



Strategic Recovery Planning Report Building a Stronger, More Resilient City



SOMERS POINT
NEW JERSEY

January 2014

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City Administrator

Wes Swain

City Clerk

Carol DeGrassi

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Wes Swain, City Administrator
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Gregory Schneider, City Engineer
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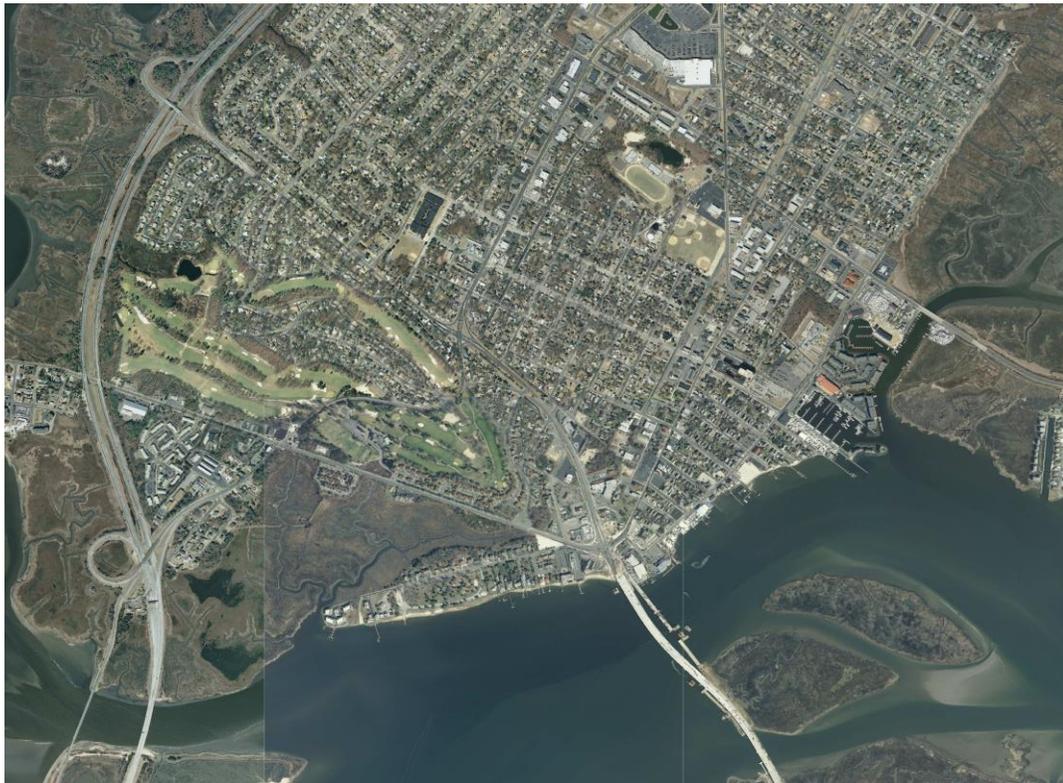
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1.0 Introduction

The Strategic Recovery Planning Report is a comprehensive planning document that contains actionable recommendations both for rebuilding the community and increasing the resilience of infrastructure and buildings. This report will analyze flood risks the City of Somers Point (City). It will also outline multi-year investments to increase economic development and make recommendations to protect neighborhoods and infrastructure from future natural disasters.

To ensure the Plan's success a series of public meetings were held to gather input from the people who live and work in the City. A Steering Committee was also established consisting of public officials, business leaders, and local residents to guide development of this Report. Interactive meeting were held with the Steering Committee on November 15, 2013 and December 16, 2013. In addition, the Somers Point Planning Board played an important role in the formulation of this Report. Meeting with the full Planning Board were held on November 25, 2013 and December 18, 2013.

This Strategic Recovery Planning Report was fully funded by a grant provided by the New Jersey Department of Community Affairs (NJCA). NJCA has allocated Community Development Block Grant – Disaster Recovery funds for this program.



2.0 Existing Conditions

The City is located on the Great Egg Harbor Bay at the southern tip of Atlantic County, New Jersey. The City has a year-round population of 10,795 based on the 2010 U.S. Census and is bordered by the Great Egg Harbor Bay to the east and south, the Great Egg Harbor River and Patcong Creek to the west, and the City of Linwood to the north. The City is bounded by tidal waterways on three sides and is potentially exposed to flooding from two sources - rising sea level and storm events (e.g. coastal flooding, ponding, urban drainage, etc.). While the change in sea level is a slow process and storm flooding more immediate, there is a linkage between the two, since as the shoreline changes, there is a corresponding change to the upper limits of the 100-year flood plain. The potential impact of these changes is significant.

According to the U.S. Census Bureau, the City has a total land area of 5.1 square miles, of which 4 square miles is land and 1.1 square miles is water.

The historical rate of sea level rise along the New Jersey coast over the past half-century was 0.14 inches/year, while predicted future rates are expected to increase to 0.5 inches/year. This means that by 2050 sea level is expected to rise by approximately 1 foot and by 2100 sea level is projected to rise about 3 feet along the Jersey Shore (Figure 1).

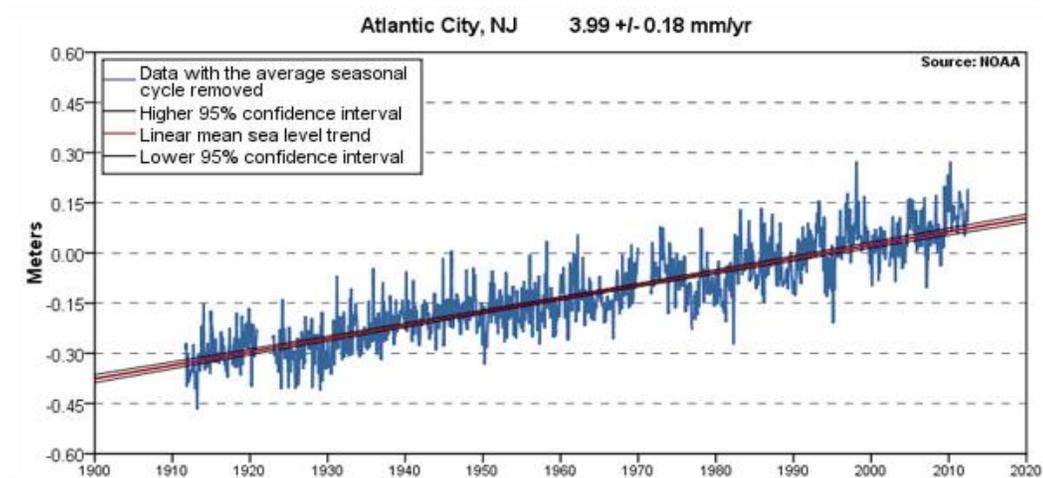
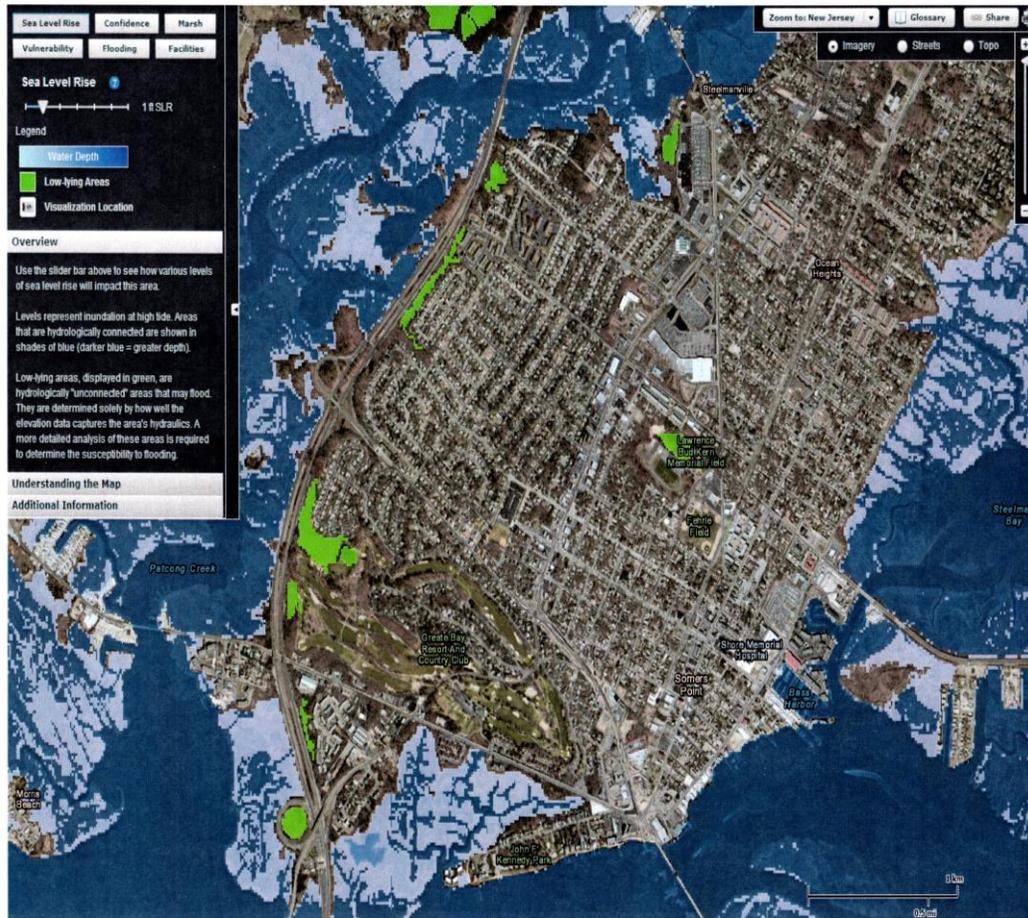


Figure 1 – Historic Rate of Sea Level Rise Along the New Jersey Coast.

Source: www.njfloodmapper.com

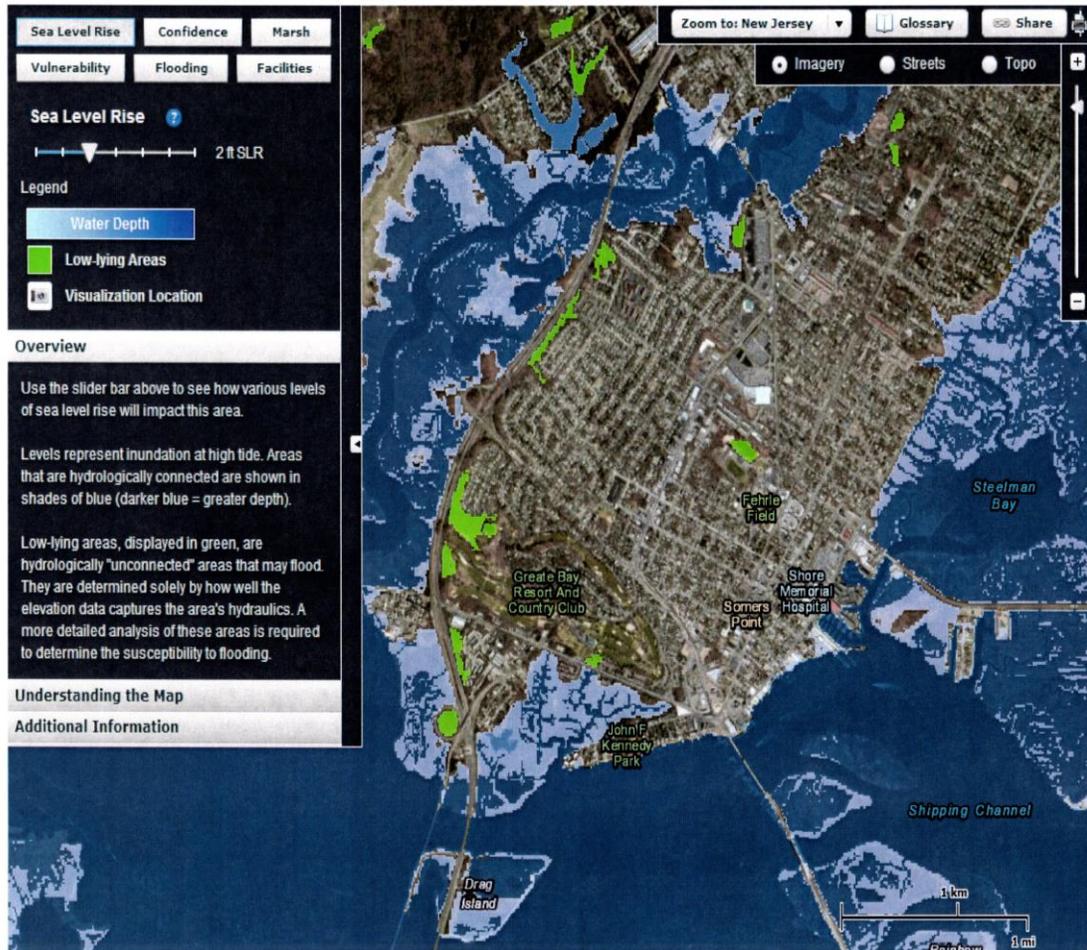
The initial Flood Hazard Boundary Maps (FHBM) for Somers Point were issued on December 28, 1973 by FEMA. Almost a decade later, the Flood Insurance Rate Maps (FIRM) were released. The FIRMs are based on historic, meteorologic, hydrologic, and hydraulic data, as well as open space conditions, flood control works, and development.



<http://54.243.129.238/SLR.html>

11/8/2013

Figure 3 – Approximate areas of Somers Point subject to inundation at high tide with a 1 foot increase in sea level. (Source: njfloodmapper.com)



<http://54.243.129.238/SLR.html>

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Figure 4 – Approximate areas of Somers Point subject to inundation at high tide with a 2 ft. increase in sea level. (Source: njfloodmapper.com)

In addition to rising sea level, the City is also vulnerable to several forms of storm-related flooding including coastal flooding, shallow flooding (ponding) and storm surge. Areas of the City subject to these conditions are mapped on the Flood Insurance Rate Map (FIRM) and were commonly referred to as the 100-year flood area, or A zone, and 500-year flood area, or B zone. An example of these areas is shown on Figure 5, which is an excerpt from the current FIRM showing the mapped flood areas in the vicinity of the former circle near the Route 52 causeway. FEMA is in the process of updating the FIRM and has recently released preliminary work maps as a form of “best available data” for municipalities to use

as guidance documents during the current stage of post Sandy recovery. Figure 6 is an excerpt from the preliminary map of the same general area around the “circle”, which shows subtle changes to the 100- and 500-year flood areas and, more significantly, the addition of V zones along the east and south facing waterfront areas.

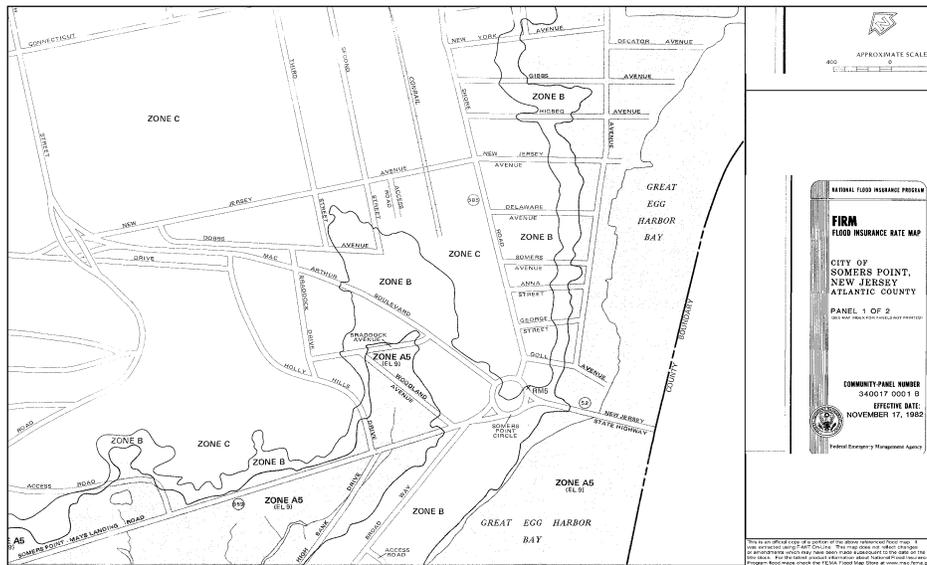
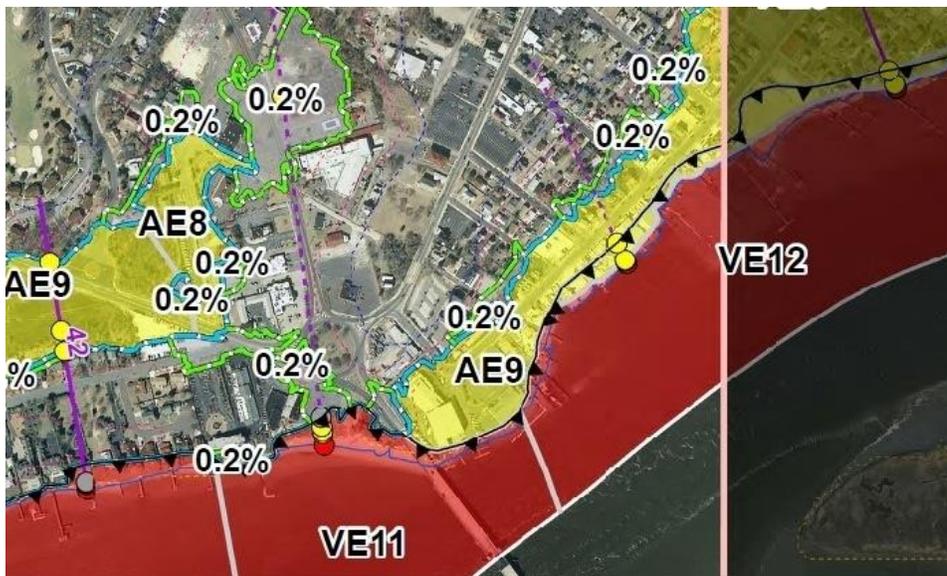


Figure 5 (top) – Existing FIRM classifications in vicinity of the Route 52 causeway.

Figure 6 (bottom) – Flood Hazard classifications as shown on FEMA's most recent Preliminary Work Map.



The 2010 Atlantic County Hazard Mitigation Plan reports that the current (pre-Sandy) Flood Insurance Rate Maps have 47 percent of the City lying in a high-risk area (A or AE zones). Much of the high-risk area is comprised of undeveloped wetlands areas since the value of improvements is only 21.8 percent of the total for the City. These same figures report 18.9 percent of the City in a moderate-risk area, X500 zone (Figure 7). While the high-risk area is much larger in size, the value of improvements is relatively low when compared to the moderate-risk area. The high-risk area contains 21.8 percent of the total improvements for the City vs. 23.5 percent for the moderate risk area (Figure 8).

SECTION 3a - RISK ASSESSMENT: HAZARD PROFILES

Table 3a.16
Summary of FEMA Q3 Flood Data by Municipality: Land in Hazard Areas

Municipality	Total Land Area (Acres)	High Flood Risk (Acres)		Moderate Flood Risk (Acres)	Low Flood Risk (Acres)	Possible But Undetermined Risk (Acres)	Land in High Flood Risk %		Land in Moderate Flood Risk %
		VE	A, AE	X500	X	D	VE	A, AE	X500
Absecon, City of	3,728	0	1,912	389	1,382	45	0.0%	51.3%	10.4%
Atlantic City, City of	7,232	3,407*	3,686	139	0	0	47.1%	51.0%	1.9%
Brigantine, City of	2,077	495*	1,582	0	0	0	23.8%	76.2%	0.0%
Buena, Borough of	4,855	0	95	0	4,760	0	0.0%	2.0%	0.0%
Buena Vista, Township of	26,631	0	1,554	1	25,076	0	0.0%	5.8%	0.0%
Corbin City, City of	5,130	0	712	309	973	3136	0.0%	13.9%	6.0%
Egg Harbor City, City of	7,124	0	3,004	639	3,481	0	0.0%	42.2%	9.0%
Egg Harbor, Township of	43,741	0	11,838	1,937	29,965	0	0.0%	27.1%	4.4%
Estell Manor, City of	34,660	0	9,850	0	24,762	48	0.0%	28.4%	0.0%
Folsom, Borough of	5,368	0	1,492	130	3,745	0	0.0%	27.8%	2.4%
Galloway, Township of	57,257	0	21,392	1,280	34,585	0	0.0%	37.4%	2.2%
Hamilton, Township of	72,131	0	23,317	582	48,229	0	0.0%	32.3%	0.8%
Hammonton, Town of	26,621	0	2,996	99	15,055	8470	0.0%	11.3%	0.4%
Linwood, City of	2,557	0	1,235	292	1,030	0	0.0%	48.3%	11.4%
Longport, Borough of	248	14	234	0	0	0	5.6%	94.4%	0.0%
Margate City, City of	930	37	883	10	0	0	4.0%	94.9%	1.1%
Mullica, Township of	36,195	0	6,319	502	26,542	2836	0.0%	17.5%	1.4%
Northfield, City of	2,324	0	354	71	1,900	0	0.0%	15.2%	3.1%
Pleasantville, City of	3,664	0	1,263	177	2,224	0	0.0%	34.5%	4.8%
Port Republic, City of	5,040	0	2,665	723	1,652	0	0.0%	52.9%	14.3%
Somers Point, City of	2,631	0	1,237	497	897	0	0.0%	47.0%	18.9%
Ventnor City, City of	1,335	35	1,144	156	0	0	2.6%	85.7%	11.7%
Weymouth, Township of	7,670	0	1,413	1	6,256	0	0.0%	18.4%	0.0%
Atlantic County Total	359,149	3,988	100,177	7,935	232,513	0	1.1%	27.9%	2.2%

*Includes undeveloped backbay marshland areas



Figures 7 (above) and 8 (next page) – Excerpts from the ACAHMP. Currently 47 percent of the land area of the City is in a high-risk flood area but this represents less than 22 percent of the improved value.

Table 3a.17
Summary of FEMA Q3 Flood Data by Municipality: Improved Values in Hazard Areas

Municipality	Total Improved Value	Improved Value in High Flood Risk Areas		Improved Value in Moderate Flood Risk Areas	Improved Value in Low Flood Risk Areas	Improved Value in High Flood Risk Areas %		Improved Value in Moderate Flood Risk Areas %
		VE	A, AE	X500	X	VE	A, AE	X500
Absecon, City of	\$263,139,927	\$0	\$29,724,892	\$30,013,100	\$203,401,935	0%	11.3%	11.4%
Atlantic City, City of	\$5,847,037,300	\$77,986,239	\$5,560,144,493	\$208,906,487	\$0	1.3%	95.1%	3.6%
Brigantine, City of	\$513,295,303	\$23,405,230	\$489,890,073	\$0	\$0	4.6%	95.4%	0%
Buena, Borough of	\$132,115,107	\$0	\$566,522	\$0	\$131,179,439	0%	0.4%	0%
Buena Vista, Township of	\$479,119,804	\$0	\$15,307,091	\$14,019	\$463,567,116	0%	3.2%	0%
Corbin City, City of	\$28,793,922	\$0	\$9,166,217	\$4,992,579	\$14,635,126	0%	31.8%	17.3%
Egg Harbor City, City of	\$80,098,041	\$0	\$1,202,802	\$1,310,315	\$77,584,923	0%	1.5%	1.6%
Egg Harbor, Township of	\$3,470,834,305	\$0	\$265,355,808	\$125,222,825	\$3,080,255,671	0%	7.6%	3.6%
Estell Manor, City of	\$102,859,729	\$0	\$1,864,380	\$0	\$100,995,348	0%	1.8%	0%
Folsom, Borough of	\$148,509,885	\$0	\$13,363,424	\$13,209,915	\$121,908,590	0%	9.0%	8.9%
Galloway, Township of	\$2,285,757,329	\$0	\$47,483,423	\$12,687,353	\$2,225,585,621	0%	2.1%	0.6%
Hamilton, Township of	\$1,728,805,249	\$0	\$86,078,691	\$62,854,493	\$1,579,872,064	0%	5.0%	3.6%
Hammonton, Town of	\$936,333,112	\$0	\$41,515,877	\$4,875,744	\$887,941,507	0%	4.4%	0.5%
Linwood, City of	\$498,008,251	\$0	\$65,208,322	\$74,727,989	\$358,071,941	0%	13.1%	15.0%
Longport, Borough of	\$165,551,868	\$64,292	\$165,487,576	\$0	\$0	0.04%	99.96%	0%
Margate City, City of	\$662,149,894	\$181,572	\$649,879,825	\$12,088,497	\$0	0.03%	98.1%	1.8%
Mullica, Township of	\$402,224,021	\$0	\$60,891,985	\$30,889,251	\$310,395,101	0%	15.1%	7.7%
Northfield, City of	\$800,316,450	\$0	\$7,142,473	\$18,599,479	\$774,574,498	0%	0.9%	2.3%
Pleasantville, City of	\$1,134,689,566	\$0	\$41,540,030	\$49,774,919	\$1,043,374,617	0%	3.7%	4.4%
Port Republic, City of	\$92,347,407	\$0	\$16,728,898	\$19,713,045	\$55,905,464	0%	18.1%	21.3%
Somers Point, City of	\$1,034,500,500	\$0	\$225,320,851	\$243,098,319	\$566,081,329	0%	21.8%	23.5%
Ventnor City, City of	\$380,608,771	\$577,952	\$286,374,593	\$93,656,225	\$0	0.2%	75.2%	24.6%
Weymouth, Township of	\$111,684,498	\$0	\$13,494,252	\$0	\$98,144,835	0%	12.1%	0%
<i>Atlantic County Total</i>	<i>\$21,298,780,238</i>	<i>\$102,215,285</i>	<i>\$8,093,732,498</i>	<i>\$1,006,634,554</i>	<i>\$12,093,475,126</i>	<i>0.48%</i>	<i>38.0%</i>	<i>4.7%</i>



The most recent Preliminary Work Map (Figure 9) from the Federal Emergency Management Agency (FEMA) shows the A zones are expanding, placing more of the City in a high-risk category. A total of 182 properties have been added to the A zone. Also, a new V zone is recommended on Broadway Avenue, which will impact nine properties and on Bay Avenue impacting ten properties.



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11/8/2013

The City of Somers Point has experienced many natural hazard events that received a federal declaration including the most recent events listed below:

April 14 – 20, 2007	Nor'Easter	DR-1694
November 11 – 15, 2009	Nor'Easter	DR-1967
December 19 – 20, 2009	Snowstorm	DR-1873
February 5 – 6, 2010	Severe Winter Storm	DR-1889
December 26 – 27, 2010	Severe Winter Storm	DR-1897
August 26 – September 5, 2011	Hurricane Irene	DR-4021
June 29 – 30, 2012	Derecho	DR-4070
October 26 - November 8, 2012	Superstorm Sandy	DR-4086

2.1 Documented Damage from Superstorm Sandy

The City experienced extensive damage as a result of Hurricane Sandy with 379 insurance claims filed as of September 15, 2013 and \$2,239,287 losses paid according to the NJ Department of Banking and Insurance. This compares to the flooding history in the City over the last 35 years where only 335 insurance claims were filed between January 1, 1978 and September 30, 2013.

The ratable base of the City was reduced by more than \$1,728,800 as of March 1, 2013. A total of 83 properties incurred some damage, and 44 of these properties are located at the South Pointe at the end of Broadway where damage included air conditioning units and bulkheads. A total of seven structures were deemed Substantially Damaged by the City's Building Official. It is expected that additional properties will be added to this list in the coming months. One Bayfront business was totally destroyed by Superstorm Sandy.

The National Flood Insurance Program (NFIP) records show that there are 20 repetitive loss properties in Somers Point.

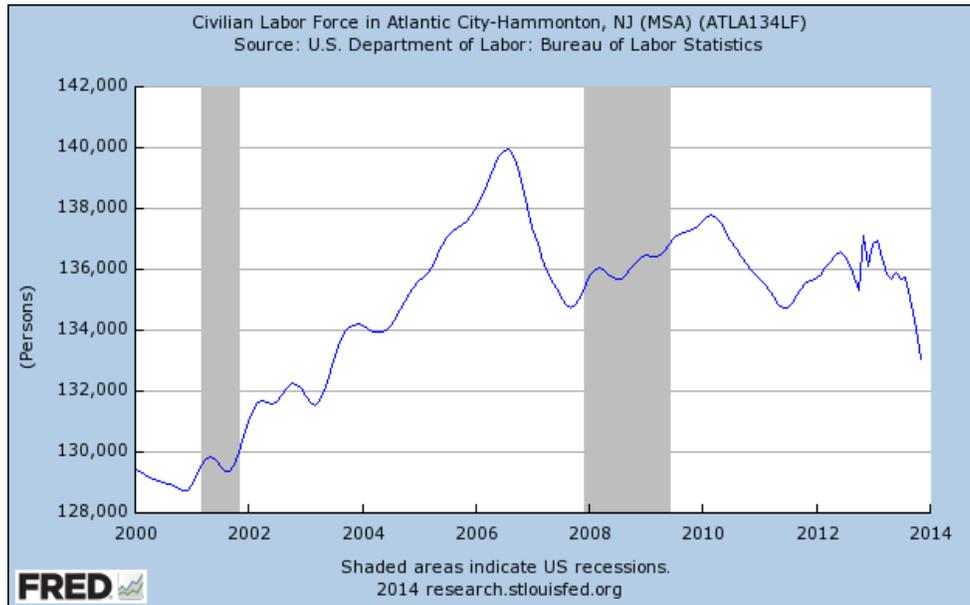
As of September 30, 2013, there were 1,066 NFIP Flood Insurance Policies in effect in the City of Somers Point, insuring property valued at \$230,694,700. The total cost of premiums in 2012 was \$860,825. Between January 1, 1978 and September 30, 2013 there were 335 insurance claims filed for property owners in Somers Point and the total payment was \$6,016,359. Listed below are the insurance claims resulting from Hurricane Sandy.

**Total Insurance Claims Resulting from Superstorm Sandy for Somers Point, New Jersey
As of September 15, 2013**

Claims filed:	379
Percent paid:	69.7%
Closed, no payment:	93
Losses paid:	\$2,239,287
Average paid:	\$8,482

Source: New Jersey Department of Banking and Insurance

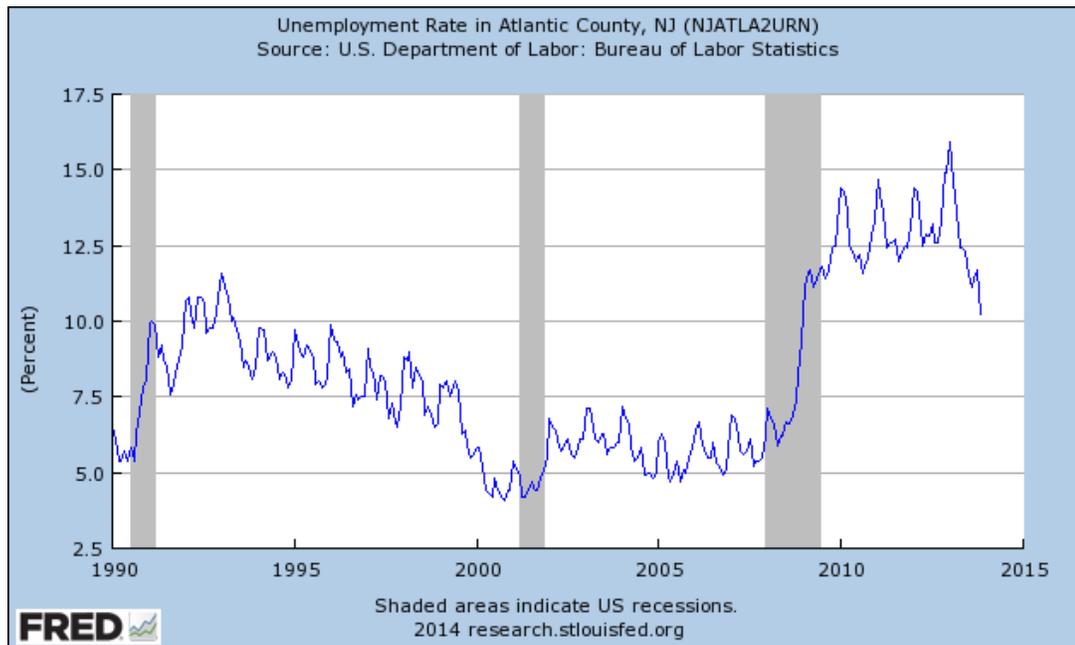
The Jersey Shore economy has not fully recovered since Superstorm Sandy. The labor force is the smallest it has been since 2003. The Labor Force was at starting to recover before Superstorm Sandy, but it has rapidly declined since the Storm, from 137,000 to 133,000 (Figure 10). This does not include the closing of the Atlantic Club Casino Hotel in January 2014 which will result in the loss of 1,600 direct jobs and 800 indirect jobs. The rapidly decreasing labor force has had a significant impact on the regional housing market, commercial growth and the overall ratable base. The County ratable base is expected to fall for the sixth consecutive year, this year by over \$2 billion.



The Atlantic City-Hammonton, NJ Metropolitan Statistical Area (MSA) is listed as 363 out of the country's 372 metropolitan areas in unemployment. The US Bureau of Labor Statistics data shows that for November 2013, the Atlantic City-Hammonton MSA is one of only twenty-one metropolitan areas that has jobless rates of at least ten percent. This lack of employment opportunities indicates that the impact of Superstorm Sandy has had a continued economic impact on the region.

On a positive note, the Atlantic City-Hammonton MSA had the nation's largest over-the-year unemployment rate decrease in November 2013 (-4.7 percentage points), from 14.9 percent in November 2012 days after Superstorm Sandy to 10.2 percent in November 2013.

According to data released by the Federal Reserve Bank of Philadelphia housing prices in the Atlantic City-Hammonton MSA has continued to drop. The data for the third quarter should a decrease of 0.4 percent while all other sections of the State of New Jersey, except for Cumberland and Cape May County's witnessed an increase in values. The decrease in value may be a result of Superstorm Sandy and flood insurance changes.



The data provided (Figure 10) above shows that the unemployment rate for the Atlantic City-Hammonton MSA peaked after Superstorm Sandy at over 15 percent.

2.2 Funding Assistance Provided

As of July 31, 2013, 24 homeowners in the City of Somers Point applied for New Jersey Resettlement Grants and 14 grants were awarded. These grants provided \$10,000 to encourage homeowners to stay in their existing home or in the same county. This grant can be used for many expenses including payment of flood insurance premiums.

Fifteen City homeowners applied for up to a \$150,000 grant from the RREM Program, and four grants were awarded. This program targets Substantially Damaged owner occupied primary homes with an adjusted household income less than \$250,000. These funds can be used to renovate and elevate residences. The State has announced that additional funds will be allocated to the Resettlement and RREM Program.

2.3 National Flood Insurance Program

There are currently more than 230,000 flood insurance policies in place for the residents of New Jersey. Nationally, that number has risen well beyond 5.6 million. Significant changes have also been made over the years to the NFIP, most notably the establishment of the Community Rating System (CRS) during the 1990s and a grant program for mitigation projects and plans.

Additionally, more than 20,000 communities in the United States and United States-held territories have had flood insurance made available, and nearly 100 private companies

now offer nationwide flood insurance backed by the federal government. Because of the NFIP, millions of taxpayer dollars are saved every year when it comes to disaster recovery.

The National Flood Insurance Program's (NFIP) Community Rating System (CRS) is a voluntary incentive program that recognizes and encourages community floodplain management activities that exceed the minimum NFIP requirements.

As a result, flood insurance premium rates are discounted to reflect the reduced flood risk resulting from the community actions meeting the three goals of the CRS:

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

The Biggert-Waters Reform Act of 2012 require the NFIP to raise insurance rates for some pre-FIRM properties to be adjusted to reflect the actual cost without subsidies. Pre-FIRM for the City of Somers Point is prior to December 28, 1973. Many of the pre-FIRM properties in high-risk areas do not meet current standards for construction and elevation, and they have been receiving subsidized rates that do not reflect their actual risk. The subsidized rates are being eliminated in some cases, as noted in the chart below. Some current policyholders and all future policyholders owning pre-FIRM properties in high-risk areas will pay rates based on their full risk of flood damage. However, most NFIP-insured properties (80 percent or more) are not affected by the changes.

For These Pre-FIRM Properties With Newly Issued Policies	Subsidized Rates Are Eliminated
Recently purchased pre-FIRM buildings in high-risk areas	Policies for newly purchased pre-FIRM buildings are issued at full-risk rates. Policies that were issued at subsidized rates for pre-FIRM buildings purchased on or after 7/6/2012 renew at full-risk rates starting 10/1/2013.
Policies issued for the first time on buildings in high-risk areas	New policies are issued at full-risk rates. Pre-FIRM subsidized policies first in effect on or after 7/6/2012 renew at full-risk rates

	starting 10/1/2013.
Policies re-issued after a lapse on pre-FIRM buildings in high-risk areas	Policies are reinstated at full-risk rates. Lapsed policies reinstated on or after 10/4/2012 and before 10/1/2013 will renew at full-risk rates.

For These Pre-FIRM Properties Paying Subsidized Rates	Subsidized Rates Are Moving to Full-Risk Rates
Non-primary residences (secondary or vacation homes or rental properties) in high-risk areas	25% annual increases at policy renewal until premiums reach full-risk rates for policies in effect before 7/6/2012. If a pre-FIRM property is sold, the new owner pays full-risk rates.
Non-residential/business buildings in high-risk areas	25% annual increase at policy renewal until premiums reach full-risk rates for policies in effect before 7/6/2012. If a pre-FIRM property is sold, the new owner pays full-risk rates.
Previously flooded residences in high-risk areas	25% annual increases at policy renewal for severely or repetitively flooded properties of 1 to 4 residences until premiums reach full-risk rates for policies in effect before 7/6/2012. If a pre-FIRM property is sold, the new owner pays full-risk rates.

For Other Property Types	Subsidized Rates Do Not Apply or Can Continue
Pre-FIRM primary residences in high-risk areas	Subsidized rates continue when policies are in effect before 7/6/2012 until or unless: <ul style="list-style-type: none"> • Property is substantially improved;

	<ul style="list-style-type: none"> • Property of one to four residences incurs severe, repetitive losses or receives insurance payments that exceed the property's value • Property is sold (the new owner pays full-risk rates); or • Policy is allowed to lapse.
Newer post-FIRM residences in high-risk areas	Not affected; already paying full-risk rates.
Residences in moderate- to low-risk areas	Not affected; properties in these areas (shown as B, C, or X zones on flood maps) do not pay subsidized rates.

Note: Discounted, lower-cost rating options for properties affected by flood map changes (Grandfathering; Preferred Risk Policy Eligibility Extension) are not affected by the removal of pre-FIRM subsidies. Policyholders can continue paying rates based on the risk shown on the previous flood map until Section 100207 of BW-12 is implemented. The best way to determine exactly how your property and insurance premiums will be affected by changes to subsidies is to talk with your insurance agent.

Source: National Flood Insurance Program

3.0 Review of Plans and Regulations

An objective of a Strategic Recovery Planning Report is to examine the adequacy of the existing planning documents and describe what changes are needed, if any, to support municipal planning needs and goals related to post storm recovery and to mitigate future storm impacts. The materials reviewed were:

- City of Somers Point Master Plan Reexamination Report (November 2004)
- City of Somers Point Development Plan (May 1979)
- Somers Point Vision Plan 2012 (February 2012)
- Development Regulations (Chapter 114 of Code of the City of Somers Point)
- NFIP Community Rating System
- Atlantic 4 - Hazard Mitigation Plan (2014)

The Community Plan Checklist includes a list of municipal documents that may be helpful in developing a Strategic Recovery Planning Report.

Plans, Ordinances, and Codes	Yes	No	Adopted Year	Update Frequency
Municipal Master Plan	x		2004	6 to 10 years
Vision Plan	x		2012	
All-Hazard Mitigation Plan	x		2014	
Floodplain Management Plan	x		1988	
Evacuation Plan				
Emergency Response Plan	x		1981	
Capital Improvements Plan		x		
Economic Development Plan	x		2006	
Open Space Plan	x		2008	
Stormwater Management Plan	x		2006	
Historic Preservation Plan				
Zoning Ordinance	x		1999	
Subdivision Ordinance	x		2011	
Building Code	x		1980	
NFIP Flood Damage Prevention Ord.	x		1988	
Cumulative Substantial Damage		x		
Greater than One Foot Freeboard		x		

3.1 Master Plan Reexamination/Development Plan 2004

The 2004 Reexamination Report identifies the following actions that the City has taken since adoption of the 1998 Reexamination which, directly or indirectly, contribute towards addressing flood hazards:

Recreation/Open Space/Conservation Objectives

- Stabilization of the long-standing erosion problem at Kennedy Park
- Purchase of 14 acres of land on the Patcong Creek near the Garden State Parkway

Community Facilities Objectives

- Improvements to the storm drainage system including a pump station at Tenth Street and Dobbs Avenue
- Installation of one-way drains at selected Bay Avenue outfalls

1998 Recommended Development Regulation Revisions

- Recommendation #47 suggests revision of residential ground cover requirements to limit impervious coverage in front yard areas to two off street parking spaces (13 percent impervious coverage) with all other areas maintained as natural vegetation.

The Reexamination Report also acknowledged the 2004 release of new New Jersey Department of Environmental Protection (NJDEP) Stormwater Management Rules and recommended the City evaluate its current ordinances, plans and regulations to ensure consistency with these Rules.

With the exception of the land purchase and the limitation on impervious coverage in front yard areas, the actions identified in the Reexamination report address existing flood-related issues and do not address ways to minimize or avoid future flood impacts.

3.2 Somers Point Vision Plan 2012

The Vision Plan is a community driven plan that sets forth strategic programs to achieve the goals and objectives of the Master Plan and subsequent reexamination reports. The only specific reference to flood/storm surge protection found in the Vision Plan is the following from the opening paragraph discussing the concept of Somers Point Landing (Chapter 1: Bayfront village & point landing):

“...There is the potential for Somers Point to benefit in both civic and economic ways from the creation of a continuous, high-quality, public waterfront walkway along the bay – docks connected by quay/wave-break walkways and more accessible attractions that may include for-fee recreational opportunities...”

It should be noted that the appearance upgrades along the Route 9 corridor recommended in the Vision Plan provide the City with the opportunity to include design standards for renovated and redeveloped sites that help to reduce on-site and off-site stormwater runoff. The Route 9 area contributes to the flooding problems west of Route 9.

3.3 Development Regulations

The development regulations include design requirements for stormwater control and stormwater management systems, which are intended to avoid increases in stormwater runoff from new development. It should be noted that stormwater management systems requirements do not apply to single and two-family residential construction that is not part of a major subdivision.

The Development Regulations have also recently been amended to incorporate several definitions issued by NJDEP earlier in 2013 that would typically be adopted as part of the Flood Protection Ordinance (Chapter 146 of the City Code). It is notable that this includes an amendment to the definition “Building height” which is applicable to structures in any AH or SHOS zoning districts. The amended definition stipulates that the building height for any structure in an AH or SHOS zone that is also located in a flood zone is to be measured from the base flood elevation plus one foot of freeboard.

3.4 NFIP Community Rating System

The City has commenced the application process and anticipates joining the National Flood Insurance Program (NFIP) Community Rating System (CRS). To date, the City has submitted a letter of interest to the FEMA Regional Office and on December 9, 2013 a Community Assistance Visit occurred. Once the City receives a letter of good standing from the Community Assistance Visit, the CRS application process can commence.

Over 1,200 communities nationwide, including 61 in New Jersey, participate in the CRS. On those about a dozen communities are in class five, the highest ranking in the State, saving residents 25 percent off their flood insurance.

Joining the CRS will benefit the City by encouraging the reduction and avoidance of flood damage to insurable properties. It will also strengthen and support the insurance aspects of the NFIP and it will advance comprehensive floodplain management in the City. In addition, the flood insurance premiums of the City’s residents and businesses will be discounted to reflect the City’s work to reduce flood damage to existing buildings, manage development in areas not mapped by the NFIP, protect new buildings beyond the minimum NFIP protection level, preserve and/or restore natural functions of floodplains, help insurance agents obtain flood data and help people obtain flood insurance.

The discount that the City’s residents and businesses receive on flood insurance premiums will be determined by the number of credits the City can receive. The City anticipates receiving credits for maintaining elevation certificates, providing flood information, preserving open space in Special Flood Hazard Areas, developing higher regulatory standards and implementing a storm water management plan.

The CRS recognizes and encourages community floodplain management activities that exceed the minimum NFIP standards. Depending upon the level of participation, flood insurance premium rates for policyholders can be reduced by up to 45 percent. In addition to the benefit of reduced insurance rates, CRS floodplain management activities enhance public safety, reduce damage to property and public infrastructure, avoid economic disruption and losses, reduce human suffering and protect the environment. Participating in the CRS provides an incentive to maintaining and improving a community's floodplain management program over the years. Implementing some CRS activities can help projects qualify for certain other Federal assistance programs.

One of the recommendations of the adoption of a Drainage System Maintenance Program which includes annual inspections and cleaning of debris from the drainage system. The City should adopt a written procedure for maintenance, system inventory, inspection procedures, capital improvements and records of inspections and removal projects.

Participating communities can earn credit for undertaking a variety of flood reduction measures, including preserving open space, mandating that buildings in flood zones be elevated higher than FEMA requires, and incorporating predictions of future sea level rise into their regulatory maps. Overall, creditable activities are grouped into four categories public information, mapping and regulations, flood damage reduction, and warning and response. Different amounts of points are awarded for different measures, as explained in the FEMA manual.

3.5 Atlantic 4 – All-Hazard Mitigation Plan

The City and three other Atlantic County communities were not included in the Atlantic County Hazard Mitigation Plan when it was developed in 2005. For this reason, the four communities (Buena Vista Township, Egg Harbor City, Port Republic and the City of Somers Point) have banded together to prepare an All Hazard Mitigation Plan (HMP). A grant for this project was awarded in August 2012, prior to Superstorm Sandy. The Plan will provide a blueprint to address the City's vulnerability to natural hazards and help the City qualify for additional funding sources.

4.0 Zoning and Regulatory Recommendations

Based on review of the current planning and development documents the following are recommended actions for the City to consider to reduce the effects of rising sea level and flooding:

- Amend zoning regulations to reduce the amount of impervious surface permitted on development sites in order to lessen stormwater runoff and help reduce ponding.
- Amend zoning and development regulation to require all new or expanded single-family dwellings that do not otherwise require site plan or subdivision approval to undergo a stormwater review process.

- Amend the definition of building height to make the base flood elevation plus one foot of freeboard standard applicable to any development in a flood zone not just limited to development in AH and SHOS zoning districts.
- Amend the floodplain management regulations to require a minimum freeboard of at least 2 feet in A and X zones and a minimum of 3 feet in V zones.
- Adopt guidelines for elevating and floodproofing homes in the Historic District.
- Amend the floodplain and/or construction regulations to reduce the cumulative damage/improvements threshold from 50 percent to 40 percent.

4.1 Amend Building Height Requirements

The City complies with the State-mandated one foot of freeboard for structures in a flood zone by amending the definition of building height to make the base flood elevation plus one foot of freeboard applicable to any development in a flood zone.

4.2 Adopt greater freeboard (e.g. exceeding the State mandated one foot of freeboard).

The City will consider the costs and benefits of requiring more than one foot of freeboard for structures in a flood zone.

4.3 Develop and adopt a cumulative substantial damage/improvement ordinance.

Substantial Improvement is any reconstruction, rehabilitation, addition or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the “start of construction” of the improvement. This term includes structures that have incurred Substantial Damage, regardless of the actual repair work performed.

Substantial Damage is a term that applies to a damaged structure in a Special Flood Hazard Area or floodplain for which the cost of repairs is 50 percent or more of the structure’s market value before the disaster occurred regardless of the cause of the damage. Land value is excluded from this determination. The decision regarding Substantial Damage is made at the municipal level by the building official or the floodplain manager.

For communities that participate in the National Flood Insurance Program, Substantial Damage determinations are generally required by the local floodplain management ordinances. If a building in a floodplain is determined to be Substantially Damaged, it must be brought into compliance with the local floodplain management regulations:

- Owners who decide to rebuild may need to elevate their structures, or change them in some other way to comply with those local floodplain regulations and avoid future flood losses.
- Owners of non-residential structures may need to flood proof their buildings.

Property owners who have a flood insurance policy and a Substantially Damaged building in a Special Flood Hazard Area may be able to use additional funds known as Increased Cost of Compliance (ICC) from their flood insurance policy (up to \$30,000) to help defray the costs of elevating, relocating or demolishing a structure.

The City may adopt an ordinance that requires that property owners comply with the local floodplain management regulation when they structure is damaged or improved by more than some percentage less than the 50 percent required by law. It is recommended that a 40 percent cumulative damage or improvements threshold be considered and that the cumulative period be increased from five to seven years.

4.4 Become a Sustainable Jersey Member

Sustainable Jersey is a certification program for municipalities in New Jersey that want to go green, save money, and take steps to sustain their quality of life over the long term.

4.5 Consider Requiring Underground Utilities for All New Development

Consider amending the zoning code to require the placement of all utilities for new major development underground.

4.6 Increase CRS Insurance Discount

Once the City is certified for inclusion in the CRS the City should strive for a higher insurance discount for its residents and business. The City anticipates receiving credits in the future by performing flood studies and necessary stormwater infrastructure improvements.

4.7 Green Infrastructure

Green Infrastructure or Blue-green infrastructure is a network providing the “ingredients” for solving urban and climatic challenges by building with nature. The main components of this approach include stormwater management, climate adaptation, less heat stress, more biodiversity, food production, better air quality, sustainable energy production, clean water and healthy soils, as well as the more anthropocentric functions such as increased quality of life through recreation and providing shade and shelter in and around towns and cities.

Green infrastructure decreases pollution to local waterways by treating rain where it falls and keeping polluted stormwater from entering sewer systems. Green infrastructure tools and techniques include green roofs, downspout disconnection, planter boxes, bioswales, green parking, living shorelines, urban tree canopies, land conservation, permeable pavement, alternative designs for streets and buildings, trees, rain gardens and rain harvesting systems.

Green infrastructure is also a critical tool for addressing climate change and mitigating its impacts by making communities more resilient. Green infrastructure can increase the capacity of sewer systems by reducing the flow into them, making the systems more resilient.

Green infrastructure programs managed by EPA and partner organizations are intended to improve water quality generally through more extensive management of stormwater runoff. The practices are expected to reduce stress on traditional stormwater drainage infrastructure which are typically extensive networks of underground pipes and/or surface water channels. Improved stormwater management is expected to reduce the frequency of system overflows, reduce the impacts of flooding, and provide other environmental benefits.

For example, the City of Philadelphia has installed or supported a variety of retrofit projects in neighborhoods throughout the city. Installed improvements include:

- Permeable pavements in parks, basketball courts and parking lots.
- Rain gardens and bioretention systems at schools and other public facilities.
- Constructed wetlands for management of stormwater runoff.

Some of these facilities reduce the volume of runoff entering the city's aging combined sewer system, and thereby reduce the extent of system overflows during rainstorms.



Shorelines are often stabilized with hardened structures, such as bulkheads, revetment, and concrete seawalls. Ironically, these structures often increase the rate of coastal erosion, remove the ability of the shoreline to carry out natural processes, and provide little habitat for estuarine species. Living shorelines use plants, sand, and limited use of rock to provide shoreline protection and maintain valuable habitat.

Living shoreline projects utilize a variety of structural and organic materials, such as wetland plants, submerged aquatic vegetation, oyster reefs, coir fiber logs, sand fill, and stone. The benefits of living shorelines include:

- Stabilization of the shoreline.
- Protection of surrounding riparian and intertidal environment.
- Improvement of water quality via filtration of upland run-off.
- Creation of habitat for aquatic and terrestrial species.



The City of Somers Point has an excellent example of a living shoreline at John F. Kennedy Park which overlooks that Green Egg Harbor River on Broadway. This park was prone to erosion and sustained significant damages as a result of Superstorm Sandy. The City Engineer designed a rock filled gabion system to repair and prevent future erosion events. Funding was secured from FEMA for this project.



5.0 Post Sandy Planning Recommendations

The following Post Sandy Planning Recommendations have been identified by the Steering Committee and are presented in priority order.

5.1 Master Planning

The Master Plan Reexamination was completed in 2004 almost 10 years ago. Since that time the Somers Point Vision Plan was developed which includes many land use recommendations. In addition, State law requires that municipal Master Plans be re-examined at a minimum every 10 years.

The mandatory 10-year Master Plan Reexamination provides an opportunity for the City to reexamine many of its goals and objectives and focus on strategies to address the impacts from Hurricane Sandy. It is recommended that a NJDCA Post Sandy Planning Grant be secured to fund the Master Plan Reexamination.

The Master Plan Reexamination will insure that:

- The future land use map clearly identifies natural-hazard areas;
- Land use policies discourage development and redevelopment within the natural-hazard areas;
- That environmental systems that protect development from hazards are identified and mapped;
- That green infrastructure techniques are incorporated into the long term infrastructure planning;
- That transportation systems are designed to function under disaster conditions; and
- That the goals and policies of the Plan are related to the All-Hazards Mitigation Plan.

It is recommended that a NJDCA Post Sandy Planning Grant be secured to fund the Master Planning for the City of Somers Point. The following Master Plan Elements should be completed: Recreation & Open Space; Conservation; Land Use; Housing and Cultural Resources.

5.2 Zoning Ordinance Revisions

Once the Master Plan Reexamination is completed, zoning ordinance revisions will be required. The Somers Point Vision Plan recommends many changes that could be implemented through this action. Additional revisions may be needed to comply with the CRS.

Green infrastructure strategies will be incorporated into the zoning ordinance to the greatest extent possible to encourage renewable energy, green roofs, permeable pavement, and rain gardens among other strategies.

Discussions with Planning Board and Historic Commission members identify the need to:

- 1) Provide better information on the permitting and review process,
- 2) Simplify the permitting and review process, and
- 3) Provide some new resources to the reviewers.

The following suggestions are documented in the Somers Point Vision Plan:

- Bulkhead height revisions.
- Illustrative design guidelines are useful, even essential, in compact, complicated places like Somers Point.
- Consider amending the City's Historic District ordinances to provide the Committee a clear framework to gauge whether or not new construction is "in concert with the surrounding neighborhood" §114-98(C).

- The 1998 Reexamination Report suggests that the zoning code bulk provisions be recalibrated to reflect the typical dimensional characteristics of village streets and building lots.

“The majority of properties average 30’ to 50’ wide. The present ordinance requires lot sizes to be 15,000 square feet or 100 x 150 feet in the Historic Village Commercial and the Historic Village Waterfront Zones. Also, the Historic Village Residential Zone requires lots to be 7,500 square feet or 70 x 110 feet. The creation of these zones with these bulk requirements has made most of the lots non-conforming, which makes it difficult for homeowners who wish to make additions to their properties.”

- New form-based zoning regulations in village areas (HVC, HVR and HVW zoning districts) could be administered with increased clarity and predictability, an improvement that will be welcomed by Somers Point homeowners and business operators. This would provide an opportunity to reevaluate the code’s provisions for setbacks, parking, commercial signage and site improvements.
- Review and update other municipal ordinances and policies as needed.

It is recommended that a NJDCA Post Sandy Planning Grant be secured to fund the required Zoning Ordinance Revisions.

5.3 Building Standards for the Historic Preservation District

The Somers Point Historic District consists of three zoning districts:

- Historic Village Commercial;
- Historic Village Residential; and
- Historic Village Waterfront.

Historic structures are exempted from the substantial improvement requirements to elevate or flood proof if they meet the criteria listed below and the criteria is adopted by ordinance. These properties can also maintain their FIRM flood insurance rating status.

1. The building must be a bona fide “historic structure.”
2. The project must maintain the historic status of the structure. If the proposed improvements to the structure will result in it being removed from or ineligible for the National Register or federally-certified state or local inventory, then the proposal cannot be granted an exemption from the substantial improvement rule. The best way to make such determinations is to seek written review and approval of proposed plans by the local historic preservation board, if it is federally certified, or by the state historic preservation

office. If the plans are approved, you can grant the exemption. If not, no exemption can be permitted.

3. Take all possible flood damage reduction measures. Even though the exemption to the substantial improvement rule means the building does not have to be elevated to or above BFE, or be renovated with flood-resistant materials that are not historically sensitive, many things can and should be done to reduce the flood damage potential.

Examples include:

- Locating mechanical and electrical equipment above the BFE or flood proofing.
- Elevating the lowest floor of an addition to or above the BFE with the change in floor elevation disguised externally.

The exemption can be granted administratively if the current NFIP definitions of substantial improvement and historic structure are included in the development regulations, or if not they can be granted by the Board through a variance procedure. In either case, they are usually granted subject to conditions.

Given that some of these structures may still need to be elevated and that standards are needed for new construction in the Historic District, the City and the Historic Preservation Commission would like to develop design standards to ensure that construction is done in a way that it does not have a negative impact on the District and the City as a whole. It is generally assumed that homes in the Historic District would have to be elevated five to six feet.

It is recommended a NJDCA Post Sandy Planning Grant be secured to fund the development of design standards for flood proofing, elevation of properties and new construction in the Historic District. These supplemental standards will synchronize the existing guidelines with the necessary adjustments to meet new flood elevation requirements. The supplemental standards will include graphics and photographs to illustrate their intent.

5.4 Environmental Design for Bay Avenue Infrastructure and Redevelopment

Bay Avenue is the City's waterfront business area and a District in need of flood protection. Most of the damage in the City from Superstorm Sandy was concentrated in this District. The City would like to examine the opportunities available to protect this area from future flooding and to enhance economic activity in this area. This project will include preliminary engineering, environmental design of the Harbor walk, Public Pier and infrastructure improvements.

A "bridge-to-beach" harbor walk is recommended by the Somers Point Vision Plan linking waterside attractions to the new bikeway on the Route 52 Bridge between Somers Point

and Ocean City. It would be appropriate and desirable to incorporate compatible commercial uses, such as restaurants, boutiques, and seasonal retail, on sites adjacent to this public waterfront walkway.

It is recommended that a NJDCA Post Sandy Planning Grant be secured to fund to determine infrastructure needs, complete a bathymetric survey of the Bayfront waters, a terrestrial survey of existing infrastructure and environmental design engineering and consider economic development tools that can be used to protect and enhance this important District.

5.5 Capital Improvement Plan

This Strategic Recovery Planning Report identifies many capital improvements needed to make the City of Somers Point more resilient. It will not be possible for the City to fund these improvements immediately. The improvements will have to be paid for over a period of time in a planned fashion so to avoid a significant impact on municipal government and the local tax rate. It is recommended that a NJDCA Post Sandy Planning Grant be secured to fund the development of a long-term capital improvement plan to fund needed capital improvements.

The development of this plan will involve the City's Administration, Engineer, Chief Financial Officer, Financial Advisor, Bond Counsel and City Council. This effort will include inspection of stormwater and sanitary sewer systems, local roads and sidewalks and developing a priority ranking for needed improvements. Engineering will be included for various priority projects. Projects will be identified along with the associated costs and alternative sources of funding (i.e. grants, low interest loans, private/public partnerships, etc.). A portion of the Plan will be dedicated to capital improvements that enhance the safety of children walking to school and the preparation of a School Travel Plan.

5.6 Environmental Design for the Route 9 West Neighborhood

The neighborhoods west of Route 9 support the largest number of homes in the City and a significant portion of the City's flood zones. Given this situation careful attention must be given to provide infrastructure improvements and home elevation guidance to this section of the City.

It is recommended that a NJDCA Post Sandy Planning Grant be secured to fund a study to determine infrastructure needs, complete topographic surveying and environmental design engineering and develop design standards for these neighborhoods to protect and enhance this important area.

5.7 Community Development Plan for the Route 9 Business District

This lack of shrinking labor force in the Atlantic City region indicates that the impact of Superstorm Sandy has had a continued economic impact on the region. The Somers Point region continues to struggle with an 11.4 percent unemployment rate. To help address this issue, a Community Development Plan for the Route 9 Business District is recommended.

The Route 9 Corridor runs the entire length of the City from the Great Egg Harbor River to the Linwood boundary. The Route 9 Corridor is a regional shopping district but it is starting to look shabby and have many vacant stores. Most recently, a Wawa Food Store that has operated for decades at the intersection of Route 9 and Rhode Island Avenue closed.

Heading south for the Linwood border of Somers Point, there are two large shopping centers anchored by “big box” grocery chains, a nationally recognized department store, and specialty chain stores and franchised eateries. At the midpoint of the corridor, the character changes and Route 9 is framed by strip centers, offices, apartment complexes and independent retailers. While the corridor is unattractive in places, residents of the region appreciate the convenience of being able to purchase what they need so close to home. The Corridor is an auto-centric area. Sidewalks do not exist in some areas forcing pedestrians to walk in the street. Vacant stores dot this portion of Route 9. There is no consistent lighting, landscaping or design theme in this corridor. The facades of many of the buildings are aged and unattractive.

The Route 9 corridor has a significant business base and provides goods and services to nearby resort communities including Longport, Margate and Ocean City and to the bedroom communities of Egg Harbor Township, Upper Township and Linwood. In order to fully recover from the impacts of Superstorm Sandy the local economy needs to be stimulated.

It is recommended that a NJDCA Post Sandy Planning Grant be secured to fund a design and marketing study for this important commercial corridor. This Plan will include a market analysis that will identify specific types of business and industry that would complement and grow the Somers Point economy. The Plan will also explore and develop ideas such as the expansion of commercial business districts, economic incentives for new businesses, joint marketing, implementation of wayfinding signage, design standards to brand the economic districts, and the use of many other tools to jump start the economic growth of Somers Point. This study would be designed to leverage additional public improvements (streetscapes, sidewalks, pedestrian safety, etc.) and to determine an incentive package to attract new businesses to the area.

5.8 Capital Improvement Plan for Regionalization and Shared Services

The City of Somers Point has been a leader in shared services having participated in shared dispatch services and regional recycling services. In order to maintain a stable tax rate during a time when additional capital investment is needed to address the impacts of Superstorm Sandy the City will continue to explore ways to reduce the costs of service delivery while maintaining high service quality. A NJDCA Post Sandy Planning Grant is requested to fund an in-depth capital plan for Regionalization and Shared Services. This Plan will identify capital and operating costs associated with implementing regionalization and shared services.

5.9 Bicycle and Pedestrian Plan

The New Jersey Department of Transportation (NJDOT) provides for Bicycle and Pedestrian Plans for communities to help to identify the needs of the community and prepare for the submission of grant applications to implement this Plan. Somers Point has various bicycle and pedestrian needs to enhance accessibility in the community. A waterfront bicycle route is planned in the Bay Avenue area and a connection of the Pleasantville – Somers Point Bike Path and the Route 52 Bikeway are planned. Pedestrian signals and sidewalks as well as handicapped access is needed in various locations. To identify these and other needs and to create an implementation strategy it is recommended that the City request that the NJDOT authorize consultants to develop the Somers Point Bicycle and Pedestrian Plan.

5.10 Energy Audit/Energy Savings Improvement Plan

To evaluate this energy savings opportunities it is recommended that the City complete a Local Government Energy Audit (LGEA) for all public buildings owned by the City and School District. The LGEA is fully funded by the New Jersey Board of Public Utilities. Once the energy savings actions are identified by the LGEA the City and School District should consider pursuing an Energy Savings Improvement Program (ESIP). ESIP's were recently created by the State Legislature as a means for public agencies to make energy savings improvements without expending public funds. The ESIP requires that the cost of the improvements be totally offset by energy savings over a fifteen or twenty year period.

6.0 Infrastructure Recommendations

After Superstorm Sandy, the City quickly prepared five FEMA Hazard Mitigation Grant Program applications for land acquisition and stormwater infrastructure improvements to protect the City from further damage and increase resiliency. These applications were submitted to the State through the Atlantic County Emergency Management Office in March and to date the City has not received a decision on these applications. The following projects (6.1 to 6.5) were also submitted to the New Jersey Environmental

Infrastructure Trust (NJEIT) for funding consideration. Detailed cost estimates for each of these capital improvements are provided in Appendix A.

6.1 Jordon Road Land Acquisition - \$820,000

Three private homes located on Jordon Road between Swarthmore Road and Bryn Mawr Road are targeted for acquisition. These homes have repetitively been the scene of flooding since they are located on a natural drainage area. The parcels include Block 1129, Lots 24 and 25; and Block 1127, Lot 9. These properties are located at the end of an inadequately sized stormwater collection system that was installed around 1970 and collects stormwater from approximately 105 acres, including US Route 9. It is estimated that the current stormwater conveyance system is only capable of conveying 22 percent of the runoff from the entire 105 acre drainage basin during a fifteen (15) year storm due to inadequately sized pipes.

The City installed a stormwater pump station in 1999 that prevents tidal water from entering the stormwater system but the area continues to flood. The City has considered several additional flood mitigation options such as replacement of the stormwater system with more adequately sized stormwater pipes, installation of underground storage, acquisition of flood prone homes, and elevating flood prone homes. Replacing the current stormwater system with adequately sized pipes is not feasible because of the extreme cost required for the excavation of the easement area between existing homes which includes fences, sheds, and landscaping. Additional pumps located at the end of the system would also need to be installed. The installation of underground storage is not feasible due to the amount of underground storage that would be required and existing utility conflicts. Elevating the homes is not feasible due to the split-level design of two (2) of the three (3) structures.

Therefore, the City intends to convert these properties to a shallow drainage basin and the City will maintain this property. This basin would be used to store runoff until it can be discharged into the stormwater system during dry weather. Total estimated cost for acquisition, demolition and construction of stormwater improvements is \$820,000.

6.2 Tide Flex Values - \$375,000

Tidal influences often flood the stormwater system and create situations where positive discharge into the tidal waters may not be possible. To address this impact the City proposes to install tidal check valves in two phases. The first phase will consist of the installation of thirteen tidal check valves in the most tidal prone areas of the stormwater system at a cost of \$167,000. The second phase will address smaller stormwater systems that are also susceptible to tidal flooding. The estimated cost of phase II is \$208,000.

Phase I

Location	Size of Stormwater Pipe
End of Delaware Avenue	12"
End of Somers Avenue	24"
End of Anna Avenue	18"
End of Holly Hills Drive	48"
Gulf Mill Road	36"
Gulf Mill Road	15"
Gulf Mill Road	18"
Bala Drive	18"
End of Yale Blvd	42"
End of Yale Blvd	36"
Bucknell Road	15"
Bucknell Road	24"
Bucknell Road	15"

Phase II

Location	Size of Stormwater Pipe
End of Ocean Avenue	15"
End of Harned	15"
End of Myran	15"
End of Myran	15"
End of Dawes	15"
End of Dawes	15"
End of Groveland	12"
End of Groveland	18"
Bay Avenue between Pleasant and Harbor	36"
End of New Jersey Avenue	24"
End of Cedar Court	24"
Fox Tail Court	15"
Chapman Avenue	30"
Wilson Avenue	15"
Whitman Drive	36"
Woodlot Court	15"
Defeo Lane	12"
Defeo Lane	60"

6.3 Pump Station Installation - \$1,700,000

To insure proper drainage in the Gulph Mill, Yale Boulevard and School House Lane area, the City proposes to install three pump stations with two diesel pumps at the end of Gulph Mill Road and Yale Boulevard and a pump station with one electric pump on School House Lane. The Gulph Mill Road, Yale Boulevard and School House Lane stormwater systems are responsible for conveying stormwater for over 170 acres. The installation of these pump stations is critical so that when the tidal check valves are closed, stormwater can still be pumped into Patcong Creek. All three systems drain into the Patcong Creek.

6.4 Bethel Road Stormwater Improvements - \$330,500

Rainstorms with moderate precipitation overload the current stormwater collection system and flooding occurs along Bethel Road. If heavy precipitation occurs, flooding from the street overflows onto private property. To correct this problem the Bethel Road Stormwater Improvements will replace an undersized stormwater collection system along Bethel Road and Defeo Lane. The end of the current system has a 12 inch corrugated metal pipe that is responsible for conveying stormwater for over 20 acres. The project also consists of the installation of a separate outfall with a tidal check valve along Defeo Avenue to reduce the amount of water that is entering the current system from other areas of the City that are currently connected.

6.5 Atlantic Avenue Stormwater Improvements - \$1,199,100

Similar to Bethel Road rainstorms with moderate precipitation overload the current stormwater collection system and flooding occurs along Atlantic Avenue and the neighboring streets. If heavy precipitation occurs, flooding from the street overflows onto private property. To correct this problem improvements include the replacement of the existing undersized stormwater system along Atlantic Avenue. The current system has a 15 inch corrugated metal pipe that is responsible for conveying stormwater for over 75 acres. This is particularly important since the Dawes Avenue School, which is a shelter, fronts Atlantic Avenue and access to the school is difficult during flood situations.

6.6 Bay Avenue Bulkhead - \$9,135,000

The City is making a concerted effort to make the Bayfront area a more vibrant, attractive, year-round destination with a publicly, accessible “destination waterfront”. A boardwalk or access way is planned from the Route 52 Bridge to the beach area. A critical element of this project would be to rebuild the existing bulkhead at a higher height to provide increased protection to the public infrastructure and private investment in this area.

The bulkhead extends about 5,800 linear feet from Goll Avenue to Longport Boulevard. Most of the current bulkhead is between 4 and 6 feet (NAVD88). The existing bulkheads are not sufficient to provide flood and storm protection to public and private properties. The new bulkheads will be installed at a height of 8 feet (NAVD) and this along with an

improved stormwater system (tide flex valves and pump systems) will minimize the effects of future flood events.

Shoaling of Ship Channel along Bay Avenue caused by recent storms including Superstorm Sandy and from upland erosion due to the deteriorated bulkheads has created unsafe navigation and boating conditions. This has impacted all the properties along Bay Avenue, lowering property values and impacting the historic use of the area for recreational boating and marina activities.

City officials have recently met with NJDEP regarding the need to enhance the bulkhead system along Bay Avenue which is the economic hub of the community and where businesses were destroyed by Superstorm Sandy. Funding for bulkhead replacement is limited and this needs to become a State priority in order to properly rebuild and strengthen the back-bay areas. The NJDEP Office of Coastal Engineering implements the Coastal Protection Grant Program that is funded annually with \$25 million to provide State matching funds for beach projects and to provide 75 percent grant funding for needed coastal improvements like bulkheads.

A new Disaster Relief Emergency Finance Program has been established to fund infrastructure improvements through the NJEIT. This program will provide 18 percent grants coupled with no- and low-interest loans to fund sewer, water and stormwater improvements. Coastal communities must strengthen their infrastructure, but given the decline in ratables that they have and will experience, a higher percentage of grant funds is needed. It is also important that bulkheads be included in the infrastructure that can be funded through the New Jersey Environmental Infrastructure Trust.

The City has also asked the US Army Corps of Engineers to evaluate the bulkhead on Bay Avenue to determine if there is a Federal interest in this project. This project is designed to make the stormwater system more resilient and to protect public infrastructure and private investment in the area. The total cost of this project is estimated to be \$9,135,000.

6.7 Launch Avenue Bulkhead and Dredging Improvements

Bulkhead improvements along Launch Avenue were included in the City's request to the US Army Corps of Engineers discussed above. For all of the bulkhead projects, if State or Federal funds are invested the bulkheads will have to become public property.

6.8 Off-Grid Energy Supplies

The creation of an off-grid power system for essential buildings has become a statewide priority. The City already has a series of emergency generators that can support municipal services during storm events except for the municipal building that requires a generator for the administrative section of the building.

The Jordon Road School has a natural gas generator that can power the school's boiler and emergency lighting.

In addition to providing useful information on off-grid power options this audit will outline ways to make each building more energy efficient.

Options for off-grid power systems include:

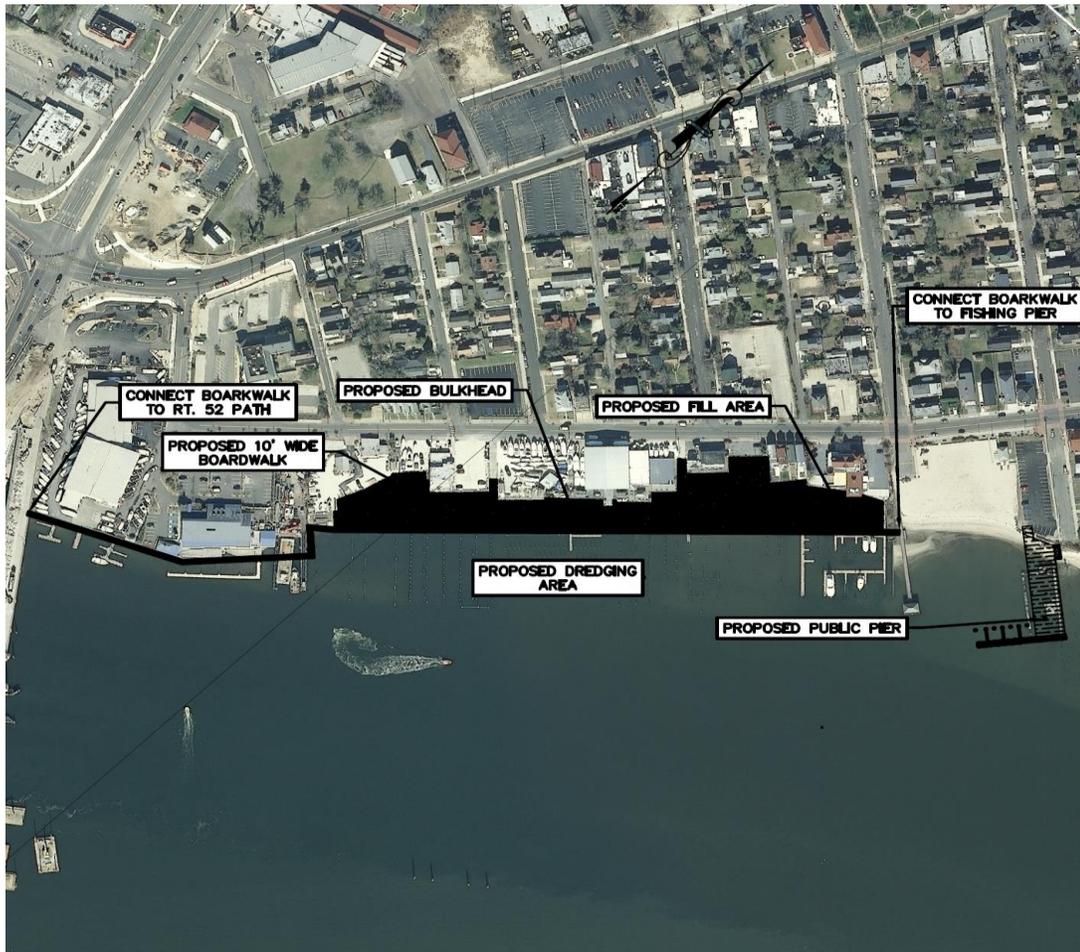
- Micro grids;
- Combined heat and power systems;
- Dynamic inverters for solar systems to allow the generated power to flow directly to essential buildings; and
- Natural gas powered emergency generators.

7.0 Economic Development Recommendations

7.1 Bay Avenue Redevelopment

The City plans to enhance the Bayfront area to become a more vibrant, attractive, year-round destination with improved public access to the waterfront. The revitalization of Bay Avenue should incorporate:

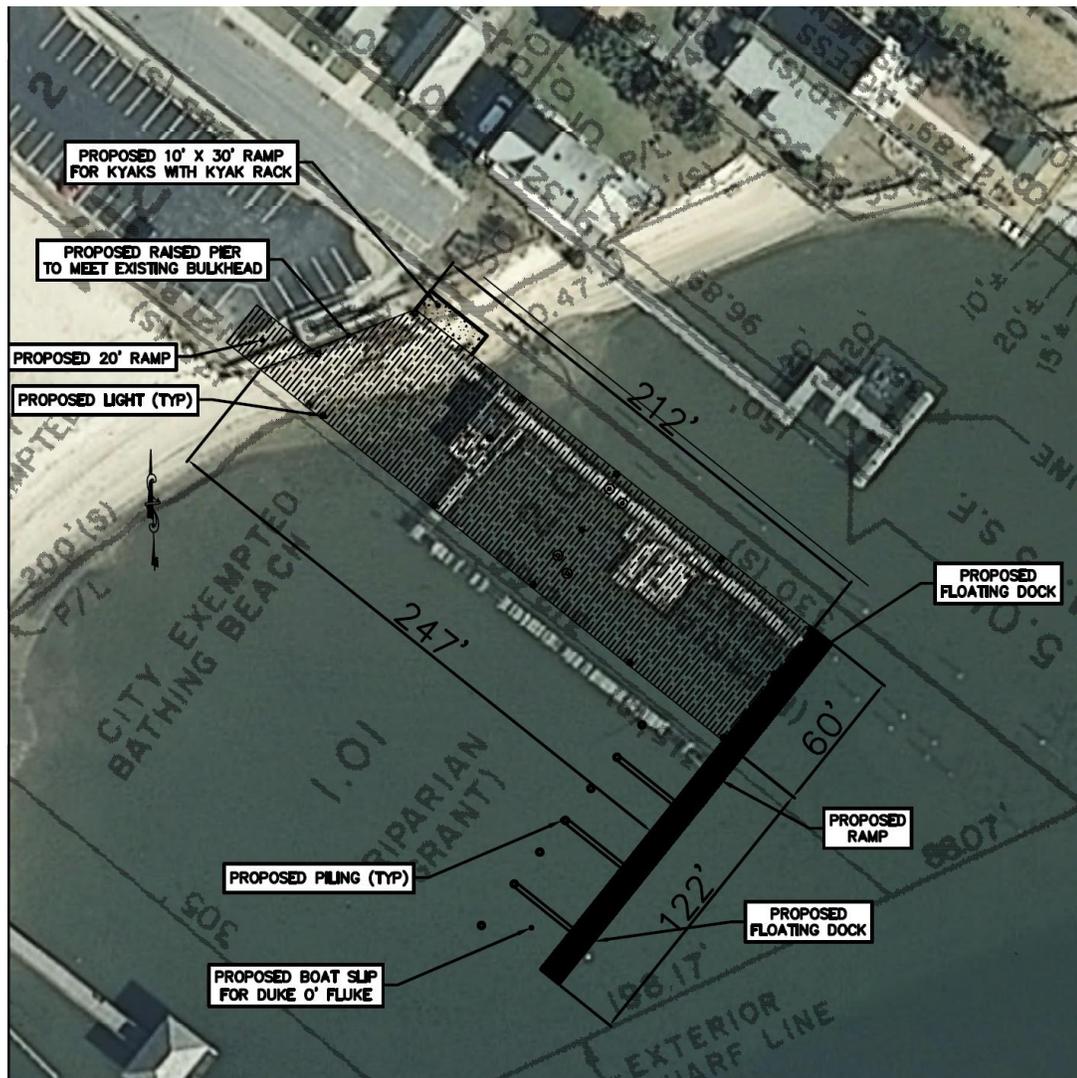
- Bay Harbor Walk with a bicycle connection to a new waterfront boardwalk connecting the new Route 52 Causeway with the Somers Point's public beach on Bay Avenue;
- Mitigation of the bulkhead by replacing this structure at a higher elevation and/or to develop a living shoreline;
- Dredging for increase boating activity;
- Raised wooden pier at Higbee Avenue that will provide a mixture of seasonal pop-up retail and dining options;
- Branding the City as an active waterfront community and a must see tourist stop through extensive use of wayfinding signage and common design elements.



The City proposed to construct this new walkway along a new 1,900 linear foot bulkhead/living shoreline that would permit public access to the Bay in contrast to the limited or nonexistent access available today.

The Higbee Avenue raised public pier is proposed to be a 250 feet by 60 feet raised wooden pier that would include a mixture of pop-up retail and dining options that would support water dependent public use. Retail uses would focus on water dependent activities such as kayak rentals, fishing excursions, and water taxis to Ocean City and Atlantic City.

The pier is proposed to have a floating dock that would be used by transient boaters. This would permit boater to dock temporarily and connect with the variety of retail, historic homes, outdoor dining, amusement, arts and entertainment venues existing and planned in the Bay Front District.



The Higbee Avenue pier would replace the old pier that existed in this area in the 1950's.

7.2 Route 9 Corridor Improvement

As noted earlier in this Report, Route 9 is the commercial hub of not only Somers Point but for nearby bedroom communities of Linwood, Upper Township and Egg Harbor Township. Due to its easy access and central location, Route 9 has significant growth potential. Many vacant commercial buildings exist in the area and if appropriate actions were taken to make this area more accessible for pedestrians and more attractive, the non-residential ratable base of the City could grow.

7.3 Branding/Completion of a Wayfinding System

The City's Economic Development Advisory Commission has complete a branding process for the City that is designed to sharpen the City's message to the public and visitors. The vision of the Somers Point Branding Initiative was to create a consistent and unique image for Somers Point, in order to promote and leverage the City's assets including, but not limited to, Bayfest, Good Old Days Festival, Beach Concerts, the Historical Society, the Business Association, Gateway Playhouse and more. The City has enormous assets, diversity, and potential.



SOMERS POINT
the shore starts here!

A set of logos was developed and adopted by the Business Community and the City. The new Somers Point logo is the single most recognizable icon used to represent our City. The new band features three colors with blue representing the abundant water the surrounds Somers Point, yellow representing the sand of our beach and the sun and with green representing our open spaces and our nearly century old golf course that is a cornerstone of the community.

All City entities are challenged to help grow destination recognition over time. This is especially important at a time when the City is seeking to build regional awareness for our brand.

The Somers Point Vision Plan recommends that a wayfinding signage system be provided throughout the City. Project objectives include:

- Develop a vehicular and pedestrian wayfinding system for destinations throughout the city, with a focus on the bayfront village and marina areas.
- Develop a wayfinding system (perhaps emerging from the ongoing branding project) that will create an overall identity for the city that is compatible with its waterside village character and that will also help to differentiate this place from the suburban corridors and beach-town resorts that surround Somers Point.
- Provide signage that will direct visitors to area offerings and related parking lots, RV areas, boat tie-ups, kayak launch and landing locations, and trailheads.
- Provide trailblazer signage connecting the parkway, roads, and primary bicycle trails, as well as major destinations within and outside city boundaries (Greate Bay Country Club, Ocean City Bayfront restaurants, seasonal attractions, etc.).

- Reduce visual clutter and increase consistency of local signage.
- Promote walking, bicycling and use of transit through well-marked trails and visible signs.
- Support the developing regional interpretive trail system and reinforce historical and regional trail themes by incorporating regional trails and historic sites into city interpretive signage.

The comprehensive wayfinding signage system will consist of the following:

- City gateways—signs or sculptural marker, landscaping
- Bayfront Village identification sign
- Destination directional signs (to include commercial districts and cultural sites)
- Destination identification signs
- Neighborhood identification signs
- Parking directional signs
- Parking identity signs
- Pedestrian directional signs
- Trailblazer signs
- Interpretive signs
- Directional kiosk directory (at three locations)

The City has submitted grant applications to support the design phase of implementing a Wayfinding System.

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