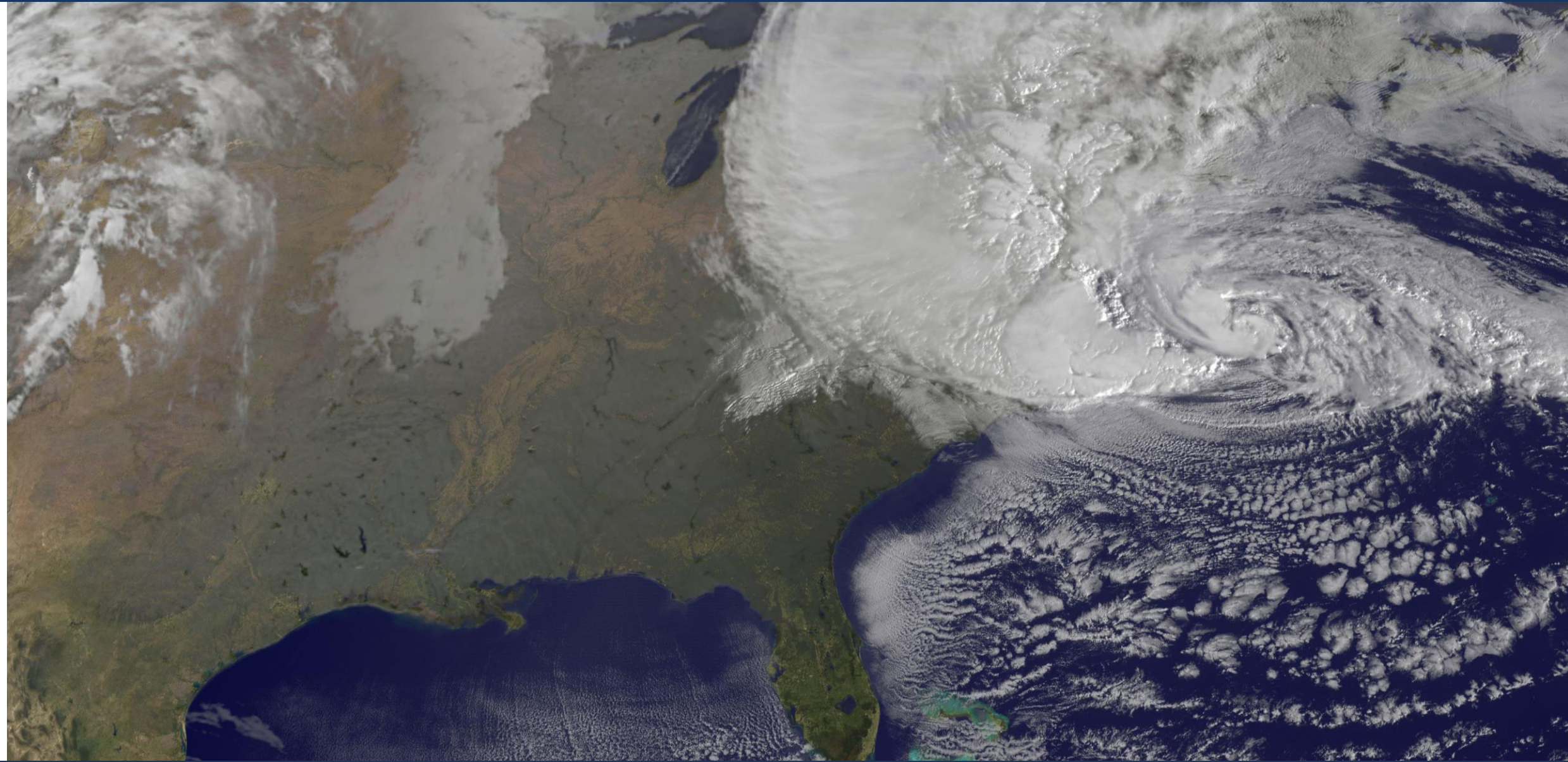


The Borough of Rumson



Strategic Recovery Planning Report

BOROUGH OF RUMSON STRATEGIC RECOVERY PLANNING REPORT

January 6, 2014

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Executive Summary

When Hurricane Sandy struck the coast of New Jersey on October 29, 2012, it brought extensive damage to Rumson Borough from both storm surge and wind damage. Rumson reported that 284 properties within the Borough's jurisdiction faced substantial damage. 11 of the Borough's sewage pump stations went offline due to floodwater inundation and/or power system failure. Trees and power lines throughout the Borough also fell, in some cases damaging buildings. The Borough also faced total power outages for 14 days.

In response to the impacts faced by Hurricane Sandy, Rumson's recovery efforts have been extensive. The Borough passed zoning amendments to adopt FEMA's new Advisory Base Flood Elevations and to adjust building height for residences in high-risk areas. Rumson has also applied for FEMA Hazard Mitigation Grant Programs in order to elevate 32 homes, to construct flood mitigation infrastructure improvements, to install flood gate barriers on all doors for the Department of Public Works building, to improve eight of the Borough's sanitary sewer pump stations, and to replace two of the DPW's underground fuel storage tanks.

Rumson property and business owners have also received recovery aid from the New Jersey Department of Community Affairs Community Development Block Grant programs; the Borough has been awarded \$1,200,000 for the Homeowner Resettlement Program, \$2,500,000 for the Homeowner Reconstruction, Rehabilitation, Elevation, and Mitigation program, \$109,436 for Small Business Grants, as well as \$1,075,000 for Continuation and Enhancement of Essential Public Services. Furthermore, Rumson has received 71 home loans from the Small Business Administration totaling \$9,357,300 and one economic injury disaster loan totaling \$4,800.

Rumson Borough's recommended municipal actions to promote recovery from Hurricane Sandy and to reduce vulnerabilities from future storms include the following resiliency actions: updating and revising the Emergency Operation Procedures Manual based on the Borough's experience during Hurricane Sandy, developing a GIS database and user interface to inventory all Borough-owned infrastructure; compiling low-elevation aerials within identified special flood hazard areas; updating a more comprehensive Borough Master Plan; entering FEMA's Community Rating System program; as well as municipal capital investments in public facilities improvements such as sewer pump stations, bulkheads, and generators.

Acknowledgements

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Introduction

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

- Evaluate the impacts on affected community features in Rumson and address the conditions created or exacerbated by the storm;
- Articulate 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
- Contain 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; the estimated cost of implementation; identification of potential or actual funding sources to pay for project implementation; and estimated implementation dates.

Description of Rumson Borough

The Borough of Rumson is a compact residential community with a population of approximately 7,044, (according to the U.S. Census Bureau's 2012 estimate) and an area of approximately 5.2 square miles. The Borough is located in the coastal area of northeastern Monmouth County, bordered to the north by the Navesink River and to the south and east by the Shrewsbury River, and contiguous to Fair Haven and Little Silver to the west (see Map 1 on page 17). Rumson is a mature community that has established harmonious patterns of land use and satisfactory public facilities and services. The challenge for Rumson is to manage further growth and changes within the Borough to assure that its quality of life is maintained. Rumson is a fully developed community that has developed in a manner consistent with County and State Plans.

With the absence of a major State highway access from the surrounding communities, and limited access to major shore points, Rumson has been able to successfully preserve an attractive townscape. The Borough's business areas are compact, pedestrian in scale, and relate well to adjoining residential streets.

Proximity to the New York Metropolitan Region and other business and commercial developments has significantly influenced the growth of the Borough. Rumson is situated about 40 miles to the south of New York City. Four miles to the west, residents have access to Exit 109 of the Garden State Parkway. State Highway Route 35, which parallels the Parkway, the Red Bank Station of the North Jersey Coast Line, and access to the ferry to Manhattan from Atlantic Highlands also provide Rumson with transportation to major metropolitan communities.

Rumson is located between the Shrewsbury and Navesink Rivers, but in addition to the primary and secondary watercourses in the Borough, there are a number of unnamed tributaries and ponds. The Borough has historically maintained low-density zoning in environmentally sensitive areas of the Borough, particularly along the Shrewsbury River and, in general, along the Navesink, both listed by NJDEP as Category-1 streams.

The Borough's established development pattern, the preservation of which is the Borough's primary goal, creates and supports a well-designed mixed-use community. In addition, the Borough has adopted a mixed-use overlay option in the General Business, Neighborhood Business, and Professional Office districts.

Assessment of Existing Planning Documents

This section of the SRPR will examine the adequacy of the existing planning documents included below, at both the municipal and county level, and will describe what changes are needed, if any, to support municipal planning needs and goals related to post storm recovery and to mitigate future storm impacts.

Borough of Rumson

Borough of Rumson Master Plan, 1988

The Borough's Master Plan, adopted in 1988, is a basis to regulate land use in a reasonable fashion consistent with the responsibility of municipal government to promote the public health, safety, and general welfare of the Borough, Monmouth County, the region, and the State of New Jersey. In the Master Plan, the Borough looks at what needs to be done locally to continue to maintain a sound pattern of land use that ensures the health of the natural environment

and that responds to human needs. The following objectives included in the Borough's Master Plan are relevant to this SRPR:

- 1) Maintain Rumson's character as a residential community and the quality of life it offers.
- 2) Encourage the most appropriate use of land consistent with neighborhood character and its suitability for development.
- 3) Establish appropriate population densities and limit the intensity of development to both preserve the natural environment and to ensure neighborhood, community, and regional well-being.
- 4) Maintain a satisfactory level of public facilities and services.
- 5) Secure the public's safety from fire, flood, panic, and other natural and manmade disasters.
- 6) Ensure that Rumson's development does not conflict with the development and general welfare of neighboring municipalities, the County and the State as a whole.
- 7) Coordinate public development with land use policies to encourage the appropriate and efficient expenditure of public funds.
- 8) Provide sufficient space in appropriate locations for residential, recreational, commercial, and open space use.
- 9) Locate and design transportation routes to promote the free flow of traffic while discouraging congestion or blight.
- 10) Prevent urban sprawl and degradation of the environment through improper land use.
- 11) Expand housing opportunities within the Borough compatible with neighborhood character and the needs of present and future residents.
- 12) Protect the natural resources and qualities of the Borough including freshwater and saltwater wetlands, floodplains, stream corridors, open space, steep slopes, and areas with scenic, cultural and recreational values.

These objectives assume that there will be no extensive natural or man-made disasters which would require major reconstruction or redevelopment of Rumson's developed areas.

Master Plan Reexamination Report, 2012

The Borough's Master Plan Reexaminations, adopted in 1997, 2002, and again in 2012, support the goals and objectives of the 1988 Master Plan, and do not modify the prior endorsements. The 2012 Reexamination Report recognizes that the Borough Master Plan consists of numerous documents and elements adopted by the

Planning Board over the past four decades. The Planning Board recommends that, upon completion and adoption of the reexamination, the Borough compile the 1988 Master Plan and all subsequent master plan element amendments and reexaminations into one reference document easily made available by Borough staff to the general public.

Land Use Plan Element, 1988

The land use plan element is based on the principles, objectives, assumptions, and policies set forth in the 1988 Master Plan. Rumson is a mature community with little vacant land. It has harmonious land use patterns and satisfactory public facilities and services. The major emphasis of the land use element is to maintain the intensity of these patterns and assure the continued high quality of public services available to the Borough's residents.

At the same time, the land use element incorporates as a recommendation the housing element's proposal to meet the Borough's need for low and moderate income housing by including companion dwelling units as a conditional use. The landmark sites and districts of the historic preservation element have been included as a land use consideration by proposing a landmark overlay zone as the basis for preservation efforts.

Land Use Plan Element Amendment, 2002

The Borough's land use element, reexamined in 2002, maintains the same principles, objectives, assumptions, and policies set forth by the 1988 Master Plan. The 2002 amendment also considers the need for some land use changes, including enacting protective regulations for agricultural and horticultural uses, increasing required minimum lot size in R-1 and R-2 zone districts, as well as some proposed land use changes.

Housing Plan Element and Fair Share Plan, 2008

The Housing Plan Element includes the following components:

- An inventory of Rumson's demographic, housing stock, and employment characteristics.
- Rumson's affordable housing obligation and growth share
- Rumson's municipal ability to accommodate its affordable housing obligation

The Fair Share Plan includes the following components:

- Identification of Rumson's prior-round obligation
- Evaluation of unmet low and moderate income housing need
- Rumson's mechanisms to address its prior-round unmet need
- Accommodation of Rumson's present and prospective fair share for low and moderate income housing

The Plan also includes as an appendix the Vacant Land Inventory and Analysis Report, adopted in 2003.

Stormwater Management Plan, 2006

The Stormwater Management Plan Master Plan Element was amended in 2006. It provides a strategy for the Borough of Rumson to plan for and manage increased runoff associated with future development and land use changes. The Plan makes recommendations to better regulate stormwater management. It is not designed to resolve existing flooding or runoff problems, but rather to identify them for future correction. The Plan addresses groundwater recharge, stormwater quantity, and stormwater quality impacts by including stormwater design and performance standards for new development and redevelopment. The Plan also addresses the Borough's suggested policy regarding the long-term operation and maintenance of existing and future stormwater management facilities.

The relevant goals of the Stormwater Management Plan are:

- Reduce flood damage, including damage to life, property, and the environment;
- Minimize, to the extent practical, any increase in stormwater runoff from any new development;
- Reduce soil erosion from development, redevelopment, and construction projects;
- Assure the adequacy of existing and proposed culverts and bridges, as well as for drainage;
- Maintain groundwater recharge;
- Prevent, to the greatest extent feasible, an increase in non-point pollution;
- Maintain the integrity of stream channels for their biological function, as well as for drainage;
- Minimize pollutants in stormwater runoff from new and existing development to restore, enhance, and maintain the chemical, physical, and biological integrity of the waters of the State, to protect the public health, to safeguard fish and

aquatic life and scenic and ecological values, and to enhance the domestic, municipal, recreational, commercial, and other uses of water;

- Protect public safety through the proper design and operation of stormwater basins;
- Properly manage and maintain existing natural ponds and waterways on private property; and
- Regulate the stormwater impacts from properties within 300 feet of a C-1 waterway that are unregulated by the Municipal Land Use Law (MLUL) and the Residential Site Improvement Standards (RSIS).

Rumson Emergency Operation Procedures Manual

This manual, approved in 2010, sets forth the general policies and procedures to be carried out by municipal and volunteer entities in order to provide the citizens of the Borough with an effective integrated emergency response plan designed to minimize the loss of life and property during an emergency. The manual is comprised of the Basic Plan and the following accompanying annexes: Alerting, Warning, and Communications; Damage Assessment; Emergency Medical; Emergency Operations Center; Emergency Public Information; Evacuation; Fire and Rescue; Hazardous Materials; Law Enforcement; Public Health; Public Works; Radiological Protection; Resource Management; Shelter, Reception, and Care; Social Services; Weapons of Mass Destruction; and Public Demonstrations and Civil Disorders.

The purpose of the Emergency Operations Basic Plan is to protect life and property in emergencies by coordinating response activities of municipal and volunteer entities to ensure their optimum use. It provides for actions to be taken to mitigate, prepare for, respond to, and recover from the effects of an emergency. The plan is an "all-hazards" approach to emergency management and covers natural disasters, technological disasters, and national security crises.

Monmouth County

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 entire Borough of Rumson as a Suburban Settlement Growth 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 completion of missing freeway links
- Encourage the use of cluster development in all parts of the county

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 those that call Monmouth County home.

Coastal Monmouth Plan, 2010

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

The Plan was developed with the following goals and objectives:

Goal: 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.

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 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. Its development was led by the County under a FEMA planning grant that covered the costs of its preparation. Monmouth County adopted a multi-jurisdictional approach, 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.

In this Plan, Monmouth County conducted general estimates of potentially developable vacant land in identified hazard areas. For Rumson, the County found that in 2009, 88 parcels were vacant. 85 of those parcels were located in key hazard areas.

The Plan states that the Borough of Rumson is basically fully developed. New households are the result of the demolition of an existing house and the building of two homes to replace the former residence. The two new homes that are built are generally larger than the original home. Many smaller ranch homes are being demolished and replaced with larger, two-story homes. As of 2009, the Borough had followed State conservation guidelines and codes for all new houses built in the Borough, and all FEMA guidelines for construction and development in flood areas.

The 2009 Plan study found that the Borough of Rumson had no Emergency Response Plan, Post-Disaster Recovery Plan, or Post-Disaster Recovery Ordinance.

To stay in compliance with the DMA, the plan must be updated every five years. Monmouth County is currently undergoing the update process for this plan. A draft of the update is expected in April 2014, to be followed by FEMA approval and jurisdictional adoptions of the updated plan.

The following 2009 Plan goals have been adopted as the 2014 Plan goals and are relevant to this SRPR:

- Promote disaster-resistant development.
- Build and support local capacity to enable the public to prepare for, respond to, and recover from disasters.
- Reduce the possibility of damage and losses due to flooding associated with coastal and inland floods, hurricanes, coastal erosion, and wave action.
- Reduce the possibility of damage and losses due to high winds associated with windstorms, tropical storms, and hurricanes.

- Reduce the possibility of damages to emergency and critical facilities from damage due to flooding, storm surge, and extreme winds.
- Promote disaster-resistance by incorporating mitigation actions into other planning mechanisms.

Rumson’s participation in the 2014 Plan Update has identified the following hazard mitigation actions:

- Implement early flood warning system for Shrewsbury and Navesink Rivers as a shared service with other towns along the rivers. This action is ongoing, as expansion of equipment, access of information for the project database, and ongoing system maintenance are underway.
- Enact new FEMA flood maps as part of planning and zoning regulations. The Advisory Base Flood Elevations (ABFE) have been adopted, but this action is ongoing as Rumson waits for new BFE maps.
- Implement stream and pond cleaning to speed drainage of flood prone areas and follow up with regular maintenance. This action is also ongoing and work has been completed given the Borough’s equipment available for use.
- Upgrade the shelter facility located at Rumson Fair Haven Regional High School, including the emergency power facility. This action has not been completed due to a lack of funding for the emergency power installation.
- Continue to maintain the current warning system that is already operational including the Borough website, AM radio, the reverse 911 calling system, and the emergency siren alerting system. This action is ongoing as the services are continued.
- Maintain shade trees along community streets and increase the effectiveness of Public Works to clear trees in the event of a storm. This has been completed by the Borough and is also ongoing.

Monmouth County Farmland Preservation Plan, 2008

According to the Monmouth County Farmland Preservation Plan, adopted in 2008, only 27 acres of the Borough of Rumson’s total municipal land area of 3,328 acres are devoted to agricultural uses.

Monmouth County Open Space Plan, 2006

One of the principal purposes of the Monmouth County Open Space Plan (adopted in 2006) is that the Plan establishes direction and priorities for the land preservation program of the Monmouth County Park System.

The goal of the Plan is to permanently preserve public land of county significance to support future regional conservation and recreation needs throughout the county. The land should form an integrated system of open space that is sufficiently diverse and comprehensive to protect the significant natural and man-made landscapes that have defined Monmouth County in past generations and to provide a wide range of resource-based recreation opportunities for current and future generations.

According to the Monmouth County Open Space Plan, as of 2005, 89.79 acres of the Borough of Rumson's 3,328 acre municipal land area was dedicated open space. The 2006 Plan proposed a target of 99.84 acres of open space for the area, leaving a current 10.05 acre deficit.

Evaluation of Superstorm Sandy's Impact on Rumson Borough

Storm Surge

In Rumson, major impacts occur during tidal flooding resulting from hurricane and Nor-Easter storm events, such as in the case of Hurricane Sandy. The flooding that Rumson experienced during Hurricane Sandy cut off significant portions of the town from emergency services and stranded many residents in their homes until flood waters receded.

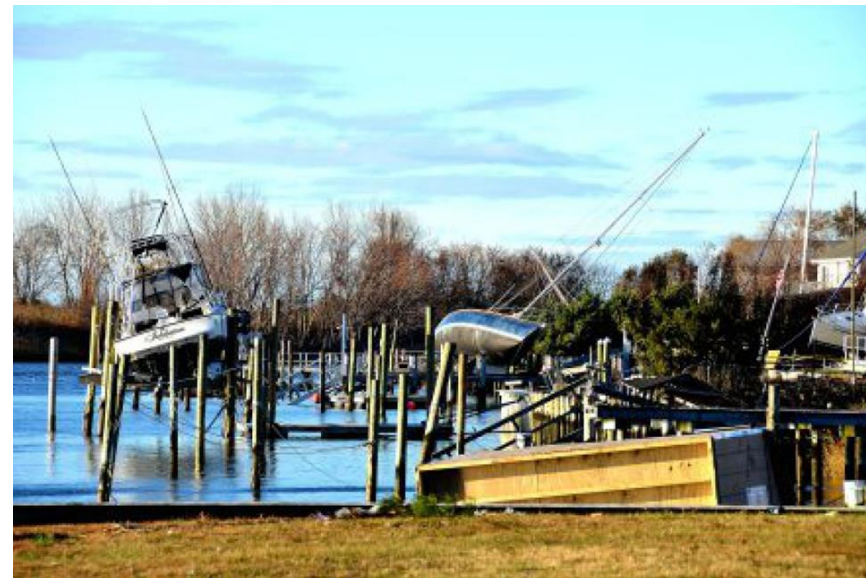
The storm surge also carried a significant amount of debris from Sea Bright onto the eastern shoreline of Rumson. This debris not only caused physical damage to waterfront structures (see Figure 1 and Figure 2), but also cost the Borough approximately \$4 million in debris collection and removal.

Figure 1: A Displaced Ship in Rumson Borough from the Storm Surge



Source: Rumson-Fair Haven Patch. "Rumson Mayor's Post-Sandy Update." <http://rumson.patch.com/groups/politics-and-elections/p/rumson-mayor-s-sandy-clean-up-update>

Figure 2: More Displaced Ships in Rumson Borough from the Storm Surge



Source: Rumson-Fair Haven Patch. "Rumson Deals with Sandy's Aftermath." <http://rumson.patch.com/groups/around-town/p/rumson-deals-with-sandy-s-aftermath>

Damage to Properties

The Borough of Rumson faced damage to various properties, as a result of both the storm surge and also wind damage. Both trees and power lines in various parts of the Borough fell (see Figure 3).

Figure 3: Wind Damage in Rumson Borough



Source: Rumson-Fair Haven Patch. "Rumson Deals with Sandy's Aftermath." <http://rumson.patch.com/groups/around-town/p/rumson-deals-with-sandy-s-aftermath>

The State of New Jersey has analyzed the storm damage to heavily impacted communities, as determined by HUD, and has released the CDBG Disaster Recovery Action Plan. The data has been generated using the 2011 American Community Survey 5-Year Survey Data and FEMA Individual Assistance Data (effective March 12, 2013).

As a result of Superstorm Sandy, two census tracts in Rumson Borough had homes that sustained "severe" or "major" damage to housing units, shown below. This table does not include minor damage sustained, which was common.

Table 1: Census Tracts with “Severe” or “Major” Damage

Census Tract No.	Households with Major/Severe Damage	Households	Housing Units	Median Household Income
34025803800	28%	990	1,172	\$219,500
34025803900	10%	1,285	1,424	\$112,656

Source: NJ Department of Community Affairs, US Census American Community Survey, 2006-2011 Averages, and FEMA Individual Assistance Records as of March 12, 2013.

In addition, the Borough provided a list of 284 properties with “substantial damage,” which is defined as damage of any origin sustained by a structure whereby the total costs of restoring the structure to its before damaged condition would equal or exceed 50% of the structure market value. Most of these properties in Rumson are located close in proximity to the Shrewsbury and Navesink Rivers, with one cluster in the north of the Borough close to Barley Point Island, and in the east of the Borough close to the Shrewsbury River Bridge (see Map 2 on page 18). The high distribution of damaged properties in the east of Borough may be attributed to the location of many higher-density properties in a low-lying area close to the Shrewsbury River.

Properties that have been found as substantially damaged have been categorized based on the type of damage and assessment of reduction to the property, and have been given a special tax code based on the assessment. Table 2 shows the number of properties affected in Rumson for each assessment. Although 284 properties in Rumson have faced substantial damage, 32 properties have more than one type of damage and are counted twice in Table 2.

Table 2: Assessment Reduction Code Guidelines

Special Tax Code	Description	Reduction in Improvement Assessment (IA)/Land Assessment (LA)	Affected Properties
H71	Minimal Basement Flooding	5% in IA	3
H72	Moderate Basement Flooding	10% in IA	4
H73	Moderate 1st Floor Flooding	15% in IA	28
H74	Significant 1st Floor Flooding	30% in IA	216
H81	Minimal Structural Damage	5% in IA	26
H82	Moderate Structural Damage	20% in IA	8
H83	Significant Structural Damage	60% in IA	5
H84	Extreme Structural Damage	90% in IA	1
H85	Total Structural Damage	100% in IA	0
H86	Accessory Damage Only	Manual reduction required in Coastal Area Management Act	24
H91	External Obsolescence	10% in LA	1
H92	External Obsolescence	25% in LA	0
H93	External Obsolescence	50% in LA	0

Source: Borough of Rumson

Damage to Pump Stations

The Borough of Rumson has 11 sewage pump stations (see Map 3 on page 19). These pump stations are all vulnerable to flood-related damage and/or power outages during storm events. During Hurricane Sandy, eight of the pump stations went offline due to backup generator failure as a result of tidal flooding, or because no backup generators were installed. To prevent the backflow of raw sewage into Borough streets, waterways and into Borough residences, Borough Public Works personnel traveled from pump station to pump station with one gas powered generator, connected this generator to these pump stations, and ran the generator to operate the pump station until the system segment served by the pump station was emptied. Lack of flood proofing measures and adequate backup generators resulted in a significant labor, equipment, and fuel cost to the Borough.

Damage to Rumson Department of Public Works’ Garage Storm Door

The Borough’s Public Works garage houses vehicles and equipment necessary to conduct emergency repairs to Borough infrastructure, conduct debris removal and cleanup of Borough roadways, and provide assistance to Borough emergency personnel. During Hurricane Sandy, the office, locker room, mechanics shop, and garage bays sustained structural damage as well as damage to equipment and materials stored in the building. The building’s service bay doors required significant repairs and, in some cases, replacement while flood waters caused significant damage to equipment within the building.

Community Vulnerabilities Exacerbated by Hurricane Sandy

Hurricane Sandy exacerbated the vulnerability of homeowners located in low-lying areas to the flooded waterways that surround Rumson Borough and their homes. The loss of power exposed residents to the dangers of cold fall nights. Furthermore, the eight sewage pump stations that went offline threatened the health of residents by failing to prevent the backflow of raw sewage into flooded Borough streets.

Community Opportunities Created by Hurricane Sandy

The impacts of Hurricane Sandy have shed light on the areas in which Rumson Borough may improve its resiliency in future storm events by:

- Improving community outreach during emergency situations through emergency siren system, social media outlets, and other communication methods
- Promoting public awareness of hazard mitigation and resiliency issues;
- Focusing public agencies on community vulnerabilities to hazards such as flooding;
- Encouraging regional solutions.

Current Status of Post-Sandy Recovery Efforts

Municipal Efforts

Rumson adopted zoning amendments 13-002 G and 13-003 D in January 2013 to reflect FEMA’s new Advisory Base Flood Elevations (ABFE) and map released on December 12, 2012 which more accurately reflect the true one percent annual chance flood hazard elevations as a result of a large storm event. They also made adjustments for building height. Without the amended ordinances, the Borough would have been inundated with individual variance requests.

The Borough also passed a resolution in January 2013 extending the permit waiver to October 30, 2013 for residents rebuilding their homes after Hurricane Sandy. Because of this, residents who sought to rebuild were not required to pay normally associated permit fees until the end of June, given that rebuilding was limited to replacing damaged structures rather than expanding them.

The Rumson Department of Public Works has also improved some mitigation-related duties since Hurricane Sandy. The Department now checks for fallen trees and blocked storm drains as part of its daily work. Also on a daily basis, the DPW must inspect and report identified debris in streams and ditches to the Foreman for scheduled maintenance and cleaning.

Community Development Block Grant (CDBG) Disaster Recovery Programs

The Borough of Rumson 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. Rumson’s residents have received aid 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. The grant amount is \$10,000.
- **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. 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.

The state sent preliminary-award letters to 4,303 homeowners and has estimated an average award of \$100,000 per application until final award of construction amount is known. Once final award is determined, this amount will be adjusted.

- **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 prior to the LRRP implementation but not paid for by other programs.

Rumson has also received aid from small business grants:

- **Small Business Grants (SBG):** Forgivable loans that help small businesses 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.

In addition, Rumson has received aid from a planning and infrastructure program:

- **Continuation and Enhancement of Essential Public Services (EPS):** Certain local governments experienced budget difficulties due to Superstorm Sandy-related revenue losses, and responded to Local Finance Notices 2013-8, 2013-10, and 2013-12 seeking FEMA assistance in the form of Community Disaster Loans. Community Disaster Loans are the primary form of assistance to ensure local governments can adopt stable budgets providing for essential services. However, eligibility criteria and caps on Community Disaster Loans may result in certain local government applicants continuing to have structural budget problems preventing the ability to budget for essential services.

Local governments that: 1) applied for Community Disaster Loans, and: 2) continue to experience funding gaps that prevent adoption of a budget that delivers essential services, may apply to the Division of Local Government Services for funding from a Community Development Block Grant made available by a special act of Congress. The State, through a HUD-approved Community Development Block Grant Action Plan, has allocated up to \$60 million for this purpose and the program is being administered by the Division as the Essential Services Grant Program.

Below is an outline of CDBG project funds provided to residents of Rumson (LMI/ low and moderate income units and UN/urgent need units) in their recovery efforts. The data are current as of November 27, 2013:

Housing Programs:

- HRP:
 - LMI Units: 28
 - UN Units: 92
 - Total Units 120
 - Awarded: \$1,200,000
 - Distributed: \$1,200,000
- RREM
 - LMI Units: 16
 - UN Units: 9
 - Total Units 25
 - Awarded: \$2,500,000
 - Distributed: \$0
- LRRP
 - Units: 14
 - Awarded: \$420,000
 - Distributed: \$0
- Total
 - Units: 159
 - Awarded: \$4,120,000
 - Distributed: \$1,200,000

Economic Development Programs:

- SBG
 - Businesses: 6
 - Awarded: \$109,436
 - Disbursements: \$91,306
- Total
 - Businesses: 6
 - Awarded: \$109,436
 - Disbursements: \$91,306

Planning and Infrastructure Programs:

- EPS
 - Projects: 1
 - Awarded: \$1,075,000
 - Disbursed: \$843,418
- Total
 - Projects: 1
 - Awarded: \$1,075,000
 - Disbursed: \$843,418

Data has not yet been reported on the following CDBG recovery programs, and will be updated on NJDCA's online CDBG database as it becomes available:

- Small Business Loans (SBL)
- Neighborhood and Community Revitalization (NCR)
- FEMA Match Program (FMP)
- Code Enforcement (FMP)
- Code Enforcement (CODE)
- Supportive Service Program (SSP)
- Administrative/Planning (AP)

Small Business Administration Disaster Loans

In the months following Hurricane Sandy, the Small Business Administration (SBA) has been issuing loans to homes 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. As of February 2013, Rumson had received 71 home loans totaling \$9,357,300 and one economic injury disaster loan in the amount of \$4,800.

FEMA's Hazard Mitigation Grant Program (HMGP) Elevation Program

This is a \$100 million reimbursement grant program set up to assist homeowners elevate their homes after Hurricane Sandy. The HMGP elevation program provides up to \$30,000 of reimbursement for eligible homeowners to elevate their primary single-family residences. The program is being paid for by FEMA funds. The application period for homeowners closed on September 15, 2013.

The New Jersey standard is to elevate residential structures one foot higher than the Advisory Base Flood Elevation (ABFE). This reduces the risk of damage to the property and its contents in the event of major flooding. It may also provide a significant reduction in flood insurance premiums compared to a structure that is not elevated.

Figure 4: A Rumson Home is Elevated.



Source: Redbankgreen. "Rumson: Au Revoir, V-Zone."

<http://www.redbankgreen.com/2013/06/rumson-au-revoir-v-zone.html>

FEMA Public Assistance Grants

Monmouth County has received grants distributed through the FEMA Public Assistance program. As of May 2013, the Monmouth County Public Works department was set to receive \$3,714,294 as partial reimbursement for its pre and post storm efforts. The Sheriff's department was also set to receive \$1,291,688 for providing security at shelters, search and rescue operations, and other activities (source: Matawan-Aberdeen Patch).

More specifically, FEMA has also provided a public assistance grant to Rumson to aid with disaster recovery. NJ.com has also compiled this data from FEMA and made it available on their website, although due to privacy concerns, data on individual assistance grants that have been issued have not been released. As of April 25, 2013, the Rumson Board of Education had received a public buildings grant in the amount of \$1,027.

Other FEMA Applications

The Borough of Rumson applied for six more FEMA Hazard Mitigation Grant Programs (HMGP), subsequent to the Federal Disaster Declaration FEMA # 4086-DR-NJ. These include the following applications from March of 2013:

Residential Elevation of 32 Homes

Rumson applied for funding to elevate 32 homes. 8 of these homes were substantially damaged by Hurricane Sandy. 20 of the homes are located in the Coastal “A” Flood Zone, while 12 are located within the ABFE Velocity zone. The Borough applied to elevate these homes above the new Advisory Base Flood Elevations (ABFEs) established by FEMA and adopted by the State of New Jersey after Hurricane Sandy. The Coastal Floodplain Boundaries Preliminary Work Map with flood elevations is located on page 20.

It is estimated that the proposed mitigation activities could potentially result in a \$13,294,993.00 (as per value assessments on listed homes) reduction in future storm damages to residential structures and personal property and will protect public health and safety during major storm events.

The goal of this elevation project is to protect lives and property from flood inundation and hazards, to reduce the need for emergency services during flood events, and to reduce or eliminate repetitive flooding of these homes thereby reducing claims under the National Flood Insurance Program. This project will mitigate the repetitive flooding of the structures by elevating the house above the advisory base flood elevation.

The proposed mitigation measures will cost \$200,000 per residential structure located within the Coastal “A” ABFE zone and \$260,000 per structure located within the Velocity Zone pursuant to federal prevailing wage standards. The Borough requested \$5,340,000.00 (75 percent of the total project cost of \$7,120,000.00) for the 32 houses. Individual homeowners would be expected to provide the remaining 25 percent of the total cost.

West Park Area Neighborhood Flood Mitigation Project

Rumson applied for funding in the amount of \$130,000 in order to construct flood mitigation infrastructure improvements in the West Park Area residential neighborhood, including new elevated bulkheads, new tide valves, replacement of an existing tide valve, as well as earthen berms and associated grading.

The proposed infrastructure improvements will result in a significant decrease or elimination of tidal nuisance flooding in the neighborhood through a combination of bulkhead, grading, and flood mitigation infrastructure improvements.

The Borough funded significant drainage system and roadway improvements in the neighborhood in 1995, and has completed significant bulkhead projects in this location since these improvements in an effort to mitigate flooding in the neighborhood. However, to date the Borough’s significant infrastructure investments have been unable to eliminate nuisance flooding and prevent roads in the neighborhood from becoming impassable. The proposed improvements will work in concert with previously constructed infrastructure improvements to reduce the frequency of or eliminate tidal flooding in the neighborhood. Existing bulkhead along the waterfront is being retained where possible and earthwork is being proposed in lieu of bulkhead elevation in these areas in order to undertake a more cost-effective approach to flood mitigation in this neighborhood.

Pump Station Flood Proofing and Generator Installation

Rumson applied for funding in the amount of \$250,000 to construct or install improvements to eight sanitary sewer pump stations within the Borough. The project request involves installing natural gas emergency backup generators at four pump stations, raising the access lids, covers, and vault chambers of six pump stations, and installing reinforced steel, rubber gasket lined storm doors at two pump station buildings.

The proposed pump station improvements and backup generator installations will protect public health and safety and result in a significant cost savings to the Borough and homeowners. The improvements will ensure that pump stations that lack a generator, or pump stations whose backup generator failed during the storm have an adequate backup generator that is installed in a location that is not vulnerable to flooding. In addition, the proposed improvements will reduce the vulnerability of pump station infrastructure to flood damage. Ensuring that the Borough’s sanitary sewer pump stations are protected will greatly reduce the likelihood of sanitary sewer system failure and backup, which will mitigate the potential environmental degradation associated with sewage backup into the Borough’s storm sewer system and the flow of raw sewage into the Navesink and Shrewsbury Rivers.

Department of Public Works Garage Storm Door Installation

Rumson applied for funding in the amount of \$75,000 to install reinforced steel, rubber gasket-lined storm doors at the Borough’s Department of Public Works garage. The storm doors will be installed to the building’s service bays to provide greater protection from wave action and flooding to the building’s structure and contents.

The storm door installation will result in significant cost savings to the Borough and will protect the health and safety of its residents. The improvements will reduce the vulnerability of the DPW garage to flood damage and will protect the equipment within the building from being damaged or destroyed. Providing protection to the Borough’s public works garage will be crucial to the Borough’s recovery efforts after future storm events. The public works garage houses vehicles and equipment necessary to conduct emergency repairs to Borough infrastructure, conduct debris removal and cleanup of Borough roadways, and provide assistance to Borough emergency personnel.

Shrewsbury Drive/Avenue of Two Rivers Bulkhead and Drainage Improvements

Rumson applied for funding in the amount of \$382,000 in order to construct a series of flood mitigation infrastructure improvements to the intersection of Shrewsbury Drive and Avenue of Two Rivers. Proposed improvements include the installation of 150 linear feet of new elevated bulkhead, the rehabilitation and replacement of existing drainage pipes, and the installation of a new tide valve at the intersection. The proposed project is the final piece of a comprehensive plan to mitigate flooding on Shrewsbury Drive.

The proposed infrastructure improvements will result in a significant decrease or elimination of tidal nuisance flooding in the area, which occurs during higher than normal tides, and prevents access to a number of residential homes along Oyster Bay Drive. Reducing or eliminating the times during which the intersection is impassable due to flooding will provide a significant public benefit, as it will protect public health and safety by providing uninterrupted access to neighborhoods in the vicinity of the intersection.

Department of Public Works Underground Storage Tank Removal and Replacement

Rumson applied for funding in the amount of \$150,000 to fund the removal of two existing underground diesel fuel storage tanks and install two new above-ground diesel fuel storage tanks at the Borough's DPW yard. The above-ground storage tanks will be installed above the Advisory Base Flood Elevation established by FEMA after Hurricane Sandy to provide protection from wave action and flooding that will be associated with future storm events. The proposed removal and replacement of the existing underground storage tanks will be completed under a contract between the Borough and the State of New Jersey through a contracted vendor.

The Borough's Public Works yard is located in an area that is particularly vulnerable to flooding, and as such, has experienced significant flooding due to multiple storm events. This flooding has rendered the existing underground storage tanks inaccessible, and, in certain instances, has contaminated the diesel fuel stored in these tanks with flood waters, rendering the fuel unusable. These occurrences prevent the Borough's Department of Public Works from providing the support activities necessary to the Borough's storm recovery and result in a significant financial loss for the Borough. The Borough has had to find alternative sources of diesel fuel after past storms because its underground storage tanks were inaccessible or because the fuel within these tanks was contaminated. In times of high demand for fuel, this has proved both difficult and costly to the Borough.

The removal and replacement of existing underground storage tanks with above-ground tanks will reduce the vulnerability of the Department of Public Works yard to flood damage and will protect existing diesel fuel stores from flood water contamination. Ensuring adequate access to the Borough's diesel fuel stores is crucial to the Borough's post-storm recover activities. The Borough's Department of Public Works required adequate and readily accessible supplies of diesel fuel to operate the vehicles and equipment necessary to conduct emergency repairs to Borough infrastructure, conduct debris removal and cleanup of Borough roadways, and provide assistance to Borough emergency personnel. Ensuring adequate access to fuel supplies through this project will result in a significant benefit to public health and safety.

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. The Group's priorities include the following:

- Individuals and families who need assistance to maintain or obtain safe, sanitary, and secure housing, including:
 - Those who are not served, or who are underserved, by other existing aid programs, including those who are ineligible for FEMA.
 - Those who are experiencing economic hardship in pursuing a plan for recovery.
 - Those who are isolated or have difficulty accessing services.
 - Those who have begun the recovery process but have encountered a setback and need assistance with their continued recovery.
 - Those who need assistance in order to prevent deterioration in their continued recovery.
- Landlords of owner-occupied residential rental property of four units or less when such assistance will provide safe, sanitary, and secure housing that will be affordable and permanent for the owner-occupant and his or her residential tenants.
- Landlords of owner-occupied residential rental property of three units or less when such assistance will provide safe, sanitary, and secure housing that will be affordable and permanent for 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 31, 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 Rumson Borough, but aid from this group remains available for Rumson's residents.

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

The recovery efforts previously mentioned all serve as rebuilding approaches the Borough 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 emergency generators of pump stations and 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 Hurricane Sandy and to Reduce Vulnerabilities to Future Storms

Rumson has discussed several capital and programmatic improvements in order to storm harden the Borough's infrastructure and to improve the response during a catastrophic event. These actions have been categorized into the immediate/short-term range (within the next 12 months), mid-term (within the next 24 months), and long-term range (within the next 36 months). However, the various actions presented could change between short-, mid-, and long-term as opportunities arise and funding becomes available. For example, the planning documents identified as long-term priorities could be completed within 12 to 24 months if funding becomes available.

Immediate/Short-Term Range

The Borough has several immediate needs. In particular, Rumson would like to install a town-wide Supervisory Control and Data Acquisition (SCADA) system throughout the Borough in conjunction with its owned and operated facilities (including at pump stations, Borough Hall, the Police Department, fire houses, etc.) to communicate critical alarms to a centralized location or operational personnel. Use of a SCADA system can provide the Borough with accurate information on water and wastewater collection, pump control, pump station performance, as well as provide alarm notifications of system failure, emergency levels, and any other events as they occur. This will help protect the environmental quality of the Borough by preventing sewer spills into local waterways. The SCADA also will monitor fire, security, power failures, and generator operations for the Borough.

The Borough also needs to automate and update its system for processing zoning and construction permits. In 2013, Rumson processed double the amount of permits seen in the years preceding Hurricane Sandy. An upgraded permit program in which inspectors receive and manage permits on laptops and electronic tablets would significantly increase the Borough's efficiency in this task and in recovering from future storm events.

Lastly at the short-term range, Rumson plans to make updates to its Hazards Mitigation Plan and Emergency Operations Procedure Manual to incorporate updates and revisions based on what was learned from Sandy and related post-storm response efforts.

Mid-Term Range

Mid-term, Rumson would like to develop a GIS database and user interface to catalog and inventory all infrastructure owned by the Borough, including roadways, its stormwater collection system, and its sanitary sewer collection system. This effort would include up-to-date GPS mapping of the utility infrastructure for both systems, inventory and classification of the road network to build a borough-wide capital improvement plan, and digitizing the tax maps.

The aforementioned GIS database and user interface would also be developed to include essential residential and commercial property information. This could include, but not be limited to, zoning permit application data, building permit application data, number of occupants, age of occupants, dog and cat license information, and fire arm permit information. Linking the GIS into the automated zoning and construction permit system will bring real time data to the officials and inspectors so they can work with the data in the field.

In addition, the Borough seeks to compile low-elevation aerials to produce high-quality aerial mapping with 6" contour levels within identified special flood hazard areas. This mapping would allow the Borough the ability to complement the FEMA flood maps with the best available topographic information and to better delineate the FEMA flood elevations for buildings.

The combination of the GIS database/user interface with the compilation of low-elevation aerials/mapping will improve community resiliency by providing a geographic foundation to highlight at-risk areas that need to be addressed. The identification of these areas will complement Rumson's current participation in the revision of the Monmouth County Multi-Jurisdictional Natural Hazard Mitigation Plan. It can also provide the basis for updating the Borough's Emergency Operation Procedures Manual and for developing a Capital Improvement Plan for the Borough.

The Borough also would like to enter FEMA's Community Rating System (CRS) program, if grant monies are available. The 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. As a result of earning CRS points, flood insurance premium rates are discounted to reflect the reduced flood risk resulting from the community actions meeting the three goals of the CRS:

- Reduce flood damage to insurable property,
- Strengthen and support the insurance aspects of the NFIP, and
- Encourage a comprehensive approach to floodplain management.

Long-Term Range

At the long-term range, Rumson should make updates to its Master Plan Elements, including the following:

- Adding a Floodplain Management Plan to their current Master Plan. The Floodplain Management Plan will also evaluate the need and potential options for wetland restoration and maintenance and/or other engineering control measures to mitigate potential storm surge in those areas of the Borough that may be vulnerable.
- Amending the goals and objectives of the comprehensive Master Plan and the key elements of the Master Plan to address post-Sandy strategies and policies including but not limited to hazard mitigation and community resiliency. This effort will include the preparation of up-to-date mapping of current land uses, new FEMA floodplain and wetland mapping, critical community facilities, and important natural resources areas.
- Rumson's Master Plan consists of numerous documents and elements adopted by the Planning Board over the past four decades. It has been recommended that the documents should be available in one user-friendly format for use, reference, and public viewing. In the 2012 Master Plan Reexamination Report, the Planning Board recommended that the Borough compile the 1988 Master Plan and all subsequent master plan element amendments and reexaminations into one reference document easily made available by Borough staff to the general public.

As part of these planning efforts, the Borough also will evaluate the relevancy of green infrastructure techniques and engineering controls that could further enhance resiliency within the Borough.

Rumson has also discussed installing an emergency standby generator at the Oceanic Hook and Ladder fire house.

The Borough also seeks to replace under-sized drainage piping located at both Club Way and at Holly Tree Lane and Evergreen Drive. The inadequate sizes of these pipes create localized flooding upstream of the pipe inlet, occurring during heavy rain events (not during tidal flooding).

In addition, Rumson has planned to clean and remove silt along the minor waterway parallel to Brookside Drive, just north of Rumson Road. During heavy rains, the stream backs up onto residential properties and occasionally floods Rumson Road.

Rumson would also like to develop Bingham Hall, an existing Borough-owned meeting and community building, as a comfort station during emergencies. This would include the installation of an emergency standby generator, installation of a high-speed wireless network, acquisition of comfort supplies (emergency cots, food and water supplies), installation of electronic device charging stations, preparation of computer terminals, and installation of a television with cable feed for news updates.

Lastly, Rumson would like to install waterfront bulkheading at the Borough Boat Launch facility. Over the years, upland area has been lost due to storm surges and erosion. The installation of bulkheading would reclaim that property and reduce impacts associated with small storm surges and nuisance tidal flooding.

Summary of Actions and Priorities

The recommended actions for the Borough of Rumson serve as a comprehensive approach to both recovering from Hurricane Sandy and reducing vulnerabilities to future storms.

Immediate/Short-term needs include:

- Installing a town-wide SCADA system
- Automating and upgrading the zoning and construction permit program

- Updating the Borough’s hazards mitigation plan
- Revising and updating Rumson’s Emergency Operations Procedure Manual

Mid-term needs include:

- Developing a GIS database/inventory of Borough-owned infrastructure
- Compiling low-elevation aerial mapping of identified special flood hazard areas
- Entering FEMA’s CRS program

Long-term needs include:

- Preparing a more comprehensive Borough Master Plan, and updating its goals and objectives to address post-Sandy strategies
- Adding a flood plain management plan to the Master Plan
- Installing an emergency standby generator at Oceanic Hook and Ladder fire house
- Replacing under-sized drainage piping at Club Way, and at Holy Tree Lane and Evergreen Drive
- Removing of silt along minor waterway parallel to Brookside Drive
- Developing Bingham Hall as a comfort station during emergencies
- Installing waterfront bulkheading at the Rumson Boat Launch facility

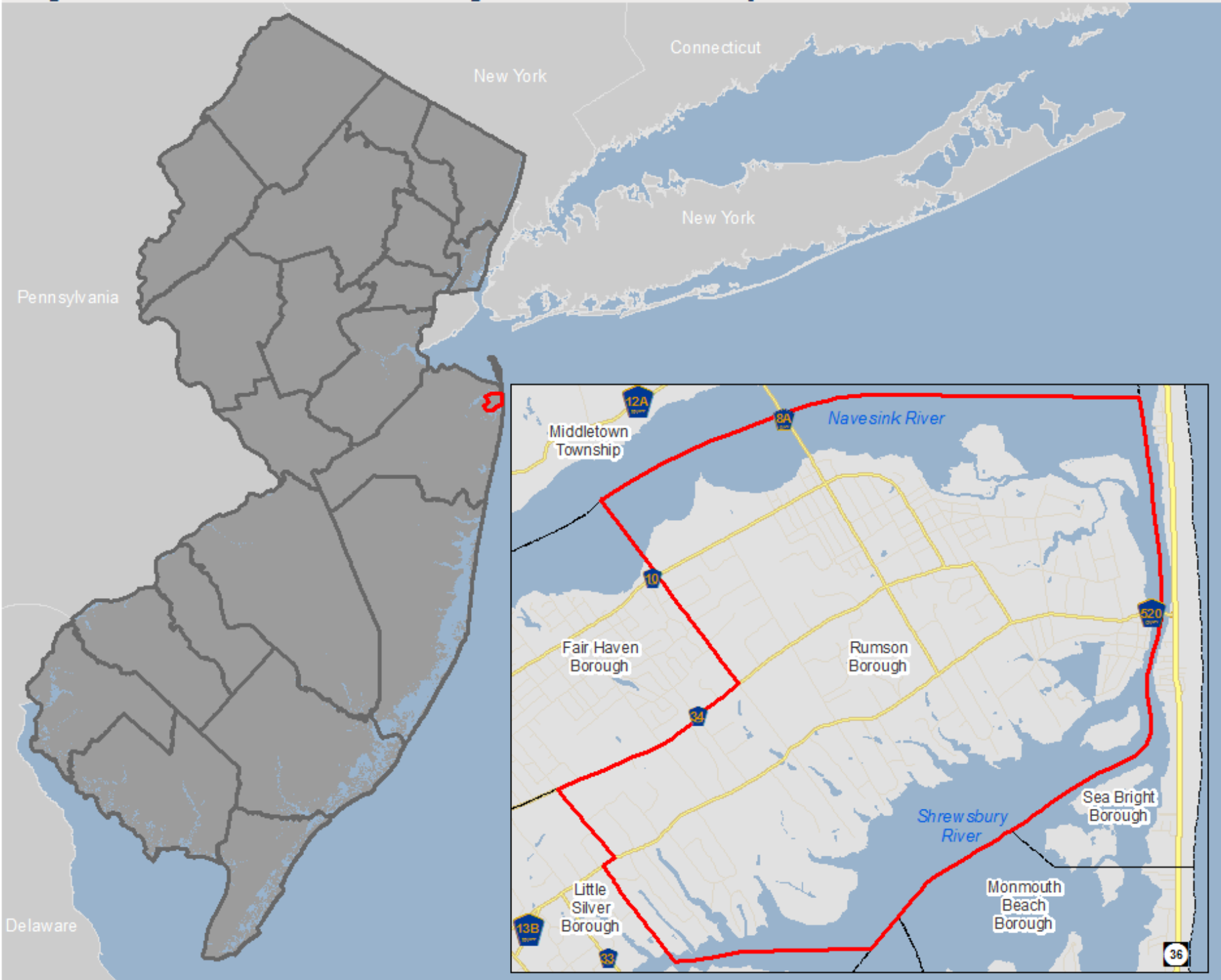
Based on the foregoing priorities, the Borough will be seeking additional funding from the NJ Department of Community Affairs as part of the Post Sandy Planning Assistance Grant Program (PSPAGP) for the following activities eligible for funding under the program:

- Updating the Borough’s Hazard Mitigation Plan and preparing a Community Resiliency Plan for the Borough;
- Revising and updating the Borough’s Emergency Operations Procedures Manual;
- Automating and updating its system for processing zoning and construction permits;

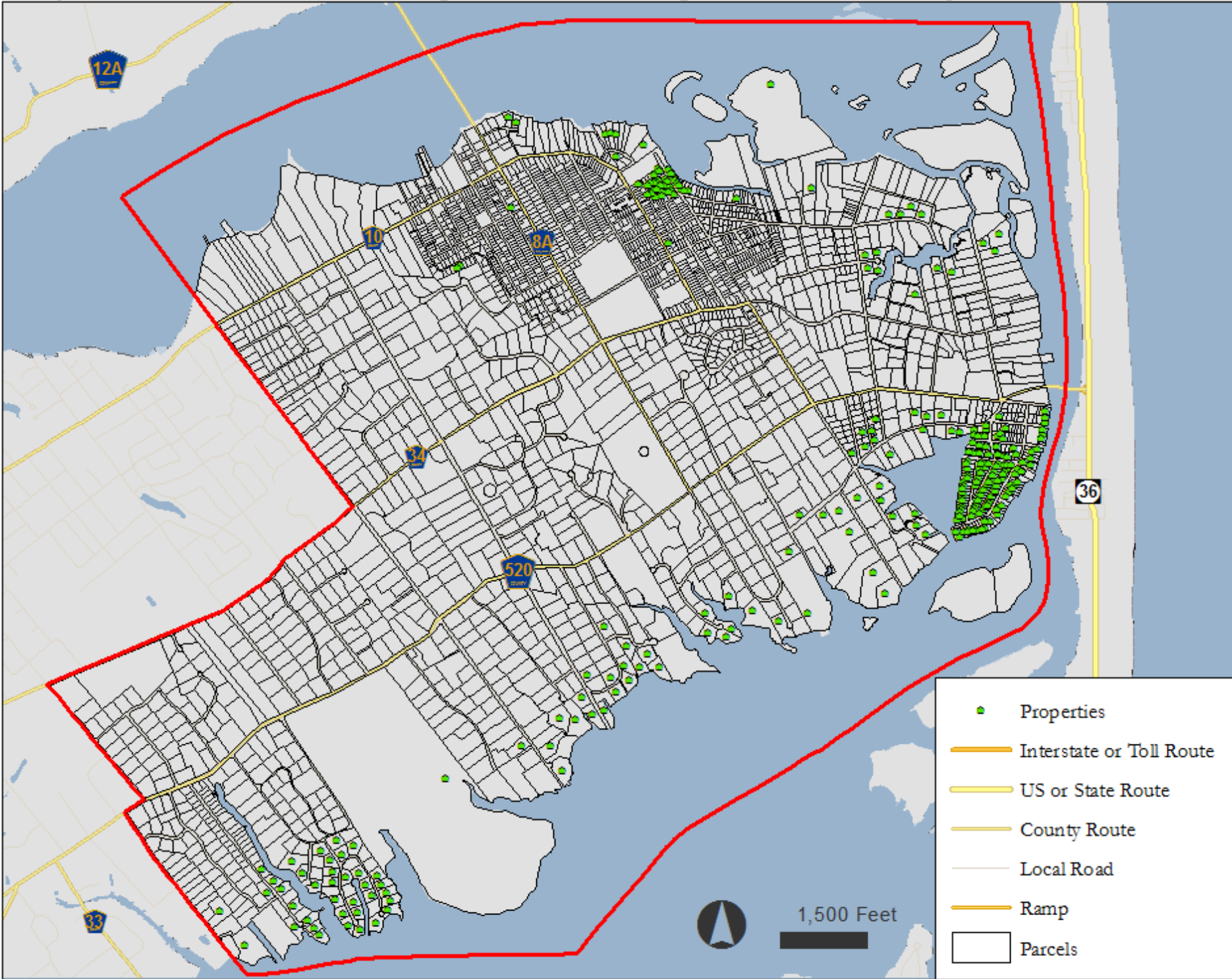
- Creating a GIS database and low elevation aerial mapping to support future planning efforts;
- Preparing a Capital Improvement Plan identifying needed capital improvements to improve local resiliency as described above;
- Create and adopt a Floodplain Management Plan as an element of the Master Plan; and
- Amending Goals and Objectives of the MP, as they relate to resiliency.

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.

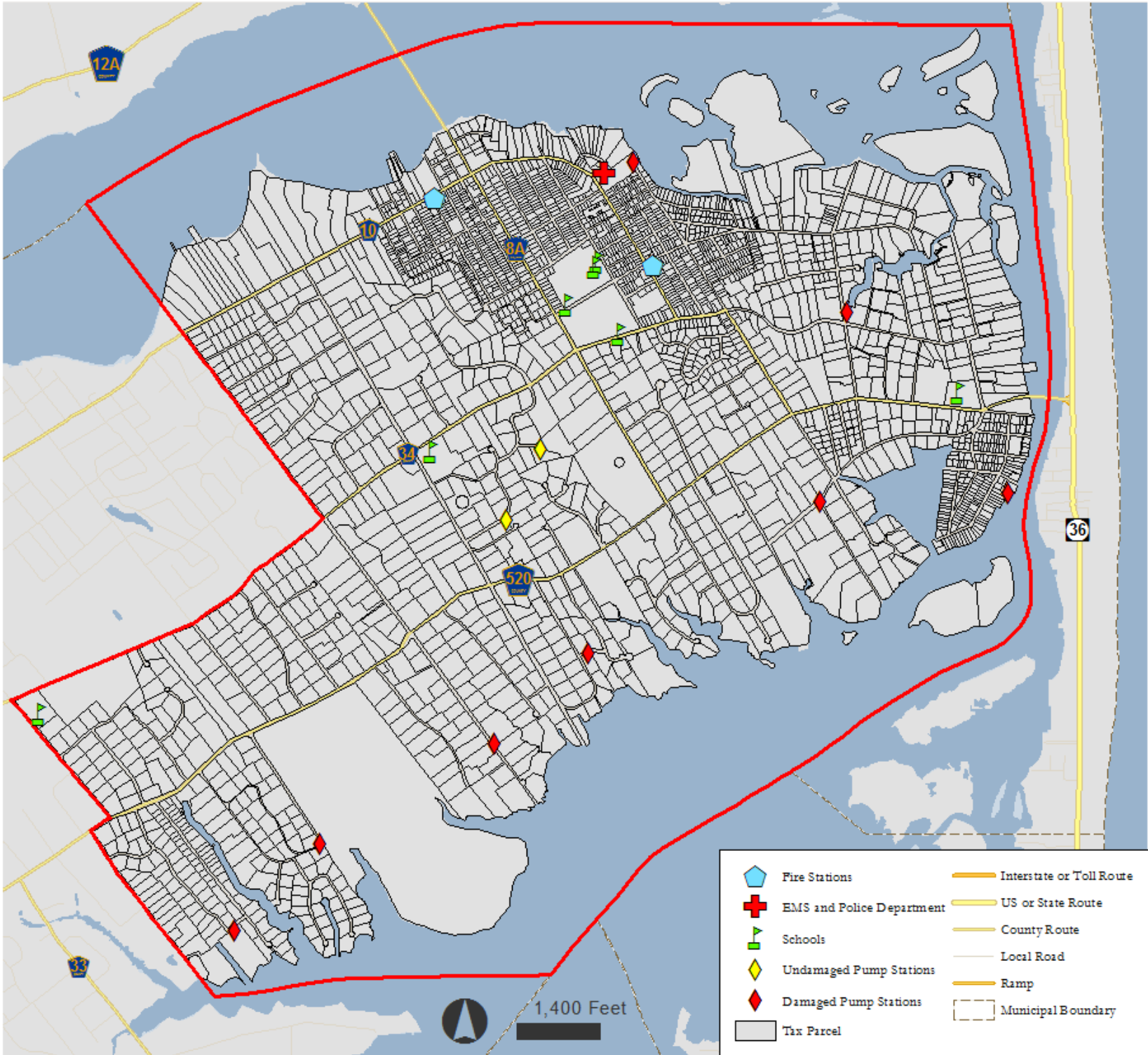
Map 1: Rumson Borough Regional Location



Map 2: Properties with Substantial Damage in Rumson Borough



Map 3: Municipal Facilities in Rumson Borough



Map 4: Coastal Floodplain Boundaries Preliminary Work Map

