

The Belford Neighborhood Revitalization Plan



Rutgers, The State University of New Jersey
Edward J. Bloustein School of Planning and Public Policy
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Table of Contents

Executive Summary

.....4

Neighborhood Context

.....8

Relation to Other Plans

.....38

Research Process

.....45

Goals & Objectives

.....53

Recommendations

.....55

Implementation Strategy

.....83

Conclusion

.....92

Sources

.....93


Appendix

.....96

The Belford Neighborhood Revitalization Plan

Mission Statement

This plan, the Belford Neighborhood Revitalization Plan, was prepared as the final outcome of a graduate student studio class at The Edward J. Bloustein School of Planning and Public Policy at Rutgers, the State University of New Jersey. The studio met from September through December of 2012 and was tasked by Middletown Township with developing a document that would refine, build upon, and put into action the Port of Belford Economic Feasibility Study and Conceptual Development Plan completed in 2009 by the Louis Berger Group for the Township of Middletown. During the formation of the Belford Neighborhood Revitalization plan, Hurricane Sandy struck New Jersey. This event influenced both the objectives and the strategies contained within the plan.



The Belford Neighborhood Revitalization Plan

Executive Summary

Belford is a neighborhood and Census Designated Place within Middletown Township, Monmouth County. The neighborhood is located between Port Monmouth and Leonardo, and is bound by Route 36 on the south and Raritan Bay in the north. As of 2010, it had a population of 1,768 and most of the neighborhood is made up of small single-family detached homes. Belford can be described as a working class residential neighborhood.

Strengths of the area are numerous and include proximity to recreational opportunities like the Bayshore Waterfront County Park, the Henry Hudson Trail, and scenic views which could attract visitors to the area. A key area of geographic focus for this plan will be the Port of Belford, a unique area with an active commercial fishing industry.

The Port of Belford is currently home to both a small commercial fishing industry and a ferry with weekday service to New York City. The area has grit as a working waterfront but also beauty with wetlands, the harbor, and the New York City skyline in the distance. The Belford fishing industry has a long history in the area. It is currently one of six operating commercial fishing ports in New Jersey. The Belford Seafood Cooperative operated a restaurant and retail fish market before they were flooded by Hurricane Sandy in October 2012, and independent fishermen operate another restaurant nearby. On the western side of the harbor, there is a historic building currently used for net storage and a 9-acre vacant site.

Local officials have expressed an interest in preserving this part of the local history and culture, but a number of challenges exist. Primarily, the fishing industry is facing increasing costs, regulations they find burdensome, and a dearth of young commercial fishermen to sustain the industry in the future. Though the industry is surviving, these obstacles have forced the fishermen to seek economic diversification to ensure their continued survival. It is vital that the Belford fishing industry be placed on a path to economic sustainability.

In October 2012 Hurricane Sandy hit the Belford area. Much of the harbor infrastructure which was already in poor condition was damaged, the need for dredging increased, much of the fishermen’s equipment was damaged, and homes were flooded. In the port area, the net storage building remained intact, as did critical bulkheads and the ferry terminal; but a restaurant, fish processing area, and fresh fish market operated by the Belford Seafood Cooperative were flooded. Ferry service was restored about one week after the hurricane, but the storm had a major impact on commercial fishing at Belford. The fishing industry at the port experienced over \$1 million in losses, including critical equipment such as freezers and ice machines. If the increased need for dredging is added in, this sum rises. The impact of Hurricane Sandy is a major setback for an already challenged industry and the results of the storm have therefore brought further focus onto the importance of economic sustainability.

Executive Summary

Based on the existing conditions of the neighborhood and the needs of the community, six core objectives were identified:

- Enhance critical infrastructure through dredging and bulkhead repairs
- Preserve and strengthen the commercial fishing industry
- Develop the local economy by creating a place more attractive to visitors and encouraging new businesses
- Integrate the natural environment into the neighborhood as a tool for economic development, flood control, and wildlife preservation
- Improve utilization of the ferry terminal parking lot
- Stabilize and improve the neighborhood by assisting residents with disaster recovery and home improvement.

This plan recommends a number of strategies to meet these objectives. Critical amongst them is the need to complete infrastructure repairs. Dredging for instance is crucial to maintain or even increase capacity at the port and make sure commercial activities can continue. Bulkhead repairs would reduce the maintenance costs to commercial fishing boat owners and if accompanied with other small improvements, could drastically improve the aesthetic appearance of the port.

It is also important to address both the core of the industry and help it diversify into other emerging opportunities. The fishermen can be assisted with repairing or replacing outdated, inefficient, or storm-damaged equipment, but also with branching into new products and services.

A number of improvements can also be made to make Belford more attractive and appealing as a destination. These include:

- Improving pedestrian and bicycle circulation through a pedestrian bridge and other improvements will help visitors navigate around the area.
- A water taxi service and a boardwalk with interpretive signage could also generate interest.
- The net house is an important part of this destination building segment.
- Recommendations include adaptively reusing it as a restaurant, boutique, gallery, bed and breakfast, or banquet hall.
- Other “pop-up” retail opportunities are also recommended to continue to diversify Belford's economy

Executive Summary

The natural environment must also be integrated into a revitalized vision for Belford. Connecting the harbor area with existing outdoor recreational amenities, particularly the Henry Hudson Trail, and promoting recreational activities is one way for visitors and local residents alike to enjoy the natural assets of the neighborhood. All physical development in the neighborhood must be conscious of environmental protection and sustainability.

The large parking lot on the east side of the harbor is heavily used on weekdays by ferry commuters. However, it is underutilized during off-peak times. Community gatherings such as festivals, fairs, and markets could be held in this lot on weekends. Solar energy arrays could be constructed on top of the parking spaces to reduce energy costs over the long-run in Belford.

Designating Belford as an area in need of rehabilitation under the state redevelopment statute will enable homeowners in the neighborhood to receive tax credits on capital improvements to their homes. Because the housing stock in the neighborhood is older and in need of repairs, especially after Hurricane Sandy, the neighborhood should qualify for this program.

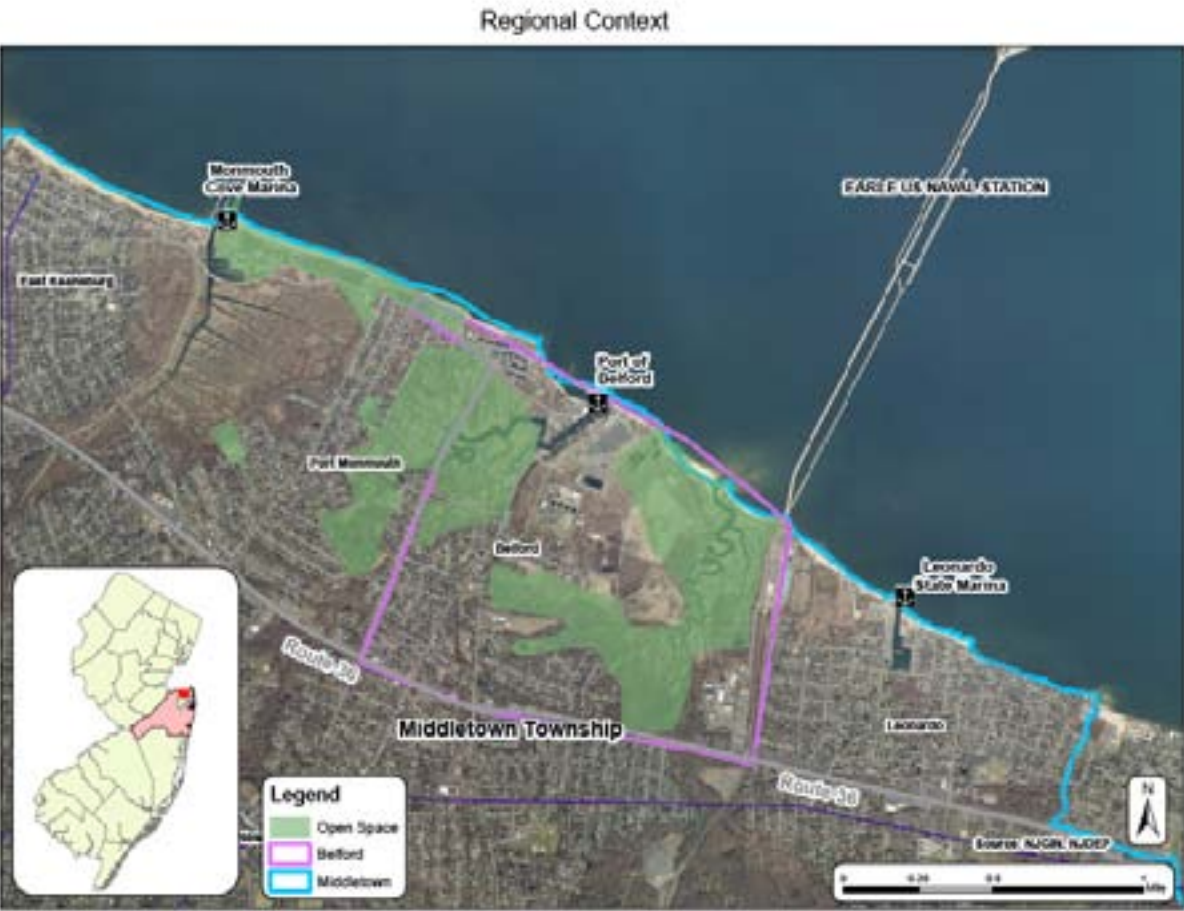
These improvements can be implemented through a number of funding sources. State and federal programs can also contribute to the implementation of the plan, several of which are related to disaster relief. Private foundations or developers can be a useful source of funding. Finally, crowdsourcing is a recent and innovative way to bring a revitalization project to the attention of the public and solicit private donations. By tapping into these funding programs to implement the recommendations outlined within this report, it will be possible to build a future for Belford that will be resilient against future natural disasters and environmentally and economically sustainable.



Neighborhood Context

I. Overview

The community of Belford is a neighborhood located in Middletown Township in northern Monmouth County, New Jersey. At the northern edge of Middletown is the Raritan Bay which provides maritime access to the Atlantic Ocean. To the west of Belford is the Port Monmouth neighborhood and to the east is Leonardo, both areas of Middletown. Belford is a predominantly residential community composed mostly of small-lot single family homes with a few pockets of commercial use. The area includes a significant amount of open space, including the Bayshore Waterfront County Park, Ware Creek, and a portion of the Henry Hudson Trail.



Neighborhood Context

At the water's edge lies the Port of Belford, a historic hub of local fishing activity. This area is isolated to some degree from the rest of Belford due to the geographic and environmental constraints of Compton and Ware Creeks. It offers excellent views across the Raritan Bay, scenic natural tidewater areas, commercial fishing activity, and a commuter ferry service to New York City. Fishermen utilize a small creek flowing into the harbor, Compton Creek to access the port and dock their boats. Across the creek, a large lot of surface parking services the ferry.

Although some new development has come to Belford in more recent years with the construction of a new residential community called The Dunes at Shoal Harbor, Belford itself has generally retained its blue collar character as a functional and practical place for commercial fishing. It has also maintained much of its natural beauty. Belford is still surrounded by high reaching cattails which grow out of tidal water marshlands. Overall, Belford has a historical maritime character that should be preserved and celebrated.



Neighborhood Context

II. History

Originally known as Shoal Harbor, the Belford neighborhood has historically been known for its significant fishing activity. In fact, fishing in the Belford area dates back to the Lenni Lenape Indians and early Dutch settlers in the 1600s. Later, in the mid-1800s the construction of a road as well as a nearby railroad allowed farmers and fishermen to sell their products and catches to New York City and other areas. The growth in the local economy and the construction of a rail station allowed Belford to officially establish its own identity in 1891, separating it from Port Monmouth. Sitting on the 9-acre property to the west of the Port , now an abandoned lot, was the J. Howard Smith Fish Factory, later owned by Seacoast Products and Hanson Industries. The fish factory processed Menhaden (bunker) which added to the local economic activity in the late 1800s and operated up until 1982. The area was so bustling that an examination of aerial photographs reveals a former airstrip runway nearby to the port that fishermen utilized to launch airplanes to aid in their search of plentiful places to fish. Pilots would fly out into the harbor and then radio back the locations of schools of fish.



Neighborhood Context

III. Demographics & Housing

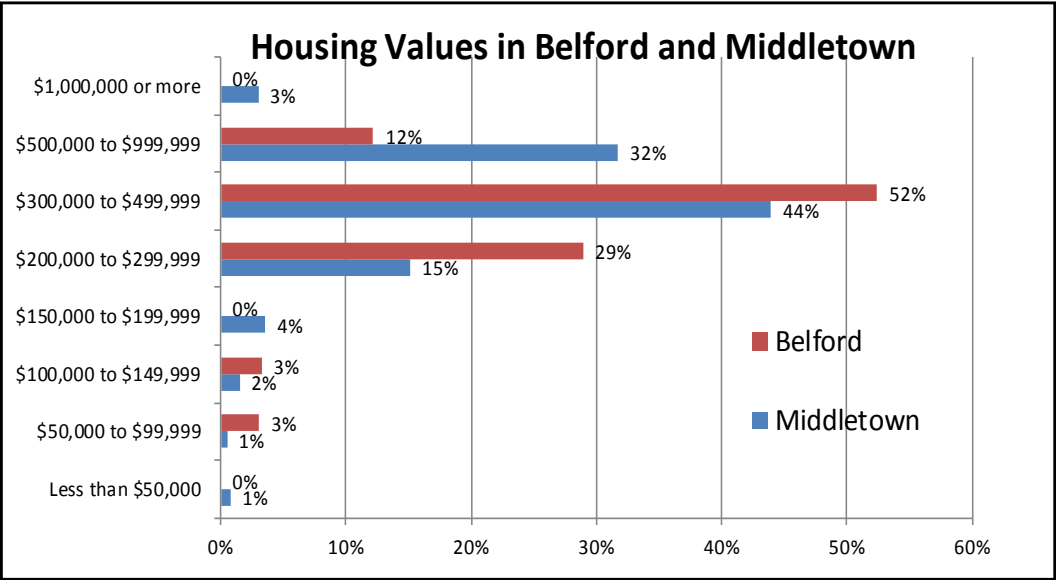
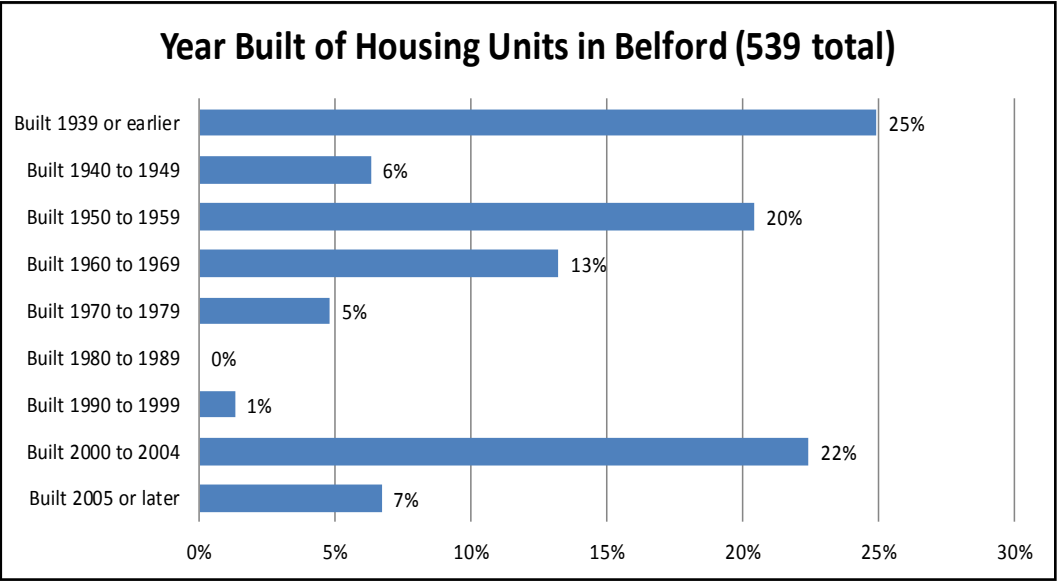
Belford is a Census Designated Place of approximately 1.27 square miles within Middletown Township, New Jersey. The population of Belford grew from 1,340 in the year 2000 to 1,768 in 2010. In comparison, the population of Middletown grew from 66,327 in the year 2000 to 66,522 in 2010. Belford is a small but unique part of the greater Township.

The residents of Belford are on average younger than those in Middletown with a median age of 38.6 compared to the residents of Middletown with a median age of 42.5. People in the age range of 20 to 34 make up 28.1% of Belford’s population while that same age range only makes up 13.5% of Middletown’s population. Conversely, the age range of 35 to 44 makes up only 11.3% of Belford’s population, while that same age range makes up 13.9% of Middletown. Those less than 5 years of age make up 9.9% of Belford’s population while those under 5 years in Middletown make up 5.9%. Overall, this data describes Belford with a younger median age, and more small children as a place with young families.

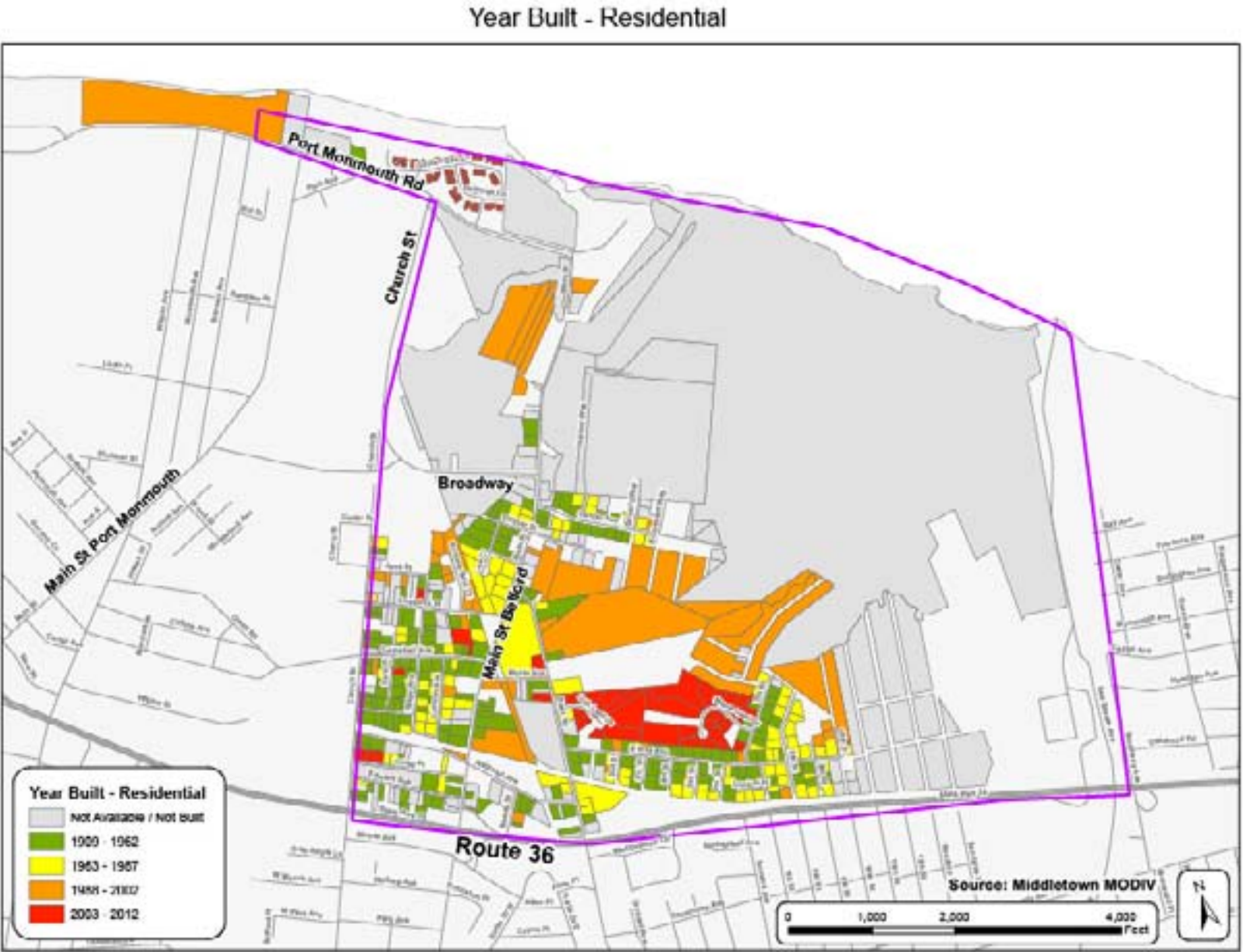
The majority of the housing stock in Belford was built during three distinct time periods: 24.9% was built before 1939, 20.40% was built between 1950 and 1959, and 22.40% was built between 2000 and 2004. Over 50% of the housing stock was built before 1959. The homes are primarily single family detached housing with 76.1% or 411 houses falling into this category. 12.8% or 69 units are single family attached residential.

The recent residential development in Belford has translated into an increase in median household value to a total of \$367,000 in 2010. However, when compared to the rest of Middletown with a median household value of \$423,000, home values in Belford are clearly on average lower. Overall, 81.3% of the houses in Belford are valued between \$200,000 and \$499,999 whereas in Middletown 76.6% of the housing stock is valued between \$300,000 and \$999,999. Finally, there are 624 houses valuing \$1 Million or more in Middletown, none of which are in Belford.

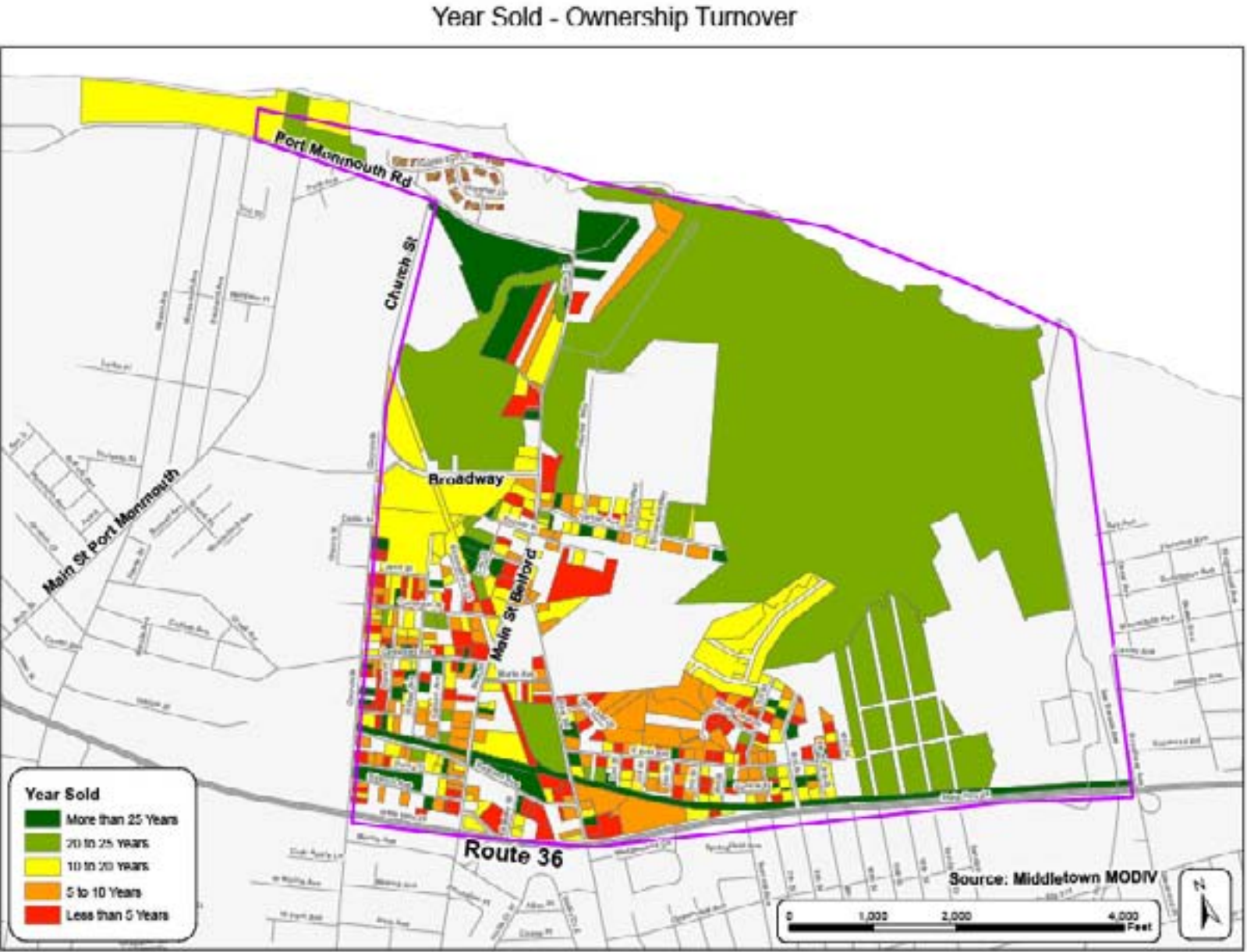
Neighborhood Context



Neighborhood Context



Neighborhood Context



Neighborhood Context

IV. Existing Development

The Belford Seafood Cooperative

Existing development in the Belford neighborhood, beginning in the area nearest the port includes a large low building used for processing fish for sale, an attached small restaurant, and a large building used to house nets owned by the Belford Seafood Cooperative. The Belford Seafood Cooperative was founded in 1953 and primarily exports its catches to New York City’s Fulton Fish Market. The fleet is composed of otter trawlers, gill netters, lobster boats, and purse seiners.

The Co-op has strategically adjusted its fishing to be in tune with state and federal regulations as well as the annual migrations of the silver and red hake, fluke, flounder, sea bass and porgies that make up a large part of the Mid-Atlantic fishery harvest.

Across a parking lot sits a two-story (picture to the right), unkempt but reportedly structurally-sound building also on the co-op property. Appropriately titled the Net House, the century-old building once served as both a fertilizer and a fish oil processing plant, but now serves as an informal storage facility for the cooperative’s netting. The solid light sea green cement structure sits in a prime location a few paces away from the crux of the creek and the bay.



Neighborhood Context

Independent Fishermen

The second area of existing development moving away from the Port of Belford itself is an area primarily populated by a variety of buildings owned by independent fishermen. They are located where the port stretches further inland, and several people and businesses here such as other fishermen, bait shops, and wholesalers own private parcels. Shoal Harbor Lobster Company hosts wholesale and retail lobster facilities and the independent fishermen in the port market through this company which also maintains a fresh fish market and restaurant. Overall, as many as 40 vessels, both from the co-op and the independent fishermen, fish from the Port of Belford, with the majority rarely going on trips longer than a day at sea.

The Ferry: New York Waterway

The New York Waterway Ferry which sits on the opposite side of Compton Creek from the cooperative's property runs a ferry service to New York City from the Port of Belford. Currently the ferry terminal and parking facility on the east side of the Port of Belford occupies about 14 acres of the 234 acres owned by Monmouth County. The ferry has found a niche providing approximately 2,200 daily trips from Belford to New York City for \$21.50 each way. Monthly passes are available for \$645. Since its inception in 2002, the popularity of the ferry grew tremendously requiring an expansion in the parking capacity in 2005. Its 1,050 parking spaces now reach capacity and patrons fill spots that spill out onto streets. For those who do not want to walk the length of the substantial lot to catch their ferries, valet parking options exist. In 2011, the popularity of the service attracted the attention of the New Jersey Department of Transportation which awarded \$2.54 million for "replacement of the bulkhead retaining wall at the Bayshore Ferry Terminal in Middletown."



The Belford Neighborhood Revitalization Plan

Neighborhood Context

The Dunes at Shoal Harbor

Along the waterfront to the east of a 9-acre lot which formerly held the Menhaden fish factory sits a recent residential development called the Dunes at Shoal Harbor which consists of 123 units of luxury condominium townhomes. Units range in size from 1,500 square feet to 2,500 square feet and the site offers public beach access as well as a homeowners' gym, pool, and clubhouse. Limited amounts of public parking spaces exist for beach users, which has led to conflicts between townhouse residents and recreational fisherman.



The Belford Neighborhood Revitalization Plan

Neighborhood Context

Vacant Parcel

A vacant nine acre lot owned by Seaport Associates currently acts as a buffer, separating the commercial fishing port from the Dunes residential community. This land is currently vacant and has a crumbling bulkhead and cracked paved area where people from the surrounding area fish recreationally. A small entrance and dirt road are located on the vacant site. Research uncovered that a deed restriction limits residential development on the Seaport Associates' land because of an agreement between the Seafood Cooperative upon the sale of the land for Shoal Harbor. Seaport Associates entertained the idea of the nine acre serving as commercial office space or other marine related uses; however currently has no interest in developing the property. They may be open to donating the property.



Housing

In the larger area around the Port of Belford, single family small-lot homes fill the neighborhood of Belford. These homes were built around wetlands and a majority of the area was inundated during Hurricane Sandy. The majority of homes are over 50 years old.



Neighborhood Context

Surrounding Development

Within Belford, Monmouth County maintains the Bayshore Waterfront County Park which encompasses Compton Creek. The Township recently purchased a parcel along this creek for a recreational boat launch. It not uncommon to see recreational fishing and kayaking on this Creek, a clear recreational asset for the area.

Another recreational asset in the vicinity is the Henry Hudson Trail. The trail offers a link for pedestrians, bicyclists, and equestrians between Highlands and Freehold. Portions of the southern segment of the trail remain under construction, and parts of the northern segment are closed due to damage from Hurricane Sandy. The trail passes closest to Belford at its intersection with Main Street just off Route 36. There are currently no parking facilities for the trail at Belford.

On the outskirts of the area lies the sewage treatment facility, the Belford Sewage Treatment Plant. It is operated by the Township of Middletown Sewerage Authority and serves the study area and other nearby locations. Effluent wastewater is discharged to the local surface water.

A former airfield is also located in the neighborhood. Previously used as a runway for planes which would search the harbor for large schools of fish before fishermen went out, the site is currently used for composting activities. Environmental constraints in the area are posed by landfills which exist both under the ferry terminal parking lot and southeast of the parking area.

Neighborhood Context

March 2012 Imagery



Neighborhood Context

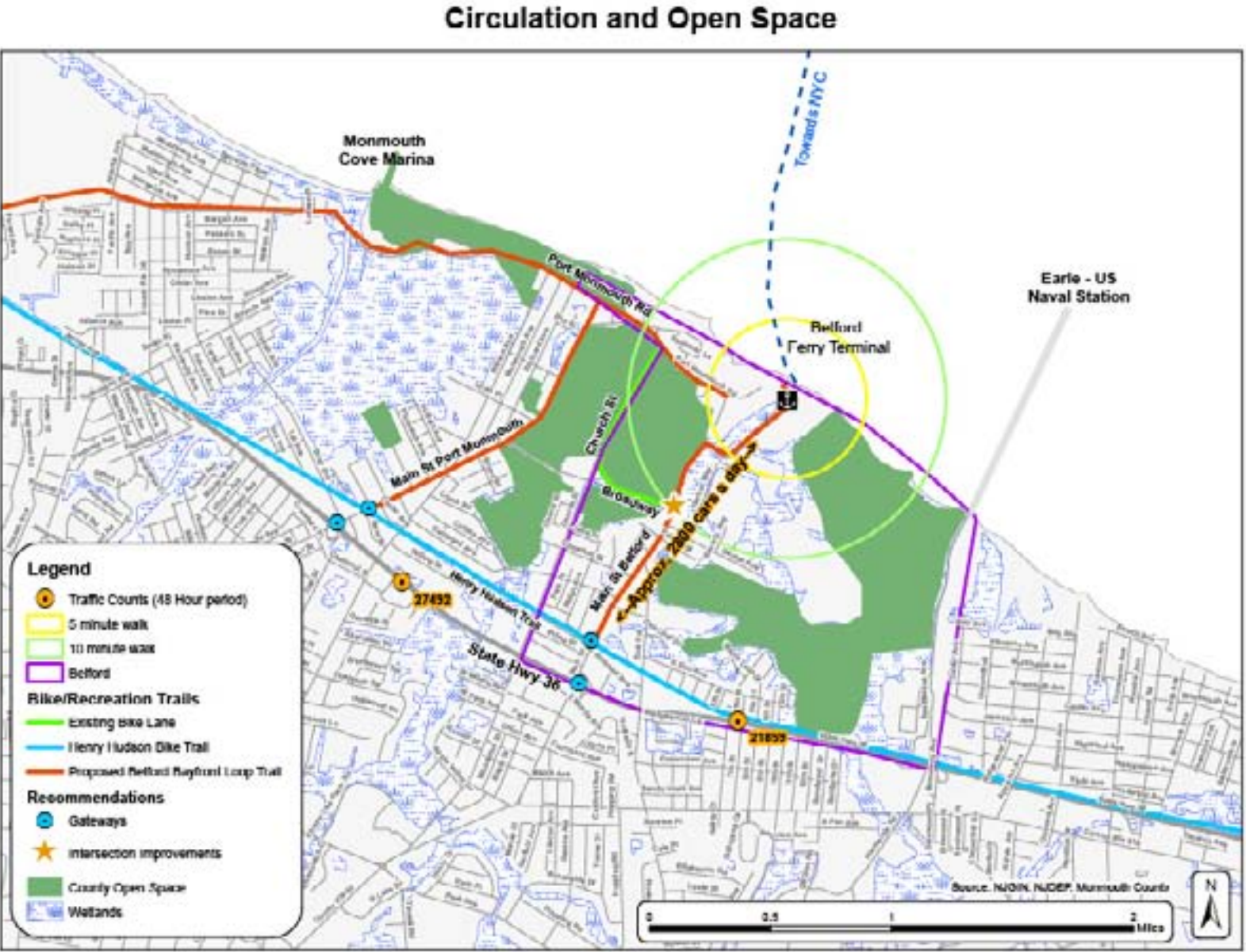
VI. Circulation

The Belford area is relatively isolated from the rest of Middletown, particularly the Port. Main Street provides primary access to the port area from the state highway, Route 36, and other parts of Middletown Township. Though the harbor area is approximately one mile from Route 36, the extremely residential nature of Belford means little traffic beyond residents and ferry users passes through the neighborhood. Traffic counts on Route 36 have yielded Annual Average Daily Traffic (AADT) in the range of 21,000 to 28,000. Based on data provided by the New Jersey Department of Transportation as well as direct observation, the local roads around the neighborhood carry minimal amounts of traffic most times. However, there is heavier volume along Main Street during peak hours due to ferry commuters. This does not reflect a problem of road capacity, but is instead a need for traffic calming to address high peak volumes and speeds associated with the ferry.

In the southeastern quadrant of the study area, there is also a network of unbuilt paper streets. These do not factor prominently into traffic patterns in the area. It is likely that these streets were laid out but not constructed due to environmental constraints.

In the past, Main Street spanned Compton Creek by a movable bridge but due to the high costs of bridge upkeep, the bridge was eventually removed. The southern segment was then redirected to the ferry terminal parking lot, and the northern segment of Main Street forms a dead end at the former bridge location. Without the bridge, one must now cross Compton Creek using a modern beam bridge on Church Street. However, using the new Church Street crossing, cars must travel over a mile to get from one side of the harbor to the other. The west side of the harbor is also served by Port Monmouth Road, which connects the study area to the neighborhood of Port Monmouth.

Neighborhood Context



Neighborhood Context

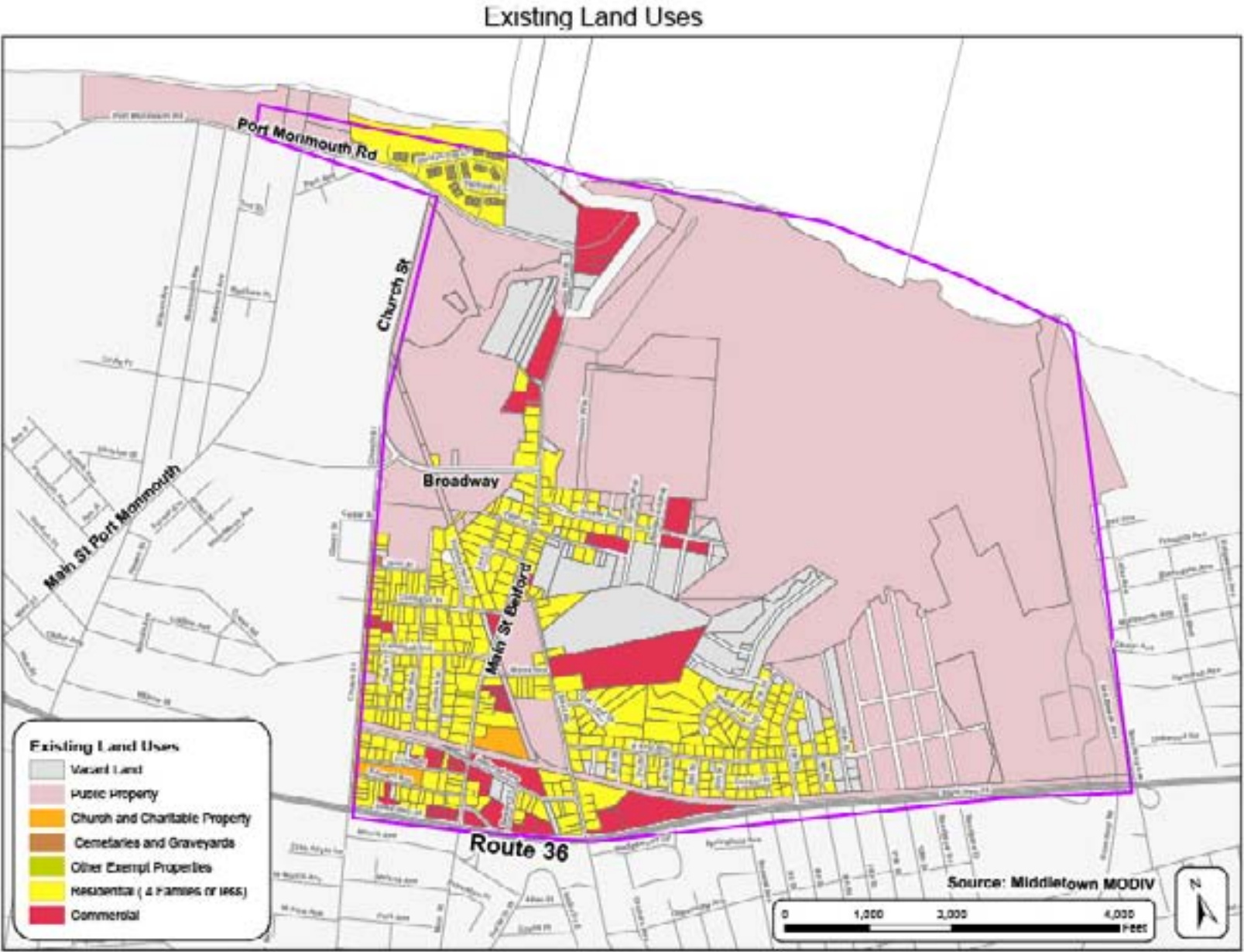
VII. Existing Land Use

The predominant land use pattern in the Belford neighborhood is public property. Approximately two thirds of the neighborhood, 523.7 acres, is public land. The majority of the public lands are open space and wetlands. A portion of the public land is utilized by the Monmouth County ferry terminal and the sewage treatment plant.

The second largest land use in the neighborhood is residential. Comprising of 138.5 acres (17.9%) residential uses are clustered in southwestern portion of the neighborhood. However, pockets of residential uses are found near the port area in the northwestern portion of the neighborhood.

Vacant land makes up approximately 66 acres of the Belford neighborhood. Most of the vacant land is clustered in the center of the neighborhood that borders the public land and is near the sewage authority site. The other vacant lands are near the Raritan / Sandy Hook Bay and the Port of Belford. Approximately five percent (~39 acres) of land in the Belford neighborhood is Commercial. The commercial uses are scattered throughout the neighborhood and typically buffer other land uses from each other. The majority of commercial land is clustered along Route 36 in the southwestern portion of the neighborhood. Finally there are the commercial port lands along Raritan / Sandy Hook Bay and Comptons Creek. The remainder of land uses in the Belford neighborhood (<1%) are tax exempt properties. The tax exempt uses include cemeteries, church lands and other tax exempt uses. These properties are located in the southwestern portion of the neighborhood between Main and Church Streets. Below is a table calculating the acreage and percentage of existing land uses and a map of existing land uses in the Belford neighborhood.

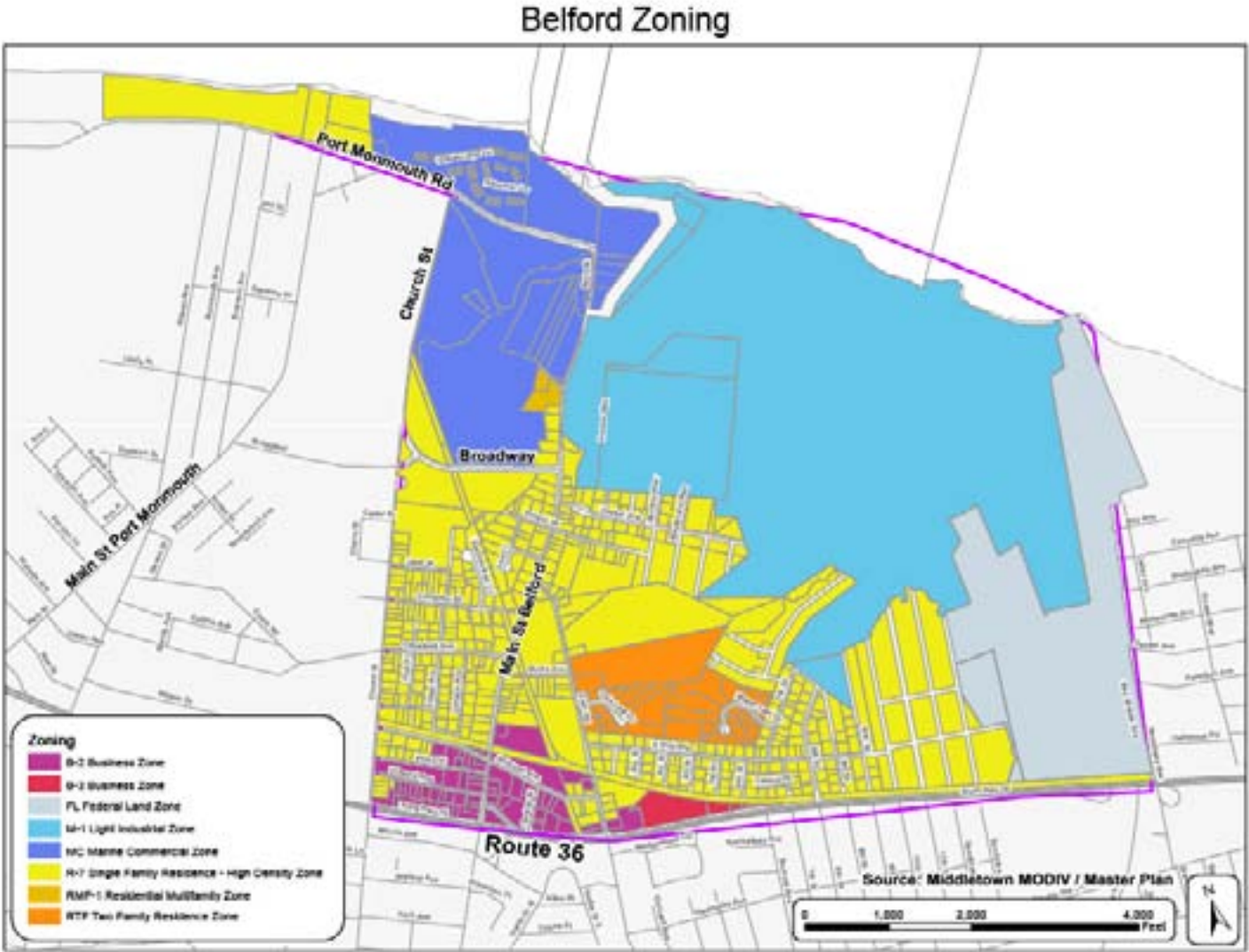
Neighborhood Context



Neighborhood Context

Zoning Analysis

The following section provides a written description of the permitted and conditional uses, minimum lot sizes, and density. The existing zoning map graphically identifies the zones.



Neighborhood Context

Residential Zones

The R-7 high density single family zone is the largest residential zone (241.8 acres) in the Belford neighborhood. Minimum lot sizes range from 7,500 square feet, for interior lots, to 9,000 square feet for corner lots. Permitted uses include single family homes, places of worship and schools. The zoning is generally consistent with the land use pattern, although there are pockets of non-conforming commercial land uses throughout the residential zone. These non-conforming uses are generally located on the fringes of the residential zone and act as buffers between more intense land uses.

The RTF two family residential zone is located in the central portion of the Belford neighborhood and comprises of approximately 29.3 acres of land. Permitted uses include two-family homes, and single family homes are a permitted use in accordance with the requirements of the R-7 zone. The minimum lot sizes are 12,000 square feet for interior lots and 14,250 square feet for corner lots. The zoning is generally consistent with the land use pattern.

The RMF-1 multifamily zone is a small zone (1.9 acres). The zoning permits multi-family housing at a maximum density of 24 units per acre. A 25% affordable housing set aside is required. A multi-family development has been approved, however it has not been constructed.

Commercial Zones

The MC marine commercial zone is 89.3 acres in size and is adjacent to the Raritan / Sandy Hook Bay and Comptons Creek. The required minimum lot size is 20,000 square feet. According to the Middletown Master Plan the intent of the Marine Commercial zone is to create a waterfront mixed-used district that allows for residential uses but is primarily for commercial uses.

Principal uses include: commercial fishing; residential uses; seafood processing facilities that do not produce secondary products such as fish oils, hotels, and motels. The zoning is generally consistent with the land use pattern.

Neighborhood Context

The B-2 business zone comprises 23.8 acres along NJ-36. Permitted uses include commercial retail establishments. The minimum lot size is 20,000 square feet. The zoning is generally consistent with the land use pattern.

The B-3 business zone comprises approximately 4.2 acres of land along NJ-36. Permitted uses include commercial retail establishments. The required minimum lot size is three acres. The zoning is generally consistent with the land use pattern.

Industrial

The M-1 light industrial zone is the largest (286.7 acres) zone in the Belford neighborhood. Permitted uses include the township public works facility, along with other light industrial uses. The Monmouth County ferry terminal is a conditional use. Additionally, the zone serves as a buffer for the military land in the FL zone to the east. The zoning is generally consistent with the land use pattern.

Other Uses

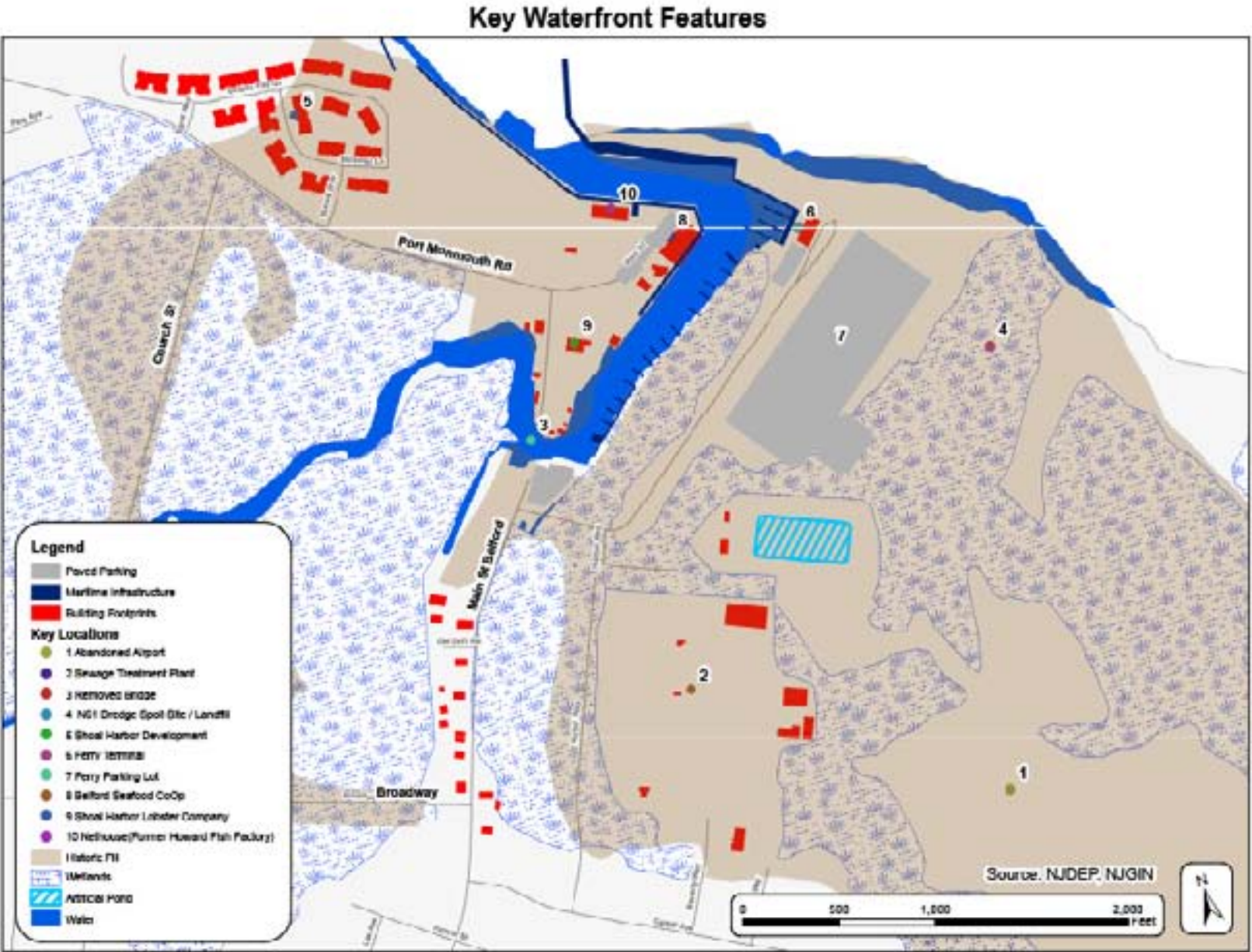
The FL Federal Land Zone is located in the eastern portion of the Belford neighborhood. This land use zone does not have a description of land use regulation standards. The land is for the explicit use of the Earle Naval; no public uses are permitted. The zoning is generally consistent with the land use pattern.

Neighborhood Context



The Belford Neighborhood Revitalization Plan

Neighborhood Context



The Belford Neighborhood Revitalization Plan

Neighborhood Context

VIII. Fishing Industry

Commercial fishing is a well-established sector in New Jersey’s economy. In 2009, New Jersey ranked 7th nationally with 37,887 jobs supported by the seafood industry. The state also ranked 5th in total sales generated and 9th in landings revenue, at around \$5.8 billion and \$149 million respectively. Sea scallop landings generated the most revenue by far in the state, followed by ocean quahog and surf clams. In 2011, the state landed 176 million pounds, worth \$212 million.

Belford is one of six major commercial fishing ports in New Jersey and some consider it to be the longest continuously operating fishing village on the East Coast. Belford was a fairly secluded village until the mid-1800s when a road and railroad were built that allowed fishermen to sell their product in New York and elsewhere. Intensive fishing and industrial activities at a menhaden processing plant, which operated from the late 1800s to 1982, helped ensure that Belford retained a strong fishing tradition over the years. In fact, Belford fisherman still fish for menhaden for use as bait.



Neighborhood Context

The commercial fishing industry is currently one of the largest employers in the Belford area. The Shoal Harbor Lobster Company and the Belford Seafood Co-Op are established seafood suppliers based in Belford. The Shoal Harbor Lobster Company specializes in Black Sea Bass, American Eel, Clams, Crabs, American Lobster, Lobster Tails, Eels, Live Skates and Tautogs and the Belford Seafood Co-Op specializes in Marine Fish, Blue Crab, American Lobster, and Whole Squid. Middletown Township recognizes the rich maritime history of the Port and strives to support it in order to maintain the tradition in the future.

To gather greater insight into the dynamics of the fishing industry at the Port of Belford, studio group members conducted personal interviews with Belford fishermen. The findings were illuminating.

The fishermen face significant threats primarily related to operational costs, regulations, and workforce needs. Fuel costs, for instance, were cited as a significant concern, especially for vessels with older and less efficient engines.

Federal, regional, and state regulations limiting the amount of fish that can be caught also impact the economic success of the fishermen. For example, an independent fisherman operating out of Belford explained that once a fish species is depleted elsewhere, the regulations do not allow fishing of that species in the New Jersey area.

Finally, the long-term sustainability of the industry is an important concern of the Belford fishermen. A representative of the Belford Seafood Co-Op stated that the biggest threat to the industry was the lack of young men who wanted to be fishermen, estimating the average age of a boat owner to be 55 to 65 years old.

Neighborhood Context

Another major threat to the industry that was not considered during our initial interviews was natural disasters, most notably hurricanes. Hurricane Sandy, which hit during the development of this plan, had a strong negative impact on the fishing industry in New Jersey. While the Belford fishermen’s boats did not suffer any significant damage, the Port’s facilities experienced over \$1 million in damage. Fishery waters also did not escape unscathed, as the storm stirred up the ocean and confused the more lucrative fish, prompting them to leave to calmer waters. Moreover, contamination from the storm has prompted the closure of oyster beds in the Raritan Bay-Sandy Hook area as wastewater treatment plants and pump stations discharged contaminated wastewater in the aftermath. In fact, and in order to help mitigate these negative impacts, the U.S. Department of Commerce declared a Federal Fishery Disaster that will allow for federal emergency funds to assist with fishery recovery.

In addition to natural forces, the regulation and management of fisheries which reflect real environmental and quality control concerns can also pose a challenge to the industry. Regulations for environmental and quality control comprise a rather complex framework which has great impacts on the commercial fishing industry. The Magnuson-Stevens Fishery Conservation and Management Act (MSFMCA), or the Sustainable Fisheries Act (SFA), is the principal law that governs fisheries in the United States. Under the SFA, the Mid-Atlantic Fisheries Management Council is responsible for conserving and managing fish stocks using fishery management plans for the waters off of New York, New Jersey, Delaware, Maryland, Virginia, and North Carolina. According to a representative of the Garden State Seafood Association, Belford is in a good position because it is dependant on fisheries that are conservatively managed and do not have an overfished designation.

Despite the regulations, the fishing industry has been able to adapt to these environmental and quality control concerns by adopting new techniques and technological innovations. For example, clam depuration plants are now being considered as a means of continuing to harvest clams in spite of restrictions due to water quality. In addition to complicated regulatory environments, changing economic conditions have also prompted innovative solutions on behalf of New Jersey’s commercial fisherman. The Belford fisherman organized the Belford Seafood Co-Op in the 1950s to reap a higher economic benefit by sharing facilities and marketing operations. At present, as the state’s seafood industry faces new economic realities, communities are now looking toward opportunities such as tourism and branding efforts to sustain the fishing industry into the future. Moreover, as the fishing industry looks forward in the aftermath of Hurricane Sandy, revenues are expected to suffer. Nevertheless, Belford’s hardy fishermen are quickly rebuilding to ensure that they can resume their operations in the weeks after the storm. This important theme of resiliency and economic sustainability is woven into the goals and recommendations of this plan.

Neighborhood Context

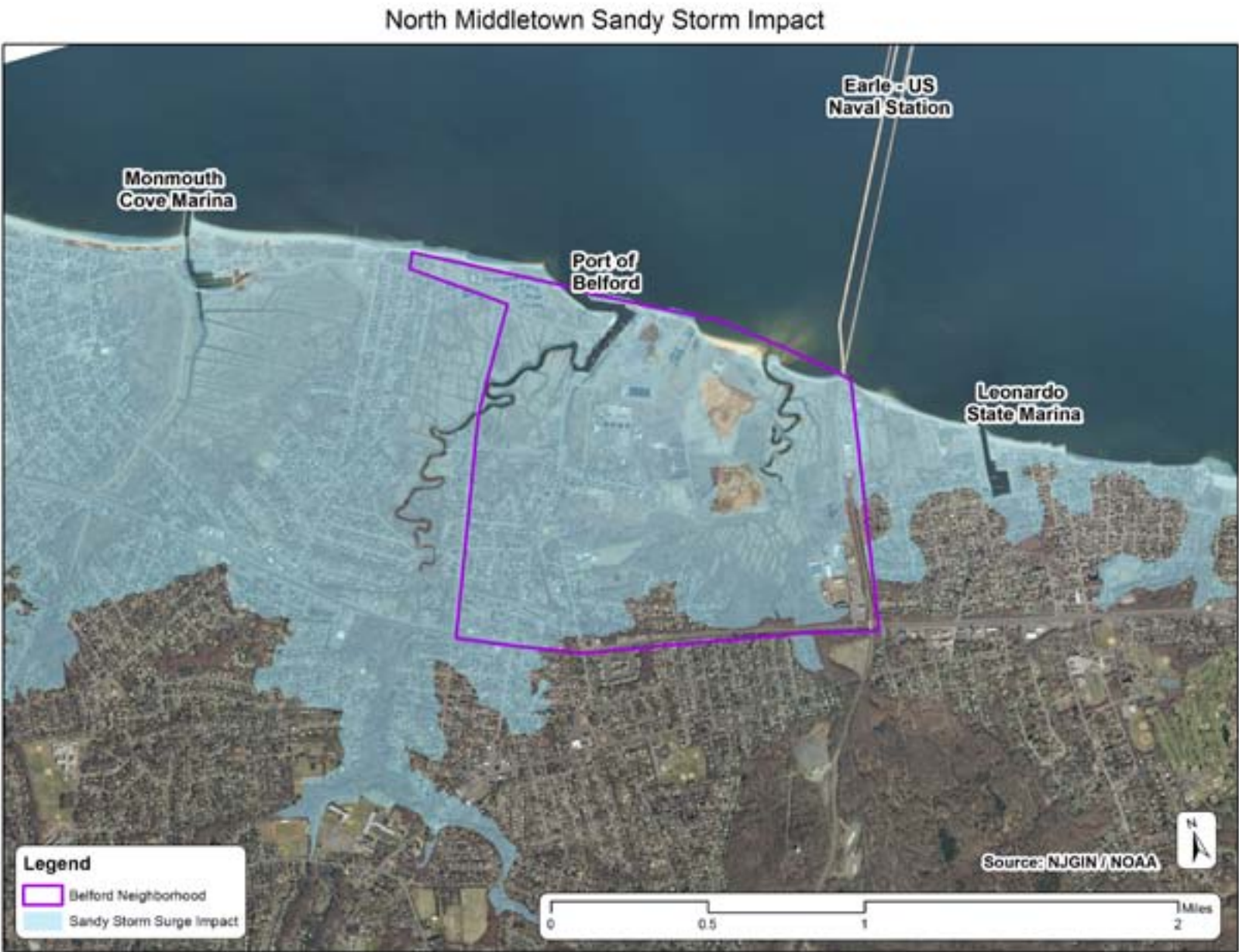
IX. Hurricane Sandy

No discussion of the neighborhood in which this plan was created would be complete without a discussion of Hurricane Sandy. Hurricane Sandy struck the State of New Jersey over the course of two days in late October 2012. Early estimates are that Sandy could end up possibly costing over 50 billion dollars in damages and economic loss throughout the state. The storm destroyed homes and displaced thousands of residents in the state, some of whom are still not permitted to reenter their homes at the time of this writing. The hurricane did not spare Middletown and the neighborhood of Belford. Though many of the demographic and physical assets remain the same, the Hurricane certainly did change some of the current conditions, as well as our recommendations. In particular, we found it necessary to include recommendations and tools for assisting in the immediate fishery recovery efforts which is critical before any type of further economic diversification can take place. Therefore, in response to the immediate challenges posed by Hurricane Sandy we have included in our implementation section several funding sources which may provide more immediate support.

On October 28th Middletown issued a mandatory evacuation of all areas from the Keansburg border to the Atlantic Highlands border from Route 36 to the Raritan Bay which was expected to produce large swells of water that would reach far onto land. There was also the expectation of almost complete power loss in the area due to flooding and trees falling on power lines. On October 29th Middletown was forced to close numerous roads and bridges in the Township including parts of Route 36, the Oceanic Bridge, and the West Front Street Bridge. The area had experienced severe flooding that was speculated to be an all-time record, at least three feet higher than another hurricane, Hurricane Donna, which hit Belford in 1960. After the storm, residents of the Belford area were forced to move their possessions to the street to dry or throw-away as waters had inundated the first floors of many one and two-story homes.

The Port of Belford, located on the Raritan Bay, suffered some substantial losses. The seating deck of the restaurant was picked up and floated, largely intact, about 300 feet away behind the net house and it is unclear if the deck will be able to be moved back to its original location. The biggest loss in the storm however was to the Co-op’s equipment. Freezers and ice machines sustained damage during the flood and are now unusable. This affects the fishermen because without the ability to freeze their catch they are unable to fish. All of the news was not bad however, as the Belford Co-op suffered no damage to any of their vessels. The net house structure also remained intact and stable throughout the storm, although its bay doors and a significant number of nets stored inside the building washed out to sea.

Neighborhood Context



Neighborhood Context

The ferry terminal also fared well in the storm as it only seemed to sustain minor cosmetic damages in the loss of several shingles as well as half of the “New York Waterway” sign that sat atop the terminal. The area was also inundated with large amounts of sand that blew there from nearby beaches.

As mentioned briefly earlier, the storm’s longest lasting effect for the Port of Belford will undoubtedly be the effect on the fishing industry. Recently Governor Christie requested a federal disaster declaration for New Jersey’s commercial and fishing industries. This could possibly open the door for the replacement of equipment or vessel repairs to help get the industry back on their feet.

In the meantime however, Belford fishermen have indicated that they will be attempting to recoup their losses without outside financial aid, particularly assistance in the form of loans. Dredging may also be needed to re-hollow the creek after surges burst past dirt and sand barriers, leaving some boats resting on the creek-bed during low tide.



Neighborhood Context



Photo from the aftermath of Hurricane Sandy

Neighborhood Context



Relation to Other Plans

Relation to other Plans

A number of existing plans have relevance to this study. Some previous plans have focused on the same geographic area in Middletown, while others focus on a particular land use such as waterfronts. Some are statewide. Nevertheless, the six plans listed below all informed the group’s recommendations and added to the base of knowledge this plan was built on. Furthermore, our group has taken care to align our recommendations with plans when necessary to strengthen the argument for adoption and ease potential future implementation.

Port of Belford: Economic Feasibility Study and Conceptual Development Plan

One plan that was particularly helpful was Port of Belford: Economic Feasibility Study and Conceptual Development Plan prepared by the Louis Berger Group in 2009. This plan proposed a number of potential commercial uses which could help the fisherman diversify their economy including a clam depuration plant, an aquaculture facility, a mixed use recreation/retail destination, and a live fish market. The plan then assessed each to determine whether or not these recommendations made sense given the overall context of the area and industry. The study determined that out of these recommendations several were less feasible than others. For instance, the research discovered that the New Jersey hard clam industry did not reveal sufficient growth to warrant another depuration plant in the region. Similarly, aquaculture was not a feasible option for diversifying the Belford fishing industry because the operation of an aquaculture facility requires a specialized set of skills that is very different than the skill set for commercial fishing. Training workers would significantly increase input costs, and this together with the financial risk of constructing such a facility in the face of extensive foreign competition would not make sense. The construction of a live fish retailer was one of the economic diversification recommendations that actually could be implemented and the idea to make Belford a mixed-use recreation/retail destination was a key feature of our plan.

Relation to Other Plans

Middletown Master Plan

The Middletown Master Plan was adopted in October of 2004 and the Land Use Element was revised in July of 2009. The plan focuses on initiatives aimed at revitalizing the Belford neighborhood and preserving the commercial fishing industry at the port. The plan recognizes the historical significance of the commercial industry to the Belford neighborhood and encourages policies to provide opportunities to expand and supplement the activities at the port.

Belford is one of several small villages within Middletown Township and several elements of the Master Plan focus on reinvigorating these areas, including Belford. The Master Plan considers the Local Redevelopment and Housing Law (LHRL) as a potential tool to improving the Belford neighborhood and specifically the port of Belford. Designating an area as in need of redevelopment or rehabilitation can facilitate the redevelopment process by providing the township with tools such as tax abatements.

The plan notes the success of the Monmouth County Ferry Terminal at the Port of Belford and its high ridership. The Master Plan also recommends adding a dock to the western side of Compton Creek in conjunction with redevelopment efforts at the Belford Seafood Co-op site. This dock could be used by a potential marine research center and could serve commuters from the Dunes at Shoal Harbor. The Master Plan also suggests utilizing a water taxi service for shorter trips in the Port of Belford district, a recommendation echoed in this plan.

Monmouth County’s Henry Hudson trail, which utilizes a previous rail right-of-way, passes through the Belford neighborhood. The Master Plan recommends researching a trail extension to Navesink River Road, which would utilize an old trolley right-of-way. The Master Plan also recommends improving signage of the Henry Hudson trail in the New Monmouth area, specifically between Harmony Road and Tindall Road. Bike paths are a great form of recreation, exercise and an alternative mode of transportation, which further the goals and objectives of the Middletown Master Plan.

Relation to Other Plans

Bayshore Regional Strategic Plan

Produced by the Office of Smart Growth of the New Jersey Department of Community Affairs in 2005 this plan focused on economic development in the Bayshore Region through creation of destinations for tourism and preservation of the area’s natural resources. The plan called for joint development areas by all municipalities in the Bayshore region to alleviate lagging economic growth compared to the rest of the County. Joint efforts recommended in the Bayshore Regional Strategic Plan included marketing the entire region to the rest of the state as a destination for day trippers and weekend getaway seekers. The concept of a “weekend getaway,” or “destination” is one of the recommendations in this plan. A county wide effort to create a website as well as a brochure for the region is included as a way to improve branding as a whole. In order to help improve the region’s attractiveness as a destination, events such as bike rides along the Henry Hudson trail were recommended.

This plan also made recommendations around waterfront development for tourism and recreation in addition to potential development of cultural outreach and an educational centers. There was also mention of increasing the Co-op’s business to include elements of tourism such as kayak and boat rentals. The plan explicitly stated an interest in preserving the Belford fishing industry because of its integral role in the local economy and regional character. These recommendations are consistent with this Plan’s objective to improve the local economy and to develop the area’s attractiveness as a destination.

Public Access and Waterfront Development in New Jersey: From the Arthur Kill to the Shrewsbury River

This report was produced by Baykeeper, Rutgers University and NJ Seagrant to investigate, discuss and publish information about access to public waters in the New Jersey portion of the Hudson/Raritan Estuary. Rather than making specific recommendations, this report is descriptive in nature. The report contains segments on different townships with waterfront access and the segment on Middletown provides a helpful description of natural features around the area such as Bayshore Waterfront County Park. The extensive description of the park informed this plan’s decision to make connecting the park to the Belford harbor area a key recommendation.

Relation to Other Plans

State Comprehensive Outdoor Recreation Plan

Produced by the New Jersey Department of Environmental Protection in 2008, the SCORP maintains New Jersey’s eligibility for funding from the Land and Water Conservation Fund, which is distributed by the National Park Service. The plan acknowledges the importance of New Jersey’s Coastline from both an economic standpoint as well as the various environmental benefits found along the coastline. The plan sets funding aside for conservation of coastal economies and the preservation of natural resources.

The Strategic State Plan

It is essential that the revitalization plan created for Belford aligns with the New Jersey Strategic State Plan. The draft Strategic State Plan focuses its policies and investments on fostering targeted job growth, supporting effective regional planning, and preserving the state’s critical resources. The Strategic Plan creates a vision of New Jersey as a national leader in coordinated private and public investment which supports sustainable communities in order to attract and provide strong economic opportunities, preserve our State’s natural resources, and create healthier communities to work, reside and recreate. Several of the specific goals included in the Strategic State Plan and how they relate to the Belford neighborhood can be found in the following chart.

Relation to Other Plans	
<p>Goal 1: Targeted Economic Growth -- enhance opportunities to attract and grow industries of statewide, regional and international importance.</p> <p><i>The Tourism Economy</i> Heritage-based tourism is one of New Jersey's inherent economic strengths. Capitalizing on its rich cultural and historical heritage, the State generates millions of dollars in revenue annually, supporting local and regional hospitality, retail and food industries.</p> <p><i>The Farming, Fishing and Food Economy</i> New Jersey's commercial and recreational fishing industries have unique advantages over fishing industries in other east coast states due to their proximity to numerous fisheries resources encompassing northern, mid-Atlantic and southern species. New Jersey's five large ports (Atlantic City, Barnegat Light, Belford, Cape May, and Point Pleasant), along with smaller ports and inlets that span the entire shoreline, allow for easy access to the vast fisheries resources. These increased opportunities historically allowed the State's fishing industry to land a greater share of available resources. Prosperous commercial and recreational fishing industries help retain other industries like boat building, maintenance and repair, bait and tackle shops, tourism, seafood processing and distribution services.</p>	<p>The Neighborhood of Belford contains rich cultural and historical heritage containing one of the oldest commercial fishing ports in New Jersey which act as a source for a small local retail seafood industry.</p> <p>The Port of Belford (directly mentioned in the plan) has excellent access to the Atlantic Ocean. Within the Port, the Belford Seafood Cooperative and other commercial fishermen export fish to the Fulton Fish Market. It will be important to expand the opportunities and supporting industries in the Port of Belford which will allow for continued growth and economic viability.</p>

Relation to Other Plans	
<p>Goal 2: Preservation, Protection and Enhancement of Critical State Resources: Ensure that strategies for growth include preservation, protection and enhancement of the State's critical natural, agricultural, scenic, recreation, and historic resources, recognizing their role in economic growth and the quality of life for New Jersey residents.</p>	<p>All around Belford critical natural resources exist including wetlands and tidal basins that have an important ecological role. The scenic views and enjoyable recreation are a direct result of the ongoing preservation and protection of these resources. Enhancement of these resources will help to increase the overall quality of life in the area as well as improve the ability of the Belford area to remain resilient in future storms.</p>
<p>Belford as an area fits extremely well into goals of the New Jersey State Strategic Plan. There is strong support within the State Plan for port areas with vibrant wetlands, historical significance, and commercial seafood production capabilities. As a port location Belford can fit the “priority investment area” designation by way of review by the State Planning Commission. This designation will increase the availability of resources to the area by state agencies. Other elements of the State Strategic plan which bear mention are the Garden State Values, several of which, including an emphasis on reusing buildings, providing pedestrian-friendly streetscapes, and protecting and restoring the environment, were considered during the creation of the recommendations for the Belford Neighborhood.</p> <p>On November 13, 2012 in the wake of Hurricane Sandy the Strategic State Plan was slated for approval by the State Planning Commission. Because of the significant destruction to the Jersey Shore and other coastal areas, the Commission decided to delay the approval of the plan. Back in the revision process many expect that the Strategic State Plan will provide new policies, strategies and goals directly connected to shore recovery. It is highly likely that Belford will be able to benefit from new policies outlined in the upcoming revised Strategic State Plan.</p>	

Relation to Other Plans

The Coastal Area Facilities Review Act (CAFRA)

The coastal areas of Belford are within the CAFRA zone which is designed to protect the vital shore areas of New Jersey from being overdeveloped. In accordance with CAFRA regulations residential development, commercial development, industrial development, and public development in these areas are regulated through permitting from the New Jersey Department of Environmental Protection. All of the study area exists within the CAFRA zone.

With the recent destruction caused by Hurricane Sandy, regulations of the Coastal Area Facilities Review Act (CAFRA) have been eased to allow recovery to take place. Several revised areas of the act apply to the reconstruction/improvement of the Port of Belford.

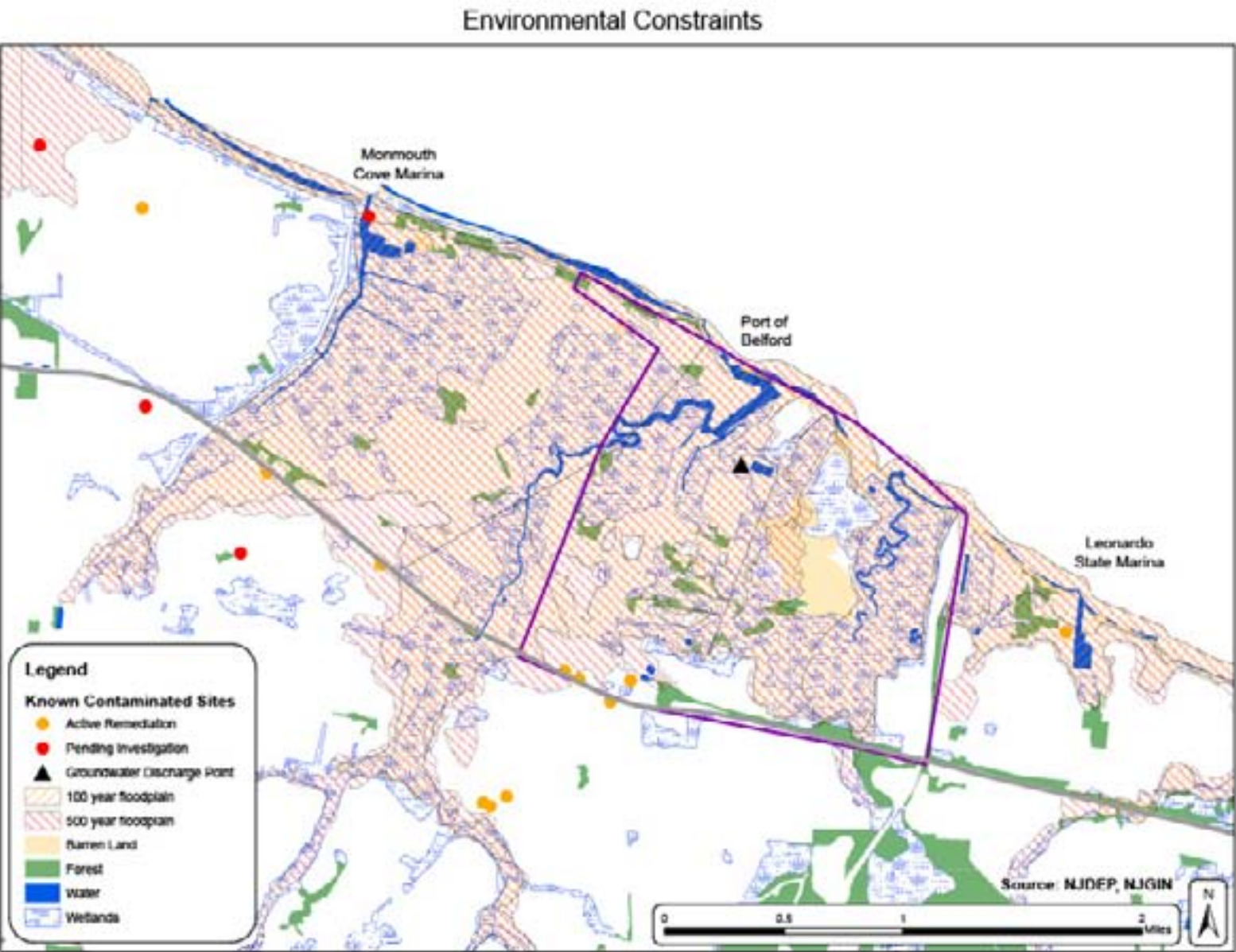
First of all, damaged marina structures that legally existed prior to Hurricane Sandy may be reconstructed without obtaining CAFRA and waterfront development permits, provided:

- They are reconstructed in the same footprint without enlargement or relocation;
- The number of dwelling units or parking spaces is not increased; and
- The area covered by buildings, concrete or asphalt is not increased.

In addition, waterfront development structures, including bulkheads or other structures must be replaced to the previously existing elevation to qualify for the exemption from permit requirement. The citation for the CAFRA exemption from permit requirement is found at N.J.A.C. 7:7-2.1(c)3. The citation for the Waterfront Development Zone exemption is found at N.J.A.C. 7:7-2.3(d)6.

It might be possible to create a CAFRA center at the Port of Belford in order to accommodate further development. CAFRA centers encompass areas of compact, mixed-use development and include adjacent areas for imminent growth where there are no significant environmental features. Centers are one component of regulations adopted by the NJDEP. The impervious cover limits and vegetative cover percentages for proposed developments requiring a CAFRA permit are determined by the location of proposed development within a mainland coastal center or non-mainland coastal center. N.J.A.C. 7:7E-5B.4, 5B.5 and 5B.6 set forth the impervious cover limits and vegetative cover requirements for a site in the CAFRA area.

Research Process



Research Process

XI. Research Process

With this background research on Belford’s neighborhood characteristics and identifying the relevant plans complete, we began research tuned to providing relevant and implementable recommendations for the economic revitalization of the area. This period of research included conducting a preliminary SWOT analysis to get a grasp on the challenges and opportunities facing Belford, visiting the site before and after the hurricane, and interviewing key stakeholders. The group also continued to consult the plans mentioned earlier to identify insightful observations and recommendations, conducted case studies on ports with similar characteristics, and drew on best practices and ideas from around the world to address some of the concrete issues we saw on the ground.

Site Visit

Beyond this initial inventory of strengths, weaknesses, opportunities, and threats the group also visited the site, before and after Hurricane Sandy to get a grasp on the feel of the community and inventory the site’s structures and landscape. The group walked both sides of Compton Creek, and visited the restaurant, fish market, ferry terminal, and net house. On the second visit the view was radically different and movement was limited by the storm’s damage. Photography from these visits is included in Appendix D. with images from the community both before and after the Hurricane.

The Belford Neighborhood Revitalization Plan

Research Process

SWOT Analysis

The Strengths, Weaknesses, Opportunities, and Threats Analysis was the first task undertaken by the group in order to start drafting recommendations. It allowed us to identify strengths that could be harnessed for our economic development goals, weaknesses that should be alleviated, opportunities which may guide future development, and threats to plan for and attempt to prevent.

Strengths

- Strong maritime history and heritage
- The Ferry Terminal
- Proximity to Route 36
- Natural Beauty
- View of New York City
- Historic Net House

Weaknesses

- Port’s isolation
- Poor circulation
- Poor marketing
- Proximity to Earle Naval Pier limits some recreational use

Opportunities

- The Net House
- Ferry from NYC
- Ferry Parking Lot
- 9-acre vacant lot
- The Henry Hudson Train
- The Beach and Shoreline

Threats

- Competition from foreign & domestic fisherman
- Regulations
- Natural disasters

The Belford Neighborhood Revitalization Plan

Research Process

Interviews

Individual interviews with stakeholders allowed studio group members to better understand the exact issues facing each stakeholder. The following stakeholders participated in meetings with group members:

- Middletown Township Administrator
- Middletown Township Planner
- Monmouth County Planners
- Monmouth County Engineering Staff
- Member-fishermen of the Belford Seafood Cooperative
- Independent commercial fishermen
- A representative of the Garden State Seafood Association
- A representative of the Port Authority of New York and New Jersey
- A Professor from the School of Environmental and Biological Sciences at Rutgers University that was involved in earlier Belford economic development reports

Personal interviews were conducted with independent fishermen that operate out of Belford to better understand the role of the fishing industry at the port. These interviews highlighted the fact that there are several major threats to the fishermen’s livelihood including operational costs, regulations, and workforce needs. Fuel costs were also cited as a major concern as many of the fishermen operate vessels with older and less efficient engines. The independent fishermen also expressed frustration with federal, regional, and state regulations that limit their catch, and as mentioned earlier, the long-term sustainability of the industry is a topic of great concern for the Belford fishermen because the younger generations are not taking over the trade as in earlier years, and there is concern that the tradition will not survive.

A community meeting was also scheduled by the group to communicate and gather input with the broader Belford neighborhood but had to be canceled due to Hurricane Sandy and the challenging situation the Hurricane put many of Belford’s residents in.

Research Process

Case Studies

To begin understanding how other small ports are diversifying their economy the group conducted case studies on a number of small ports throughout the Northeast including Port of Galilee in Narragansett, Rhode Island, Essex Seaport in Essex, Connecticut, and Point Pleasant and Cape May in New Jersey. This exercise was particularly helpful for generating ideas for the recommendations.

Port of Galilee, Narragansett, Rhode Island

Galilee is one of the largest commercial fishing ports on the East Coast. The port runs charter fishing vessels and boat tours alongside a working fishing village but has recently faced a decline in the fishing industry and the commercial businesses surrounding the port. The fishing industry is an important one in the state of Rhode Island, supporting approximately 5,000 jobs and bringing in over \$200 million each year in marine species sales alone.

The Port of Galilee is a year-round ferry hub to Block Island; it is adjacent to a 130-acre bird sanctuary, and close to public beaches. Every September the port holds a three day Fishing Tournament and Seafood Festival that brings in visitors and competitors from near and far. The recent decline of the Port of Galilee was addressed in the Narragansett Economic Development Plan, the goals of which include: developing eco-tourism, promoting aquaculture, review of adverse government regulations on the fishing industry, and commercial economic development on the waterfront.

Narragansett residents provided extensive feedback regarding their visions for the future of Galilee. In their opinion, even if the fishing industry collapses Galilee can still be an important hub for water transit, day boat trips, aquaculture and other marine-related industries. Another suggestion was to develop a linkage with the fishing industry and the URI School of Oceanography. Overall, there is a strong desire to bring back the Port of Galilee as it was once known for its fresh catch of the day and the awe of actually watching these individuals in their trade and way of life. Takeaways for Belford include eco-tourism in the area, educational programs, and the emphasis on preservation of the industry.

Research Process

Essex, Connecticut

Essex, CT prides itself on having “historic seaport charm” and was ranked among the 100 best small towns in America. Essex has a number of activities which serve as a draw for tourists like antique shops, boutiques, inns, restaurants, and marinas. Most notable are the Connecticut River Museum and the Essex Steam Train & Riverboat. Recently, the State of Connecticut Historic Preservation Council unanimously approved its submission to designate portions of Essex Village as the British Raid on Essex Battle Site District. The town also hosts a number of parades and even a boat parade to generate excitement and bring visitors to the downtown! To keep businesses strong, the town has The Essex Board of Trade, Inc. (EBOT) which is an all-volunteer, non-profit organization made up of business owners from Essex, Centerbrook, and Ivoryton who care about their communities. EBOT was incorporated in January of 1999 and though the original members were primarily Main Street retailers, the organization has grown to include virtually every type of business that is based in Essex Township.

A key difference between the port of Essex and Belford is that Essex focuses on recreational boating and yachting rather than fishing. Essex therefore is a yachting harbor and the industries surrounding the harbor support boating. For instance, the Harbor Plan notes that there are 30 businesses devoted to the boating industry including three marinas, eleven boat dealers, and nine manufacturers or suppliers of boating equipment, plus boat builders, naval architects, and charter companies.

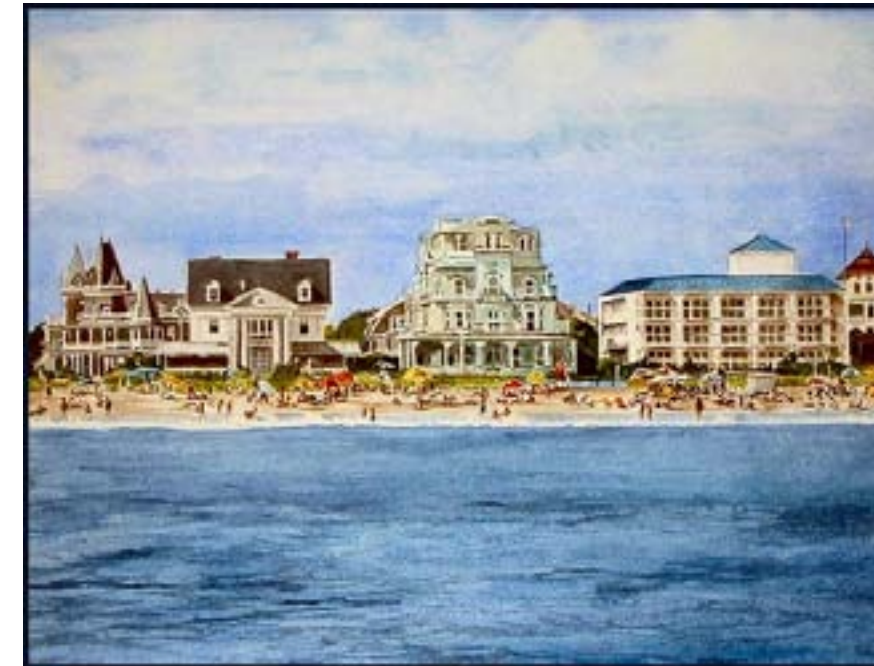
Despite these differences there is still a takeaway. It might be worth exploring further the recreational potential of the port of Belford to diversify the economic base and increase the number of cultural events planned. The Essex Harbor Plan which can be found on the Essex municipality website clearly explains how recreational uses are handled at the port.

Research Process

Cape May, New Jersey

Located at the southern tip of the Jersey Shore, Cape May is a popular tourist destination during the summer. The port area is located in Lower Township along State Route 109. It is located a 25 minute walk, 10 minute bike ride, or 5 minute car ride from the heart of Cape May borough, a center of tourism and activity. The port is home to recreational fishing and boating activities, including whale watching, party boats, charter boats, and parasailing. There are several restaurants in the immediate vicinity of the port. However, like Belford, Cape May is also an active commercial fishing port.

The Lobster House is a popular restaurant located at Cape May’s port. It offers dining as well as a retail fish market. Visitors to the restaurant can enjoy outdoor dining near the water and the ongoing commercial fishing activities. This can be attractive to people who are seeking a view of the commercial fishing heritage of the port. The “grit” of the working port makes it a unique draw. Tourists often seek this type of authentic experience. The coexistence of this form of waterfront tourism with commercial fishing informed our recommendation that Belford can diversify its economy by engaging in some development for visitors.



Research Process

Point Pleasant, New Jersey

Point Pleasant is the last case study and the most local. Point Pleasant is a popular summer vacation destination on the Jersey Shore though the town does maintain a year round community of about 18,000 people that is densely populated at 5,272 people per square mile.

The borough’s main tourist attraction is Jenkinson’s Boardwalk. The boardwalk is lined with nightclubs, bars, carnival games, an aquarium, a miniature golf course, batting cages, and offers beach access. There are multiple options for bicycle rentals allowing tourists to explore the waterfront stretch and the surrounding neighborhood area which includes various parks and a bird sanctuary. Various locally owned businesses offer tourists a unique shopping experience when visiting the borough, including extensive antiquing options. Jenkinson’s Boardwalk also has a website devoted solely to promoting tourism which offers various promotions and trip planning advice. An auxiliary component of Point Pleasant is a small port out of which 10-15 commercial fishing boats operate. The fishermen here participate in a community supported fishery (CSF) based off of the community supported agriculture model. This collaboration helps to build a relationship between Point Pleasant fishermen and the CSF shareholders who get fresh local seafood once a week. Though small in size, the port area is surrounded by restaurants and hotels. In addition to commercial fishing, the port also generates traffic by offering chartered fishing day trips aimed at families, as well as party boat trips for adults. The takeaway from this example for Belford includes the creation of a boardwalk, making the port a destination, and creating a tourism website.

Goals

Based on the analysis of existing conditions, consideration of previous plans, and interactions with key stakeholders, community goals were formulated. These goals were inspired primarily by concerns and priorities of community members, grounded by existing plans and economic realities, and put into the context of a post-Hurricane Sandy community. The vision is to make Belford a more resilient community -- physically, environmentally, and economically. To achieve this vision, six core objectives were formulated:

1.) Enhance critical infrastructure through dredging and bulkhead repairs

Much of the infrastructure critical to continued use of the port is in need of extensive repairs. In order to ensure the continued operations of both the commercial fishing industry and the ferry, repairs to the maritime infrastructure are critical. Moreover, improving maritime infrastructure will also enhance the resiliency of the port and the broader neighborhood to withstand future hurricanes and floods. These improvements are also necessary to protect the significant investments made in the Belford area by various stakeholders and preserve the ferry as a way to evacuate New York City in the event of a disaster.

2.) Preserve and strengthen the commercial fishing industry

The Belford neighborhood holds a strategic waterfront location in relation to New Jersey and New York. On the far end of the neighborhood, a Port exists which shelters a small but historically significant and still functioning fishing industry. The road network leading to the port is inefficient and remote, and although this isolation has preserved the Port’s authentic fisherman culture, it has also prevented it from flourishing as a key destination for both local residents and visitors coming primarily from Route 36. In an effort to preserve and strengthen the Belford fishing industry, this Plan has outlined several different paths to economic diversification.

3.) Develop the local economy by creating a place more attractive to visitors and encouraging new businesses

By attracting more visitors to the Belford area through educational or scenic points of interest, more money can enter the Belford local economy. Bicycle and pedestrian circulation in the area should be enhanced to establish the neighborhood as an attractive and interesting place to be. Finally, adaptively reusing underutilized spaces and encouraging new and innovative retail and marine businesses will create jobs and pump new life into the neighborhood.

Goals

The sensitive wetlands around the Belford neighborhood should be preserved and enhanced as a natural barrier against floods, and a habitat for wildlife. However, beyond protecting the environment, preserving the natural features of Belford make the area more attractive to visitors and can serve to pull people from the Henry Hudson Trail and the existing Bayshore Waterfront County Park to the neighborhood and port area.

4.) Integrate the natural environment into the neighborhood as a tool for sustainable economic development, flood control, and wildlife conservation

The sensitive wetlands around the Belford neighborhood should be preserved and enhanced as a natural barrier against floods, and a habitat for wildlife. However, beyond protecting the environment, preserving the natural features of Belford make the area more attractive to visitors and can serve to pull people from the Henry Hudson Trail and the existing Bayshore Waterfront County Park to the neighborhood and port area.

5.) Improve utilization of the ferry terminal parking lot

During the workweek, the NY Waterway commuter parking lot is at full capacity, yet during the weekend this waterfront lot is empty. Making this area a magnet for community activity by hosting farmer's markets and/or festivals would increase the vibrancy of the area and perhaps encourage cross-pollination of the businesses across the creek.

6.) Stabilize and improve the neighborhood by assisting homeowners with disaster recovery and home improvement.

As shown in the demographic analysis, the Belford neighborhood is made up of many smaller and older detached houses. Because of their age, design, and building materials, they were at significant risk of storm damage. By helping homeowners in Belford recover from Hurricane Sandy and make necessary repairs to the property, the neighborhood can be restabilized and improved. Any improvements made should also maximize the community's resilience to future storm events.

Recommendations



Recommendations

Objective	Recommendations	Possible Resources for Implementation
1. Enhance critical infrastructure through dredging and bulkhead repairs	Dredging	New Jersey Department of Transportation Office of Maritime Resources
	Bulkhead Repair & Replacement and Additional Improvements	Shore Protection Fund
2. Preserve and strengthen the commercial fishing industry	Improve fishing equipment (core)	NOAA Fisheries Financial Services
	Improvements in Physical Infrastructure (core)	Port Authority of New York and New Jersey
	Marketing and Business Development (core)	NJ Dept. of Agriculture Agricultural Economic Development Services, Export Development Assistance, and Fish and Seafood Development; USDA Trade Adjustment Assistance Program
	Create a Destination at the Net House (diversify)	
	Increase fish retail and culinary opportunities (diversify)	USDA Farmers Market Promotion Program
3. Develop the local economy by creating a place more attractive to visitors and encouraging new businesses	Increase Connectivity with Pedestrian Bridge	NJDOT Division of Local Aid and Economic Development
	Water Taxi	
	Boardwalk and Interpretive Signage	Private Foundations
	Wayfinding Signage	NJDOT Division of Local Aid and Economic Development
	Destination at the Net House	Public Private Partnerships
	"Pop up retail"	Public Private Partnerships

Recommendations

	Floating Docks for "Dock and Dine"	
	Liquor license	
4. Integrate the natural environment into the neighborhood as a tool for economic development, flood control, and wildlife conservation	Connections to Henry Hudson Trail, Bayshore Park, and other Recreational Facilities	NJDOT Division of Local Aid and Economic Development
	Recreational Facilities	NJDEP Green Acres Program, Monmouth Conservation Foundation, Monmouth County Park System Open Space Program
	Wetland Protection	NJ Environmental Infrastructure Trust
	Kayaking	
5. Improve utilization of the ferry terminal parking lot	Solar panels over parking lot	Public Private Partnerships
	Use of parking lot for events	
	Use of ferry parking for boardwalk/Net House destination	
6. Stabilize and improve the neighborhood by assisting residents with disaster recovery and home improvement	Designating Belford as an Area in Need of Rehabilitation	Township
	Hurricane relief	NJ EDA Main Street Disaster Relief Program, FEMA, UCCDC Storm Recovery Loans, Private Foundations, Crowdsourcing, U.S. Small Business Administration
	Modification of development ordinances for greater resiliency	

Recommendations

Improvements in Physical Infrastructure

The improvement of the physical infrastructure in Belford has critical and far-reaching regional, economic, transportation, homeland security, and environmental implications. The most important recommendations in this report, dredging and creating bulkheads are of vital public interest to the community, county, region, and even the inter-state level due to the Port of Belford's importance to both New Jersey and New York. Without implementation of this recommendation, nothing else will work.

The patchwork of ownership and maintenance around the port has led to degraded conditions and economic distress. Ineffective communication and lack of improvements has caused economic harm to every stakeholder. Therefore, we propose that a single entity be responsible for the long-term ownership and maintenance of the port and its facilities. This type of arrangement is not uncommon in the port setting. The creation of a Belford Port Authority or management by an existing state or bi-state level agency would ensure cohesive management and maintenance of the port and its facilities.

The infrastructure improvements recommended are directly in-line and support the mission of multiple planning documents guiding development policy at the regional and state levels. The Bayshore Regional Plan fully endorses the economic development in the Bayshore Region through creation of destinations for tourism and preservation of the area's natural resources and the State Strategic Plan explicitly emphasizes the fishing and food economy, seaport development, and the preservation and protection of critical state scenic, historic, and agricultural resources.



Recommendations

Dredging

Within the Bayshore region are naturally shallow waters near the shoreline that require periodic dredging of the channels. Naturally occurring sediment transport within the marine ecosystem creates continuous shoaling in navigation channels and impedes marine boating activities. Upland stream channel erosion compounds the problems by bringing heavy sediment loads to marine basins and ultimately the larger bay system. Post Hurricane Sandy; there are numerous reports that significant material has been deposited into the channel south of the Belford ferry terminal. The Ferry terminal was in operation shortly after the storm passed, and thus the underwater draft depth is deep enough for operation. However, the area south of the terminal has significant deposits, both from the incoming surge from the bay, and the receding storm waters from inland. There were significant amounts of debris on land in the harbor area, which would indicate a corresponding amount that is now in the channel. With an increased need due to the storm it is now more important that even that dredging take place. Doing so will allow for the following improvements to port activity:

- Allow for boats to operate safely and without worry that their engines are taking in too much sediment at the bottom of the channel.
- Ability for ferries and commercial fishing boats to maneuver easier to dock.
- When combined with new bulkheads the port will be expanded allowing increased capacity.
- New capacity will allow the port to be available to more diverse boating activity as well as a potential evacuation site via ferry from New York City.
- Will allow all large boats to dock north of the proposed pedestrian bridge decreasing the need for a higher bridge and lowering the cost of that recommendation.

Recommendations

From the Dredge Material Management Plan, it is stated that much of the pre-planning and engineering work is complete. Permits required for the project includes the USACE individual dredging permit, section 10, for maintenance dredging, NJDEP Dredging Authorization / Beneficial Use Determination, CAFRA for the anticipated bulkhead repairs, and NJDEP water quality permits for discharged materials into the CDF. A state tidelands grant is also required before using the dredging material for beneficial uses, as it is state property. These permits have been granted before and are not anticipated to be a problem.

The issue with respect to dredging is handling the spoils. In Belford, there is a Confined Disposal Facility (CDF) on the west side of the ferry terminal parking lot, called N61. This CDF is stated to have a capacity of 200,000 cubic yards, with about 125,000 cubic yards remaining as of 2009. According to the Dredge Material Management Plan, there is a plan in place for the removal of 100,000 cubic yards of dredged material from the Compton Creek channel, which is the waterway south of the ferry terminal.

Due to the extensive surge damage from the storm, it is anticipated the dredging and bulkheading costs will be partially offset by FEMA and federal funding, and would help to prioritize the dredging in the harbor. Dredging is quite expensive, with costs ranging from \$10 to \$40 per cubic yard. There are two main methods of dredging that can occur in Compton Creek: hydraulic/suction dredging which consists of a vacuum hose that is maneuvered along the waterbed, and clam-shell bucket dredging. Though the most recent dredging operations have been done with hydraulic equipment, several of the fishermen were adamant that the bucket is vastly more effective, and the channel tends to stay deeper for a longer period of time when compared to the hydraulic dredging. With the clam-shell technique, a dump truck is required, as well as in-situ preventive equipment which would be necessary to mitigate the environmental concerns of spillage and open air operation. Some of this cost can be offset by finding beneficial uses for the dredge spoils, which may be combined with other materials and sold as fill material, or used as a resource for Bayshore Beach replenishment. The N61 CDF is only treated as a storage facility. Once the material has settled and the water has been drained, this can be combined with other materials such as composted organic matter, and create fill material. It also can be used as a capping material for landfills. It is very likely that clam-shell bucket excavators will become the preferred method over hydraulic.

Dredging the port is extremely important and needs to be taken seriously. The Port must be returned to its capacity before the storm and perhaps even expanded to work more effectively for all users. Any sort of dredging work will have to be done in conjunction with bulkhead repair, replacement, and improvement.

Recommendations

Bulkhead Repair & Replacement and the Installation of Additional Improvements

In addition to dredging the Port of Belford, it is also necessary to implement bulkhead repair and replacement to solidify the inlet area, increase capacity, and use the opportunity to install additional placemaking improvements like a boardwalk and fish cleaning tables. The Bureau of Coastal Engineering constructs and maintains shore protection structures including jetties, groins, seawalls, breakwaters, and bulkheads in order to protect the coastline and navigable channels of New Jersey. When constructed along an inlet, a Bulkhead has the ability to keep waterways clear of sediments and debris and maintain open navigation channels-items essential to the NY Waterway Ferry operation as well as the fishing activity out of the port. The targeted areas in which bulkhead replacement and construction would take place are:

- The Raritan Bay side of the 9-acre parcel from the Dunes at Shoal Harbor to the Co-op property
- All areas of property that meet the Port of Belford channel and have a pre-existing bulkhead
- The Monmouth County owned side of the port to increase capacity of floating docks and ultimately make the channel larger.
- The entire Port area from the proposed pedestrian bridge out to the Raritan Bay

The easement of the CAFRA regulations post-hurricane will allow for the rebuilding of the bulkhead in areas in which there was already a bulkhead such as along the western side of the Belford channel and the bulkhead facing the Raritan Bay. The areas on top of the bulkhead covered by deteriorated cement and/or the cooperative restaurant deck before the storm can be replaced as well. However, in order for a completely new bulkhead to be created on the east side of the port’s waterway, the normal CAFRA permitting process would need to take place. By securing the shoreline of the waterway the bulkhead might mitigate some of the effects seen on the channel which resulted from Hurricane Sandy. In fact, improving bulkheads in Belford is one way to mitigate the effects of future storms on the neighborhood. Bulkheads create a solid barrier between the land and the water. By holding back soil on one side they also prevent erosion and in doing so keep the channel clear of sediments. Different materials for bulkheading and their advantages and disadvantages are listed in Appendix A.

Recommendations

Beyond increasing the efficiency of the port and mitigating storm impacts, a new bulkhead could also create a new sense of place along the waterfront. This is a key segment of our recommendation regarding bulkheads. This is because bulkhead installation projects exist which incorporate other improvements. In Belford, on a nice day it is not uncommon to see anglers fishing from the top of the degraded bulkhead on the 9-acre parcel. Additionally, while not much activity takes place in front of the “net house” on a regular basis, the improvement and reconstruction of the bulkhead with other improvements help the functionality of both areas. To increase functionality and create a sense of place, we recommend that the bulkhead improvements be made in conjunction with the following features:

- Full dredging of the port channel to increase capacity
- Creation of a sidewalk/boardwalk on the land at the top of the bulkhead
- Creation of railings and lighting fixtures at the waters edge for safety
- Mounted fishing support tools such as fish cleaning tables, trash cans, and rod holders
- Additional and new floating dock systems to replace old fixed docking infrastructure
- Finish/resurface area between “net house” and waters edge

Providing these improvements with bulkhead reconstruction will allow the location to facilitate safer and increased pedestrian and fishing activity at the water’s edge as well as increase of the overall functionality of the port. In making recommendations we looked to marine improvements in Red Bank, New Jersey as a case study.

The impact of successful implementation of this recommendation on the channel would be enormous. With the maintenance and rebuilding of the bulkhead, Belford would be ready to increase the efficiency and capacity of its port, while at the same time creating a new sense of place along the waterfront with the suggested additional installations. Maintaining an open navigation channel that can accommodate many boats is essential to port activity. The primary funding source for bulkheading is through the Shore Protection Program and a detailed description of this program and how it can be applied for bulkheading is included in *Appendix B*.

Recommendations

Preserve and Strengthen Fishing Industry

As illustrated, the fishing industry plays a crucial role in the vitality of Belford’s economy. It is imperative that efforts be made to improve the core activities of Belford’s fishing industry, as well as diversify operations in order to ensure future economic sustainability.

Core Activities

The core of the fisherman’s operation is his vessel and related processing equipment. As such, investment in the boats and processing equipment is necessary to continue profitable operations. Unfortunately, many of the boats are aging and contain inefficient engines. Interviews with the fisherman revealed that they suffer from high fuel costs due to the inefficiency of the engines. Upgrades could significantly enhance the profitability of their operations. While the damage left by Hurricane Sandy largely did not affect the boats, other vital equipment has been damaged, which has increased the need for such improvements. For example, the fishermen currently have an immediate need for an ice machine that is required to maintain the seafood for future sale.

Infrastructure improvements are an equally important recommendation for improving the fishing industry’s core activities because they are a necessary prerequisite to efficient operation in the channel. Therefore, the improvement of the port’s physical infrastructure is described above as the first objective of this plan. Hurricane Sandy has prompted an even more immediate need for these improvements. For example, the channel is in desperate need of dredging, with vessels currently unable to move through without getting stuck. Dredging and bulkheading will allow the fishing boats to navigate the channel and maintain operations.

Finally, the fishing industry can increase its profitability with greater marketing and business development efforts. By identifying competitive advantages and engaging in marketing, the local fishing industry can better compete in the current market. The Jersey Seafood Logo Program, administered through the NJ Department of Agriculture, provides an opportunity for sellers to market their products with a logo that implies quality and gains consumer confidence. It is recommended that Belford engages in a partnership with the Jersey Seafood Logo Program or existing trade associations to establish their affiliation with a specific “brand” of quality fresh seafood. Another common way to help attract a greater customer base is to participate in trade shows and events that showcase Belford seafood. There are numerous programs that provide financial and technical assistance for marketing and business development efforts, as referred to in the Implementation section of this plan.

Recommendations

Diversification

Given current economic conditions and the regulations placed on the fishing industry, the fisherman are limited in the type and amount of fish they can harvest, as well as the amount of profit they earn. These limits call for greater diversification in the fisherman’s activities and sources of income in order to achieve economic sustainability.

One way Belford’s co-op fisherman can diversify is to redevelop their “Net House” property. The redevelopment of this structure is discussed as a means to establish Belford as a destination. Suggested possible uses include a restaurant, marine educational facility, or culinary school. The introduction of a new use could spur diversification and build upon the marine traditions of the port. For example, the fisherman could feature their catch in a restaurant or culinary school. With a marine educational facility occupying the building, the fisherman could benefit from participating in research and other learning activities. Furthermore, because the Net House is owned by the Belford Seafood Co-op, income can be generated through the redevelopment and leasing of the property. This income would be independent of their direct fishing revenues, so as to provide more diversification.

In addition to the redevelopment of the Net House, there are other opportunities for the Belford fishing industry to increase seafood retail and culinary opportunities. Firstly, there are existing restaurants in the study area that feature seafood. By supplying to these restaurants, there is great potential to establish Belford as a culinary destination and generate additional income. For example, obtaining a liquor license would allow the restaurants in the immediate area to elevate the dining experience and attract more visitors. In keeping with a “Jersey Seafood” theme, the restaurants could also feature Jersey wines which do not require conventional liquor licences. Another opportunity could be to create a “pop-up” shop within a maritime designed shipping container as a simple place to sell fresh seafood. Seafood could also be sold at a weekend farmers market on the ferry parking lot.

Another diversified retail option for Belford Fishermen would be to establish a Community Supported Fishery (CSF). CSF is based off of the Community Supported Agriculture (CSA) model where individuals pay a fee at the beginning of the season and in turn the receive shares of fresh, locally caught fish on a weekly basis. This practice, which was first started in 2007 in Port Clyde, Maine, has become popular in multiple coastal locations across the United States. The Rutgers University Haskins Shellfish Research Laboratory along with the New Jersey Sea Grant Consortium has developed a pilot program in New Jersey. The CSF practice has proven to be a method for enhancing the connections between local communities and fishermen as well as to increase awareness about sustainable fishing as an economic livelihood.

Recommendations

There would be several benefits to connecting the east and west sides of the Belford Harbor by spanning Compton’s Creek. The connection would:

- Enable the completion of a walking path on top of the new bulkhead around the port area. This walking path would improve public access to the waterfront, offer scenic views, and include interpretive signage.
- Allow users of the ferry terminal or weekend visitors to more easily park and then access the seafood market and restaurants on the west side of the harbor. This will help sustain the fishing industry by expanding its retail fish market and restaurant opportunities.
- Potentially increase tourism in the area depending on the design of the bridge. Some pedestrian bridges have become tourist attractions in their own right because of unique designs, scenic views, or interesting surroundings. In the case of Belford, a pedestrian bridge would offer unique views of the New York City skyline, Raritan Bay, and beaches and marshlands.
- Assessing different ways to forge this connection, it appears that the alignment of the former bridge is the most appropriate alignment for a new bridge. A connection at this location would be beneficial by connecting existing streets and could be integrated into the existing recreation facility and parking area. Furthermore, changing the alignment of the bridge would add to the cost by requiring that new rights of way be acquired. The span of a bridge would be approximately 150 feet.

Several obstacles to construction of a physical bridge are present however. First, the cost of such a structure would require a serious and concerted effort to find funding sources. It is unlikely that local or county government would be willing to fund the project upfront. A more realistic funding strategy would include gathering local contributions and the support from one or more major grant programs which can be found in the section in Implementation. The second obstacle is that the height of the bridge must be sufficient to allow boats to pass underneath it. Even if boats with the greatest height requirements were moved toward the bay, the number of boats using the harbor dictates that some will need access to the waters upstream from the bridge alignment.

Recommendations

In light of these obstacles, there are four alternative scenarios available to better connect the two sides of the harbor.

1.) No bridge, but rather improved pedestrian and bicycle access between both sides of the harbor. This option would be the least expensive to implement, but offers the smallest return in terms of improved circulation of people. Bicycle lanes exist on Church Street, and would be extended under this recommendation to include Main Street and Port Monmouth Road in order to form an uninterrupted bicycle path from the ferry terminal to the restaurant and seafood market on the Belford Seafood Co-Op property. The sidewalk along Port Monmouth Road would also be extended to the Co-Op property and integrated with new developments on that site and the adjacent vacant property. Traffic calming measures could also be implemented along Main Street to ensure pedestrian and cyclist safety during the busy peak traffic periods to and from the ferry terminal. Through the addition of bike lanes, the travel lanes can be narrowed to provide this calming of motor vehicle traffic.

2.) Construction of a movable pedestrian bridge across the harbor at the former bridge alignment. This option is likely to be the most expensive. Many existing movable pedestrian bridges have become tourist attractions in their own right. They are often designed by notable architects, placed in unique locations, or have radical designs. This indicates that constructing a purely practical movable pedestrian bridge is not always cost effective. This alternative would also include the general circulation improvements included under Scenario 1.



Recommendations

3.) A fixed position bridge with sufficient clearance to allow small boats to pass beneath it. This bridge would be less expensive to maintain than a movable bridge, but would need to have a very high clearance (likely 75 feet or higher) in order for the majority of the fishermen's boats to pass below it. The high span height of such a bridge would require an extensive set of ramps to move users from ground level to the bridge height. The height of the bridge could be adjusted by changing which boats are kept upstream from the bridge alignment. If it is feasible to move the upstream commercial fishing boats to the downstream side of the span, then it could be possible to construct a lower height fixed bridge with a clearance of perhaps 15 feet, enough to allow kayaks and small recreational boats to pass through. This alternative would also include the general circulation improvements included under scenario 1.

4.) Addition of movable floating docks across the harbor at the former bridge alignment. This type movable crossing would allow pedestrians to cross the harbor, but without as much physical modification of the area as a traditional moving bridge. A series of floating docks would span the harbor. The center segment(s) of dock would be swung using a cable system to allow boats to pass through. The docks would be ADA accessible, have railings for safety, and could be constructed from wood, aluminum, galvanized steel, or plastic. This option could offer greater simplicity (and therefore cost savings) compared with a traditional movable bridge, but there is little precedent for such a solution at ports like Belford. Floating docks could be removed from the water prior to forecasted storms or during the winter to prevent damage from icy conditions. This alternative would also include the general circulation improvements included under scenario 1.

Several considerations that will determine which of these alternatives is most feasible include the availability of funds as well as the number and type of vessels kept upstream from the crossing. This latter detail will determine which bridge designs would and would not interfere with fishing activities. If boats with high clearances can be moved to other parts of the harbor through the dredging and bulkheading projects, it would become more appropriate to construct a lower-clearance fixed position bridge as opposed to a movable bridge.

Recommendations

Making Belford a Destination

Belford has a number of assets which make it a great destination for day visitors from throughout the region. Plentiful seafood, great waterfront location, beautiful New York City skyline views, rich history, and a unique charm all exist in Belford. However, the implementation of several recommendations such as those suggested below would allow Belford to better harness these assets for their economic growth.

Water Taxis

Water taxis could be an effective option to explore since Belford already has a ferry which runs to Manhattan leave from its harbor. The taxis could be marketed as a fast way to move between different shore towns during summer months when day trippers clog many of the roads. The taxis could also run lines in the summer to towns with a nightlife such as Point Pleasant which would make the system attractive to 20 somethings as a way to travel to livelier atmospheres without having to worry about driving. There is an existing water taxi service in the Highlands that offers trips to different nightlife spots including bars, restaurants, and a weekly fireworks show. Perhaps negotiations with the Township could be conducted to extend their service lines to the Port of Belford. A sightseeing tour would also be an attractive option. Billing the taxis as an enjoyable day on the water for the whole family could be a convincing way to encourage more people to frequent the area, and encourage new business development in the Belford region.

To give an illustration, Miami's water taxi system docks at various locations throughout the city. Customers purchase an all day pass which costs \$20.00. Recently Miami has begun shuttling people to Miami Marlins games at the new stadium in order to increase accessibility to the team.

The taxis often adjust to events in the City, tailoring their services to whatever may be happening at the time in order to be flexible and deliver service where it is most demanded. A taxi system in the Belford area could be designed to bring patron's to different events in the many shore towns throughout summer months such as concerts and festivals.

Recommendations

Boardwalk & Interpretive Signage

Another idea which would make Belford more of a destination would be to create a boardwalk pathway from east side to west side of creek utilizing the easement area. This boardwalk would allow visitors to Belford to witness the activities of a working waterfront without interfering with the fishermen's daily duties. Moreover, it would allow visitors a convenient and fun way to access the creek which is currently difficult for the public to access. Along the boardwalk, which can be seen in one of the renderings of the site, small vendors could sell their wares. The proposed walkway can also be enhanced with a number of strategically placed interpretive signs that highlight the history of the port, current fishing activities, and common fish species. Such signage can help add depth to the pedestrian experience for visitors to the Port of Belford. Moreover, the signs would be placed to guide pedestrians from the ferry parking area toward the restaurants and other attractions. Waterfront areas across the country are using interpretive signage in this manner. For example, the Fall River Fish Hatchery in Central Oregon has signs around their facilities explaining the fish, the history, and the functions of the hatchery. Another example is the signage at the Leonardtown Wharf in Maryland that demonstrates the history, marsh habitat, and redevelopment of the site.



Recommendations



Recommendations

Wayfinding Signage

In order to further establish Belford as a destination, it is recommended that wayfinding signage be placed in strategic locations in the surrounding area. Such signs are a simple, yet effective way to pique interest and guide visitors toward the Port. For example, the nearby community of Atlantic Highlands uses signage along Route 36 to direct visitors into Town.

A high-visibility sign along Route 36 at the intersection of Main or Church streets could signal drivers to turn and continue to the destination. Another possible use of wayfinding signage would be along the Henry Hudson Trail, where users can be guided toward Belford's recreational activities.



Recommendations

Creating a Destination at the Net House

The Net House building is a structurally sound building that borders the proposed boardwalk close to the water’s edge. The Net House is owned by the Belford Seafood Cooperative and is currently used to store the large quantity of commercial fishing nets. This structurally sound, cement shell of a two story building overlooks the harbor with views reaching the Manhattan Skyline. The Co-op could leverage this premier property to become a profitable income supplement and start diversifying the local economy.

While not only serving as an income producing property, the Net House could become an anchor building from which to stem economic development in Belford. With a boardwalk to be connected to the property, the large Net House facility could easily house multiple tiers of restaurants (from low end to high), an education facility, gallery space or even a bed & breakfast. It could also serve as a location to showcase Belford’s seafood products, a recommendation which also strengthens the core of the Belford fishing industry. These developments would serve serve to draw people to the boardwalk. The ability to attract outside money into Belford, and particularly the Port area would encourage other local businesses to open and help revitalize the local economy. Therefore, the repurposing of the Net House plays a critical role in fostering the economic sustainability of Belford.

Recommendations

To convert the Net House into an income producing property capable of housing a variety of these uses, the Co-Op could bring in a development partner to provide the necessary capital for renovations. The Co-Op would provide the prime land and the building, while the development partner would be responsible for raising capital, fitting-out the building, attracting tenants, managing the property. The development partner would be responsible of regularly sending an agreed upon share of the income streams to the Co-Op. Additionally, deals involving exclusive fish purchases for any potential restaurant could be negotiated as well.

A liquor license for a restaurant within the net house restaurant or another restaurant in the port area is also necessary. A liquor license is strongly recommended because it would serve as both a draw to the area for people who would like a drink with dinner and as an income producing measure since margins on alcohol sales are very high. If the owners of the net house building were to obtain a liquor license, perhaps through creative tenant agreements that establish the building as one restaurant with multiple kitchens, the building could support a variety of restaurants under a single license.

This type of use has the potential to be economically feasible primarily because of its proximity and ability to serve as a quick getaway destination from New York City. In fact, other destinations along the North Jersey coast have begun to draw this crowd of customers. One recent travel article cited Sandy Hook, New Jersey and Bay Head, New Jersey as easy and pleasant getaways from New York City. For a night with a beautiful view of the New York City skyline, a fresh fish dinner, and a true country experience, many people may find Belford an exciting escape.

Recommendations

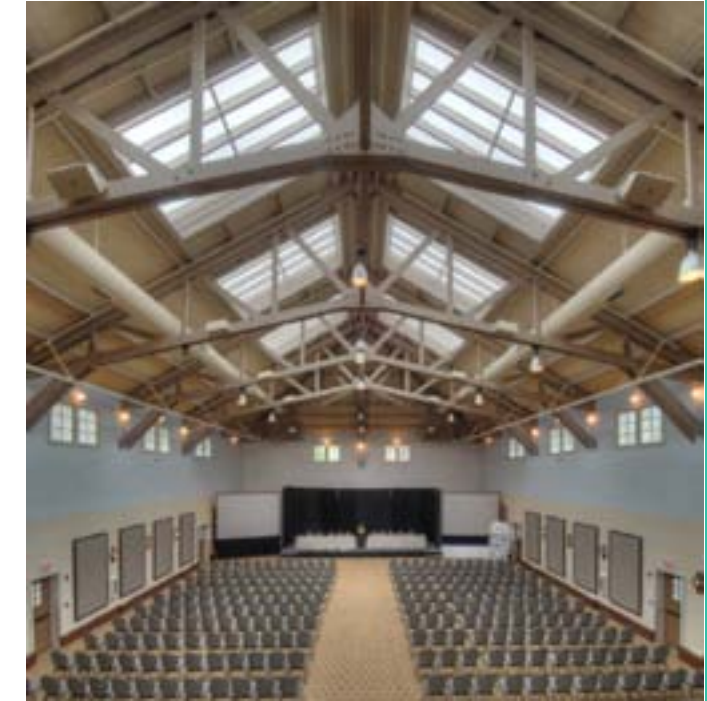


The Belford Neighborhood Revitalization Plan

Recommendations

Several case studies on adaptive reuse emerge from the literature which was helpful in shaping a vision for the Net House. The first is the Morgan Center on Jekyll Island, Georgia. The Morgan Center is the Jekyll Island Club Hotel's newest addition. It was originally constructed in 1929 as an indoor tennis court for guests of the Jekyll Island Club. The facility was closed in 1990 out of disrepair, but a joint venture between the owners of the Jekyll Island Club Hotel and the Jekyll Island Authority was created to renovate the historic indoor court. The plan was for this adaptive reuse project to serve as the focal point in the National Historic Landmark district. Details of the building include a ground level with 4900 sq. ft. of flexible space and a second story mezzanine with 900 sq. ft. of space. The Morgan Center will also feature a foyer and outdoor terrace as well as a brand new state-of-the-art catering kitchen. The space is perfect for groups of 150-250 for meetings and up to 350 for banquets and weddings. The Net House in Belford, with its view of New York, could serve a similar purpose for small weddings, banquets, and marine-related conferences.

A second example is the Packing House in Anaheim, California. This provides yet another model. The Anaheim Orange & Lemon Association's mission-style packinghouse at 424 Anaheim Boulevard was completed in 1919. Over a period of almost 40 years, millions of locally grown citrus fruits were packed in the building and sent to markets all over the country in railroad cars. A landmark in both County and City history, the packinghouse was neglected for the past half-century, but is now under intense renovation. With the restoration underway, the Packing House is positioned to again showcase and share the culinary offerings of Orange County. The Net House could provide an upscale showcase for culinary offerings and regional products of the New Jersey area like Jersey Wine, seafood, and fresh vegetables.



The Belford Neighborhood Revitalization Plan

Recommendations

A marine-related educational facility is another potential use for the Net House. There are a number of marine science programs and trade schools that could benefit from the Net House's large size and unique waterfront location. For instance, Marine science programs could use the Net House to do research and teach students in a very hands-on topic such as marine biology, oceanography, and coastal development. Some relevant programs in New Jersey include the Marine Academy of Science and Technology at The Monmouth County Vocational School District (M.A.S.T), the Ocean Institute of Brookdale Community College, Monmouth University's Urban Coast Institute, and the Rutgers University Institute of Marine and Coastal Sciences. These programs are currently located in close proximity to Belford, with the Monmouth Urban Coast Institute located in West Long Branch, and both M.A.S.T and the Ocean Institute of Brookdale Community College located at nearby Sandy Hook. Moreover, the Rutgers Institute of Marine and Coastal Sciences has numerous field stations along the Jersey Shore.

In addition to environmentally focused educational programs, culinary schools and trade schools that specialize in marine mechanics might find the Net House particularly attractive. A culinary school, such as the Culinary Education Center of Monmouth County Vocational School District and Brookdale Community College, would be able to teach students the culinary arts in an inspiring atmosphere using the freshest seafood possible. Finally, technical institutes that teach marine mechanics would make productive use of the Net House's size and waterfront access. Some examples include Universal Technical Institute in Orlando, Florida, and Wyotech in Daytona, Florida.

Recommendations

Increasing Commercial Opportunities

Although commercial can be a viable option for stimulating revitalization in Belford, the Port's environmentally vulnerable location and economic realities are important considerations. Retail establishments might be more successful using adaptable, resilient structures that don't carry financial burdens and long-term commitments. "Pop-up" retail, consisting of short term retail spaces often made from shipping containers, is quickly becoming a popular way to address short-term needs while adding long-term value to places. Commercial establishments, public spaces, and even events are "popping up" across the country in cities and towns looking for alternative solutions for their long-term economic sustainability goals. Such pop-up uses are considered a creative means to add vibrancy in areas with vacant parcels and sluggish development climates. These uses also emphasize the pedestrian experience, which could help foster more tourism and recreation.

Repurposed shipping containers are an increasingly popular structural material for employing the pop up retail concept due to their size, cost, ease of transport, and durability. For example, an 8 ft by 40 ft container can cost around \$3000 and can be easily loaded onto a truck and moved to a different location. The structures can also be adapted with modern amenities such as electricity, plumbing, and insulation. One of the most important factors concerning the shipping container is the strength of the structure. Made of non-corrosion Corten steel with a unibody construction, the containers are earthquake, fire, tornado, and hurricane proof. Structures of this quality would contribute to the resiliency of the Port of Belford.



Recommendations

Belford can look to pop-up retail as a first step to in achieving larger revitalization goals. While the practice is still quite uncommon, it is not unprecedented in New Jersey. In fact, Asbury Park, located just 20 miles south on the shore, has a number of pop-up stores housed in repurposed shipping containers. The structures, which have fun architecture with a waterfront theme, have assisted in the revitalization of the boardwalk and surroundings in Asbury Park.

While the “pop-up” development concept is touted for being relatively fast and cost-effective, its new and unorthodox nature can complicate the development process. Zoning and building codes largely do not account for these structures and/or uses, which can lead to a long and complicated permitting process. Therefore, the feasibility is dependant upon the current regulatory environment.

Additionally, the Port of Belford would be a prime candidate for a Marine Incubator. This Industrial “flex-space” would provide different size modules of space to start-up marine related trades. This would allow services such as boat repair, boat painting or marine retail to operate at a small scale without a large real estate investment. This type of operation allows for long-term growth and expansion while maintaining low barriers to exit.



Recommendations

Integrate the Natural Environment

The wetlands surrounding the Belford neighborhood make the area a unique, almost isolated spot. Perfect for an outdoor getaway. Therefore, beyond preserving the environmental areas for the protection they provide against flooding and the home they provide to wildlife, these areas should be preserved for their ability to make Belford a true destination for area residents and visitors interested in recreation. To increase recreational opportunities in the neighborhood, this plan follows the recommendations of several other plans in suggesting that connections are made between the Henry Hudson Trail and Belford, as well as Bayshore Waterfront County Park and Belford. Moreover, kayakers already utilize Compton Creek but with more marketing of the small boat launch parcel purchased by the Township up the creek and perhaps the purchase of kayaks by the municipality or county for rental, more kayakers could visit and enjoy the natural beauty in Belford. Visitors to the area participating in recreational activities will be no less likely to take enjoyment in whatever retail opportunities are established in the Net House and therefore are an important part of an integrated development scheme for the neighborhood. Making sure that these natural elements are a core part of our plan means that we are positioning the area for a sustainable use in the future.



Recommendations

Improve Utilization of the Ferry Terminal Parking Lot

Solar panels over parking lot

The parking lot near the ferry terminal presents an economic as well as an environmental opportunity in the way of a solar canopy. A canopy of solar panels could be erected over all, or just a portion of the parking lot. This would generate electricity for the ferry terminal as well as provide cover for cars that park underneath the canopy from sun during the summer, rain, and snow during winter months. A standard solar canopy covering ten spaces is capable of producing roughly 12 kWh of electricity a year. The current SREC market in New Jersey typically pays about \$75 per kWh generated by solar panels. This would amount to \$900 dollars generated for every ten spaces covered by a canopy. The ferry terminal lot has 1,050 spaces currently so the earning potential of the canopy would have significant room for growth depending on the size of the project undertaken. The SREC market also has the potential to grow as well. The recently signed “New Jersey Solar Resurrection Bill” has the solar industry optimistic that SREC prices could rise to around \$200/SREC. This would bring the earning potential of coverage of 10 spaces to \$2,400 per year.

Solar canopies would also present an interesting marketing opportunity to people who are looking to invest in electric vehicles. Many solar canopies offer charging capabilities for electric cars. Ferry riders would be able to park a vehicle underneath the canopy during the day and charge it while they were at work. This would be both environmentally beneficial as well as a possible attraction to commuters who own or are looking to purchase an electric vehicle.

The county has expressed some concern about construction of a permanent structure on the parking lot due to environmental concerns, however there are varieties of solar canopy that do not require permanent support structures that would eliminate concerns about invasive construction on the area.

Solar canopies provide an interesting opportunity to increase economic sustainability by improving the utilization of the ferry terminal parking lot on a year round basis. The canopy could both generate revenues through electricity production but also make the lot, and ultimately the region, more attractive to more people by offering electric vehicle charging capabilities. Local energy production is also a great way to improve the sustainability of the neighborhood.

Recommendations

Increasing Off-Peak Utilization of Ferry Terminal Parking Lot

There are 1,050 parking stalls at the Belford Ferry Terminal parking lot. Because the ferry is used almost exclusively by commuters, the lot is typically almost empty during the evening and on weekends and holidays. The ferry terminal parking lot is a good candidate to host evening, weekend, and holiday activities for several reasons, namely it has a large, flat, paved surface conducive to a variety of activities, it is easily accessible by road, and it has an attractive and unique waterfront location.

There are a number of uses that could be considered depending on local interests and organizational capacity.

- Farmer’s markets or seafood markets
- Community fairs or carnivals
- Arts and crafts fairs
- Live music or cultural events

It is not without precedent to use commuter parking lots for these types of events. Examples include the Burke Farmers Market in Burke, Virginia and the Suffern Fall Farmer’s Market in Suffern, New York. In Belford, events utilizing this parking lot could also relate with other new tourism developments in the area to form a single sense of place.



Recommendations

Stabilize and Improve the Neighborhood

Designating Belford as an area in need of rehabilitation under the State Redevelopment statute enables homeowners in the neighborhood to receive tax credits on capital improvements to their homes. Capital improvements may include: interior renovations in accordance with applicable building codes, as well as the repair and/or replacement of deteriorated wood trim and siding. Driveways and other exterior structural improvements like porch foundations and front steps can also be included. Given that over 50% of homes were built before 1962 and are therefore 50 years old or older, Belford should qualify for this designation. The exact wording of the Local Redevelopment and Housing law on designating an area as in need of rehabilitation is included in Appendix C for greater detail.



Implementation

For all of these projects to become realities it is critical to find funding sources. This section will discuss a variety of the possibilities for funding as well as discuss organizations and grants available to provide technical assistance.

Sources of Funding

Funding for the type of improvement projects vary in source. Funding sources put forth in the 2009 Belford study have already been identified but should be reviewed once more for their applicability in the 2012 and post-hurricane context. These sources include:

- Parks and Open Space Preservation and Educational Facility
- NJDEP, Green Acres Program. State Park and Open Space Acquisition
- Monmouth County Park System Open Space Program
- The Port Authority of New York and New Jersey
- American Littoral Society
- I BOAT NJ

Infrastructure and Transportation Improvement

- Municipal Aid, NJDOT Division of Local Aid and Economic Development
- Local Aid for Centers of Place
- Community Development Block Grants

Implementation

State of New Jersey
The State of New Jersey is also home to a number of potential funding streams. These will be discussed further detail in below.

NJ Environmental Infrastructure Trust
Through the provision of low-cost financing, the New Jersey Environmental Infrastructure Trust funds sustainable infrastructure projects that protect water resources. Due to the confluence of surface water with ocean water in the Belford area this may be an interesting prospect.

NJ Department of Transportation Office of Maritime Resources
The Office of Maritime Resources engages in initiatives such as environmental restoration, dredging projects, port development, enhancement and security, maritime transportation, marine trades advocacy, harbor safety and management, and ferries. Grants are available to organizations involved in the marine industry through the I BOAT NJ Program under the Office of Maritime Resources.

Federal Programs
The state government is certainly not the only ones with pots of money which Belford may be able to tap into during its recovery efforts if not. From the United States Department of Agriculture to the U.S. Department of Homeland Security, the possibilities are truly endless to those who aspire for federal funding.

U.S. Department of Agriculture
Farmers Market Promotion Program
Approximately \$10 million is available for marketing operations such as farmers markets, community supported agriculture and road-side stands. These grants are administered by the USDA's Agricultural Marketing Service (AMS).

Trade Adjustment Assistance Program
Producers of raw agricultural commodities and fishery products that are determined by the Foreign Agricultural Service (FAS) administrator to have been adversely affected by imports may apply for technical assistance and cash payments under the Trade Adjustment Assistance (TAA) for Farmers program.

Implementation

U.S. Department of Homeland Security
The U.S. Department of Homeland Security may offer several programs that are relevant for Belford. For example, the Port Security Grant Program (PSGP), Transit Security Grant Program (TSGP), Urban Areas Security Initiative (UASI), Homeland Security Grant Program (HSGP), Emergency Management Performance Grant (EMPG) should all be investigated.

Preferential Tax Treatment
As a seafood processor, several possibilities exist for claiming preferential tax treatment. For instance, seasonal farm markets in New Jersey, meaning markets which must be closed seasonally for not less than 90 days, can qualify for NJ Farmland Assessment. Moreover, commercial fishing vessels can be exempt from state sales and use taxes and eligible for refund for state motor fuel taxes.

Assistance Programs
Within the State and federally there is a large variety of resources that can be utilized to provide small businesses and individuals in New Jersey with technical assistance.

State of New Jersey
The New Jersey Department of Agriculture, Division of Marketing and Development offers several services which might be of interest to the fishermen.

Agricultural Economic Development Services
This series provides resources and assistance to resolve questions on economic, environmental, taxation, farm building construction and land use issues.

Implementation	The Belford Neighborhood Revitalization Plan
<p><i>Export Development Assistance</i></p> <p>Provide trade show assistance and product promotion assistance. They can help apply for funds through the USDA's "Market Access Program" to receive reimbursement for promotional expenditures.</p>	
<p><i>Fish and Seafood Development</i></p> <p>"Jersey Seafood" brand advocacy, grant assistance with USDA's rural development program, and development of opportunities for value-added products.</p>	
<p><i>Division of Agricultural and Natural Resources - Fish and Seafood Development Program</i></p> <p>The Fish and Seafood Development Program assists the commercial fishing industry to develop viable business plans, innovative marketing concepts, export strategies and value-added processing technologies.</p>	
<p><i>Office of Aquaculture Coordination</i></p> <p>The Office of Aquaculture Coordination has developed an aquaculture policy framework consisting of the Aquatic Farmer License Program, a set of agricultural management practices, an aquatic organism health management plan and an import protocol for finfish that helps to ensure that aquaculture development in New Jersey is both environmentally sound and business friendly.</p>	
<p><i>New Jersey Business Action Center</i></p> <p>The New Jersey Business Action Center (BAC) serves as a "one-stop" shop for businesses helping companies to stay and grow in New Jersey, as well as locate in our great state. The Center's business advocates work to encourage entrepreneurship by supporting businesses of all sizes, advancing the global competitiveness of New Jersey companies, and promoting the State's attractiveness as a vacation destination and business investment location nationally and internationally.</p>	

Implementation

The Belford Neighborhood Revitalization Plan

Shore Protection Program Funding

The Shore Protection Program was built to protect public and private property and infrastructure from coastal storm damage, erosion, shoreline migration, and sea-level rise. Projects include beach replenishment and construction and maintenance of bulkheads, jetties, and seawalls. Eligible projects must be associated with the protection, stabilization, restoration or maintenance of the shore, including monitoring studies and land acquisition, and must be consistent with the current New Jersey Shore Protection Master Plan and Coastal Zone Management Program. Project areas must be affected by normal tidal cycles and be located on public or private property which has legal, perpetual easements assigned to the state for public access and use. Projects will be prioritized, after monies are reserved for US Army Corps of Engineers projects requiring a state funding match, based on:

- Need to maintain or repair an existing state shore protection feature or structure;
- Relative potential storm damage risk to public and private property and infrastructure; this priority consideration includes the direct exposure to coastal storms and the relative values of the at-risk property and infrastructure;
- Public access and use enhancements provided by the project

Out-of-State Institutions

Outside of state government several other institutions are helping New Jersey communities recover from the hurricane.

- New Jersey Economic Development Authority
- Main Street Disaster Relief Program
- The Main Street Disaster Relief Program will make available EDA guarantees of up to \$500,000 for commercial lines of credit to businesses that need access to cash to improve their damaged property while awaiting insurance proceeds.

Storm Recovery Loans through UCEDC

In response to the devastation facing small businesses in the aftermath of Sandy, UCEDC, a statewide nonprofit economic development corporation, is now prepared to expedite loan applications of up to \$15,000 to meet immediate post-storm working capital needs.

Implementation

Federal Programs
Additionally, federal programs are also helping New Jersey communities recover from the hurricane.

Federal Emergency Management Agency (FEMA)
In addition to recovery resources being offered through the State of New Jersey, the federal government has issued a major disaster declaration for all New Jersey counties. That means the Federal Emergency Management Agency (FEMA) is accepting applications for disaster assistance from businesses and individuals in those counties.

U.S. Small Business Administration – New Jersey District
Through its Office of Disaster Assistance, SBA provides low-interest, long-term loans for physical and economic damage caused by a declared disaster:

- Home and Personal Property Loans
- Business Physical Disaster Loans
- Economic Injury Disaster Loans
- Military Reservists Economic Injury Loans

US Department of Commerce, NOAA Fisheries Financial Services
The Office of Management & Budget Financial Services Division administers several financial assistance programs for United States commercial fishermen and other eligible citizens and entities. Particularly relevant in this situation is the Financial Services Division which manages a national financial assistance program in the form of direct loans, a tax deferred capital construction fund, and vessel and gear loss and damage compensation programs.

Implementation

Private Foundations
Although most private foundations only make grants to nonprofits, there are a number of opportunities available for governmental organizations, cooperatives, non-profit partnerships and individuals that may be relevant to the implementation of this plan. Furthermore, the effects of Hurricane Sandy have prompted a response from private foundations looking to assist with recovery efforts. As of the writing of this document, many of these funds are still in development. For example, the New Jersey Recovery Fund, administered by the Community Foundation of New Jersey, is an effort between local and national foundations, corporations, and individuals to support New Jersey’s communities and nonprofit organizations that are affected by or responding to Hurricane Sandy. The award process for grants and program related investments will be released in December.

Additionally, there is some foundation funding available for cooperatives, which could be utilized by the Belford Seafood Co-Op. For example, the Cooperative Development Foundation has numerous funds dedicated to the development of cooperatives, with a recent focus on the long-term recovery of cooperatives and their members after Hurricane Sandy. The foundation’s Hurricane Sandy Cooperative Recovery Fund directs funds to individuals and cooperative businesses along the East Coast that have suffered losses from Hurricane Sandy.

There are also resources available from foundations in New Jersey and the greater region that are concerned with issues relevant to the goals of this plan. A great example is the New York-New Jersey Harbor Estuary Program, which concentrates on waterways and productive habitats, sediments, community stewardship, public education, and safe access to waterways. Funds from such a program could be used to host tourism, recreation, and education activities or create a public access point on the Belford waterfront.

Implementation

Crowdsourcing

Crowdsourcing is the process of getting work or funding from a crowd of people. Crowdsourcing can be used to brainstorm solutions to a problem or raise funds for a specific project. Crowdsourcing can be a particularly effective fundraising tool because it draws funds from previously untapped sources at the same time that it creates awareness for your cause, in this case for instance, helping Belford rebuild. An October 2012 issue of Forbes predicted the use of such tools to “explode” in 2013 and in fact, after the hurricane many communities were harnessing the power of crowdsourcing platforms to gather funds for rebuilding. There are many websites that serve as a platform for crowdsourcing. Some cater to the general entrepreneurial community while others provide a platform for projects in a specific issue area like education. For instance, fund.ly is focused on connecting people and non-profits working on charitable causes to funding. Key features common to most include an attractive user-friendly site, a space to provide media content and text about your project, and a series of pledge amount options with corresponding thank you rewards.

Kickstarter is one of the most prominent crowdsourcing platforms. Over 32,070 projects have been successfully funded with over \$348 million dollars. Examples of projects funded on Kickstarter include creative films, an outdoor pavilion, a website that wants to run without ads, and a non-profit working with youth on food security. No credit cards can be charged until enough pledges have been made to reach the funding target. Kickstarter collects a 5% fee from the project’s funding total if a project is successfully funded. Project creators can reward those who donate by offering thank you mentions on their personal blogs or products from their projects. You need to create a video for fundraising success on this site. Something which could be done in Belford could be footage that captures the storm’s impact on the community and testimonial by one of the fishermen.

Implementation

Indiegogo is another popular platform and is very similar to Kickstarter . The key difference is that you can choose to close a project before full funding. Under the regular option Indiegogo collects 4% if you reach the fundraising goal and 0% if you do not. Under the “Flexible Funding” option Indiegogo gives you the option to take your funding, even if incomplete, but collects 9%. Indiegogo also has a small business section in addition to a technology section which makes it differ from Kickstarter. Examples of projects funded through Indiegogo include microbusiness grants for minority entrepreneurs, a small-business conference for at-home moms, and funds for the New York City Food Truck Association to provide hot meals to hurricane Sandy victims.

Some other crowdfunding platforms take a different strategy. They offer a platform and the tools for non-profits to have their own fundraising page. For instance, CauseVox provides non-profits with the tools to create their own separate page for crowdfunding purposes rather than being one of many projects on a group platform as is the case with Kickstarter. Causevox gives non-profits their own customizable fundraising site with the capability to take credit card or paypal donations right on the webpage. The monthly fee is \$39/month but these are waived until you reach your first \$3,000. Causevox takes 7.5% per credit card transaction. Besides the fact that unlike accounts on Kickstarter or Indiegogo, using CauseVox for a fundraising campaign does not need to be time limited. Crowdsourcing is a relatively new method of fundraising but worthy of consideration.

Conclusion

Hurricane Sandy ravaged Belford and its unique fishing port. Homes were flooded, channels were filled with debris, and damages are currently tallied at over \$1 million dollars -- even before factoring in dredging costs. A combination of immediate and long term remedies are needed to restore Belford and to create resilience so as to mitigate against future disruptions. This resiliency will allow Belford to be more economically sustainable for years to come.

Belford must enhance critical infrastructure, beginning with dredging and bulkhead repairs at the port. Boats are running aground during low tide and cannot conduct regular fishing business as this persists. Infrastructure improvements paired with local diversification plans are critical to preserving and strengthening Belford's commercial fishing industry. Additions to the area like a boardwalk, restaurant, event venue, education facility, or pop-up retail, as well as an improved connection to areas of recreation can create visitor traffic and encourage new businesses to locate in Belford. The more intertwined each amenity becomes with the rest of the port area, Belford's historic sense of place will become exponentially reinforced. The port area can become a destination and commercial engine for Belford.

The historic heritage of the commercial fishing industry can also be used as the focus of a revitalization plan. With revitalization designation, Belford property owners would gain tax breaks for capital improvements, which would ease an already difficult rebuilding process after the storm. Other sources that can help contribute to the rebuilding process include private development partnerships, state and federal disaster relief funds and a variety of established foundations. Even creative means such as internet driven crowdsourcing could be tried.

All of the recommendations of this plan are interconnected and should be looked at in a comprehensive way to achieve a revitalized Belford area. The overarching theme of the Belford Neighborhood Revitalization Plan is to rebuild in a manner that will make the community more resilient- physically, environmentally, and economically. Fortifying infrastructure and diversifying the local economy are at the heart of storm mitigation and future revitalization. Long term improvements must accompany immediate relief. Foresight is needed to look past rebuilding to how things were, and look towards rebuilding for the long term. Belford can rebuild but it will require strong leadership and cooperation from the community, elected officials, Middletown Township, Monmouth County and The State of New Jersey. Each stakeholder mentioned in this plan has a unique position to contribute through raising awareness or acting. The more interest and awareness the greater chance of Belford representing a place of distinct culture that not only made it through the storm, but came back stronger and better for everyone.

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Appendix

Appendix A. Bulkhead Materials

A large component of the costs associated with bulkhead replacement has to do with the materials being used. However, choosing the right materials are important as the bulkhead will be forced to deal with heavy loads, corrosive saltwater, marine life attaching and growing to the bulkhead along with ice in the winter. Therefore, the options for construction include timber, steel, vinyl/plastic, and concert/cement. Material selection is site specific based upon various design considerations as well as each materials various advantages and disadvantages. For example, timber bulkheads and seawalls may be the most cost effective, but could be susceptible to marine borers and rot. Steel bulkheads and seawalls could have the most upfront costs, but are also the strongest. Vinyl/Plastic bulkheads could have the greatest service life, but may not be easy to drive into the ground. Finally, concrete/cement could be the most practical, but could also require periodic maintenance. When considering the commercial nature of the Belford Port combined with the pre-existing conditions of a severely deteriorated steel bulkhead, replacement with steel with strip of wood buffering for docking and mooring purposes would be the most appropriate for the coastal activity in the port.

Appendix B. Bulkhead Funding

The primary funding source for bulkheading is through the Shore Protection Program. The Shore Protection Fund (N.J.S.A. 13:19-16 et seq), come from either through a federal-state-local cost share or a state-local cost share, depending on the size and scope of the project. Under these projects, design and real estate acquisition costs are the responsibility of the local sponsor. State-owned shore protection structures are designed, constructed and maintained through the Bureau of Coastal Engineering. In the case of Belford, the landowners surrounding the inlet have expressed high levels of interest in a bulkhead repair and replacement, especially if funding is available for the project. Truly, project funding varies with the project scope. For projects conducted by the state and the grantee, the grantee must provide a minimum of 25% of the construction cost, provide engineering design and specifications, and provide perpetual easements to facilitate public access. The same 75% state and 25% local grantee cost-share ratio is assigned to US Army Corps projects, however in these situations the USACE provides 65% of construction costs and the 75-25% ratio is applied to the remaining 35% of costs. Local grantees are not asked to share in the preconstruction design and planning costs; those costs are shared by the state and the USACE.

Appendix

Appendix C. Local Redevelopment and Housing Law - (N.J.S.A. 40A:12A)

“A delineated area may be determined to be in need of rehabilitation if the governing body of the municipality determines by resolution that there exist in that area conditions such that: (1) a significant portion of structures therein are in a deteriorated or substandard condition and there is a continuing pattern of vacancy, abandonment or underutilization of properties in the area, with a persistent acreage of property tax payments thereon or, (2) more than half of the housing stock in the delineated area is at least 50 years old, or a majority of the water and sewer infrastructure in the delineated area is at least 50 years old and is in need of repair or substantial maintenance; and (3) a program of rehabilitation, as defined in section 3 of P.L.1992, c. 79 (C.40A:12A-3), may be expected to prevent further deterioration and promote the overall development of the community.”