

# Master Plan Reexamination Report

April 2016

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City of Atlantic City Master Plan Reexamination Report  
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Table of Contents

Introduction.....	1
Atlantic City Physical Layout.....	2
Atlantic City Economic Background.....	2
Demographic Profile of Atlantic City.....	4
Total Population.....	4
Population Density.....	5
Household and Family Size.....	6
Racial Composition.....	8
Income.....	10
Age of Housing Stock.....	10
Educational Attainment.....	11
Summary of Demographic Observations.....	13
Citywide Cohort Analysis.....	15
Economic Profile of Atlantic City.....	16
Employment.....	16
.....	20
.....	20
Real Estate Market.....	21
.....	23
Land Use Profile of Atlantic City.....	23
Reexamination of the 2008 Master Plan.....	25
CRDA Tourism District.....	29
Strengths, Weaknesses, Opportunities, Threats.....	29
Summary of Findings.....	31
Goals, Objectives and Recommendations of the 2016 Re-Examination.....	32
Land Use.....	32
Housing.....	33
Economic Plan.....	35
Circulation.....	37
Open Space and Recreation.....	38

Conservation.....	39
Historic Preservation.....	39
Community Facilities .....	40
Utilities Services .....	41
Recycling .....	41
Resiliency Plan Element .....	42
Resiliency Planning.....	42
Design Standards Recommendations.....	42
Sea Level Rise and the Future of Infrastructure .....	44
Green Infrastructure Elements:.....	48
Design Standards .....	48
Design Criteria and Applications.....	49
Methodology .....	50
Resiliency as an Economic Development Strategy .....	51
Consistency with Other Plans .....	53

## Introduction

Per New Jersey Municipal Land Use Law, N.J.S. 40:55 D-1, et seq., a municipality's Master Plan must be substantially consistent with zoning laws, redevelopment plans and review of development applications, thereby providing the basis of land use decisions. Master plans are required to be updated at least every ten (10) years, however, a master plan may be updated more often based on changes in the assumptions, policies, and objectives forming the basis for the master plan as last revised.

Atlantic City's 2008 Master Plan assumed an expansion of gaming and the associated impacts such as jobs, new housing, and casino construction beyond just the Revel. Property values were also significantly different in 2008 compared to 2016. Additionally, the 2008 Master Plan did not contemplate both the economic and physical impact from natural disasters such as Sandy.

The focus of this reexamination report is economic diversity, housing, and resilience to storms and flooding.

This reexamination of the Atlantic City Master Plan conforms to the requirements of the Municipal Land Use Law and addresses the requirements of N.J.S. 40:55D-89 by including the following:

- a. The major problems and objectives relating to land development in the municipality at the time of the adoption of the last reexamination report.
- b. The extent to which such problems and objectives have been reduced or have increased subsequent to such date.
- c. The extent to which there have been significant changes in the assumptions, policies, and objectives forming the basis for such plan or regulations as last revised, with particular regard to the density and distribution of population and land uses, housing conditions, circulation, conservation of natural resources, energy conservation, collection, disposition and recycling of designated recyclable materials, and changes in State, county and municipal policies and objectives.
- d. The specific changes recommended for the master plan or development regulations, if any, including underlying objectives, policies and standards, or whether a new plan or regulations should be prepared.
- e. The recommendations of the planning board concerning the incorporation of redevelopment plans adopted pursuant to the "Local Redevelopment and Housing Law," P.L. 1992, c.79 (C.40A:12A-1, et al.) into the land use plan element of the municipal master plan, and recommended changes, if any, in the local development regulations necessary to effectuate the redevelopment plans of the municipality.

This reexamination report serves as a reexamination of the Atlantic City Master Plan dated September 2008.

Before embarking on the statutorily required elements of the Master Plan Reexamination it is informative to present a brief overview of the conditions that were current in 2008 when the Master Plan was adopted in comparison to the conditions since that point in time up to today. The most recent available data on demographic, economic and land use conditions in comparison to 2008 will be presented before addressing the five required elements of a Reexamination Report.

## Atlantic City Physical Layout

The City of Atlantic City is a both an urban center and seaside resort community, consisting of a total of 10,067 acres in land area of which approximately 2,624 acres are developable lands, the remaining acreage consisting of water (3,079 acres) wetlands (3,708 acres) and roads/rights-of-way (656 acres).

The most unique characteristic of the City is its approximately 3.4 mile long sand beach, which is lined by an approximately 60 feet/40 feet/20 feet wide (depending on location) boardwalk. The City is laid out in a grid system of city blocks with an average dimension of 350 feet by 550 feet, which incorporates public parks and open spaces. Public infrastructures, including both water and sewer systems, are well integrated into the grid system.

## Atlantic City Economic Background

From the 1880s to 1940s, Atlantic City was a major east coast vacation resort. In the 1920s, it was considered the premier tryout town for theatrical productions headed for Broadway and beyond. In the 1950s, as air travel to vacation spots in Florida and the Caribbean become more widely available, Atlantic City's popularity as a resort destination began to decline. By the 1960s, the City was beset with the economic and social problems common to many larger urban centers at the time.

In 1976, the "Atlantic City Gamble" was launched when New Jersey voters approved a referendum legalizing gambling in Atlantic City but not elsewhere in the State. The first casino, Resorts International, opened in 1978. Other casinos were soon added along the Boardwalk and later in the Marina District, for a total of eleven (11) by 2008 (a twelfth casino was opened in 2012.) The number of annual visitors had grown from 700,000 in 1978, to over 35 million.

The 2008 Master Plan noted that:

"The strength of the existing economic infrastructure should not be overlooked; in 2007, the City's tax base had skyrocketed from \$316 million in 1976 to almost \$7 billion. The positive impact on Atlantic City has been realized in revitalized neighborhoods, new housing projects and public service facilities and economic, social and cultural programs."

The 2008 Master Plan noted further that:

“The promised economic benefits of gaming to the City, although slow to materialize, have now begun to bear fruit. The eleven (11) casinos that are now operating in Atlantic City achieve a higher gaming “win” (and overall revenues) than all the casinos along the Las Vegas strip combined. Plans for a twelfth casino (speculated to be promoted by Morgan Stanley/Revel Entertainment) have been announced as well as a new thirteenth casino to replace the recently demolished Sands Casino. Existing casino properties such as Harrahs’ Borgata and Trump Taj Mahal are in the midst of major expansions including increased gaming space, additional hotel rooms, entertainment, and retail space.”

The 2008 Master Plan goes on to state that:

“The City’s historic neighborhoods such as Bungalow Park, Chelsea, Chelsea Heights, Ducktown, the Inlet, Venice Park, and Westside continue to flourish in varying degrees. From 2005 to 2006, Atlantic City had the highest percentage increase (25.9%) in average home value in the United States while most of the country showed little or no home value appreciation during this same time period. With this continued economic expansion, Atlantic City is being marketed as *“hot and exciting...and the cool place to be.”* It is beginning to be recognized as a place with not only casino gaming, but also spas, world-class entertainment, nightlife, fine dining, beautiful ocean beaches, a world-famous Boardwalk, golf amenities, amusements, fishing, water sports, and a variety of shopping venues. The geography, economics, and timing are finally beginning to align for the City.”

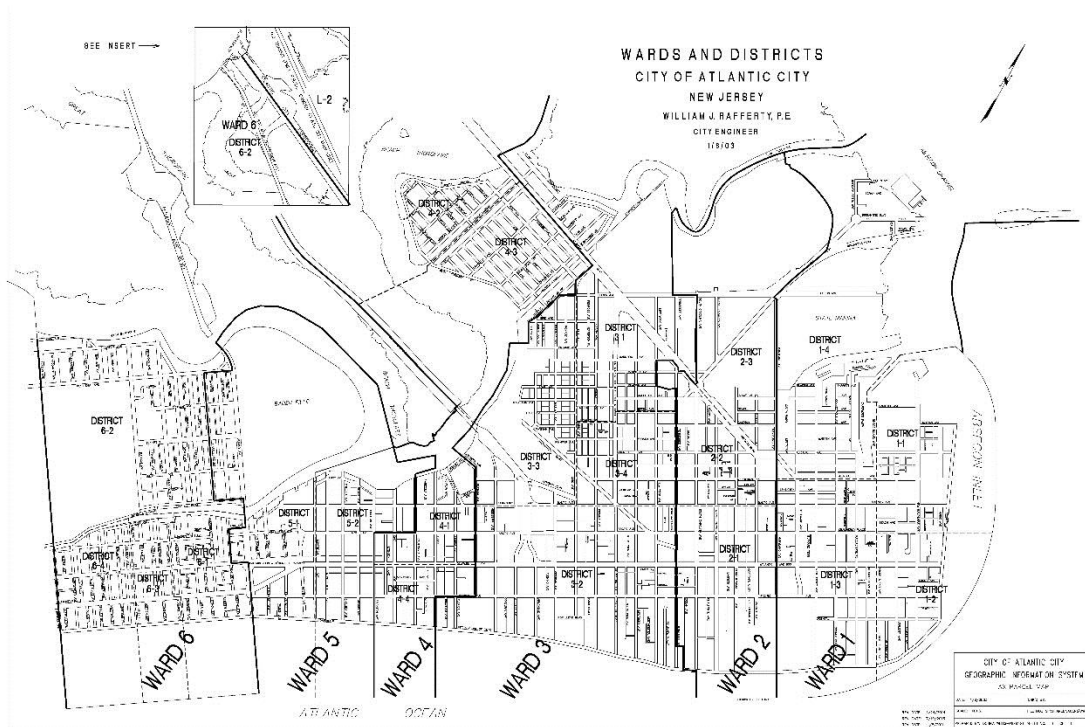
Through the 2000’s, the gaming industry continued to monopolize the City’s economy, however competition from neighboring states began to have an effect in 2010. Casino revenue began dropping, jobs were lost, and the City’s assessed value of property decreased significantly. Specifically, between 2007 and 2015,

- casino revenue decreased from \$5.2 billion to \$2.5 billion
- four of the twelve casinos closed, and two declared bankruptcy
- approximately 2,000 casino employees lost their jobs
- assessed value dropped from \$22 billion to \$7 billion in 2015.

Furthering the economic devastation was Superstorm Sandy, which came ashore in Atlantic City on Monday, October 29, 2012 and produced storm surge and wave erosion of historic proportions. This major coastline altering event was perhaps the most destructive storm in New Jersey history. As Sandy reached landfall the storm surge raised water levels along the inlet and back-bays of Atlantic City causing significant damage. The report “Storm Damage Mitigation Project” dated November 21, 2012 and prepared by CRDA and the City of Atlantic City, estimated damages in Atlantic City at \$75.2 million including losses to public buildings, beaches and boardwalk, housing and loss of convention business revenue.

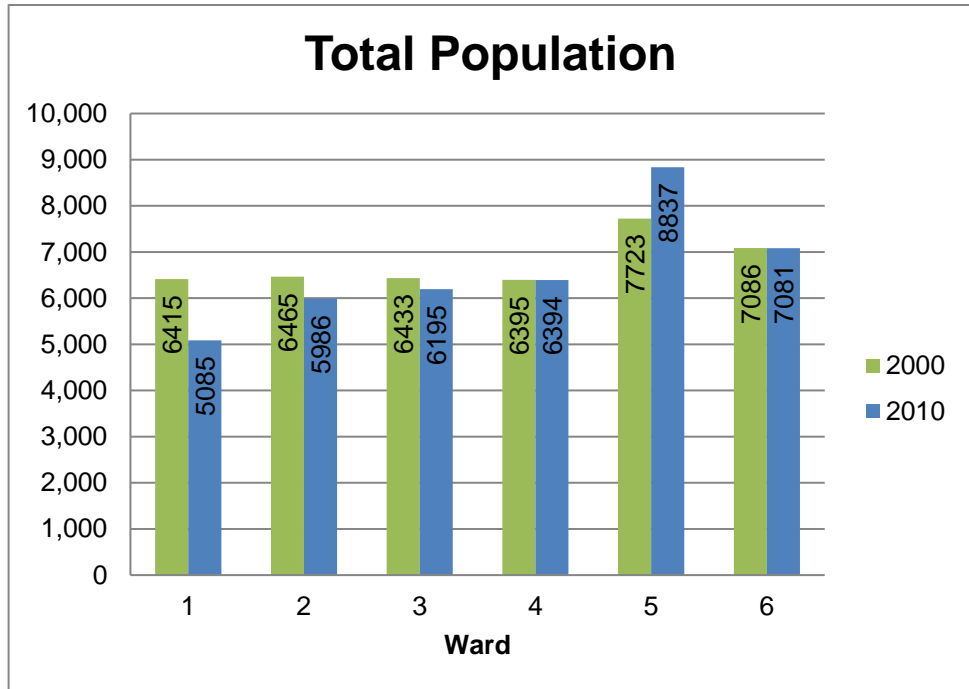
## Demographic Profile of Atlantic City

The 2008 Master Plan included a demographic profile of the City by Ward based on the 2000 Census. With the availability of the 2010 Census it is informative to compare demographic changes in the City between 2000 and 2010 (updated information is not available on an annual basis as the American Community Survey conducted by the Census Bureau only provides minimal annual projections for communities with a population of 65,000 or greater).



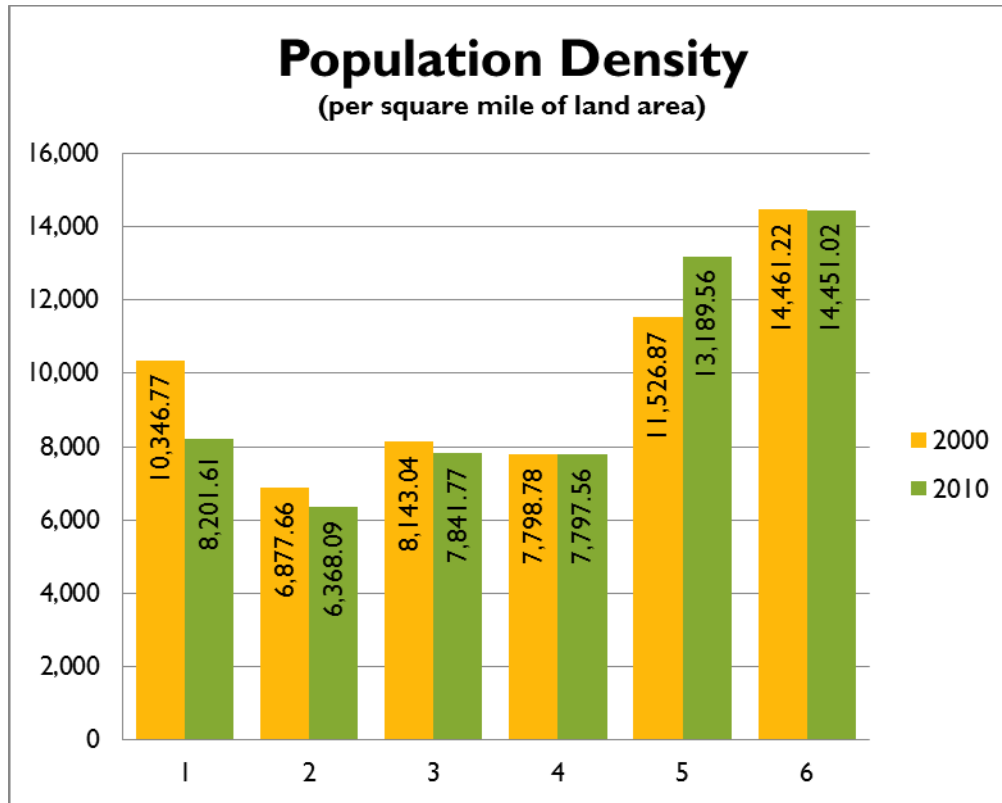
## Total Population

Atlantic City's total population in 2000 was 40,517 falling to 39,510 in 2010. The 2013 estimate by the U.S. Census Bureau was 39,551. The population comparison by Ward is shown below. It can be seen that Wards 1, 2, and 3 all lost population between 2000 and 2010 while Wards 4 and 6 remained essentially the same and Ward 5 increased in population.



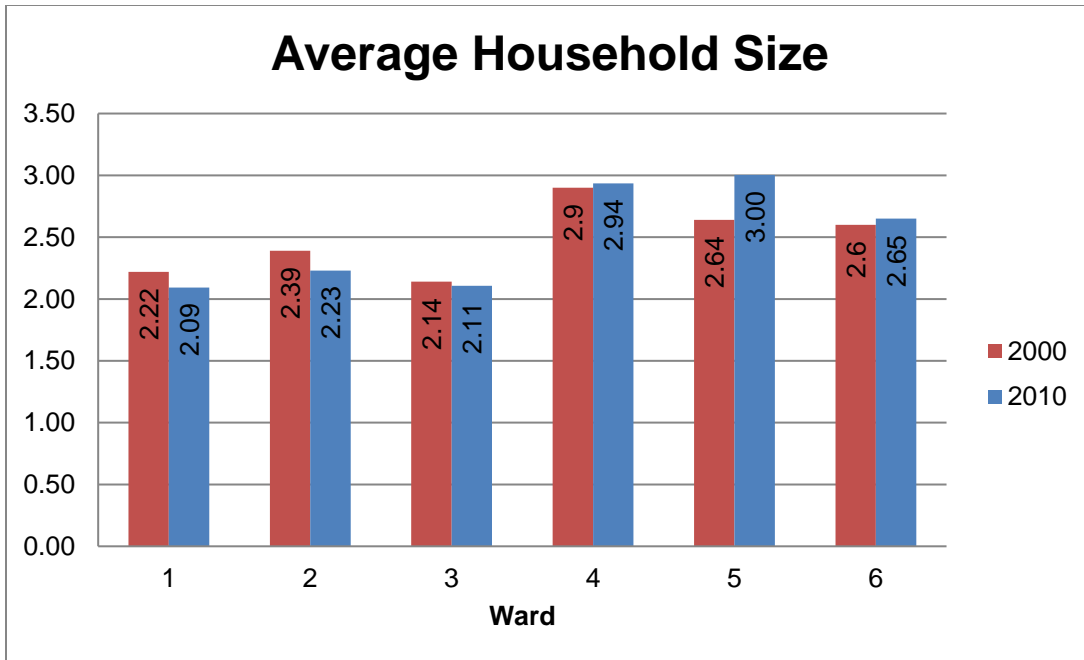
### Population Density

Population density in Atlantic City varies from 6,368 persons per square mile in Ward 2 up to 14,451 persons per square mile in Ward 6. Consistent with the population totals, the density declined in Wards 1, 2 and 3 between 2000 and 2010; while Wards 4 and 6 remained essentially the same and Ward 5 increased in density.

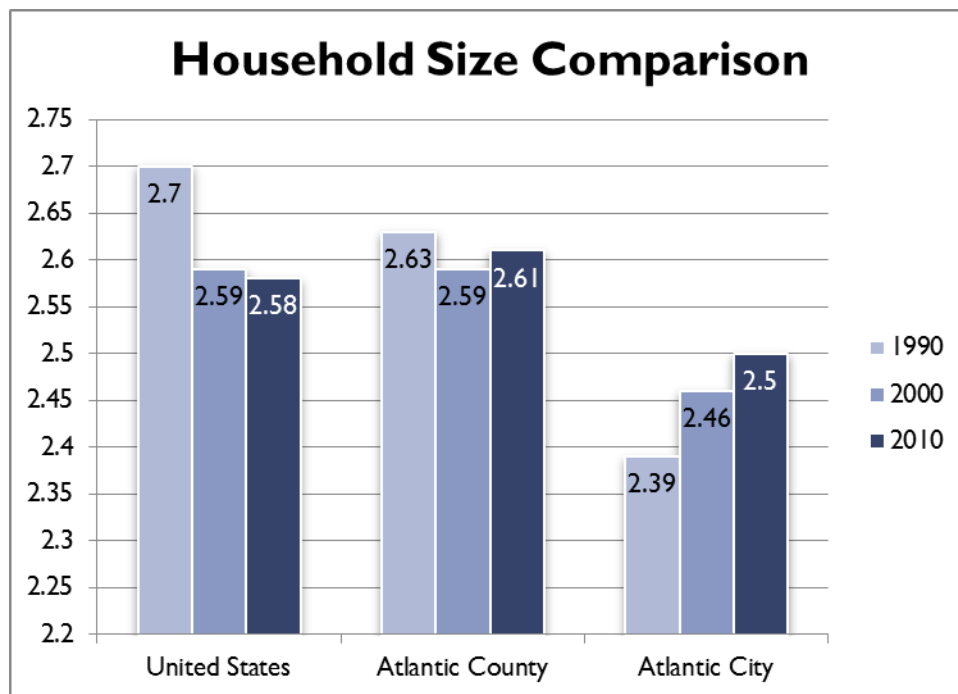


### Household and Family Size

Average household size varied from a low of 2.14 persons per household in Ward 3 up to 2.90 persons per household in Ward 4 in 2000. In 2010 Ward 3 continued to have the lowest average population per household at 2.11 persons per household and Ward 5 had the highest average population per household at 3.00 persons. Ward 4 had the second highest average population per household in 2010. Wards 1, 2 and 3 all decreased in the average size of households between 2000 and 2010 while Wards 4, 5 and 6 all had increases in the average household size between 2000 and 2010 with the largest increase in Ward 5 at +13.6%.

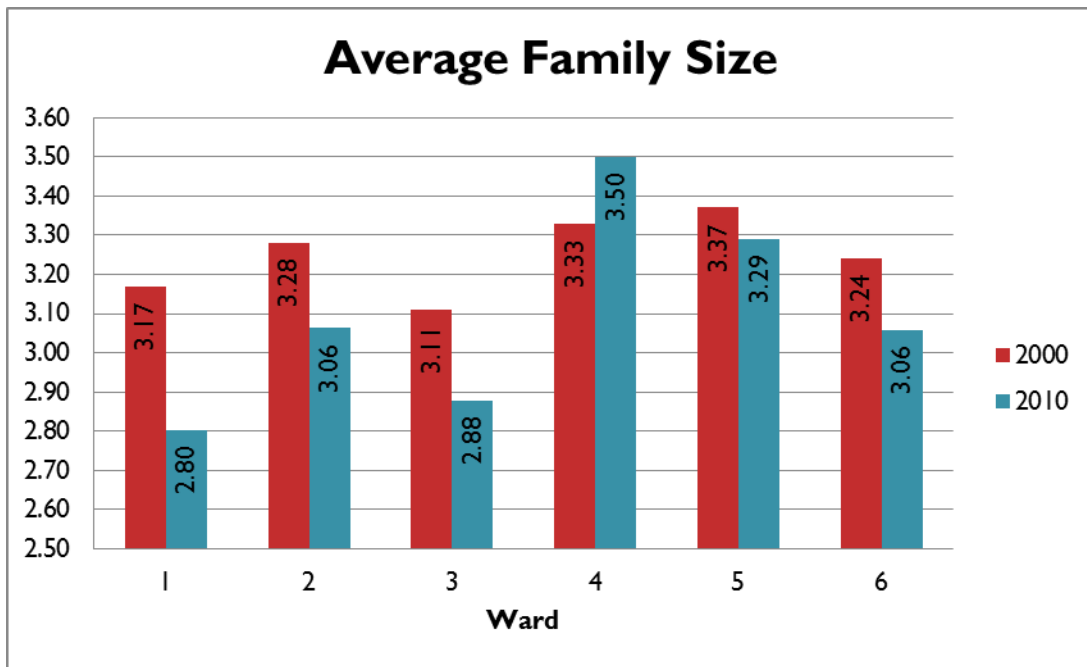


The chart below compares the average household size in Atlantic City with the average household size in Atlantic County and the United States. While the average household size in Atlantic County is similar to that of the United States as a whole, the average household size in Atlantic City is less than either although the average household size in Atlantic City has been increasing since 1990 while that of the County and U.S. has decreased since 1990.



Average family size was fairly consistent across all six Wards in 2000 with the difference between highest and lowest only about 8%. In 2010 however, there was a larger difference with Ward 4

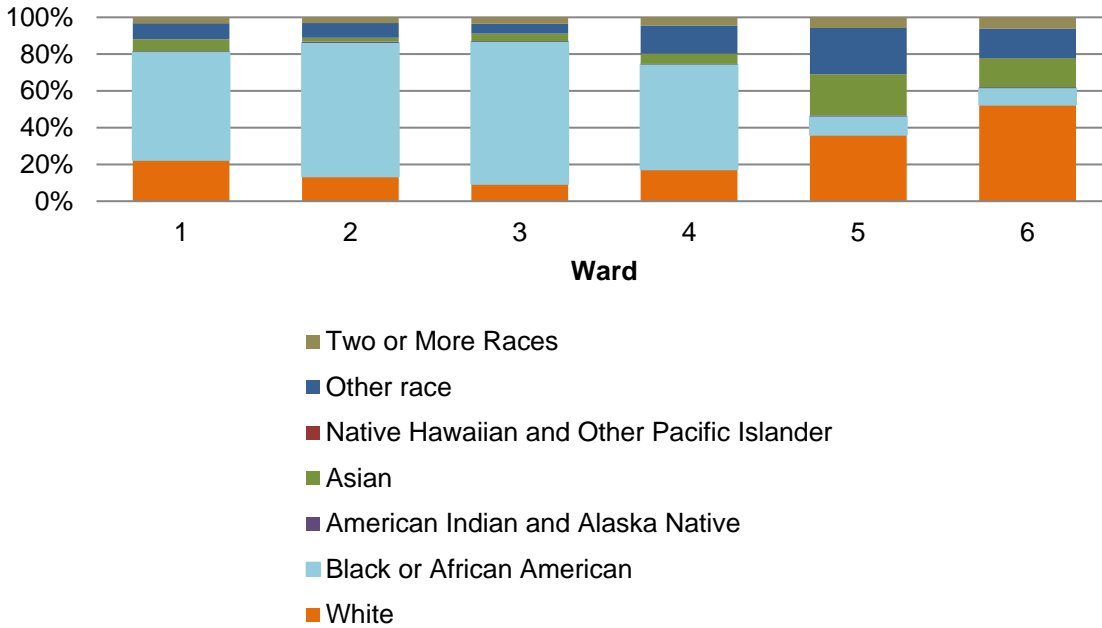
(the highest) having a 25% greater average family size than Ward 3 which was the lowest. The average family size decreased between 2000 and 2010 in all Wards except Ward 4 which increased, although at a modest 5%.



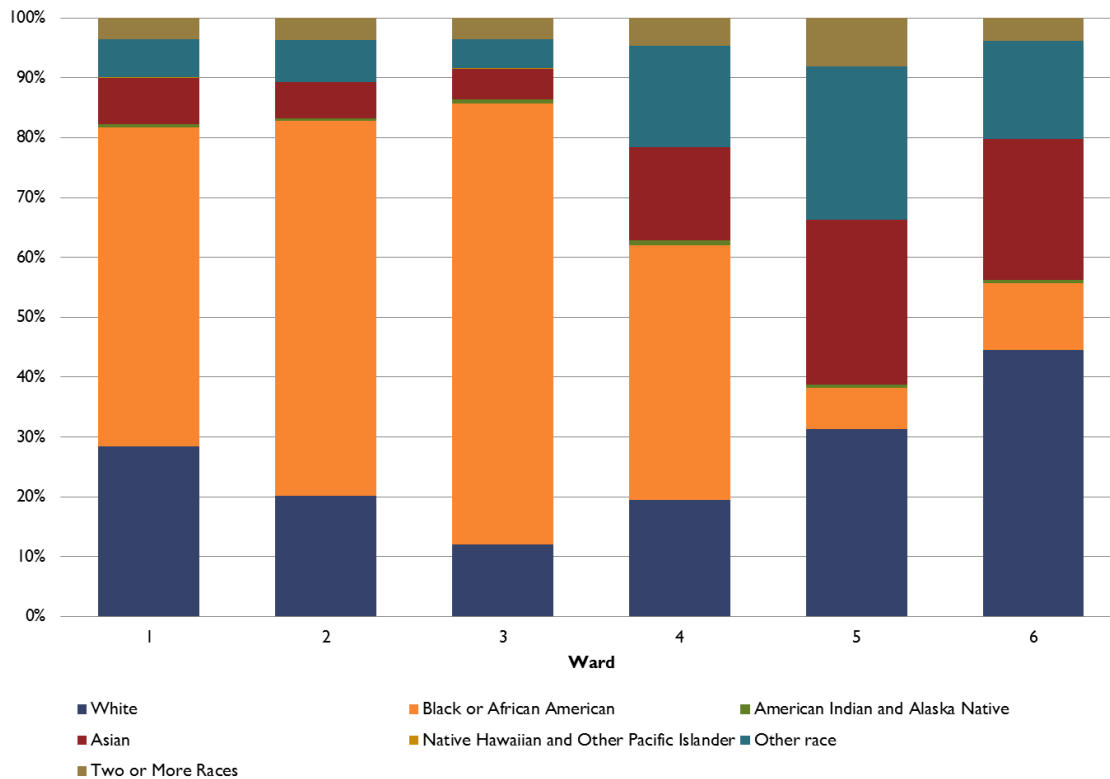
### Racial Composition

There exists a difference in the distribution of races between the different Wards of the City as evidenced in figures following. The differences are more or less consistent in both 2000 and 2010. The 6<sup>th</sup> Ward has the greatest concentration of white residents; comprising more than 40% of its total population in 2010 (it was more than 50% in 2000). The 5<sup>th</sup> and 6<sup>th</sup> Wards have a higher percentage of white residents and a very low percentage of black residents. It is worth noting that the 5<sup>th</sup> and 6<sup>th</sup> Wards also have the largest Asian populations when compared to the other Wards. The remaining four Wards, on the other hand, have greater percentages of Black/ African American residents and a significantly decreased percentage of white population.

## Racial Composition (2000)

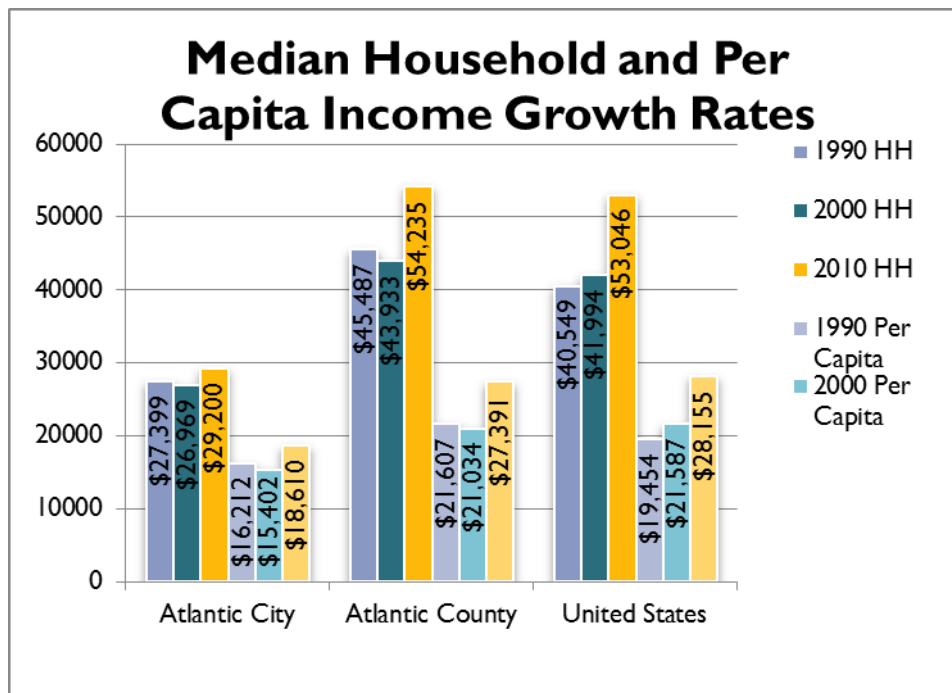


## Racial Composition (2010)



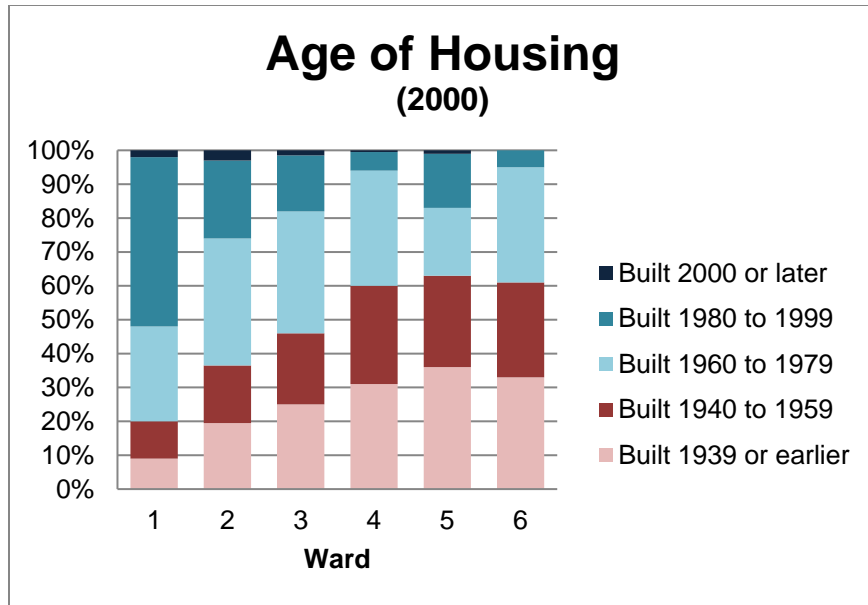
## Income

Income data by Ward is not available for the 2010 census. However, income data is available by Ward for the 2000 Census which indicated that the 6<sup>th</sup> Ward had the highest per capita income at \$19,340 while the 2<sup>nd</sup> Ward had the lowest at \$11,328. Median household and per capita income rates are available for the City as a whole in 2010. The chart below shows the median household and per capita income for Atlantic City in comparison to Atlantic County and the United States in both 2000 and 2010. The data indicates that both the household and per capita income in Atlantic City lags behind both the County and the United States. All three jurisdictions showed an increase in both income categories between 2000 and 2010. In 2010 the per capita increase in Atlantic City was \$18,610 while it was \$27,391 in the County and \$28,155 in the United States.

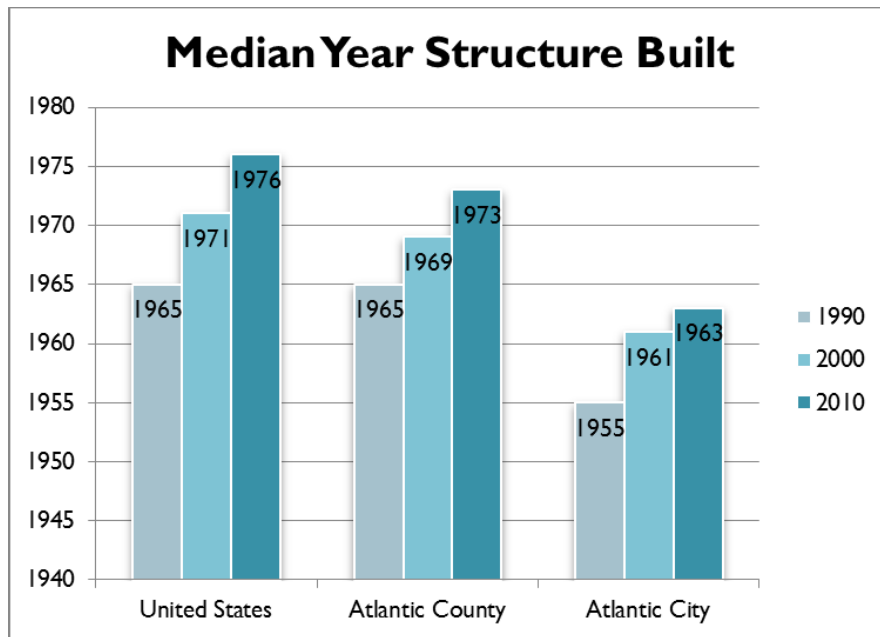


## Age of Housing Stock

The age of housing stock is not available for the 2010 Census by Ward, but it was available for the 2000 Census. The chart below shows the age of housing stock as of 2000. The chart illustrates that the 1<sup>st</sup> Ward has the highest percentage of new housing stock whereas the 6<sup>th</sup> Ward has a very low percentage of new housing. More than 60% of the housing units in the 4<sup>th</sup>, 5<sup>th</sup> and 6<sup>th</sup> Wards were built before 1960. On the other hand, more than 60% of the housing units in the 1<sup>st</sup> and 2<sup>nd</sup> Wards were constructed after the year 1960. The 1<sup>st</sup> Ward also has the highest percentage of housing units built between 1980 and 2000.



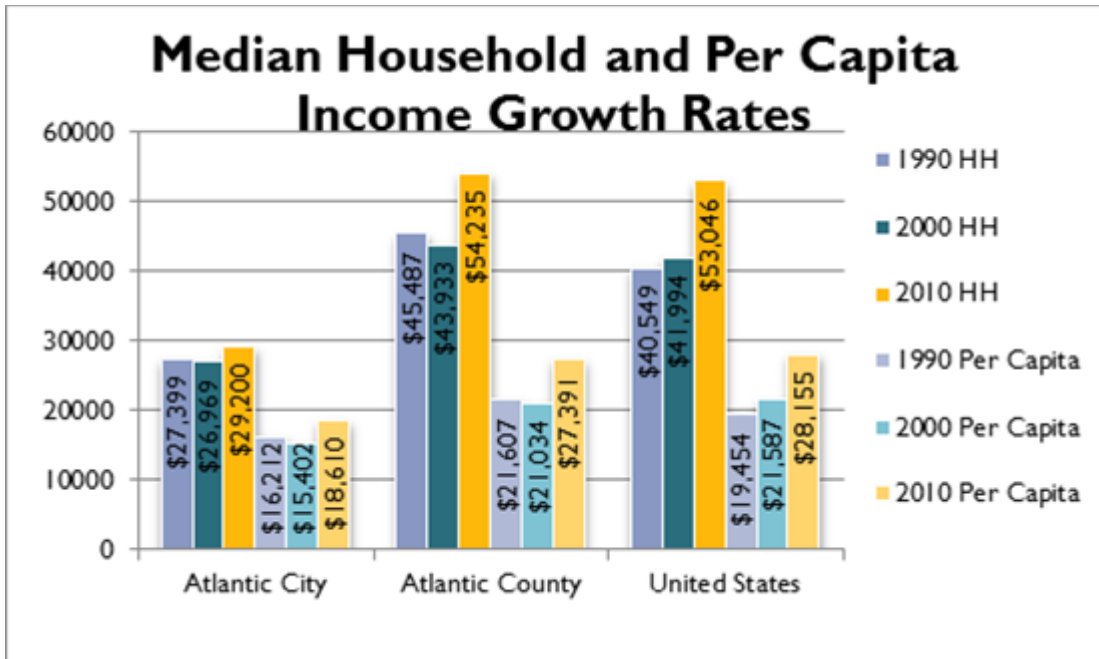
A comparison of the median year that housing was built is shown in the below chart for Atlantic City, Atlantic County and the United States. It can be seen that the median age of the housing structures in Atlantic City is considerably older than that of the County or United States.

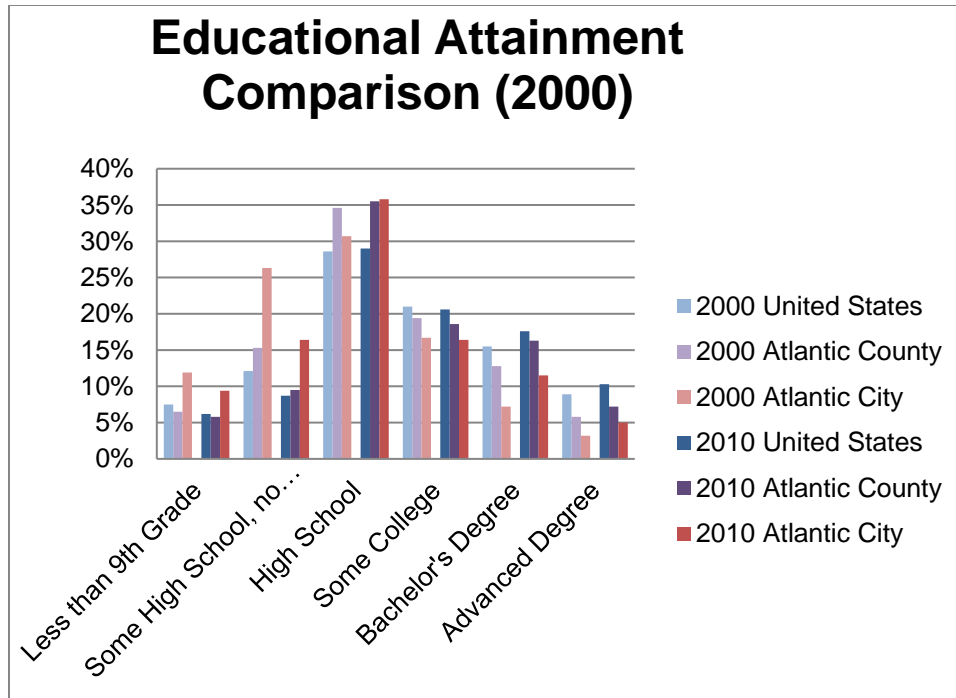


## Educational Attainment

Educational attainment data by Ward is another census item available for 2000 but not for 2010. The chart below shows the 2000 levels of educational attainment.

The chart demonstrates that the 2<sup>nd</sup> Ward has the highest percentage of people aged 25 years and over without a high school diploma. The 2<sup>nd</sup> Ward also has the lowest percentage of the population with a Bachelor’s or advanced degree. Approximately 20% of the population in each Ward has some college credit; however, the 5<sup>th</sup> Ward has the greatest percent of population with a Bachelor’s degree and the second highest percentage of people with an advanced degree. The 1<sup>st</sup> Ward has the lowest percentage of people without a high school diploma, and has the highest percentage of people with an advanced degree. In general, the educational attainment levels in Atlantic City are lower than in the County or United States.



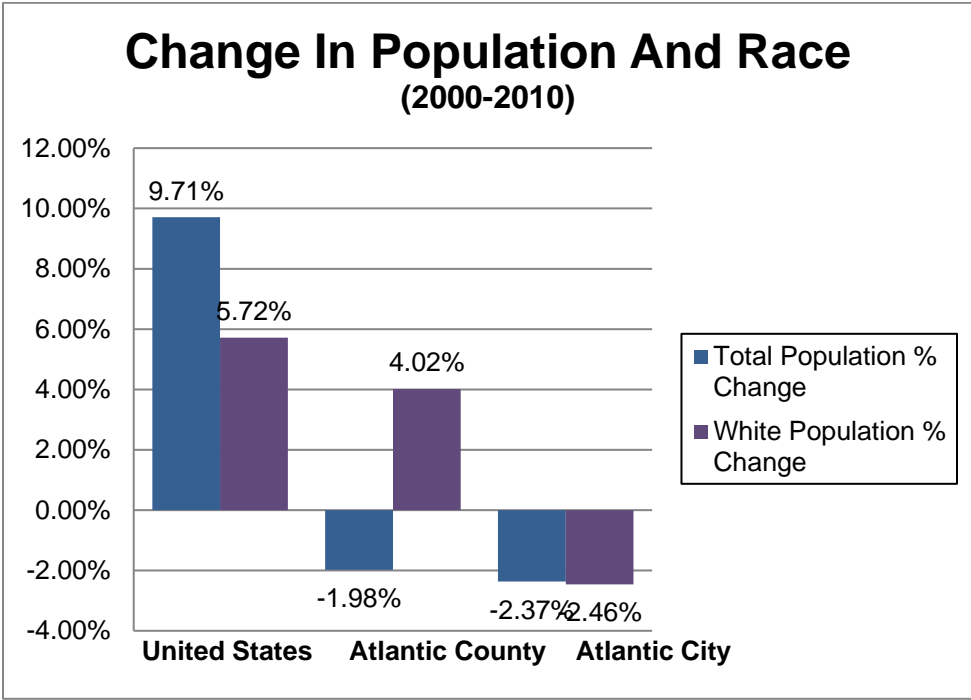
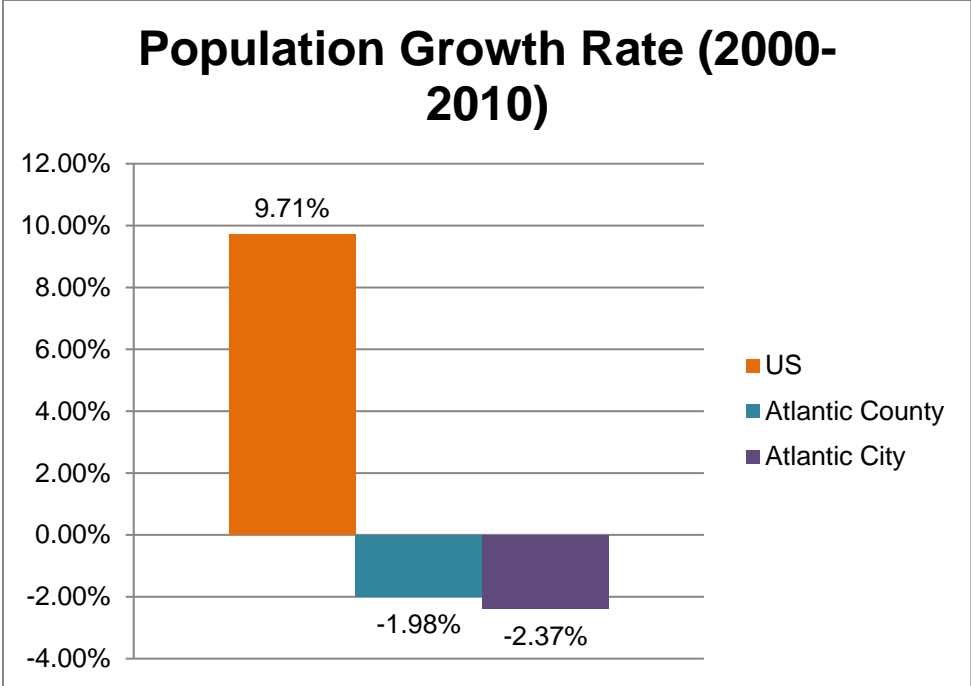


### Summary of Demographic Observations

Atlantic City’s population level is essentially stagnant. There was a decline of approximately 1,000 residents between 2000 and 2010 but the U.S. Census Bureau estimates the 2013 population to be essentially the same as 2010. Within the City, the 5<sup>th</sup> Ward has the highest total population and the 6<sup>th</sup> Ward has the highest population density. The 2<sup>nd</sup> Ward has the lowest population density. Atlantic County also experienced a population decline between 2000 and 2010.

The City’s household size has increased in the past decade, but it is still less than the County or the nation. The 1<sup>st</sup> and the 3<sup>rd</sup> Wards have fairly low average household and family sizes, specifically when compared to the other Wards and to the City averages.

The white population in the City has declined over the past decade as it also did between 1990 and 2000. Within the Wards, the 6<sup>th</sup> Ward has the highest concentration of white residents as well as the highest per capita income among all the Wards. The population growth rate between 2000 and 2010 and the percent of white population change between 2000 and 2010 in comparison to the County and the US is shown in the following charts.



The National per capita and median household incomes as well as the County and the City figures increased between 2000 and 2010 after dropping between 1990 and 2000 for the County and City. The City’s median household income is significantly lower than that of the County and the nation.

The City has a greater stock of older housing compared to the County and the Nation, but this decline is gradually declining; a majority of the older structures in the City are located in the 5<sup>th</sup> and 6<sup>th</sup> Wards.

The educational attainment of the City's population has improved over the past decade, but falls significantly short of the National and County rates. Within the City, the 2<sup>nd</sup> Ward has the lowest high school diploma and college degree education levels.

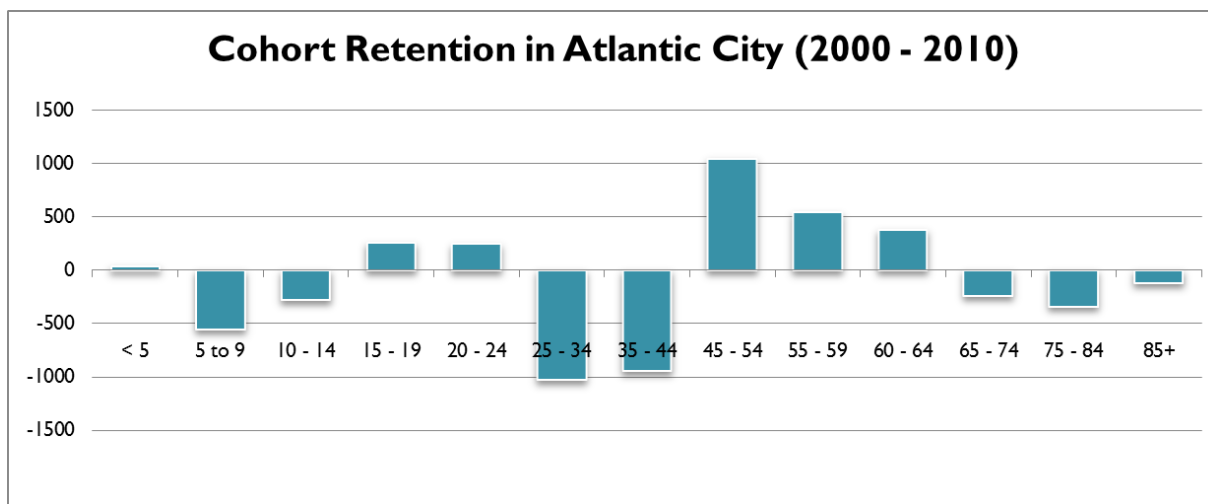
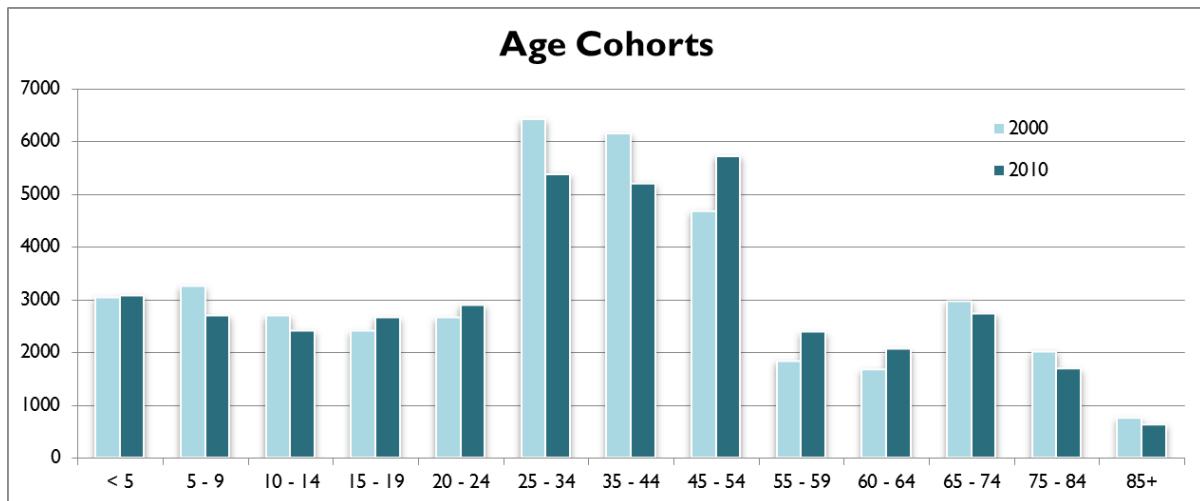
## Citywide Cohort Analysis

In an effort to better understand the overall City demographic and population shifts, a cohort retention analysis was completed. The purpose of this analysis is to look at the population of the City in a given census year (2000) and, using trending analysis, predict the movement of the population cohorts (age groups) for the next 10 years. These numbers are then compared to the "actual" population change over ten years using the U.S. Census information. The analysis provides an indication of population gain/loss by cohort, or age group.

Ideally the "predicted" population would match the actual population; however mitigating factors impact the results. Factors such as in-migration and out-migration are often based on quality of life issues in a community. For example, if a municipality shows a loss in the 35-54 age cohorts, the area is losing significant economic buying power as this age range is the most important economic force in the economy. The loss of those residents in the 25-44 age cohorts could also indicate the desire to move to areas with better quality schools, as this age group tends to be in the "child raising years." While every municipality varies, the best situation is that a city is retaining its key demographic age cohorts and attracting new residents as well.

The following figures illustrate the cohort retention analysis for Atlantic City. In this case, the "expected" or predicted population for those residents aged 15-24 was less than actually realized. This may be a sign of Atlantic City's strong economic need for entry level workers in these age cohorts; however, the City did not retain those residents in the age 25-44 cohorts, which may indicate that once they had children they opted to move to a less urban environment in search of a better school district. Interestingly, there was a fairly strong increase in the 45-54, 55-59 and 60-64 age cohorts. In the previous 10 years (2000-2010) there was only a nominal increase in these age cohorts.

The loss of the population cohorts over the age of 65 is typical of most urban areas, although the decrease between 2000 and 2010 was not as significant as between 1990 and 2000.



## Economic Profile of Atlantic City

### Employment

Private sector employment has fallen in Atlantic City since 2008 with the biggest drop in Accommodation and Food Services as can be expected due to the problems in the casino industry. Employment data from the 2007 and 2012 Economic Census is reproduced below. It can be seen that employment level in Accommodation and Food Services declined from 47,392 employees in 2007 to 38,593 employees in 2012. Also notable is the decline in Real Estate, Rental and Leasing which fell from 739 employees in 2007 to 475 employees in 2012 emblematic of the lackluster activity in real estate. It should be noted that the 2012 data which is the latest U.S. Census Bureau Economic Census predates Superstorm Sandy and the recent rash of casino closings.

Atlantic City Economic Statistics - 2007					
NAICS Code	Description	Establishment	Sales Receipts or Shipments (1,000)	Annual Payroll (1,000)	Paid Employee
42	Wholesale Trade	13	70,865	8,700	355
44-45	Retail Trade	316	554,035	59,451	2,692
51	Information	5	X	853	33
53	Real Estate, Rental and Leasing	63	139,386	20,654	739
54	Professional, Scientific, and Technical Services	71	111,139	54,757	610
56	Administrative, Support, Waste Management and Remediation Services	35	28,639	18,550	790
61	Education Services	1	D	D	0-19
62	Health Care and Social Assistance	87	249,950	120,299	2,702
71	Arts, Entertainment and Recreation	20	17,109	4,399	148
72	Accommodation and Food Services	238	5,602,533	1,368,996	47,392
81	Other Services (Except Public Administration)	78	80,475	23,931	1,003
	D-Withheld to avoid disclosing data for individual companies; data included in higher level totals.				
	Source: U.S. Census Bureau, 2007 Economic Census, 2007 Economic Census of Island Areas, and 2007 Nonemployer Statistics.				

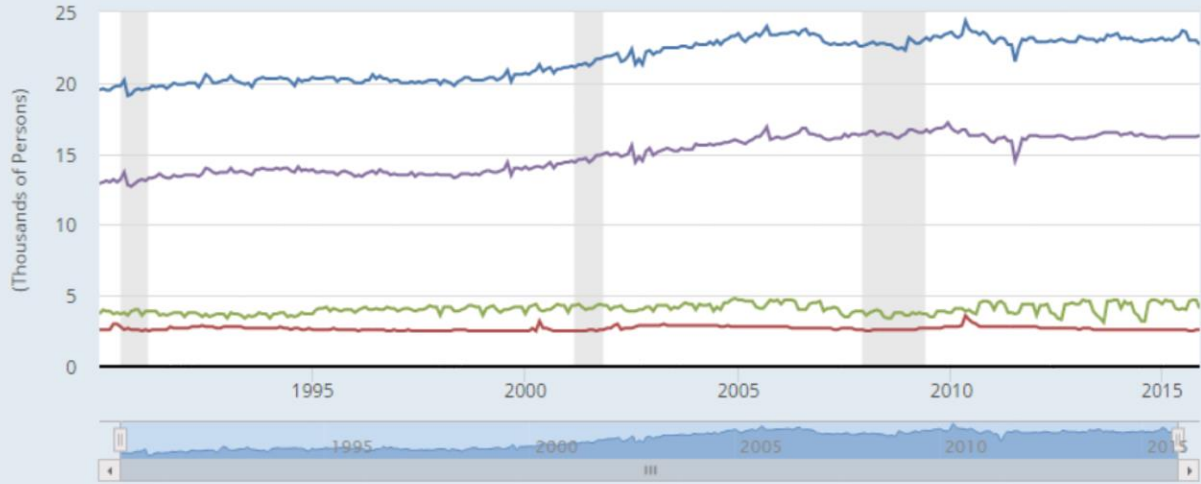
Atlantic City Economic Statistics - 2012					
NAICS Code	Description	Establishment	Sales Receipts or Shipments (1,000)	Annual Payroll (1,000)	Paid Employee
22	Utilities	8	Q	7,476	91
31-33	Manufacturing	6	D	960	54
42	Wholesale Trade	12	95,779	11,982	388
44-45	Retail Trade	330	641,008	61,111	3,060
53	Real Estate, Rental and Leasing	47	111,175	15,807	475
72	Accommodation and Food Services	228	3,539,066	1,154,835	38,593
	D-Withheld to avoid disclosing data for individual companies; data included in higher level totals.				
	Q- Revenue not collected at this level of detail for multiestablishment firms.				
	Source: U.S. Census Bureau, 2012 Economic Census of the United States				

Unemployment remains higher in Atlantic City than in the State or Nation. According to the U.S. Bureau of Labor Statistics as of June 2015 the unemployment rate in the Atlantic City area was 8.8% as compared to 6.1% for the State and 5.5% for the U.S. This is an improvement however over May 2012 when unemployment in Atlantic City was at 16.2% as compared to the State unemployment rate of 9.1% and the U.S. rate of 8.2%.

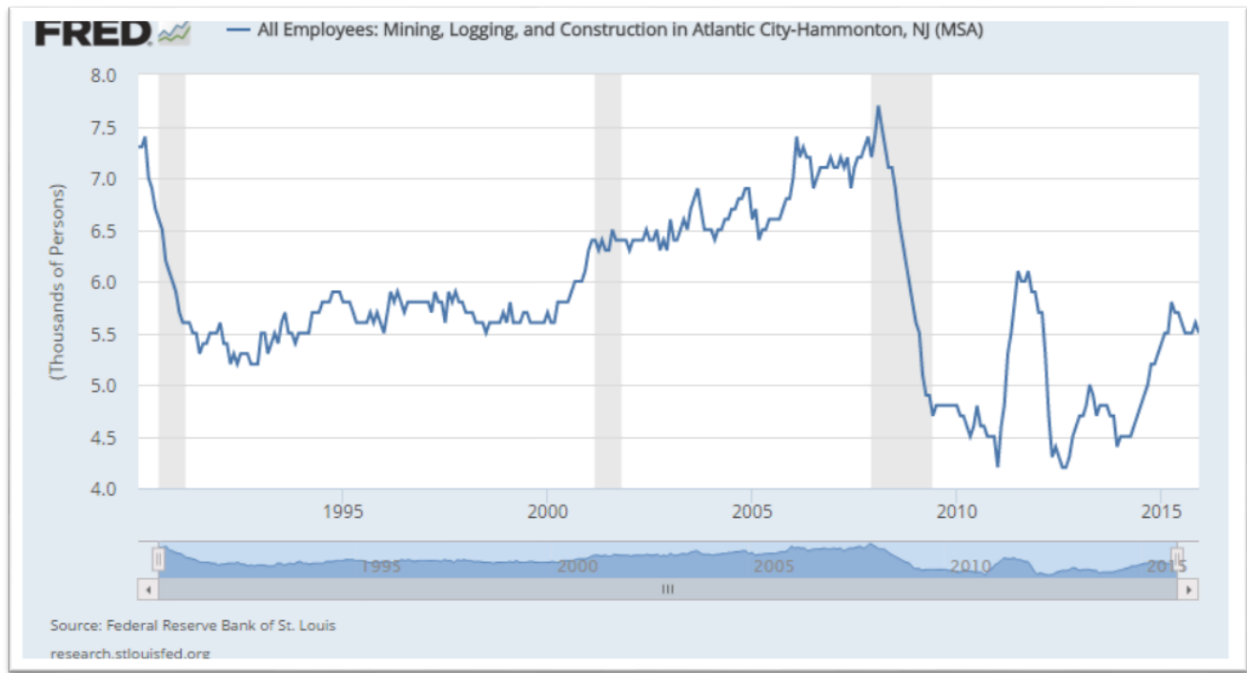
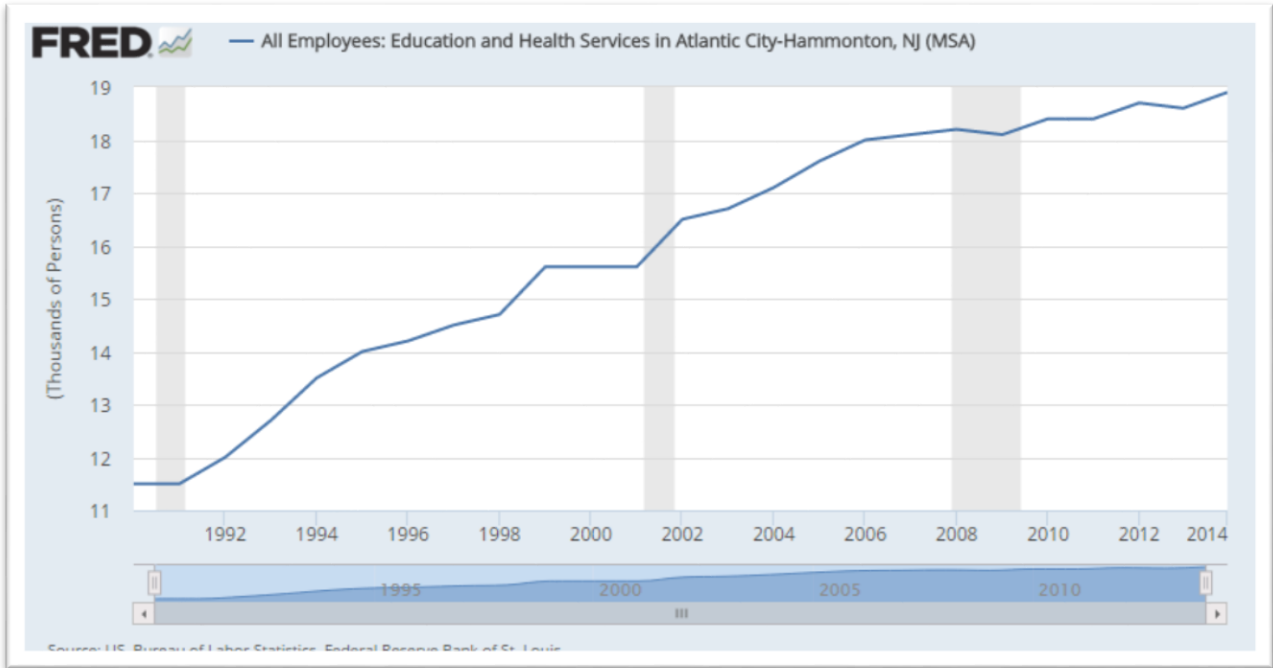


**FRED**

- All Employees: Government in Atlantic City-Hammonton, NJ (MSA)
- All Employees: Federal Government in Atlantic City-Hammonton, NJ (MSA)
- All Employees: State Government in Atlantic City-Hammonton, NJ (MSA)
- All Employees: Local Government in Atlantic City-Hammonton, NJ (MSA)



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## Real Estate Market

Just as real estate values were higher in Atlantic City during the mid-2000s, the drop has been more precipitous. The significant decrease in values of the casinos has had a massive effect, with the ratable base dropping from over \$20 billion in 2008 to less than \$10 billion in 2015.

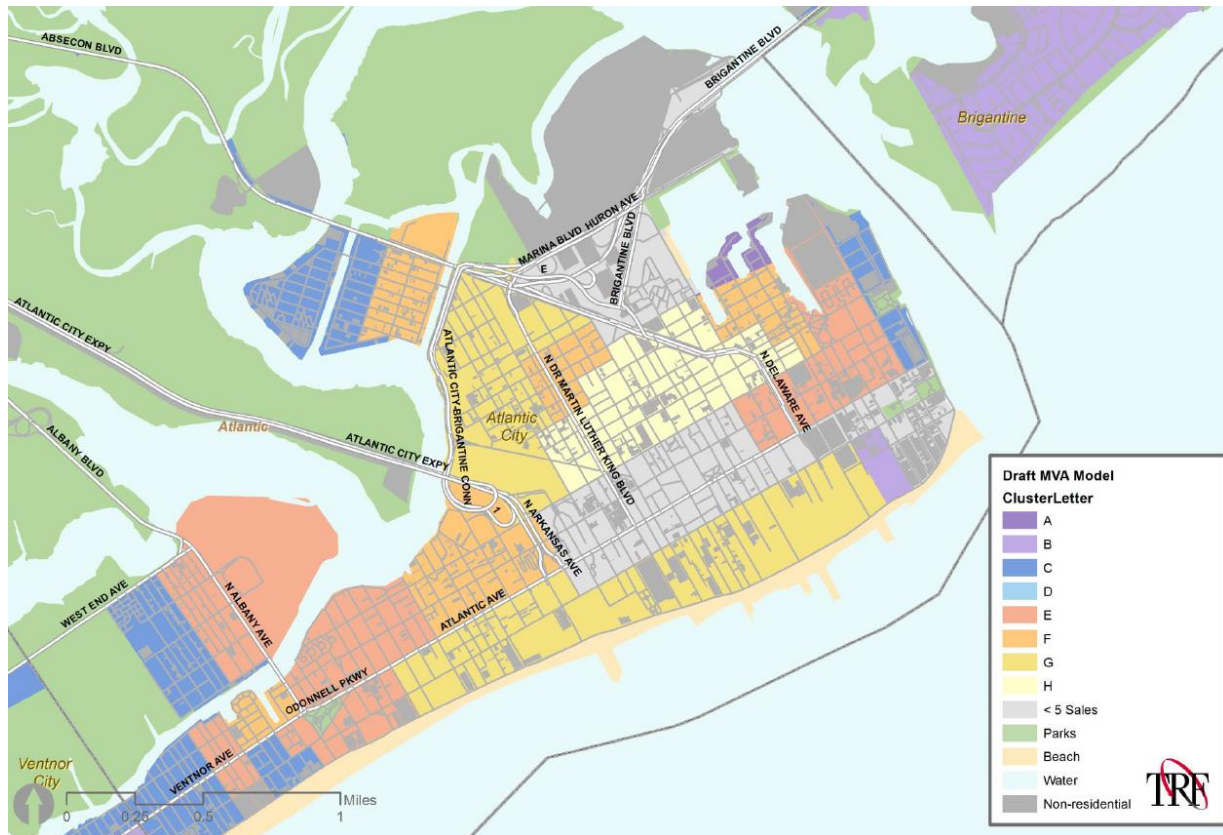
The table below compares the change in tax ratables between 2008 and 2014. The assessed property value overall has declined 46% in that time period with all property types (residential, commercial, vacant and apartments) sharing in the decline. The total assessed valuation in 2008 was approximately \$22 billion. It is currently (2014) approximately \$12 billion.

### Change in Tax Ratables

	Number of Parcels			Property Value			
	2008	2014	% Change	2008	2014	% Change	2016
Vacant	2,365	2,229	-6%	\$1,490,690,697	\$813,360,054	-45%	\$415,929,500
Residential	11,036	10,952	-1%	\$3,114,539,426	\$2,201,052,829	-29%	\$1,685,997,740
Commercial	1,771	1,645	-7%	\$17,415,239,503	\$8,861,743,791	-49%	\$4,251,201,600
Industrial	11	9	-18%	\$8,944,705	\$4,264,697	-52%	\$4,972,800
Apartments	182	170	-7%	\$321,524,267	\$194,521,848	-40%	\$151,651,000
<b>Total</b>	<b>15,365</b>	<b>15,005</b>	<b>-2%</b>	<b>\$22,350,938,597</b>	<b>\$12,074,943,220</b>	<b>-46%</b>	<b>\$6,509,752,640</b>

### Market Value Analysis

In April 2015, a Market Value Analysis was completed by The Reinvestment Fund. The Market Value Analysis is a tool designed to assist the private market and government officials to identify and understand the various elements of local real estate markets. Specifically, it maps conditions that cause demand and distress in the housing market, and color code neighborhoods to help local officials and private investors can more precisely craft intervention strategies in weak markets and support sustainable growth in stronger market segments. The darker colors are the stronger markets.



## 2015 Atlantic City MVA DRAFT Model Stats (Atlantic City Block Groups Only)

Cluster	#BGs	Median Sale Price 2011-2014	Variance 2011-1014	Foreclosures % Housing Units 2011 - 2014	% Publicly Subsidized 2014	% Commercial 2014 (MOD-IV)	Valassis Vacancy (Minus Seasonal) Q4 2014	Valassis No Stat (Rolling Avg. 2014)	% Permits 2013 - 2014	Owner Occupancy 2014 (Est. MOD-IV)
A	1	\$350,000	0.49	8.8%	0.0%	1.1%	15.6%	9.4%	5.4%	53.5%
B	1	\$217,500	0.42	4.0%	0.2%	1.8%	7.2%	1.2%	0.5%	1.2%
C	6	\$185,812	0.82	4.6%	8.1%	2.3%	5.1%	2.8%	4.7%	38.1%
E	8	\$109,875	0.59	5.6%	6.4%	7.2%	7.3%	2.8%	2.3%	24.8%
F	6	\$63,850	0.74	10.6%	0.7%	5.6%	8.3%	3.3%	3.5%	41.2%
G	5	\$49,350	0.80	9.4%	0.4%	23.8%	11.2%	2.7%	2.3%	19.2%
H	5	\$40,750	0.62	3.1%	33.1%	4.0%	11.3%	1.2%	2.1%	8.6%

### Land Use Profile of Atlantic City

The Land Use Plan element of a community Master Plan is generally perceived to be the key element of the Master Plan. The Land Use Plan serves as the foundation and basis for the Zoning Ordinance. Indeed, the significance of the Land Use Plan Element is noted by the Municipal Land Use Law which states that a Master Plan shall generally comprise of at least a statement of objectives, principals, assumptions, policies and standards and a land use plan element with other elements being optional. Generally the Land Use Plan is to show the existing and proposed location of uses of land in the future. In the case of Atlantic City which has been fully developed for many years, the future land use pattern can be anticipated to replicate the existing land use pattern for the most part save for possible areas of redevelopment.

A comparison between the amount of different land use types in 2008 and currently can be had through either a review of property tax classifications from the tax assessor's office of Land Use/Land Cover data from NJDEP based on aerial photos. It was not possible to exactly compare 2008 data with today since the tax assessor's property tax classification data only goes back to 2011 and 2014 represents the last update. The NJDEP Land Use/Land Cover data was only available for the years 2007 and 2012. Tables representing both methodologies follow:

Property Tax Classification - Number of Acres				
Class	2011	2014	Change	% Change
Residential	373.49	371.52	(1.97)	(0.53%)
Apartment	50.13	50.39	0.26	0.52%
Commercial	574.06	569.43	(4.63)	(0.81%)
Industrial	5.72	5.72	0.00	0.00%
Vacant	1,329.23	1,289.46	(39.77)	(2.99%)
School	80.85	80.85	0.00	0.00%
Public Land	2,874.20	2,894.29	20.10	0.70%
Church	29.78	28.91	(0.87)	(2.93%)
Other Tax Exempt	1,153.07	1,158.23	5.17	0.45%
Unknown Classification	3,677.09	3,698.81	21.72	0.59%
<b>Total</b>	<b>10,147.61</b>	<b>10,147.61</b>	-	-

Land Use / Land Cover - Number of Acres				
	2007	2012	Change	% Change
Beaches	51.19	64.01	12.82	25.05%
Barren Land	25.31	75.15	49.84	196.96%
Forest	79.28	64.40	(14.88)	(18.77%)
Residential	885.12	881.93	(3.18)	(0.36%)
Commercial	808.15	818.62	10.47	1.30%
Military	10.01	10.01	0.00	0.00%
Industrial	29.08	28.17	(0.91)	(3.13%)
Transportation/Utilities/Communications	427.09	429.87	2.78	0.65%
Airport	27.85	27.85	0.00	0.00%
Recreational Land	94.67	94.65	(0.02)	(0.02%)
Athletic Field	25.57	25.47	(0.10)	(0.40%)
Stadium/Theater/Cultural Center/Zoo	30.32	30.32	0.00	0.00%
Mixed Urban Land	35.73	33.00	(2.73)	(7.65%)
Other Urban Land	403.92	361.68	(42.24)	(10.46%)
Water	3,553.25	3,585.39	32.13	0.90%
Wetlands	3,692.67	3,648.69	(43.98)	(1.19%)
<b>Total</b>	<b>10,179.21</b>	<b>10,179.21</b>	-	-

A review of the above tables show there has been very little change in land use over the years. This is particularly true for the property tax classifications where the largest percentage increases were for public land +0.70% and apartments +0.52%. The largest percentage decreases were for vacant land -2.99% and church property - 2.93%. In terms of actual acreage all changes were

nominal. For instance the decrease in vacant land was only 39.77 acres and the increase in public land was 20.10 acres.

The Land Use/Land Cover analysis shows greatest increases to be for barren land at +196.96% (49.84 acres) and beaches at +25.05% (12.82 acres). Note that the beach figure was pre-Superstorm Sandy and may have decreased since. The largest decreases in Land Use/Land Cover were for forest -18.77% (14.88 acres) and other urban land -10.46% (42.24 acres).

## Reexamination of the 2008 Master Plan

a. The major problems and objectives relating to land development as stated in the 2008 Master Plan.

The following major problems relating to land development and objectives to address them can be summarized as follows from the 2008 Master Plan:

### Problems

- Lack of a diversified economy.
- Transportation accessibility and traffic problems.
- Age of infrastructure (water, sanitary sewer, electric and gas systems).

### Objectives

- Provide opportunities for the continued growth of the City's resorts and casinos while using land use planning to diversify its tourism economy and meet the needs of local residents.
- Redevelop Bader Field as a signature site and viable community asset.
- Encourage the redevelopment/revitalization of existing neighborhoods and provide pedestrian and bicycle connections between them.
- Encourage development in the Central Business District.
- Protect the City's natural resources.
- Provide adequate capacity for future growth on access roads to Atlantic City.
- Minimize impacts of traffic on Atlantic City residents and businesses.
- Plan strategies for diversification of the City's economy.
- Encourage urban design and establish design criteria and performance standards that improve the quality of development within the City.
- Promote and reinforce the City as a desirable residential location.
- Promote academic uses to attract new economic development opportunities.
- Preserve and maintain the existing utility infrastructure and take advantage of best available technology for sewage treatment and stormwater management.

b. The extent to which such problems and objectives have been reduced or have increased since 2008.

The main problem related to land development identified in the 2008 Master Plan is the lack of a diversified economy. The lack of a diversified economy enhanced the economic impact

of the great recession in Atlantic City. The City was affected to a greater extent than the County, State or Nation by the recession since casinos, the main economic driver in the City, rely on patrons with disposable income. Disposable income was hard to come by for most individuals during the recession. In the post-recession years casinos opened in the adjacent States of New York and Pennsylvania drawing customers away from Atlantic City. As a result, the need for a diversified economy is more apparent today than in 2008.

There has been little or no improvement in Transportation accessibility to Atlantic City and traffic problems within certain main arteries of the City persist. The Circulation Plan goals and objectives in the 2008 Master Plan have not been addressed, leaving the City with the similar transportation and traffic problems as in 2008. There should be a discussion within the Planning Board about an evaluation and prioritization of transportation problems and improvements. This will assist with the application for funding moving forward.

Some of the infrastructure issues have been addressed since 2008. South Jersey Gas has completed a wide spread upgrading of their lines accompanied by repaving of effected streets. Important streets such as Pacific Avenue and Arctic Avenue have been repaved in recent years, but there is an acknowledgement that stormwater infrastructure must now be included in the discussion. The City has taken aggressive measures to drain stormwater and improve resilience from storms and flooding, but additional improvements are needed.

Regarding the major objectives relating to land development from 2008 each objective is repeated below followed by a brief discussion of the current status.

- **Provide opportunities for the continued growth of the City’s resorts and casinos while using land use planning to diversify its tourism economy and meet the needs of local residents.**

There is currently no longer a need to provide opportunities for continued growth of casinos since the casino industry has retracted drastically in recent years. Opportunities for growth may be needed sometime in the future but certainly not at the present time. On the other hand using land use planning to diversify the tourism offerings and tourism economy is of utmost importance as is the objective to meet the needs of local residents.

- **Redevelop Bader Field as a signature site and viable community asset.**

The redevelopment of Bader Field has been an objective for many years. This is an objective that has been addressed recently with the adoption of the Bader Field redevelopment plan and active discussions and executed lease (pending State approval) for a sports complex on the site.

- **Encourage the redevelopment/revitalization of existing neighborhoods and provide pedestrian and bicycle connections between them.**

The encouragement of the redevelopment/revitalization of existing neighborhoods continues to be an objective that has not been fully addressed. Certain neighborhoods such as Northeast Inlet have seen revitalization or redevelopment but overall this is a continuing objective. The

provision of enhanced pedestrian and bicycle access between neighborhoods is an objective that was advanced further in the bicycle and pedestrian master plan study by Michael Baker Associates. The City's first bicycle lanes were completed in March 2016 along Maryland Avenue. The City has received a grant and is currently completing design of the Inlet Bike Loop.

- **Encourage development in the Central Business District.**

The objective to encourage development in the Central Business District is ongoing and has been met with some success since 2008. Examples of development that has occurred since 2008 include the recently opened Bass Pro Shops.

The City and Main Street Atlantic City organization is working with Atlantic Avenue merchants to improve business. The Atlantic Avenue Streetscape project (under construction) and pedestrian improvements will enhance the CBD.

- **Protect the City's natural resources.**

Protecting the City's natural resources is an objective that has received greater emphasis since Superstorm Sandy. The preservation of salt marshes is essential to help attenuate the impacts of storm surges such as that experienced with Sandy. The City has been working with NJDEP for continued protection of Green Acres lands.

- **Provide adequate capacity for future growth on access roads to Atlantic City.**

Capacity has not been increased on access roads to Atlantic City. In 2008 the primary concern was to improve access and increase capacity to accommodate the additional growth in the casino industry that was anticipated at that time. That growth has not occurred but in the meantime the impact of Superstorm Sandy has made the improvement of access a safety concern more so than a concern to accommodate growth. The most significant concern is flooding of roads.

The improvement of the capacity and storm proofing on Albany Avenue/Route 40/322 was rated as a high community need in the Bader Field Post Disaster Recovery Project Matrix, and there have been ongoing discussions about improvements to the West End Avenue intersection with Albany Avenue. The Army Corps of Engineers has included this area within the Chelsea Heights project they are presently conducting.

- **Minimize impacts of traffic on Atlantic City residents and businesses.**

Efforts have been made to minimize the impacts of traffic on Atlantic City residents and businesses including the Chelsea Heights / Bader corridor, but more can be done.

- **Plan strategies for diversification of the City's economy.**

The planning of strategies for diversification of the City's economy is an area of concentration for the City. Education and medical uses, along with increased convention and conference activities and diversifying the tourism attractions will likely serve the foundation of a new economy.

Atlantic County Economic Development Plan was completed in 2015 stated: "Much of Atlantic County's difficulty stems from two issues: the lack of any significant industry cluster activity other than tourism and gaming, and the lack of a regional economic development organization to brand and market the area and aggressively recruit new companies. To address these and other issues, Atlantic County must adopt a regional approach to economic development."

- **Encourage urban design and establish design criteria and performance standards that improve the quality of development within the City.**

Urban design initiatives undertaken since 2008 includes funding from the CRDA to improve the facades of properties along Atlantic Avenue and the Boardwalk. Facades of several casinos have also been improved. Aesthetic improvements to the Boardwalk are also ongoing.

- **Promote and reinforce the City as a desirable residential location.**

Bringing attention to the assets of the City, including the well-established neighborhoods, is a City initiative that is resulting in renewed interest. Increased taxes are off-set by purchase prices lower than surrounding areas. First time homebuyer programs are enticing new teachers and police officers to buy homes in the City. Over 300 units of new rental housing are improving the aesthetics of the neighborhoods and occupying formerly vacant and blighted land.

- **Promote academic uses to attract new economic development opportunities.**

The involvement of Stockton University and Atlantic Cape Community College in the City has expanded since 2008, and there is recent interest by Rowan to establish a Medical School. The City needs to continue to encourage and expand academic uses in the City moving forward.

- **Preserve and maintain the existing utility infrastructure and take advantage of best available technology for sewage treatment and stormwater management.**

The preservation and maintenance of the utility infrastructure continues to be a priority especially in light of the impacts from Superstorm Sandy.

- c. The extent to which there have been significant changes in the assumptions, policies, and objectives forming the basis for the Master Plan or development regulations as last revised.

There have been very significant changes in the assumptions forming the basis for the Master Plan between 2008 and today. The key assumptions in 2008 upon which the Master Plan was based were that the City was embarking on a growth spurt in casinos and the economic base

was strong and growing. Unforeseen was the competition from out-of-state casinos and the great recession which started at the end of 2008. Both of these have had major impacts on the casino industry in Atlantic City. The economic downturn was compounded by the arrival of Superstorm Sandy in October 2012. The economic and demographic impacts the City has absorbed since 2008 are chronicled elsewhere in this document.

Although the assumptions on which the Master Plan are based have changed many of the policies and objectives of the 2008 Master Plan remain valid today. Some of the objectives have risen to greater significance as a result of Superstorm Sandy and the contraction of casino industry.

Objectives from the City's 2008 Master Plan which were impacted by or made more relevant by the advent of Superstorm Sandy and its effects on the City fall into the area of Circulation, Conservation, Community Facilities and Utilities. There are many other objectives in the Master Plan that are essential to the rebirth of the City going forward but the following objectives in particular take on added importance when considering storm preparedness and undertaking planning for future storm events.

## CRDA Tourism District

In 2011, the Casino Reinvestment Act was amended to give authority over land use in the Tourism District to the Casino Reinvestment Development Authority (CRDA). The Tourism District is an area encompassing the Resort Commercial (casino) district as well as City-owned land such as Bader Field and Gardner's Basin. The 2012 Tourism District Master Plan, dated February 1, 2012, provides recommendations regarding the future land use of the District, including the establishment of new districts. The recommendations of the Tourism District Master Plan include changes to the existing zoning such as boardwalk, beach and Central Business District, but also propose new districts including a Ducktown Arts District and the Lighthouse District (Southeast Inlet).

## Strengths, Weaknesses, Opportunities, Threats

The following SWOT analysis was discussed throughout the Master Plan process.

### Strengths:

- Free Beach w/ Shower Stations
- Boardwalk
- Beach Events
- Gardner's Basin Maritime Park
- Bader Field

- Dune System with Stormwater Mitigation
- Growing Reputation as a World Class Food City
- Cultural Diversity and Civic Pride
- The Walk Outlet Stores
- Transportation Options
- Low Cost of Home Ownership
- Stockton University
- Atlantic Community College
- AtlanticCare
- Casino Entertainment / Gaming / Restaurants
- Atlantic City Convention Center / Boardwalk Hall and Casino Meeting Spaces
- Growing arts community
- Access to AC International Airport

Weaknesses:

- Casino Closures and vacant zones on Boardwalk and Pacific Avenues
- Lack of a Diversified Economy
- High rate of foreclosures
- Declining middle class
- High unemployment
- Safety perception
- Maintenance concerns of abandoned properties and vacant lots
- Boardwalk in need of improvement and retail diversity
- Property tax increases
- Aging condition of housing
- Vacant surface lots
- Inconsistent and dim street lighting throughout the City
- Inconsistent facade appearances and upkeep
- Lack of large food store located within the City
- Illegal conversions of single family homes to multi-family homes, increasing density

Opportunities:

- Build on resurgence of City life
- Strengthen neighborhoods
- Establishing a variety of districts throughout City and “brand” them
- Pedestrian and bike friendly
- Rebranding as a leader in environmental and sustainability initiatives
- Increase code enforcement efforts
- City’s rich history

- Arts district
- Public-private partnerships
- Beach and water-based activities
- Improve transportation
- Changing perception
- Infrastructure improvements
- Streetscape improvements
- Non-gaming attractions
- Second home market

Threats:

- North Jersey casinos and their effect on the City’s gaming industry
- Storms and flooding

## Summary of Findings

Reexamination of the 2008 Master Plan and review of the many planning documents prepared before and since reveals there are overriding themes that must be recognized and addressed:

- The economy needs diversification. Education and medical uses, increased conventions and conferences, and expanded tourism attractions can provide the basis.
- Housing stock needs to be upgraded. Homeownership, both primary and second homes, needs to increase.
- The waterfront is underutilized. Public access to the waterfront needs to be improved. Pedestrian trails should be located along the bayfront and activities such as kayak and boat rentals, boat launches and fishing areas added.
- Tourism offerings should be expanded to make Atlantic City more family-oriented.
- Atlantic City’s economy and tourism is intricately tied to the County and region and cooperative marketing and promotion to investors is critical.
- Better connections between the Boardwalk and the shopping district are needed and an improved retail mix should be explored for the Boardwalk.
- The City needs to attract new residents and keep residents, in particular 25-40 year olds, who will invest in the community.
- An analysis of community vulnerability to natural disasters has been prepared and a series of resiliency goals and objectives developed. The mitigation projects listed in the Storm Damage Mitigation Project Report dated November 21, 2012 should be carried out.
- The existing 2008 Master Plan has good information and strengths, and the 2016 Re-examination has been conducted to address any perceived weaknesses and to update the objectives based upon the changing economics and environment of the City. Therefore, it would be recommended to adopt these modifications to the Master Plan, and not rewrite a new document at this time.

Atlantic City's atypical demographics and job market significantly influences the housing need, including:

- The household income level of \$30,000 is approximately half of the county, state and nation
- Jobs are disproportionately low paying service industry jobs, and employment opportunities have decreased significantly since 1990
- The number of renters compared to homeownership is two and a half times the average, at 70% renters and 30% homeowners in the City
- Multifamily dwellings are the predominant housing type, with 30% of the housing type buildings with 20 units or more
- The housing is aged, 59% built prior to 1970, and 44% built prior to 1960.
- Many residents are paying a significant amount of their income towards housing; 35% on more on housing costs
- Housing rentals and ownership have been subsidized out of necessity. The number of units that have previously or currently receiving subsidy is extremely high. In addition, there are a multitude of social service agencies that also provide subsidized housing to seniors, disabled residents, and at risk individuals.
- Non-subsidized (market rate) housing is reasonably priced in the City, as demanded by the average household income. This makes it difficult for re-investment by property owners. Overall, the existing housing stock has an average date of construction of 1952 as of 2010, and generally has not been maintained up to code. This has created a need for demolition and/or rehabilitation of existing housing units.

## **Goals, Objectives and Recommendations of the 2016 Re-Examination**

The following are the results of the review of the Objectives revised by Maser Consulting and reviewed and modified with the Planning Board Post Sandy Planning Committee Members and Planning Department that involve the following recommended changes to the goals and objectives from the 2008 Master Plan.

### **Land Use**

Provide a balance of land uses and development patterns while maintaining the character and grid pattern of the community.

### **Goals, Objectives and Recommendations**

- Encourage redevelopment on under-utilized and vacant properties throughout the City. Create an inventory of properties; use ordinances such as Abandoned Properties and Foreclosure Registration; target high flood vulnerability properties for conservation and open space; aggressively foreclose and facilitate redevelopment; adopt redevelopment plans to provide incentives.
- Encourage the comprehensive redevelopment of large areas of vacant lands within the Downtown area and along the beach, boardwalk, inlet and bay areas through Redevelopment. Specifically: the Southeast Inlet; the Downtown/Midtown beach blocks between South Carolina and MLK and the Boardwalk and Pacific Avenue; large lots along Absecon Inlet at Atlantic and Melrose Avenues.
- Continue to establish strong pedestrian, bus and bicycle linkages between destinations, public transportation, employment and residential areas, such as the newly completed Maryland Avenue bike lanes connecting the Marina District towards the Inlet. Implement the recommendations of the 2013 Bike and Pedestrian Plan.
- Demolish or reconstruct substandard properties in the City, particularly highly visible and/or those affecting neighborhoods' quality of life using aggressive code enforcement and condemnation when necessary.
- Provide for adequate parking to serve established residential and commercial areas
- Create attractive and well-served neighborhoods with a mix of housing types, to provide a high quality of life for residents.
- Strengthen and improve City-wide and neighborhood commercial districts as centers of employment, shopping, services, entertainment and education.
- Incorporate the Redevelopment Plans into zoning by creating new districts, such as Gateway education.
- Create new districts that reflect goals or themes, including Beach Resort, Lighthouse District, Ducktown Arts, Green Energy, music history (Kentucky Avenue jazz).
- Update the zoning ordinance to reflect changes and adaptations caused by responses to the hurricane, such as, the raising of residential properties

## **Housing**

Preserve, protect and ensure the availability of decent, safe and adequate housing units of different types, sizes, and price ranges through new and compatible infill residential development in appropriate locations to meet the needs of current and future residents. This report recommends strategies to create a wider variety of housing types that are reasonably priced for the market. This is expected to result in a more balanced economic base to support the local economy, benefitting all residents.

Vacation/second homes, live/work lofts, casino and healthcare workforce housing, single and duplex residential on vacant lots, and owners' and renters' apartments above stores, are recommended to diversify the housing options and costs. The encouragement and possible subsidy through land donations, tax abatements or low interest construction loans or mortgages can be considered to jump start interest in the Atlantic City housing market by households that can help to balance the economy.

Market rate and home ownership should be prioritized.

This is especially in light of over 350 newly constructed or planned affordable rental apartments funded in part by Sandy Multifamily Funds, administered by the New Jersey Housing Mortgage Finance Agency. Although Sandy victims receive priority, complicated paperwork, and strict credit and background checks have created a disconnect with those intended to be served by the program. Therefore, funding of those units by the State has resulted in an increase in affordable households and rental units in the City, contrary to the housing goals of the City. The City has taken the initiative to hold a housing event to ensure Sandy victims receive priority along with targeting substandard Sandy damaged housing for demolition.

A discussion of housing must acknowledge the excessive and disproportionate number of low paying service industry jobs that make it difficult for the housing stock to be renovated and replaced. A correlation also exists between educational opportunities, well-paying jobs, and decent housing stock. Any effort to develop higher paying jobs in the City, and improve education, would contribute to the demand for housing by a variety of income levels.

The Planning Board also recommended expanded housing options for seniors, including new housing developments and age in place facilities. The City is considering providing land for senior housing.

#### Goals, Objectives and Recommendations

- Clear blighted and substandard housing throughout the City. Prioritize those units and structures that are non-FEMA compliant, vacant, abandoned, foreclosed, or create a public nuisance.
- Encourage for sale home construction, including second homes, on vacant lands in both resort commercial areas and neighborhoods.
- Discourage and end use of rooming house-style hotels in resort commercial areas to serve as permanent housing.
- Use occupancy limit regulations to identify and end overcrowding.
- Increase home ownership opportunities through improved access to mortgage financing, first time homebuyer programs, and production of reasonably priced for-sale housing.
- Provide support for the encouragement of aging in place mechanisms that will allow for seniors to remain in their homes.
  
- Raise attached housing at one time rather than piecemeal. This will address appearance, setbacks and access issues, structural stability, creation of shadowing and repurposing of ground floor spaces.
- In conjunction with existing non-profit organizations within the City, address existing special needs housing, including the homeless, disabled, persons with AIDS/HIV, people with substance abuse and / or mental health challenges, and people returning or re-entering the community post-incarceration.

- Solicit a variety of housing types and prices to attract of balanced mix of households and income levels.
- Encourage the use of mechanisms such as payment in lieu of taxes to assist with new construction and improvements.
- Encourage appropriate infill development and look at the relationships to present zoning codes.
- Encourage the second home ownership market in the city.
- Encourage the development of residential dwellings on 2<sup>nd</sup> floors above commercial properties where currently vacant units exist.
- Explore creative and non-conventional methods such as Community Land Trust (CLT) to mitigate anticipated workforce housing shortages in the City.
- Rehabilitation of existing sub-standard or vacant units, particularly above stores on Atlantic Avenue and those with architectural or cultural significance
- Demolition of units and housing structures that are outdated for the market and beyond repair
- Partner with casinos and healthcare employers to provide workforce housing options
- Encourage artist work/live lofts by identifying properties for rehab
- Homestead Program to donate deteriorated homes and abandoned lots under public ownership to residents that will build a home and live there
- Adopt zoning that reduces vacant land based on speculation; provides incentives for live/work uses; and allows for increased density for diverse housing such as micro-units.

## **Economic Plan**

Provide a vibrant and diverse economic environment which will protect and enhance the long term economic and social interests of present and future residents in order to maintain and improve the City's overall quality of life.

## **Goals, Objectives and Recommendations**

- Support existing businesses by facilitating development approvals; advertising new business opportunities locally first; and City use of local vendors whenever possible.
- Continue to re-brand the City to reflect a more diverse destination, including conferences and conventions, events such as concerts and restaurants
- Continue to develop education and medical industries, green, sustainable, and resilient infrastructure and brand the City accordingly.

- Pursue additional commercial uses that provide a diversification of the economy and jobs. Focus on jobs that are consistent with the work force but work towards higher paying jobs.
- Coordinate economic development efforts with the region and State efforts, including the Atlantic County Economic Development office and NJ Economic Development Authority.
- Leverage economic development incentives such as the Grow New Jersey program that gives added benefits to Atlantic City as a “Garden State Growth Zone”
- Use Payment in Lieu of Taxes (property) to encourage projects that create jobs and long term increased value to areas.
- Promote the continued redevelopment of the Central Business District as a mixed-use pedestrian-oriented core with a concentration of commercial and residential uses in close proximity to mass transit.
- Create an attractive physical and economic environment to bring back professional services such as medical professionals, engineers and lawyers to locate within the City.
- Provide a business friendly environment that encourages opportunities for existing businesses and local contractors to succeed by providing a supportive environment for those wishing to grow or expand.
- Provide access and information on new small and low interest loans available to local businesses, such as the City’s 108 loan program that leverages CDBG funds.
- Support the arts and culture of the City by focusing on historic connections and leveraging the existing entertainment market to provide opportunities for local artists.
- Work with the Atlantic City Convention and Visitors Authority, Chamber of Commerce and other similar agencies to promote destination tourism, business and leisure trip packages and beach related tourism.
  
- Develop an up to date comprehensive Capital Improvement Plan for the City to modernize facilities.
- Transforming Atlantic City into a hub for resilience and climate change research, training, policymaking and implementation.
- Improve the Community Rating System for the City
  
- Support the implementation of the Atlantic County Economic Development Strategy and Action Plan that identified the following leverageable assets:
  - Airport and airspace opportunities
  - Federal Aviation Administration (FAA) and UAV testing sites
  - Other Federal programs and facilities
  - Stockton University and Atlantic Cape Community College
  - Stockton Aviation Research and Technology Park
  - Proximity to major markets (30 million consumers)
  - Atlantic City Development Corporation’s Stockton-South Jersey Gas project
  - Environmental amenities
  - Quaint communities with tourist appeal
  - Development, redevelopment, and repurposing opportunities
  - Affordable home prices
  - Global connectivity

- Casino Reinvestment Development Authority

The top target industries identified in the Atlantic County Economic Development Strategy and Action Plan include:

- Aerospace and Aviation
- Life Sciences
- Tourism
- Specialty Manufacturing
- Entrepreneurial Business Services.

In addition, “Emerging Life Sciences Eco Niche” was identified. The action plan stated that “Studies conducted by Princeton University and the U.S. Environmental Protection Agency have identified the Mid-Atlantic region and Coastal New Jersey in particular to be a critical area of impact for coming sea level rise. Global architecture firm Perkins+Will has issued a detailed proposal and is spearheading an effort to establish Atlantic City as an international research hub for climate change and coastal resiliency (with the potential for) repurposing vacant casinos as housing for scientists and lab centers for universities. Burgeoning political support and Princeton interest are giving the idea viability.” The City is currently working with Stockton and Rowan Universities to locate a coastal research center in the City.

The City’s role as industries such as aviation develop elsewhere in the County, is to continue to be a destination for those living and working in the area. In addition, young professionals (millennials) have demonstrated a desire to live in urban centers, and with new market rental housing planned or under construction, there will be an opportunity to attract young professionals as residents.

### Circulation

The City’s streets have been designed with vehicles as the priority, however, as an urban environment and beach community, residents and visitors also walk and bike. In addition, many residents are elderly or disabled, have children, and take public transit. Increased bike and pedestrian safety is a top priority. Several areas within the City, particularly on Atlantic Avenue around the Walk shopping area, and on Pacific in the casino area, have been identified by the South Jersey Transportation Planning Organization as extremely high accident sites. In particular, four of the top ten sites in South Jersey are in Atlantic City.

The City’s overall goal is to provide a safe, effective and energy efficient multimodal transportation system by increasing mobility, reducing dependency on single-occupancy vehicles, protecting roadway capacity, decreasing air emissions and enhancing the aesthetic qualities of the streets and gateways.

### Goals, Objectives and Recommendations

- Implement recommendations of the 2013 Bike and Pedestrian Plan.
- Increase pedestrian and bike safety through pronounced crosswalks, appropriate signal timing, bulb-outs, medians, striping, and other improvements.

- Enhance and improve street signs within the City for general navigation and wayfinding to important City destinations.
- Enhance connections within the City between and among residential neighborhoods, community resources, the Central Business District, the casinos, and the region, through the use of public transit system, walking and alternative modes of transportation.
- Revitalize or create identifiable, pedestrian-oriented neighborhood areas with focal points, mixed-use centers, and employment areas that are linked with each other.
- Promote the creation of a multi-modal transportation system and hub that enhances local circulation, increases regional access and encourages alternatives to driving, such as, mass transit and bicycle/pedestrian facilities.
- Develop a comprehensive bicycle and integrated jogging trail and sidewalk system along the back bay connecting the residential neighborhoods in the City.
- Encourage the growth and expansion of specialized transit services to meet the needs of the elderly, disabled, schoolchildren, and other transportation dependent groups.
- Require that traffic-calming techniques be implemented where needed to create a pedestrian friendly street environment, control vehicle speed and reduce the number of vehicles cutting through residential neighborhoods.
- Encourage public safety with the implementation of the recommendations of the Bicycle and Pedestrian Master Plan, in particular for high traffic areas, such as Atlantic Avenue CBD.
- Create a parking division or utility to provide a more comprehensive, efficient and user friendly parking strategy throughout the City.

### **Open Space and Recreation**

To promote participation in diverse, interesting, and high quality recreational and leisure opportunities in safe, modern, and well-maintained parks and facilities for both the residents and visitors.

#### **Goals, Objectives and Recommendations**

- Preserve and enhance the existing system of parks and recreation facilities.
- Promote further development and expansion of parks and recreational facilities to meet neighborhood and community needs.
- Develop and promote open space and recreation opportunities along primary circulation corridors through a network of “green urban trails”, particularly along the waterfront.
- Promote recreational activities along the back bay and consider partnerships with private property owners to provide access for canoeing and viewing wildlife and waterborne transportation.

- Investigate opportunities for water sports to be provided access in the back bay and beach areas, to facilitate their development within the City.
- Consider the creation of neighborhood oriented "pocket" parks in locations that are not currently afforded close access to existing park facilities.
- Improve and expand the cultural, non-athletic, and recreational opportunities for residents of all ages within the community.
- Preserve and protect open space areas that have scenic views and/or important historical, cultural significance and exceptional ecological value.
- Initiate the development of a community/recreation center for people of all ages in the CBD to increase activity.
- Create linkages between existing parks and open space areas to residential neighborhoods and commercial centers where possible, to form a network of open spaces.
- Create attractive gateways at the principal and secondary entrances into the City through upgraded land uses, streetscape improvements and signage.
- Encourage the use of standards, such as, "Safety by design" that seek to design out environmental health and safety risks for recreation during design development.
- Provide and encourage opportunities for RV and camping access within Atlantic City in specially designated areas.

### **Conservation**

Preserve environmentally sensitive land along natural features such as waterways, wetlands, beaches, unique ecology and prime wildlife habitats.

### **Goals, Objectives and Recommendations**

- Promote environmentally sensitive and green design solutions for all development particularly adjacent to wetland areas.
- Pursue long term plans and agreements with State and Federal agencies for securing funding for beach replenishment and preservation of wetland areas, as an important part of preserving Atlantic City's resources and coastline
- Require developers to utilize low impact development techniques to minimize impacts to and minimize destruction of the natural environment and natural drainage systems.
- Encourage new construction in the City to utilize low impact development techniques and to meet the requirements of LEED (Leadership in Energy Efficient Design) guidelines.

### **Historic Preservation**

Encourage historic preservation in order to maintain the City's unique character, protect existing historic resources and complement economic development efforts.

#### Goals, Objectives and Recommendations

- Establish a historic preservation entity within the City administration.
- Acknowledge the importance of historic resources in providing a link to the past, preserving the City's unique character, enhancing the appearance of neighborhoods and the casinos, and promoting economic development and tourism.
- Discourage the unnecessary demolition or significant alteration of historic structures/buildings.
- Encourage the preservation of historic landmarks designated in the National Historic Register.
- Encourage and explore incentives to assist with the proper maintenance of facades and local historically notable structures.
- Work with the City's Arts Commission to develop programs and incentives for arts and cultural promotions.
- Promote the understanding and appreciation of the City's heritage and historic value in local schools and other regional education centers.

#### Community Facilities

Provide community facilities through timely and efficient provision of community services that meet the needs of all City residents and businesses.

#### Goals, Objectives and Recommendations

- Maintain and upgrade the existing system of community facilities in order to provide high level of public services and to accommodate growth as well as the changing needs of the population.
- Provide community services which address all demographic sectors of the population (e.g. schools, day care facilities, recreation facilities, senior centers).
- Coordinate with the Board of Education to investigate the joint use of schools as community centers, wherever feasible.
- Maintain and upgrade existing emergency service facilities, especially those facilities which are aging or obsolete.
- Use community facilities to create and maintain a sense of place by enhancing public areas with quality designs and pedestrian friendly landscapes that link to commercial, cultural, and educational resources.

## **Utilities Services**

Provide adequate infrastructure including sanitary sewer, water and storm water drainage to service the needs of all residents and businesses without adverse impact upon the environment.

### **Goals, Objectives and Recommendations**

- Recommend that the city conduct a comprehensive review of Infrastructure and Utility upgrades that have been completed in the last years. There have been numerous utility upgrades conducted by local utilities, such as, South Jersey Gas that have replaced as much as 40% of the high pressure lines throughout the city. These improvements and others such as repaving need to be updated on the City GIS system.
- Employ regional strategies to facilitate redevelopment, particularly with large-scale public infrastructure such as water quality and waste management issues.
- Address new and redevelopment project needs, as well as mitigating existing flooding and water quality issues within the City.
- Require new developments to locate all utilities underground.
- Maintain criteria for zero increase in water runoff from new developments.
- Promote the preservation and protection of water supply facilities and water resources by controlling flood discharges, stream erosion, and runoff pollution.

## **Recycling**

Continue to promote recycling in order to protect the environment.

- Continue to promote recycling to reduce the solid waste stream and increase the reuse of natural resources.
- Encourage the use of “green” practices and materials in local construction and development projects.

## Resiliency Plan Element

The concept of resiliency has become part of common conversation ever since New Jersey was hit first by the winds and rain of Tropical Storm Irene in 2011 and then coastal New Jersey was hit 14 months later by the winds and unprecedented surge of Superstorm Sandy. Emergency readiness was sorely tested and stressed in these two major storm events and vulnerability to flooding, the lack of redundancy in the power network and gaps in our ability to communicate in a disaster were all exposed to varying degrees from Cape May to the northern tidal rivers (Hudson, Hackensack, etc.). The Post Sandy Recovery Grant Program, funded by USHUD and administered in New Jersey by the NJDCA, recognized that local master planning prior to Sandy had not addressed the concept of resiliency, nor was there ever a need to examine the statutory master plan elements such as Land Use, Circulation, Housing, Utilities, Open Space & Recreation, Economic Development, etc., through the lens of resiliency. Sandy forever changed the way that towns that it impacted will view their future.

## Resiliency Planning

Resiliency planning can be summarized in four basic steps:

1. Generate awareness of coastal risk;
2. Assess coastal risks and opportunities;
3. Identify options or choices for addressing priority risks and vulnerabilities (short term); and-
4. Develop and implement an action plan to put selected options or choices into place (long term).

The Atlantic City Strategic Recovery Planning Report (SRPR) summarized the vulnerability within the City's neighborhoods and the neighborhood plans for Chelsea Heights, Bader Field, Back Bay Neighborhood and the North East Inlet/Gardner's Basin provide specific detail regarding vulnerability for those neighborhoods. Because Atlantic City is a barrier island and is therefore typical of an area developed on top of what was once a natural dune system, the elevations are generally higher closer to the ocean and lower closer to the back bays. The ocean side of the island is exposed to a surge from a northeast winds, while the back bays rise up from tides hemmed in by the east winds and flood the lower elevations. These conditions occur with every northeast storm, which occur multiple times per year. They become catastrophic when there are surges of the size that Sandy created.

## Design Standards Recommendations

After reviewing the R-2 Zone's bulk standards, the following recommendations should be considered by the City for the R-2 Zone:

### **Amend the front yard setbacks.**

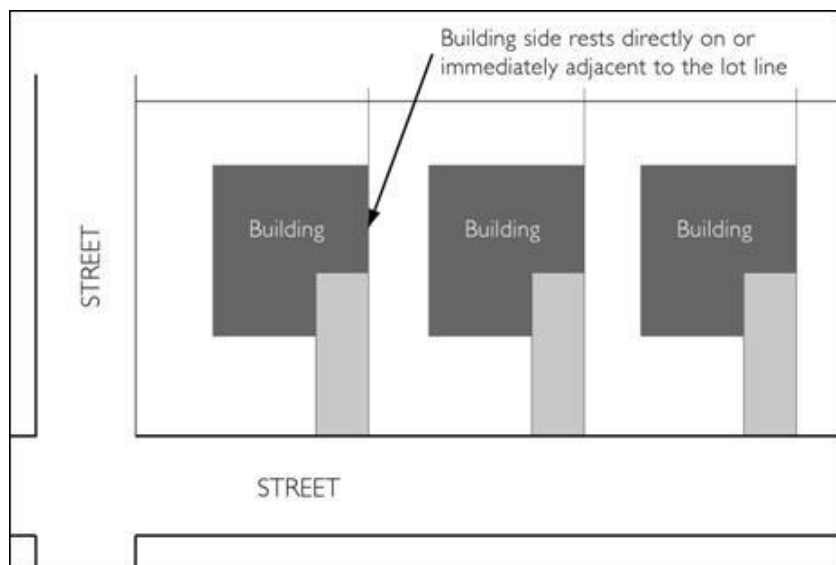
Homes are presently required to have a 15 foot front yard and a 25 foot rear yard. However, lot depth varies within the neighborhood from 40 to 100 feet. Therefore, a lot that is only 40 feet deep

cannot meet the rear or front yard setback requirement. In fact, a lot that is 60 feet deep would only be able to construct a house that is 20 feet deep, which is impractical.

Front yard setbacks within the neighborhood vary from as little as 5 feet to 20 feet. It is recommended that the City consider reducing the minimum requirement for the front yard from 15 feet to 5 or 10 feet to provide homeowners more flexibility.

**Amend the side yard setbacks.**

Lot width varies greatly from 20 to 120 feet. Presently the code requires a 12/5 ratio in that one yard to be minimum of 5 feet wide and the two side yards combined must be 12 feet wide. A lot that is only 20 feet wide would only allow for an 8 foot wide home and a 30 foot wide lot would be restricted to a home that is 18 feet wide.



Two options are presented for the City’s consideration. The first is reducing the side yard setbacks for lots with a width less than 40 feet. A sliding scale could be provided to offer homeowners looking to rebuild with variance-free options. Lots between 31 and 39.9 feet (in width) could be permitted side yard setbacks of 4 feet each, for a total of 8 feet. Lots between 20 and 30.9 feet could be permitted a side yard setback of 0 and 3 feet, for a total of 3 feet. (This condition exists presently within Chelsea Heights.)

The second option for the City’s consideration is a development concept called “zero-lot line”. A zero-lot line home essentially places the home on the side yard line, allowing for a generous side yard that functions as the home’s outdoor space in conjunction with the rear yard. On lots narrower than 40 feet, the zero-lot line concept provides one useable side yard instead of two useless side yards. The wall of the home that sits on the property line typically has no windows and acts as a privacy wall, so neighbors are not staring into one another’s windows. This alternative would provide more flexibility to owners of undersized lots (less than 40 feet wide) and produce usable side yards instead of useless slivers. Potential amendments to the side yard parameters could include:

- Lots between 20 and 30.9 feet (in width) – 0 and 5 feet, for a total of 5 feet
- Lots between 31 and 39.9 feet – 0 and 8 feet, for a total of 8 feet
- Lots between 40 and 49.9 feet – 0 and 12 feet, for a total of 12 feet
- Lots between 50 and 59.9 feet – 0 and 16 feet, for a total of 16 feet

**Revise the maximum principal building coverage.**

There are lots within the Chelsea Heights neighborhood, which are only 20 feet wide and 50 feet deep. When applying the 35% maximum principal building coverage to the lot, the owner would only be able to construct a 350 square foot first floor. This would essentially translate to three rooms that are approximately 10 feet by 11 feet each. Furthermore, existing on-the-ground conditions reveal that undersized lots contain homes that cover much more than 35% of the lot area.

It is recommended that the City consider allowing lots under a certain size (perhaps lots less than 3,000 square feet) a larger maximum principal building coverage, for example, 50% or 55%. This would allow a lot that is 20 feet by 50 feet to construct a home that has a first floor with 500 or 550 square feet.

- Minimum lot area – 3,000 square feet
- Minimum lot width – 40 feet
- Minimum front yard setback – 15 feet
- Minimum side yard setback, each – 12 feet and 5 feet
- Minimum rear yard setback – 25 feet
- Maximum principal building coverage 35%
- Maximum height – 35 feet

The City has already taken strides to revise definitions to assist homeowners who are rebuilding. In order to assist the residents and provide them with more development options and less variance obstacles, the R-2 Zone’s bulk standards should be amended.

**General Appearance from Street:**

Every effort should be made to provide designs for the new elevations that will work within the context of the existing lot lines and setbacks to enhance the overall character of the neighborhood. These would include stairs coming across the front of the property instead of extending into the front yard setbacks.

**Sea Level Rise and the Future of Infrastructure**

**Sea Level Rise**

The Neighborhood Plans for all of Post Sandy Planning areas (Northeast Inlet, Bader Field, Chelsea Heights and Back Bay) have all been developed to deal with the immediate needs of the neighborhood, as well as to anticipate measures for improving the resiliency of existing and future development to future storm events. However, it is important to recognize that the evidence for the phenomenon of sea level rise, combined with the subsidence that is occurring along the New

Jersey coastline is compelling and that Superstorm Sandy may have been a precursor of more frequent and possibly more severe storm events to come in the future, which coupled with a rising sea level, even if only measured in inches, may make the existing neighborhood pattern unsustainable in the most vulnerable areas.

The North Atlantic Coast Comprehensive Study (NACCS) was released in January, 2015. The NACCS was commissioned by Congress in the Disaster Relief Appropriations Act of 2013. It examined present and future flood risks in a 10-state area from New Hampshire to Virginia.<sup>1</sup> "In New Jersey, coastal storm risk is managed along the Atlantic Ocean coast by a number of Federal coastal storm risk management projects ... However, the low-lying areas of tidal rivers, back bays, and Delaware Bay coasts have a limited number of coastal storm risk management projects."<sup>2</sup>

This Re-Examination Plan notes that the areas identified in the figures below show the potential impact made by the 2 foot of Sea Level Rise, 3 foot Sea Level Rise, and a 4 foot Sea Level Rise which somewhat correlates to the City mapping indicating repetitive loss properties in Figure 4. The Rebuild by Design study done by Princeton University for Chelsea Heights indicated that, since 1992, the tide gauge reading for Atlantic City showed a 3.3 mm/year sea level rise, but that the average over the past 100 years (century average) was 4.1 mm per year.<sup>3</sup> At the more rapid rate of 4.1 mm of sea rise per year, it would take 149.25 years to reach the 2 foot level shown in Figure 3.

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<sup>1</sup> [www.njspotlight.com](http://www.njspotlight.com), "Attention Must Be Paid to Bayside Flooding at Jersey Shore, Reports Army Corps", by Scott Gurian, January 30, 2015.

<sup>2</sup> IBID.

<sup>3</sup> "Atlantic City Sea Level Rise Rate Below Average Since 1992", by Steven Goddard, December 19, 2014, <https://stevengoddard.wordpress.com>



Figure 1: Map of Atlantic City from www.climatecentral.org showing the impact of a 2 foot rise on storm surge when combined with a high tide such as occurred during Superstorm Sandy.



Figure 2: Map of Atlantic City from www.climatecentral.org showing the impact of a 3 foot rise on storm surge when combined with a high tide such as occurred during Superstorm Sandy.



Figure 3: Map of Atlantic City from [www.climatecentral.org](http://www.climatecentral.org) showing the impact of a 4 foot rise on storm surge when combined with a high tide such as occurred during Superstorm Sandy.



Figure 4: The yellow dots on the map above indicate repetitive loss properties and the red dots indicate severe repetitive loss properties.

## Green Infrastructure Elements:

While the city has been moving forward on the shore protection measures associated with a number of infrastructure and planning projects, such as, extending the boardwalk and new seawall from Oriental Avenue to Gardner's Basin, taking actions to continue to adhere to FEMA BFE requirements for new construction, especially residential buildings, and elevating roads and improving stormwater management facilities, the resiliency of the city in the longer term will need to continue to plan for improvements to address potential climate related changes.

A part of this has been efforts to define and expand the standards for Green Infrastructure improvements within urbanized areas. Below is an outline of the ideas and standards being presently used:

### Design Standards

As is common in most shore towns when it rains, the volume of stormwater falling on exposed impervious surfaces and running into gutters and eventually storm inlets overwhelms the piping system in the short term. As a result, some of this stormwater gets built up in the streets and leads to localized flooding with this being exacerbated by tidal influences on the water levels.

One of the major goals of the developing stormwater management concepts throughout the areas is an attempt to retain and / or infiltrate the first 1" inch of rainfall in the immediate area where this water falls. This can be achieved by numerous methods by integrating green streets concepts into the redesign of urban corridors and spaces, and to improve infrastructure sustainability and assist the regional utility authority in their attempt to reduce peak stormwater flows into the system. This includes using a variety of applications from, underground storage to green roof structures, to divert and reduce the volume of stormwater flowing initially into the system.

As stated earlier; the intent is that the Plan will retain rather than increase stormwater from the site, lessening site and localized flood conditions; with remediation of the site to the extent necessary to reduce stormwater runoff and mitigate against flooding by incorporating green infrastructure, as well as, vegetation to the greatest extent, within and around the development including along sidewalks, rooftop gardens, green roofs and walls, decks, and in the courtyards and open spaces.

The first step is to investigate the ability of the area to support stormwater management initiatives and techniques in conjunction with the improvements associated with redevelopment. This provides an approach that incorporates Green Street Design standards that can be fully integrated with the redesign of an entire area of the city.

The planning process must include an evaluation of the existing sewer utilities throughout the designated area, and an evaluation of the grounds ability to store or ultimately to infiltrate runoff within the existing Right of Ways and adjacent properties. The use of Test Borings and percolation testing should be done within any project area to determine both the current conditions of the subgrade material and the potential to provide storage and infiltration.

The existing conditions in many areas designated for redevelopment have little to no ability of the subgrade to provide significant storage volumes and or infiltration. Therefore, most systems to be designed will need to provide storage volumes through methods such as green roof applications

and surface and subsurface storage systems in cisterns or stone trenches capable of slow release of stormwater to be used for gray watering purposes or back into the system at non- peak flow times.

The following are general design criteria to be used to determine the volumes to be addressed, and the ability of an area to support Green Infrastructure and to provide for effective stormwater management.

### **Design Criteria and Applications**

The Stormwater Management systems usually include different applications providing infiltration, evapotranspiration and storage and slow release. Some examples of successfully completed applications include:

**Raingardens:** diverting water, usually from a paved corridor, to a planted low area that allows for storage and infiltration. The systems we have designed have an overflow system to the existing utility as a relief and are designed with native plant species.

**Bioswales:** directing water through a graded and planted swale usually adjacent to a roadway as a method to attenuate runoff and promote infiltration. The plantings are designed to promote evapotranspiration and are usually native species that require less long term maintenance and can withstand wet conditions.

**Stormwater Trenches:** capturing an initial, 1" concentration of stormwater prior to entrance to a combined sewer system. This involves the introduction of green inlets upstream to redirect the stormwater to a series of underground stone storage trenches. The trenches are either for infiltration if possible or storage with slow release if not possible. This application can be used in conjunction with planters and street trees.

**Pervious surfacing:** Porous concrete and pervious asphalt have been used in a range of applications, notably for surfacing of basketball courts and walking trails within recreation sites. This has evolved to development of pervious streets with stepped and terraced underground storage and slotted inlets. The idea of pervious surfacing within streets is now being developed to use as a gutter collection system and for cross walk areas that can infiltrate and redirect surface runoff.

Other ADA accessible porous surfacing can be used throughout the city, including safety surfacing in playground areas and the use of stone binder materials over stone base. Each of these applications provides stormwater storage as part of the design to handle runoff on site.

**Individual Infiltration Units:** The design and development of individual infiltration units was created to provide point diversion of curb line runoff, and to provide a means of collection and infiltration. Each unit is placed along the curb in relation to an adjacent street tree and planting area and the runoff is captured and fed to the root system below.

**Native Basin Plantings:** Stormwater management basins have been developed with the intention of capturing runoff and providing an effective means of infiltration. In most cases this involves the use of native wetland seeding and plantings that are particularly adapted to promoting infiltration.

## Methodology

Present design standards encourage the introduction of sustainable Best Practices as to how best to intercept an initial 1” to 1 ½” of rainfall and divert it to an alternative drain system that can infiltrate and/or store the potential runoff. Most approaches use a blend of Best Practices such as the installation of green roof systems, porous and pervious surface systems, rain gardens incorporated into parking lots and dedicated open space areas and bioswales integrated into streetscape designs. These practices all intercept stormwater prior to it reaching the existing inlets and storm systems, many of which back up during moon high tides in the lowest lying areas.

Green Infrastructure strategies should include the introduction of Green Inlets, which can capture stormwater from roads and parking lots for distribution to a trench stone or other manufactured drain system, such as, storm crates, upstream of existing City Inlets (which are connected to the citywide storm system), to divert and intercept runoff.

## Resiliency Action Plan

The Action Plan for Resiliency for Atlantic City combines short-term actions for protecting buildings through elevation, which occurs through the aggregated decisions of multiple property owners in a neighborhood, with moderate term actions that might involve gradual upgrading of infrastructure with Green Infrastructure best practices and long term actions that anticipate the eventual impacts of Sea Level Rise (elevating streets, raising bulkheads and protecting shorelines).

A set of specific Actions follow below:

- Work with federal and state agencies to regularly update the City floodplain maps, with first priority being areas that are mapped as 100-year floodplain without base flood elevation established.
- Limit new development in the floodplain.
- Promote uses, such as open space easements, natural areas, and recreational open space to reduce impervious surfaces in floodplains.
- Work to acquire properties in the lowest lying portions of the 100-year floodplain, and return them to a natural state.
- Reevaluate the effectiveness of the current floodplain protection regulations.
- Discourage the location of new homes and roadways in the "V" or wave velocity zone and the 100-year floodplain.
- Work with the county to complete a hazard mitigation plan for flooding, wildfire, and other natural hazards.
- Develop and implement a post-disaster recovery and reconstruction plan to facilitate recovery and to reduce exposure to future disasters.
- Consider code changes that will limit impervious surfaces.
- Develop a sea level rise response strategy (a two foot freeboard requirement for properties exposed to flooding has been approved and discourage further shoreline hardening).
- Utilize the Community Vulnerability Assessment Tool, Risk and Vulnerability Assessment Tool, Hazard Assessment Tool, and HAZUS-MH to identify potential hazards, risks, and vulnerabilities and keep mapping information on file.

- Ensure the public is aware of any changes to FEMA's flood maps as they are updated and adopted as well as if those updates result in changes to the Township's building requirements.
- Participate in the Community Rating System (CRS). The Community Rating System (CRS) is a FEMA program, designed to reward communities for taking steps to reduce flooding risk. These activities and elements include public information, mapping, regulation, flood damage reduction, and warning and response initiatives. Actions under these categories are eligible for points that are added up to designate where the community is "rated" according to class rankings of 1 through 10.
- Work to become designated as a Storm Ready Community by the National Weather Service. The National Weather Service has created a community preparedness program to assist towns as they develop plans for a wide variety of severe weather events. This program provides guidance on hazardous weather identification, warning systems, and creating public readiness.
- Complete City GIS mapping of utilities, including stormwater management design.

## Resiliency as an Economic Development Strategy

Atlantic City has been hit hard by the combined impact of the economic competition in the gaming industry and the damage from Superstorm Sandy. New strategies to diversify the economy through the redevelopment of Bader Field (Bader Field Neighborhood Plan) and the North East Inlet/Gardner's Basin (North East Inlet/Gardner's Basin Neighborhood Plan) have been incorporated into this Master Plan Reexamination/Update.

Another strategy that has emerged from the Post Sandy Recovery Planning efforts of the City is the idea transforming Atlantic City into a hub for resilience and climate change research, training, policymaking and implementation.

Storms and flooding are significantly impacting coastal communities worldwide and billions of dollars will be spent on this growth industry. Creative solutions for coastal resilience will be necessary in near future. Atlantic City is perfectly positioned to be in the forefront based on its central location along the east coast, its conference space and hotel rooms, its vulnerability to storms and flooding, and its unique coastal urban environment. Most importantly, the City and partners are focused on pursuing new economies that provide higher paying jobs, educational opportunities, and innovative branding for the region.

The economic losses caused by natural disasters have increased from an average of about \$50 billion a year in the 1980s, to just under \$200 billion over the last decade. Climate change and rapid urbanization will only keep pushing costs upwards. It is estimated that average global flood losses will increase nine-fold by 2050, from \$6 billion per year in 2005 to \$52 billion a year. This forecast only takes into account socio-economic factors, such as growing population and property values. Add in the risks from sea-level rise and sinking land, and global flood damage for large coastal cities could cost \$1 trillion a year if cities don't take steps to adapt.

Natural hazards continue to cause significant loss of life and have significant social and economic consequences. There is significant research and development underway to create tools and

mechanisms to assess, reduce, and manage risk, covering a vast array of legislative, regulatory, policy, planning, institutional, financial, and capacity-building instruments. Moreover, there is increasing public awareness and investment to strengthen disaster resilience at all levels of society as a critical component of efforts to achieve sustainable socioeconomic development and poverty reduction.

Climate change continues to make media headlines with the outcome of the UN global climate change talks (COP21) in Paris last December. The result of these negotiations was a legally binding global agreement on greenhouse gas emissions. Based on advance commitments from the US, China, Europe and India, government will implement stricter emissions targets. As every challenge is also an opportunity this coming regulation creates substantial investments in climate change solutions.

The emergence of numerous clean energy technologies is accelerating and moving to mainstream, unsubsidized markets as their costs continue to fall rapidly. For example, global solar installations have skyrocketed as prices have dropped by more than 75 percent in recent years. Lithium ion batteries for storing electricity and LED lighting which uses significantly less electricity are also developing quickly and gaining wider adoption. Microgrids and off grid power systems are becoming more prevalent.

Atlantic City is one of the few urban, barrier islands in the region making it a tremendous laboratory for resiliency and sea level rise research and development. The City is vulnerable to higher sea levels and storm events. The City has launched an ambitious plan with initiatives in green infrastructure to providing economic opportunity. Atlantic City is in close proximity to ocean/marine life, strong medical facilities, low real estate cost makes Atlantic City an ideal location. In addition, Stockton University and Rowan University are both committed to building campuses in Atlantic City. NJIT, Princeton University, Rutgers University, Columbia University, University of Pennsylvania, National Fish and Wildlife Foundation, US Economic Development Agency, US Army Corps of Engineers, USEPA, FEMA, NJ Economic Development Authority, NJ Board of Public Utilities, NJ Department of Community Affairs, NJ Department of Transportation, NJ Department of Environmental Protection, and The Rockefeller Foundation have all invested in resiliency research and development in Atlantic City.

The Master Plan recommends that Redevelopment areas are designated to encourage private (largely taxpaying) research and development facilities dedicated to improving resiliency that would form economic synergy with Stockton and other research and educational institutions that could emerge in the City in the future.

Phase I, currently underway, involves educational institutions to locate in Atlantic City. Specifically, build on the recently approved Stockton City campus to establish a branch of the Stockton Coastal Research Center. Additionally, the Rowan Environmental Engineering Program is a natural fit based on their focus on resilience.

Concurrently, the City and other agencies will continue to pursue funding and implement demonstration projects which showcase latest storm and flooding solutions and structures, such as

the innovative design of the Inlet Boardwalk and Seawall and the Gardner's Basin Living Shoreline projects.

Phase II could included engaging local convention and conference organizers to attract meetings, conferences, and trainings focused on coastal resilience. Continued effort could be made to recruit other university coastal research programs to create satellite programs in Atlantic City: NJIT, Rutgers, Princeton, and Stevens Institute of Technology for example.

### **Consistency with Other Plans**

This master plan reexamination is consistent with the State's smart growth principals of developing within areas of existing infrastructure. In addition, the plan is consistent with surrounding jurisdictions and the County.