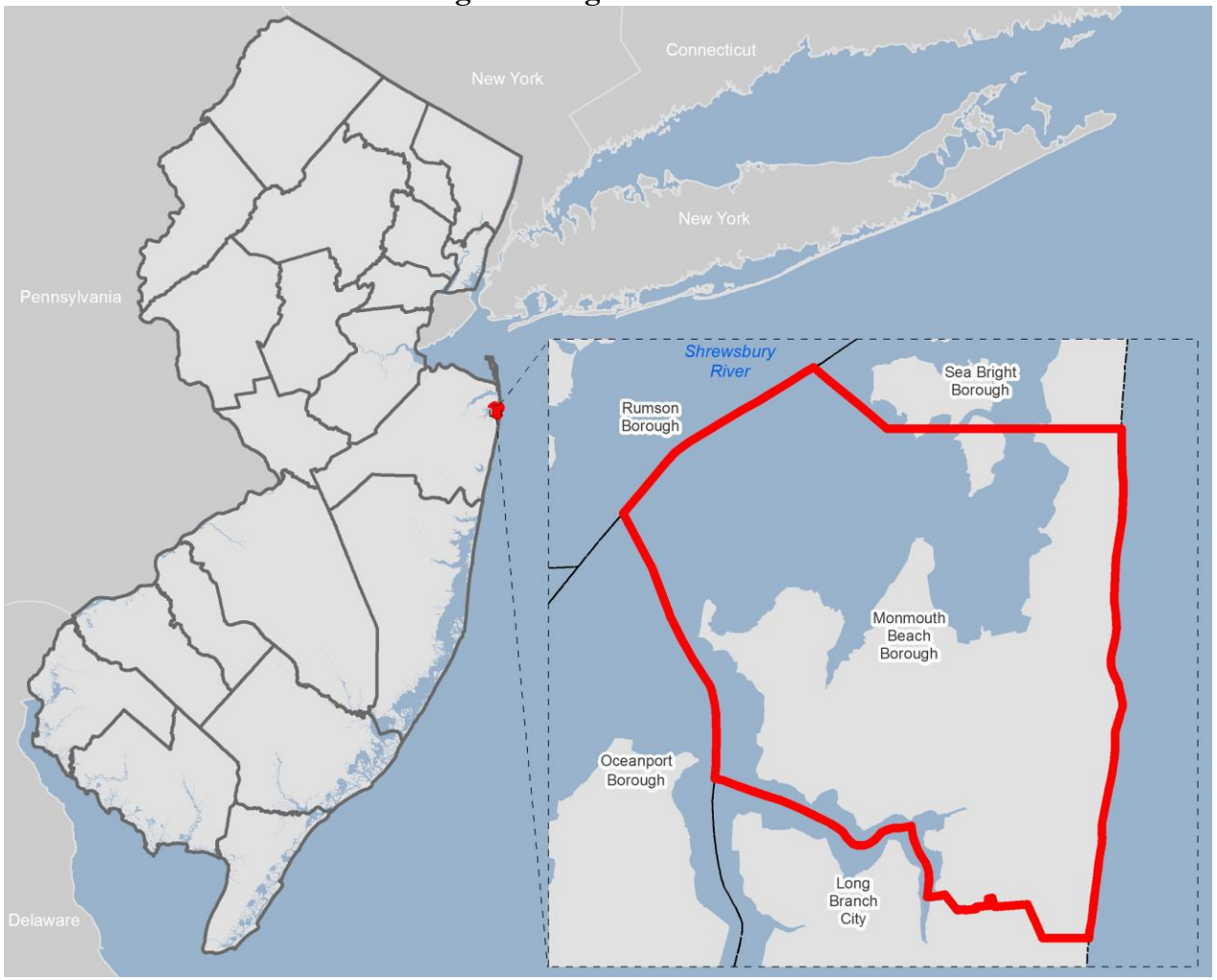
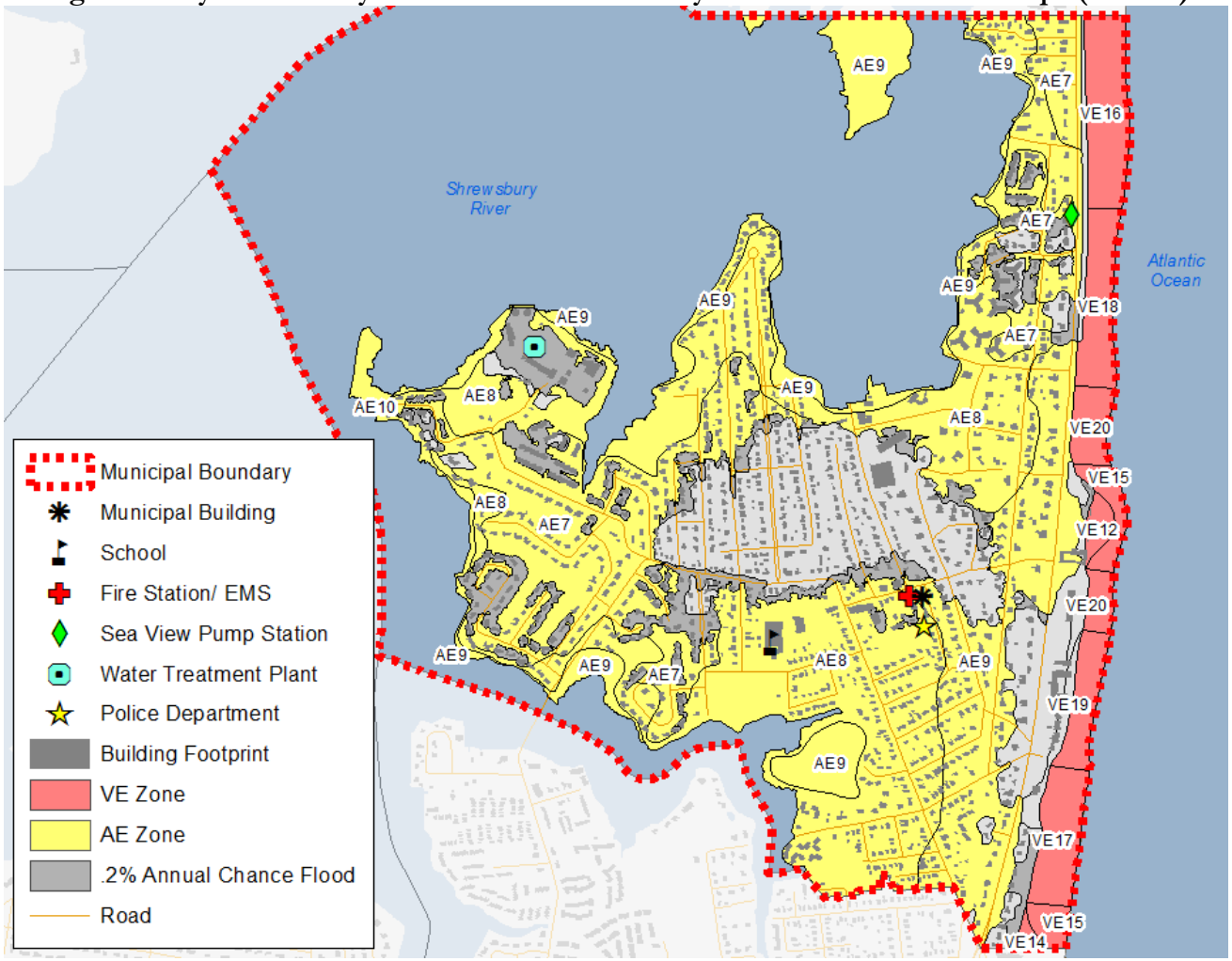


Figure 2: Key Community Facilities and Preliminary Flood Insurance Rate Maps (FIRMs)



Assessment of Existing Planning Documents

This SRPR will examine the adequacy of the existing documents contained below and will describe what changes are needed, if any, to support Monmouth Beach Borough's planning needs and goals related to post storm recovery and to mitigate future storm impacts.

Monmouth Beach Master Plan, 1978

The Monmouth Beach Master Plan, 1978, was prepared at the end of a boom in development for the Borough, a time during which it experienced increased suburban development, population growth, and a shift towards permanent/year-round (rather than seasonal) residence.

This Master Plan noted that developed land within the Borough was predominantly residential in character, while undeveloped land was comprised of several areas of wetlands. At the time of this Plan's adoption, the land use pattern and character of the Borough were not expected to change dramatically. Though, at the time it was expected that the population of the Borough would continue to increase, mainly by means of an increase in single family housing development.

The Master Plan's objectives that were relevant to this Strategic Recovery Planning Report include the following:

- To encourage municipal action to guide the appropriate use or development of lands within the Borough in a manner that will promote public health, safety, morals, and general welfare.
- To secure safety from fire, flood, panic, and other natural and man-made disasters.
- To promote the establishment of appropriate population densities and concentrations that will contribute to the well-being of persons, neighborhoods, and preservation of the environment.
- To promote the conservation of open space and valuable natural resources and prevent degradation of the environment through improper use of land.

The Master Plan also outlined principles concerning the development of land, of which the following are relevant to this SRPR:

- Encourage residential development to occur in locations and at densities which are compatible with existing development patterns and that can be properly serviced by Borough roadways and community services.
- Locate residential, commercial, and marina uses at sites and in locations which are suitable for their use environmentally, economically, and geographically in conjunction with proximity to existing facilities, land uses, major roadways, and natural features.
- Protect natural and environmental resources including floodways, wetlands, marsh areas, and areas suitable for public and quasi-public recreational activities.

The 1978 Master Plan was based on several assumptions, one of which is particularly important to highlight for the Borough in this SRPR. This is the assumption that there will be no catastrophic man-made or natural disaster which will greatly affect the existing natural and/or cultural development of the Borough. In the aftermath of Superstorm Sandy, it is important that current planning efforts, including future master plans and reexamination reports, address the Borough's vulnerability to Sandy-type events and employ storm-resilience strategies, as will be addressed and suggested in this report.

The 1978 Master Plan was also comprised of a Land Use Plan, which outlines the following objectives that are relevant to this SRPR:

- To encourage a balance and variety of residential development types in areas and at densities compatible with environmental and natural resource capabilities and constraints within the Borough.
- To encourage the management and conservation of the remaining natural and environmental resources which provide open space, aesthetic vistas, and important ecological elements within the Borough.
- To identify and preserve the ecologically sensitive wetlands which are scattered along the Shrewsbury River shoreline.

All of the above Land Use Plan objectives served as land use patterns that limited development in areas of the Borough prone to damage from Sandy-type storms.

Master Plan Reexamination Reports, 2001, 2012

The 2001 Master Plan Reexamination Report deemed that the Master Plan was consistent with the development patterns, overall goals, assumptions, policies, and objectives of the Borough as of 2001. This Reexamination Report did not identify any major problems relating to land development in the Borough. It also found that there were no areas in Monmouth Beach that required "redevelopment." Furthermore, there were no additional recommendations or changes provided by this Reexamination Report that had an impact on resiliency or storm recovery planning. The 2012 Master Plan Reexamination Report also identifies no major updates, changes, or additional recommendations that have an impact on resiliency or storm recovery planning.

Despite the Reexamination Reports that the Borough undertook in 2001 and 2012, Monmouth Beach is in need of a comprehensive update to its Master Plan Elements. This will be discussed further in the "Recommended Municipal Actions" chapter of this SRPR.

Municipal Stormwater Management Plan Master Plan Element, 2005

The Municipal Stormwater Management Plan (MSWMP) addresses groundwater recharge, stormwater quantity, and stormwater quality impacts through the incorporation of stormwater design and performance standards for new development and redevelopment projects that disturb one or more acres of land and/or result in more than one quarter acre of additional impervious coverage. The standards are intended to minimize negative or adverse impacts of stormwater runoff such as decreased water quality, increased water quantity, and reduction of groundwater recharge that provides base flow to receiving bodies of water.

The goals and objectives of the MSWMP that apply to this SRPR are to:

- Reduce flood damage, including damage to life and property;
- Minimize, to the extent practical, any increase in stormwater runoff from any new development;
- Reduce soil erosion from any development or construction project;
- Seek to assure the adequacy of existing and proposed culverts and bridges, and other in-stream structures;
- Maintain groundwater recharge;
- Maintain the integrity of stream channels for their biological function, as well as for drainage; and
- Protect public safety through the proper design and operation of stormwater basins and best management practices.

The MSWMP makes the following recommendations:

- Review and update the existing Land Use and Development Regulations to implement the principles of non-structural and structural stormwater management strategies to reduce stormwater quantity, improve stormwater quality, and to maintain or increase groundwater recharge.
- Educate residents on the impacts on the overuse of fertilizers and good fertilizer maintenance practices.
- Seek to ensure the proper inspection, monitoring, and maintenance of all stormwater management facilities and develop strategies for all existing and future maintenance and improvements.
- To reduce erosion and sedimentation in streams, encourage residents and property owners to minimize the amount of re-grading and to employ techniques to minimize soil erosion.

Housing Element and Fair Share Plan, 2006

The Housing Plan Element includes the following components:

- An inventory of Monmouth Beach's demographic, housing stock, and employment characteristics;
- Monmouth Beach's affordable housing obligation and growth share; and

- Monmouth Beach's municipal ability to accommodate its affordable housing obligations.

The housing goals and objectives set forth in the Housing Element are as follows:

- Locate residential, commercial, and marina uses at sites and in locations which are suitable for their use environmentally, economically, and geographically in conjunction with proximity to existing facilities, land uses, major roadways, and natural features.
- Provide a variety of residential and non-residential uses which will encourage continuation of Monmouth Beach as a quality residential community and encourage the retention of the shore residential and marine environment which has been a keystone in the historical development of the Borough and has helped establish the quality of life within the Borough.
- Encourage residential development to occur in locations and at densities that are compatible with existing development patterns and that can be properly serviced by Borough roadways and community services.
- Encourage a development pattern that will protect and enhance the long term economic and community interests of the Borough as a residential community.

The Fair Share Plan includes the following components:

- Identification of Monmouth Beach's prior-round obligation;
- A narrative of housing projects used to satisfy Monmouth Beach's growth share obligation.

Monmouth County Growth Management Guide, 1982

The Growth Management Guide (GMG) is the main planning tool used in Monmouth County. In 1982 it was adopted as the Monmouth County Master Plan. The GMG is intended to be a framework for other planning and decision making, and is a point of departure and a catalyst for an ongoing dialogue between the County and its municipalities.

The Guide categorizes the Borough of Monmouth Beach as primarily a Suburban Settlement Growth Area, while the Borough's coastal and wetland areas (primarily along the Route 36 corridor and the Atlantic Coast, but also along the Manhasset Creek) are located in both the Proposed Protection Area and the Environmentally Sensitive Area.

Suburban Settlement policies in this plan include:

- Encourage a variety of residential types in the suburban settlement.
- Encourage the use of the neighborhood unit in the suburban settlement.
- Encourage the use of cluster development in all parts of the county.

Proposed Protection Area policies in this plan include:

- Encourage public acquisition of unique freshwater wetlands for conservation and groundwater recharge.
- Continue the policy or supporting a county-wide system of linear greenbelts along primary and secondary streams.
- Encourage public acquisition of lands that are geologically unstable and unsuitable for development.

Environmentally Sensitive Area policies in this plan include:

- Restrict non-water related development in coastal flooding and high-risk erosion areas.
- Establish a coastal development district to set density, location, and use standards for areas adjacent to the Atlantic Ocean and the Sandy Hook and Raritan Bays.
- Prohibit high-rise structures from all areas east of the first public roadway from the Bay and discourage structures within 1,000 feet of the Bay shoreline.
- Allow for oceanfront development of beach-related commercial and recreational activities where such uses have been traditionally located.
- Encourage new coastal development compatible with the surrounding environment.
- Continue to protect tidal wetlands through state and federal wetlands management programs.
- Encourage municipalities to adopt ordinances providing for the protection and conservation of freshwater wetlands.
- Encourage municipalities to adopt and enforce floodplain ordinances to protect life and property against floodwaters, and to protect floodplains from development.

In 1995, the Monmouth County Planning Board adopted the Goals, Objectives, and Policies as an element of the GMG. Goals of the GMG relevant to this SRPR include the following:

- Air Resources: To promote land use planning that encourages the use of transit, walking and cycling, and the creation of centers in order to improve air quality by reducing automobile trips and congestion.
- Centers: To promote new and revitalize older urban areas into well designed mixed use centers with an easily accessible compact but varied core of residential, commercial, and community services which provide employment and create a specific identity.
- Comprehensive Planning: To promote comprehensive planning among all levels of government as well as the private sector by sharing information and developing a continuing dialogue on regulations, plans, policies, and issues.
- Economic Development: To promote managed growth by providing a suitable long-term economic climate and preserving and enhancing the quality of life in Monmouth County for the attraction of new businesses and the retention of existing businesses.

- Historic, Cultural, Natural, and Scenic Resources: To preserve the valuable historic, cultural, natural, and scenic resources of Monmouth County.
- Housing: To provide housing opportunities for all residents of Monmouth County.
- Transportation: To plan for a comprehensive and reliable intermodal transportation system that properly provides for public safety and meets the needs of the County's workers, residents, and visitors as well as respects the environment.
- Water Resources: To provide all of Monmouth County with a safe and pollution-free water environment, and conserve valuable water-oriented resources.

Monmouth County Master Plan Draft, 2013

The Monmouth County Planning Board is in the process of undergoing a comprehensive update to the County Master Plan, with drafts of its vision statement as well as goals, principles, and objectives available on the Monmouth County Division of Planning website.

The Plan's draft principles that are relevant to this SRPR include the following:

- Comprehensive Planning: Planning issues are to be addressed from interdisciplinary perspectives to identify and assess both interdependent and collective impacts and opportunities. This will minimize adverse impacts while maximizing benefits for all parties.
- Coordination: Effectual planning requires integration and coordination both internally (horizontally) and with other levels of government (vertically).
- Approach: Comprehensive planning relies on the use of new and emerging technologies as well as traditional methods of input from stakeholders and citizens.
- Natural Resources: Natural resources are life supporting infrastructure that all human and built environments are dependent upon to function and prosper.
- Investments in Preservation Areas: Aligning state, local, and county preservation strategies improves efficiency and reduces cost in protecting natural and unique resources.
- Preservation of Community Character: Protect and strengthen the established character of municipalities and their unique, individual qualities.
- Recovery and Community Resiliency: Promote planning, land use, and design strategies that increase the capacity to adapt physically and economically to long-term environmental changes and natural hazards.
  - Objectives:
    - Participate in long-term recovery, mitigation, and resiliency efforts to better protect people, businesses, and resources against environmental damage and natural disasters.
    - Assist in the coordination of the County's long-term disaster recovery planning initiatives.

  - Provide assistance to other County agencies involved in disaster response and emergency management.
  - Provide technical assistance to municipalities in disaster recovery efforts.
- Investment in Growth Areas: Aligning state, local, and county investment strategies improves efficiency and reduces cost in repairing, and expanding systemic infrastructure.

The Plan will be a vital coordinating tool used by municipalities, school boards, businesses, and other government agencies to help guide efforts and actions that contribute to a strong, stable, and sustainable prosperity for Monmouth County residents.

Coastal Monmouth Plan, 2010

The Coastal Monmouth Plan was initiated by the Monmouth County Planning Board to construct a plan for the future development of natural resource conservation of the County's Atlantic coastal region, which includes the Borough of Monmouth Beach and 29 other municipalities.

The Plan's goal is: To create a vision and planning strategy for the Coastal Monmouth Region (CMR) to cooperatively address development issues on a regional scale in a manner that is sensitive to the area's unique coastal setting, diverse community character and critical environmental, cultural, and aesthetic resources.

The Plan was also developed with the following objectives:

- To preserve and enhance the character and quality of life in the CMR.
- To identify and assess current and future land use, economic development, public services, transportation, and design issues within the CMR.
- To identify development, redevelopment, and revitalization opportunities within the CMR.
- To identify and address conservation strategies to aid in the preservation, protection, and accessibility to the region's sensitive environmental, cultural, and aesthetic resources.
- To identify and assess transportation strategies that provide safe, efficient, and enhanced multimodal mobility for the CMR.
- To identify and assess public infrastructure (water, sewer, schools) capacities to ensure sustainable development within the region.
- To identify and assess community design strategies that will provide alternative models to address specific design issues identified in the CMR.
- To identify and assess regional mechanisms that will encourage regional cooperation to address multi-municipal concerns.
- To cooperatively prepare a regional plan for submittal to the State Planning Commission for Plan Endorsement.

Monmouth County's engagement with Monmouth Beach (including through the public visioning process) took place in 2007 and identified some planning priorities for the Borough as it relates to the Coastal Monmouth Region. This planning process identified the following:

- The Borough's long-term vision is to preserve the "small town feel," while growth will remain fairly stable in the foreseeable future.
- The top planning issues included:
    - Protection of the coast through seawall repairs and beach replenishment projects;
    - Reviewing the Master Plan and zoning to control overdevelopment;
    - Meeting the Council on Affordable Housing (COAH) requirements.
- Land use concerns included:
    - There is limited open space available for substantial new development;
    - Part of Monmouth Beach is classified as a barrier island. As such the Borough would like to pursue coastal town planning area designation.
- As a redevelopment/revitalization effort, the Borough identified renovation of the bathing pavilion and an urgent need to repair the seawall. Both projects have subsequently been constructed in recent years.
- Active conservation projects included:
    - Participation in the Clean Communities Program;
    - Protecting wetlands, stream corridors, and floodplains as designated conservation lands in the Master Plan;
    - Mitigating beach erosion through dune grass planting and replenishment;
    - Restoring the island in the Shrewsbury River;
    - Reducing the maximum permitted lot coverage to protect the environment and town character. An ordinance was passed in August of 2005 to support this project.
- Transportation concerns included:
    - Traffic congestion and speeding on Route 36, specifically during the summer months;
    - Need for better pedestrian facilities;
    - Need for traffic calming measures;
    - Need for smart highway signage;
    - There is no mass transit service available, and the Borough would benefit from a small scale feeder transit system with service to ferry, train, and regional bus services.
- Goals pertaining to economic development include:
    - Beach replenishment in order to maintain the income from the bathing pavilion. The Army Corps of Engineer beach replenishment project was completed in August of 2013;
    - Creating a diverse mix of businesses and community events.

Monmouth County Multi-Jurisdictional Natural Hazard Mitigation Plan, 2009

The Monmouth County Multi-Jurisdictional Natural Hazard Mitigation Plan was adopted in 2009 to meet the requirements of the Disaster Mitigation Act (DMA) of 2000. The plan's development was led by the County and was funded through a FEMA planning grant. Monmouth County employed a multi-jurisdictional approach to develop the plan, and every municipality in the County was invited to participate as an equal partner with the County.

The Plan represents the collective efforts of citizens, elected and appointed government officials, business leaders, volunteers of non-profit organizations, and other stakeholders. The Plan identifies natural hazards that could affect the County's jurisdictions, evaluates the risks associated with these hazards, identifies the mitigation actions to lessen the impacts of a disaster on Monmouth County communities, and prioritizes them based on the municipal master plans and other planning documents.

The successful implementation of the Plan will result in an increasingly resilient Monmouth County. In addition, the Plan ensures that Monmouth County and its jurisdictions are compliant with the Disaster Mitigation Act of 2000, which makes the County and its jurisdictions eligible to apply for Federal aid for technical assistance and post-disaster hazard mitigation project funding.

To remain compliant with the DMA, the Plan must be updated every five years. The County is currently undertaking a comprehensive update of the Plan, with a draft expected to be completed in 2014. The FEMA approval and jurisdictional adoptions of the updated plan are anticipated thereafter. Monmouth Beach Borough is actively participating in the Plan's update and has provided progress reports to the County regarding mitigation and resiliency measures undertaken since the Plan's adoption in 2009.

As part of Monmouth Beach's participation in the 2014 Plan update, the Borough has identified updated local land uses and development trends, including:

- There is almost no open space available for development in the Borough. The trend in recent years has been for developers to buy existing homes, raise them, and rebuild new homes to current building and zoning standards on the property. There has been a moratorium on building high-occupancy or multiple dwellings since the early 1990s.
- The Borough has recently (post-Sandy) adopted the FEMA Advisory Base Flood Elevations (ABFEs) and has passed an ordinance that any new construction must meet the elevation standard of three (3) feet above the ABFE.

Monmouth Beach has also identified in its participation in the Plan update process that certain areas throughout the Borough are not draining as well as in the past, and erosion is becoming more of a concern on public park land.

Furthermore, the Borough has prioritized the installation of drainage to relieve flooding from flood-prone areas, such as on Johnson Street, Anderson Street, Drew Court, and Valentine Street. This activity, though a priority, has been stalled in the past due to issues with funding.

Coastal Area Facility Review Act (CAFRA)

Coastal Area Facility Review Act (CAFRA) regulations apply to development activities near coastal waters. Generally, the closer the project is to the water, the more likely it will be regulated. The CAFRA law regulates almost all development activities involved in residential, commercial, or industrial development, including construction, relocation and enlargement of buildings, excavation, grading, shore protection structures, and site preparation.

The Borough of Monmouth Beach is located entirely within the coastal zone boundaries, so any regulated development requires a CAFRA permit. In Monmouth Beach, as well as areas in other municipalities located within the CAFRA boundary, development is regulated and therefore a permit shall be required for:

- Any development on a beach or dune.
- Any development located in the CAFRA area between the mean high water line of any tidal waters, or the landward limit of a beach or dune, whichever is most landward, and a point 150 feet landward. This includes single family homes, commercial, industrial, and public development.
- Residential development within the CAFRA area has varying regulation depending on how many dwelling units it has and the development's location in relation to the mean high water line.
- Commercial development within the CAFRA area has varying degrees of regulation depending on the number of parking spaces and the development's location in relation to the mean high water line.

Further, CAFRA separates the coastal region into zones and centers where development is regulated by varying degrees. The Borough is designated as a CAFRA Coastal Town and is located within the Coastal Environmentally Sensitive Area. This area within the CAFRA boundary protects environmentally sensitive features by guiding development into centers and maintaining low intensity development patterns. It carefully links the location, character, and magnitude of development to the capacity of natural and built environments to support new growth. The area accommodates development at higher intensities in existing centers, and discourages the development of public infrastructure facilities outside of centers.

Monmouth Beach Borough is home to three high rise buildings, which are prohibited under CAFRA regulations, but were developed prior to the establishment of CAFRA.

Evaluation of Superstorm Sandy's Impacts on Monmouth Beach Borough

Superstorm Sandy brought high winds, heavy rains, and a record tidal surge and waves to Monmouth Beach Borough. Impacts on Monmouth Beach include (but are not limited to) the following:

- Sustained winds in excess of 80 miles per hour;
- Tidal surge of approximately 9 feet above high tide level;
- Loss of utility services (gas, electricity, and telephone service) in some areas for 10 days, and in other areas beyond 45 days;
- The public water supply was deemed unsafe for consumption for days following the storm;
- The sewage authority lines were surcharged, and residents were asked to not flush their personal toilets for a period of time;
- Forced evacuation of Borough residents;
- All of the Borough's public buildings (including the Police Station, Fire and First Aid buildings, Borough Hall, Library, and the Cultural Center) received major damage, reaching estimates of $3 million to place them back to pre-storm conditions;
- Damage to 1,500 linear feet of protective dunes;
- Damage to or destruction of (including missing or lost) 20 street traffic signs;
- Inundation of the Borough's storm drains with salt water, sand, and vegetative debris;
- 26,000 cubic yards of vegetative debris, 4,854.98 tons of construction and demolition debris, 85.43 tons of White Goods, and 5,100 cubic yards of sand; and
- Prevention of the circulation of emergency vehicles.

Figure 3: A Washed up Boat in Front of a Residence on Monmouth Parkway

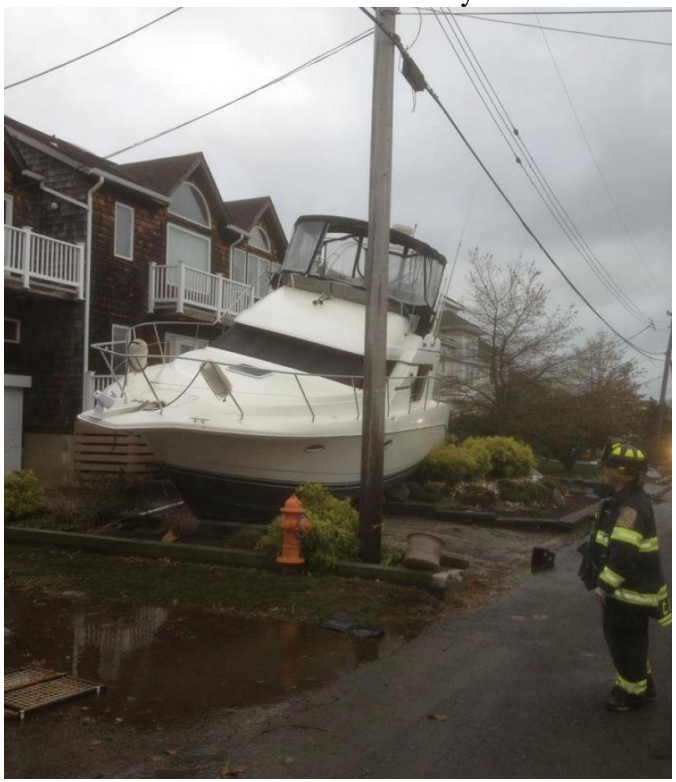


Figure 4: A Destroyed Traffic Light at the Intersection of Beach Road and Ocean Avenue

Figure 5: Damaged Traffic Light and Sign at the Intersection of Ocean Avenue and Valentine Drive

Figure 6: Sand and Debris Deposited by the Storm

Figure 7: Flood Waters Rising at the Intersection of Ocean Avenue and Cottage Road

Damage to Homes

Sandy's record storm surge reached approximately nine feet above the high tide level and inundated homes and structures in the Borough. As a result of the destruction and damages from Superstorm Sandy, Monmouth Beach faces a significant financial burden. The Borough as a whole has sustained a 4.2% loss in home values and tax revenue, a $51,934.500 reduction in assessment from 2012 to 2013 as a result of Superstorm Sandy. 784 properties faced reduced property values.

In the months following Superstorm Sandy, the New Jersey Department of Community Affairs compared 2011 American Community Survey 5-Year Survey Data and FEMA Individual Assistance Data (effective March 12, 2013) with observed storm-related damage in order to identify damages and to determine the most efficient use of Community Development Block Grant Disaster Recovery (CDBG-DR) funds. This effort resulted in the completion of a Statewide CDBG Disaster Recovery Action Plan.

The CDBG Disaster Recovery Action Plan identifies one census tract in Monmouth Beach Borough (census tract 34025804100) where homes sustained "severe" or "major" damage according to classifications made by HUD. This does not include dwelling units that sustained minor damage, which was far more common. The median household income in this census tract is $82,188. This census tract has 1,619 households, and 42% of these households faced severe or major damage.

Damage to Borough Hall

The Monmouth Beach Borough Hall was damaged by power surges and water intrusion. The water level was six inches above the finished floor of the Borough Hall. Storm damages impacted the main lobby, the Construction Department offices, the main hallway, bathrooms, storage areas, a conference room, additional office rooms, and the building's boiler system.

Damages to the Borough Hall include (but are not limited to) the following: three building heat boilers; one 39-gallon water heater; four desktop computers; two computer printers; and one 4.4 cubic foot refrigerator. In addition, two Borough-owned Ford Crown Victorias were damaged by water intrusion. The complete list of damages is extensive, and is included in the FEMA project worksheet that the Borough filled out as an application for a grant for restoration of the building.

Borough Hall offices were damaged by flood waters, and will require $130,000 to repair the building to its pre-storm conditions.

Damage to the Library

The Borough library was inundated with approximately 16 to 18 inches of flood water. Additionally, the storm surge damaged contents in the library and mechanical equipment inside and outside the building.

The library interior had between 16 and 18 inches of flood water, which damaged interior wall and floor finishes throughout the building. All carpet had been removed prior to FEMA assessment of the site. The interior walls throughout were removed to a height of about 24 inches above the finished floor to remove floodwater damaged walls and to prevent mold from growing. All doors and frames were also removed prior to FEMA assessment.

After Superstorm Sandy, the Library had to dispose of all of its books and other printed material. Furniture, bookcases, and electronic equipment were also lost to flood damages.

The library's HVAC system consisted of a ducted forced air system with two exterior air conditioner condensers, one interior air conditioner evaporator, and two vertical gas-fired combo furnaces. The exterior units were inundated with brackish storm water and were damaged beyond repair. Inside the building, the flood water inundated the two gas furnaces and the low-lying ductwork. A 30 gallon gas-fired hot water heater provided the building with hot water. It was inundated with flood water as well. All 32 of the library's electrical wall outlets were inundated with the brackish flood water.

Damage to the Cultural Center

The Monmouth Beach Cultural Center sustained damages from flooding and storm surge totaling over $60,000. Flood waters from Superstorm Sandy reached 30 inches above the finished floor of the Cultural Center.

Damages to the exterior of the building included (but were not limited to) the following: two porch lights; 8 facility sign lamps; 4 phone jacks; 100 feet of phone wire; 1,250 square feet of vinyl siding; one front porch railing; and two air conditioning units.

Interior damages included the following: one electrical service panel; three ceiling fans; outlets, electrical wire, and other electrical equipment; cabinetry; and trim boards. The complete list of damages is extensive, and is included in the FEMA project worksheet that the Borough filled out as an application for a grant for restoration of the building.

Figure 8: Damage to the Cultural Center Building (1 of 4)

Figure 9: Damage to the Cultural Center Building (2 of 4)

Figure 10: Damage to the Cultural Center Building (3 of 4)

Figure 11: Damage to the Cultural Center Building (4 of 4)

Figure 12: Debris at the Cultural Center Building

Damage to the Police Station and Annex

Both the police station and the annex had about eight inches of flood water enter the buildings. The interior flooding damaged the flooring, drywall, and insulation in most rooms of the main police station. While no wind damage was reported at the main police station, at the annex building, the majority of the roofing was damaged by the winds. Additionally, the wind removed most of the aluminum gutters, the six-inch metal fascia, and downspouts.

Apart from structural damages, the police station and annex also faced damages to several pieces of equipment, furniture, and appliances, including (but not limited to) the following: desks and chairs; two refrigerators; bookcases; two Ford police patrol cars and radio equipment; one ford service pickup truck; one cargo van; one ambulance; a five-ton air conditioner compressor that was inundated with salt water and damaged beyond repair; and a window air conditioning unit that was blown out of a window at the annex building. Damages to the police station and annex were estimated at $90,000.

Damage to the Fire House and First Aid Buildings

The Fire House and First Aid Buildings were flooded, and sustained extensive damages to equipment, furniture, and appliances, as depicted in the following figures.

Figure 13: Flood Waters at the Fire Department (1 of 4)

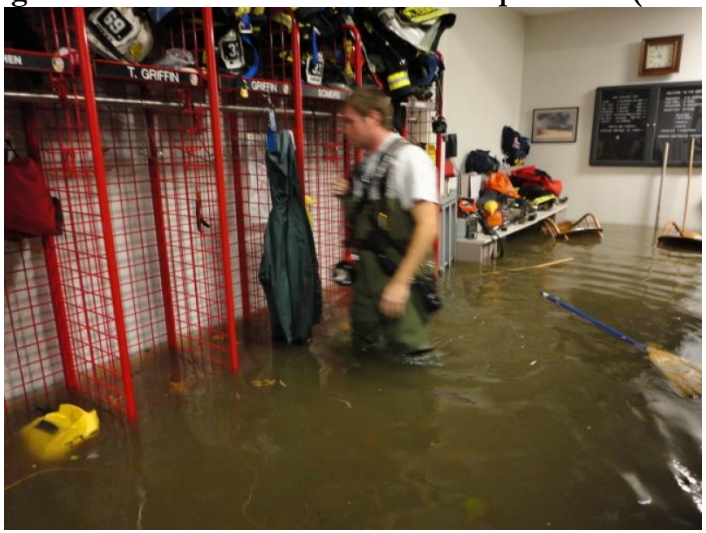


Figure 14: Flood Waters at the Fire Department (2 of 4)

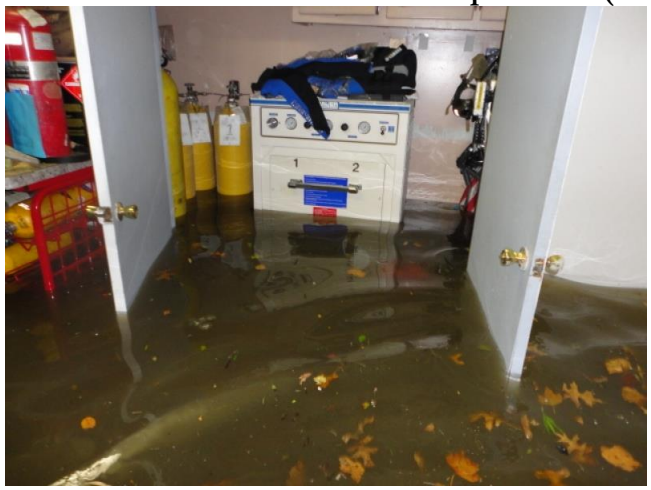
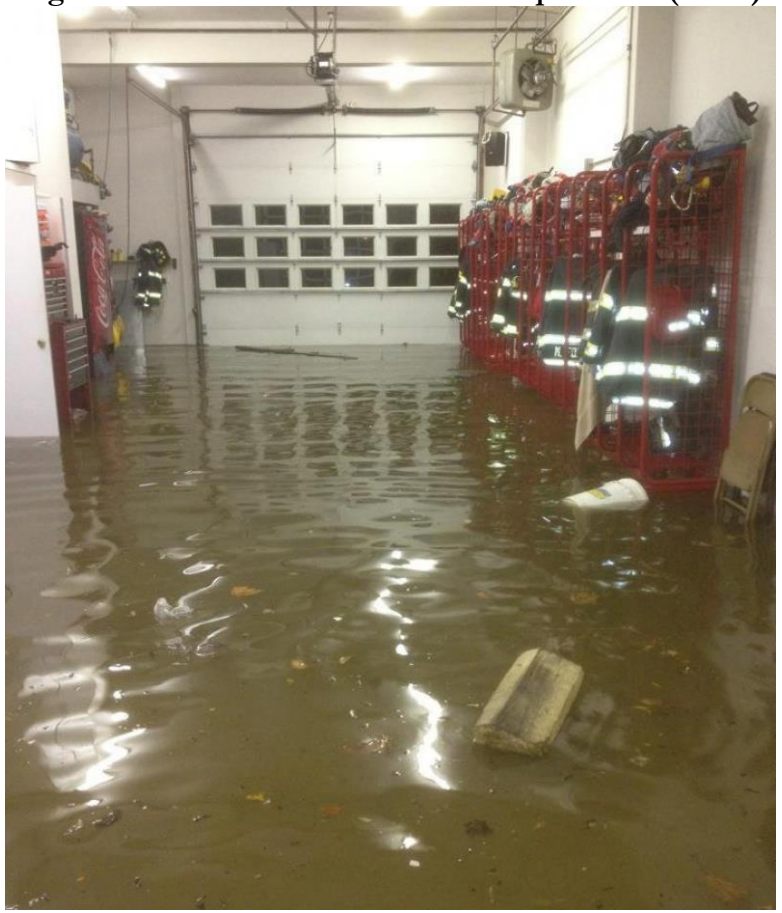


Figure 15: Flood Waters at the Fire Department (3 of 4)

Figure 16: Flood Waters at the Fire Department (4 of 4)



Damage to Salt Shed

Superstorm Sandy heavily damaged the salt shed at the Monmouth Beach Borough Public Works Yard. The high winds damaged the canvas canopy and canvas drop sides, exposing the Borough's stockpile of rock salt. The damage to the salt shed resulted in the Borough being in violation of the New Jersey Department of Environmental Protection Tier A Stormwater General Permit, which requires salt and other deicing material to be stored in a permanent structure or building.

Damage to the Monmouth Beach Elementary School

The interior of the Monmouth Beach Elementary School sustained three feet of water damages throughout the building, and had to close for rebuilding. The renovation cost was $2.5 million.

Damage to the Beachfront Areas

Monmouth Beach's protective dune system sustained damages by Superstorm Sandy. Approximately 1,500 linear feet of dunes were damaged, including dune grass and snow fencing.

The Borough has five beach public access locations. These are located at the intersection of Seacrest Road and Ocean Avenue (Route 36), the intersection of Central Road and Ocean Avenue, the intersection of Cottage Road and Ocean Avenue, Ocean Avenue between the Shores and Admiralty building complexes, and at the south end of the Bathing Pavilion. All of these public access locations, which had been replaced following Hurricane Irene in 2011, were also destroyed by Superstorm Sandy's storm surge.

Figure 17: Damage to the Public Access Stairs at Central Avenue (1 of 3)

Figure 18: Damage to the Public Access Stairs at Central Avenue (3 of 3)

Figure 19: Damage to the Public Access Stairs at Seacrest Avenue

Figure 20: Damage to the Public Access Stairs at Cottage Road

Figure 21: Damage to the Public Access Stairs near Seacrest Road before They Were Removed and Relocated

Figure 22: Damage to the Public Access Stairs at the South End of the Bathing Pavilion

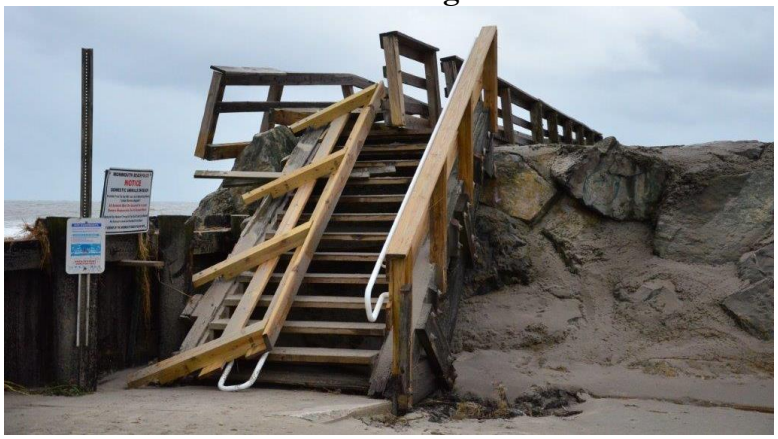


Figure 23: Remnants of Beach Public Access Stairs

Damage to the Bathing Pavilion

The Monmouth Beach Bathing Pavilion building has two floors. The first floor of the north section includes the entry porch, check-in desk, stairs, a large breezeway, a lifeguard equipment room, a snack bar with a supporting preparation room, bath houses with lockers, and restrooms. The second floor has a deck that provides access to more bath houses. Most of the south section houses two levels of cabanas and a small office on the second floor. In addition, the pavilion has a large ocean-side deck that is a separate structure abutting the building's east side.

The storm surge, wave action, and high winds from Superstorm Sandy damaged part of the Monmouth Beach Bathing Pavilion building. This includes most of the north section of the building, leaving only the check-in desk area, stairs, and the second level deck. The breezeway, lifeguard office, and snack bar were destroyed completely by the storm surge. The large sunbathing deck was also completely destroyed, including the entire decking surface and all railings, ramps, stairs, and sub-deck timber. Only the recently renovated sections (including the pool) survived, receiving only minor damage.

As Superstorm Sandy destroyed significant sections of the bathing pavilion building, the storm also extensively destroyed equipment and material at the site, including the snack bar, lifeguarding equipment, and other miscellaneous items. Damage to equipment includes (but is not limited to) the following: a freezer; three French fry warmers; two microwaves; one toaster; two refrigerators; two kayaks; beach umbrellas; numerous

lifeguarding equipment; garbage and recycling cans; one water fountain; one cash register; and numerous benches, tables, and chairs. The complete list of damages is extensive, and is included in the FEMA project worksheet that the Borough filled out as an application for a grant for restoration of the building.

Figure 24: Damage to the Bathing Pavilion (1 of 8)

Figure 25: Damage to the Bathing Pavilion (2 of 8)

Figure 26: Damage to the Bathing Pavilion (3 of 8)

Figure 27: Damage to the Bathing Pavilion (4 of 8)

Figure 28: Damage to the Bathing Pavilion (5 of 8)

Figure 29: Damage to the Bathing Pavilion (6 of 8)

Figure 30: Damage to the Bathing Pavilion (7 of 8)

Figure 31: Damage to the Bathing Pavilion (8 of 8)

Damage to Griffin Park

The Griffin Park restroom also sustained damages costing $16,000. This does not include damage to the Park's contents. The restroom building was inundated with high volume surface water that flooded the facility to a depth of five feet. In addition, baseball equipment was saturated and water-logged by contaminated salt water, including padded safety helmets, padded body protectors, rubber grips on baseball bats, and other porous, non-cleanable equipment that was disposed of.

Community Vulnerabilities Exacerbated by Superstorm Sandy

Superstorm Sandy exacerbated the vulnerability of homeowners and business owners in the following ways:

- The loss of fuel exposed residents to the dangers of cold fall nights;
- The loss of power and cell phone service impacted the communication between emergency personnel;
- Breaches and gaps in the Borough's dune system allowed stormwater to reach the community;
- Residences and businesses located in low-lying areas close to the Atlantic Ocean and the Shrewsbury River were especially vulnerable to flooding;
- Regular moon tide inundation has increased as a result of stream siltation from Superstorm Sandy; and
- Damages to roads and flooding throughout the Borough hindered the capacity of emergency response vehicles.

Community Opportunities Created by Superstorm Sandy

The impacts of Superstorm Sandy have shed light on the ways in which Monmouth Beach may improve its resiliency in future storm events. As such, the Borough may improve its resiliency by implementing the following opportunities that have been created:

- Promoting public awareness of hazard mitigation and resiliency issues;
- Focusing public agencies on community vulnerabilities to hazards such as flooding;
- Encouraging regional solutions to flood- and storm-related impacts;
- Ensuring that future capital projects are designed and constructed to incorporate features that are resilient to storm- and flood-related impacts; and
- Encouraging/supporting the use of sustainable development techniques and green building design in future development and redevelopment.

Current Status of Post-Sandy Recovery Efforts

Both in preparation for and in immediate response to Superstorm Sandy, Monmouth Beach Borough took the following emergency protective measures:

- Posted mandatory evacuations for Borough residents between 4:00pm on October 28th through 12:00 noon on October 31st;
- Broadcasted frequent emergency notifications via the Borough's Code Red System and email;
- Barricaded flooded roads and hazards;
- Operated a 125 kilowatt generator at Borough Hall to provide emergency power to the Borough's essential services buildings;
- Conducted home inspections to assess the extent of damage to individual homes and to determine the level of repair required (performed by the Construction Department);
- Removed debris from the Borough, including 26,000 cubic yards of vegetative debris, 4,854.98 tons of construction and demolition debris, 85.43 tons of white goods, and 5,100 cubic yards of sand;
- Set up Borough emergency systems in the lobby of Borough Hall to assist residents with food, supplies, contacts for special assistance, and arrangements for shelter, as well as providing ability to charge cell phones and to register for assistance. A computer was also available for community use;
- Set up food and water distribution tents at the rear of Precious Blood Church to supply residents with needed essentials; and
- Students attending the Monmouth Beach Elementary School were displaced to the surrounding elementary schools in Oceanport, West Long Branch, and to Shore Regional High School immediately following Superstorm Sandy's landfall until June 3rd, 2013.

Figure 32: Debris is temporarily placed at the Bathing Pavilion.

In the weeks and months following Superstorm Sandy, Monmouth Beach has taken (and continues to take) the following recovery actions:

- Adopted the FEMA Advisory Base Flood Elevations (ABFEs) in January of 2013;
- Passed an ordinance requiring new construction to meet the elevation standard of three (3) feet above the ABFE in January of 2013. Elevated homes have subsequently reflected this change;
- Passed an ordinance to increase the height to 38 inches for those homes which comply with the ABFE +3 feet;
- Applied to participate in the Community Rating System (CRS) and is awaiting approval;
- Transmitted notifications to residents regarding instructions for applying for grants, loans, and rebuilding assistance to raise, repair, and rebuild their homes;
- Removed 5,000 tons of debris from the Borough in a period of two months, costing over $2.2 million;
- Applied for FEMA Public Assistance Grants to fund replacement of damaged, destroyed, and missing traffic signs; and
- Jet cleaned the storm drain lines that were inundated with salt water and vegetative debris.

Demolition of Homes

One week after Superstorm Sandy made landfall, New Jersey officials, alongside Borough officials, conducted home inspections. A number of homes throughout the Borough were determined to be structurally unstable as a result of damage incurred during Superstorm Sandy.

Some older homes were demolished because in many cases it was not cost effective to lift older homes, especially bi-levels. In these cases it has been more economical to first demolish the home before rebuilding completely.

Borough Facilities

Monmouth Beach applied for FEMA Public Assistance Grants to fund restoration of: Borough Hall; the Library; the Cultural Center; the Police Station and Annex; the salt shed; Griffin Park; to replace damaged, destroyed, and missing traffic signs; and others described below in more detail.

In addition, the Borough applied to Hazard Mitigation Grant Programs to partially fund the elevation of the Borough Hall, Library, Cultural Center, Police Station, Fire House, and First Aid Building.

Restoration of Borough Hall

Monmouth Beach has authorized a structural evaluation and analysis to determine the most cost-effective way to improve the building.

Restoration of the Library

The library's services have temporarily been relocated to Borough Hall, as the building has been undergoing cleaning and restoration. All insulation, electrical components, and HVAC units have been removed from the site, and shelving units that remain have been cleaned. All rugs, files, and affected materials have also been removed. The Borough was directed by Monmouth County to dispose of most of the library's inventory. To date, the building remains unoccupied.

Restoration of the Cultural Center

As mentioned above, Monmouth Beach applied for funding through the Hazard Mitigation Grant Program to elevate the Cultural Center. The building is located within the Coastal "A" flood zone and lies below the ABFE elevation standard of eight feet. Borough ordinances require that buildings be elevated to three feet above the current ABFE standards. The Borough requested funding in the amount of $180,000.00, which is 75 percent of the total project cost of $240,000.00.

Restoration of the Police Department Building

The Police Department building has been almost 100% restored to its pre-Sandy condition. Tiling has been installed where carpeting once was.

Restoration of Beachfront Areas

In the days before Superstorm Sandy, Monmouth Beach Borough constructed emergency protective berms in an area 4,700 linear feet long. This project involved filling 9,000 cubic yards (1,500 linear feet by 6 cubic yards per foot) of material for dune protection.

The beach access stairs previously located approximately 120 feet to the south of the intersection of Seacrest Road and Ocean Avenue were relocated approximately 115 to the north (now located just 5 feet south of the intersection of Seacrest Road and Ocean Avenue). The new access stairs were relocated because of public safety concerns, as the beach going public previously tended not to walk to the crosswalk and would jaywalk across a very dangerous highway (and would after not use the crosswalk at the intersection).

The four remaining beach access stairs locations were reconstructed, but not relocated. These include access stairs located at the intersection of Central Road and Ocean Avenue, the intersection of Cottage Road and Ocean Avenue, Ocean Avenue between the Shores and Admiralty building complexes, and in the south parking lot of the Bathing Pavilion.

Figure 33: New Beach Access Stairs at Seacrest Ave.

Figure 34: New Beach Access Stairs at Central Avenue

Figure 35: New Beach Access Stairs at Cottage Road

Figure 36: New Beach Access Stairs between The Shores and Admiralty Building Complexes

Restoration of the Bathing Pavilion

Before and during the summer of 2013, Monmouth Beach restored the north section of the bathing pavilion, replaced the entire wooden deck, repaired damages to the concrete pool deck and wall, raised the first floor level of the north section of the building from approximately 13.7 feet above sea level to 16 feet above sea level, restored the electrical service, and installed an elevator in the pavilion. This was funded through a FEMA Public Assistance Grant.

The Borough also filed for a Public Assistance Grant to replace the extensive list of pavilion building contents, including equipment, appliances, furniture, and other materials. The complete list of damages is extensive, and is included in the FEMA project worksheet that the Borough filled out as part of the Public Assistance Grant.

Figure 37: Repairs to the Bathing Pavilion on May 10, 2013

Figure 38: Repairs to the Bathing Pavilion on May 16, 2013 (1 of 2)

Figure 39: Repairs to the Bathing Pavilion on May 16, 2013 (2 of 2)

Figure 40: Repairs to the Bathing Pavilion on May 21, 2013

Figure 41: The Bathing Pavilion on May 30, 2013

Figure 42: The Bathing Pavilion on June 6, 2013

Figure 43: The Bathing Pavilion on June 17, 2013

Figure 44: The Bathing Pavilion Filled with Beachgoers on June 26, 2013

Community Development Block Grant (CDBG) Disaster Recovery Programs

Monmouth Beach Borough has received recovery aid from various federal funding programs. The NJ Department of Community Affairs has put together an online database of CDBG programs that have aided in Superstorm Sandy recovery across New Jersey, updated as of July 11, 2014. Monmouth Beach's residents have been awarded $5,307,400 from the following housing programs:

Homeowner Resettlement Program (HRP): $180 million in federal funds have been allocated to support a Homeowner Resettlement Program designed to encourage homeowners to remain in the nine most impacted counties (Atlantic, Bergen, Cape May, Essex, Hudson, Middlesex, Monmouth, Ocean, and Union) that were severely impacted by Superstorm Sandy. The funds may be used for any non-construction purpose that assists the Homeowner to remain in, or return to, the county in which they lived prior to Superstorm Sandy.

In Monmouth Beach Borough, 85 low-to-moderate income housing units and 213 urgent need units were awarded grant monies through the HRP, totaling 298 housing units for the Borough. With a grant amount of $10,000 per household, $2,980,000 has been awarded to Monmouth Beach, all of which has been disbursed as of July 11, 2014.

Homeowner Reconstruction, Rehabilitation, Elevation, and Mitigation (RREM): $600 million in federal funds have been

allocated to help eligible primary homeowners repair or rebuild their Superstorm Sandy impacted homes. The RREM program will assist homeowners in rehabilitation, reconstruction, elevation, and mitigation so that they can do the necessary work on their homes to make them livable and to comply with requirements for structures located in flood plains. RREM provides grants to eligible homeowners up to $150,000, though the state has estimated an average award of $100,000 per application. The RREM program is intended to "fill the gap" between the cost of repairs and other funds the owner has received to repair the structure.

In Monmouth Beach Borough, 41 low-to-moderate income housing units and 63 urgent need units were awarded funding through the RREM program, totaling 104 housing units for the Borough. With an average award of $100,000 per application, $8,300,000 has been pre-awarded to Monmouth Beach. As of July 11, 2014, $2,165,100 has been obligated, and $1,270, 767 has been disbursed.

Small Rental Properties/Landlord Rental Repair Program (LRRP): This program provides up to $50,000 per unit in grant funding assistance to eligible owners of rental property from 1 to 25 units. The LRRP program will provide funds to help rental property owners restore their properties through rehabilitation, reconstruction, elevation, and mitigation to rental property damaged by Superstorm Sandy. The LRRP program is intended to help existing owners restore their properties and receive reimbursement for eligible building expenses incurred by owners but not paid for by other programs.

In Monmouth Beach Borough, 4 units have been awarded funding through the LRRP, totaling $120,000 for the Borough. As of July 11, 2014, none of this money has been disbursed.

Small Business Grants (SBG): In addition to the CDBG housing programs, Monmouth Beach has also been awarded one small business grant (SBG) totaling $32,960. SBGs through the CDBG's economic development programs are forgivable loans that help small business pay for Sandy-related expenses including building repairs, equipment and inventory purchases, rent or mortgage payments, salary expenses, and utility costs for which they may need assistance.

Administrative/Planning (AP): The Monmouth Beach local government has also been awarded $19,000 for administrative/planning work under the AP program, none of which has been disbursed as of April 25, 2014. AP funds are designed to provide oversight, monitoring, evaluation, and planning support for programs and grantees. This includes implementing financial controls and procurement processes that meet CDBG requirements, processes to ensure timely expenditure of funds, oversight to detect fraud and prevent waste, environmental review, and other federal laws. This program also includes planning grant assistance to local or regional entities to guide long-term recovery and redevelopment. This may include the development of comprehensive plans,

zoning ordinances, and land development codes. The program may also be used to provide technical assistance to sub recipients so that recovery programs are implemented efficiently and in compliance with federal, state, and local regulations.

Small Business Administration Disaster Loans

In the months following Superstorm Sandy, the Small Business Administration (SBA) has been issuing loans to homeowners and businesses in New Jersey to aid in their recovery and reconstruction efforts. NJ.com has compiled data from the SBA and made it available on their website. Monmouth Beach has received 112 home loans totaling $10,373,100 and 2 business and economic injury disaster loans in the amount of $158,700.

FEMA Public Assistance Grants

FEMA has provided public assistance grants to Monmouth Beach Borough to aid with disaster recovery. NJ.com has also compiled this data from FEMA and made it available online, although due to privacy concerns, data on individual assistance grants that have been issued have not been released. Monmouth Beach has received the following FEMA Public Assistance Grants, totaling $1,789,869:

- The Borough received:
  - $1,682,802 for debris removal
  - $103,064 for protective measures
  - $3,806 for recreational facilities
  - $1,972 for roads and bridges
- The Monmouth Beach Board of Education received:
  - $225 for public buildings

Participation in FEMA's Community Rating System

The Community Rating System (CRS) is a voluntary incentive program that recognizes and encourages community floodplain management activities that exceed the minimum National Flood Insurance Program (NFIP) requirements. The NFIP administers the CRS which scores towns on their effectiveness in dealing with the mitigation of flood hazard events, including reducing flood damage to insurable property, strengthening and supporting the insurance aspects of the NFIP, and encouraging a comprehensive approach to floodplain management. Monmouth Beach Borough is a participating municipality in the NFIP but not in the CRS. However, the Borough has expressed interest and is actively pursuing participation in the CRS.

Municipalities that participate in these programs earn CRS points, which result in discounted flood insurance premium rates to reflect the reduced flood risk. Discounted premiums are just one of the benefits of participating in the CRS. It is more important that these communities carry out activities to save lives and reduce property damage. Other benefits include enhanced public safety, reduced property damage and public infrastructure, avoidance of economic disruption and losses, reduction of human suffering, and protection of the environment.

Community Outreach and Involvement

Monmouth Beach Borough has also taken part in community involvement actions as part of its response to and recovery from Superstorm Sandy.

On December 11, 2012, the Borough held a meeting at the Church of the Precious Blood, as this served as the only large gathering place in the Borough left undamaged from the storm. At this meeting FEMA representatives and other related agencies explained the process for submitting claims, obtaining grants, and applying for emergency assistance.

On January 19, 2013, a recovery workshop was held (also at the Church of the Precious Blood) by the Borough Construction Department. At this meeting, building contractors, mechanical contractors, architects, foundation engineers, surveyors, and environmental mold scientists were available to meet with Borough residents to offer professional advice on their steps to rebuilding and recovery.

A draft of this SRPR will be available for residents to view and to provide comment prior to its adoption by the Borough Commission.

In addition, as part of Monmouth Beach's ongoing participation in the Monmouth County Multi-Jurisdictional Hazard Mitigation Plan, the Borough offers regular public outreach to the community with expert assistance from the FEMA Speakers Bureau, the Office of Emergency Management, the Building Department, Zoning, and Engineering. Dedicated email access is provided to submit questions and comments. Website access to assorted flood-related information is also available through the Borough.

Monmouth County Long Term Recovery Group

The Monmouth County Long Term Recovery Group (MCLTRG) seeks to assist all Monmouth County residents and homeowners in recovery from disasters by addressing and prioritizing unmet needs. MCLTRG's priorities include:

- Individuals and families who: need assistance to maintain or obtain safe, sanitary, and secure housing; are not served, or who are underserved, by other existing aid programs, including those who are ineligible for FEMA; are experiencing economic hardship in pursuing a plan for recovery; are isolated or have difficulty accessing services; have begun the recovery process but have encountered a setback and need assistance with their continued recovery; and need assistance in order to prevent deterioration in their continued recovery.
- Landlords of owner-occupied residential rental property of four units or less (or non-owner occupied residential rental property of three tenants or less) where assistance will provide safe, sanitary, and secure housing that will be affordable and permanent for the owner-occupant and residential tenants.

In October of 2013, the American Red Cross awarded a grant to the MCLTRG in the amount of $1.1 million. With this grant, the MCLTRG plans to prioritize 150 Monmouth County residents who have exhausted other available resources, but still face unmet needs in terms of home repair and rebuilding assistance. As of August 2013, the Red Cross had received $308 million in donations for its Hurricane Sandy emergency relief and recovery efforts, with $272 million spent or committed.

There is no publicly available data regarding MCLTRG's recovery aid in Monmouth Beach Borough, but aid from this group remains available for Monmouth Beach residents.

A Monmouth County resident seeking support from the MCLTRG must submit an intake form, will be assigned a case manager, and will be designated to a tier level of need according to MCLTRG priorities. From there, the case manager will review the intake, contact the client where necessary, and establish the range of services available.

Rebuilding Approaches That Will be More Resistant to Damage from Future Storms

The recovery efforts previously mentioned all serve as rebuilding approaches that Monmouth Beach is taking to be more resilient in the future. They serve to protect residents from the dangers of potential storm events by providing a solution to damaged services. The Borough may also consider the following rebuilding approaches in their recovery efforts:

- Rebuilding and renovating homes and structures in accordance with flood hazard and construction codes.
- Elevating key community facilities above the base flood elevation.
- Educating residents and builders about flood hazards and flood-resistant provisions in codes.
- Protecting natural areas that currently buffer developed areas from storm damage and storm surge.

Recommended Municipal Actions to Promote Recovery from Superstorm Sandy and to Reduce Vulnerabilities to Future Storms

This Strategic Recovery Planning Report recommends that Monmouth Beach Borough promote recovery from Superstorm Sandy and resiliency to future hurricanes and storms by taking the actions that are detailed in Table 1 below. These actions have been developed in consultation with the officials from a variety of Borough offices, and are intended to promote recovery from Superstorm Sandy and resiliency to future hurricanes and storms. They are classified in order of priority, where short-term priority means that the particular action should be implemented within 12 months, mid-term priority within 24 months, and long-term priority within 36 months. The prioritization could shift depending on available funding. Actual costs of each project will be prepared at the time that the specific scope of work is determined.

Table 1: Recommended Actions to Recover from Superstorm Sandy and to Improve Response and Increase Resiliency to Future Storms

Action	Relation to Superstorm Sandy's Impacts	Importance to Promoting Recovery, Response, and Resiliency	Length of Project
Reexamine the Borough's Master Plan Elements and prepare a sustainability element to address post-Sandy strategies and policies related to hazard mitigation, community resiliency, and forecasted sea level rise and its impacts. This should involve amending the goals and objectives, integration of assessment of community vulnerabilities exacerbated by Superstorm Sandy from this SRPR, as well as up-to-date mapping of current land uses, new FEMA mapping, community facilities, and important natural resources areas.	The last time the Master Plan was reexamined was in 2012. However, after Superstorm Sandy, it is important that planning documents address natural resources and recovery, response, and resiliency, especially issues dealt with in the aftermath of Superstorm Sandy.	Planning can mitigate risks and vulnerabilities, and protect property and safety.	Short-term (Within 12 months)
Adopt a Master Plan element for floodplain management, including a detailed inventory and mapping of infrastructure damaged during Superstorm Sandy.	Superstorm Sandy caused extensive flooding.	Enhanced floodplain management will promote resiliency to future storms.	Short-term (Within 12 months)
Adopt an Emergency Operating Plan to incorporate updates and revisions based on key lessons learned from Sandy and related post-storm response efforts.	Superstorm Sandy required an immediate emergency response.	Planning can mitigate risks and vulnerabilities, and protect property and safety. An updated emergency operating plan will help to improve efficiency of future emergency responses.	Short-term (Within 12 months)

Action	Relation to Superstorm Sandy's Impacts	Importance to Promoting Recovery, Response, and Resiliency	Length of Project
Revise and update the Borough's Hazard Mitigation Plan to incorporate updates and revisions based on key lessons learned from Sandy and related post-storm response efforts.	Superstorm Sandy mobilized police, emergency response, and utility personnel. This exposed areas that need improvement.	Planning can mitigate risks and vulnerabilities and can protect property and safety.	Short-term (Within 12 months)
Automate, update, and expedite the Borough's system for processing zoning and construction permits, including allowing inspectors to receive and manage permits with state of the art technology such as laptops and electronic tablets.	The Borough is processing high quantities of zoning and construction permits in the aftermath of Superstorm Sandy. Zoning permits the Borough processes increased from 156 in 2012 to just shy of 500 in 2013. Construction permits increased from 224 pre-Sandy to 406 in 2013.	This action will significantly increase the Borough's efficiency in processing permits and in recovering from future storm events.	Short-term (Within 12 months)
Participate in FEMA's Community Rating System (CRS).	FEMA's CRS promotes recovery from Sandy-type storms.	CRS participation results in enhanced public safety, reduced property damage, and discounted flood insurance premium rates, among other benefits.	Short-term (but ongoing for longer than 12 months)

Action	Relation to Superstorm Sandy's Impacts	Importance to Promoting Recovery, Response, and Resiliency	Length of Project
Install a Borough-wide Supervisory Control and Data Acquisition (SCADA) system in conjunction with the Borough's owned and operated facilities (including Borough Hall and Police Department, Fire House, etc.) to communicate critical alarms to a centralized location or operational personnel.	Monmouth Beach faced devastating damages to many of its services and municipal facilities.	This can: provide the Borough accurate information on water and wastewater collection, pump control and station performance; provide alarm notifications of system failure and emergency levels; protect quality of environment by preventing sewer spills into local waterways; and monitor fire, security, power failures, and generator operations.	Short-term (Within 12-months)
Provide backup power at key community facilities, including at the Police Department site, the Fire House and First Aid Building, pump stations, and at the Cultural Center. This should include considering alternative forms of backup power such as diesel generators when gas is shut off.	Borough-wide power outages after Superstorm Sandy caused delays in providing emergency services to residents.	This could improve reliability in service, response time, and access for emergency services post-storm.	Short-term (Within 12-months)
Install drainage to relieve flooding from flood prone areas (Example: Johnson Street, Anderson Street, Drew Court, and Valentine Street), as suggested by Monmouth Beach's participation in the Monmouth County HMP.	These areas of the Borough flooded during Superstorm Sandy. In addition, they are already prone to regular flooding during high tide and full moon events.	This will help alleviate flooding during Sandy-type events, will reduce recovery time, and will allow for easier emergency service access.	Short-term (Within 12 months)

Action	Relation to Superstorm Sandy's Impacts	Importance to Promoting Recovery, Response, and Resiliency	Length of Project
Prepare a Capital Improvement Plan identifying needed capital improvements to improve local resiliency.	Monmouth Beach faced devastating damages to many of its services and municipal facilities.	An up-to-date catalog and inventory of Borough-owned infrastructure will better prepare Monmouth Beach to provide recovery and response services in future Sandy-type storms.	Mid-term (Within 24 months)
Prepare a Borough Debris Management Plan, to include providing the Public Works Department with an emergency staging facility and a designated debris management area.	Debris from Superstorm Sandy was deposited at the Bathing Pavilion parking lot. Had the storm occurred in the summer months, the Borough would have had limited options for debris management sites.	An efficient response of the Public Works Department, including a proper staging facility, is critical during times of emergency and will help to increase response and protect lives and property.	Long-term (Within 36 months)
Develop a GIS database and user interface to catalog and inventory all infrastructure that is owned by the Borough, including roadways and stormwater and sanitary sewer collection systems. This will include up-to-date GPS mapping of the utility infrastructure, as well as inventory and classification of the road network to build a Borough-wide capital improvement plan.	Monmouth Beach faced devastating damages to many of its services and municipal facilities.	An up-to-date catalog and inventory of Borough-owned infrastructure will better prepare Monmouth Beach to provide recovery and response services in future Sandy-type storms.	Long-term (Within 36 months)

Action	Relation to Superstorm Sandy's Impacts	Importance to Promoting Recovery, Response, and Resiliency	Length of Project
Elevate the Borough Hall, Cultural Center, Fire House, and First Aid buildings.	These buildings faced interior flooding, damage to the exterior of the building, and loss of an extensive list of equipment, appliances, and materials as outlined in this SRPR. The Borough Hall building also serves as an emergency operating facility during emergency events, and this is compromised during flooding events.	Without elevation, the Borough risks damage to all resources and equipment contained within these structures. The elevation of these buildings secures the effective mitigation of flood damage to the buildings themselves as well as the resources they contain. Elevation also allows for the uninterrupted use of Borough Hall as a safe haven for residents.	Long-term (Within 36 months)

Summary of Actions and Priorities

The recommended actions for Monmouth Beach Borough serve as a comprehensive approach to both recovering from Superstorm Sandy and reducing vulnerabilities to future storms.

Immediate/Short-term needs include:

- Reexamining the Borough's Master Plan Elements;
- Adopting a Master Plan Element for floodplain management;
- Adopting an Emergency Operating Plan;
- Revising and updating the Borough's Hazard Mitigation Plan;
- Automating and updating the zoning and construction permit process;
- Participating in FEMA's Community Rating System (CRS);
- Installing a town-wide Supervisory Control and Data Acquisition (SCADA) system;
- Providing backup power at key community facilities; and
- Installing drainage to relieve flooding from flood-prone areas.

Mid-term needs include:

- Preparing a Capital Improvement Plan identifying needed capital improvements to improve local resiliency.

Long-term needs include:

- Preparing a Debris Management Plan;
- Developing a GIS database and user interface to catalog all Borough-owned infrastructure; and
- Elevating the Borough Hall, Cultural Center, Fire House, and First Aid buildings.

In addition to the above recommended actions, this SRPR also recommends that any new development within Monmouth Beach Borough employ storm-resistant infrastructure and building strategies. Potential examples include: landscaped streetscape improvements; rain-gardens; the use of berms or levees to protect capital facilities; and raising electrical equipment, HVAC units, meters, and other appliances and utilities at key community facilities. Green infrastructure and resilient design are encouraged for future developments. Monmouth Beach should prioritize and assess the use of sustainable building design and techniques as they relate to housing and infrastructure in the Borough.

Monmouth Beach Borough will be seeking additional funding from the NJ Department of Community Affairs as part of the Post Sandy Planning Assistance Grant Program (PSPAGP) for the following activities eligible for funding under the program:

- Reexamining the Borough's Master Plan Elements;
- Adopting a Master Plan Element for floodplain management;
- Adopting an Emergency Operating Plan;

- Revising and updating the Borough's Hazard Mitigation Plan;
- Automating and updating the zoning and construction permit process;
- Preparing a Capital Improvement Plan identifying needed capital improvements to improve local resiliency as described above;
- Preparing a Debris Management Plan; and
- Developing a GIS database to support future planning efforts.

All of the foregoing will help the Borough improve resiliency by improving the Borough's knowledge base, establishing clear procedures and protocols for addressing future emergencies and facilitating restoration, and creating a comprehensive planning framework that will enhance the resiliency and sustainability of the Borough and minimize the impacts of future storm events.