COMPREHENSIVE PLAN

Town of Ocean City, Maryland

Planning and Zoning Commission
Draft Update – Redline Version
with final Public Hearing Comment revisions
November 21, 2017

TOWN OF
OCEAN CITY
The White Marlin Capital of the World

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DOUGLAS R. MILLER

CITY CLERK
DIANA L. CHAVIS

Planning and Zoning Commission
P O Box 158
Ocean City MD 21843

November 21, 2017

Mayor and City Council
Town of Ocean City
P O Box 158
Ocean City MD 21843

Dear Mayor Meehan and City Council Members:

The Ocean City Planning and Zoning Commission is pleased to submit The Comprehensive Plan for the Town of Ocean City Maryland – 2017 for your consideration and adoption. This is a revision to our existing Comprehensive Plan that was adopted on September 5, 2006 and further amended by ordinance on October 19, 2009. The revision is required by and has been prepared in accordance with the Land Use Article of the Annotated Code of Maryland.

This Comprehensive Plan recognizes that the majority of the future development of Ocean City will be in the form of redevelopment, and that this is an opportune time to evaluate accomplishments over the last 10 years so that we can make Ocean City even better in the future. The plan does not promote major changes in the basic development philosophy, because the Commission believes the development that has occurred in the recent past has been appropriate and beneficial for the Town. The plan does, however, address some current issues and problems that need attention in the coming years.

The plan is based on the premise that Ocean City should be a desirable place in which to live, vacation, and invest. Each of the goals, objectives, and recommendations contained in the plan has been analyzed with respect to this premise.

The Commission believes that this plan will provide the framework to ensure a prosperous future for Ocean City, and we recommend its approval and adoption by the Mayor and City Council.

Sincerely,

Pamela Greer Buckley
Chairman

William W. Neville, AICP
Director of Planning and
Community Development

RESOLUTION

BY THE OCEAN CITY PLANNING AND ZONING COMMISSION APPROVING **THE COMPREHENSIVE PLAN UPDATE FOR OCEAN CITY MARYLAND – 2017 UPDATE** AND RECOMMENDING ADOPTION OF SAID PLAN BY THE MAYOR AND CITY COUNCIL OF OCEAN CITY.

WHEREAS, the Ocean City Planning and Zoning Commission has completed a chapter by chapter review of the Comprehensive Plan and determined that an update is required; and

WHEREAS, the Commission has given due consideration to addressing the public welfare as well as respecting individual rights in recommending the most appropriate development policies for Ocean City; and

WHEREAS, by authority of the Land Use Article of the Annotated Code of Maryland, and the Maryland Economic Growth, Resource Protection and Planning Act of 1992, **The Comprehensive Plan for Ocean City Maryland – 2017 Update** has been prepared for the general purpose of guiding the future development of Ocean City and will, in anticipation of present and future needs, best promote the health, safety and general welfare of Ocean City; and

WHEREAS, after giving proper notice in the "Ocean City Today" newspaper , the Commission conducted a public hearing on September 19, 2017 and continued until October 17, 2017, and presented the draft plan at four public meetings; and

WHEREAS, the Commission has considered all comments received during the review process.

NOW, THEREFORE, BE IT RESOLVED THAT **The Comprehensive Plan for Ocean City Maryland – 2017 Update**, including all text and maps therein, is hereby approved by the Ocean City Planning and Zoning Commission.

BE IT FURTHER RESOLVED that the Commission recommends approval and adoption of **The Comprehensive Plan for Ocean City Maryland – 2017 Update** by the Mayor and City Council of Ocean City as an official document of Ocean City, Maryland.

Dated this 21st day of November, 2017.

PLANNING AND ZONING COMMISSION

_____
Pamela Greer Buckley, Chair

_____
Paul W. (Peck) Miller, Secretary

_____
William W. Neville, AICP, Director,
Planning and Community Development

Town of Ocean City Maryland
Comprehensive Plan

Acknowledgments

Planning Commission

Pamela G. Buckley, Chair
Peck Miller, Secretary
Joel Brous
Palmer Gillis
Chris Shanahan
Lauren Taylor
Joe Wilson
William E. Esham III, Attorney

Town of Ocean City Staff

Department of Planning and Community Development
William Neville, Director
Frank Hall, Zoning Administrator
Kay Gordy, Planning Analyst
Karen Zera, GIS Coordinator

Special Recognition

John C. Staley, Planning Commission Secretary (Retired)
R. Blaine Smith, Zoning Administrator (Retired)

Town of Ocean City Maryland
Comprehensive Plan

Table of Contents

Page Number

Introduction

Required Elements 1
Comprehensive Plan Overview 3
Strategic Plan 4

Chapter 1: Population Characteristics and Trends

Population Size and Characteristics 1-3
Seasonal Visitor Population 1-5
Population Density 1-10
Resident Population Characteristics 1-10
Population Projections 1-19
Recommendations 1-23

Chapter 2: Economic Development

Introduction 2-1
Goal and Objectives 2-1
Fiscal and Economic Trends 2-3
Employment 2-7
Tourism 2-10
Downtown Development 2-17
Other Business Issues and Views 2-18
Recommendations 2-20

Chapter 3: Land Use and Community Character

Introduction 3-1
Goal and Objectives 3-1
Growth History 3-3
Existing Land Use 3-6
Future Land Use Plan 3-16
Recommendations, Proposals and Special Projects 3-22
Summary 3-25

Chapter 4: Transportation

Goal and Objectives 4-1
Ocean City's Transportation System 4-3
Town Street System 4-4
Inter-City Roads 4-7
Parking 4-9
Public Transportation 4-10
Bicycle Movement 4-15
Pedestrian Movement 4-17
Waterways 4-18
Airport 4-19
Recommendations 4-21

Chapter 5: Community Facilities and Public Safety Services

Goal and Objectives 5-1
Water System 5-2
Wastewater Treatment 5-10
Stormwater Management 5-12
Solid Waste Management and Recycling 5-13
Recreation and Parks 5-14
Public Safety Services 5-17

Chapter 6: Housing

Goal and Objectives 6-1
Housing Supply 6-2
Housing Units and Householders 6-5
Housing for Seasonal Employees 6-8
Transient Housing 6-10
Recommendations 6-10

Chapter 7: Environment

Goal and Objectives 7-1
Sensitive Areas 7-3
Geology and Landform 7-4
Coastal Dynamics/Sea Level Rise 7-8
Water Quality/Coastal Bays 7-12
Wildlife 7-16
Climate and Air Quality 7-17
Energy Conservation 7-18
Environmental Threats 7-19
Built Environment 7-20
Summary/ Recommendations 7-22

Chapter 8: Downtown Development Redevelopment/Reinvestment

Introduction 8-1
Overview of Issues 8-2
Current Status/Projects 8-6
Redevelopment/Reinvestment 8-9
Conclusions and Recommendations 8-9

Chapter 9: Plan Implementation

Goals and Objectives 9-1
Strategic Plan 9-2
Capital Improvement Plan 9-4
Design Criteria, Standards, and Review Process 9-8
Economic Development 9-9
Environmental Resource Management 9-10
Transportation 9-11
Citizen Participation 9-11
Summary of Key Objectives 9-12

Chapter 10: Municipal Growth Element

Sustainable Growth Act 10-1
Population 10-3
Land Use 10-6
Build-out and Projections 10-8
Impacts of Growth 10-10
Vision 10-17

Chapter 11: Water Resources Element/ Mineral Resources Element

Goals and Objectives 11-1
Coastal Geology and Groundwater Resources 11-2
Land Use Plan / Growth Projections 11-4
Water Supply 11-6
Wastewater Treatment 11-10
Stormwater Management / Non-Point Source Pollution Control 11-12
Conclusion 11-14

Appendices:

Appendix A: **Summary of Current and Historical Rare, Threatened and Endangered Species**

Appendix B: **Comprehensive Plan Strengths, Weaknesses, Opportunities and Threats**

Appendix C: **Comprehensive Plan: Vision Statement**

Appendix D: **Residential Development Guidelines**

Appendix E: **Commercial, Infill and Redevelopment Guidelines**

Appendix F: **Maryland Visions**

CHAPTER 1: Population Characteristics and Trends

Ocean City has experienced consistent, and in some time periods, remarkable growth. The number of both daily and seasonal visitors has increased steadily over the years. The year-round population, in particular, has remained stable within the past 15 years even during a national economic recession. US Census estimates of the permanent resident population in April are 7,172 (2000), 7,102 (2010) and 7,055 (2015) with less than 1% change between each period. This chapter reviews past changes in both year-round and seasonal populations, provides a profile of the characteristics of these populations, identifies expected future population trends and projections and assesses the implications of expected future population trends for purposes related to community planning.

Goal:

To collect and utilize information regarding the demographic characteristics of Ocean City (both year round and seasonal) and to identify trends or changes which should be evaluated by the Comprehensive Plan.

Objectives:

In order to achieve the population characteristics and trends goal, the following objectives are adopted:

1.1 Update population estimates and other data collected through the US Census and American Community Survey.

1.2 Review traditional and new methods of estimating peak seasonal population to identify trends or changes. Improve data collection and tracking methods.

1.3 Communicate information with other City Departments, Planning Commission, Mayor and City Council to support local decision making in other planning documents such as the Capital Improvement Plan, Code revisions, etc.

1.4 Reference data collected in Chapter 1 throughout the Comprehensive Plan to evaluate adequate public facilities.

1.5 Study seasonal visitor demographics by zip code origin to determine unique population characteristics.

1.6 Incorporate Town of Ocean City, MD Strategic Plan principles into the evaluation of demographic information.

The Town of Ocean City is a diverse and international community. This diversity is underscored by the wide range in characteristics of the seasonal visitor population and of the stable base of year-round residents. These residents and visitors to Ocean City can be characterized as follows:

- Year-round residents
- Non-resident property owners
- Overnight visitors
- Day visitors
- Seasonal workers

The Town of Ocean City is a 'hard to count' community for the U.S. Census because of the high percentage of seasonal rental housing and the population survey count based on a single day in April, once every 10 years. The American Community Survey is completed more often, however the method of sampling representative sites does not adequately capture the dynamic seasonal changes that occur and data collected by zip code includes areas outside of the municipal boundary.

Limited availability of data has traditionally meant that population statistics are consolidated into two groups: year-round residents and seasonal visitors. Best available information from many sources is used to provide a basis for understanding and meeting present and future planning needs. This Chapter is organized in three parts, each providing discussion of:

- **Population size and characteristics**. Population size serves as the benchmark for planning the physical needs of the community. It provides the basis for estimating overall land and facility needs. Analyzing the characteristics of the population assists policymakers in making informed judgments regarding how the needs and service demands of the present population can best be met.

- **Population projections**. Population projections provide the basis for estimating future service, housing, and employment needs and determining how community demand for services can be expected to change over time. Projections are based on both recent trends and the capacity of the Town of Ocean City to adapt to growth and redevelopment. Given a wide range of variables that can influence future year-round and visitor population characteristics, projections should be considered less than precise, but nevertheless useful for estimating future demand for community facilities and services.

- **~~Proposals for action~~Recommendations.** The ~~proposals~~ recommendations for action identify key items or issues to be addressed related to population. They are designed to implement the spirit of the Comprehensive Plan and facilitate the progress of Ocean City's ongoing planning program.

Ocean City at Night ~~(photo)~~

As a tourist destination with many scheduled special events and destination locations, the location of the population can be very important as well as the time of day or night. The downtown area of the Boardwalk provides a gathering point for thousands of summer visitors in the evening hours, and special events such as the annual Air Show will concentrate the visitor population and increase the demand for public services.

Healthy Eating Active Living

The Town of Ocean City is now recognized as a healthy community by joining with the HEAL – healthy eating and active living – Cities & Towns Campaign for the Mid-Atlantic, which champions local government policies that improve access to healthy foods and physical activity. 'HEAL' wants all Marylanders to live high quality, healthy lives and Ocean City works to maximize free resources that can benefit our citizens and the wellbeing of our entire community.

In June 2017, Ocean City achieved Gold Level recognition for meeting 3 goals:

- Healthier vending options at Park concession stands
- Promoting worksite wellness
- More accessible bike and walking paths

Population Size and Characteristics

Year-round Population

During its early years, Ocean City was a small resort community experiencing slow year-round resident growth. Through four decades from the period 1930-1970 the Town's resident population grew by only 547 new residents. The Town's population declined in the 1950s only to recover in the 1960s when the northern section of the island was annexed. The modest population decline in the l950s has been attributed to permanent residents moving to the mainland, either selling or renting their high-value island property. During the 1970's, 1980's and 1990's growth in the year-round population increased steadily. This growth period resulted from the increasing tourist economy enabling more households to be supported year-round by the summer trade, and the expansion of public facilities to serve an increasing population. In addition, there has been an influx of retirees who have found Ocean City to be a desirable place to live.

As a resort town, Ocean City is affected by the strength of the national economy. Year-round resident population has stabilized but generally not dropped significantly during recent recessionary periods in the early 1980's and again recently beginning in 2008/09. Although the

year-round resident population has increased almost 5 fold since 1970, current Census data indicates the resident population on April 1st may have stabilized around 7,100 persons.

Table 1-1: Year-Round Population, Ocean City 1930-2010		
Year	**Population**	**Average Annual Change**
1930	946	
1940	1,052	1.1%
1950	1,234	1.7%
1960	983	(-2.0%)
1970	1,493	5.2%
1980	4,946	23.1%
1990	5,146	0.4%
2000	7,173	3.9%
2010	7,102	(-0.1%)
2015 (estimate)	7,055	(-0.7%)

Source: U.S. Census for years 1930 through 2010. 2015 estimate from the American Community Survey illustrates the same stable growth trend in year-round population evident from 2000 to 2010

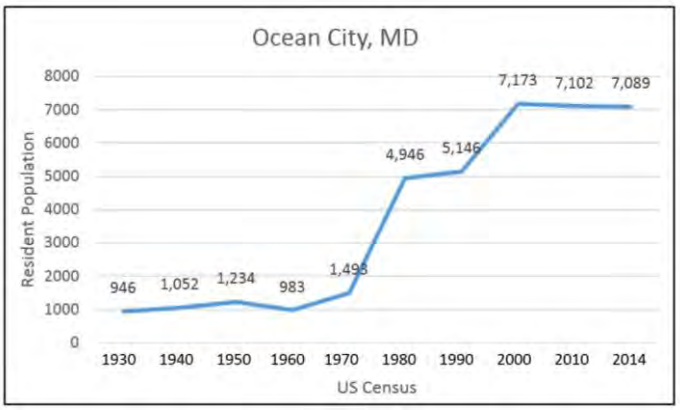


Figure 1-1: Change in Year-Round Population, Ocean City, 1930-2014~~5~~

Table 1-2 compares the growth of Ocean City's permanent population to that of the County, Eastern Shore Region and the State of Maryland. Traditional growth rates across the State of Maryland and especially on the Eastern Shore have been stable over the last 10 year period ranging from 1 to 1.5 percent annual average increase. The slight decline of year-round population in Ocean City is ~~easily within the margin for error in the Census count and~~ consistent with ACS 5 year estimates however it does not necessarily indicate a demographic trend.

	Table 1-2 **Population Change in Ocean City and Selected Jurisdictions 1970-2010**

	1970	1980	1990	2000	2010	Average Annual Change -2000 - 2010
Ocean City	1,493	4,496	5,146	7,173	7,102	-0.1%
Worcester County	24,442	30,889	35,028	46,543	51,454	1.06%
Lower Eastern Shore (w,w,s,s,oc)	127,988	145,240	163,043	186,608	214,102	1.47%
State of Maryland	3,922,399	4,216,933	4,780,753	5,296,486	5,773,552	0.90%
Sussex County, Delaware	80,356	98,004	113,229	156,638	197,145	25.9%
	Source: U.S. Census Quick Facts					

The Ocean City Office of Planning and Community Development has indicated the official 2010 Ocean City population of 7,102 as determined by the U.S. Census may not accurately represent the number of actual year-round residents based on the single April 1st survey date and the seasonal nature of the resident population. For planning purposes however, the number of permanent residents has been identified as an important indicator of stable residential neighborhoods, as a benchmark for providing minimum year-round public services, as a core employee workforce, and as a critical factor to maintain a strong base of registered voters and local governance. The permanent resident population is not as important in many other ways as the total maximum number of people in the Town, including both the permanent and transient population.

Seasonal Visitor Population

In a resort such as Ocean City, it is much more important to understand the demographics of the total population, including year-round residents and seasonal visitors, rather than only the resident population. Planning for future development and for the provision of public facilities must be based on the total maximum population to be accommodated and served within a 10 to 20 year planning period. With recent efforts to expand events and activities for seasonal visitors throughout the year, there will be a need to evaluate the implications of an extended peak season and higher sustained service levels year-round.

Measuring the seasonal visitor population is a difficult task for any resort community. Since the 1970s, Ocean City has estimated its total population by a mathematical formula called "demoflush". Demoflush estimates population based on flow amounts through the sewage treatment system. When compared to other indicators of population, demoflush population estimates may seem to overstate the actual number of people in Ocean City, however it has served as a valuable tool to compare population over time and by season since it provides a consistent methodology for estimating seasonal and year to year changes in population.

Over the last 5 years, the Mayor and City Council have directed that an alternative way of estimating seasonal visitor population should be developed and calibrated so that the use of the demoflush method can be phased out. The Tourism Commission has been collecting a consistent set of statistics since May 2012 that may allow the use of a tax revenue and room occupancy based approach in the future. With this Plan update, the traditional demoflush information has been updated for comparison purposes until a new method is adopted.

Table 1- 3
Peak Summer Seasonal Population Estimates, Ocean City

Year	Peak Summer daily Population	Annual Percent Change
1990	326,859	-3.7%
1991	333,795	2.1%
1992	326,859	-2.1%
1993	322,919	-1.2%
1994	330,133	2.2%
1995	319,755	-3.1%
1996	332,547	4.0%
1997	319,309	-4.0%
1998	335,798	5.2%
1999	334,096	-0.1%
2000	331,755	0.7%
2001	311,330	-6.2%
2002	339,309	9.0%
2003	340,344	0.1%
2004	345,671	1.6%
2005	322,308	-6.8%
2006	**311,321**	**-3.4%**
2007	**315,649**	**1.4%**
2008	**326,249**	**3.4%**

2009	**325,805**	**-1.4%**
2010	**332,547**	**2.1%**
2011	**330,688**	**-0.6%**
2012	**330,300**	**-0.1%**
2013	**322,558**	**-2.4%**
2014	**306,353**	**-5.3%**
2015	**318,840**	**4.1%**
25 year average 1990 to 2015	**326,658**	
Source: Mathematical formula called "Demoflush" which estimates population based on volume of flow through the Town's Sewage Treatment System		

Peak Day- Table 1-3 shows the peak seasonal population for each year from 1990 to 2015. This is the estimated number of people in Ocean City on the peak day in each year. The table indicates that a peak day population of 332,547 in 2010 and a 25 year average of 326,658 with a maximum annual variance of 6%.

Table 1-4
Average Weekend Population Estimates, Ocean City
1992--- December 2015

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
January	51,312	72,886	75,152	77,469	67,425	64,831	76,182	68,868	71,343	78,345	73,571	73,141	77,376	82,897
February	70,662	69,853	72,492	64,372	80,237	81,826	94,783	72,877	78,427	88,512	82,575	84,296	86,807	83,116
March	73,474	78,829	90,594	82,658	78,745	95,971	96,129	92,412	94,173	97,159	99,051	96,648	92,321	90,427
April	97,603	103,150	110,769	107,924	112,000	117,203	107,845	104,655	114,284	119,909	119,839	122,004	111,307	115,938
May	157,839	169,437	171,387	177,330	163,605	160,895	159,734	159,245	180,979	166,248	176,124	159,245	167,658	164,276
June	223,496	230,008	229,953	230,188	233,540	234,628	236,381	227,303	233,698	235,772	234,451	228,621	216,510	227,775
July	307,187	303,968	313,402	302,532	311,009	311,323	307,457	315,618	317,699	303,440	301,623	308,588	301,476	297,825
August	300,222	321,199	309,708	303,496	310,374	307,680	290,921	294,950	307,242	301,235	315,749	293,940	300,882	292,175
September	211,986	212,694	229,944	211,868	211,570	188,055	217,827	208,996	208,202	201,077	192,231	185,854	204,564	209,476
October	99,806	105,385	110,521	127,358	125,319	132,145	115,294	128,285	127,442	123,424	132,006	122,863	120,588	127,104
November	67,147	77,941	73,418	84,353	92,696	107,115	83,241	90,899	95,283	92,939	99,401	89,578	91,010	96,795
December	43,049	63,277	49,473	67,598	80,230	67,065	62,819	54,107	75,273	72,786	76,373	76,519	65,795	71,393
Avg./Mo.	141,982	150,719	153,068	153,095	155,563	155,728	154,051	151,518	158,670	156,737	158,583	153,441	153,024	154,933
% Change		6.2%	1.6%	0.0%	1.6%	0.1%	(1.1)%	(1.6)%	4.7%	(1.2)%	1.2%	(3.2)%	(.27)%	1.2%

Source: Town of Ocean City, Dept. of Tourism/Planning and Community Development, 2015

(Table 1-4 continued next page)

Table 1-4
Average Weekend Population Estimates, Ocean City
1992--- December 2015

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	23 yr avg	2015 change from avg.
January	81201	77678	70700	67972	78671	80491	75003	72493	75051	87336	**74058**	+17.9%
February	82173	80758	80543	72045	98297	81229	79655	65549	78047	90613	**79989**	+13.3%
March	87250	94917	85424	89864	117189	97503	90320	88828	83531	95559	**91207**	+4.8%
April	108114	122456	113041	123296	118012	179179	112516	103550	121094	105258	**115456**	-8.8%
May	168882	175860	169545	197363	165111	178563	191561	166852	177055	171529	**170680**	+0.5%
June	225056	237214	235301	261854	230917	247544	250146	225784	214003	222739	**232203**	-4.1%
July	296859	295491	298946	294471	299248	314120	303502	305111	283517	289831	**303510**	-4.5%
August	293910	296365	285436	289993	293740	308546	290670	290964	281370	273199	**298082**	-8.3%
September	208435	207747	178441	214532	213150	224137	198698	203345	189908	213984	**206113**	+3.8%
October	140220	128469	123792	139793	120022	136867	122213	125207	121142	144274	**124981**	+15.4%
November	108269	91712	92402	106726	92148	78888	91679	78686	79755	84206	**89429**	-5.8%
December	84895	75358	74750	92755	69125	67508	69436	73190	75145	72596	**70021**	+3.7%
Avg./Mo.	157105	157002	150693	162555	157969	161048	156283	149880	148302	154260	**154425**	-0.1%
% Change	1.4%	-0.1%	-4.0%	7.9%	-2.8%	1.9%	-2.9%	-4.1%	-1.1%	4.0%		

Source: Mathematical formula called "Demoflush" which estimates population based on volume of flow through the Town's Sewage Treatment System

Source: Town of Ocean City, Dept. of Tourism/Planning and Community Development, 2015

Average Weekend- The average weekend population by month is shown in Table 1- 4. Since 1992 the year-round average weekend population has varied from 5 to 8 percent above or below the 24 year average and typically ranges from 150,000 to 160,000 over the years. The average weekend populations through the summer months have remained quite stable through the 1992-2015 period. Most noteworthy are trends reflecting more substantial increases in average weekend populations during the peak season shoulder months and winter months. Through the period shown in Table 4, the months of January, February, and October 2015 each recorded substantial weekend population increases of 13 to 18% above average.

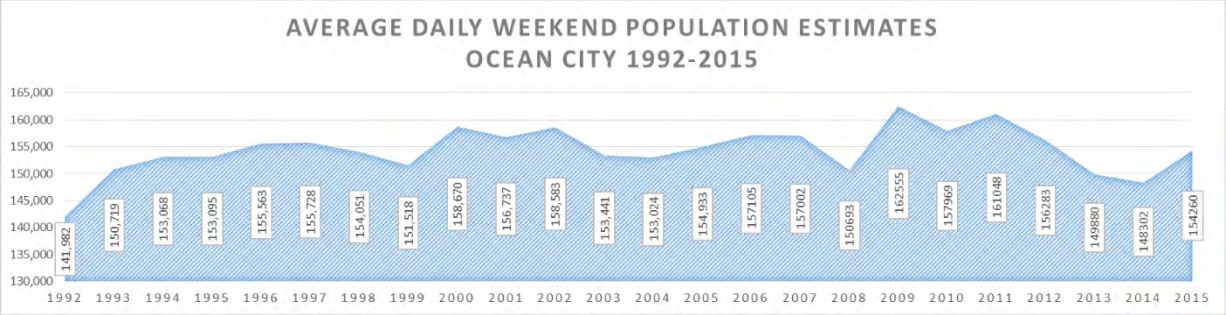


Table 1-5
Average Weekend Population by Season
1992--- 2005

		1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Winter		55,008	68,672	65,706	69,813	75,964	71,235	77,928	65,284	75,014	79,881	77,506	77,985	76,659	79,135
Spring		109,638	117,138	124,250	122,637	118,117	124,689	121,236	118,771	129,812	127,772	131,671	125,966	123,762	123,547
Summer		276,968	285,058	284,354	278,739	284,974	284,544	278,253	279,290	286,213	280,149	283,941	277,050	272,956	272,592
Fall		126,313	132,006	137,961	141,193	143,195	142,438	138,787	142,727	143,642	139,147	141,213	132,765	138,721	144,458

Table 1-5
Average Weekend Population by Season
2006 --- 2015

		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	24 Year Average	6 year Average	2015 Change from 6yr	2015 Change from 24yr
Winter		82,756	77,931	75,331	77,591	82,031	76,409	74,698	70,411	76,081	83,515	**74,690**	**77,191**	**+8.2%**	**+11.8%**
Spring		121,415	131,078	122,670	136,841	133,437	151,748	131,466	119,743	127,227	124,115	**125,781**	**131,289**	**-5.5%**	**-1.3%**
Summer		271,942	276,357	273,228	282,106	274,635	290,070	281,439	273,953	259,630	261,923	**277,932**	**273,608**	**-4.3%**	**-5.7%**
Fall		152,308	142,643	131,545	153,684	141,773	146,631	137,530	135,746	130,268	147,488	**140,174**	**139,906**	**+5.4%**	**+5.2%**

Source: Town of Ocean City, Dept. of Tourism/Planning and Community Development

Source: Mathematical formula called "Demoflush" which estimates population based on volume of flow through the Town's Sewage Treatment System

Shoulder Season- Information shown in Table 1-5 appears to confirm trends toward increases in visitor populations during the shoulder seasons (non-summer months). Table 5 shows the average weekend population during the summer season from 1992 through 2015 has typically remained constant although there was a 4 to 5% reduction in the last few years. In absolute numbers, the population for all seasons has increased over the past decade as a result of significant increases in average weekend populations in all other seasons, particularly the winter months where average weekend populations have grown by over 11.8% over the 24 year average. These changes suggest that efforts to expand the traditional tourist season have been successful.

Annual- Total annual visitor population has been estimated at 8.1 million in 2009 (3.6M in the summer months), 7.6 million in 2012 (3.4M in the summer months), and 8 million in 2015.

As noted earlier, estimating the visitor population using the Demoflush methodology may overestimate the population. To illustrate, comparing the 2015 average summer population estimate (277,932), less about 10 percent day visitors, to the number of housing units (30,119 as reported by the 2010 Census plus about 10,000 hotel units) results in an average of 7.0 persons

per unit. It seems more likely that, if the average unit contains 2 bedrooms, four to six people would occupy the average unit in the summer.

Thus, a population estimating methodology that incorporates persons per unit indicates that up to 204,607 people are in Ocean City at any time during the peak season (based on an assumed 85% occupancy and excluding day visitors and non-resident workforce). Adding another 10 percent to account for day visitors who are not staying overnight, and an estimated 5,294 non-resident employees) yields a maximum of about 230,362 as a total average summer population (about 83 percent of the Demoflush figure). This is probably a more accurate population estimate for purposes of planning for parks, recreation, police, fire and emergency medical facilities and services as well as Town administrative facilities. However, demoflush figures should be utilized as a basis for ongoing planning to assure adequate water supplies and satisfy wastewater treatment capacity needs until another methodology is tested and approved.

Population Density

Total land area within the Town of Ocean City is approximately 4.46 square miles or just under 2,853 acres. Table 1-6 presents the population density (persons per square mile) for the year round population (1,592 persons per square mile) and for the average weekend demoflush population by season (16,746 to 62,316 person per square mile, depending on the season). By way of comparison, the population density of Baltimore City is approximately 7,700 persons per square mile and the density within the City of Annapolis is approximately 5,700 persons per square mile.

Table 1-6
Population Density– 2010
Town of Ocean City

Population type	Population	Density (persons per square mile)
Year-Round Population	7,102	1,592
Winter (Average Weekend)	74,690	16,746
Spring (Average Weekend)	125,781	28,202
Summer (Average Weekend)	277,932	62,316
Fall (Average Weekend)	140,174	31,429

Source: 2010 U.S. Census; Town of Ocean City Department of Tourism/Planning and Community Development

Resident Population Characteristics

It is common for a comprehensive plan to reference the US Census as a consistent way to analyze the various characteristics of a community's population, such as age, sex, race, income and education. Selected data from both the 2010 Census and the 2015 American Community Survey have been used to complete a current update of the Comprehensive Plan with emphasis

on meeting the adopted goals and principles of Ocean City's Strategic Plan. While such information can serve to inform many actions related to future planning, the size and characteristics of the community's visitor population will continue to be of greater import for planning purposes due to its much greater size which drives a much greater demand for public facilities and services.

As noted earlier, growth in the Town's resident population accelerated during the period 1990 to 2000 and then stabilized over the last 15 years near 7,100 residents. This stable rate of growth in the resident population is expected to continue. Worcester County also sustained an accelerated rate of growth during the 1990's. County population grew from 35,028 residents in 1990 to 46,543 in 2000, reflecting a 33% increase for the decade, and now has stabilized with 51,454 residents in 2010 and an estimated 51,540 in 2015 reflecting a 0.2% growth rate.

Table 1-7
Selected Population Characteristics, 2000-2010 and Estimated 2015
Town of Ocean City and Worcester County

Population	Ocean City	Worcester County
2000	7,173	46,543
2010	7,102	51,454
2015 Estimated	7,055	51,540
2010 Population by Sex and Age		
Male	3,652	25,044
Female	3,450	26,410
Percent Population Change		
2000 - 2010	-1.0%	+10.6%
Median Age in 2010	54.2	47.0

Source: 2010 U.S. Census

Ocean City completed a strategic planning process in recent years which resulted in the identification of certain demographic characteristics which are incorporated into the Strategic Plan vision, goals, principles, and strategies. More detailed information is available from the 2010 US Census which allows these characteristics to be measured and evaluated along with the traditional measures of change in population and community characteristics. One example is Strategic Plan vision principle # 4: Choice of today's families, and Goal #1: 1st Class Resort

and Goal #3 More Livable Community for Residents to increase the number of year round residents. 2010 US Census data on these topics has been added with this update.

Age and Sex Characteristics of Year-Round Population

Table 1-8 presents a comparison of the age characteristics for the year-round permanent population of Ocean City in 2000 and 2010. Based on the evident shift in population to increases in all age groups over 45 years, Table 1-10~~9~~ has been modified to provide additional detail regarding this area of the resident population.

Table 1-8

Year Round Population

Year 2000 and 2010 Age Characteristics

	2000		2010		Change	5 Year Estimate	
Age	**Number**	**Percent**	**Number**	**Percent**		**Number**	**Percent**
Under 5 years	214	3.0%	194	2.7	-9.3%	271	3.8
5 to 9 years	220	3.1%	167	2.4	-24.1%	191	2.7
10 to 14 years	239	3.3%	150	2.1	-37.2%	174	2.5
15 to 19 years	234	3.3%	215	3.1	-8.1%	170	2.4
20 to 24 years	427	6.0%	396	5.6	-7.3%	220	3.1
25 to 34 years	1,007	14.0%	780	11.0	-22.5%	605	8.6
35 to 44 years	1,016	14.2%	699	9.8	-31.2%	757	10.7
45 to 54 years	937	13.1%	1051	14.9	+12.2%	839	11.9
55 to 59 years	526	7.3%	656	9.2	+24.7%	670	9.5
60 to 64 years	545	7.6%	693	9.7	+27.2%	803	11.4
65 to 74 years	1,136	15.8%	1175	16.5	+3.4%	1247	17.6
75 to 84 years	577	8.0%	733	10.3	+27.0%	944	13.3
85 years and over	95	1.3%	193	2.7	+103.2%	183	2.6
	7173	100.0	7102	100.0		7074	100.0

Median Age 54.2

Population 18(19) years of age and older

2000: 6,266 (87%)

2010: 6,458 (90.9%)

Population 65 years of age and older

2000: 1,808 (25.1%)

2010: 2,101 (29.5%)

Source: 2000/2010 U.S. Census

Table 1-9

Year Round Population

	Number	% of total
Male	3,652	51.4 %
Female	3,450	48.6 %

Source: 2010 U.S. Census

Table 1-10 Trend Growth in Year Round Population Age 55 and Older			
Year	Persons Age 55 and older	Total Population	Percent of Total
1970	418	1,493	28.0%
1980	1,401	4,496	28.3%
1990	1,919	5,146	37.3%
2000	2,879	7,173	40.1%
2010	3,450	7,102	48.6%

Source: 2010 U.S. Census

Certain characteristics or trends regarding the age and sex characteristics are noteworthy. They include:

- The general population is remains evenly divided between males (51.4%) and females (48.3%). Within the seniors age group (65 and older) representing 30% of the population, there is a larger difference between males 46% and females 54%.

- The population under 18 years of age represents a much smaller percentage of total population (9.1%) than population under 18 years of age in Worcester County (18.3%) and the State of Maryland (23.4%)

- The school-aged population, in the age group 5-17 years of age, makes up only 6.3 percent of the total population as compared to the County school age population which represents 13.8% of the total County population.

- The median age of the Town's population is 54.2 years of age. This is substantially higher than the median age of the Worcester County population (48.1) and the State (38.0). From 2000 to 2010, there was an increase in all age groups over 45 and decrease in all age groups under 45. The age group 85 and older doubled in size over the 10 year period.

- The median age of men (52.5 years of age) and women (55.8 years of age) as compared to the County (47.0 years of age for men and 49.2 years of age for women) and State

(36.4 for men and 39.3 for women) demonstrates the general aging of the existing population and the attractiveness of Ocean City for seniors and retirees.

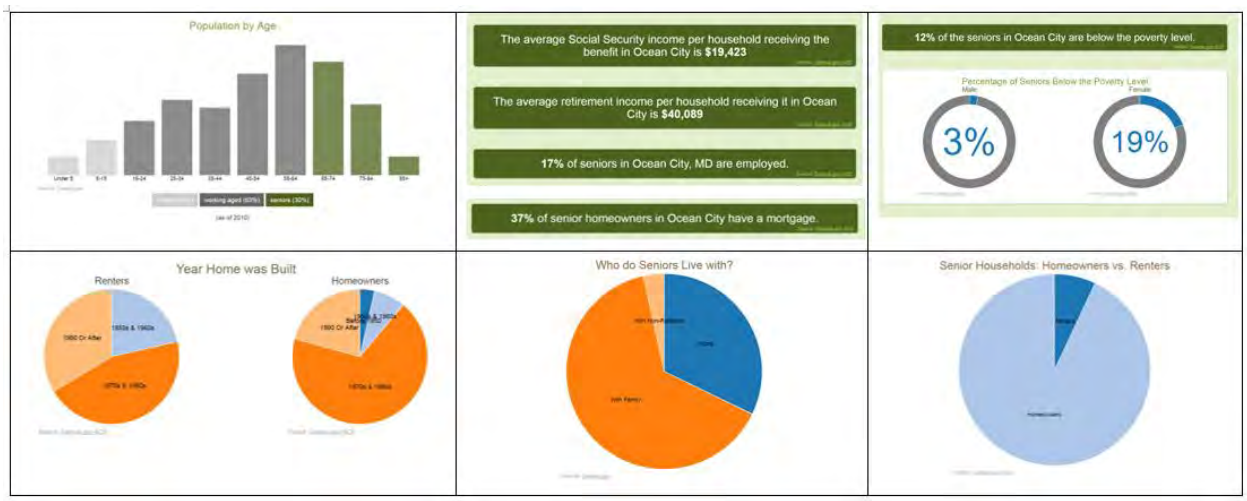
- Probably the most important observation of the analysis of the age characteristics of the Ocean City year-round population is the large percentage of the population over 55 years of age. In Ocean City, 40.1% of the year-round population is over 55 years of age, compared to 33.0% in the County and 20.3% in the State as a whole. The trends demonstrating a substantial increase in this age group as a percentage of total population in the Town over the past 30 years are also important to note (Table 1-10).

In both Ocean City and Worcester County, the older population is growing almost three times as rapidly as the general population. From 1995 to 2020, the population age 55 and over is projected to increase by over 100% while the general population will likely increase by only 40%. The numerical and percentage increase in the retirement age group has been substantial, especially in the 1980s. It is likely to continue to be an important ongoing trend as the Town's year-round population continues to grow over time, and may require planning for various forms of assisted housing and place greater demands on emergency medical services and health care services in the future.

Key senior statistics compiled from US Census data at **www.seniorcare.com** are highlighted below to illustrate both the strengths and vulnerability of a growing segment of the Ocean City resident population.

Figure1-2

Senior Population Characteristics



30% of the population of Ocean City, MD are seniors Source: Census.gov **32%** of those seniors living in Ocean City, MD are living alone Source: Census.gov **25%** of the seniors in Ocean City are veterans Source: Census.gov ACS	**66%** of Ocean City, MD residents 60 and over received food stamps in the last year Source: Census.gov ACS The average Social Security Income in Ocean City is **$19,423/year** Source: Census.gov ACS	The median household income for a Ocean City senior is **$47,554** Source: Census.gov ACS There are **360** working seniors in Ocean City Source: Census.gov ACS

Source: **www.seniorcare.com**

Family and Racial Characteristics of the Year-Round Population

The 2010 Census provides greater detail about the family characteristics of households than in previous years. With a stable resident population of 7,102, it is important to track changes in family population (4,300 or 60.5%) compared to non-family population (2,802 or 39.5%). Over the last ten years, there has been a 2.5% decrease in resident family population. Census data estimates that 533 children under age 18 reside in Ocean City (59% in a two parent household, 41% in a single parent household).

Table 1-11 shows the 2010 population by race of Ocean City compared to previous Census surveys. Significant growth in the Hispanic or Latino population is likely the result of increased efforts in the 2010 Census to collect this data, as well as a reflection of the natural progression of day trip visitors and vacationers to full time residents and resident employees. All minority populations increased by 1 to 6% with a corresponding reduction in the white population to 89% of the total year round residents.

Table 1-11: Racial Characteristics—Year-Round Population

Race	1980		1990		2000		2010		2000 to 2010
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	10 year change
White	4,815	97.4%	4,956	96.3%	6,758	94.2%	6,310	88.8%	-6.6%
Black	76	1.5%	129	2.5%	179	2.5%	189	2.7%	+5.6%
Hispanic or Latino					81	1.1%	417	5.9%	+414.8%
Asian					53	0.7%	93	1.3%	+75.5%
American Indian and Alaska Native					9	0.1%	12	0.2%	+33.3%
Two or More					68	1.0%	71	1.0%	+4.4%
Other	55	1.1%	61	1.2%	25	0.4%	10	0.1%	-60.0%

Source: U.S. Census

Educational Attainment of the Year-Round Population

Educational levels in Ocean City have increased along with Worcester County and Maryland in general. Table 1-12 shows the educational attainment level of the year—round population of Ocean City compared to the County and State. Among Ocean City's year-round residents, well over one-half (60.5%) have some college experience as compared to 56.1 percent of County residents. As the area recovers from the Great Recession, a weak job market has led to increased educational attainment as more people stay in school gaining the skills and training needed to compete effectively. (Source: MDP Status Report on the ACS Survey 2005-2014)

Table 1-12
Educational Attainment of Persons 25 years and Older in Year-Round Population

Educational Attainment	Ocean City 6,094		Worcester County (%) 38,428	Maryland (%) 3,973,193
	Number	Percent		
Less than9th Grade	79	1.3	2.9%	4.3%
9th to 12th Grade (No Diploma)	408	6.7	7.8%	6.7%
High School Graduate	1,926	31.6	33.3%	25.7%
Some College	1,322	21.7	20.4%	19.6%
Associate Degree	317	5.2	7.5%	6.3%
Bachelor's Degree	1,225	20.1	17.1%	20.3%
Graduate or Professional Degree	823	13.5	11.1%	17.0%
Percent High School graduate or higher	5,606	92.0%	89.3%	89.0%
Percent Bachelor's degree or higher	2,042	33.5%	28.2%	37.3%

Source: 2010-2014 ACS 5 year estimate

Income

The last 10 years included a great deal of economic turmoil in the Nation and Maryland with the peak of the housing bubble as well as the devastating Great Recession. By and large, Ocean City has continued to thrive while many of the rural areas on the Eastern Shore have had a hard time recovering from lost income, unemployment, and cost burdens for homeowners and renters on fixed incomes. During this time, Maryland's median income fell by 3.3%, and Worcester County's unemployment rate increased 5.9 percent. (Source: MDP Status Report on the ACS Survey 2005-2014)

People who work in the service and hospitality industries depend on the tourist season for a majority of their income. Owners of businesses in these industries rely on making enough profit during the summer season in order to sustain themselves through the year. Table 1-13 illustrates

increases of income levels over $50,000 and reductions in all lower income levels indicating general upward growth in income over the last 5 years along with workforce reductions.

- The median household income is $56,458.
- Approximately 30% of the households make less than $35,000 annually, which is similar to the County at 31.7%.
- Around 28% of the households have an income of above $100,000.

Table 1-13
Households (2010) By Household Income: Ocean City (Town) and Worcester County

Household Income	Ocean City	%	Worcester County	%
Less than $10,000	114	3.4	1128	5.5
$10,000 to $14,999	106	3.2	1047	5.1%
$15,000 - $24,999	278	8.3	1782	8.7%
$25,000 - $34,999	509	15.2	2531	12.4%
$35,000 - $49,999	362	10.8	2320	11.3%
$50,000 - $74,999	763	22.7	4056	19.8%
$75,000 - $99,999	287	8.5	2647	12.9%
$100,000 - $149,999	396	11.8	2876	14.0%
$150,000 - $199,999	231	6.9	1099	5.4%
$200,000 or more	313	9.3	1006	4.9%
Total	**3,359**		**20,492**	
Median household income	**$56,458**		**$58,820**	
Median Non Family Household Income	$47,500		$32,888	
Median Family Income	$71,938		$70,298	

Source: U.S. Census Bureau 2010-2014 ACS 5 year estimates

Visitor Population Characteristics

Since 1987, each summer, the Ocean City Tourism/Public Relations office conducts a non-scientific sample survey of vacationers to attempt to learn where the Town's visitors come from and to frame a profile of visitor characteristics. This information is important to the city government and to various private entities in their attempt to identify visitor needs, assess market trends, and identify service demands, business opportunities, and recreational offerings that respond to dynamic changes in visitor population interests over time. In Recent years there has been an emphasis on the collection of zip code information in order to evaluate the effectiveness of location specific marketing efforts.

Review of the results of standardized questions indicates that the profile of the visitor population has not changed substantially over the past 10 years. Geographic diversity was influenced recently with the impact of Hurricane Sandy on communities and beaches in New Jersey causing an increase in visitors from those locations, and more recently with targeted advertising to larger market areas in New York and New Jersey.

J-1 Visa students

Ocean City, Maryland maintains a long tradition of organizing and welcoming international students for summer seasonal employment under the J-1 visa work program. Each year approximately 4,000 young adults join the local population as both visitors and workforce. Meeting housing needs of this seasonal workforce is discussed in Chapter 6.

Short Term Visitors

Seasonal populations have different characteristics and impacts on the community depending on their length of stay: monthly, weekly, or weekend only. Over the last 10 to 20 years, Ocean City has adapted as family vacations became shorter, more frequent, organized around school and sport schedules, enhanced with new activities and special events, and reliant on homes, condos or hotels for lodging.

Current trends toward internet based reservation systems, short term rental of single family housing in established neighborhoods, and new hotel construction and competition from national flagship corporations demand new approaches. This demographic change of short term visitors will have positive and negative effects on the local economy and the stability of established residential neighborhoods.

Day trip visitors also have their own unique characteristics which change over time. Growth projections for West Ocean City and Berlin, suggest that there will be more shuttles to the beach from remote hotels and campgrounds and more demand for parking and public services from a non-resident population.

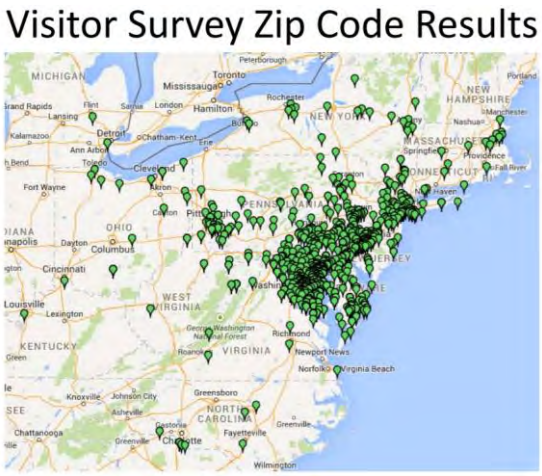


Figure 1-3

Non-resident property owners continue to play an important role in defining the future of Ocean City. Second home owners carry all of the expectations of their primary home communities plus the demand for high levels of outdoor recreation, entertainment and public services. Encouraging reinvestment and maintenance of all properties is increasingly important as construction from the early development years reaches 50 years old. A zip code map illustrates the geographic location of existing non-resident property owners who consider Ocean City to be their second home (Fig. 1-3)

Population Projections

Population projections are based on assumptions and projected trends. They cannot necessarily consider unknown future changes in policies regarding growth or major market forces that can influence community growth over time. The projections of permanent and seasonal population which follow assume a continuation of current policies, and no major economic downturns. The projections are intended to provide a range for policy analysis and consideration of future facility needs.

Projecting year-round resident and seasonal population in Ocean City is complicated by several factors. The uncertainty about the accuracy of the Census and the small size of the year-round population compared to the total population decreases the accuracy and importance of projecting future year-round population.

Seasonal population projections present their own set of problems. Vacationers and seasonal workers are not counted by the Census, so historical counts rely on symptomatic data, such as wastewater flows, traffic counts or tax collections which can only offer a surrogate measure as a basis for projection. Future growth depends of a variety of economic and demographic characteristics. Finally. Ocean City's physical capacity (a largely built community with 98% of the land developed) and land use policies will have a major effect. It is likely that much of the change in the capacity of the City to absorb increases in the peak seasonal visitor population will be largely influenced by City redevelopment policies as much as new development over the next 20 years.

Regional and national trends will also influence future increases in population and/or the rate of occupancy for existing housing units. The National Coastal Population Report (March 2013) prepared by NOAA and the US Census is a reminder that 52% of the U.S. population lives in coastal counties in 2010. This report projects that Maryland coastal shoreline counties are projected to receive a 10% increase in population between 2010 and 2020 many of which will be age 65 and older based on past trends.

Year-round Population Projections

For planning purposes, the size of Ocean City's year-round population is an important indicator of the community as a whole. The number of people in the city at any time is much larger than the year-round population and is of much greater import in influencing demand for community facilities and services.

Population projections from MDP for Maryland jurisdictions (July 2014) incorporate projections for the Baltimore Region based on Rounds 8A from the Baltimore Metropolitan Council of Government's Cooperative Forecasting Committee. Worcester County is projected to increase population beginning at a rate of 1.18% between 2015 and 2020, and decreasing to a rate of 0.37% by 2040.

Table 1-14 presents both the historic and projected year-round population. Given the unique characteristics of Ocean City as a resort community, two alternative forecasts or projections are provided utilizing different approaches. Assumptions made are provided to define the likely range of growth in the year round population that might be anticipated.

The projections provided in column one titled *"Proportionate Share"* (about 1% per year increase) are based on the assumption that the proportion of the Worcester County population that lives in Ocean City [(14.69% in 1990), (15.4% in 2,000) and (13.8% in 2010)] will remain relatively constant at 14% of the County population in the future. Population projections prepared by the Maryland Office of Planning for Worcester County are used to derive Ocean City "Proportionate Share" projections.

Projections provided in Column two titled *"trend growth"* assume that the rate of increase in the year-round residential population will be more affected by recent growth trends within the Town itself, which were approximately 1.5% annually over the twenty-five year period from 1990 to 2015.

The actual rate of future growth in the Town of Ocean City will be influenced by a number of factors including the state of the national and regional economies over time, as well as the implementation of Maryland's Planning Visions as they are applied in Worcester County over time. It is likely that the rate of growth will fall somewhere between the two alternative projections provided with future resident population between 7,598 and 8,834 within another 25 years.

The Town of Ocean City has the capacity to absorb a surge in year-round population growth with existing seasonal housing stock and available infrastructure which has traditionally been required to support its visitor population.

Table 1-14 Year-Round Resident Population Projections Town of Ocean City		
Year	**Population**	
1930	946	
1940	1,052	
1950	1,234	
1960	983	
1970	1,493	
1980	4,496	
1990	5,146	
2000	7,173	
2010	7,102	
2015	7,055	
	Proportionate Share	**Trend Growth**
2020	**7,854**	**7,160**
2025	**8,225**	**7,267**
2030	**8,463**	**7,376**
2035	**8,673**	**7,486**
2040	**8,834**	**7,598**

Note: Figures shown in Table under Proportionate Share assume the Town will maintain its proportionate share of the county population in future years as established by the 2010 Census (14% of County Population). Figures shown under "Trend Growth" assume the Town's rate of growth in Year-round population from 1990-2015 (approximately 1.5% annually) will continue in future years.

Total (Seasonal) Population Projections

The projection of future total, or seasonal, population is also important to planning efforts in Ocean City. It is the total number of people in the city that impact the environment and demand for public services and facilities. This plan continues to project future peak seasonal population based on the demoflush population figures from 1994 through 2015 (Table 1-15). Until such time that another method of measuring and estimating seasonal population is developed and calibrated, the demoflush data will be maintained for reference.

In this recent 6 year period the peak seasonal visitor population has been relatively stable with an average peak weekend day of 323,547. This plan update anticipates that the trend toward a maximum carrying capacity for Ocean City will be maintained in the foreseeable future, in part because of the successful expansion of shoulder seasons which allow visitors multiple opportunities to visit Ocean City rather than just during peak periods.

"Adjusted" population figures are presented which are 85~~3~~ percent of the demoflush population.

(See discussion on page 1-10~~6~~.) These projections assume that there is no major change in local policy toward or regulation of development, and that new hotel construction and/or redevelopment will occur through the 2015-2040 period that will increase capacity to attract visitors during peak weekends.

Table 1-15
Estimated Recent and Projected Peak Summer Seasonal Population

Year	Peak Weekend Population*	Annual Percent Change	Peak Population Adjusted**
1994	330,133	2.2%	280,613
1995	319,755	-3.1%	271,792
1996	332,547	4.0%	282,665
1997	319,309	-4.0%	271,413
1998	335,798	5.2%	285,428
1999	334,096	-0.1%	283,982
2000	331,755	0.7%	281,992
2001	311,330	-6.2%	264,631
2002	339,309	9.0%	288,413
2003	340,344	0.1%	289,292
2004	345,671	1.6%	293,820
2005	322,308	-6.8%	273,961
2010	332,547	**3.2%**	282,665
2015	318,840	**-4.1%**	271,014
2020	~~323,547~~323,622	**1.5%**	~~268,544~~275,078
2025	~~323,547~~328,476	**1.5%**	~~268,544~~279,204
2030	~~323,547~~333,403	**1.5%**	~~268,544~~283,392
2035	~~323,547~~338,404	**1.5%**	~~268,544~~287,643
2040	~~323,547~~343,480	**1.5%**	~~268,544~~291,958

Source: Ocean City Department of Planning and Community Development * Demoflush Population** Adjusted Population (83% of Demoflush)

Recommendations

Based on the historic data and projections presented in this Population Element, the following recommendations are made:

1. Continued growth in year—round population should be encouraged in order to provide the critical mass for expanded offerings of economic, social and cultural goods and services and to reflect the "Visions" of the Maryland Planning Act of 1992 which call for growth to be directed to existing population centers and suitable areas.

2. The Town's ability to provide park facilities and health, safety, and other vital services should be coordinated with seasonal population growth over time.

3. The composition of seasonal and off—season population should be monitored regularly for market research purposes and to assure the Town's range of services and facilities and visitor attractions and offerings are responsive to any changes in the characteristics of the visitor population over time.

4. Continued growth in the older population both in numbers and as a percentage of the total year-round population should be anticipated. This may prompt additional demand for medical and EMS services which should be monitored over time to assure such services are responsive to this special population need.

5. Projections of the resident and seasonal population should be reviewed and updated every five years since characteristic of growth in both populations are dynamic and have not always shown consistent patterns of growth. Adjustments to anticipated facility and service needs should be made accordingly.

6. Evaluate the implications of an extended peak season and higher sustained service levels year-round based on recent efforts to expand events and activities for seasonal visitors throughout the year. Monitor and describe unique characteristics of 'OC at night'.

7. Develop an improved method of estimating seasonal population, which incorporates data known as the Tourism Metrics Report.
~~Changes in water consumption have caused questions about the accuracy of previous methods and may not accurately predict future peak periods.~~

8. In future updates, Demoflush information should be summarized within an Appendix that describes the model, input data, mathematical formulas, flow to population ratio, and limitations for continued use.

9. Measure community health as a new demographic characteristic of the population, and continue to promote initiatives through the HEAL Campaign.

CHAPTER 2: Economic Development

Introduction

Ocean City is nationally recognized as a destination resort that is a clean, safe, diversified and successful community for its residents, vacation homeowners and visitors. Its tourism industry, which is the basis of its economy, can be broken down into four categories: 1) accommodations (hotels, motels, and condominium rentals), 2) restaurants and nightclubs, and 3) retail shops and malls, and 4) amusements.

Over eight million people are estimated to visit the resort each year. Although the peak months are June, July and August, tourism is also strong in April, May, September, and October. During these off season, or "shoulder" months, the weekend population of the Town can average over 150,000 people.

Ocean City's Tourism Master Plan provides organization and direction to the combined marketing efforts of many public and private partners in economic development. By reference it is incorporated as a part of this Comprehensive Plan.

Goal:

To maintain a healthy and growing economy that supports the quality of life of residents and tourists, and encourages reinvestment. Economic development efforts should focus on retaining and attracting jobs that are more varied and better paid; maintaining and increasing year round employment; expanding the commercial base through business retention, expansion and attraction; and growing the economy to provide goods and services that match the needs of residents and tourists.

Objectives:

In order to achieve the economic development goal, the following objectives are adopted:

2.1 Continue to advertise and promote a family friendly beach and boardwalk experience, enhanced by area attractions and special events.

2.2 Support bayside marine and natural area recreational use for expanded tourist activities in locations with adequate facilities and where residential neighborhoods are protected from adverse impacts.

2.3 Promote orderly real estate development that enhances the Town and generates taxes to support required services.

2.4 Promote redevelopment of properties and locations that are underdeveloped or obsolete.

2.5 Promote mixed-use projects that integrate commercial and residential development.

2.6 Encourage the County to direct new industries and commercial development into the northern part of the County in order to provide additional year round work opportunities for Ocean City residents.

2.7 Promote opportunities for job development in technical and other skilled employment sectors within the Town.

2.8 Support technical education at the Community College to meet tourism industry and other requirements.

2.9 Support small local businesses that offer unique goods and services and provide jobs and revenue for the resident population.

2.10 Promote the Green Business Registry, and Healthy Eating Active Living (HEAL) community and business goals.

2.11 Encourage the Chamber of Commerce to enhance the local retail environment with specialty stores that provide entertainment and capture a larger share of potential tourist spending.

2.12 Coordinate with Worcester County to expand year-round social services to meet demand from the growing population.

2.13 Expand year-round cultural activities in the Town and the County, with increasing use of the Performing Arts Center, and activities sponsored by the OC Art League.

2.14 Support non-profit sponsors of seasonal workers by promoting additional workforce housing, public transportation support services, training and legal assistance.

2.15 Support County economic development efforts to expand commercial air service from the Ocean City Municipal Airport.

2.16 Request Worcester County to expand the existing State Priority Funding Area boundary to include the entire OC Municipal Airport. and adjacent commercial development properties.

2.17 Expand the Convention Center to maintain it is as one of the top meeting centers in the Mid-Atlantic region, generating a significant level of visitation and spending.

2.18 Encourage and promote quality restaurants with a broad range of cuisines

2.19 Expand the range of tourist attractions to include entertainment venues, quality restaurants, and boardwalk activities.

2.20 Conduct an in-depth analysis of the tourism market in order to identify trends and specific gaps in the range of attractions presently available.

2.21 Maintain expenditures on tourism marketing to meet competition from other locations in the Mid-Atlantic region.

2.22 Continue to expand visitation in shoulder seasons with golf packages, weekend themes and special events.

2.23 Create a seamless approach to promote the Town and the region with a clear message that binds the distinct elements---the Beach and Boardwalk district, Downtown/Midtown/Uptown commercial districts, Convention Center, tourism and business development entities---with a single brand and message.

2.24 Maintain the public commitment to downtown redevelopment, including the bayside boardwalk extension, retail attraction and parking improvements.

2.25 Consider a mixed-use development project (including parking, retail and possibly housing) in the vicinity of the Worcester Street parking site including a 'Model Block' to encourage redevelopment.

2.26 Maintain the amusement parks, as they are essential to the success of the resort.

2.27 Take advantage of the benefits offered by participation in the ~~Lower Eastern Shore Heritage Management Plan and location along the Blue Crab~~Cape-to-Cape Scenic Byway which travels through 3 states from Cape Henlopen, DE to Cape Charles, VA. In Maryland it runs along Coastal Highway to 9th Street, then Baltimore Ave to Route 50.

Fiscal and Economic Trends

The Town's fiscal position appears to remain healthy based on reported revenues and expenditures. Impacts from the National Economic Recession beginning in 2008 have

generally been offset by a strategy of increased marketing and public investment in expanded recreational opportunities in Ocean City. Overall growth in tax revenues from 2005 to 2015 was $2,198,284 average per year over the 10 year period. Table 2-1 summarizes General Fund revenues and expenditures in 2000, 2005 and 2015.

Table 2-1

Revenues and Expenditures

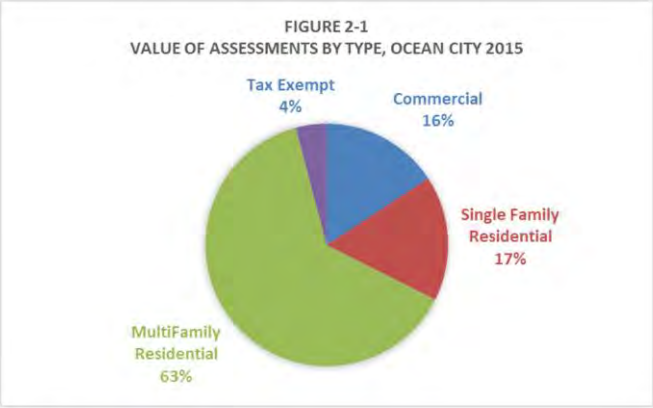
Town of Ocean City General Fund, fiscal year ending June 30, 2005, 2010 and 2015

	2005		2010		2015	
	Amount ($)	%	Amount ($)	%	Amount ($)	%
Revenues						
Property Taxes	28,893,748	49.7	43,808,149	58.3	42,429,988	53.0
Penalties and Interest	203,861	0.4	0		0	
Other Taxes	12,561,124	21.6	13,062,376	17.4	17,024,793	21.3
Licenses and Permits	5,017,242	8.6	3,858,142	5.1	4,190,527	5.2
Fines and Forfeitures	523,136	0.9	741,763	1.0	583,087	0.7
Charges for Current Services	7,299,685	12.6	7,691,958	10.2	9,457,304	11.8
Revenue from Other Agencies	2,897,590	5.0	5,218,485	6.9	5,602,145	7.0
Other Revenue	684,897	1.2	712,087	0.9	776,280	1.0
Total	$58,081,283		$75,092,960		$80,064,124	
Expenditures						
General Government	3,652,371	7.0	3,990,472	5.3	3,817,132	5.3
Public Safety	21,756,557	41.8	32,523,984	43.6	32,700,162	45.2
General Public Works and Beach	3,916,271	7.5	7,949,005	10.6	4,991,821	6.9
Sanitation and Waste Removal	5,601,659	10.8	6,423,476	8.6	5,353,919	7.4
Highways and Streets	4,140,051	8.0	5,670,074	7.6	5,241,405	7.3
Tourism and Community Relations	3,861,408	7.4	5,999,877	8.0	7,889,134	10.9
Recreation and Parks	5,964,562	11.5	7,459,650	10.0	7,090,260	9.8
Debt Service	3,123,228		4,662,431		5,199,584	
Total	$52,016,107		$74,678,969		$72,283,417	

Source: Finance Department, Town of Ocean City. *Excludes other financing sources; see annual CAFR reports for complete summary.

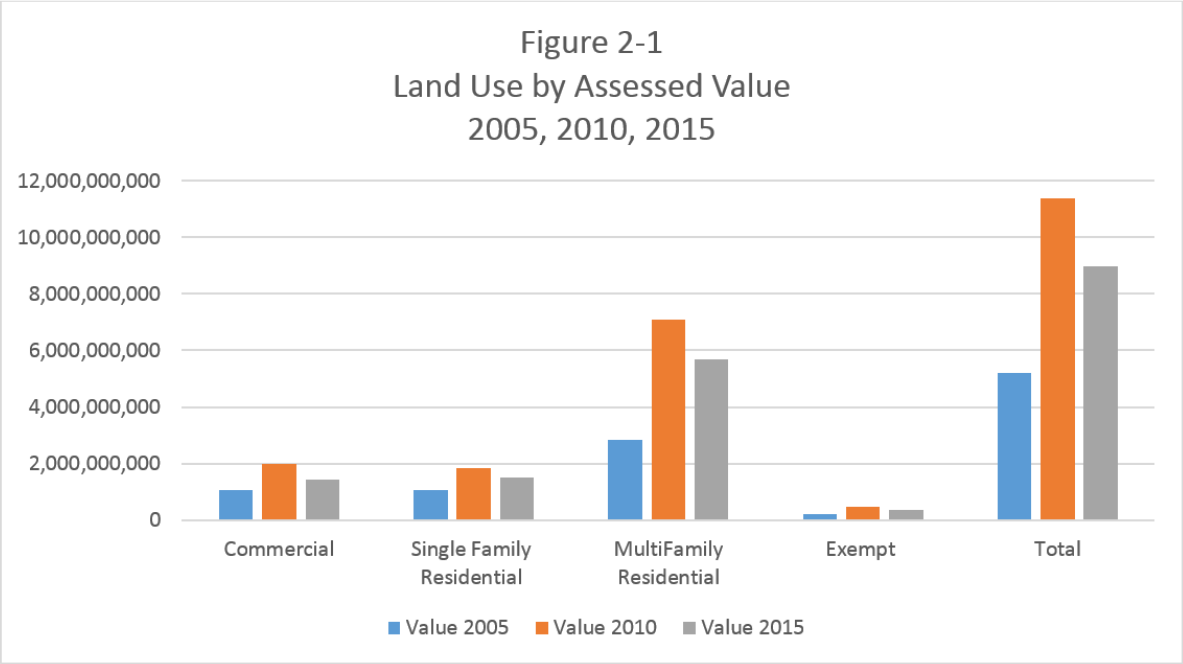
Revenue sources continue to be balanced with expenditures providing stability to the local economy, provision of services to meet seasonal high demand, and predictability for real estate investment.

The importance of residential property in the overall distribution of land use is apparent; residential properties make up 80 percent of the total value of taxable real estate. Figure 2-1 shows the relative values of residential and commercial real estate assessments in 2015.



Source: Department of Planning, Town of Ocean City

Data for the last ten years (Figure 2-1) show the tremendous growth in real estate development and property value leading up to 2008 and the slow correction that has occurred following the economic recession. Condominium and multi-family housing are not only the largest category of value (63% of the total) but also the fastest growing (average 10% per year) over the last period.

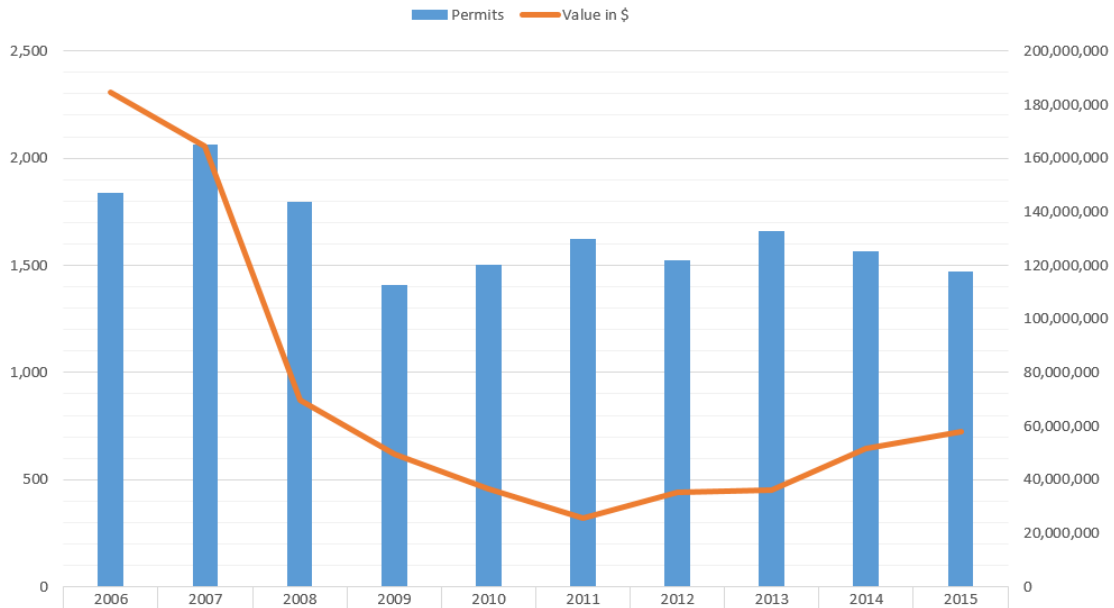


The recent growth trend in new hotel construction has increased the real estate tax base and provided additional impact fee revenue and room tax revenue to offset any decreases in property assessments.

New development and reconstruction typically drives an increased level of real estate assessments. Figure 2-2 shows the trend in terms of value of building permits issued in the period 2006-2015. Previously there was a growth spike in 1996 and then steady growth from

1999-2002 with a large increase in 2003 continuing through 2005. The national recession beginning in 2008 had a negative effect on the tax base however the pattern of 3 year assessments tempers rapid change in value and tax revenue. The other trend visible in Figure 2-2 is the steady number of permits for smaller renovation and single family home construction projects.

Figure 2-2
Value of Building Permits Issued



	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Permits	1,837	2,065	1,795	1,407	1,501	1,622	1,525	1,660	1,564	1,472
Value in $	184,582,285	164,614,258	69,597,628	49,378,207	36,525,292	25,521,294	35,460,486	36,287,285	51,755,670	57,999,098

The long term trend in assessed value of taxable property also tells a positive story (Figure 2-3 and Table 2-3), based on the apparent stabilization in property values and indication of a 0.7% increase in the last year. Assessments were $8.69 billion for fiscal year 2015, similar to the value in 2007 before the peak and correction period.

Source: Uniform Financial Report of Town of Ocean City to Maryland Department of Fiscal Services.

Table 2-3
Assessed Value of Taxable Property ($ millions)

Fiscal Year	Real Property	Personal Property	Corporate Property	Total Value	% Change
2015	8,526	13.6	147.5	8,687	0.7%
2014	8,481	12.6	133.5	8,627	-0.8%
2013	8,551	12.6	133.5	8,698	-16.0%
2012	10,209	13.5	129.8	10,353	-0.6%
2011	10,268	13.6	131.5	10,413	-2.2%
2010	10,501	14.3	133.1	10,648	-13.0%
2009	12,090	16.5	135.2	12,242	17.0%
2008	10,309	15.6	140.1	10,464	21.1%
2007	8,491	15.5	135.4	8,642	27.3%
2006	6,642	15.4	130.4	6,788	17.3%
2005	5,640	15	131	5,787	19%
2004	4,710	21	124	4,856	21%
2003	3,861	21	132	4,015	5%
2002	3,676	20	119	3,815	145%
2001	1,416	24	114	1,555	4%
2000	1,366	25	107	1,497	3%
1999	1,333	26	100	1,458	1%
1998	1,319	28	98	1,445	-1%
1997	1,328	29	99	1,456	1%
1996	1,314	37	85	1,435	1%
1995	1,306	36	84	1,426	-2%
1994	1,336	35	86	1,456	

Source: Uniform Financial Report of Town of Ocean City to Maryland Department of Fiscal Services.

Employment

Service, retail sales, and tourism based businesses are traditionally the major employers, creating more than 85% of the Town's year round jobs (Table 2-5). Approximately 3,232 Town jobs are estimated by the American Community Survey, which does not include over 10,000 seasonal jobs each year.

The three main activities that generate employment are:

- Hotels, motels and condominiums
- Restaurants and nightclubs
- Retail Shops and Malls

The ten major employers in Ocean City (2016) are all in tourism and property management/development industries:

• Harrison Group	1,172
• Bayshore Development	519
• O.C. Seacrets, Inc.	469
• KTG, llc	360
• Clarion Resort Fontainebleau	340
• Phillips	303
• Fagers Island, Ltd	292
• 91st Street Joint Venture	222
• Trimpers Rides	244
• Castle in the Sand	186
	4,184

Source: Maryland DLLR Career and Workforce Information 2016

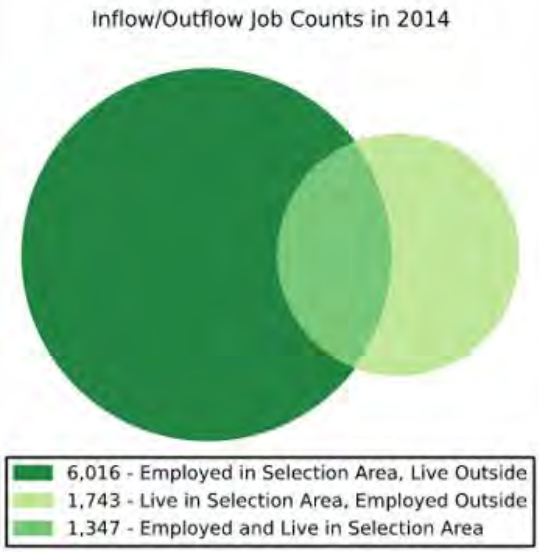
Table 2-5 Employed Population 2014, Age 16 and Older, by Industry: Ocean City Town and Worcester County				
Occupation	**Ocean City**	**%**	**Worcester County**	**%**
Management, Business, and Financial Operations	699	21.6%	3,489	15.1%
Professional and Related Occupations	611	19.0%	4,718	20.5%
Service Occupations	713	22.0%	5,011	21.7%
Sales and Office	740	22.9%	5,718	24.8%
Natural Resources, Construction, and Maintenance	276	8.5%	2,475	10.7%
Production, Transportation and Material Moving	193	6.0%	1,658	7.2%
Total	**3,232***		**23,069**	

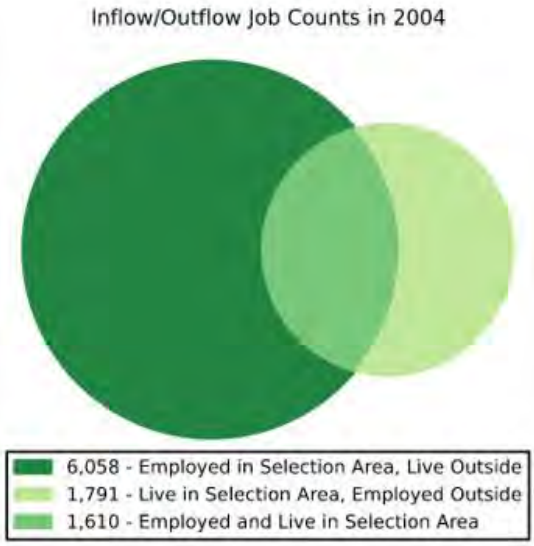
Source: 2010-2014 American Community Survey 5 year estimates US Census

*Census estimate of year round employment. Seasonal employment during the summer spikes to over 10,000 jobs

The real estate business remains a major economic force. There are approximately 85 realty companies and 770 active licensed realtors/brokers in and around Ocean City.

The US Census, Center for Economic Studies, provides location specific data for Ocean City employment and workforce statistics that will serve as a comparative tool in the future for evaluation of economic development efforts. Information included in the web based tool generally describes the community's reliance on a workforce with 81.7% of workers who live outside of Ocean City, and over 65% of jobs in the Accommodations/Food Service/Retail/Entertainment sectors. Figure 2-4 captures several key metrics which describe the local economy and present targets for improvement.





Jobs by NAICS Industry Sector

	2014 Count	2014 Share
Agriculture, Forestry, Fishing and Hunting	0	0.0%
Mining, Quarrying, and Oil and Gas Extraction	0	0.0%
Utilities	0	0.0%
Construction	120	1.6%
Manufacturing	113	1.5%
Wholesale Trade	88	1.2%
Retail Trade	702	9.5%
Transportation and Warehousing	7	0.1%
Information	108	1.5%
Finance and Insurance	105	1.4%
Real Estate and Rental and Leasing	357	4.8%
Professional, Scientific, and Technical Services	153	2.1%
Management of Companies and Enterprises	3	0.0%
Administration & Support, Waste Management and Remediation	227	3.1%
Educational Services	18	0.2%
Health Care and Social Assistance	43	0.6%
Arts, Entertainment, and Recreation	204	2.8%
Accommodation and Food Services	4,028	54.7%
Other Services (excluding Public Administration)	176	2.4%
Public Administration	911	12.4%

Work Area Profile Report

Total All Jobs

	2014 Count	2014 Share
Total All Jobs	7,363	100.0%

Jobs by Worker Age

	2014 Count	2014 Share
Age 29 or younger	2,122	28.8%
Age 30 to 54	3,508	47.6%
Age 55 or older	1,733	23.5%

Jobs by Earnings

	2014 Count	2014 Share
$1,250 per month or less	2,652	36.0%
$1,251 to $3,333 per month	3,209	43.6%
More than $3,333 per month	1,502	20.4%

Jobs by Worker Educational Attainment

	2014 Count	2014 Share
Less than high school	784	10.6%
High school or equivalent, no college	1,762	23.9%
Some college or Associate degree	1,572	21.3%
Bachelor's degree or advanced degree	1,123	15.3%
Educational attainment not available (workers aged 29 or younger)	2,122	28.8%

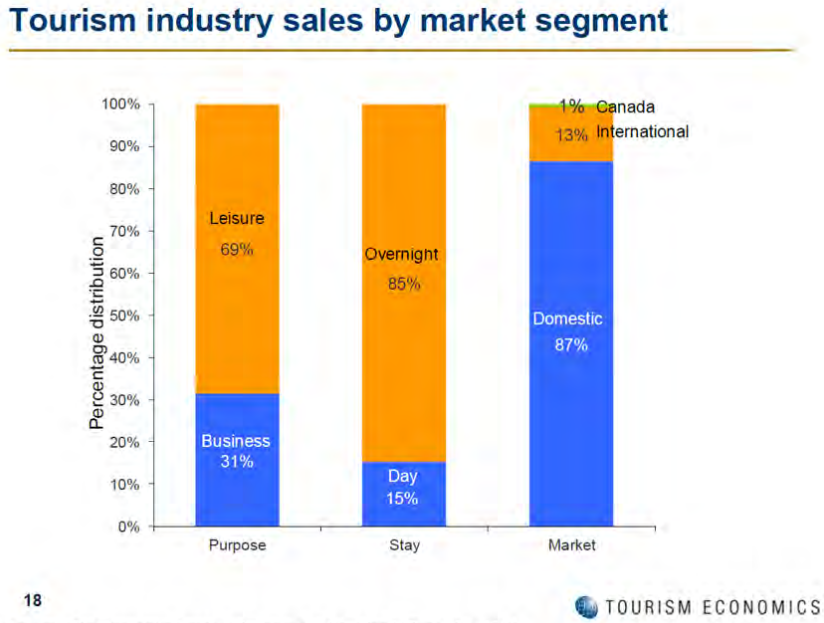
Source: U.S. Census Bureau, OnTheMap Application, http://onthemap.ces.census.gov

Figure 2-4

Tourism

A destination resort, Ocean City is nationally recognized as a clean, safe, and successful community for its residents, vacation homeowners and visitors. More than eight million people visit Ocean City every year. Tourism drives employment in Ocean City, and strongly influences household incomes.

Issues associated with tourism are complex. Visitation has been stable at approximately 8 million per year for the past ten years. Roughly half this figure comes in peak season, June through August, and the other half comes in offseason (April-May, September-October). The objective is to maintain present levels and not lose visitors to competitive locations. A steady transition to more year round activities and events, along with a change in vacation patterns to more frequent weekend visits, can be observed in recent years.



Source: The Economic Impact of Tourism in Maryland, December 2014

Ocean City Tourism Impact

Total Tourism Tax Receipts (millions)					Tourism Sales (millions)	
Year	Federal	State and Local	Hotel	Total	Tourism Industry	Tourism Economy
2013	$91.7	$163.5	$13.27	$255.1	$1,373.2	$1,466.4
2012	$86.8	$154.3	$12.87	$241.1	$1,283.6	$1,381.5
2011	$80.6	$145.3	$12.32	$226.0	$1,188.6	$1,275.6
2010	$73.8	$139.1	$11.59	$212.9	$1,109.5	$1,193.3
2009	$71.26	$152.5	$11.12	$223.8	$1,071.9	$1,171.8

Special Events

The Town government, in conjunction with local businesses and non-profit organizations, has sought to increase off-season visitation with the development of festivals and entertainment and sporting events. The largest events, Sunfest, Winter Festival of Lights, Springfest, Air Show and auto rallies, attract thousands of visitors during the "shoulder" months of the peak tourist season. Ocean City has also maintained a strong identity as a group meeting and conference destination and as a premier golf destination (there are 15 courses in the area); these two markets contribute significantly to visitor attendance in the spring, fall, and winter months.

In addition to the expansion of special event programming, the local economy is growing to include added value tourism activities that expand a beach visit to include: organized sports, nature based exploration, heritage/cultural sites, brewery tours, art instruction, and performing arts. Many activities sponsored by the Town of Ocean City are free to the public and enhance the visitor vacation experience, as well as enrich the lifestyle of year round residents.

Ocean City has joined with others in the region to incorporate Sport Tournaments into the Town's Tourism Strategic Plan. Attracting competitive sport teams to the Eastern Shore will expand the economic impact of this special event type with direct benefits to hotel room occupancy.

Heritage Tourism

Heritage Tourism can have a significant positive impact on economic development through strong planning policies which preserve, maintain and enhance community character defining resources. In April, 2002, the Maryland Heritage Authority officially granted certification status to the Lower Eastern shore Heritage Area, including heritage sites and places in Ocean City, as well as Worcester, Wicomico, and Somerset Counties. This status along with promotion of scenic byways recognizes the unique heritage and heritage tourism destinations within these areas and offers an opportunity for coordinated and enhanced tourism activity.

The *Lower Eastern Shore Heritage Area Management Plan* is hereby incorporated, by reference, in *The Comprehensive Plan for Ocean City*.

The Ocean City Life S~~s~~aving Museum located at the south end of the Boardwalk is a natural center for information about local history and provides several walking tour brochures in the Downtown area. An expansion is planned to improve accessibility, provide additional display and activity areas, and continue to tell the Ocean City story as history is made with each vacation.

The Convention Center

The Roland E. Powell Convention Center is one of the top attractions in Ocean City, generating a significant level of visitation and spending. It is a major employer, a focal point for economic development, and it serves as Maryland's major convention facility on the Eastern Shore.

The original convention center was built in 1970 with 40,000 square feet of exhibit space on two levels along with 7 meeting rooms and site improvements including 1,100 parking spaces. In 1997, 2012 and 2014 the center was expanded and a final phase expansion is planned in the CIP. The OCCC currently offers approximately 60,000 square feet of exhibit space, 19,126 square feet of ballroom space, 23,295 square feet of meeting space, a 1,200 seat Performing Arts Center and 1,320 parking spaces.

- The facility has a footprint of 214,000 square feet and includes approximately 70,000 square feet of meeting space. The largest space is 15,000 square feet and there are 15 smaller meeting rooms.
- It hosted a total of 110 events, including 40 conventions, in 2008.
- These events generated 435,000 visitors to the center.
- The facility has created about 1,900 full-time jobs, and also generates $5 million in sales and local taxes.
- Construction of a new 1,200 seat Performing Arts Center has greatly enhanced the range of events and activities with indirect benefits to support hotel occupancy and provide shoulder season activity for non-resident property owners.

The City and State of Maryland are equal partners with respect to debt service and operating expenses. Under the present arrangement the City pays its share of these costs with a 1 percent tax surcharge on the food and beverage tax. The cost sharing agreement has been extended to allow for phased expansions of the facility. The operational deficit (negative cash flow last year was $1.4 million) is common among convention centers that create benefits by attracting out of town attendees who generate spending on lodging, restaurants, retail, transportation and entertainment. According to the facility manager there are limiting factors on convention business in Ocean City which will be addressed by the planned expansion of a 30,000 square foot/third exhibit hall:

- Size of the facility limits its appeal and some groups that have used it for years are getting larger and may have to meet elsewhere.

- Competition from other major meeting places in the region, notably Virginia Beach and Hampton, is getting more intense. Competitive facilities in both locations are expanding. Moreover, Montgomery County is constructing a small convention center that will siphon off some business that now goes to the beach.

Municipal Airport

Ocean City Municipal Airport is a publicly owned, public use general aviation airport owned by the Town of Ocean City. The airport serves the business, recreational, and flight training needs of the community through the services and employment opportunities provided by numerous successful on-airport businesses. The airport contributes to both the State and Local economy by generating business revenues from all types of aviation-related activities – aircraft operations and fuel sales; cargo and package freight service; goods and services provided to pilots and passengers; and, the rents, leases, and services of on-airport businesses. In turn, these airport-related businesses hire people and, through the salaries paid to those employees, additional spending is generated in the economy. In addition, these on-airport firms also purchase goods and services from local and regional vendors. Ultimately, all of these jobholders pay taxes to State and local governments.

The Maryland Aviation Authority prepares an annual report which shows how business activity at an airport creates economic impacts throughout the economy. Based on the 2015 study, the Ocean City Municipal Airport had the following positive impact on the economy:

BUSINESS REVENUE:	$22,895,000
JOBS:	393
PERSONAL INCOME:	$14,146,000
TAXES:	$1,500,000
LOCAL PURCHASES:	$8,316,000

- Air service has recently expanded with a new charter service. US Airways continues to serve the Salisbury/Ocean City/Wicomico Regional Airport, which is located just 30 miles to the west on Route 50.

Accommodations

The hotel/motel and condominium rental industry is a very large part of the Town's economic picture. Overnight accommodations generate roughly $13.8 million per year for the general fund from a 9 percent tax (4 percent County, 5 percent State). Room occupancy and room rates have been steadily increasing in the past 10 years, using the room tax increase as evidence.

Figure 2-5
Room Tax revenue 1996-2015

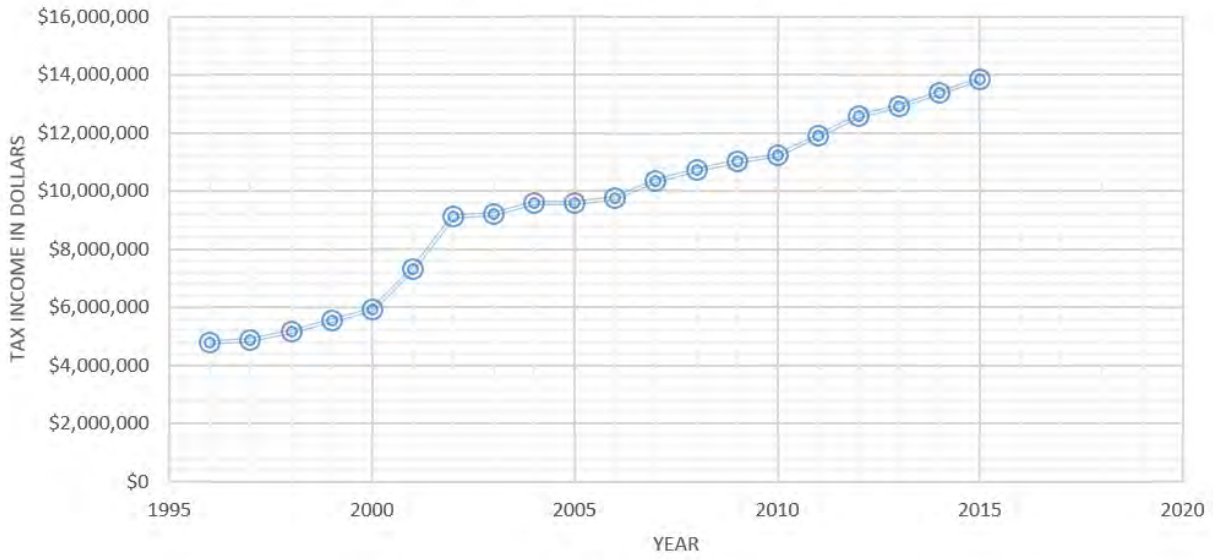


Figure 2-5 shows steady growth in room tax revenue with dramatic growth from 2001 to 2002 which was largely due to an increase in the room tax.

Tourism Metrics are now available on a monthly basis at 'ococean.com' by clicking on the Media tab. This resource has collected and published information about lodging and other statistics since May 2013 which assist in planning for our seasonal visitors. Figure 2-5 illustrates how occupancy rates and room tax receipts has help to evaluate trends for the future.

OCEAN CITY Maryland

Tourism Metrics Report

A monthly recap of Ocean City's travel and tourism trends, monitored by the Department of Tourism.

Data through July '15 except where noted.

WEATHER

July	Avg. High	Avg. Low	Precipitation
2015	84	68	2.06"
2014	82	66	3.43"

Weather Events/Conditions: OC Municipal Airport

TOURISM TAXES

Category	July 2015	July 2014	Change
Room tax	3,815,702	3,756,821	1.56%
Food tax	286,269	281,489	1.7%
Sales tax (Tourism coded)	9,697,685	9,238,112	4.9%
Admission & amusement tax	313,729	295,384	6.2%

LODGING - SMITH TRAVEL RESEARCH

Category	July 2015	July 2014	Change
Occ %	83.7	80.3	4.2%
ADR	233.30	227.17	2.7%
RevPAR	195.20	182.42	7%

REQUESTS FOR TRAVEL INFORMATION

Request Type	July 2015	July 2014	Change
Visitor Guide Requests – ococean.com (FYTD)	2,747	2,030	35.32%
Phone calls – 1-800-OC-OCEAN	4,752	2,427*	95%

*Call accounting program not functioning July 3-8, 2014

TRANSPORTATION

Category	July 2015	July 2014	Change
Bus ridership	622,560	590,235	5.5%
Bus revenue	$741,231	$724,327	2.3%
Inlet parking revenue	$757,891.40	$754,539.10	0.44%

BUS PERMITS ISSUED

FY16 YTD	FY15 YTD	Change
307	232	32%

VISITOR CENTER TRAFFIC

July 2015	July 2014	Change
4,205	5,281	-20%

Figure 2-5

Industry issues continue to include the following:

- The Association has been intensifying its efforts to work with the golf industry, a sector that has declined in recent years.
- West Ocean City Casino at Ocean Downs has been successful. Recent statewide legislation to control gaming had unintended effect on boardwalk amusements and had to be resolved by State Code amendment.
- Trend in Hotel development – expansion of tourism marketing through national flagships
- Short term rental of housing with new online third party rental businesses raises concerns regarding licensing, room tax collection, and neighborhood impacts

Retail, Restaurants, Nightclubs and Amusements

Ocean City's economy depends heavily on retail sales and the activity generated by restaurants, nightclubs and amusements. These industries are both a source of jobs and income based on the Sales and Use taxes as well as food and beverage and amusement taxes they generate. Food and Beverage Tax Revenues to Ocean City have remained strong through the period 2000 through 2015, and have increased by 14 percent over the last 4 years. Typically over 50% of the revenues derived from food and beverage taxes are generated during the summer months.

The Town of Ocean City also accounts for a sizable portion of the Sales and Use taxes generated in Worcester County from sales of Apparel, Furniture and Appliances, Building and Industrial supplies and General Merchandise.

Recent trends toward locally crafted beer has resulted in 3 breweries and 1 distillery operating in Ocean City. A new network of these businesses is supported by Shore Craft Brewery tours and festivals. Bayside restaurants have also expanded on the tradition of indoor and outdoor seating with family friendly entertainment and playgrounds.

Ocean City at Night – Live entertainment and music is provided at a large number of business establishments in Ocean City. This partnership creates an exceptional opportunity for seasonal employment of musicians, and in many cases provides free entertainment to resort visitors.

The Golf Industry

Ocean City continues to compete effectively in the resort golf market. The temperate climate and championship golfing opportunities at more than a dozen highly rated courses all within close proximity to each other, coupled with a myriad of lodging choices, restaurants, golf schools, outfitters and other services have combined to make the community a year-round golf destination.

Studies performed in 1998 indicated that the total economic impact of golf in Ocean City was $112.4 million~~, and estimates indicate it has been steadily growing since that time~~. Of that amount, $66.7 million was spent directly on golf, both at golf courses and off-course on accommodations, food, beverages, and other items. Re-spending of golfer dollars in the local economy produced an additional $22.4 million in indirect and 23.3 million in induced impact. Off-course spending by golfers contributed $61.8 million of economic impact to the local economy. The overall economic multiplier was 1.69: that is to say that 69 cents of every dollar in direct spending was re-spent in the local economy.

~~In addition, a total of 15 operating~~ ~~G~~golf courses in the area were estimated to generate approximately 2,321 full-time jobs in 1998 (source: *Economic Impact of Golf in Ocean City Maryland*, Study Conducted for the Town of Ocean City and Ocean City Golf Getaway, Inc., May, 2000). ~~New golf course construction since that time has generated yet additional jobs.~~ Although this study does not reflect the net loss of several golf courses over the last 19 years, the economic benefits of the golf industry are still significant.

Several golf courses in the Ocean City area can be characterized as golf communities with residential development integrated into overall design of the course. Ocean City area golf communities comprise a total of over $54.2 million in residential real estate generating over 1.1 million in real property taxes annually. Other benefits include aesthetic benefits in the form of expansive views, creation of open space, and wildlife habitat. Eagle's Landing, the Town's municipal course, was the first certified Audubon Cooperative Sanctuary in the State of Maryland. Table 2-7 provides a summary of the economic impact of golf in Ocean City in 1998 when the last study was completed.

Golf tournaments have traditionally provided a significant benefit to the community as a charitable fundraising event. Recent trends were presented in the Maryland Coast Dispatch article (March 31, 2016) which noted a competitive force in third party online sales which may have an impact to the golf course industry in the future.

Table 2-7 Economic Impact of Golf in Ocean City, 1998					
Impact	**Golf Course Revenues**	**Accommodation Spending**	**Food, Beverage and Other Spending**	**TOTAL DOLLARS**	**TOTAL FULL-TIME EMPLOYMENT JOBS**
Direct	$30,240,521	$15,150,137	$21,302,537	$66,693,195	1,417
Indirect	$10,102,668	$5,111,573	$7,234,512	$22,448,753	436
Induced	$10,252,814	$5,387,268	$7,658,996	$23,299,078	468
TOTAL	**$50,596,003.00**	**$25,648,978.00**	**$36,196,045.00**	**$112,441,026.00**	**2,321**
Source: Institute for Governmental Service, Center for Applied Policy Studies, University of Maryland, 2000					

The Sport Fishing Industry

Ocean City's sport fishing industry was borne in the wake of a violent storm that cut an inlet through the island in August, 1933. The inlet linked the ocean with the bay, and the newly created access meant that fishermen no longer had to launch boats through the surf or limit themselves to bay fishing. In 1934, the first white marlin was caught off the coast and Ocean City claimed the title of "White Marlin Capital of the World." Today the White Marlin Open, considered the East Coast's premier fishing tournament, is the centerpiece of the town's sport fishing industry. The Open draws about 400 boats to compete for the largest prize money payouts in tournament sport fishing in the world. Winning boats collect record setting awards with $1.18 million awarded in 2015 for the biggest white marlin. Last summer, the anglers competed for $4 million in prize money, however of the 695 billfish caught during the 2015 event, 687 (99.8%) were released following established conservation practices.

A variety of businesses in Ocean City are heavily dependent on recreational bay and ocean fishing year-round, including boat builders, party and charter boat businesses, bait and tackle retailers, and several marinas.

The Ocean City Inlet and its long term maintenance with the assistance of the US Army Corps of Engineers, the National Park Service, and Worcester County is one of the critical infrastructure elements of the local and regional economy.

Nature based tourism

Opportunities to bring first time visitors to a resort destination are possible through the promotion of nature based tourism that engages people with education, experiences and programmed activities to explore the natural world around the traditional beach and boardwalk attractions. Partnerships with the National Park Service, Maryland Coastal Bays Program,

Maryland State Parks and Worcester County help to expand and sustain tourism activities in a way that can benefit natural resource management and local economy.

Downtown Development

In recent years the City has made the downtown the focus of economic development efforts. The Ocean City Development Corporation was organized as a non-profit charitable organization with the power to sell tax credits and accept tax-deductible contributions. This organization has responsibility for implementing the recommendations of the 1999 Downtown Action Plan. Discussion of this plan, its various components, and status of implementation of projects defined therein is provided in Chapter 8 of this Plan.

Ocean City has a relatively fixed base of existing land uses and developed properties. Economic development in this context has remained focused on strategies which encourage continued investment in property renovation and redevelopment. Mixed use redevelopment of large single ownership parcels will continue to build the tax base and offset any conversion to public ownership for needed infrastructure improvements.

Other Business Issues and Views

The Director of the Chamber of Commerce often expresses the views of the business community in seeking economic development and growth. The key issues for the Chamber include the following:

- There is a need for a more skilled work force. As one sees the tremendous retail growth in west Ocean City, the work force will be the key to healthy economic development. Development of a vocational school in Worcester County offers vocational internships and apprenticeships for the local service based economy needed to support Tourism.

- There is a significant disparity between wages and housing costs, as has happened in so many places around the U.S. and particularly in resort areas. With many families relocating to the area to enjoy the higher quality of life and the regional year-round population grows, housing costs have increased. For most people living in the resort area is out of the question. Teachers, for example, find close-in housing unaffordable.

- The resort is becoming a year-round community. It is a year-round place where residents need all the support and services that they have traditionally had available in larger cities.

- The retail sector has been growing tremendously and its orientation is increasingly to the year-round population. The community needs a wider range of business and

professional services. Chain retailers have begun to recognize the buying power of the population: WalMart and Home Depot have opened new big box stores along the Route 50 gateway corridor to serve Berlin, Ocean Pines and Ocean City.

Future Economic Development/Regional Trends

Worcester County partners with the Town and the Ocean City Development Corporation in economic development matters. The County has continued to expand the commercial business corridor along Route 50/Ocean Gateway. Racetrack Road/Route 589 and Route 611/Stephen Decatur Highway provide additional development corridors serving Ocean Pines and the Assateague Island National Seashore respectively. Capital improvements to water and sewer services generally regulate the pace and location of growth in this area. Chapter 4-Transportation identifies the potential impact of development along the Route 50 corridor and the need for expansion of Route 90 capacity.

Recent private investment in campground properties, and new hotel construction in West Ocean City indicate a possible transition away from complimentary retail land use development to competitive uses which provide tax benefit to Worcester County while demanding services from the Town of Ocean City as day trip visitors travel to enjoy the beach and boardwalk destination. Recognizing the need for cooperative planning and actions, the Town and County have entered into extended discussions regarding tax differential studies and grants to equitably balance tax revenues and budget expenditures.

Broadband connectivity is increasingly important as seasonal visitors create peak demand and social media provides new tools to drive the local economy. Ocean City's 2013 and 2015 awards as one of America's eCities by Google recognizes the strongest online business community in each state.

Google's eCity Awards recognize the strongest online business community in each state. These cities' businesses are using the web to find new customers, connect with existing customers and fuel their local economies.

Offshore Wind Energy is proposed with two wind farm projects approved by the Maryland PSC for renewable energy credits off Maryland's Eastern Shore near Ocean City. US Wind of Baltimore and Skipjack Offshore Energy, a subsidiary of Deepwater Wind, can build a total of 368 megawatts of capacity. US Wind proposes to build 62 turbines between 12 and 15 nautical miles offshore to generate 248 megawatts and is expected to be operational in early 2020. Skipjack proposes to build 15 turbines between 17 and 21 miles offshore to generate 120 megawatts with completion by the end of 2022. Economic benefits to Maryland and surrounding areas are expected to yield more than $1.8 billion on in-state spending, creation of 9,700 new direct and indirect jobs, and contribution of $74 million in state tax revenues over 20 years (Source: MD Public Service Commission press release dated May 11, 2017).

The Ocean City Mayor and City Council support the concept of clean energy including offshore wind, provided it is done in a responsible manner. Specifically this support is contingent on the projects not being visible from the Ocean City shoreline. Calculations indicate that the proposed turbines must be located a minimum of 23 to 26 miles from the shoreline to limit visibility at ground level, and 30 to 33 miles from the shoreline to limit visibility at the elevation of high rise condominium units. This request is consistent with the minimum distance of 27 miles off the coast as approved for Virginia Beach to the south.

Offshore Oil/Natural Gas exploration off the coast of Maryland was opposed by resolution of the Mayor and City Council due to its potential severe impacts on coastal

fisheries and the recreational beaches which sustain the local economy. Delays in licensing at the federal level appear to have extended this concern beyond the scope of this update.

Scenic Railroad excursion trips from Berlin to Snow Hill are working through a feasibility stage with the assistance of the Worcester County Economic Development Director. This destination tourist attraction is one example of a regional approach to marketing unique and complementary recreational activities for area visitors.

A Sports Tournaments Plan is supported by an agreement between Wicomico and Worcester Counties, and Ocean City to establish the Mid-Atlantic Amateur Sports Alliance (MAASA). In July 2015 the USSSA Girls Softball Eastern World Series was hosted over a three week period with almost 400 teams participating. Estimated economic impact to the region was $20 million, with a hotel room night demand of 12,000.

Recommendations

Ocean City is in good fiscal condition, as a result in part, from steady appreciation in real estate values and positive tourism activity. Trends over~~in~~ the past decade ~~that affect this situation include the following~~will be monitored and recommendations modified as follows:

1) Continue to promote tourism as the #1 economic force that supports a level of community benefits and services unique to Maryland's 'family friendly' ocean resort community.

2) Expand special activities and marketing promotions to encourage increased visitation in the shoulder seasons and year round.

~~1)~~3) Monitor t~~T~~ourist visitation ~~has remained steady as~~and modify the ~~result of a concentrated~~ marketing efforts and ~~the~~ actions of all partners in the local economy to maintain and enhance~~. Weather conditions remain the main factor in determining any significant variation in~~ economic activity.

~~2)~~4) Encourage p~~P~~roperty renovations and redevelopment ~~generally have maintained~~to maintain the level of real estate assessment value ~~even through~~following the National Economic Recession period beginning in 2008.

~~3)~~5) Evaluate t~~T~~he trend in new and redeveloped hotel room construction which has responded to market demand for long weekend vacations with over 1,000 rooms recently developed or in the development process. Study complementary activities such as weddings, conferences, group events, etc. that may compete with large sponsored special events.

~~4)~~6) Continue to expand special events at t~~T~~he Convention Center, including the new 1,200 seat performing arts center ~~, is now~~as one of the top attractions in Ocean City, generating a significant level of visitation and spending. Prepare a current fiscal impact study to evaluate the benefits of the PAC and Phase 3 addition to the economy.

~~While conditions are positive, there are important issues and challenges:~~

~~6) Ocean City and Worcester County are increasingly attractive as year-round places to live. This trend is enhancing the retail environment and increasing the need for year round social services.~~

7) Ocean City is increasingly an international place, especially in its seasonal worker population, and there is a growing need for a solution to the problem of housing seasonal workers. ~~The County has identified a site in the County but the workers lack ready transportation and prefer housing in the Town. There are other problems associated with the retention and development of the increasingly foreign work force, including training and legal assistance.~~A coordinated effort with Worcester County is recommended to address mutual transportation and housing needs for the seasonal workforce.

8) The Town has adapted to business and real estate cycles which may affect different sectors of the economy. Development activity should be monitored to identify trends such as the shift ~~has shifted~~ from new condominiums to new hotel rooms in recent years. ~~Lower land values and taxes~~Expansion of retail uses in West Ocean City ~~are attracting some retailing activity away from the Town. Regular~~ and regular turn over in small business ventures on the Boardwalk ~~provides~~ should be studied to identify opportunity for innovation to meet market demand, including healthy food options.

9) ~~There is a need to give visitors more reasons to spend money at attractions, such as~~Continue to encourage new entertainment venues and better quality restaurants so that returning tourists will find something new each year along with favorite destinations.

10) The growth of the retirement population, aged 55-65, is a national trend that creates new challenges in the health care field and the need for projects and programs related to independent and assisted living. ~~As new~~Encourage the development of regional facilities ~~are developed~~ in the centralized areas between Berlin, Ocean Pines, and Ocean City, so that all residents benefit from increased social and medical services.

11) The Ocean City Development Corporation (OCDC), established to lead the downtown redevelopment process, has good support from the Town and the business community and it has made significant progress on its agenda. Support u~~U~~pdates to the work plan

with additional priorities and projects for the Model Block will likely be the focus of the next planning period.

12) The competitive environment related to resort area conference and convention activity is always changing and the Town should continue to reevaluate its spending on marketing and business development. Maintain~~ing~~ current levels of spending on tourism marketing ~~may be necessary~~ in the face of increasing competition from other locations in the Mid-Atlantic region.

13) Continue to partner with Worcester County ~~partners with the Town~~ in its ~~formal~~ regional economic development efforts which benefit Town residents and visitors.

14) ~~The Town and County must~~ P~~p~~reserve, protect and restore the island's and bay's natural assets and water quality to sustain their attractiveness to tourism in a continued partnership with the Maryland Coastal Bays Program.

~~15) Tourism trends are subject to volatility and Ocean City faces economic challenges as it becomes more of a year-round community with an older population and an international work force.~~

15) Storm readiness and public safety are priorities to a strong and resilient local economy. Implement projects and recommendations contained in the adopted Hazard Mitigation Plan.

16) Encourage partnerships to promote expansion of the Ocean City Life Saving Museum in the downtown district.

17) Identify working waterfront areas and review supporting land use policies. Consider designated areas to support commercial and recreational use along public access waterfronts.

~~16)~~18) Adopt clear definitions of 'short term rental' as a distinct land use, with appropriate code modifications to manage adverse impacts on established single family neighborhoods.

CHAPTER 3: Land Use & Community Character

Introduction

The Land Use ~~Plan~~ Chapter should be considered the most important element of this Comprehensive Plan. It establishes the relationship of Ocean City's existing patterns of growth and development to the location, distribution and scale of future development. It builds on the history of growth of Ocean City. It influences the location and needed capacity of public facilities and transportation system improvements. It affects both the quality and character of the overall community. The scale of future development will have an impact on the fiscal and natural resources of the Town.

The Land Use ~~Plan~~ Chapter provides the means to integrate various planning goals and objectives into a comprehensive whole and incorporate public participation as the plan is updated. Ocean City's ~~Land Use Plan~~ Comprehensive Plan and its land use principles are~~is~~ the basis for future changes in zoning and development regulations.

With this update, the established land use pattern which has developed over the years is reaffirmed and the recommendations extended until the next comprehensive plan review. Minor revisions have been proposed to address current issues.

Goal:

To foster a clear pattern of land use which accommodates variety in development type and scale appropriate to distinct neighborhoods or districts within the town, to meet the residential, commercial and cultural needs of the community, and to protect natural resources and open spaces, improve transportation systems, maintain and enhance community facilities, enhance pedestrian connectivity within the Downtown, and to protect the Town's seaside character.

Objectives:

In order to achieve the land use goal, the following objectives are adopted:

3.1 Mixed Use Development - To the extent practical, document and describe a series of land use districts or neighborhoods that serve to guide development and re-development design in a manner that is consistent with the mix of uses and character/scale of development that is currently established in each district.

3.2 Residential - Maintain the integrity of existing residential neighborhoods to promote long term property ownership and quality of life for year round resident populations.

3.3 Residential ~~- Identify single family areas with a high percentage of resident owners who may support the proposed R-1A district with limitations on short term seasonal rental use.~~Encourage sustained investment in residential properties to maintain property value and attractive, safe neighborhoods that are appropriate for the zoning district and surrounding land uses.

3.4 Residential - Protect residential neighborhoods from incompatible traffic and encroachment by commercial activities, except in a planned mixed use context.

3.5 Economic Development - Encourage infill and redevelopment of existing vacant or underutilized sites.

3.6 Economic Development - Maintain opportunities to grow the tourist economy and support a viable diversified economic base, which encourages further investment, diversification, and expansion creating more employment opportunities to meet the needs of Town residents and tourists while enhancing the tax base.

3.7 Commercial - Encourage a full array of commercial services that meet the needs of the Town and its residents and visitors.

3.8 Commercial - Encourage new development and re-development to minimize the impacts of strip commercial development by encouraging clustering of commercial uses and activity at optimal locations.

Study the potential for additional free standing commercial zoning and uses in selected locations on the Oceanside to reduce vehicle trips and encourage pedestrian safety.

3.9 Environment - Minimize the environmental impacts of development and re-development to minimize adverse impacts of pollution on the Coastal Bays and ocean, dunes, and beaches. Promote the positive benefits of nature based tourism.

3.10 Municipal Services - Expand guidelines for development design that reflect the traditional character of those districts where appropriate, notably the Southern portions of the Town. Continue to support the OCDC with emphasis on architectural design review and redevelopment opportunities.

3.11 Municipal Services - Establish more flexible guidelines for development design for distinct districts in northern portions of the Town, (17th street north), that encourage quality in architectural design, and a mix of uses. Guidelines should reflect the existing character of these districts, or contribute to better definition of character where it may be absent and therefore appropriate.

3.12 Municipal Services - Review existing zoning district standards to study the possible benefits and consequences of transitioning away from pyramidal zoning.

3.13 Economic Development - Increase the downtown retail base and cultural opportunities. Enrich the quality of the pedestrian experience, including improved signage, storefront design, wider walkways, and landscaping while maintaining the traditional character of downtown structures.

3.14 Economic Development - Support the continuing improvement to the Boardwalk and the development of inlet and bayside public use areas to increase opportunities for water vistas.

Growth History

Ocean City began in the resort business in 1875 with the opening of the Atlantic Hotel, on the boardwalk south of Somerset Street. Prior to its settlement, the island served as pastureland for mainland farms. The first town limits were at North and South Division Streets.

By 1880 three major hotels, several cottages, the United States lifesaving station, a post office, two general stores, several churches, and a railroad station had been established in Ocean City. A railroad bridge built in 1876 coming into the resort at South Division Street provided a direct line to the mainland, and served as the primary means of transportation to and from the resort community.

In 1890, the Sinepuxent Beach Company purchased all the land available from South 7th Street (now part of Assateague Island) north to 33rd Street and platted the land into lots, blocks and streets. The Towns corporate limits were extended from South 7th Street to North 15th Street in 1898. The 1890's saw the construction of additional hotels, casinos, cottages, a power plant and the advent of the resort's fishing industry with fishing camps located between South 2nd Street and South 7th Street. Pound fishing grew along with tourism as the major community source of income.

An automobile/railroad bridge in 1910 replaced the original and the town's growth continued. The Fenwick Land Company and the Isle of Wight Land Company purchased the land to the Delaware State line and platted blocks and streets in the area that is now referred to as north Ocean City. By 1918 a number of Town Streets were paved and an automobile bridge was constructed from Worcester Street across Sinepuxent Bay to the mainland.

Throughout the years, major fires and storms ravaged portions of town. Most notable are the fires of 1925 and 1929 and the storm of 1933. The two fires destroyed twelve city blocks including portions of the original town. The storm of 1933 destroyed the fishing camps and cut the inlet, reducing the part of Fenwick Island now occupied by Ocean City to an area of about four square miles. The storm also knocked out the railroad bridge resulting in more and more

tourists traveling by car. Coastal Highway was first extended from the resort's northern limits to the Delaware State line as an unpaved 2 lane road in this period.

Downtown Plan after 1933

Growth in 1940s was slowed by the war. The next decade brought the first span of the Chesapeake Bay Bridge (1953) and more growth. Throughout the town's development, fill had been used to create land. The 1960s saw a great expansion in land creation and consequently the loss of wetlands. Up until this point, the plan for expansion of the Town was accomplished in large sections with the creation of a survey and subdivision plat which followed the traditional development pattern of connected streets and small lots.

Modern day Ocean City has grown in stages that are the direct result of the 1968 Comprehensive Plan. This plan was the outcome of the 1962 Storm, after which federal recovery funding was tied to the adoption of a master plan. Harland Bartholomew was hired as the best planning firm in the nation and a plan was put in motion for high rise density of 1 unit per 600 square feet of land (80 units/acre) in part to build an adequate tax base for annexation of Ocean City municipal limits to the Delaware state line. Storm recovery funds were used to put into place the public facilities and infrastructure which continue to support the Town today.

1968 Comprehensive Plan

The first high-rise, Highpoint, was constructed in 1969 along with adoption of the Maryland Property Act which allowed condominium ownership and expanded the real estate market to small individual investors for purchase of a vacation property. The early 1970s brought the completion of the second span of the Bay Bridge, adoption of the first comprehensive zoning map for Ocean City, and the start of a sidewalk program for all public streets.

Two major periods of rapid growth occurred during the last three decades. The first occurred from the late 1960's into the early 1970s and created north Ocean City's "High-Rise Row". The second and more recent between 1981—1985 was largely driven by renewed interest in purchase of second homes in the resort community. This development continued the land use pattern referred to in the 1968 Comprehensive Plan as "natural", i.e., driven by market forces rather than a preconceived plan.

A mixed use development pattern was encouraged by pyramidal zoning which allows multiple land uses in the same district, and market forces which established 'highest and best use' of the land. By 1986, Ocean City had completed comprehensive density reductions which reduced multi-family density by 50%, recognized new residential neighborhoods at lower density, revised permitted density for Hotel/Motel use and adopted the first landscape ordinance.

1986 brought the third great storm, Hurricane Gloria, which had a significant impact on land use in Ocean City by triggering the USACE beach renourishment and primary sand dune system project that provides property protection and flood risk reduction today. This project

included density transfer from land east of the project limit line and the creation of 312 development rights that may be used to increase density up to 25%. The resulting public ownership of the majority of Ocean City's beach is an important legacy for future generations.

1989 Comprehensive Plan

The Comprehensive Plan in 1989 recognized the previous density reductions and continued to direct comprehensive zoning changes in 1993 which addressed large parcel redevelopment through new planned overlay districts, bayside mixed use regulations, existing non-conformity with new parking standards, and building 'height by right' based on size of the parcel. Increased emphasis was placed on applying design guidelines and redevelopment strategies in the downtown area which led to establishing the Ocean City Development Corporation (OCDC) in 2000.

A growth period from 2000 until 2008-09 capped off an extended period of residential condominium construction included the construction several high end condominium buildings which added several hundred units over 10 years.

By 2009 when the current Comprehensive Plan was adopted, the measurements of growth and change were indicating an extended period of stability, and the beginning of a national economic recession. New State laws and guidance required the preparation of two new Plan elements in 2011: Municipal Growth and Water Resources as a means of estimating future needs and demands on resources. In both areas, Ocean City demonstrated adequate capacity to meet current and future needs.

2009 Comprehensive Plan

Today, 95% or more of the land located within Ocean City has been developed. Recent growth has been in the form of redevelopment; new modern structures are replacing older less desirable ones. Redevelopment projects show a net increase in number and average size per housing unit. Coordination of land use policies with Worcester County is more important than ever in order to meet increased needs for regional services: schools, large retail, medical facilities, athletic fields, golf, etc.

Following the national recession in 2008-2012, the next wave of development in Ocean City has been the addition over 1,000 new hotel rooms under construction or in the development process in 2015. Several hotel sites located on the Bayside have created new landmark buildings and raised new land use challenges for guests to safely cross Coastal Highway to reach the beach.

The history of development in Ocean City, together with a present day emphasis being placed on quality of life and community values, has led to a greater interest in preserving components of the Town's character, particularly the Downtown area, and to giving greater consideration to the quality of development and redevelopment that will occur over the next planning period.

Existing Land Use

Existing Land Use is illustrated on Map 3-1at the end of this chapter. The present land use pattern contains a thorough mixing of residential types and substantial commercial strip and center development along Coastal Highway. Industrial development, other than a few locally specific examples, is notably absent. This traditional mixed use development pattern resulted from several factors:

- Ocean City has a large proportion of absentee property owners. The orientation of these owners is both as an investor and as a member of the traditional community.

- In the past, seasonal visitors tended to overlook development aspects which in their home community might be unacceptable. As the year-round residential population became more established, there is increased concern about the quality of life and compatible development in recent years.

- The island's long narrow shape and simple traffic circulation system limited the creation of more traditional distinct single use neighborhoods. The exception are areas along the bayside, zoned R-1 single family residential and several single use commercial centers.

- A strong demand exists for ocean side and bayside seasonal accommodations, and development has occurred to meet that demand. Higher density residential use is directed to the ocean side of Coastal Highway and commercial uses are generally restricted to the bay side.

Now established, Ocean City's land use pattern and variety of neighborhoods will continue into the future. Visitors seek out favorite places to stay, landmark commercial establishments, and new attractions each year. The recently constructed Sunset Island community on the bayside at 67th Street is one example that reimagines the traditional seaside resort experience with a mix of housing options, civic park space, and now a 'mid-town boardwalk' at the adjacent commercial Town Center.

In recent years the ocean side's residential diversity has tended to decrease as single family homes are rebuilt and converted into higher density rental units. Infill and redevelopment has largely involved multifamily structures in condominium forms of ownership. Therefore, the character of the ocean block has become increasingly multifamily with a rise in the number and size of individual units within condominium projects developed in recent years.

There is a great variation in the density of residential development overall. The oceanfront areas range from 20 units per acre to over 80 units per acre in completely developed blocks. In these areas most blocks average from 40 to 70 units per acre.

On the bayside, a few higher density projects dot the waterfront. However, the majority of land is developed at less than ten units to the acre. This is due to extensive use of land committed to commercial uses and the location of a number of single family neighborhoods. Areas developed with Townhouse and manufactured homes approach a density of twenty units per acre.

New hotel construction and mixed use redevelopment on the bayside are creating high density concentrations of visitors and new opportunities to plan for improved east/west pedestrian and transit connections to and from the Oceanside.

Most important to the analysis of existing land use is the fact that less than three (3) percent of land in Ocean City is undeveloped. Thus the potential for new development, other than redevelopment, is limited.

Several trends are causing an increase of interim surface parking lots particularly in the downtown areas. Market demand can encourage property owners to seek reduction of nonconformity in meeting current parking requirements for redevelopment projects by demolition of existing structures, and interim use of vacant lots to meet seasonal peak demand for parking. Both actions tend to cause a temporary reduction in assessed value, and change the traditional architectural character of downtown.

Figure 3-1 illustrates Town of Ocean City land area by land use type (see end of chapter).

Residential Land Uses

Ocean City's residential land uses include mobile homes, rooming houses, motels, hotels, single family residential units, duplexes, townhomes, mid-rise apartments, and high rise condominiums. In several sections of the Plan, hotel/motel rooms are also considered as a residential land use.

Residential development is distributed throughout the town. The lack of a major industrial area or other non-compatible uses affords residential use more locational flexibility. On the high value ocean block, multifamily apartments dominate with hotels, motels, townhouses and less intense residential uses sharing this prime location.

Dramatic changes in building scale are common in the ocean block. "High rise row" (94th St to 118th St) is exclusively a tall building (eight or more stories) area. To the north and south, tall buildings are dispersed in clusters and as individual landmarks along the beach.

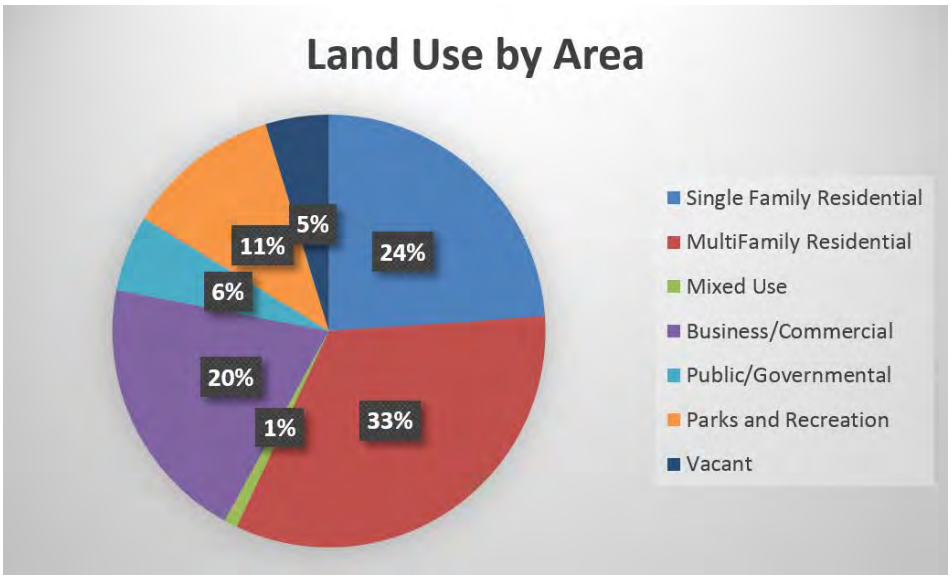
West of Coastal Highway, a variety of residential and commercial development intermingle. Several distinct neighborhoods exist. Much of the land for the bayside neighborhoods was created by filling the bay. This land was then, in most cases, subdivided and sold as lots. Each neighborhood has direct bay front lots, canal frontage, non-waterfront, or a combination of the three. Some vacant lots remain, but many of these subdivisions are built-out.

Several Mobile Home Parks remain a viable option for seasonal home ownership and often meet affordable housing needs in the community. Trends for reinvestment of new manufactured housing and construction of 'small footprint' single family homes within the five existing areas are expected to continue. As older homes are replaced or rebuilt, incremental compliance with current building codes and floodplain ordinance requirements are met.

Another trend currently impacting established residential neighborhoods is an increase in short term vacation rental use. The traditional weekly condominium rental for a stay at the beach has dramatically expanded to include daily and weekend rental agreements largely as a result of a change in consumer demand, and the convenience of internet web applications for reservations. Established single family neighborhoods have experienced adverse impacts of this increased commercial activity.

Seasonal workforce housing shortages have also expanded the impacts of individual room rentals into all housing types. Rental housing is currently regulated by Ocean City through an annual rental license and noise permit process. Transient, short term, shared housing, and workforce rental use often exhibit characteristics that are non-compatible with established residential neighborhoods (noise, late night activity, adequate parking, care of premise). Enforcement of maximum permitted occupancy, property maintenance, and zoning codes for required parking help to mitigate these conflicts.

Residential zoning districts are generally separated by housing type and density. Ocean City has adopted additional districts when necessary to establish unique areas to further control permitted land uses and bulk regulations ~~(R-2A and R-3A). A similar alternative has been proposed for several established single family neighborhoods to control or prohibit short term rental of residential property in the R-1 district by creating an R-1A district.~~ Along with supplemental zoning regulations for specific uses.



Land Use_2016	Acres
Single Family Residential	483.0
Multi-Family Residential	669.4
Mixed Use	19.9
Business/Commercial	405.4
Public/Governmental	114.6
Parks and Recreation	233.3
Vacant	95.7
	2,021.3

Figure 3-2 illustrates the percentage and number of residential housing types

Commercial Land Uses

Several main types of commercial development exist in Ocean City:

- Boardwalk businesses
- Freestanding retail, office and service operations; convenience markets, gas stations, general retail operations, restaurants and bars
- Neighborhood shopping centers
- Community shopping centers (large centers generally over 100,000 square feet with one or more major anchor stores, usually a supermarket)
- Marine – related commercial
- Amusement and recreational uses
- Other new uses include: microbreweries, distilleries

Commercial development occurs predominantly along Coastal Highway. Current land use policy encourages the greatest concentrations to occur on the bayside in order to reserve proximity to the ocean for residential use.

Presently, neighborhood shopping centers of a variety of configurations are distributed about town. Five community shopping centers are concentrated north of the Route 90 Bridge. Two major amusement areas exist, one at the south end of the boardwalk and pier area, and the other at 30th Street on the bayside. Other concentrations of amusements include putt putt golf, theaters and indoor arcades.

All areas of the Town fall within the trade area of a convenience market or grocery store. This indicates that, for the most common needs of vacationers, existing commercial developments adequately serve the market. Land use policies should continue to support retail uses such as grocery, clothing, pharmacy and others which provide the basic daily needs of both permanent and seasonal residents.

Lacking a formal central business district, Ocean City's commercial uses are distributed along Coastal Highway and sized to meet neighborhood needs. Coastal Highway improvements with medians to limit turning movements, synchronized traffic signals and pedestrian crossing controls have improved traffic flow and safety in the corridor. The dispersal of commercial uses does have some advantages in that many residential areas are within walking distance of restaurants and shopping.

In addition to Coastal Highway, a major commercial focal point is the Boardwalk and Downtown area. Commercial and residential developments are interspersed along the Boardwalk between 3rd Street and 12th Street. South of 3rd Street, the Boardwalk is almost completely commercial at the ground level. A variety of restaurants, clothing, souvenirs, amusements and sundries are available. OCDC Main Street goals for Downtown include a possible extension of the Boardwalk commercial uses west to the bayside and additional design standards to the north.

In recent years there has been substantial pressure for condominium residential development that in many cases has prompted redevelopment which has displaced a number of commercial uses including restaurants, office uses and shops. Opportunities to maintain or encourage development of ground level commercial uses and/or to promote mixed use development have been explored to maintain such uses as an important component of the Town's tax base.

Sustaining the distribution of commercial restaurant, retail, and service uses throughout Ocean City and promotion of mixed use developments can reduce dependence on automobile use by residents and visitors, thereby reducing demand on transportation system infrastructure and services over time. Established commercial areas should be considered during a comprehensive zoning review to identify an acceptable transition away from pyramidal zoning to a primary commercial use district.

Big box retail establishments, such as Walmart, Home Depot and Factory Outlets have located in West Ocean City because of available land and lower land values and a greater year round market area. While these establishments do compete with retail businesses in Ocean City, they also provide shopping opportunities to our residents and visitors that are not available in town.

Both development of mixed use projects and redevelopment of commercial properties represent a major opportunity to enhance and improve Ocean City's image, while supporting residents' needs for goods and services. Improved landscaping, signage and lighting as well as design standards for new commercial development and re-development would enhance the specific property as well as the visual character and qualities of the Town as a whole.

The Ocean Boardwalk is likely the Town's most unique man-made asset. Continued consideration of improvements along or adjacent to the boardwalk should evolve to assure a consistent design theme along the boardwalk to enhance its character and qualities to enhance the image of the Town.

A bay front boardwalk along specific reaches of the Town's bayside should be developed together with subsequent street system and walkway improvements that improve and strengthen the vehicular, bicycle and pedestrian connections between the Ocean and Bay front boardwalks. Easements should be obtained from any property being redeveloped for this purpose. Such connecting improvements along selected streets in the downtown area can promote greater bicycle and pedestrian traffic to support a broader mix of commercial uses within the downtown area and provide an important tourism and mobility asset.

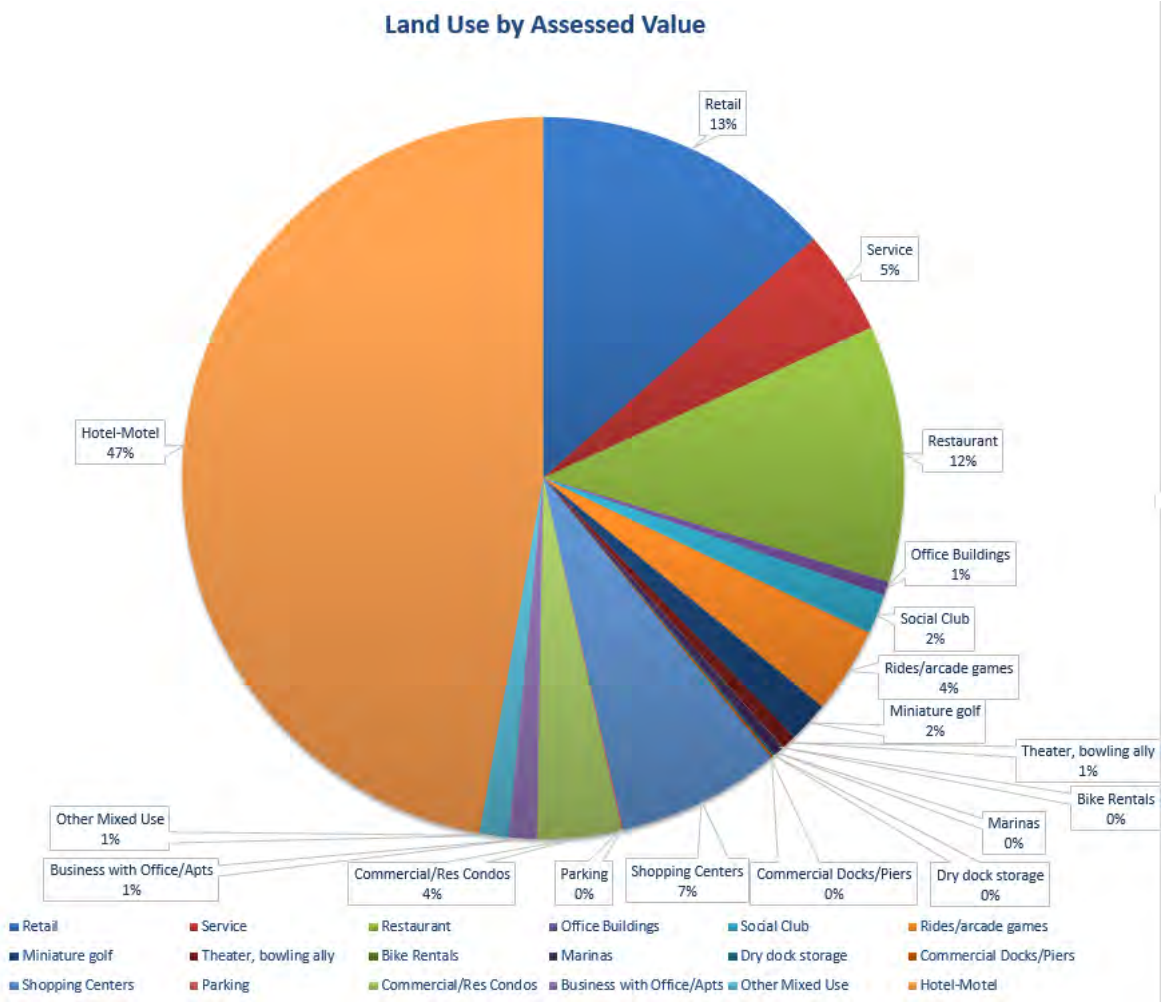


Figure 3-3 illustrates the percentage and number of commercial use types

Parks and Open Space

Maryland's 10 mile long public Atlantic Ocean beach remains the number one attraction and recreational open space for Ocean City. Most public open spaces are carefully managed and programmed for multiple uses and special events. The beach is no exception with room for sunbathing, jogging, shell hunting, fishing, surfing, volleyball, soccer, movies, laser shows, concerts, sand sculpture contests, jeep parades, and skateboard competitions.

Ocean City also operates many parks which provide a wide range of active and passive recreation opportunities. These parks are described in detail in the Community Facilities and Public Services Chapter (Chapter 5). Northside Park is the premier community park facility out of some 15 locations used for recreation purposes, and its 58 acres of land represent the second largest area after the 300+ acre ocean beach.

Expansive views across the beach, ocean, and bays provide Ocean City with the feeling of openness and space. However, land-based open space is rather limited due to the nearly complete development of the town and the modest building setbacks. Design standards should be developed that assure that the development and re-development of sites maintains or creates more landscaped open space to contribute to the "greening" of Ocean City over time.

Although not within the town limits, two major open space resources, Assateague Island and the Isle of Wight are also available to the public. Figure 3-4 illustrates the number of parks and open space areas in Ocean City, including a service area radius from each park of ¼ mile or 5 minute walk. All areas of town enjoy proximity to the Ocean Beach and the park system is linked by a public transit system providing easy access.~~.~~

Recreational Boating

Use of the coastal bays for recreational boating provides a variety of experiences for Ocean City visitors in addition to traditional ocean beach recreation. Many private commercial waterfront businesses offer boat and jet-ski rentals, parasail rides and fishing trips and adventure boat tours. Kayak and paddle board rentals have expanded opportunities for low impact tours of bayside wetlands and coves.

The Town of Ocean City has expanded public water access through the construction of a new bayside boat ramp at 64th Street and providing pedal boat and paddle board rentals at Northside Park. Extensive individual property docks, bulkheads and piers are permitted annually by the Ocean City Board of Port Wardens to allow and encourage marine waterfront use.

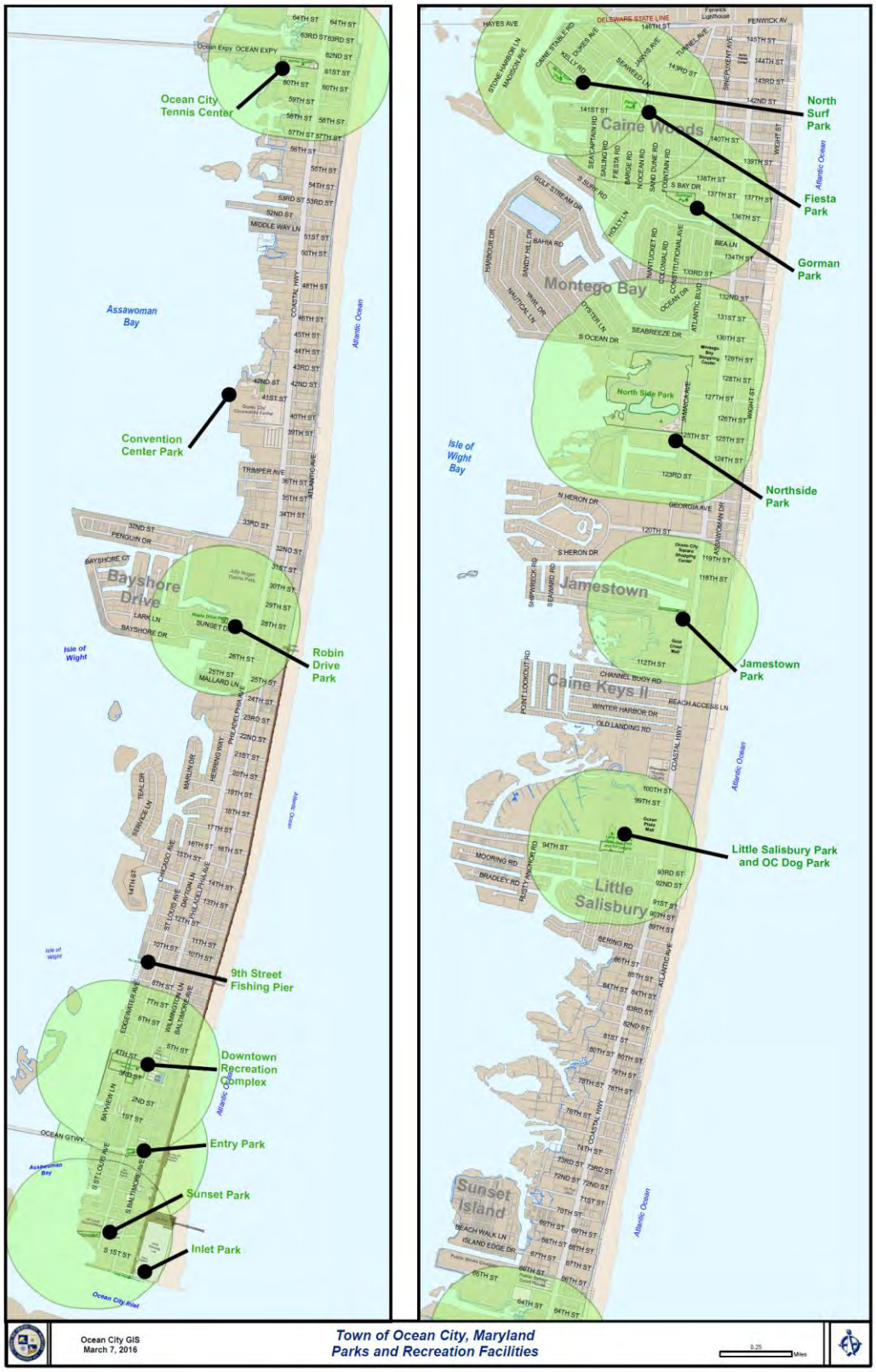


Figure 3-4

Note: Proximity to public parks is evaluated by a ¼ mile radius/5 minute walk service area

Industry, Utilities, and Municipal Services

The last major industrial use in Ocean City, a concrete plant, was closed in 2011 and the property was rezoned in 2015 for mixed use development. Limited manufacturing of unique products for the tourist industry still continues including salt water taffy, caramel corn, and crab cakes that are marketed and shipped from Ocean City. New craft breweries and the Seacrets Distillery have been established by conditional use permit to address any potential industrial use impacts to surrounding properties. Electric transformer stations, telephone switching buildings, and Ocean City public works facilities comprise a range of utility/municipal service uses and area requirements.

Information in Chapters 4 and 5 provides additional detail regarding transportation and community facilities.

Due to Ocean City's resort and residential nature, many industrial or manufacturing uses are inappropriate. Smoke, noise, and major truck traffic would have an adverse effect on year-round and vacationer populations. With limited land area for new development, opportunities for buffering are limited and such industry would be detrimental to surrounding properties. The town's limited street capacity would be adversely impacted by heavy truck traffic.

Investment in municipal facilities and public land ownership has been a slow and steady process to meet the needs of the community. As new properties are converted to public use facilities, the land use map and zoning maps for the Town will be updated. Many of these areas are also designated as critical facilities in the Hazard Mitigation Plan which applies a higher design and development standard for future construction.

Streets

Streets occupy nearly 460 acres, which is about 20 percent of the Town's land area. This relatively large amount is a result of the short blocks of the original subdivisions and the eight lanes of Coastal Highway. Although summer traffic volumes constantly challenge the Town to move both people and goods, land constraints preclude meaningful expansion of the street system, and therefore continually require improvements to transit facilities and redevelopment forms that promote non-motorized transportation options and pedestrian movement.

Safe travel accommodations for bicyclists provides both an economic development and tourism benefit. For new road construction (or resurfacing), adding marked bicycle lanes and 'sharrows' provides a low cost option to creating separate pathways.

Vacant and Redevelopment Land

In general, widely dispersed small parcels make up most of the Town's vacant land. In addition to vacant land, a number of parcels in town are subject to redevelopment. They

generally contain wood frame construction and are not held in condominium ownership, as condominium ownership can make parcel assembly difficult. The greatest concentration of possible redevelopment sites is in the Downtown; north of 33rd Street redevelopment sites are more dispersed.

Several of the larger parcels offer special opportunities. When located near the entrances to the city, their development has aesthetic as well as traffic consequences. Special consideration should be given to these sites so they are developed in harmony with the community's development strategy.

Temporary Land Use (Special Events / OC at Night)

In addition to conventional land uses which are typically more permanent in nature, Ocean City also accommodates temporary uses that often occupy municipal or large private properties. Uses such as Concerts on the Beach, Summer Nights on the Boardwalk, Car Shows and Parades, Sunfest at the Inlet Lot, Lunasea at Seacrets, and the White Marlin Tournament cause large gatherings of the population in specific locations which must be organized and managed. These special events and tourist activities are equally important for land use planning because they are location specific, involve activities which must be coordinated with other compatible land uses, and are a vital part of the local economy.

Ocean City at Night is a unique combination of bright lights, entertainment, boardwalk activities, dining and celebration which could be the subject of its own Comprehensive Plan section. With this Plan update, it is enough to explore the potential land use differences and service demands of the 24 hour resort and to identify potential study topics for the next Comprehensive Plan in 2022.

Summary

Ocean City's development pattern is well established. Consistency in land use management is important to maintain family traditions, property values, and encourage continued investment in maintenance and redevelopment.

The ocean side contains a diverse mix of residential types and intensities. The town's southern end is a conglomerate of residential and commercial uses, many of which are related to the Boardwalk or have a marine orientation. The bayside further north is also a mixture, but in a more defined districting of residential and commercial uses. Development covers 97 percent of developable land, so redevelopment will be a major component of any future development.

Commercial establishments are sufficiently dispersed to provide convenient access for consumable goods. Major commercial centers have clustered in the north end of town. Future commercial growth on the island will come through the expansion and/or more intensive use of existing facilities. Opportunity for construction of larger retail or big box uses will be limited by

available land and land cost on the Island and will likely continue to develop in West Ocean City over time.

Substantial pressure for condominium residential development has, in some cases, prompted redevelopment which has displaced commercial uses including restaurants, office uses and shops. Evaluation of opportunities to maintain or encourage re-development of commercial uses ~~and/or to promote mixed use development~~with appropriate transitions and buffers to existing residential neighborhoods should be explored to maintain such uses as an important component of the Town's tax base, and to assure they continue to meet residents' needs for goods and services.

The balance of commercial and residential uses through new mixed use development not only serves the resident's needs, but also helps to maintain a compact and walkable urban design that is consistent with reducing automobile use and building a community character.

Commercial-marine uses require bayside access, but some of these sites have been developed in other uses. Zoning should continue to favor these working waterfront activities and ensure continued water access as they support the identity of Ocean City as the White Marlin Capital of the World and provide a vital service to boating, fishing, and tourism interests.

Traditional Industrial/Manufacturing land uses are limited in number and may not be compatible with surrounding land uses. ~~scope. An increase would be detrimental to the town's resort character.~~

Existing land use policies help to maintain the course set by previous Comprehensive Plans, with minor changes in direction to enhance value and meet new challenges. Coordination of current objectives with economic development can strengthen the 'brand' or 'sense of place' of the community.

Growth and change occurring outside of the Town boundary may require changes in the future land use plan as well as an active participation with West Ocean City, Worcester County, State and Federal land management programs.

FUTURE LAND USE PLAN

Future development, as in the past will be dominated by resort accommodations and services. The demand for land for future development is affected by several factors including the national and regional economies, financing capabilities, the supply of developable land, and the attractiveness of Ocean City as an investment opportunity. A proven approach which continues valued traditions and the established land use pattern, while encouraging incremental redevelopment that~~o~~ presents new experiences each year is recommended.

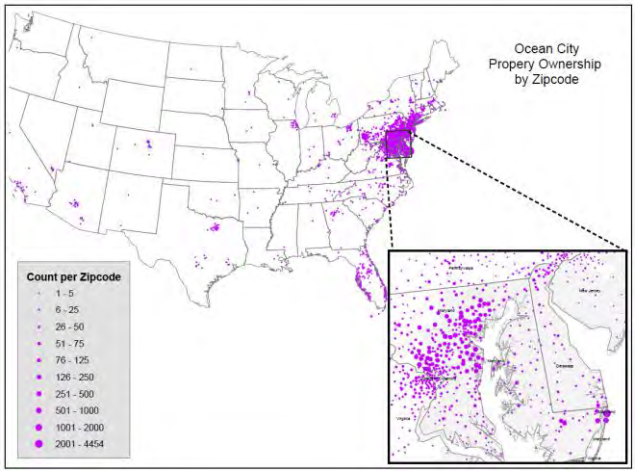


Figure 3-5 Property Owner Zip Code Map

As discussed earlier, the majority of Ocean City's visitors and property owners reside in the Washington—Baltimore regions and south-Central Pennsylvania. Growth and income levels in those areas have traditionally been the primary determinants of growth in Ocean City. Growth in the number of households may continue to be greater than the rate of population growth as average household size continues to decrease. In the past, this has encouraged an even higher demand for accommodations.

Looking to the past for indications of future trends, land use plans should also consider that:

- Families who first visit by day trip, will likely make extended stays in the future;
- Families who vacation in Ocean City are likely to begin a tradition that their children will want to continue when they grow up;
- Many small business owners in Ocean City have become property owners, full time residents and community leaders within one generation, and pass on the legacy to the next generation;
- Special events introduce new visitors to Ocean City and quickly become an annual tradition that is maintained through~~by~~ public/private partnerships;
- The natural environment surrounding Ocean City is resilient, and with proper management it can withstand challenging weather conditions;
- Elements of municipal infrastructure are adequately sized for current land use with limited incremental growth, and may have reached a sustainable balance; and
- Certain streets, blocks, neighborhoods or districts will have unique characteristics which should be considered when redevelopment, infill or change of use is evaluated for compatibility with surrounding land uses.

Based on these indicators, Ocean City should plan for a more international and diverse population, a 'next generation' that values old traditions and seeks to make new ones, a resilient and adaptable economy, a strong local government, and a built environment that sustains many uses and functions over time.

As developable sites in Ocean City continue to diminish, nearby mainland unincorporated sites are coming under more intensive development pressures. Expansion of sewer and water service in West Ocean City will cause substantial new development to occur. Incremental growth on buildable lots in nearby Berlin and Ocean Pines will continue and substantial acreage is slated

for future development in Sussex County, DE. The Comprehensive Plan for Worcester County intends to limit growth in the Berlin and Showell areas to 9,114 people over the planning period. The Sussex County and Fenwick Island Delaware Comprehensive Plans are currently under review in 2016.

Projected commercial development in the Route 50 corridor and a potential regional sports complex will have an undetermined impact on Ocean City's local economy and accessibility.

Mainland development will place many demands on Ocean City's facilities and services. Police protection, sanitation, water and sewer service and public transportation all must be available for nonresident visitors and day trip visitors. The costs of providing these services should be borne by all users.

The land use plan recognizes Ocean City's existing development pattern which is well established since 97 percent of the buildable land is now developed. The opportunities for major change are limited based on undeveloped land area. Zoning districts are generally consistent with the planned land use, however the characteristics of 'pyramidal zoning' which allows a range of residential densities and commercial uses by-right, are still subject to non-compatible changes of land use in response to market forces and new property investment strategies.

In general, major changes in permitted land uses and densities are not recommended by the plan. Revisions to zoning regulations necessary to implement updated priorities of the Comprehensive Plan should be phased in over time to avoid unreasonable financial burdens to existing property owners. When feasible, the following concepts should guide future development.

Residential

For the most part, the highest density residential uses should be located on the ocean block for two reasons:

- ✓ Vacationers desire the convenience to the beach.
- ✓ Major bayside development often produces substantial traffic and parking demands on the oceanfront.

New residential development on the bayside should be of moderate to low density and building height. Again, this recognizes bayside dwellers' use of automobiles to reach the beach. Once there, an on-street parking space is needed. Lower density on the bayside will help reduce the ultimate number of pedestrians who must cross Coastal Highway. In addition to the traffic impacts, more moderate densities, reduced height, and some careful project design will help preserve bayside vistas.

The plan recommends limited higher density and taller buildings (maximum of eight stories) on larger bayside parcels through the establishment of special, carefully crafted regulations. The plan also recommends that only parcels greater than 5 acres on the bayside may apply for the Planned Overlay designation. Where existing zoning districts allow for hotel use on the bayside, special consideration should be given to encouraging private shuttle service to the beach along east west cross streets, and providing enhanced pedestrian access and crossings at key signalized intersections with Coastal Highway.

The Plan proposes the provision of additional public bayside access. Such access points would be public mini-parks, piers, and docks in locations with adequate facilities and where residential neighborhoods are protected from adverse impacts. Public and private marinas would be desirable.

Established residential neighborhoods on the bayside, and areas zoned R-1 single family provide for a different quality of life and retreat from the noise and activity along Coastal Highway and the Ocean blocks. Protecting this lower density housing type from non-compatible commercial impacts is beneficial and necessary to promote year round residency and long term rental housing.

Additional control over short term residential rental ~~use~~ and workforce housing use should be considered in established single family residential neighborhoods ~~and R-1 zoning districts~~ due to its non-compatible commercial use activities and impacts. Improved code definitions for long, short and transient term rental housing, modifications to the rental license program, and ~~the adoption of an optional R-1A zoning district~~supplemental zoning regulations are solutions that require further consideration.

Commercial

The Plan encourages the retention of existing commercial areas. Both regulations and incentives should be designed to maintain commercial uses that have been threatened by conversion to condominium development. Future needs for commercial services will be met through more intensive use of existing shops, redevelopment of existing commercial uses and off-island centers.

As noted earlier, virtually the entire island is within convenient distance of an existing food or convenience store. Mixed-use development or redevelopment forms that contain some component of commercial use along with residential uses can increase the diversity of commercial uses in the Town, support their broader distribution throughout the community, reinforce the scale and character of structures within specific neighborhoods, and minimize demand for automobile use to preserve transportation system capacity. Small, neighborhood serving commercial uses should be permitted to operate in selected locations on both sides of Coastal Highway to better serve the residential population in all areas.

Industrial / Office / Manufacturing

The plan recommends limiting industrial and manufacturing uses. For the most part, moderate and heavy industrial uses, and their by-products, are incompatible with the Town's resort nature and have traditionally located on the mainland. Ample, more suitable, land exists in Worcester County for this purpose. Light food processing and craft industries are provided for in the commercial areas. These uses have located in town for convenience and are, in the case of craft manufacturing, more of a commercial than industrial character.

Although not an industrial use, the Ocean City Convention Center is a key component to support and promotion of tourism as the essential industry of the community. Opportunities to expand this facility should be supported to assure it can function over time in a manner that continues to support growth of tourism as the major industry of the community.

Office use is an important component of the commercial zoning districts and is encouraged where it supports other complimentary business and residential use.

Marinas, boat repair, and fueling are suitable in locations with deep water access and working waterfronts. Close proximity to the inlet is desirable. Designated areas will~~ould~~ incorporate marine—related retailing and services and meet the purpose and intent of State Code Section 66B 3-05(a)(7) that requires the Planning Commission to identify areas on tidal waters suitable for loading, unloading and processing finfish and shellfish as well as docking and mooring for commercial fishing boats and vessels. These areas are meant to facilitate commercial and recreational fishing by assuring reasonable access to the waterways of the State by commercial watermen.

New impacts to Ocean City may need to be addressed in the future as 'big utility' plans are proposed with offshore wind energy and offshore oil/natural gas exploration. Preliminary studies have indicated that new coastal electric power networks will be required to support wind energy generation with connections to the existing power grid. Construction activities and support facilities may be proposed in existing coastal communities.

Downtown

The Downtown area (south of 15th Street) retains much of Ocean City's early character. A mixture of hotels, cottages, rooming houses, apartments, commercial uses, restaurants, and entertainment attractions combine to make the area an exciting part of town. The buildings share a fairly uniform scale and architecture that serves as a model for complementary design details in new construction.

The plan recommends continued hotel development along the Boardwalk and around the inlet to South Division Street. This would locate development in a prime destination area. Interior blocks should remain at moderate residential density and scale, and marine uses and waterfront restaurants should continue to be encouraged in the lower bayside area. Protection of the seaside

cottage character of development and management of the scale and bulk of structures is a major consideration in the downtown area.

The OCDC has successfully administered architectural design guidelines and a façade improvement grant program in the Upper and Lower Downtown Overlay Districts extending from the Inlet to 17th Street. Extension of this program north to 33rd Street is proposed along with the designated Maryland Sustainable Communities area.

Interim use of vacant land in the downtown area for paid parking lots is expected to continue in the near term as private property owners, OCDC and the Town of Ocean City all meet the prime destination demand of day trip visitors and special event participants. The future land use plan for downtown revitalization is described in more detail in Chapter 8.

Master Planned Areas

A number of key parcels with unique development opportunities should be given special consideration. Designating these areas for planned development would be appropriate to ensure their proper development. Generally, these properties are large vacant or redevelopment parcels held in single ownership. Mixed use developments integrating special attractions would be desirable. Combining lots is a viable way to create larger building lots.

As a result of the Comprehensive Plan update, neighborhoods or districts may be identified which complete a small area plan process to explore potential redevelopment concepts in greater detail. Participation by area stakeholders to accomplish a mutually beneficial development strategy would be necessary.

Conservation and Protection of Sensitive Areas

The plan calls for conservation zoning of the beach dune systems and remaining bayside wetlands. These areas, while generally designated on the future land use map, must be field verified to locate the exact conservation zone boundary. The beach must be preserved for its recreational and flood protection benefits and wildlife habitat. Wetlands are necessary to preserve the finfish and shellfish habitat so important to sport and commercial fishing. Wetlands are also a key habitat for waterfowl.

Chapter 7 includes a more in-depth discussion of Sensitive Areas and underscores the importance of the Town's ongoing participation in the Coastal Bays Program in future years as a means to garner support for resource conservation and protection measures. The regulation of conservation and sensitive areas should continue to follow State and Federal regulations where applicable.

Ocean City will advocate for active natural system management and partner with the USACE and Maryland DNR to complete projects for beach renourishment, inlet dredging, and sediment management/sand bypass to Assateague Island. Ocean City

will partner with the Maryland Coastal Bays Program and Worcester County to protect coastal bays water quality and provide shared recreational use of the natural resources.

Temporary Land Use (Special Events / OC at Night)

Temporary uses such as special events, or large gathering areas such as the downtown Boardwalk, have not traditionally been mapped or identified by Plan goals, strategies and objectives. In preparation for the next comprehensive plan update, this land use type is highlighted with recommendations to collect data and formulate land use policies which assist in managing temporary uses and the areas where they take place.

Future Land Use Plan Map

The Future Land Use Plan is depicted graphically at the end of this chapter on Map 3-2. For the purpose of this Plan update, the 2006 adopted Future Land Use Plan will remain in effect to promote consistency in land use planning decisions. Where there is a difference in land use category between existing and future land uses, Map 3-2 will correspond with the Map 3-1 Existing Land Use Plan as follows:

SINGLE FAMILY	Single Family, Mobile Home, Townhouse
MULTI-FAMILY	Low Density, Medium Density, Moderate Density, High Density, Hotel
MIXED USE	Mixed Use, Amusement Mixed Use, Overlay Districts
BUSINESS / COMMERCIAL	Boardwalk, Bayside Marine, Local Commercial, Shopping Center
PUBLIC/GOVERNMENTAL	Civic, Municipal, Parks, Utilities, Transportation
OTHER	Non-Buildable (Beach and Bayside Wetlands), Street Right-of-way, Temporary Uses (not mapped)

Residential Land Use Designations

- Single Family — Includes single family detached, and areas of existing mobile home parks; uses and densities established by the R1 and MH zoning districts*; building heights of one to three stories; yard requirements providing landscaped open spaces particularly along major roadways.

- Low Density Multifamily — Includes areas of mixed residential types; uses and densities established by the R2-A zoning district*, building heights of five stories or less; yard requirements providing landscaped open spaces.

- Medium Density Multifamily - Includes a variety of single family, duplexes, townhouses,

motels/hotels, and multifamily residential types; uses and densities established by the R2 zoning district*; building heights of five or less stories; landscaped open space used to break long expanses of buildings; bayside marina facilities would be encouraged.

- Moderate Density Multifamily — Includes areas of generally mid and low rise construction appropriate for moderate levels of density; the areas of this designation are either ocean block areas east of substantial bayside development or serve as an intervening area between the ocean block and Coastal Highway; uses and densities established by the R3-A zoning district*; building height of five or less stories.

- High Density Multifamily — Includes areas of generally mid to high rise construction appropriate for maximum levels of density; the areas of this designation are ocean block areas; uses and densities established by the R3 zoning district*; building height up to 12 stories based on lot size, setback, parking and other criteria.

- Hotel/Motel — Includes residential areas zoned R2 or higher, usually including or adjacent to local and shopping center districts developed with mixed commercial and residential uses at relatively high densities. These existing use, density, and height characteristics are encouraged to continue with adequate provision for safe pedestrian access to recreational amenities and the beach.

Business/Commercial Land Use Designations

- Boardwalk — Includes the area south of 12th Street fronting on the Boardwalk consisting mainly of retail and amusement uses whose clientele is almost exclusively pedestrians. A uniform commercial frontage (no interior side yards) on the first floor should be encouraged to eliminate small, dark vacant spaces. Residential uses and hotel development are appropriate with uses and density established by the B1 and BC2 zoning districts.

- Bayside Marine — Includes locations most suitable for marinas and marine—support facilities. Marinas, minor boat repair, and service along with related commercial activities are encouraged. Uses not related to deep water should be permitted only as part of a mixed use development with marine emphasis. Building height should be five or less stories and residential development should be integrated into the neighborhood context.

- Local Commercial — Includes individual businesses and neighborhood shopping centers offering services and retail goods which conveniently meet the daily needs of residents and vacationers. Uses and densities established by the LC-1 zoning district. Mixed commercial and residential development should be integrated into the neighborhood context.

- Shopping Center — Includes major existing community-scale shopping center. Such areas have traffic concentration impacts and should be located with sufficient buffers from residential areas. Uses and densities established by the SC-1 zoning district. New

community shopping centers are not encouraged.

Mixed Use/Overlay Districts

- Downtown Mixed Use / Marine — Includes the area of the Downtown which has developed with a mix of commercial, boardwalk, residential and bayside water orientation uses. This area's existing character contains a variety of uses of relatively high intensity and primarily pedestrian access. This character is encouraged to continue and redevelop under the mixed use 'model block' concept. Uses and densities established by the DMX, DM, DR and I-1 zoning district, and building height of five stories.

- Overlay Districts - Three overlay districts have been identified to address special needs and add flexibility to the zoning regulations. Each overlay district has its own unique standards contained in the Zoning Ordinance. While the locations of several overlay districts are shown on the Future Land Use Plan, other properties will be eligible to apply for an overlay designation.

  The function of an overlay district is an offering of certain incentives to developers of unique properties in exchange for the recognition of public needs in the development of those properties. Incentives could be in the form of increased density, increased height, or parking bonuses. For example, it is envisioned that a "planned overlay" on a property whose underlying zoning would permit medium density residential development would entitle that property to increase its density to that of the General Residential District in exchange for concessions such as increased landscaping, a design review process, or other items of public benefit.

- Amusement — This overlay designation implements the policy of encouraging existing amusement parks to continue operation and provide the flexibility necessary for their efficient evolution in response to changing market conditions. Amusement areas other than those identified on the land use plan may apply for this designation. Standards for buffering of residential development and protecting residential neighborhoods from noise and glare are part of the review process. Consideration of traffic and compatibility with existing development are also be part of the review process for new amusement areas.

- Planned — This overlay district applies to designated areas which present special development opportunities and are important to the orderly development of Ocean City. Special development review procedures are established to add design flexibility and increase public input into site and architectural design. Sites other than those identified on the land use plan could apply for the Planned Overlay designation.

- Commercial Marine — The Commercial Marine areas will be overlay districts using incentive zoning to encourage the development of new public marinas or expansion of

existing ones. Incentives could involve density, height or parking bonuses. Standards will be developed to define qualifications for this overlay and the incentives to be given. A ratio should exist between the size of the marina provided and the incentives. Appropriate sites could apply for Commercial Marine designation.

Public/Governmental

- Public Buildings/Parks — Both existing and future proposed public buildings, municipal facilities and parks are designed and maintained to provide a positive image of the Town and set an example for private property owners. The city will plan, construct and maintain adequate public facilities to meet the needs of community residents and visitors.

- Pier — The amusement and fishing pier which is located east of the Boardwalk at Wicomico Street is identified on the Future Land Use Plan. Its use and- operation is regulated by the "Pier Franchise" (Chapter Al12 of the Code of the Town of Ocean City) which supersedes any conflicting ordinances, including the Zoning Ordinance.

Other Uses

- Open Space/Sensitive Areas — Ocean beach and bayside wetland areas are identified which should be preserved and managed for their recreational and ecological benefits to the community. These areas act as buffers protecting property from natural hazards and are critical to the tourism industry and the sportfishing industry.

(Pyramidal zoning extends to higher districts as noted with additional uses and permitted densities.)*

Summary

Ocean City faces important future challenges. The economy, even more than in the past, will rely on the tourism resort emphasis as its economic generator. In the past, land development shared this role to some extent. As the Town stabilizes at build-out levels, encouraging continued re-investment in renovating older structures and re-development's role in expanding the tax base will be more important than ever.

Ocean City is also working to expand year-round job opportunities and cultural activities that will help to retain or expand the resident population. Recommendations in this chapter seek to balance the need for protecting established neighborhoods, successful business districts and favorite landmarks with the goal of redevelopment to provide continued investment and new recreational opportunities for our seasonal visitors.

Based on an extended period of strong but stable demographic and economic performance over the last 10 years, along with strategic investments in municipal infrastructure and tourism marketing, only minor changes to the land use policies are proposed with this update.

Recommendations

The following is a summary of the future land use plan's major proposals and projects. Featured are those items of significance or those not addressed elsewhere in the Comprehensive Plan.

1) Future development should be monitored for its impact on Ocean City's quality of life. Specifically, changes in congestion levels (traffic, overcrowding, transit, etc.) and vacationers' and residents' attitudes towards the resort should be monitored. Future adjustments to land use regulation may be required.

2) Land use implementation measures (zoning, subdivision regulations and capital improvements programming) should be revised to reflect the proposals of this plan. Flexible zoning techniques regulating the intensity of development should be instituted when appropriate.

3) Future development should be directed to create a quality image for Ocean City. As vacationers' expectations increase, Ocean City will continue to encourage compatible redevelopment, opportunities for new experiences along with celebration of traditional landmarks and activities.

4) Nonconforming uses, when redeveloped, should be required to reduce their level of nonconformity. Modified standards for compliance with existing codes may be appropriate. New code requirements for determining a change of use and applicability of current design criteria are needed.
5) Large parcel developments should be encouraged to use planned development or clustering techniques to promote design flexibility, gain open space and retain natural features. Planned developments should be located on substantial parcels and contain a mix of residential types along with supporting commercial development and marinas when appropriate.

6) Tall buildings should have special minimum lot sizes and additional landscaped setbacks to prevent overcrowding of the land. Buildings above five stories should be designed and located on their parcel so that their shadow does not exceed that of a five story building. This will prevent excessive shading of neighboring buildings and the beach. Additional open space and landscaping should be provided.

7) Wetlands and the beach should be designated as sensitive conservation areas to be preserved. The beach should be replenished and maintained to provide flood protection and recreational benefits. Public ownership of the beach and wetlands is desirable.

8) Hotel/motel needs should be monitored to evaluate current market conditions as well as current room inventory and at what point a reexamination of the density requirements

would be appropriate. Experience indicates the density differential for hotels has stimulated their development. Enforcement of the hotel non-conversion requirements should be rigorous. This is especially important with the increasing popularity of suite hotels and the possibility of converting them to "lock out" units with insufficient parking.

9) A design review process should be established to ensure compatibility of new and redevelopment projects. Advisory design guidelines should be incorporated into site plan and building permit reviews reflecting the desired character of each section or district within the Town. An incentive program may be required to encourage participation. As a resort, the town's appearance has a major impact on its economic mainstay, tourism. For this reason it is in the community's interest to oversee the visual quality of development. (See Appendices D and E)

10) In concert with the design guidelines, a town wide beautification plan encouraging the use of native plants, should be prepared. This staged effort would identify priorities, costs, and an implementation plan. The purpose of this plan would be to unify and coordinate beautification efforts as well as program them.

11) The bayside boardwalk should be extended northward to the Chicago Avenue Park and be connected to the oceanside boardwalk in the 4th Street area.

12) The ocean boardwalk should incorporate sitting areas and gazebos for the added comfort of our visitors. The special boardwalk setback north of Third Street should not be violated, unless, as a part of a planned overlay district, a reduced setback from the Boardwalk facilitates an improved development project. The special boardwalk setback should be enhanced with landscaping and not covered with concrete or outdoor displays.

13) Setbacks should be enforced on water frontage to improve the aesthetics of waterfront areas, prevent buildings from interfering with bulkhead replacement, provide protection from flood damage, and enhance water quality improvement opportunities.

14) Existing single family neighborhoods should be protected from development influences, and changing short term residential rental techniques that could degrade their quality of life.

15) Regulations should be developed which control the amount of land covered by structures and impervious surfaces. A greater area should be landscaped.

16) The zoning ordinance should be revised to promote mixed use development of larger parcels within planned overlay districts. The current pyramidal framework permits conversion of commercial uses in areas zoned commercial to condominium residential development, and is threatening to limit the mix and range of commercial uses needed to support neighborhoods in Ocean City.

Revisions to the ordinance should limit first floor uses in commercial districts to those that are commercial but may permit residential development at appropriate densities above office or retail uses. Parking standards for residential uses should meet minimum requirements to encourage visitors to 'park where you stay and then ride the bus'.

17) Standards should be established for public amenities to be provided as part of any larger mixed-use development or re-development project. This may include requiring each project to provide a minimum of one of the following:

- public art
- clock tower
- outdoor seating or outdoor furniture
- courtyard or plaza
- water feature/fountain/or sculpture

18) Standards should be established for larger structures to incorporate wall plane projections, changes in roof configuration, building modulation and fenestration that complement the established proportions and mass of adjacent structures and avoid featureless massing and design.

19) Modify definitions and criteria for Accessory Uses to limit multiple primary uses on individual lots/parcels.

20) Propose new standards for Employee/Workforce Housing including minimum living and dining space for dormitory housing, on site management, design guidelines

21) Develop guidelines or code requirements for transition of non-compatible land use along property lines: commercial properties (LC-1 adjacent to Residential)

~~18)~~22) Residentially zoned areas in the interior of the Upper Downtown area (generally 3rd Street to 17th Street between Baltimore Avenue and St. Louis Avenue) should be developed at a medium or low density with height limited to three stories.

~~19)~~23) Pockets of Local Commercial land uses should be evaluated by conditional use permit or zoning map amendment in appropriate locations, based on adopted performance and separation criteria, on the Oceanside of Coastal Highway and Philadelphia Avenue. The preparation of a small area land use plan is recommended prior to any significant land use change.

~~20)~~24) Integration of land use policies with other long range planning documents such as the Town Strategic Plan, Hazard Mitigation Plan, Tourism Master Plan, Capital Improvement Plan, and plans from allied agencies.

~~21)~~25) Data collection and study of regional information sources regarding best practices for climate adaptation and community resilience. Monitor and analyze the frequency and duration of high tides and local flooding based on the Ocean City Inlet tide gauge data.

~~22)~~26) Characterize Special Event schedules as a temporary land use in the next Comprehensive Plan update in order to evaluate and plan for the multiple uses of public spaces, and the entire Town as a venue for event-specific permitted uses.

27) Review and consider adoption of additional rental housing enforcement tools which clarify but do not change the basic structure of the R-1, MH and R2-A Districts:

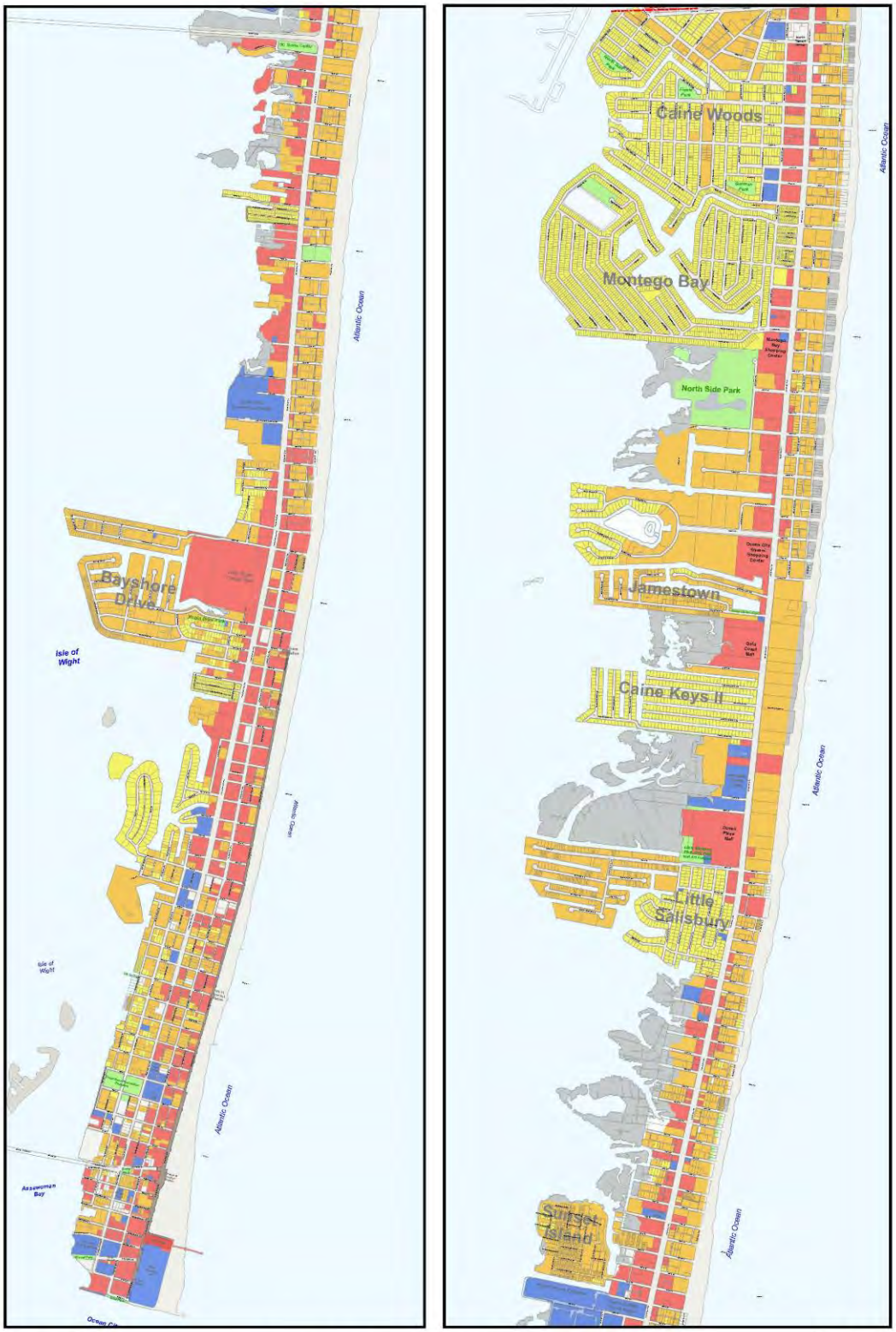
- Definition of Short Term Rental (Similar to 'Family' definition)
  - In the R-1, MH and R2-A permitted short term rental defined as less than 4 months and one day, rental periods of less than one month prohibited
  - In all other applicable zoning districts permitted short term rental defined as less than 4 months and one day
- Definition of Transient Dwelling
- Definition of Dormitory and/or Workforce Housing
- Modify other Codes and Regulations to coordinate with Zoning Ordinance definitions and supplemental regulations.

~~Summary~~

~~Ocean City faces important future challenges. The economy, even more than in the past, will rely on the tourism resort emphasis as its economic generator. In the past, land development shared this role to some extent. As the Town stabilizes at build-out levels, encouraging continued re-investment in renovating older structures and re-development's role in expanding the tax base will be more important than ever.~~

~~Ocean City is also working to expand year-round job opportunities and cultural activities that will help to retain or expand the resident population. Recommendations in this chapter seek to balance the need for protecting established neighborhoods, successful business districts and favorite landmarks with the goal of redevelopment to provide continued investment and new recreational opportunities for our seasonal visitors.~~

~~Based on an extended period of strong but stable demographic and economic performance over the last 10 years, along with strategic investments in municipal infrastructure and tourism marketing, no significant changes to the land use policies are proposed with this update.~~



Map 3-1: Town of Ocean City, Maryland - Existing Land Use

Single Family | MultiFamily | Mixed Use | Business/Commercial | Public/Governmental | Parks | Vacant

August 17, 2017

Map 3-2
Town of Ocean City
Future Land Use

CHAPTER 4: Transportation

Ocean City's transportation system has evolved over many years into a true multi-modal system. The transportation system is still dominated by the automobile. Automobile movement via highways and streets will continue to have capacity limits, will be seasonally stressed, and congestion will continue to be evident in future years. Given the linear form of the community and its condition as largely developed, opportunities to construct or widen existing highways and streets to accommodate vehicular traffic and build additional parking lots to store vehicles will be quite limited.

Therefore, the communities' growing use of alternative modes of public transportation including bus, trolley, bike and pedestrian means of transport will continue to demand attention and be required to augment the capacity of the Town to accommodate automobile transport via highways and street systems. Autonomous vehicular traffic is expected to affect both parking and vehicular traffic within the next decade. Changing patterns of land use and traffic flow may require policy decisions and design elements to adapt to new vehicular automation requirements.

Successfully moving both people and goods will be among the Town's greatest future challenges and will call on the community to continue to explore more cost-effective and efficient modes of transport. The following goal and objectives are designed to support efforts to meet expected ongoing transportation system needs and demands.

Goal:

To maintain and improve the transportation system to accommodate the movement of people and goods as efficiently as possible, with minimum congestion and maximum safety.

Objectives:

In order to achieve the transportation goal for a balance of auto, transit, bicycle and pedestrian mobility, the following objectives are adopted.

4.1. Identify and implement opportunities for short and long-term improvements to the thoroughfare system.

4.2. Continue to develop public transportation system alternatives to and on the island to its maximum potential to minimize automobile congestion and impact to air quality.

4.3. Identify property in key locations to accommodate parking, park and ride and public transportation facilities where possible to augment existing facilities.

Coordinate with Worcester County and SHA on a potential park and ride facility along Route 90 to the west of Ocean City.

4.4. Continue to implement a bikeway system using alleys, secondary streets, the Boardwalk, bay front and the beachfront connections.

4.5. Develop additional bike storage (racks) and lockers to encourage additional bike use.

4.6. Decrease reliance on automobile use by continuing to increase transit ridership.

4.7. Encourage walking activity by enhancing the pedestrian environment through the use of pedestrian signals, pedestrian pushbuttons, and location of crosswalks in appropriate location.

4.8. Support completion by SHA of future phases for the dune-style median fence down the center of Coastal Highway to improve pedestrian safety and use of crosswalks and continue the Walk Smart Bike Smart public information campaign

4.9. Coordinate with Worcester County and Sussex County to improve transit connections between Ocean City and new growth areas along the Route 50 and 54 corridors.

4.10. Facilitate use of Tram by improvements to ticketing and reduce pedestrian/tram conflicts along the boardwalk.

4.11. Explore opportunities to establish a bay-side ferry service or encourage use of bayside water-taxis as an alternate mode of transportation.

4.12. Continue to upgrade and improve the Ocean City airport to meet future demand for air transportation.

4.13. Continue to cooperate with Wicomico County in the operation and improvement of the Wicomico/Ocean City Regional Airport.

4.14. Ensure adequate off-street parking for new and existing land uses.

4.15. Utilize traffic system management (TSM) techniques to preserve street capacity, promote smooth traffic flow, and maximize safety.

4.16. Coordinate with State and Federal agencies to maintain and improve long-range local and regional transit options along with demand and financing requirements.

4.17. Continue to improve bicycle and pedestrian safety and accommodate ~~pedestrian~~ non-motorized circulation throughout town, and prepare an updated bicycle study to support planned improvements.

4.18. Enhance pedestrian and bicycle connections between the Oceanfront and bay front to foster greater pedestrian activity, particularly within the downtown.

4.19. Incorporate the SHA Route 50 Bridge Replacement project – Alternate 5A into long range planning and evaluate potential impacts to the local street system.

4.20. Identify preliminary design criteria for improving Baltimore Avenue between North Division Street and 15th Street to complete the streetscape improvement project with wider sidewalks, relocated utilities, etc.

4.21. Study the location of the southern terminus of the bus system to identify a possible relocation of the transit station north of Route 50 in order to reduce downtown traffic congestion and periodic flooding impacts to operations.

4.22. Investigate improvements to the Route 90-Coastal Highway intersection to increase traffic flow through the intersection.

4.23. Continue to advocate for the Dualization of Route 90 in long term State Transportation Plan priorities to ~~improve~~ address long term safety, access and emergency route needs~~capacity~~. Study potential traffic impacts on town streets with increased capacity at the intersection with Coastal Highway, as well as land use and growth impacts.

4.24. Coordinate with Sussex County and Delaware state agencies to maintain and improve a ~~viable~~improved third point of access to Ocean City from Route 54 to the north.

4.25. Identify areas with acute parking deficiencies and develop financing mechanisms to provide necessary parking. Parking districts, fee in lieu of parking, and other methods of development and financing should be considered.

4.26. Evaluate costs and benefits of design and construction of parking decks or garages to augment parking in the downtown and to enhance or reinforce downtown streetscapes.

4.27. Encourage and work with the State of Maryland and Worcester County to improve the flow of traffic on the Rt. 50 corridor gateway into Ocean City.

~~4.27.~~4.28. Study the impact of establishing a 'complete streets' policy on the long term management of the existing street system.

Ocean City's Transportation System

Ocean City's transportation system has developed locally into a true multi-modal system, made up of highways, streets, and public transportation. The system is still dominated by the automobile, which serves as the most viable means of access from major population centers to the resort community. Traditional rail access, Greyhound Bus service and regional airline flights no longer provide direct connections to Ocean City and are located at least a 30 minute drive away. For the near term, a coordinated transportation strategy will continue to emphasize convenient access by private automobile with adequate parking provided 'where you stay', and recognize the need for day-trip parking facilities. Each of the components of the transportation system is described below.

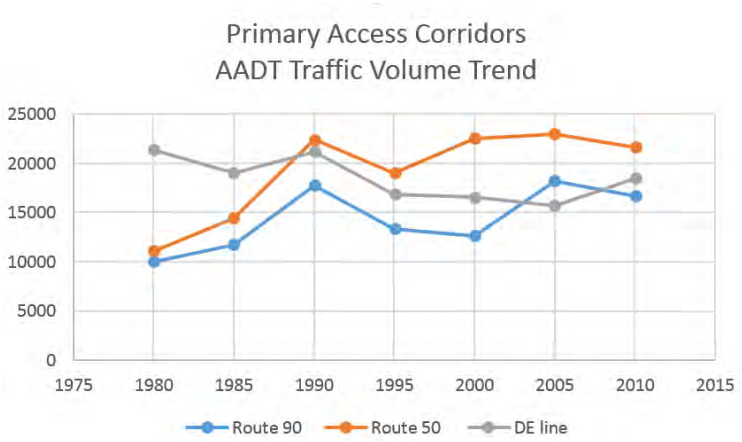
Town Street System

Ocean City's local street system is simple in layout. One major median divided 6-lane arterial, Coastal Highway (MD Rt. 528), accommodates the bulk of north-south movement. North-south movement in the Downtown area is also accommodated on Baltimore Avenue and St. Louis Avenue. Short east-west streets provide property access and provide connections between the Ocean and Bayfront. The modified grid system is simple but is called on to work hard to meet seasonal demand.

Arterial roads such as Coastal Highway, portions of Baltimore Avenue (S. 1st Street to 15th Street), and several cross streets (1st, 9th, 15th) are owned and maintained by the Maryland State Highway Administration (SHA). 63 miles of local streets, 38 miles of storm drains, and 15 miles of alley are owned and maintained by the Town of Ocean City with approximately $2-3 million annually budgeted for repaving and repairs. In recent years, local revenue sharing received from the Ocean Downs Casino in Worcester County has been directed to public streets and utilities.

Primary access to the island is provided by two bridges, one near the town's southern tip, the Harry W. Kelley Bridge (Route 50), and the other at Ocean City's midpoint, the Route 90 Bridge. Both serve the primary east-west highway, Route 50. The Route 90 Bridge also provides access from Route 50 and Route 113, a major north-south highway.

Two secondary access roads feed in from Delaware. Route 54 links Coastal Highway to Route 113 via Selbyville. A two lane secondary highway, Route 54 meanders through several communities before reaching Route 113. The other secondary access is Route 1 which is the extension of Coastal Highway northward along the Delaware beaches and merging in Milford, Delaware with Route 113. Often during storms these routes are flooded.



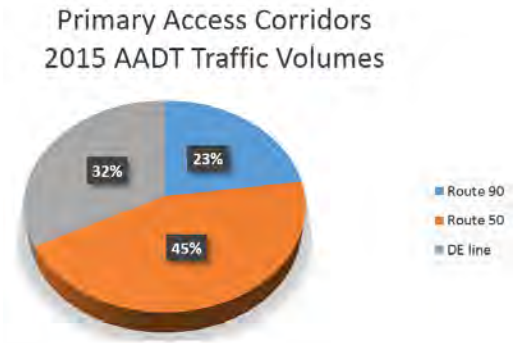


Figure 4-1 Gateway Traffice Volume
Source: Maryland State Highway Administration website 2015

Table 4-1 identifies AADT volumes over 5 year periods from 1980 to 2010. Several locations are identified on Coastal Highway at the DE line, above and below the Route 90 bridge intersection and near the north end of Philadelphia Avenue at 14th Street, as well as the Route 50 Bridge.

Coastal Highway

Coastal Highway (MD 528) serves as the main arterial running from 33rd Street to the Delaware line. Due to the narrowness of the island, it is the only continuous north—south route in Ocean City. Coastal Highway consists of three 11 foot wide travel lanes northbound and southbound, a 14 foot wide bus/bike lane in each direction, a 14 foot median and left turn lane, and a five foot sidewalk on each side.

Parking is not permitted on Coastal Highway and curb cuts for new development are discouraged or carefully located. Over the past 10 years, several improvements have been made to Coastal Highway. The signal system is fully computerized to ensure the smoothest and most efficient traffic flow possible and additional turning lanes from northbound Coastal Highway have improved traffic flow onto Route 90.

Traffic flow along Coastal Highway varies dramatically with the season. Off-season flow is unimpeded; summer brings heavy volumes. In-season traffic has both weekly and daily peaks. Weekly peaks occur on Saturdays, and are partially due to “check-in and out” of vacationers. At this time, thousands of visitors are all leaving and arriving at about the same time. During such periods traffic volumes can range from between 32,000 and 38,000 vehicles per day. Congestion along the corridor during such periods can make access to the route difficult causing backups along the Route 90 and Route 50 corridors.

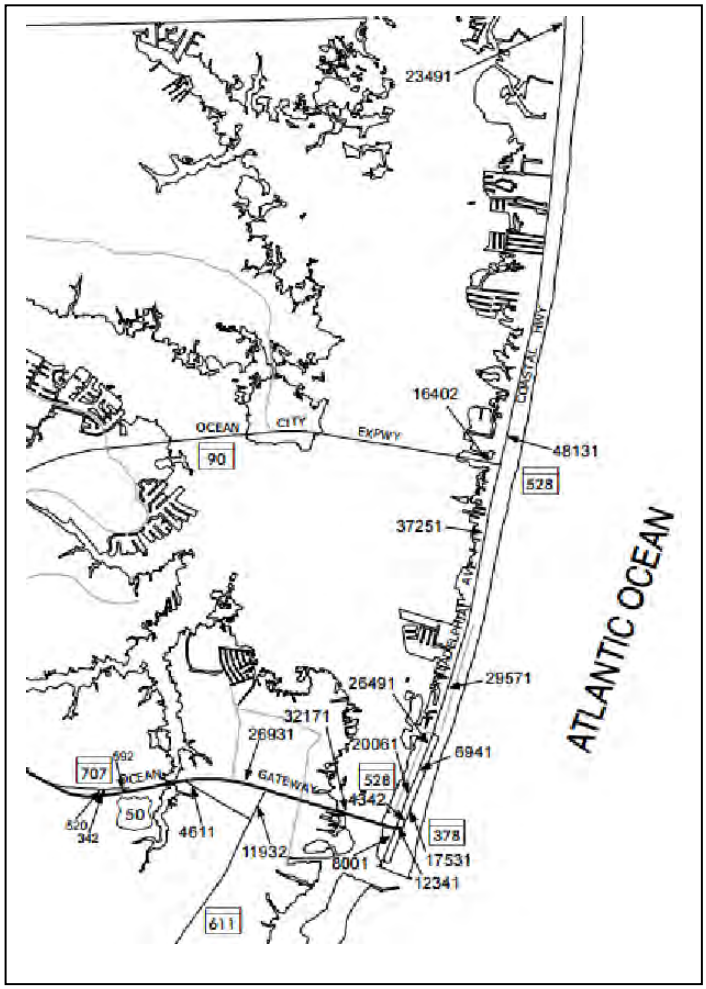
In-season daily peaks on Coastal Highway occur in the early evening for southbound traffic and several hours later northbound. During the earlier period vacationers head to the Boardwalk amusement centers, restaurants, and other night spots. Later, as everyone migrates back, traffic

peaks heading north. Also, rainy weather causes a peak in traffic conditions. As a rainy day alternative to the beach, many go shopping, thereby causing congestion.

A major safety, stormwater management and beautification project was completed by the State Highway Administration from 9th Street to the Delaware state line during the 1990's. This involved the installation of landscaped medians in Coastal Highway with signalized breaks about every three blocks. This restriction and control of turning movements has greatly improved traffic flow, reduced the number of accidents and has also improved pedestrian safety. SHA is currently proceeding with a phase one dune-style median fence down the center of Coastal Highway from Route 90 to Convention Center Drive to improve pedestrian safety and use of crosswalks.

Philadelphia Avenue

Philadelphia Avenue is a continuation of Coastal Highway (MD 528) from 33rd Street to South 1st Street. It is one way southbound from 9th Street to South 1st Street. Philadelphia Avenue's configuration varies. Generally it has three southbound lanes with parking on both sides. It flares to four lanes at the intersection with Route 50 at North Division Street. In October, 2002, the Town initiated a two-year project to improve an eight-block corridor of Philadelphia Avenue, from North 1st Street to South 1st Street. Improvements included new sidewalks, concrete pavers, street lighting, landscaping, and patterned pedestrian crosswalks.



Average Annual Daily Traffic counts for 2015 in the vicinity of 20th Street indicate an annual average daily traffic flow of 29,571vehicles per day. As in the case of State maintained portions of the route, in-season traffic volumes along the route can exceed 35,000 vehicles daily.

Baltimore Avenue

Baltimore Avenue extends from South 2nd Street to 33rd Street between the Boardwalk and Philadelphia Avenue. From South 2nd Street, north to 33rd Street it is MD 378. Baltimore Avenue serves as the "Main Street" of "Downtown" Ocean City, and also serves as the secondary north-south traffic mover in the southern part of town. Baltimore Avenue does not have a dedicated bus lane to support transit service. Therefore when peak season congestion occurs on this route, bus traffic is caught in the traffic. Transit system alternatives for the downtown are currently being explored to determine how to alleviate this condition.

In 1993, the southern portion of Baltimore Avenue, from Caroline Street to South 2nd Street, was completely renovated with upgraded underground utilities, landscaping, decorative paving and street furniture. Similar improvements were subsequently made through the 1990's from 15th to 33rd Streets. These projects have improved both the function and appearance along the corridor and have served to spur private investment in the area.

The remaining portion of Baltimore Avenue from Caroline Street to 15th Street has been identified as a priority for streetscape improvements including wider sidewalks, underground utilities and pavement reconstruction. Existing right of way along the east side of the existing roadway is owned by the Town of Ocean City, while the roadway is maintained by SHA, which will require a coordinated project design.

Other Road Improvements

In 2004, the Town completed renovation of the 94th Street corridor and 142nd Street. These projects included replacement of metal storm drains, horizontal alignment changes, and landscape improvements.

In 2014, St. Louis Avenue improvements were completed from 1st Street to 17th Street to rebuild the road pavement, install new water and sewer mains, replace sidewalks and provide bike lane pavement markings in both directions.

Other street reconstruction is underway in the Little Salisbury neighborhood that will also replace storm drains, sidewalks and underground utilities. Each street improvement includes more than just repaving to upgrade all of the infrastructure located in the public right of way whenever possible.

Intercity Roads

Route 50

Route 50 is the main east-west route from the Washington and Baltimore area to the Eastern Shore and Ocean City. Over the past several decades it has been improved by the construction of

bypasses and new bridges and lane improvements to the point that there are now at least four lanes for the entire length of the corridor. Turning lane improvements and upgrade to six lanes in selected reaches of the Route 50 corridor have further ameliorated congestion along the corridor. The completion of the Salisbury bypass in 1999 was among the most significant improvements to improve traffic flow to Ocean City in the lower Eastern Shore region in recent years. Average annual traffic volumes on Route 50 entering Ocean City range from approximately 21,000 to 32,000 over the last 5 years (see figure 4-1). However, in-season traffic volumes during the summer range from 43,000 to 52,000 vehicles daily.

The 71-year-old, 1.5-mile-long US 50 Crossing (Harry W. Kelley Memorial Bridge) includes a 140-foot-long draw span. To provide access to and from the commercial center of Ocean City, a safe and efficient crossing of US 50 is essential. The bridge, which is eligible for listing on the National Register of Historic Places, is in fair condition. SHA completed its most recent repairs in January 2013. Long term maintenance and replacement of the Route 50 Bridge into Ocean City was studied in 2013 with location and design plans approved for a north parallel bridge replacement (Alt. 5A). Funding for the bridge replacement may not be available for at least 20 years, however the potential impact on peak season access during construction is a significant concern.

Substantial development along Route 50 in Worcester County west of Ocean City has caused increased congestion in recent years and will likely limit the highway capacity for beach access in the future. Every effort should be made by the State to manage access and highway capacity and by the City and County to monitor and manage growth to address this growing problem.

A vital part of the Route 50 access to Ocean City is the Chesapeake Bay Bridge. Given growth trends in traffic volume crossing this span (approximately 3% annually), it is important that the capacity of current spans to accommodate traffic flows be evaluated to assure continued access to the Eastern Shore of Maryland and the Town of Ocean City. In 2015, State funding was approved by the Governor to complete a 4 year study of a third Chesapeake Bay crossing.

Route 90

Route 90 is a limited access two lane road linking Route 50 to Ocean City at 62nd Street. This twelve mile expressway is the primary access to the northern part of Ocean City. As shown in figure 4-1, the average annual daily traffic volume on the Expressway entering Ocean City was 16,402 in 2015. Peak volumes during the summer months are lower than those on Route 50, since the route provides only 2 lanes, and range from 28,000 to 32,000 daily.

The safety of Route 90 has been questioned due to the number of serious accidents over the years. Various improvements to Route 90 have been studied, and several safety improvements have been made over the years by the State Highway Administration. Larger scale improvements, including dualization and the construction of a new road and bridge entering Ocean City somewhere north of 100th Street, have been considered..

The City has placed a priority on pursuing the Route 90 dualization project because of its many advantages: increasing capacity on Route 90 and enhancing its safety; creating improved emergency access into and out of Ocean City in the event of an accident, providing a viable means of access when Route 50 is limited by bridge construction or future development; and providing an expanded hurricane evacuation route.

Route 113/13

Route 113 links the coastal areas of the Eastern Shore with Route 13, the main north-south interstate travel route on the Shore. Diverging from Route 13 at Dover, Delaware, it swings east serving Milford. Georgetown. Selbyville, Berlin, Snow Hill and reconnects to Route 13 at Pocomoke City where it continues south through Virginia to the Chesapeake Bay Bridge Tunnel and Norfolk, VA. In conjunction with Route 13, Route 113 expands Ocean City's market area for vacationers within a three hour drive, and improves both emergency and supply access.

Like Route 90, Route 113 has experienced many serious accidents over the past several years and safety improvements are being completed as the top regional priority for State funding. In order to handle the present and future traffic volumes safety, the existing two lane sections of Route 113, Route 90 and Route 589 should be widened to four lanes.

Parking

An important component of the transportation system is parking. Parking has been a problem in Ocean City for many years, especially in the Downtown area. Use of street parking by day trippers and boardwalk-oriented traffic, downtown employees, and the limited off-street parking provided by historic development patterns all combine to create difficult conditions. Double parking by delivery trucks using parking area for off-street loading functions further complicates the situation.

Public parking has changed over the past several years with removal of street parking from Coastal Highway and Baltimore Avenue south of 15th Street, and the addition of new public parking lots. The metering of street parking changes occasionally in location and numbers. With few exceptions, metered parking is limited to locations in the downtown area. Table 4-2 provides an inventory of public parking lots including over 3,000 spaces which are located throughout the Town. In addition, private vacant properties are often used for temporary parking lots during peak season periods.

Prior study of Downtown Parking conditions indicates that conflicts between parking and traffic movement are apparent at the Inlet Parking lot. Often the lot is full and unaware drivers become stuck in traffic seeking access to parking and constrain traffic flow. Advance notification to drivers by remote sign panel indicating the lot is full or has only a limited number of spaces has improved this condition. Additional real time information for availability of parking in all public lots has been proposed.

It continues to be the practice of the Mayor and City Council to purchase property and develop public parking lots when the need and opportunity exist. In conjunction with the 100th Street lot, the city's first residential parking district was created in the Caine Keys II subdivision on the bayside across from high rise row. This district reserves street parking for the residents of the neighborhood, and the 100th Street lot provides the needed visitor parking spaces in the area.

The parking district concept and use of existing parking lots for parking decks or garages should be studied to determine their cost-effectiveness for use in Ocean City, particularly in the downtown area. It is very possible that reductions in the parking requirements of the zoning code coupled with the establishment of a parking district, fee in lieu of parking, and provision of more public parking could improve the parking situation downtown and support ongoing redevelopment.

Auto sharing services and increasing use of on demand transportation alternatives such as Uber and Lyft, may have the effect of reducing parking demand. Other peak demand reduction strategies may include fluctuating parking fees for public parking lots, street parking, and remote sign information panels to direct drivers to available parking.

In 2015 Ocean City implemented a trial program for EV charging stations at two public parking lots (Convention Center and 4th Street). A third location is proposed at Northside Park. Many special events in Ocean City are organized around car shows and clubs including a recent gathering of Tesla electric vehicles which highlighted a demand for this enhanced service.

Public Transportation

Investments in public transportation services in Ocean City have proved to be among the most effective means of improving the overall quality of the transportation system. Such improvements have proved an effective means of moving a greater number of people throughout the community in spite of limited land for highway system improvements. Such investments have permitted connection between the Island and greater use of off-Island lands to meet parking demand in satellite locations and have increased system ridership. The primary transit systems include the Municipal Bus System and Boardwalk Tram.

Municipal Bus System

Ocean City operates a municipal bus system comprised of fixed routes and a dial-a-ride program for the elderly and handicapped. Operational and system wide review and recommendations are included in a Transit Development Plan last prepared in 2015. From a total of 13 vehicles in the early 1980's, the continually expanding bus fleet in 2015 includes 69 vehicles. The fleet includes 64 forty foot Thomas buses, 2 sixty foot articulating buses, and 3 para-transit vans. The bus system operates year-round, twenty four hours per day during peak seasons. In the height of the summer season the buses operate on Coastal Highway at 7 minute headways/intervals.

During the less congested hours and times of year the fleet is smaller and intervals between buses longer; however, there is always service provided.

As shown in Table 4-1, ridership has been stable over the last 5 years with around 2.7 million rides per year. Efforts to improve the bus experience, reliability and customer service included increased bus deployment by 24 percent in 2015 resulting in a 3% increase in passenger count. On July 4th alone the bus carried 41,000 passengers and during the two-day Air Show in June, the numbers reached over 70,000 passengers. (Source: Article from www.delmarvanow.com 7/29/15, E. Chappell and OC Transportation Division)

OCEAN CITY TRANSPORTATION
MONTHLY RIDERSHIP CY 2005-2016

CY	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
JAN	31,900	35,563	32,176	32,573	28,895	26,503	20,292	19,906	20,438	17,288	16,387	17,098
FEB	32,310	35,241	30,459	33,895	29,192	24,414	21,475	20,780	19,154	18,919	14,875	16,541
MAR	44,075	49,053	45,175	47,227	39,779	39,889	30,368	38,556	38,081	35,389	28,421	32,942
APR	57,091	65,117	56,740	58,402	60,145	59,832	49,437	58,003	54,195	56,601	50,179	49,662
MAY	256,353	296,715	275,977	318,501	295,979	274,844	212,172	251,044	237,543	258,346	268,041	228,789
JUN	851,995	837,588	850,579	875,962	764,716	744,121	714,124	781,047	736,708	707,296	701,083	564,589
JUL	850,995	845,775	839,474	844,811	749,246	781,831	727,771	699,194	664,846	590,298	622,622	599,000
AUG	758,991	764,167	735,123	772,962	688,334	683,203	558,426	633,613	588,746	545,955	562,618	525,305
SEPT	420,943	378,399	390,741	337,137	361,409	367,909	294,896	298,072	288,053	279,400	310,845	
OCT	95,857	75,041	77,799	80,332	69,550	68,966	64,155	64,268	56,841	54,437	56,082	
NOV	44,579	40,558	37,357	33,884	31,350	25,367	23,604	27,570	24,254	20,133	21,065	
DEC	42,612	39,787	35,276	32,005	28,086	22,862	24,753	23,803	21,203	19,628	22,660	
TOTAL	3,487,701	3,463,004	3,406,876	3,467,691	3,146,681	3,119,741	2,741,473	2,915,856	2,750,062	2,603,690	2,674,878	
FY	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
TOTAL	3,276,341	3,535,254	3,435,903	3,481,330	3,315,614	3,097,299	2,998,006	2,862,941	2,852,639	2,737,600	2,588,837	2,505,513

Table 4-1 Ridership

Future opportunities to expand and improve the municipal bus system include

- Increased cooperation with neighboring transit systems including Shore Transit in Worcester County and the Delaware Area Rapid Transit system in Sussex County
- Additional service to new hotel and commercial development in West Ocean City to reduce the parking demand of 'day-trip' visitors
- Improved West OC Park and Ride system performance with possible service to a future downtown loop
- Continued coordination of private shuttle services from expanding campground facilities in the County
- Evaluate potential relocation of the downtown transit center to reduce traffic congestion delays south of Route 50, and implementation of a downtown shuttle circuit route
- Potential conversion of bus fleet to CNG fuel to improve efficiency and provide environmental benefits

Boardwalk Tram

An important part of the Ocean City public transportation system is the train (or tram) service that traverses the length of the boardwalk. While serving an important transportation system function moving over 400,000 people during the summer season, the tram also provides important entertainment value to the Town. The trams are also used during Winterfest at Northside Park to provide a musical tour of holiday light displays.

Ongoing evaluation of the Downtown Area Transportation system indicates that current Tram operations can result in pedestrian/tram conflicts over the entire length of the boardwalk. Since stops are in response to the interest of passengers, the frequency of un-regulated stops delays operation and schedule/headways. The Town should consider establishing designated scheduled stops every two or three blocks, integrated with street intersections that are subject to heavier pedestrian traffic to improve this condition. Future relocation of Tram operational facilities may create the need for additional boardwalk improvements to support access and circulation changes.

Additional Transit System Considerations

A "Technical Transit Study" was prepared by Craine and Associates in 1996 which provided a number of recommendations for improvements to transit service. Many of these improvements have been implemented since that time and others have proved not feasible over time. The following provides an overview of the ridership profile and those recommended measures in the 1996 study which have been implemented since that time. It also identifies ~~current~~ recommendations provided as part of the ~~ongoing~~ Downtown Transportation System study prepared by Kimley-Horn and Associates, Inc. as well as recommendations based on discussion with Transportation Department staff. Additional information is also available in the 2015 Transit Development Plan.

~~These r~~Recommendations are provided by specific transit system topic areas which include:

- Ridership profile
- Funding
- Bus operations
- Maintenance
- Service Extensions and Coordination
- Fares
- Analysis of the shared bus/bicycle lane
- ADA Paratransit
- The potential for automation

Ridership Profile

Based on the prior studies, the typical Ocean City transit rider:

- Is a vacationer (67%).
- Travels either to or from the area between Inlet and 33rd Street (69%)
- Travels either to the boardwalk (25%) or to return to their hotel, condo, or home (31%).
- Makes a single round trip (43%).
- Has an extremely positive (43%) or somewhat positive (38%) attitude toward the bus.
- Would use the bus more often if it was: less crowded (51%), had more frequent service (50%), was faster (33%), or had fewer stops (31%). (Multiple responses were permitted to this question.)
- Would have driven (42%) or walked (32%) if they had not used transit.

Transit ridership is heavy throughout the day, with high levels of activity from about 9:00 a.m. through midnight. Patronage per vehicle hour during these hours (over 50 passengers per vehicle hour) is typical of that found on the most productive bus routes of major cities. Ridership remains significant throughout the night and early morning hours. In fact, peak ridership occurs between the hours of 6:00 p.m. and 1:00 a.m.

In order to determine how transit can be combined with the road system and parking to serve the Town most effectively, it would be desirable to update this survey to determine the travel patterns of day trip visitors and tourists in the beach areas. Such information could help determine what impact changes in parking opportunities or fees would have, whether services aimed at employees would have an impact, and where improved transit services or remote parking lots would prove to be most cost-effective.

Recent management actions have added increased security during peak night hours, and expanded recruiting for drivers in order to maintain high levels of service.

Funding

As the Ocean City transit system has grown, federal and state funding has remained relatively constant resulting in Ocean City contributing a larger share of the operating cost of its non-urban transit system than any other local government in Maryland.

Ocean City's transit system is classified as a rural system, and thus does not receive the amount of operational funds that an urban system would receive. Federal and State agencies have worked with the City to provide additional support in capital costs of new and shared use busses to meet local seasonal needs, including the addition of new articulated buses capable of carrying 100 passengers.

A campus master plan for the public works facilities supporting the transportation program is underway under a cost share program which will upgrade support and maintenance facilities at 65th Street.

Bus Operations

The attractiveness of bus service to riders has been significantly improved by additional buses and drivers, regular service due to frequent scheduled stops, and shorter waits due to regular spacing between buses. Continued evaluation will remain a consideration in planning future service improvements.

Decreased reliance on private vehicles while visiting Ocean City is accomplished by continuing to increase transit ridership. More widespread dissemination of transit routing, schedule, and fare information at visitor centers, in visitor guidebooks, through motels and hotels, and other means such as the Town website, smart phone apps, and social media will meet this objective.

Within the downtown area, parked vehicles and service vehicles periodically block bus lanes. Greater use of enforcement, pavement markings and education of businesses and delivery drivers could improve this condition.

A greatly increased level of supervision to maximize adherence to planned schedules using trained street supervisors and/or an automatic vehicle location system could also improve overall service. The Town is currently working toward development of a vehicle location system.

Maintenance

Maintenance is performed by permanent employees of the Town fleet service center.
The maintenance center was expanded in 1998 to add additional maintenance bays and to add an automatic bus washer. A long range master plan is underway to optimize the public works campus ~~will be completed in 2016~~ leading to ~~potential~~ construction of improved operational and maintenance facilities within a 3 year period.

~~As was recommended in the 1996 Craine study,~~ T~~t~~he appearance of the bus fleet ~~would~~ benefits from ~~an~~ investment in ~~a~~ strong eye-catching paint ~~scheme or~~ themes for the buses which ~~would~~ promote ridership and add to the Town's overall tourism destination image.

Service Extensions and Coordination with Other Systems

Service extensions to West Ocean City, to connect with a growing number of commercial services and retailers suggests the need and demand for linking residents to these shopping opportunities. The West Ocean City Park and Ride was developed in 2002 and County system

service to the nearby factory outlet stores has been met recently with Shore Transit service connections

Partnership with Shore Transit (a service provided by the County) should be enhanced to improve service system connections and scheduling.

The benefits of an additional Park & Ride facility location along Route 90 west of Ocean City should also be explored. Such a facility might attract day trippers, thereby increasing highway system capacity. Since land costs may be high in near Ocean City locations, areas near the Whaleyville Campground located west of the junction of the Route 90 expressway and Route 50 should also be considered as a candidate location for such a facility.

The most effective improvement for attracting additional bus riders from Delaware would be developing a park and ride lot near the northern end of the bus route. A North End Transit Center has been constructed by the Town and may serve as the first step toward developing such a facility with the addition of parking.

As noted in the section titled "ridership" it would be desirable to conduct a survey or study to determine the travel patterns of parkers and tourists in the beach areas. Such information could help determine what impact changes in parking opportunities or fees would have, whether services aimed at employees would have an impact, and where improved transit services or remote parking lots would prove to be most cost-effective.

Transit Fares

The all-day pass has proved simple, easy to understand, has good marketing value, and has reduced delays due to fare payment on the bus, since it was instituted in 1990's. The current cost of $3.00 does not appear to have greatly deterred use of the system since 2012.

The Town currently estimates there are 180 active ADA clients using the bus system with only 5 paying for the service. Seniors coupon books provide a 'good will' benefit with minimal reduction in system revenues. The town should continue to provide this valuable service to the public.

Bicycle Movement

Presently, Coastal Highway provides north and southbound bicycle lanes which are shared with buses and which also serve as turn lanes for all other traffic. Because of the high volumes of traffic on Coastal Highway, the multiple uses of these lanes has been an ongoing safety problem.

Consultants have conducted studies of the use of the bus/bike lanes in the summers of 1990 and 1995. Vehicle counts were made at various locations and time periods. Kellerco, the consultant

that performed the 1995 study, also has summarized the many conflicts which are present on Coastal Highway. The safety problems caused by the multiple uses of the bike/bus lanes should continue to be addressed. The establishment of bikeways servicing various parts of the city Town has been discussed, as well as widening the Boardwalk to accommodate bicycles. These past studies should continue to provide the basis for future improvements to accommodate bike movement.

A 2004 study of bike transportation issues within the downtown area by Kimley-Horn indicates a need to make it easier and safer for people to store their bikes in order to encourage additional bike ridership. The study recommends installation of additional bike racks in the downtown area and installation of bike lockers.

The study further recommends improving bicycle service on the US Route 50 bridge that permits concurrent use of the bridge for Eastbound and Westbound bikes by providing a ramp on the north side of the bridge for westbound bikes. Recommendations also include installation of a shared bike and pedestrian path on the west side of St. Louis Avenue (completed in 2014), south of 1st Street to Somerset that utilizes the existing cross section north of 1st Street. The report prepared by Kimley-Horn should be consulted for any additional "location specific" recommendations it provides concerning enhancement of bike movement in the downtown area.

The Ocean City Transportation Committee began continues to work on a project in 2014 to define a system of bicycle routes which help to connect points throughout the community and provide an alternative to the shared use of bus lanes on Coastal Highway. A mapping effort was completed to capture the typical riding patterns of both local cyclists and the seasonal workforce who use a network of alleys, parking lots and secondary streets in order to avoid high speed or high traffic volume arterial roads.

Ocean City recently completed a bayside bike friendly retrofit along Sinepuxent Avenue from 130th to 146th Streets. Improvements included bicycle lane pavement markings, sharrow markings, new signage and the installation of crosswalks. This project was funded by a $57,560 grant from the Maryland DOT Bikeways Program. The next phase is proposed to be completed in the ocean block from 118th to 146th Street along Wight Street and Assawoman Drive.

Other sSignage and pavement marking projects have been identified and completed in several segments'pods', private easement agreements and minor curb reconstruction areis proposed to complete several gap connections, and improved cross street safety improvements will be completed as other street reconstruction projects are funded. Long term connectivity is projected to be 20 years out, with continued incremental progress.

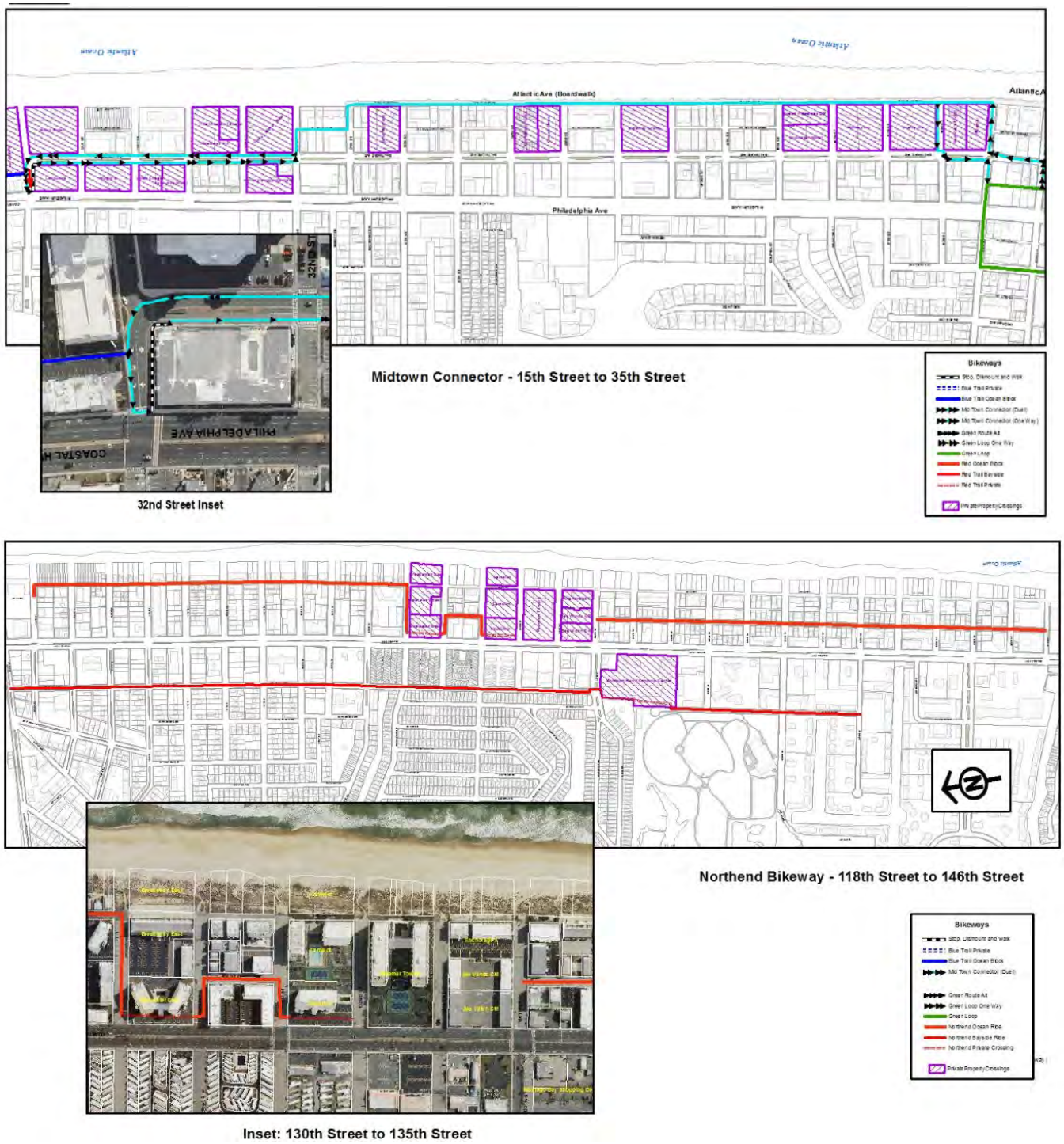


Figure 4-2 Working Draft -Bicycle Corridor Plan (OC Transportation Committee)

Pedestrian Movement

The Ocean City Boardwalk provides a traditional and favorite destination for walking, shopping, dining, and beach recreation where you can leave your car behind. Activities such as bicycling and riding on the boardwalk tram are carefully managed to limit potential conflicts with the large volume of individuals, families and groups who enjoy walking on the boardwalk. In 1991, the concrete tram lane was added from the amusement pier to 3rd Street to accommodate this busy area and provide storm protection.

Sidewalks along the Town's public street system also provide important pedestrian connections from bayside and ocean block housing to the ocean, and from bus stops to commercial destinations. As sidewalks are replaced and where new development occurs, a minimum 5 foot wide sidewalk meeting minimum design standards is required with an additional 3 feet of pervious paving to meet existing City Council policy for heavy use corridors.

Pedestrian movement is a key mode of transportation in Ocean City that brings on a range of issues. Pedestrians get frustrated when they see gaps in traffic and often don't wait for pedestrian signal indications. In some locations in the downtown area, there is a lack of pedestrian signal locations and/or pushbuttons on east and west approaches to Baltimore and Philadelphia Avenues. In other cases there is discontinuity between where a majority of pedestrians want to cross and where the crosswalks are located, particularly on Baltimore Avenue.

A number of ~~specific~~ locations where these conflicts occur were identified by Kimley-Horn as part of the downtown transportation study conducted in 2004 which should be consulted to identify specific improvements by location that are proposed for improving downtown area pedestrian movement. Their recommendations include shortening signal cycle lengths, installation of additional pedestrian signal heads, installation of additional pedestrian pushbuttons, and improvements in crosswalk continuity to match needs. The choice regarding these optional solutions is often location specific depending on the particular conflict between vehicular and pedestrian traffic.

Key pedestrian urban design improvements in the downtown area ~~that~~ can improve the pedestrian environment and enhance the Town include continued development of the "Bayfront Boardwalk" over time and improvement of east-west pedestrian connections between the Ocean boardwalk and the Bay Area to provide better pedestrian safety across Baltimore and Philadelphia Avenues. Such improvements should include consideration of one-way pair street segments to accommodate vehicle circulation while narrowing pavement widths to permit wider sidewalks, signs, signals, crosswalks and other pedestrian design considerations to assure vehicular traffic is less dominant in the Downtown area.

Wider sidewalk areas could also be used to add shade trees, accommodate outdoor cafes and generally support a festive atmosphere that would provide benefits to Downtown businesses. The location of such one-way street pairings would need to be coordinated with potential transit station locations to minimize conflicts with automobile movement.

Waterways

The Ocean City inlet serves as critical infrastructure for Ocean City, Worcester County and the National Park Service at the north end of Assateague Island. Continued operations by the US Army Corps of Engineers to maintain adequate channel depth for commercial ships is an important element of supporting the local economy and maintaining ocean access for the US Coast Guard Station.

Boat traffic, like automobile traffic, peaks during the summer. In season, the bays and open ocean provide recreational opportunities for pleasure boating and sport fishing enthusiasts. Commercial shipping is limited to local and ~~some~~ transient fisherman and their catch with primary access through the Ocean City Inlet to the West OC Harbor. Basic waterway needs will require ongoing maintenance of channels and channel markers. In keeping with the image of an Ocean resort community, every opportunity to increase the availability of and access to marina facilities and boat launching facilities should be explored.

A new public boat launch facility was completed in 2017. Located at the bayside end of 64th Street, facilities include construction of a two-lane boat ramp, channel dredging for ramp access, a 50-space trailer parking area and a small comfort station. New opportunities for additional public water access will be considered in locations which minimize impacts to established residential neighborhoods.

The waterways will continue to provide recreational benefits and possibly a limited amount of transit. A bayside "water taxi" ferrying tourists from the north to a location near the inlet could serve a useful dual purpose. This service would provide relatively rapid transit and a guided tour of the bayside at the same time. The water taxi concept could also be used from Ocean City to the mainland (possibly Ocean Pines). The water taxi's impact on the overall transportation situation may be small, but it would provide an interesting addition to Ocean City's recreational opportunities and could become its own attraction. Opportunities to promote such a water taxi service and link such services to land-based transit alternatives should be explored. Any private sector interest in developing a water taxi service should be encouraged.

~~A new public boat launch facility is scheduled to be completed in 2017. Located at the bayside end of 64th Street, facilities will include construction of a two-lane boat ramp, channel dredging for ramp access, a 50-space trailer parking area and a small comfort station.~~

Airport

Ocean City Municipal Airport (OXB) is a publicly owned, public use general aviation airport owned by the Town of Ocean City. The airport is located in Worcester County approximately 2 miles southwest of the Town of Ocean City. The airport maintains two asphalt/concrete runways, a 4,074-foot long by 75-foot wide runway (Runway 14/32) and a 3,204-foot long by 75-foot wide runway (Runway 2/20), both with a full parallel taxiway and non-precision approach capability.

The airport is included in the FAA's National Plan of Integrated Airport Systems (NPIAS), making it eligible to receive federal funds. Its role, identified within the 2008 Maryland Aviation System Plan, is a General Airport, which accommodates the basic needs of general aviation aircraft and pilots. General aviation operations typically include light multi-engine and single-engine aircraft used for business, pleasure, and training.

Airport users can obtain aircraft fueling services for 100LL and Jet A, major airframe service, and major power plant service. Aircraft parking and storage is available on paved tie downs and in T-hangars. The airport supports all types of general aviation activity including flight instruction, aircraft rental/sales, and charter flights. The 43 based aircraft at Ocean City Municipal are primarily single-engine aircraft (38), multi-engine aircraft (3), and helicopters (2).

The airport serves the business, recreational, and flight training needs of the community through the services and employment opportunities provided by numerous successful on-airport businesses. Cloud Dancer provides airplane sightseeing tours; Ocean City Aerographic is an aerial photography company; and Ocean Aviation is a full service FBO and professional FAA Part 141-approved flight academy providing a wide variety of aviation services, including: flight training, aircraft rental, pilot supplies, aircraft sales, acquisition consulting, sightseeing flights, aircraft maintenance, heated hangar space, and catering (www.flyoceanaviation.com).
Other on-airport activities and businesses include OC Skydiving.

The Ocean City Airport offers the following services:

- Fuel sales (10OLL and Jet A)
- Major and minor power plant service
- Major and minor airframe service
- Aircraft rental
- Charter service
- Sightseeing packages
- Flight and sky-diving instruction
- Community and T-hangers
- Paved tie-downs
- Bus transportation available in summer

Annual aircraft activity (2015):

Local GA	7,400
Transient GA	29,600
Military	300
Air Taxi	150
	37,450

(Source: Maryland Economic Impacts of Public Use Airports, July 2015)

The airport handles approximately 50% of its annual traffic during the months of June thru August; 70% during the period from May to September. The bulk of the traffic is from the Baltimore/Washington area, but there are indications that more and more traffic is originating from the Philadelphia and New York areas.

A master plan for the airport was completed in 1979 and updated in 1987. Many improvements have been made since 1977, resulting in a facility that is a valuable part of the area's transportation system. In 1995, a new terminal was constructed which replaced the farmhouse that had previously served as the terminal. The new terminal building is a two story, 3,200 square foot structure. There is office space for the skydiving center along with rental cars on the field. Airport operations are also conducted from the terminal. Catering and a conference room are available upon request. Three new hangars built in 2005-2006 house between twenty and thirty additional aircraft and are 100% occupied

The Airport is now served by public water and sewer service from Worcester County. The Airport Manager has identified the extension of the existing State Priority Funding Area (PFA) from the northern Airport boundary to include the entire Airport property as an objective to assist with future funding and economic development opportunities.

The most recent updates to the Airport Master Plan in 2012 identify several improvements that are needed at the airport, including:

- Completion of Environmental Impact Assessment update
- Acquisition of clear zone and obstruction easements.
- Installation of several safety enhancements.
- Rehabilitate Runway 14/32
- Construction of 3-bay extension of Hanger K
- Reconstruction of Taxiway A
- Construction of a combination aircraft hangar and commercial office space building at the 'long term parking lot'
- Construction of Apron Expansion to larger aircraft

- Relocation of the localizer antenna array for the LOC14 instrument approach

The airport can be a valuable alternative to the automobile for many vacationers. As air travel alternatives grow, so will the Ocean City Airport's role in the transportation system. The airport could also be an important factor in the growth of conventions in Ocean City. The continued expansion of the Convention Center is expected to attract larger groups to the resort, and many of the participants may want to fly to the area if the airport facility is adequate. Thus, for both vacationers and conventions, the airport has an important role in transportation and economic development.

Recommendations

Ocean City's transportation system moves goods and people on land, sea, and in the air. By far, the primary transportation access is by private vehicles via the well-developed roadway system. Pleasure and sport-fishing boats have public access to the bays and open ocean along with the commercial fishing fleet. The airport provides rapid access for visitors from the Middle Atlantic States and historic rail access may be viable again from Delaware to nearby Berlin, Maryland. Like much of the town's other infrastructure the transportation system is strongly influenced by Ocean City's long and narrow shape.

The main arterial road corridors carry a seasonal burden adequately most of the time. However, at peak periods roadway capacity is stretched to the limit. Future improvements will be needed to keep pace with the town's growth. Opportunities for improvement are limited, but should be pursued. Below are recommendations for action to improve Ocean City's transportation system:

1) Highways and Street Systems

a) Continue to work with the State Highway Administration to improve the efficiency and safety of Route 90 including Dualization from Ocean City to Route 50. Include proposed state road projects such as Route 90 Dualization in Worcester County's Transportation Priority Letter which is submitted annually to MDOT Office of Planning and Capital Programming (April 1st)

b) Consider developing a 'complete streets' policy to provide increased transportation choices and mobility for all users, based on the Maryland State Highway Administration guidance.

c) Continue working to improve the stormwater management system on Coastal Highway.

d) Coordinate with the SHA to implement the Route 50 north parallel bridge replacement when necessary and as funds are available.

e) Encourage Delaware to continue improvements to Route 54 which would improve the third means of access to the north end of Ocean City.

f) Keep the remaining alley system open; only close alleys that have no present or potential benefit to the public.

g) Minimize curb cuts on Coastal Highway to maintain capacity.

h) Continue to monitor the structural integrity of the Route 50 Harry W. Kelley Memorial Bridge and Route 90 Bridge to ensure their safety and serviceability.

i) Continue to cooperate with the state to improve the safety and capacity of Coastal Highway.

j) Continue to implement the street system improvements identified in the 10-year capital plan for improvement of 78 miles of town streets and alleys.

k) Initiate the design of a streetscape project to complete Baltimore Avenue improvements between N. Division Street and 15th Street for consideration in the next capital improvement plan update.

l) Coordinate special event use of the public streets for car shows, parades and short term controlled access. Evaluate maximum carrying capacity of roadway system during peak periods and multiple event schedules.

m) Support efforts to prepare a Cape to Cape Scenic Byway corridor management plan and refer to MDOT SHA Context Sensitive Solutions Guide for projects along the corridor.

~~1)~~2) Parking

a) Provide additional public parking in the downtown area. If feasible, plan for long term parking districts and parking structures which incorporate retail stores at the ground level of the garage to enhance commercial activities at the pedestrian street level. The architectural design of the garage(s) should be attractive and compatible with the character of the neighborhood and should be constructed in a manner that reinforces or enhances the streetscape.

b) Continue to provide or permit public parking lots and street parking where needed throughout the town. Study downtown parking demand and potential impacts of conversion/redevelopment of interim use private parking lots.

c) Examine current parking standards and consider revising regulations to address offsite parking facilities, fee-in-lieu parking fund, and alternate parking minimums to

encourage responsible redevelopment.

d) Adjust off-street parking requirements in the Zoning Code to establish minimum criteria for change of use or redevelopment in order to phase out non-conformity with current parking standards.

e) Identify areas with parking deficiencies and establish parking districts or a fee in lieu of parking program to finance the provision of public parking in these areas.

f) Require compact car only parking, at corners in need of improved sight distance.

g) Continue to monitor the functions and flow of traffic into and out of parking lots and institute measures to improve their function or minimize disruption to traffic flow where possible (e.g. inlet lot).

h) Incorporate electric vehicle (EV) charging stations at selected public parking lots to meet the demand of seasonal visitors.

~~2)~~3) Transit/Bus System

a) Provide more widespread dissemination of transit routing, schedule, and fare information at visitor centers, in visitor guidebooks, through motels and hotels, and other means (social media, smart phone apps, website) in order to increase ridership.

b) Plan and design a dedicated bus lane extension southbound along Philadelphia Avenue from 17th Street to 9th Street.

c) Evaluate the feasibility of express bus service to supplement current service recognizing limitations posed by available bus lanes to accommodate both.

d) Identify express buses with a different paint scheme or markings from local buses.

e) Install an Automated Vehicle Locator (AVL) system to permit monitoring and adjustments to intervals between buses along the length of Coastal Highway and allow waiting passengers to find the anticipated time of the next bus through a web application.

f) Study potential relocation of the southern terminus of the transit system to a location north of the Route 50 Bridge as a means of solving traffic congestion and impacts of coastal flooding. ~~.~~

g) Investigate a potential design for Route 90 Dualization which incorporates multimodal access and/or express lane connection to an additional park and ride facility in Worcester County.

h) Evaluate the benefits and costs of developing a park and ride lot near the northern end of the bus route. The North End Transit Center is currently being designed by the Town and may serve as the first step toward developing such a facility with the addition of parking in the future.

i) Prepare and adopt an updated Transit Development Plan

~~3)~~4) Pedestrian and Bike Movement

a) Prepare and adopt a Bikeway Master Plan which includes location specific Pedestrian and Bicycle recommendations, AASHTO compliant design standards and draft easement documents. Incorporate funding options through SHA and MDOT programs.

b) Develop strategies and tools to address implementation of non-motorized facilities which include funding mechanisms, a 'complete streets' policy and modified development regulations.

c) Develop recreational and destination bike routes minimizing the use of Coastal Highway.

d) Consider development of Pedestrian overpasses over Coastal Highway at locations where they may support the needs of key concentrations of bayside population.

e) Continue to develop the "Bayside Boardwalk" to invite pedestrian activity to the bayside and distribute greater pedestrian activity in the Downtown area.

f) Monitor pedestrian signal cycle lengths, install additional pedestrian signal heads and additional pedestrian pushbuttons in key locations as needed.

g) Locate or re-locate crosswalks in appropriate locations to provide continuity and match pedestrian needs.

h) Provide several one-way pair street segments to improve traffic flow and pedestrian safety.

i) Consider amending Boardwalk shared use policy regarding bicycle use hours on the Boardwalk to allow greater bicycle use at the north end and year round.

j) Improve east-west pedestrian connections within the Downtown area between the Ocean boardwalk and the Bay Area to provide better pedestrian safety across Baltimore and Philadelphia Avenues. Such improvements should include consideration of one-way pair street segments to accommodate vehicle circulation while narrowing pavement widths to permit wider sidewalks to assure vehicular traffic is less dominant in the

Downtown area.

k) Utilize wider sidewalk areas where possible in the Downtown area to add shade trees, accommodate outdoor cafes and generally support pedestrian activity and a festive atmosphere to provide benefits to Downtown businesses.

l) Coordinate the location of such one-way street pairings with potential transit station locations to minimize conflicts with automobile movement.

~~4)~~5) Waterways

a) Continue to conduct channel maintenance dredging. Coordinate with Maryland DNR to s~~S~~tudy the possibility of using channel dredge spoil for beach replenishment or other secondary beneficial use.

b) Continue to improve channel markings for inlet and bayside navigation

c) Explore opportunities to increase the availability of and access to marina facilities and boat launching facilities in locations with adequate facilities and where residential neighborhoods are protected from adverse impacts. Encourage the provision of private marina facilities and examine potential sites for public marinas.

d) Explore opportunities to develop a Town or privately owned bayside "water taxi" or series of taxi services to ferry tourists from the north to a location or locations near the inlet. Such a service could provide relatively rapid transit and become its own attraction providing a guided tour of the bayside at the same time thereby providing both transit and recreational benefits.

e) Explore use of the water taxi concept for use between the Town and the mainland (possibly Ocean Pines). Link any water-based taxi or ferry services to land-based transit systems.

f) Augment boat access under the Kelley Memorial Bridge with a second access point for small boats. This would reduce the use of the draw span, thereby increasing boating safety and decreasing automobile traffic problems.

g) Coordinate with SHA on the future design and replacement of the Route 50 Bridge to allow improved small boat access separate from the main channel, pedestrian/bayside boardwalk connection underneath, maintaining the S. Division Street to S. St. Louis Avenue local street connection, providing adequate pedestrian and bicycle access to West Ocean City, possible adaptive reuse of the existing bridge as a fishing pier.

~~5)~~6) Airport

a) Continue to improve the safety and operational elements of the airport.

b) Maintain and improve the runways for use by critical aircraft.

c) Increase hangar capacity to meet demand.

d) Improve taxiways.

e) Work with Worcester County to ensure compatible land uses in the vicinity of the airport.

f) Request Worcester County to extend the existing priority funding area (PFA) boundary south to include the Airport and adjoining developable property.

g) Improve navigational aides to include G.P.S., lighting, and signage to improve the safety and utility of airport.

h) Support and encourage scheduled commuter services to the airport.

CHAPTER 5: Community Facilities & Public Safety Services

Ocean City's public services and utilities are of vital importance to all aspects of daily life. The provision of water supplies, wastewater treatment facilities, solid waste disposal services, libraries, parks and recreation areas as well as police, fire, medical and emergency management services are essential to the health, safety and welfare of the community. Adequate maintenance and expansion of community facilities is necessary to meet peak seasonal demands while allowing for incremental growth and redevelopment.

Goal:

To provide for the continued maintenance, operation and expansion of community facilities along with a complete and efficient system of public services necessary to ensure the health, safety, and welfare of residents and visitors and the economic prosperity of the community.

Objectives

In order to achieve the community facilities and public services goal, the following objectives are adopted.

5.1 A full range of services will be provided to meet the needs of year-round residents and seasonal visitors.

5.2 City-wide water, sewer, and solid waste systems will be expanded and improved when necessary to provide cost efficient service for planned growth.

5.3 Public safety services will meet the year round needs of the resident population, and expand to meet peak seasonal demand.

5.4 Provide a high quality public beach, boardwalk, parks, water access, and other sport facilities to meet the recreational needs of year-round residents and vacationers.

5.5 A variety of recreational outlets will be provided to meet the needs of all age groups, including special events and free programs to promote family oriented activities.

5.6 Ocean City will cooperate with the Worcester County ~~school district~~Board of Education to provide high quality education that is able to prepare students for a rewarding and productive future.

5.7 Ocean City will coordinate with Worcester County to maintain and

enhance the —library system.

5.8 Sufficient resources will be allocated to plan for and implement necessary emergency management measures. Community resilience in post storm/disaster recovery will be developed to quickly restore community facilities and infrastructure.

5.9 Ocean City will cooperate with state and county officials to ensure a complete range of social and human services.

5.10 Developer-constructed infrastructure will be constructed to appropriate City and State standards. Adequate performance bonds will be required from developers as needed.

5.11 Use of community facilities to support special events will be coordinated with public services to actively manage and minimize impacts to the community.

5.12 Incorporate Capital Improvement Plan projects adopted by the Mayor and City Council into the Comprehensive Plan by reference.

Water System

The following section provides an overview of present conditions and current plans regarding various aspects of the Town Water System including discussion of current and planned water system demand and supply, water treatment and water supply storage facilities and capacity.

Water Demand

A review of the Comprehensive Water Supply Study was made by Whitman Requardt & Associates (WR&A) in 2014 in order to update the plan for implementing improvements that will enable the Town's water system to meet the following primary objectives:

- Meeting the projected water system demands at least to the Year 2025
- Compliance with current and proposed regulatory requirements
- Continuing to provide a safe and affordable drinking water for its customers
- Extension of the useful life of the facilities
- Conceptual planning for possible future desalination

The Town's water system must have adequate capacity to serve the seasonal peak weekend population. The Year 2025 Peak Summer Seasonal Population, as projected in Chapter 1 is 381,114. Based on an average usage rate of 44 gallons per capita per day (gpcd), the corresponding maximum day system demand for the Year 2025 is projected to be 16.8 million

gallons per day (MGD).

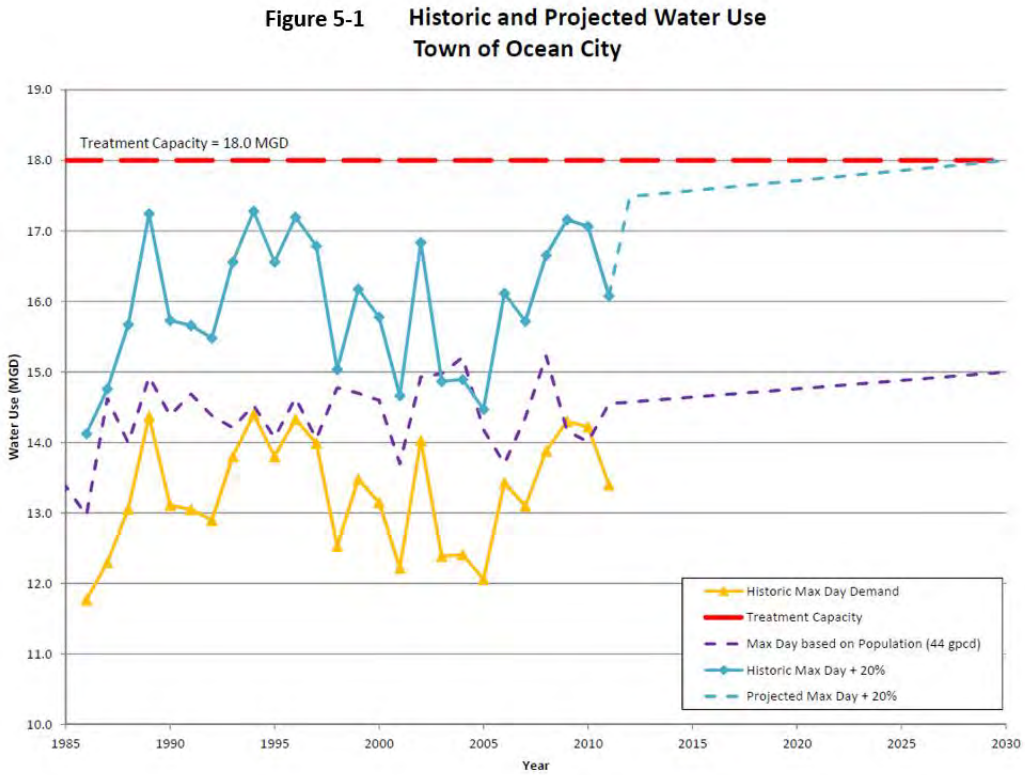


Figure 5-1 Water Use

Water Supply

The existing raw water supply for Ocean City, MD consists of 17 groundwater wells in the Ocean City Aquifer and 9 wells in the Manokin Aquifer. The location of the wells have been spread out to the extent possible to reduce the effects of seasonal draw down and to minimize the potential for increased salt water intrusion by up-coning in specific areas. The current available raw water supply safely exceeds the treatment capacity of each associated treatment plant. The ongoing well testing and rehabilitation program should be maintained in order to ensure that the current well capacities will continue to be available. The current permitted allocation (8 MGD annual average/17.6 MGD daily average in the month of maximum use) is more than adequate to meet the projected water demands to the Year 2025.

Table 5-1 identifies water supplies pumped monthly to serve the Town for the years 2000, 2005, 2010 and 2015. Figures shown reflect the great seasonal variability of demand for water supplies in a single year. Through the five year periods shown, annual pumpage has remained relatively constant from just over 1.7 billion gallons to 2.0 billion gallons.

Ocean City Water Department Monthly Pumpages

Month	Year 2006	2005	2004	2003	2002	2001	2000	1999	Totals
January	82.11	70.34	82.29	64.18	70.96	73.81	98.11	59.93	601.73
February	70.18	62.02	72.56	63.68	70.47	68.77	88.58	59.12	555.38
March	91.40	70.03	74.41	79.25	87.95	82.33	104.08	83.18	672.63
April	114.33	84.09	88.16	91.85	112.81	97.93	118.90	99.83	807.90
May	179.07	131.94	156.46	143.24	164.21	151.24	174.99	163.61	1264.76
June	256.97	219.23	222.49	220.33	255.98	238.83	244.17	252.80	1910.80
July	350.60	305.75	311.73	305.72	343.77	333.17	338.48	356.62	2645.84
August	346.94	308.76	298.74	313.64	336.29	327.46	324.99	321.44	2578.26
September	200.30	191.31	181.26	165.42	187.38	195.54	189.76	186.74	1497.71
October	127.77	108.16	105.03	113.60	113.47	122.37	124.62	123.93	938.95
November	96.81	80.94	68.60	84.49	83.14	87.45	89.94	99.41	690.78
December	88.08	79.01	65.92	72.39	72.76	75.58	78.06	85.96	617.76
Totals	2004.56	1711.58	1727.65	1717.79	1899.19	1854.48	1974.68	1892.57	14782.50

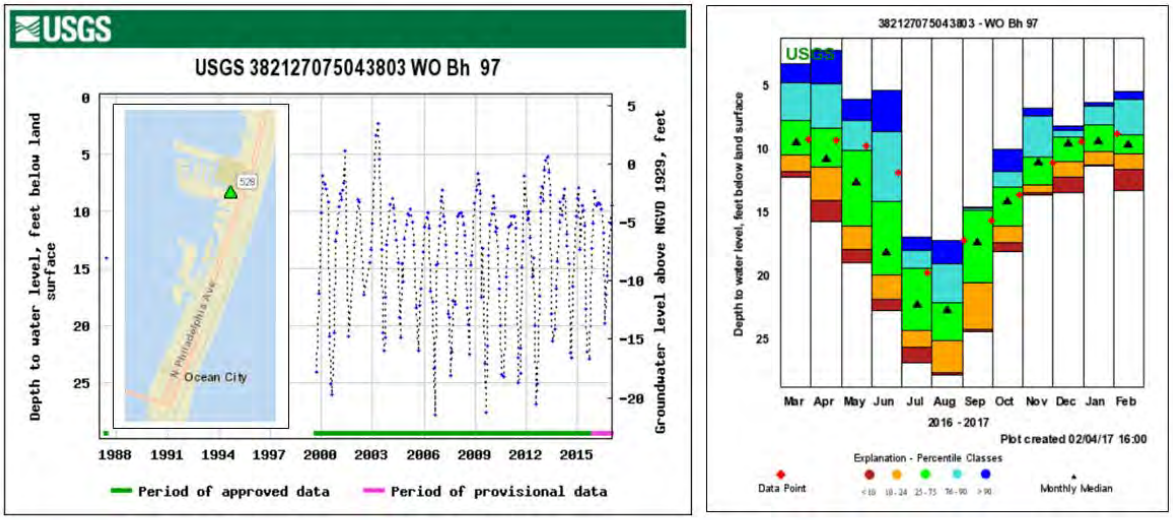
All Pumpages in Millions of Gallons

Table 5-1

Levels of water consumption reflect a number of factors including seasonal visitation, use of more efficient fixtures in new construction and redevelopment in recent years, and a growing use of water conservation measures.

Ocean City appears to have more than ample quantities of groundwater resources available in the Ocean City and Manokin aquifers for its projected growth and development. This is substantiated by extensive water level monitoring by the Town and other agencies. Despite withdrawal of approximately 55 billion gallons of water from the Ocean City and Manokin aquifers since 1955, with continued annual increased pumping, water levels still recover to nearly original levels when water demand diminishes in the winter.

Figure 5-2 Well Map



https://groundwaterwatch.usgs.gov http://www.mgs.md.gov/groundwater/water_level_mapper.html

Figure 5-3 Groundwater well monitoring

Evaluation of the Town's water demand and supply is described in the "Comprehensive Water Supply Study", prepared by WR&A consulting engineers, and the Town of Ocean City "Water and Wastewater Comprehensive Rate Study", dated February 24, 2015. Improvements to the water system will likely include the addition of a new well to meet future increased demand.

Water Treatment

Ocean City's water supply system includes 3 water treatment plants which treat raw water to remove iron, manganese, and chlorinate the water. The Town of Ocean City's water treatment and distribution system has several unique physical and operational characteristics as follows:

- Three separate water treatment facilities that supply water to south, central and north portions of the system with only one facility typically operating during the low water demand months
- Relatively long (10 miles) and narrow (0.2 to 1.0 miles wide) configuration
- Six elevated water storage facilities spaced along its length at same overflow elevation of approximately 118'
- Dramatic seasonal water demand fluctuations due to differences in population served (7,000 full-time residents and over 300,000 visitors during a peak summer weekend)

The current treatment capacity is based upon the following:

15th Street WTP	6 MGD*
44th Street WTP	4 MGD
Gorman Avenue WTP	8 MGD
Total	18 MGD

**Current treatment capacity is down-rated based upon Town's concerns regarding performance at higher rates (Actual design filtering capacity for 15th Street WTP = 8 MGD)*

The existing water treatment facilities are producing an excellent quality potable water meeting all regulatory requirements. Improvements completed at the plants over the past several years have improved operations, improved reliability and extended the useful life of the facilities.

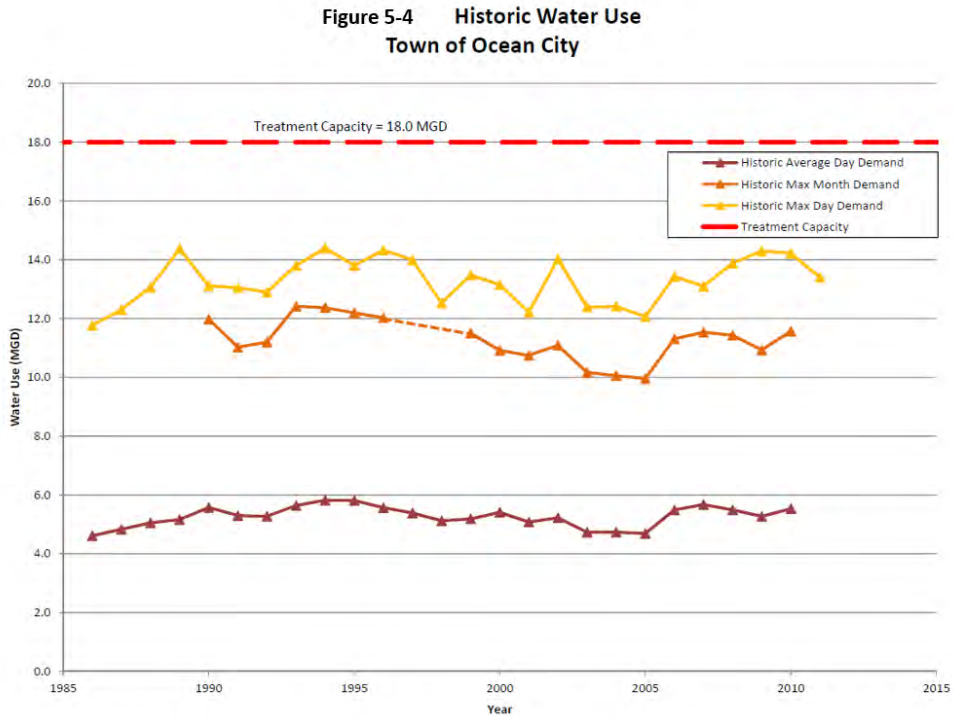


Figure 5-4 Water Use and Capacity

The current design treatment capacity of 18 MGD is more than adequate to meet the projected 2025 maximum day demand of 16.8 MGD. Allowing for an estimated 4% waste as typically required for filter backwashing of the iron removal filters, the current 18 million gallons per day (MGD) treatment capacity will support a maximum water demand of approximately 17.3 MGD (18.0/1.04).

The 17.3 MGD maximum available treatment capacity that may be delivered to the water system is slightly less than the 18 MGD projected maximum day water demand for the Year 2030. However, since the projected 18 MGD maximum day water demand (at Year 2030) includes a 20% allowance for planning purposes, there is no immediate concern that there is a 0.7 MGD deficit (18.0 – 17.3) between projected water demand and deliverable treatment capacity.

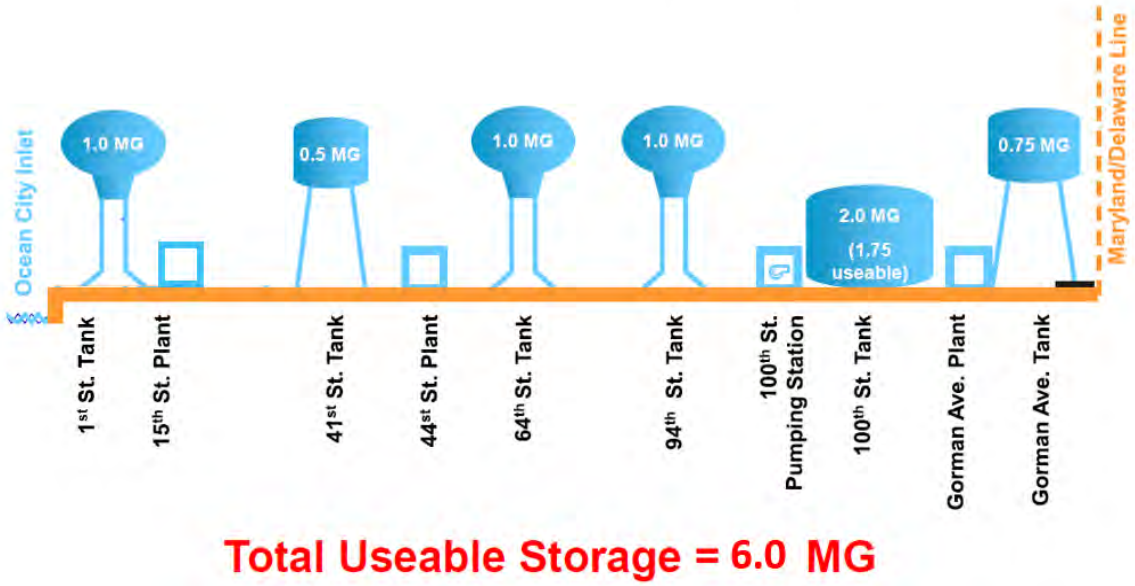
This projected water delivery deficit can be addressed by the continued periodic review of actual and projected populations and water demands to confirm future water supply needs; conceptual planning for future expansion or enhancement of the water treatment capacity; along with the subsequent implementation of necessary treatment expansion or enhancements when required. In addition, the potential need for desalination facilities in the future to address salt water intrusion must also be factored into water treatment facility planning since desalination facilities typically involve an additional waste component that would further reduce the delivery capacity of the water treatment facilities.

The Town's Capital Improvement Plan (CIP) continues to include projects for planned infrastructure upgrades such as the replacement of aging and obsolete equipment in order to maintain its current high level of operational reliability.

Water Storage and Distribution System

The water distribution system includes 8 water storage tanks; 7 elevated tanks and 1 ground level tank. There is a total useable storage capacity of 6.3 million gallons. The present storage tanks have adequate capacity to support a maximum day demand of over 16 mgd. New elevated storage tanks, constructed at 66th Street and 1st Street have increased storage capacity to satisfy demand for the next 10 years. Needs for additional storage capacity beyond that period will need to be assessed as part of the 2017 water system plan update. The location and capacity of both existing water storage and treatment facilities are shown in Figure 5-5. The chart illustrates size and length of the distribution system which totals over 96 miles of water pipe.

Figure 5-5
Ocean City Water System



Total Useable Storage = 6.0 MG

(Source: Modified from the Town of Ocean City 2015 Water and Wastewater Comprehensive Rate Study)

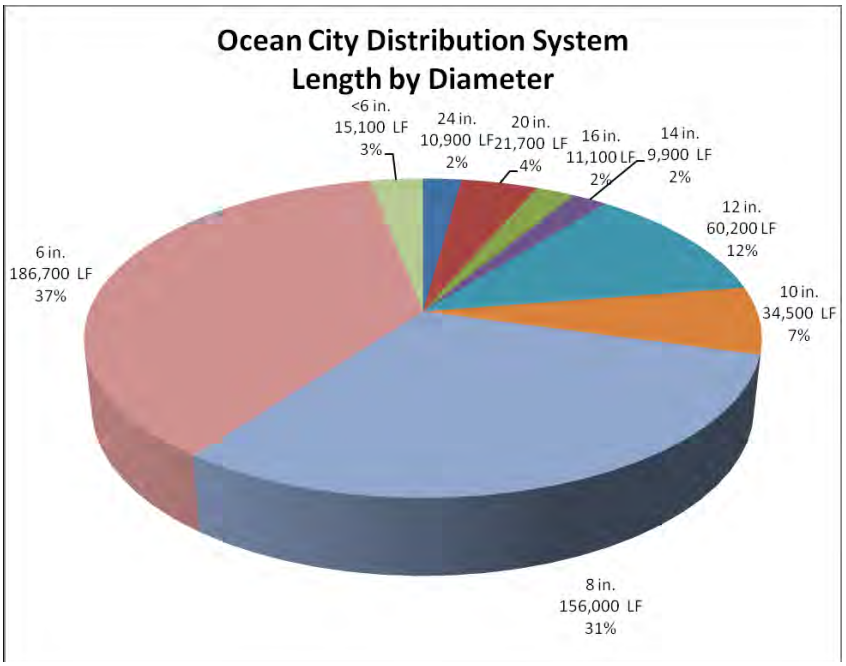


Figure 5-5 Water Storage and Distribution

Saltwater Intrusion

An area of concern to Ocean City's water supply is saltwater intrusion, which is the horizontal movement of saltwater into the freshwater aquifer from under the ocean or the bay. It could also occur from a vertical movement by downward leakage from the ocean or bay, or upward leakage from lower aquifers.

Testing in the past had shown a rise in chloride levels in the 44th Street area. This is caused by heavy year round water use in the area and leakage between the Ocean City aquifer and the saltier Manokin aquifer in this area. The upconing of salt water at the 44th street plant stabilized after much of the pumpage was shifted to the Gorman Avenue Plan in 1989 and 1990, indicating a state of equilibrium may have been reached. Salt water intrusion is occurring in localized parts of the unconfined Columbia Aquifer, but it is not considered a major threat.

The "Comprehensive Water Supply Study", prepared by WR&A, recommends spacing future wells to distribute drawdown from the aquifers and relieve the salt intrusion in any particular area. The study also notes that any future water supply production wells should probably be located in the northern part of the Town where the hydrogeologic conditions are more favorable with respect to available drawdown and salt water intrusion. The Study also states that future planning must recognize the possibility of saltwater intrusion, and flexibility in design of the water supply system must be provided so that the problem may be addressed if and when intrusion occurs. Adequate area has been allocated at the WTPs to install treatment systems for the desalination of brackish water if needed in the future.

Water System Improvement Needs

The "Comprehensive Water Supply Study" contains an extensive list of planned system improvements. Many of these improvements have been implemented by the Town through the Water Fund. The study is currently being updated and will be based on pertinent growth policies and projections in this Comprehensive Plan. Future monitoring and system evaluation should include annual and long groundwater recharge rates relative to other Comprehensive Plan goals for year round tourism marketing and growth of the permanent resident population.

Wastewater Treatment

In 1994, the Town of Ocean City assumed control of the Ocean City wastewater system from the Worcester County Sanitary Commission. The system has collection, treatment and disposal capabilities. The treatment plant at 64th Street was constructed in 1969, with expansions and secondary treatment upgrades completed at regular intervals.

The Ocean City Wastewater Treatment Plant (WWTP) currently has a rated capacity of 14 MGD based on average daily flow. The WWTP service area includes the entire Town of Ocean City as well as a portion of wastewater flow (1 MGD) from West Ocean City, conveyed to the Town by a Worcester County pump station located in West Ocean City.

The wastewater collection and conveyance system consists of sewers ranging in size from 6 inch to 48 inch diameter which convey wastewater from the north and south along Coastal Highway to the wastewater treatment plant located at 64th Street. The conveyance system includes eleven pumping stations which lift wastewater flows into the interceptor in areas where gravity flow is not possible.

Sewer lines and manholes that are worn and failing require repair or replacement in order to avoid blockages, structural collapse, sanitary sewer overflows, etc. The current inventory of sanitary sewer pipes known to need repair or replacement that are beneath the streets that have recently been paved is approximately 10,000 linear feet. Sewers north of 26th St are 40 to 45 years old. Sewer lines south of 26th Street are older including sections of old asbestos concrete pipes underground which need to be lined or replaced.

Treated wastewater is discharged to the Atlantic Ocean via an ocean outfall discharge. The Ocean outfall for treated effluent was constructed in 1968 and is regularly inspected for any needed repairs or maintenance. The portion of the pipe that lies to the ocean side of the air release valve (ARV) at the east end of 64th street consists of approximately 4,200 linear feet of 30 inch pre-stressed concrete cylinder pipe (PCCP). The current ocean outfall capacity will continue to create an ultimate limit on future growth and development along with determining required treatment technologies.

The WWTP produces Class A biosolids which are disposed of by Enviro-organic Technologies or at the county landfill. In addition, biosolids that do not meet Class A requirements (i.e. "off spec" biosolids that meet Class B requirements) are also disposed of at the landfill. Pending regulations may restrict the ability of the plant to dispose of biosolids at the current locations, resulting in increased cost for disposal of all biosolids in a landfill. Based on these significant potential cost increases, it is recommended that a thorough survey of other available disposal options be conducted including other viable disposal locations, or improvements to the biosolids process which would allow for wider distribution of the end product.

Because of the seasonal nature of the influent flows, the plant's treatment capacity is based on maximum monthly flows, which occur only during the summer months. Figure 5-6 shows the actual maximum month wastewater flows for the period from 1990 through 2015 and provides projections for maximum month flows to the year 2020.

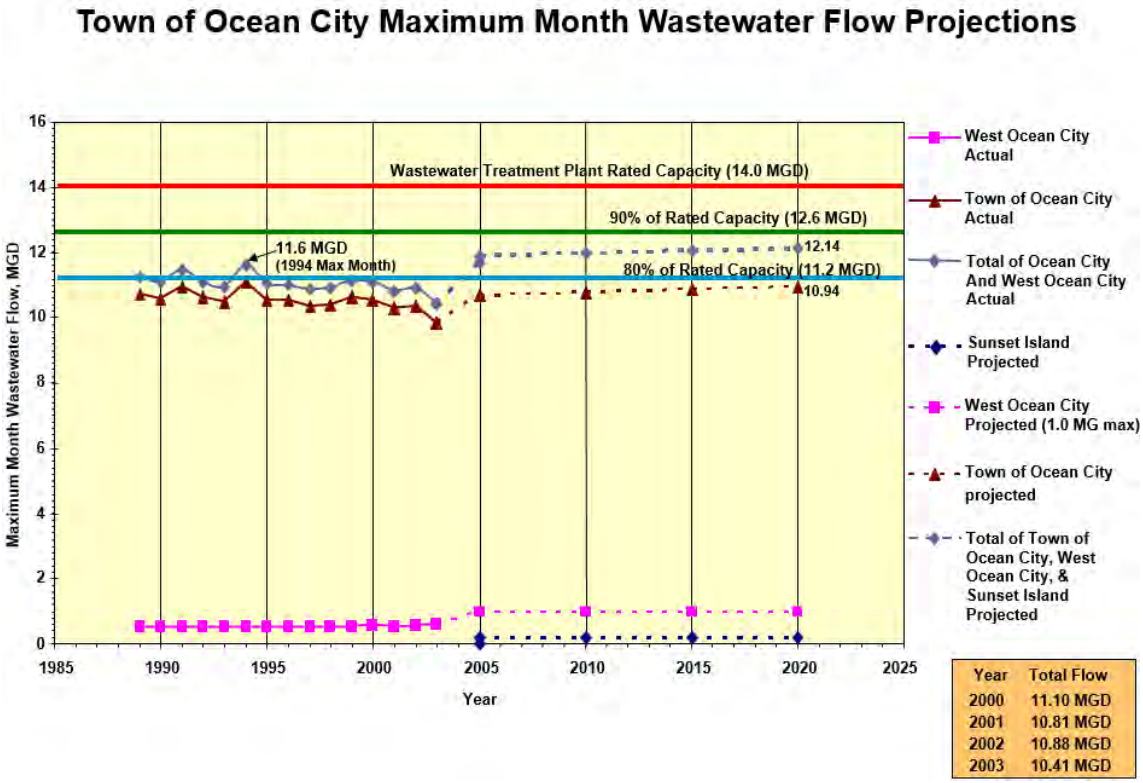


Figure 5-6 Historic Wastewater Flows

Year 2030 maximum wastewater treatment flows are projected to increase to approximately 12.14 MGD for the Town of Ocean City and West Ocean City combined. Work is currently being conducted by the City to evaluate needs for future wastewater treatment plant improvements to meet future peak demand, new technology and water quality standards. Additional information is available in the 2015 Water & Wastewater Comprehensive Rate Study.

Storm Water Management

Three approaches are used in Ocean City to remove stormwater from City streets. Sheet flow is used on the ocean block and essentially it uses the street to conduct the water west to Coastal Highway and eventually to the bay. On Coastal Highway and the bayside, both a traditional stormwater drainage system and sheet flow with sediment basins are used.

The pipe and catch basin system suffers from the island's lack of elevation change. Without the required fall, water can back up. Several streets on the bayside are simply sloped toward the bay and canals. At the end of the street, a sediment or infiltration basin typically removes pollutants and debris. Use of sheet flow on the ocean block results in regular shallow flooding of Coastal Highway. It is not uncommon for the eight lane road to be reduced to two slow moving lanes during a heavy rainfall.

Private and public development is required to meet all State and local stormwater management regulations. Typically as more development covers the land with concrete and black top, stormwater problems will increase. With redevelopment, Ocean City requires use of several alternatives for controlling stormwater on site, including infiltration beds and trenches, pervious black top and open cored pavers. These items as well as "low impact" development techniques are used to the extent possible to attenuate stormwater flows, reduce sedimentation and improve the overall quality of stormwater discharges.

The environmental aspect of stormwater is further discussed in the "Sensitive Areas and the Environment" Chapter of this plan. Ongoing efforts to improve the Town's stormwater management system include:

- Continue stormwater system improvements on Coastal Highway to reduce flooding.
- Continued improvements to the downtown's storm sewer system including a demonstration project to install tide gate backflow preventers at the bayside outfalls.
- Requirements for on-site control measures when re-paving and landscaping installations present opportunities.
- Continuing evaluation of standards and requirements for open space and landscaping in Town ordinances and regulations.
- Measurement and management of water quality controls to meet adopted nutrient contributions to the coastal bays.
- Drainage system maintenance including street sweeping, catch basin inserts, and sediment basin clean outs.

Ocean City has 205,655 linear feet (over 40 miles) of pipes to channel the gravity flow of storm water. 82,974 linear feet (about 15 miles) of this pipe is corrugated metal pipe which is known to deteriorate in a salt-water environment. The stormwater system at risk was generally installed in the 1970's and is overdue for replacement with an estimated cost of $6.14 million (Source: EFC Feasibility Study for Stormwater Management, 2011). The system also includes approximately 318 outfalls, 1,794 inlet/catch basins and 86 manholes.

The EFC study identified approximately $12 million in needed stormwater system improvements by 2020 in order to address an aging conveyance system (corrugated metal pipes), flooding, water pollution from urban runoff, and annual system maintenance. A dedicated funding solution was proposed but not adopted by the City. Incremental improvements are made as streets are reconstructed and paved and with individual site redevelopment.

Ocean City's stormwater management program seeks to retrofit the system and use best management practices to improve natural drainage, reduce flooding and improve water quality with new development or redevelopment.

Solid Waste Management

The Town of Ocean City Solid Waste Department is responsible for collection of solid waste and the Town Recycling Program. Housed on 65th Street, the department currently establishes Winter and Summer waste collection schedules. Twice weekly residential collections are currently scheduled for Monday and Thursdays from 75th street to the Delaware line (Oceanside) and 75th to 135th street bayside and Tuesday and Friday from the Inlet to 74th street (ocean and bayside), and 136th to 146th street (bayside). Commercial collections (Front-end, 300 gallon containers, and containers with compactors) are provided throughout the Town five days a week.

Ocean City has converted its former recycling program to an 'energy from waste' process. By contract with Covanta 4Recovery, a leader in the field of solid waste management 'energy from waste' facilities, municipal solid waste is transported by truck and repurposed. Residents and visitors generate roughly 34,000 tons of solid waste per year. Rather than send this to a landfill, the trash is utilized as an alternate fuel source to generate heat and produce steam. On average, 670 kilowatts of electricity are produced for every one ton of trash that is incinerated, or enough to power 75,000 homes annually. The 'energy from waste' process also includes post incineration metals separation to complete the recycling process.

Current initiatives by the Town Engineering department and partner organizations have focused on several clean-up programs to reduce litter on the beach, public streets, downtown areas and the boardwalk. The Town's 'Green Team' members have also identified a goal to reduce the use of plastic and Styrofoam containers through cooperative purchasing of environment friendly products by the restaurant industry.

Recreation and Parks

Ocean City offers a variety of recreational opportunities and services to its year-round residents and visitors. In addition to the opportunities provided by a 10 mile long public beach, recreational programs offered include camps, classes, clinics, sports, events and tournaments. Lessons in exercise, fitness, dance, and gymnastics, creative arts, swimming, first aid and CPR, boating and seamanship to name a few, are given. Programs are structured to support the needs and interests of adults, seniors, and youth of all ages. Special events and outings round out the spectrum of recreational program offerings.

A wide range in the nature and type of park and recreation facilities managed by the Town support the broad range of program offerings. These facilities include:

Ocean City Beach – The number one attraction for Ocean City is the ocean beach. Extending from the Inlet north to the state line, the beach is the largest public use area (331 acres) providing recreational open space within short walk from every resident and visitor in Ocean City. Beach use is being expanded to include special events, sport tournaments, and recreational structures such as Wally the Whale and a new playground at Somerset Street. Construction of a new public restroom at Caroline Street includes a performance stage facing the beach that supports a free summer concert series.

Inlet Park - A small recreation facility, Inlet Park is located at the southernmost end of Ocean City. The facility provides a boardwalk complete with viewing binoculars and information signs overlooking Assateague Island. The park is approximately 1/5th acre in size and serves as the first link of a future bayside boardwalk. The park is marked by the presence of a large Native American sculpture and is home to Ocean City's marble topped time capsule.

Entry Park - Another small park and open space located on North Division Street directly at the foot of the Harry Kelley Bridge (Route 50 entry to the Town). Entry Park is just under one acre in size and is home to the Marlin Sculpture and is in an excellent location to inform visitors and promote awareness of seasonal Town sponsored events and activities like Winterfest.

Sunset Park - Located on South Division Street west of South Philadelphia Avenue, Downtown. Amenities include restrooms, stage, exhibits, crabbing & fishing. Ocean City's newest park is a promenade with native shore planting areas with a panoramic view of the Atlantic Ocean, Assateague Island, the Sinepuxent Bay and Ocean City Commercial Harbor. The stage at Sunset Park is home to concerts and gatherings in the summer and early fall.

Beach Volleyball Courts - Located just off the boardwalk between Third and Fourth Streets this facility provides 4 public courts available for pick up play during summer daylight hours.

Third Street Park - Located in the Downtown Recreation Complex, this 2 acre park facility includes basketball courts, a small ballfield for softball play, as well as playground facilities. The facility includes the Ocean Bowl Skate Park, with facilities for skateboarders and in-line skaters, and includes a pool bowl, vert ramp, mini ramp, and concrete street area. Across the street two hard tennis courts have been constructed. Lighting is provided for evening use at this facility.

Fourth Street/Chicago Avenue Park - Located in the Downtown Recreation Complex this 2 acre park facility hosts a multipurpose lighted ball field and accommodates bay-front fishing and crabbing on Chicago Avenue's Victorian themed "Promenade" area.

Ninth Street Fishing Pier - This fishing access location includes maintained pier facilities and fish cleaning tables with hoses for cleaning.

Robin Park - A small neighborhood park, located on Robin Drive, which is approximately 1/4 acre in size. Park improvements include Picnic tables, landscaped open space, and playground facilities for younger ages.

Convention Center Park - Located on 41st Street and Bayside, Convention Center Park provides a pier along the bay offering fishing and crabbing opportunities.

Ocean City Tennis Center - Located on 61st street bayside, the Ocean City Tennis Center is the Town's largest and most actively used tennis facility. The site consists of approximately 2.5 acres. The facility features six premier courts and three Lee Fast Dry Clay courts. Leagues, junior tennis, and clinic play are centered in this location.

Little Salisbury Park - Located on 94th Street and Bayside, this Park facility is home to the Ocean City Art League. Approximately 1.36 acres in size, improvements include two hard tennis courts, one playground, and a basketball court. Ocean City's first 'dog park' has been added in an adjacent area of open space.

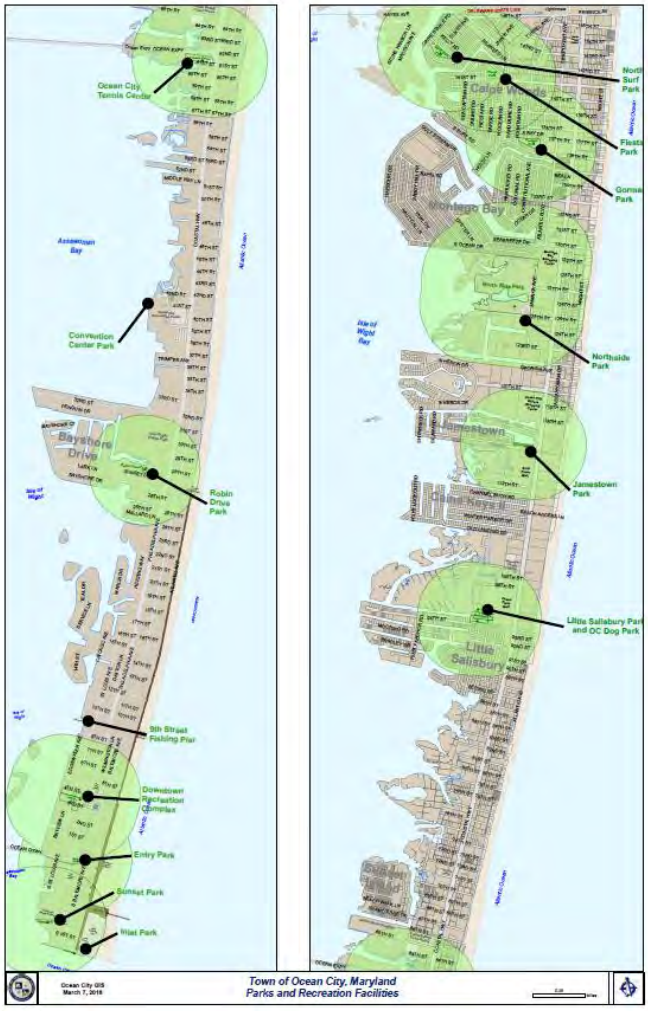
Jamestown Park - Located at Jamestown Road is the Town's newest landscaped promenade.

Northside Park - Northside Park is Ocean City's largest and most popular park facility, located on 125th Street and the Bay. The facility is headquarters to the Park Department's administrative offices and is 58 acres in size. Improvements include three lighted softball/baseball fields, a lighted soccer field, multipurpose field, a fishing lagoon, a foot bridge, concession stands, playgrounds, picnic shelter, two piers, a gazebo, and

walking/jogging paths. Indoor facilities include a large building with a 14,200 square foot gymnasium, kitchen, community room, conference room, patio, sitting areas and a sports center annex with a 21,000 square foot multi-sport arena. The park is home to Winterfest, Sundaes in the Park and Arts Alive special events, and supports year round team sports competition.

Gorman Park - Located at 136th Street and Bayside, just off Derrickson Avenue, Gorman Park is improved with one tennis court, one three wall racquetball court, and playground. The park is approximately 1.8 acres in size.

Fiesta Park - A wooded, neighborhood park facility Fiesta Park is located on 141st Street and Bayside. 2.96 acres in size, improvements include nature trails and picnic area.



Map 5-1

North Surf Park - This neighborhood park is approximately 1.96 acres in size. Located adjacent to North Surf Road (left off 142nd Street), this park facility includes a playground and facilities to support picnicking. Rolling turf and scattered trees make this one of the more attractive park facilities in the community.

The location and distribution of these park facilities is shown on Map 5-1. Park facilities are located on approximately 80 acres of public lands dedicated to recreation and park use in addition to the Ocean Beach. Distribution throughout the community means that at least 50% of all residents are within a 5 minute walk (1/4 mile radius) from recreation and park facilities and everyone is linked to other facilities in the community by the transit bus system and a network of sidewalks and bike routes.

One of Ocean City's strategic plan priorities is to prepare a Recreation and Parks Master Plan which will inventory existing facilities, identify recreational needs and new opportunities, and propose management actions for the future. This Plan will be completed in 2017.

Ocean City has also joined with nearby communities to promote a sports marketing partnership which will encourage economic development and a regional approach to meeting demand for land intensive recreational facilities such as ball fields, indoor pools, etc.

Public Safety Services

The Town of Ocean City government provides a full array of public safety services to meet the needs of its residents and visitors. Due to the resort nature of the Town and the swings in seasonal population and demand for services, the government is challenged to scale the level of service to meet seasonally dynamic needs and provide 24 hour staffing. As with other community facilities, the physical location and support facilities for public safety services are sized for peak demand, and co-located where possible with other uses.

Public safety services are described below. More detailed on each is available in specific departmental plans, mission statements, and budgets.

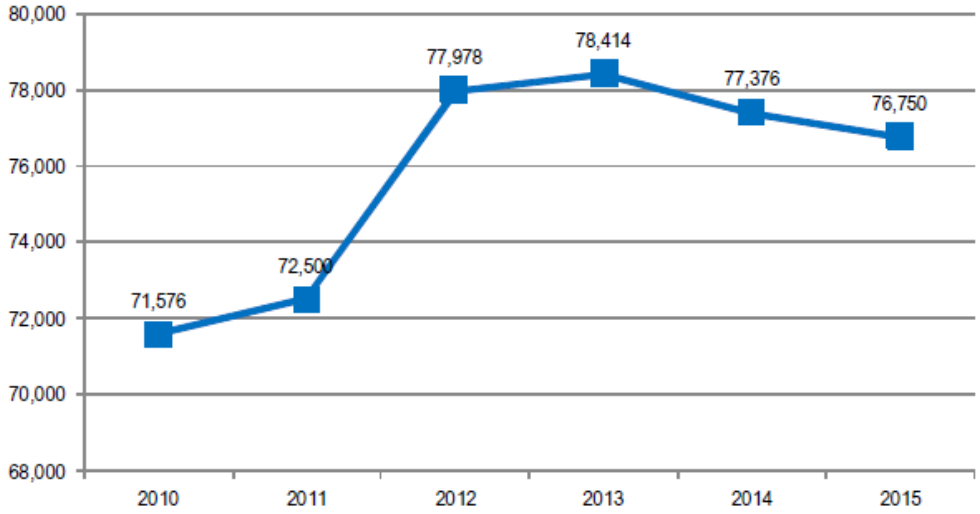
Ocean City Police Department

The OCPD is located in the Public Safety Building on 65th Street adjacent to the District Courthouse. Also located in the Public Safety Building are the Communications Center, Emergency Medical Services, and Emergency Management. The OCPD enforces the criminal and traffic portions of the Code of Ocean City within its jurisdiction including the corporate limits of Ocean City to three miles off-shore. The bays and ocean are not regularly patrolled, but the department has jurisdiction to continue pursuit in these areas.

The OCPD provides 24-hour service with 132 full-time employees augmented by 154 temporary employees during the summer season. The Office of the Chief is supported by three divisions: Support Services, Criminal Investigation, and Patrol. A seasonal substation is located on Worcester Street on the boardwalk. In addition to regular patrol assignments, police support units function for training; records; detention/ K-9; traffic; equestrian unit; animal control; a quick response team, and narcotics enforcement. The department staff includes public safety aides, who are responsible for processing and transporting prisoners, enforcing parking laws, directing traffic and generally assisting visitors.

In 1996 the OCPD responded to 18,690 calls for service. By 2001 calls for service more than doubled growing to 52,110. Calls for service in 2003 totaled 54,198 reflecting more moderate increases in number of calls during the past three years. By 2015, total calls for service reached 76,750. A call for service is generated for nearly anything that an officer does while on duty

including traffic stops, residential security checks, lost child, or major criminal event just to name a few. Figure 5-7 illustrates a peak in calls for service in 2013 and a steady reduction in recent years.



MONTH	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
OFFICER-INITIATED	2,200	2,098	2,455	2,330	5,678	9,443	10,419	8,189	4,015	3,796	1,854	1,765	**54,242**
CITIZEN-INITIATED	704	957	788	990	2,680	3,915	4,087	3,830	2,021	1,261	622	653	**22,508**
TOTAL CALLS FOR SERVICE	2,904	3,055	3,243	3,320	8,358	13,358	14,506	12,019	6,036	5,057	2,476	2,418	**76,750**

Figure 5-7
Police Department Calls for Service (2015)

Table 5-8 provides a profile of the serious crimes experienced in Ocean City as identified in the OCPD's "Uniform Crime Report" for 2015 as well as the more recent five year period (2010 through 2014). Uniform Crime Report / Part 1 crimes in Ocean City are reduced 11% from the previous year and hit the lowest mark in 25 years. Other crime statistics are available in the Police Department Annual Report.

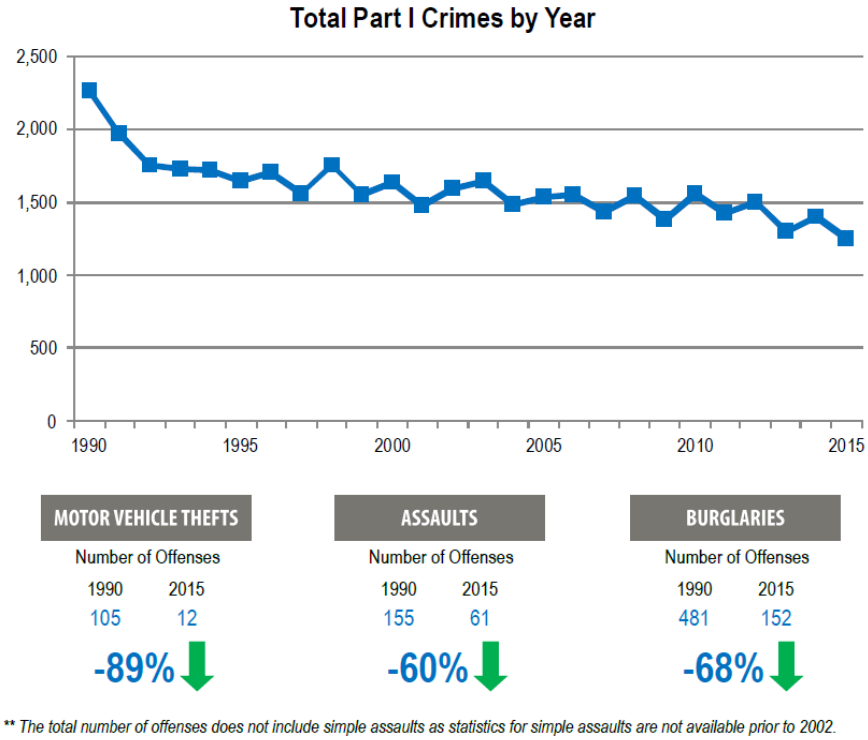


Figure 5-8

Community policing is at the core of the Department's commitment to provide quality police services and assistance to the community. Several current initiatives by the OCPD include:

- Flex Patrol – Officers on a specialized shift focused on addressing neighborhood issues held flexible hours that allowed them to effectively prevent or enforce incidents such as bicycle theft and burglary.

- Special Enforcement – Plain-clothes officers with specialized training concentrate on enhancing the overall safety on the Boardwalk and throughout downtown areas.

- Auxiliary Officer Program – Civilian volunteers receive training and provide valuable service in support various administrative and community relations functions of the department.

Emergency Management and Communications

The Office of Emergency Management and the Emergency Communications Center is located in the Public Safety Building on 65th Street. The Communications Center answers calls and dispatches for the Ocean City Police Department, Emergency Medical Services, and the Volunteer Fire Department.

In addition to traditional civil defense activities, the Office of Emergency Management (OEM) provides preplanning and coordination for localized emergencies and large special events. This work requires assessing potential hazards, determining appropriate responses, and providing for recovery.

The OEM Director is responsible for the Town's compliance with Federal Emergency Management Agency (FEMA) disaster guidelines. This four phase approach contains elements of:

- Preparedness: anticipating problems and their severity.
- Mitigation: pre-emergency actions to reduce hazard impacts.
- Response: planned procedures and actions during the emergency.
- Recovery: post disaster rebuilding and re-establishment of keys services.

These functions are detailed in the Hazard Mitigation Plan and the Emergency Operations Plan. The plan covers hurricanes, storms, floods, fire, building collapse, chemical incidents, accidents, plane crash, rip tides and oil spills.

The Town's OEM Director, in cooperation with FEMA, has prepared a Hurricane Evacuation Plan. This plan provides estimated damages and flood elevations for a variety of storm paths and intensities. This work also makes recommendations for emergency evacuation procedures.

A "Post-Disaster Recovery Plan" prepared in conjunction with the Department of Planning and Community Development should be periodically updated to accomplish the following:

- Expedite community recovery by outlining procedures and requirement for repairs and reconstruction before damages occur.
- Establish procedures for putting hazard reduction measures into effect after disaster strikes while buildings and utilities are being repaired and rebuilt.
- Gather and analyze information about the potential location and extent of damages.
- Assess the vulnerability to damage and guide reconstruction to reduce future damages.

Beach Patrol

The Beach Patrol provides emergency ocean rescue and beach safety services from the Inlet to the Delaware Line, seven days a week from Memorial Day to late September. The seasonal staff of about 200 are stationed at lifeguard stands distributed along the beach. These stations are typically located based on the intensity of beach use.

Beach Patrol Headquarters was reconstructed in 2015 as a downtown landmark building on Talbot Street and also supports the OCPD bike patrol. The Patrol is equipped with four-wheel

drive trucks, ATVs, personal watercraft, 800 mhz radios, and the familiar semaphore flags. It is estimated that in a typical season, the Patrol goes to the rescue of about 2,500 bathers, handles 1,000 lost children, and is called on for first aid about 500 times.

Emergency Medical Services

The Town of Ocean City Emergency Medical Division provides pre-hospital emergency medical services to residents and visitors. Personnel provide emergency medical services and fire suppression/rescue services in conjunction with the Ocean City Volunteer Fire Company. The Fire/EMS division is staffed with 34 full-time and 63 part-time field personnel. The full-time staff consists of 32 nationally registered Paramedics/Firefighters and 2 Maryland Cardiac Rescue Technician-Intermediate/Firefighter. The part-time staff are certified as Emergency Medical Technician-Basic/Firefighters and Nationally Registered Paramedic/Firefighters.
A number of the staff have specialized training in rescue diving and hazardous materials management. In addition to field personnel, the Fire/EMS Division is supported by the Department of Emergency Services Administrative Office Associate.

Ocean City EMS personnel cover an area from the inlet north to the Delaware line and all, of West Ocean City. EMS units will also travel into southern Delaware and other portions of Worcester County if requested.

During the summer, certified EMS crews staff all fire department stations 24 hours a day. Stations are located downtown at Dorchester Street, 15th Street, 74th Street and 130th Street. Dorchester Street station is not staffed during the period from November to March each year.

Ocean City Fire/EMS has nine mobile medic units, three command vehicles and a special operations trailer. All ambulances are equipped to provide life-support medical services and are ready to respond year-round.

In 2015, the Ocean City Fire/EMS division responded to 6,327 calls, a 25% increase from 1996 when the department responded to 4,212 calls. The average response time per call is approximately four minutes. This is the amount of time between when the 911 call is received to when the ambulance arrives on the scene.

Fire Marshal

The Office of the Fire Marshal is responsible for enforcing local and state fire codes and investigating hazardous materials emergencies, bomb threats, and fires. Building plans are reviewed and structures are inspected to ensure code compliance. Seven full-time employees are included in this division and are located in City Hall.

Fire Department

The Ocean City Volunteer Fire Department consist of 200 + volunteer members along with 100+career employees (including the Office of the Fire Marshall) who provide fire protection to Ocean City and West Ocean City from 5 (five) stations. The town's emergency medical personal are stationed at each of the fire houses in the town limits. The fire stations and their equipment are inventoried below:

Stations	**Equipment**
Headquarters (15th Street)	1 – 95' Tower Truck 1 – Rehab/Canteen Truck 2 – Pumpers 1 – Heavy Rescue Truck 1 – Utility Truck 1 – Brush Truck 1 – Special Hazards Truck 1 – Utility Van 1 – 20' Rescue Boat
Station #2 (Dorchester Street)	1 – Pumper 1 – Special Hazards Trailer
Station #3 (74th Street)	1 – 105' Tower Truck 1 – Pumper 1 – Rescue Truck
Station #4 (130th Street)	1 – Pumper
Station #5 (Keyser Point Road)	2 – Pumpers 1 – 85' Snorkel Truck 2 – Tankers 1 – Air Cadet Truck 1 – Utility Van 1 – Pumper 1 – Pumper Foam Unit

In partnership with the Fire/EMS division, the OCVFC responded to 1,400 calls for service in 2015.

Ocean City maintains an ISO fire rating of 3.8, a rating of one is excellent with ten being the bottom scale. Only one other city in Maryland has a higher ISO rating. There are four basic factors affecting a municipality's ISO rating: 1) water supply, 2) the fire company capabilities,

3) emergency communication system, and 4) the extent of the town's fire safety/prevention programs.

Replacement of Station 4 in 2014, renovation of the Fire Department Headquarters in 2016, and a planned capital improvement to relocate and replace Station 3 at 65th Street will complete the final phase of the improvements recommended in the 2002 Fire Station Location Study.

Recommendations

1) Complete Public Works Campus Master Plan design, and begin phased implementation of facility improvements to consolidate and centralize municipal operations.

2) Evaluate impact fee or excise tax to confirm its use to offset costs associated with provision of infrastructure and delivery of public services prompted by new development or more intense re-development over time.

3) Complete update of Water and Sewer master plan to determine need or demand for upgrade of components of the Water supply and Waste treatment systems and how any needed improvements should be staged over time.

4) Continue with improvements to Northside Park including renovation of facilities, rest rooms, nature walks, athletic fields, basketball courts and event venues.

5) Re-design and re-construct Skate Park downtown.

6) Establish additional biking/hiking/jogging trails that increase appreciation of the area's environmental resources and provide alternate routes to the busy Coastal Highway corridor.

7) Construct an additional indoor recreational facility for soccer, lacrosse, or other activities.

8) Develop additional playgrounds to serve local neighborhoods and replace older existing equipment where needed.

9) Improve integration of planning documents such as the Capital Improvement Program, Hazard Mitigation Plan and Comprehensive Plan.

10) Support the Ocean City Volunteer Fire Department to develop a training facility in the West Ocean City Area.

CHAPTER 6: Housing

Introduction

Ocean City has long been considered one of the Mid-Atlantic area's premier beach and resort communities. As a result, many people choose to live, visit, vacation and own residential property in the community with the Town experiencing an extraordinary amount of new development, in both number of housing units and value over the years. For 7,100 permanent residents, 30,000 residential property owners as well as guests staying at over 7,500 hotel rooms, the quality of housing is an important part of the Ocean City experience. To sustain this value over the long term and to plan for future needs, the Comprehensive Plan refers to information from the U.S. Census to identify housing trends.

As this statistical information is updated, it is clear that there has been a relatively stable housing mix and adequate housing capacity for the last 10 years in Ocean City. The national economic recession beginning in 2008 has generally had the effect of reducing rapid escalation of property values and increasing housing affordability. While larger trends in housing supply and demand continue to be influenced by areas outside of the City limits in West OC and Sussex County, DE, Ocean City is adapting existing housing to meet demand for larger family groups, seasonal and employee rentals. This 'change of use' in residential housing can create new impacts on established neighborhoods and often requires building renovation to meet current codes and standards.

Goal:

To protect and preserve the traditional character of Ocean City's housing stock while ensuring that a sufficient variety of housing densities, types, sizes and costs is available to meet the existing and future needs of all residents, and continues to meet the needs of the visitor population.

Objectives:

In order to achieve the housing goal, the following objectives are adopted:

6.1 Protect and enhance the quality of residential neighborhoods.

6.2 Encourage a balanced housing stock with housing opportunities for all residents.

6.3 Increase housing inventory to provide affordable, adequate housing for young, working families and the seasonal employee population.

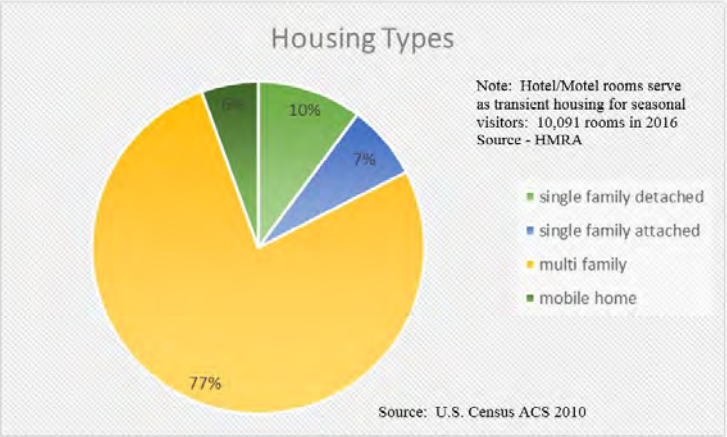
6.4 Require site plan and planning review for all major developments to ensure

functional design, quality living environment, and compatibility with overall Town character.

6.5 Adapt to changing market demands for rental housing by minimizing the impacts of short term rentals on established neighborhoods, and encouraging adequate seasonal housing for the workforce.

Housing Supply

Ocean City's housing inventory is comprised predominantly of multi-unit structures, the majority of which are residential condominiums. Single-family detached housing is an important resource for year round residents in Town and yet comprises only 10% of the total housing stock, compared to the County average of 40% (Table 6-1). The mobile home housing type is also significant, comprising 5.5% of the total number of units.



3,064
2,195
23,165
1,670
30,094
Total

Hotels
Existing Hotel rooms and seasonal rental apartments*: 10,091 units
*Source: Ocean City Hotel-Motel-Restaurant Association 2016 (may include overlap count of apartments which are also part of the Census multifamily residential units)

Table 6-1
Total Housing Comparison: Ocean City and Worcester County, 2010

Housing Units by Units in Structure	Ocean City	%	Worcester County	%
1 Unit Detached	3064	10.2%	22235	40.3%
1 Unit Attached	1399	4.6%	2803	5.1%
2 Units	796	2.6%	1061	1.9%
3 to 4 Units	1287	4.3%	1625	2.9%
5 to 9 Units	3037	10.1%	3825	6.9%
10 to 19 Units	4671	15.5%	4855	8.8%
20 or More Units	14170	47.1%	14708	26.7%
Mobile Home or Trailer	1670	5.5%	4059	7.4%
Boat, RV, Van, etc.	0	0.0%	0	0.0%
Total	**30,094**		**55,171**	

Source: U.S. Census, American Community Survey 2010

The overwhelming majority of multi-family units are in larger buildings or building complexes with three to nineteen units per structure. A review of building permit data from 1985 to 2015 reveals further that permits for structures with 5 or more units make up the largest percent of the Town's recently constructed housing type (Table 6-2).

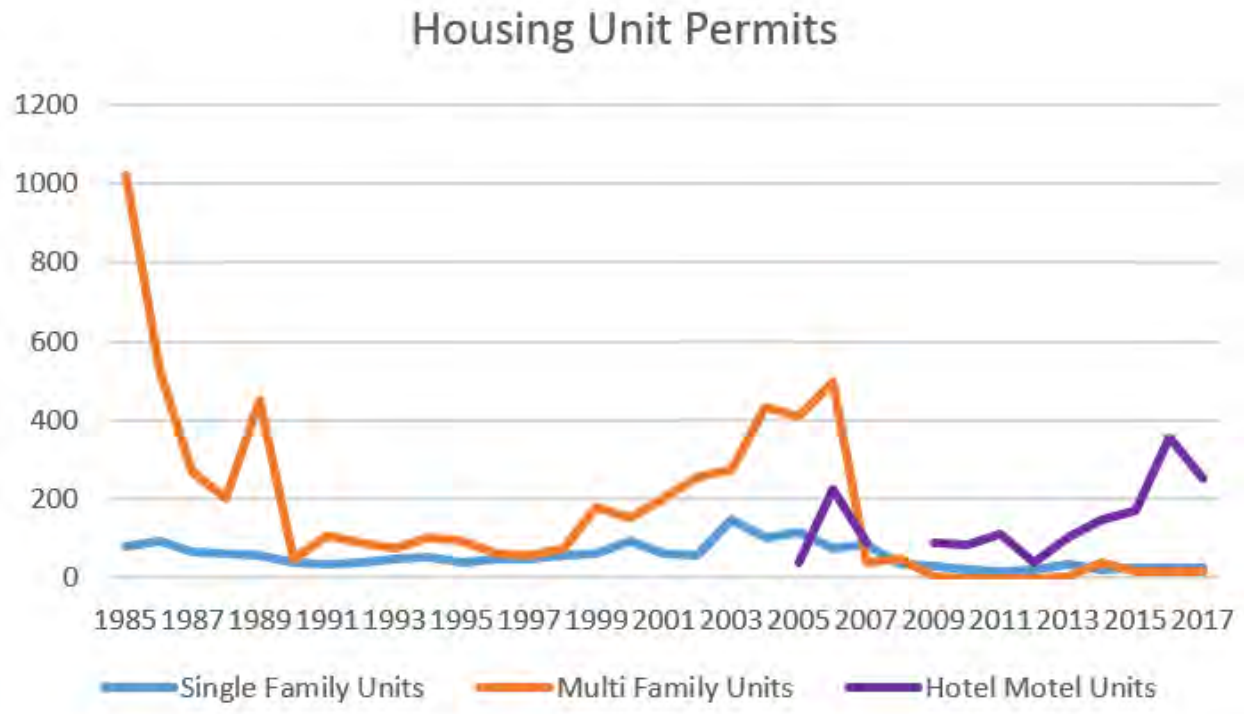
Table 6-2
Housing Unit Building Permits for Ocean City, 1985 - 2015

	TOTAL UNITS	TOTAL UNITS				UNITS IN ALL MULTI-FAMILY STRUCTURES			
YR	Total Units	Units in Single-Family Structures		Units in All Multi-Family Structures		Units in 2-unit Multi-Family Structures	Units in 3 and 4 unit Multi-Family Structures	Units in 5+ Unit Multi-Family Structures	
		#	% of Total Units	#	% of Total Units	#	#	#	% of Total Multi-Family Structures
1985	1,101	79	7%	1,022	93%	2	8	1,012	99%
1986	616	92	15%	524	85%	6	17	501	96%
1987	335	65	19%	270	81%	2	4	264	98%
1988	265	62	23%	203	77%	2	10	191	94%
1989	507	56	11%	451	89%	8	0	443	98%
1990	88	40	45%	48	55%	8	3	37	77%
1991	141	34	24%	107	76%	10	0	97	91%
1992	129	41	32%	88	68%	6	4	78	89%
1993	125	47	38%	78	62%	10	3	65	83%
1994	156	54	35%	102	65%	22	0	80	78%
1995	137	41	30%	96	70%	16	6	74	77%
1996	111	48	43%	63	57%	6	12	45	71%
1997	107	49	46%	58	54%	0	8	50	86%
1998	132	57	43%	75	57%	22	3	50	67%
1999	243	63	26%	180	74%	4	3	173	96%
2000	249	94	38%	155	62%	12	15	128	83%
2001	265	62	23%	203	77%	8	20	175	86%
2002	317	58	18%	259	82%	12	17	230	89%
2003	424	148	35%	276	65%	2	20	254	92%
2004	534	102	19.1%	432	80.9%	12	47	373	86.3%
2005	527	118	22.4%	409	77.6%	12	31	366	89.5%
2006	571	75	13.1%	496	86.9%	0	45	451	90.9%
2007	123	83	67.5%	40	32.5%	0	4	36	90%
2008	83	36	43.4%	47	56.6%	2	0	45	95.7%
2009	34	31	91.2%	3	8.8%	0	3	0	0
2010	23	23	100%	0	0	0	0	0	0
2011	17	17	100%	0	0	0	0	0	0
2012	20	20	100%	0	0	0	0	0	0
2013	42	37	88.1%	5	11.9%	2	3	0	0
2014	63	22	34.9%	41	65.1%	2	6	33	80.5%
2015	45	26	57.8%	19	42.2%	0	3	16	84.2%

Source: U.S. Dept. of Housing and Urban Development State of the Cities Data Systems, 2015

A significant spike in building permits for multi-family residential construction occurred from 1983 to 1987. In 1982, the total number of building permits issued for construction of multi-family housing units was 102. The following year the number was 2,013. In 1984 the number dropped slightly, to 1,972. In 1985 the number of building permits for multi-family units dropped by almost half to 1,022, and again by the same margin in 1986. By 1988 the annual number of permits being issued for multi-family housing units was down to 203. A significant downward trend in permits for multi-family housing units began a few years later, in 1990, when the total number of permits for housing units was only 88, 48 of which were for multi-family units. This downward trend continued to almost the end of the decade.

An upward trend in housing unit building permits began in 1999, when the total number of residential building permits nearly doubled from the previous year. Subsequent annual totals for residential building permits indicate a steady increase in residential construction within the Town through 2006. From 2000 to 2002 multi-family unit permits outnumbered single family permits increasingly each year, however in 2003 the percentage of single family unit permits doubled over the previous year. By 2006 housing permits had peaked at 571 and then dropped off significantly through the national recession to a low of 17 in 2011. Recently an equilibrium level has been reached of approximately 50 new housing units per year.



Hotel/Motel units are also considered as a residential unit component that meets the transient housing demand for seasonal visitors. Previously the number of new hotel units was not calculated in the housing supply, however with this Plan update the addition of over 1,000 new rooms within the past several years has been noted. The increased use of individual housing units as transient housing to meet the needs of our resort community has also challenged the traditional view of housing.

Historical data for housing units, segregated by decade built, appears in Table 6-3, below. Re-investment and re-development have improved the available housing in areas such as 67th Street with the development of Sunset Island, and conversion of a trailer park to Broad Marsh townhomes. The steady replacement of mobile homes in several of the mobile home parks with permanent structures provides safe, code compliant housing options for future generations. As each cohort of housing passes into the next decade, regular maintenance, renovation and inspection demands increase.

Table 6-3
Ocean City Housing Units by Year Built
pre-1939 through 2010

Year Structure Built	Number of Housing Units
2010 or later	210
2000 to 2009	3,127
1990 to 1999	1,369
1980 to 1989	10,941
1970 to 1979	10,646
1960 to 1969	2,036
1950 to 1959	530
1940 to 1949	394
1939 or Earlier	529
Total units built pre-1939 through 2010	**29,782**
Source: U.S. Census, American Community Survey	

Housing Units and Householders

In 2000, one-third of the Town's year-round occupied housing units were renter-occupied, compared to the county average of one in every four. By 2010, renter-occupied housing units in both the Town and the County were approximately one in every five units (Table 6-4). The average length of residence in the Town (11 years) is somewhat less than that of the County (13 years) according to US Census data.

Table 6-4 Estimated Housing Tenure, 2010: Ocean City (Town) and Worcester County				
Tenure of Year-round Occupied Housing Units	**Ocean City**	**%**	**Worcester County**	**%**
Owner Occupied	2,665	79.3%	17,310	78.6%
Renter Occupied	694	20.7%	4,706	21.4%
Total	3,359		22,016	
Average Household Size				
Owner Occupied	2.01		2.31	
Renter Occupied	2.42		2.28	
Source: U.S. Census, American Community Survey				

Table 6-5 illustrates the status of vacant housing units in the Town. As expected, the majority of vacancies are the result of units being used as second or vacation homes. This information, which is collected every 10 years in the month of April, does not adequately represent the dynamic and flexible way that housing in the resort community meet the needs of full time residents, second home owners, investors and workforce housing providers at different times of the year.

Table 6-5 Status of Vacant Housing Units, 2010: Ocean City (Town) and Worcester County				
	Ocean City		**Worcester County**	
	#	%	#	%
TOTAL HOUSING UNITS	**30,119**		**55,749**	
TOTAL OCCUPIED UNITS	**3,852**	**12.8%**	**22,229**	**39.9%**
TOTAL VACANT UNITS	**26,267**	**87.2%**	**33,520**	**60.1%**
For rent (annual)	2,866	10.9%	3,372	10.1%
For sale only	720	2.7%	1,238	3.7%
Rented or sold, not occupied	171	0.7%	313	0.9%
For seasonal, recreational, or occasional use	22,351	85.1%	27,597	82.3%
Other vacant	159	0.6%	1,000	3%
Source: 2010 U.S. Census, American Fact Finder				

After many years of annual increases in housing values, the effects of the National Recession beginning in 2008 have impacted housing values in both Ocean City and Worcester County. In the period from 2010 to 2015, the median value of owner-occupied housing in Ocean City was reduced from $374,600 to $283,600, and the median value of owner-occupied housing in Worcester County was reduced from $289,100 to $242,000. (Table 6-6). The U.S. Census in 2010 recorded very little housing priced above the $500,000.00 range in Ocean City.

Table 6-6 Percent and Totals of Owner-Occupied Housing Units By Value Ocean City and Worcester County, 2010/2014 Comparison				
	Ocean City		Worcester County	
Value of Owner-Occupied Housing	**2010/2014**	**%(2014)**	**2010/2014**	**%(2014)**
Less than $50,000	48/113	4.2%	607/1005	6.4%
$50,000 - $99,999	42/54	2%	721/1030	6.5%
$100,000 - $149,999	65/161	6%	1188/1235	7.8%
$150,000 - $199,999	238/291	10.9%	1893/2512	16%
$200,000 - $299,999	758/859	32.2%	4739/4717	30%
$300,000 - $499,999	974/829	31.1%	4632/3686	23.4%
$500,000 - $999,999	841/338	12.7%	2886/1408	8.9%
$1,000,000 or more	140/20	0.8%	644/145	0.9%
Total	**3,106/ 2,527**		**17,310/ 15,738**	
Median Value: Owner-Occupied Housing	$374,600/$283,600		$289,100/$242,000	
Source: U.S. Census, American Community Survey 2010-2014 5 year estimates				

One and two-person households make up 85 percent of the households in Ocean City, a significantly higher proportion than Worcester County (70 percent). Ocean City has a smaller average household size than the Worcester County, as well. Both of these facts, combined with aging population statistics in Chapter 1, are indicative of the increasing number of retired persons moving to Ocean City as permanent residents.

Table 6-8 Number of Persons per Household, 2010 Ocean City and Worcester County				
	Ocean City		Worcester County	
	#	% of Total	#	% of Total
Total:	**3,852**		**22,229**	
1-person household	1648	42.8%	6232	28%
2-person household	1606	41.7%	9271	41.7%
3-person household	331	8.6%	3131	14.1%
4-person household	178	4.6%	2193	9.8%
5-person household	54	1.4%	924	4.2%
6-person household	21	0.5%	306	1.4%
7-or-more person household	14	0.4%	172	0.8%
Avg. Persons per Household	**1.83**		**2.28**	
Source: 2010 U.S. Census				

Table 6-9 is a comparison of Ocean City's housing units by the number of bedrooms in each, including data for Worcester County. In Ocean City, two-bedroom housing units outnumber all other units by a wide margin, reflecting the demand for one-family seasonal use units in the Ocean City housing market at the time. In comparison, the largest number of housing units in Worcester County are three-bedroom, where the percentage of full time residents is far greater

than Ocean City. Building permit activity over the last 10 years suggests that the Ocean City housing market will continue to adapt by increasing the size and number of bedrooms per unit to meet demand.~~, and that~~

Table 6-9 Housing Units By Number of Bedrooms, 2010				
	Ocean City		Worcester County	
Number of Bedrooms	**Number**	**% of Total**	**Number**	**Percent of Total**
No bedroom	1477	4.9%	1578	2.9%
1 bedroom	5402	18%	6815	12.4%
2 bedrooms	13580	45.1%	18727	33.9%
3 bedrooms	7907	26.3%	21191	38.4%
4 bedrooms	1251	4.2%	5504	10%
5 or more bedrooms	477	1.6%	1356	2.5%
Total Units	**30,094**		**55,171**	
Source: U.S. Census 2010 American Community Survey 5 year estimate				

Given recent fluctuation in the Town's real estate assessment base, it is clear that residential housing units have still been able to hold substantial value based on their desirable location, and avoid sharp losses due the 3 year rotating re-assessment schedule in Worcester County. It should be noted that housing unit renovations in Ocean City often add additional bedrooms where possible in order to increase marketability for rental purposes (gap highlighted below). Recent trends in seasonal rental housing are expanding the demand for large single family homes that can support multiple family members and reduce rental cost per person.

Housing for Seasonal Employees

In 1997 and again in 2009, the Ocean City Comprehensive Plan noted that the major housing problem facing the Town was "the availability of affordable, decent, temporary housing for

seasonal employees." Seasonal workers are a key ingredient of Ocean City's economy, as over 12,000 workers come to town to fill summer jobs. The resort industry must rely on nonresident seasonal employees to staff the resort's attractions and restaurants. This demand often includes many seasonal and part time City employees.

With Ocean City's accelerating rehabilitation of older properties and enforcement of maximum occupancy standards, the supply of lower cost housing options is dwindling. This has created a shortage of affordable housing for the summer labor force. Summer labor shortages have occurred in the past, and one of the contributing factors for these shortages is the lack of affordable housing.

Possible solutions to this ongoing problem have been studied for several years but with limited success. Government assisted housing is not an appropriate solution as the recipients of such subsidies are not considered low or moderate income residents and would only occupy the housing for several months of the year. A second alternative considered was the establishment of a private non-profit Housing Authority to develop and operate affordable housing. This approach also had potential problems. A site which provides a buffer from surrounding areas would be needed, and such sites are limited in Ocean City. Finally, such an endeavor was deemed unfair competition for existing property owners who rent seasonally.

Some employers have developed or secured housing for their employees. Other potential methods to expand seasonal employee housing include mixed use commercial and seasonal housing, specific employee housing projects, and shared use of university dormitories. Housing seasonal employees in West Ocean City where land and housing costs are cheaper has increased in recent years. This creates additional demand on transportation systems to connect workers to job destinations on the island. The West Ocean City Park & Ride will continue to facilitate this approach.

International student organizations coordinate live/work visa programs in Ocean City for at least 4,000 seasonal employees. Sponsor agencies have typically been responsible for leasing properties and providing safe and affordable housing units. Overcrowding of available workforce housing requires constant inspection and enforcement of Building Code occupancy limits.

Young and low income families moving to Ocean City must also compete for a limited amount of affordable housing. Statistics continue to indicate that an increasing number of retirees (and future retirees) are seeking to relocate in the Town and are purchasing properties as second or vacation homes. These homeowners typically are able to finance more expensive homes, therefore, developers have generally found it profitable to build for this market. Low and moderate income families and seasonal employees are not able to afford this type of housing and, as a result, do not have as many housing options.

In order to insure that housing needs are met for all segments of the Ocean City population, a coordinated effort must be made by the Town and the local business community to promote the availability of a variety of housing options in the appropriate locations.

Transient Housing

Review of Hotel / Motel units as a transient housing type in this chapter has been added to highlight the rapid construction of new units within the last 5 years, and the important role they play in providing seasonal short term housing and event venues. Increased demand for short term vacation housing and employee lodging in traditional single family housing units has also been included as a current housing trend.

The Planning and Zoning Commission has recently heard public comment through several public hearings that the impacts of short term rentals are a critical issue, particularly in the R-1 district which contains larger single family homes located within established neighborhoods. Opposing viewpoints have been expressed regarding quality of life issues necessary to maintain neighborhood character suitable for year round living, compared to real estate investment expectations in a resort community which often require market based rental activity.

Internet based lodging/booking systems have encouraged property owners of all housing types to participate in the short term rental housing market. Demand for seasonal workforce housing has continued to increase with older housing units typically meeting the demand for dormitory style living. Inspection and enforcement for maximum occupancy, safe housing, rental license and tax compliance has increased and forced new and creative solutions each year.

To address impacts of short term rentals, the Town will continue to focus on licensing procedures, pre-season education for landlords and property managers, and PRESS Committee enforcement through existing and potential new tools listed below:

- ✓ A clear zoning definition of 'short term rental' is necessary to provide an additional tool for effective enforcement.
- ✓ Supplemental zoning regulations in Chapter 110, Article V may be considered to manage specific uses such as rental housing.
- ✓ Additional regulation of adverse impacts will require amendment to Ocean City Code Chapter 14 Business, Article V. Rental Housing
- ✓ Code amendments to Chapter 10 Buildings and Building Regulations may be necessary to define new housing use types such as dormitory, workforce housing, transient lodging
- ✓ Coordination with State and County to adopt new standards for collection of 'Room Tax' for all transient and short term rental properties within the Town

With the addition of new national franchise hotels to the existing market, it is anticipated that conversion or redevelopment of older hotel/motels will follow as the next development trend. Conversion of use from one housing type to another, with new standards for living space, safety, parking, etc. will require updates to the City Code and close coordination with the building industry.

Recommendations

- 1) Consider and adopt strategies for protecting both neighborhood character and real estate investments in defined areas to encourage year round residential use, particularly in single family home areas.

- 2) Study housing market trends and the unique impacts of different rental arrangements such as yearly, seasonal, monthly, weekly, weekend, daily/sharing, and others. Propose strategies to mitigate impacts of short term commercial rental activity in single family neighborhoods or districts which do not permit commercial activity.

- 3) Encourage the private sector to address the seasonal employee housing problem through wage adjustments, employer-provided housing, or a private nonprofit housing corporation.

- 4) Explore additional incentives and or requirements related to the development approval processes that could be established to increase the supply and availability of affordable housing to meet current and future needs of low and moderate income families.

- 5) Collect data and perform analysis of seasonal housing demand by type.

- 6) Continue to encourage a mix of housing types and accommodations able to meet the needs of the whole spectrum of residents and visitors to Ocean City while striving to improve the overall quality of the housing stock.

- 7) Expand the municipal partnership with Ocean City Development Corporation to provide additional housing for seasonal and part time City employees working in the downtown area.

- 8) Consider incentives to encourage utilization of upper floors of business uses to provide seasonal employee housing. Review standards for dormitory style housing to encourage new construction while meeting all applicable building codes.

- 9) Examine opportunities to construct a seasonal housing community in West Ocean City. Such a facility could utilize the West Ocean City Park & Ride, and funding for such development could be supported by the business community.

- 10) Monitor the age and building permit history of large condominium structures, particularly along the ocean front and bayside to identify recurring repairs or renovations that would indicate the need for additional inspections and enforcement of building maintenance code requirements.

- 11) Implement CRS flood risk management outreach strategies for Repetitive Loss and

Severe Repetitive Loss properties. Consider implications of building first floor elevation on accessibility and setbacks to accommodate steps/ramps

- 12) Consider residential floor area ratio (FAR) standards and additional bulk regulations to address the observed increase in unit/home sizes as a result of redevelopment/renovations with associated increases in occupancy, parking, public service demands, and impacts to surrounding neighborhood character.

- 13) Study recent redevelopment and infill projects to evaluate challenges and best practices for possible incorporation into code standards.

CHAPTER 7: Environment

Ocean City as a ten-mile-long barrier island is bounded on the east by the Atlantic Ocean and on the west by the Isle of Wight and Assawoman coastal bays. Since its beginnings, Ocean City has depended on the surrounding environment. Its vegetation provided convenient pastures for Worcester County's earliest farms. Tourism began in the early l900s by touting the restful and hygienic benefits of sea air and the Atlantic's medicinal waters. Later, the "pound fisherman" harvested the bounty of the sea.

The Town's connection and inter-dependence with the natural environment is underscored by significant storm events. In August, 1933, a major northeast storm, not a hurricane, cut the present inlet between Ocean City and Assateague Island. The storm destroyed fishing camps, but provided access from Sinepuxent Bay to the Atlantic, thereby helping create a new industry - sportfishing.

Today, Ocean City depends even more on a clean environment to sustain it. The high quality of adjacent bays and ocean and clean air continue to make Ocean City a desirable place to live and visit. The town's economic future in recreational tourism is directly linked to the quality of its environment. As a model of 'smart growth', the concentration of development within City limits has allowed for other areas nearby to remain undeveloped.

For the purpose of this chapter, the environment is comprised of the natural elements of land, sea, air, as well as the built environment. The following sections establish the goal and objectives for protection and management of sensitive areas and environmental features and inventory existing conditions and trends concerning various attributes of the environment. Finally, recommendations for maintaining and improving the quality of the Town environment are provided.

Goal:

To protect the quality of the air, water and land from the adverse effects of development and growth and, where feasible, to enhance the quality of the natural environment and sensitive areas. New priorities include adaptation to climate change and mitigation of hazards for a more resilient community.

Objectives:

In order to achieve this goal, the following objectives are adopted:

7.1 Continue to inventory and evaluate the town's natural and cultural

resource base and establish policies to protect and preserve resources.

7.2 Continue to preserve and enhance the Public Beach and maintain the Beach Replenishment Program.

7.3 Continue to monitor and maintain air quality at its present high level.

7.4 Monitor the Town's energy consumption patterns and identify opportunities for instituting energy conservation measures when appropriate.

7.5 Continue to enhance the Town waste-to-energy program where possible to reduce litter through the Adopt-a-beach, Adopt-a-street and Downtown Clean-up programs as well as other initiatives.

7.6 Encourage use of water conservation measures to reduce draw-down of the groundwater supplies and to prevent salt water intrusion.

7.7 Maintain and enhance the quality of the Coastal bays and the ocean. Continue to actively participate in and support the Maryland Coastal Bays Program.

7.8 Utilize development standards for the location and construction of structures to minimize the impacts of flooding and to mitigate major flood hazards.

7.9 Protect and preserve coastal marsh and wetlands as valuable spawning areas and to maintain the benefits they provide to water quality, shoreline stabilization, and wildlife habitat.

7.10 Utilize best management practices, low impact development techniques, flexible development regulations and innovative site design and mitigation measures to protect and improve environmental quality. Continue to implement locally determined Critical Area standards for setbacks and water quality measures.

7.11 Continue to participate in the Community Rating System (CRS), which provides reduced flood insurance premiums to reward stringent flood hazard protection regulations.

7.12 Require all forms of development and re-development to avoid sensitive areas or mitigate for impacts whenever possible.

7.13 Flexible development standards should be utilized to protect sensitive areas when they can be demonstrated to better protect sensitive environmental resources than would result from applying standard restrictions/regulations.

7.14 Investigate the benefits of natural and nature based management actions for storm protection.

Sensitive Areas

One of the visions of the Maryland Economic Growth, Resource Protection and Planning Act of 1992 requires the Town's Comprehensive Plan to include a "Sensitive Areas element that. contains goals, objectives, principles, policies and standards designed to protect, from the adverse effects of development, sensitive areas, including the following: 1) streams and their buffers; 2) 100-year floodplains; 3) habitats of threatened and endangered species; and 4) steep slopes.

Ocean City does not contain any streams. Steep slopes are generally defined as slopes greater than 25 percent, and development is usually prohibited or strictly regulated in these areas. There are no steep slopes in the Town.

Virtually all of Ocean City's land area is at risk from the effects of coastal flooding, storm surge and high winds. Based on a new FEMA coastal RiskMAP analysis, new flood insurance rate maps were adopted on July 16, 2015, which reduce the portion of Ocean City located within the special flood hazard area or 1% chance floodplain. Approximately 40% of the land area and 40% of the structures remain in the moderate or high risk flood hazard zones.

As a growth area which is already 97 percent developed, development in the special flood hazard area cannot be avoided. Ocean City's flood protection and stormwater management regulations take into account the problems inherent in developing in the floodplain, and enforcement of these regulations should continue to be stringent.

Habitats of threatened and endangered species should be protected and State and Federal guidelines for their protection should continue to be adhered to. Ocean City's location adjacent to Assateague Island National Seashore and the Maryland Coastal Bays national estuary place high density urban built form in close proximity with natural habitats. Several habitat management projects over the years have provided beneficial use for both conditions and help to manage any conflicts through partnerships with the Maryland Coastal Bays Program, Department of Natural Resources, Department of the Environment, and the National Park Service.

The Town of Ocean City will continue to monitor the work of the Mid Atlantic Regional

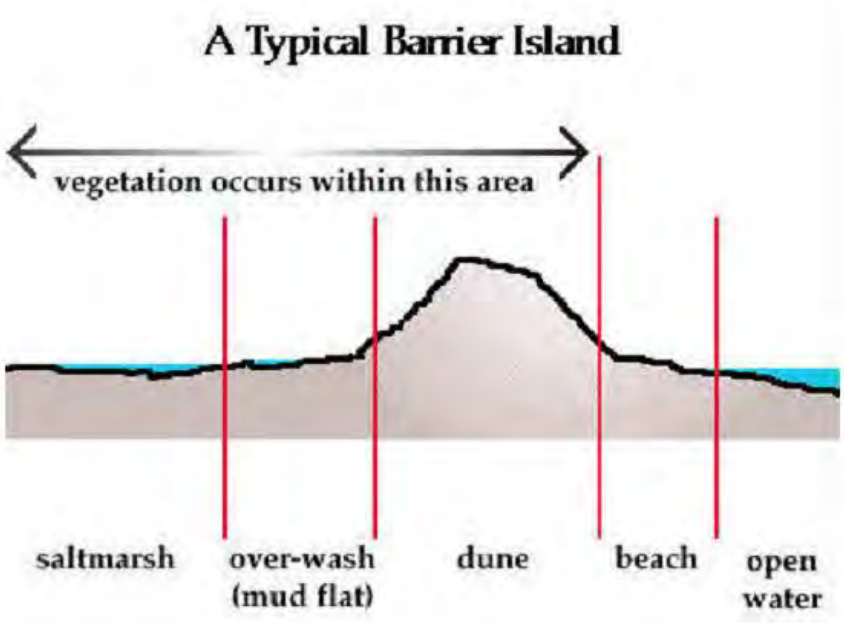
Council on the Ocean (MARCO) in developing an Ocean Action Plan for the Mid–Atlantic region. Issues related to ocean water quality, offshore energy development, and management areas which may restrict the sport fishing industry, and federal control and allocation of sand resources are critical to local resource management.

Geology and Land Form

Ocean City is located in the Coastal Plain, and occupies the southern end of a barrier island called Fenwick Island. Such land forms are dynamic in their development and continue to be active. Fenwick Island, like most barrier islands, was formed through wave, wind, and tidal action.

Due to its location on a barrier island, Ocean City is subject to some specialized forces of nature. A barrier island, in its natural state, is a constantly changing land form. Barrier islands serve two main functions. First, they protect the coastlines from severe storm damage. Second, they harbor several habitats that are refuges for wildlife. In fact, the salt marsh ecosystems of the islands and the coast help to purify stormwater runoff from mainland streams and rivers. Figure 7-1 illustrates the features and structure of a typical natural barrier island.

Figure 7-1



The structure of a typical barrier island consists of the following zones from the ocean side toward the bay:

Beach - consists of sand deposited by the actions of waves

Dunes - formed from sand carried and deposited by winds. Dunes are stabilized naturally by plants (sea oats, bitter panicum) and artificially by fences. The primary dune faces the ocean and may be followed by secondary and tertiary dunes inland.

Barrier flat - (also called backdune, overwash or mud flat) formed by sediments that get pushed through the dune system by storms, such as hurricanes. Grasses grow and stabilize these areas. This is the primary area in Ocean City which has developed over the last 100 years and by its natural form drains to the bayside marsh areas.

Salt marsh - a low-lying area on the sound-side of a barrier island. Salt marshes are generally divided into high and low marsh areas. High marsh areas may typically be flooded twice each month with the spring tides, while low marsh areas can be flooded twice daily with the high tides. Cord grasses stabilize the salt marsh area, which are one of the most ecologically productive areas (amount of vegetation per acre) on Earth.

Factors causing constant changes to Ocean City's land form include:

- Waves which deposit and remove sediments from the ocean side of the island

- Currents including long-shore currents that are caused by waves hitting the island at an angle which move the sand from one end of the island to another. The offshore currents along Ocean City's coastline tend to remove sand from the northern ends of the island and deposit it at the southern ends.

- Tides which move sediments into the salt marshes and eventually fill them in. Thus, the bay sides of barrier islands tend to build up as the ocean sides erode.

- Winds which blow sediments from the beaches to help form dunes and into the marshes, which contributes to their build-up.

- Sea level change: rising sea levels tend to push barrier islands toward the mainland.

- Storms which may have the most dramatic effects on barrier islands by creating overwash areas and eroding beaches as well as other portions of barrier islands.

The impact of these changes can be significant. Perhaps the best illustration of how substantial natural changes can be as a result of a single event is the major storm that opened the Ocean City Inlet in 1933 and now separates Fenwick Island from Assateague Island to the south. To keep the channel navigable to the mainland, the U.S. Army Corps of Engineers constructed two rock jetties. Although the jetties stabilized the inlet, they altered the normal

north-to-south sand transport by the longshore currents. The result is that sand built up behind the north jetty and the sand below the south jetty was quickly eroded. In a very short time, natural forces combined with human intervention have permanently altered the barrier island profile.

Figure 7-2 illustrates changes to Assateague Island as a result of the accelerated erosion caused by the man-made rock jetties of Ocean City Inlet. The figure shows the configuration of Assateague Island in 1980 and an outline of the position of the Island in 1849. Active management by the U.S. Army Corps of Engineers and the National Park Service has slowed and stabilized this process through inlet dredging and sand bypass to restore the natural long shore sediment movement that continues to nourish Assateague Island.

Figure 7-2
Effects of Accelerated Erosion on Assateague Island

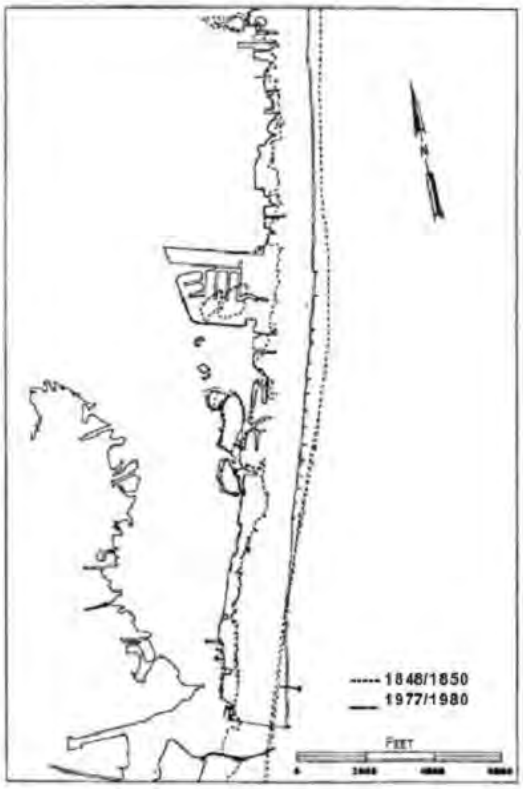
Threats to Beach Stability

The three major natural forces affecting the coastal shoreline are erosion, sea-level rise and storms. Each of these presents different but related threats to the beach and property in Ocean City.

Beach Erosion

Historical shoreline changes along Ocean City area prior to the Beach Replenishment Project are shown in Figure 7-3. The average rate of oceanside erosion over the 130 years of record has been 1.9 feet per year; some areas have shown accretion over various time periods.

Figure 7-3.
Comparison of Historical Shoreline Changes, Ocean City, Maryland (1850-1980)



Although the average rate of erosion of the beach during the past 130 years (1850-1980) has been 1.9 feet per year, inspection of shoreline movement over this period shows that the recession is not constant through time or space. Indeed, there were periods of very rapid shoreline retreat, which probably corresponded to the major storms of record -- 1902, 1933, 1962 and more recently in 1998 and 1999. In addition, the erosional trend at any one point

along the shore has tended to fluctuate through time.

While the historical trend of recession has been set at 1.9 feet per year, changes in shoreline position since 1961/62 have been less appreciable due to a decrease in hurricane activity. In other words, the historical rate of erosion has not been realized in the last several decades. This marked departure from the trend may be due to management strategies, notably groins, sand scraping, and the USACE shore stabilization project since 1986.

Assateague Island to the south is one of the longest 'natural shorelines' on the East Coast and as such has become intensively studied, measured and observed. Many federal agencies have overlapping responsibilities for shoreline management including the USACE, USGS, NPS, NASA and USFWS. It should be noted that long range plans have recently been prepared for Assateague Island by Department of Interior agencies which promote a new management strategy for the next 30 to 50 years to allow natural forces and sea level rise to create rapid environmental change and unstable barrier island conditions.

Sea Level Rise

Ocean City, MD is vulnerable to elevated water levels from flooding, storm surge, and high tides due to its location on a developed barrier island along the mid-Atlantic coast. This sea level rise policy recognizes the importance of planning and preparing for the historic and future effect of changing sea level and how it may increase hazard risks to the community. Estimates of future conditions vary greatly depending on the source, the specific location and the period of time being examined. Ocean City relies primarily on the expertise of the U.S. Army Corps of Engineers (USACE) to identify the risk and adaptation measures necessary for this hazard mitigation element.

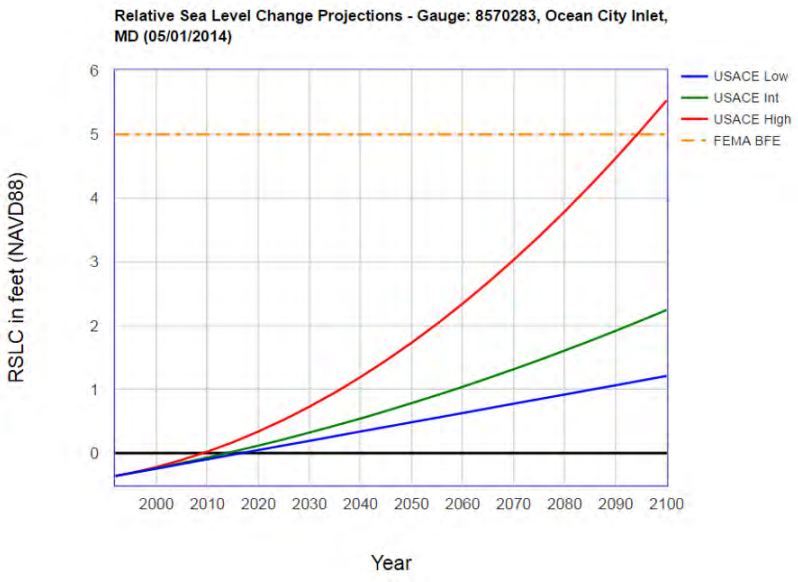


Figure 7-2 (www.corpsclimate.us/ccaceslcurves.cfm)

The USACE establishes three projections for future sea level change beginning with an extension of historic sea-level rise rates. The USACE Low Curve is based on a 24-year regional rate of 0.01453 feet per year (1 foot in 69 years) for Ocean City, Maryland. Based on tide gauge data from the Ocean City Inlet (#8570283), the USACE Sea Level Change Curve Calculator also estimates an intermediate rate scenario of 0.0267 feet per year (1 foot in 37 years), and a high rate scenario of 0.0658 feet per year (1 foot in 15 years) that may be used for planning and project design.

Conclusions drawn from a study conducted by EPA in 1985 indicate sea level rise could double the rate of erosion at Ocean City in the next forty years. If no additional erosion control measures are taken, the shore could erode 85-153 feet by 2025 assuming current sea level trends. An 11-inch global rise in sea level would increase expected erosion to between 180 and 238 feet, if no additional measures are taken; a 15-inch rise would increase expected erosion to between 216 and 273 feet. The study also offered the following summary conclusions:

- The projected rise in sea level would increase the quantity of sand necessary to maintain the current shoreline for the next forty years from 5-10 million cubic yards if current trends continue, to 11-15 million cubic yards for the two scenarios of accelerated sea level rise.

- Projected sea level rise would increase the priority of erosion control-measures under current policies of the Corps of Engineers. Current policies place a greater emphasis on flood protection than recreational benefits provided by proposed projects. Because of the substantial erosion that could occur from a rise in sea level, the need for flood protection will be greater if sea level rises.

- A significant rise in sea level would require the continuation of the beach replenishment program to offset the erosion.

- The cost of controlling erosion caused by sea level rise does not threaten the economic viability of Ocean City in the next forty years. Even the most pessimistic estimate of future erosion control implies a cost of less than fifty cents for every visitor that comes to Ocean City each year. Protecting the shore at Ocean City will continue to be economically justified.

- Understanding the likely impact of sea level rise on Ocean City in the next century will require identification of the most cost-effective and environmentally acceptable sources for up to fifty million cubic yards of sand to be placed on the beach.

- Better estimates of future sea level rise would enable decision makers to more adequately determine the most prudent strategy for controlling erosion at Ocean City.

- Although improved procedures for estimating erosion are desirable, current methods are sufficient to yield first-order estimates for use in long-term planning.

Existing barrier island profiles and the Ocean City Inlet have the effect of reducing storm surge and flooding impacts to the bayside shorelines of the community as evidenced by the Flood Insurance Rate Map (FIRM) mapping of 1% chance flood zones. Base flood elevations quickly change from 11 feet at the ocean beach to 5 feet near the US Coast Guard Station in downtown Ocean City.

Exhibit 6: FEMA Coastal Risk Map – July 16, 2015

Figure 7-3

Relative SLR rates also appear to be lower at Ocean City's mid-point location between the Delaware Bay and Chesapeake Bay estuaries, with less effect from land subsidence and upstream watershed impacts (FEMA Region III Coastal Storm Surge Study 2013). Tide gauge readings, storm surge studies and sea level rise projections from Lewes, DE and Norfolk, VA are not an acceptable substitute for location specific data from the Ocean City Inlet or other coastal barrier island measurements.

To the extent that there is a local delay in observable SLR impacts in Ocean City, it will allow for the study of best practices in other communities, preparation of action plans tied to measured changes, and implementation of resiliency strategies for significant climate related events.

An updated sea level rise policy was adopted in 2016 and incorporated into the Town of Ocean City Hazard Mitigation Plan. This policy incorporates USACE estimates of future sea level rise that are specific to the Ocean City Inlet tidal data and describes current adaptation actions.

Storms

Ocean City is subject to hurricanes and northeasters, which can cause severe damage to the beaches and property. These storms are different, and pose different threats to the town.

Hurricanes, which originate principally during August, September and October, are tropical cyclones with surface wind velocities of 75 miles per hour or more. ("Tropical storm" is the term used to describe such storms with winds less than 75 mph). Hurricanes are extremely violent, short-lived events. They pummel barrier islands with severe winds, heavy rains, and a storm surge, all of which can result in massive property damage and loss of life.

The U.S. Office of Coastal Zone Management estimates that in any year Ocean City has a one percent chance of being struck by a hurricane and less than a one percent chance of being struck by a Category 4 or 5 hurricane. This is one of the lowest probabilities on the East Coast, and is due to Ocean City being somewhat protected. Many hurricanes are deflected eastward by the projection of the Carolina capes. While this is fortunate, preparations must still be made for an evacuation.

Northeasters are typically large in scope and long in duration, and can be a major threat to property while a moderate threat to life. These storms are large low pressure systems which linger for three or more days, occurring most often in the cooler half of the year. Northeasters bring heavy rains, gale force winds, and a steady pounding of mid to large size waves. They usually cause mild and temporary beach erosion. However, given the right combination of climatic and tidal factors, northeasters can deliver major flooding including over-washing the island and major beach erosion.

Beach Stabilization and Protection Efforts.

Over the years, a variety of beach stabilization efforts have been tried. Wood, stone and macadam groins have been constructed. Following the devastating storm of 1962, the beaches were replenished with sand. A program in which stone groins were constructed at prescribed intervals along the beach was abandoned due to its high cost relative to its effectiveness.

In 1991, the Atlantic Coast of Maryland Shoreline Protection Project was completed at a total cost of about $45,000,000, which was shared by the federal government, the State of Maryland, Worcester County and the Town of Ocean City. The project consisted of a steel sheetpile seawall in front of the boardwalk from 4th Street to 27th Street, the construction of a wider (220 feet) beach, and the establishment of a protective dune which is 25 feet wide at its crest, and 85 feet wide at its base and vegetated with 65 acres of dune grass. It was designed to prevent damages associated with waves and erosion resulting from a 100-year storm event.

In the two months immediately following completion of the project, four powerful storms hit the Ocean City area. The project proved its value by absorbing the ocean's impact and protecting buildings and the boardwalk. The U.S. Army Corp of Engineers estimated the project prevented up to $160 million in damages in the two month period, more than justifying its cost.

The project also provides for periodic beach renourishment and monitoring over the 50-year project life (until 2044). Renourishment and monitoring costs are shared by the Army Corps of Engineers (53 percent) and the state of Maryland (47 percent). On average, 800,000 cubic yards of sand is required to renourish the beach every four years. The last regularly occurring renourishment was completed in 2011, and funding was available to complete another renourishment which is underway in 2017. A state maintenance fund has been established which pays for periodic renourishment and repairs to the beach, dune and seawall. Thus, a long-term commitment has been made to this successful solution to the beach erosion problem.

Water Quality / Coastal Bays

Ocean City is located in the Coastal Bays Watershed. This 175 square mile basin includes all of Maryland's barrier islands and the portion of Worcester County draining to the coastal bays. The main surface water bodies are the salt bays and the Atlantic Ocean. The limited freshwater system is predominately local drainage or small creeks draining to the bay. No natural body of fresh water exists in Ocean City.

Atlantic Ocean

In the Mid-Atlantic region, a Regional Planning Body (RPB) has been meeting since 2013 in order to design and carry out a regional ocean planning process in collaboration with the general public, stakeholders, and partners such as the Mid-Atlantic Regional Council on the Ocean (MARCO). The main product of this collaborative effort is the Mid-Atlantic Regional Ocean Action Plan (boem.gov/Ocean-Action-Plan).

The Mid Atlantic Regional Ocean Action Plan includes a description of the special relationship of the Mid-Atlantic region to the ocean waters off of its shores, the history and

collaborative process of Mid-Atlantic regional ocean planning, further detail about the RPB and its membership and a summary of certain foundational documents developed with public input.

These foundational documents include the Mid-Atlantic Regional Ocean Planning Framework that established eleven overarching principles to guide ocean planning, two goals for the regional ocean planning process, and a series of objectives related to each goal. The goals are:

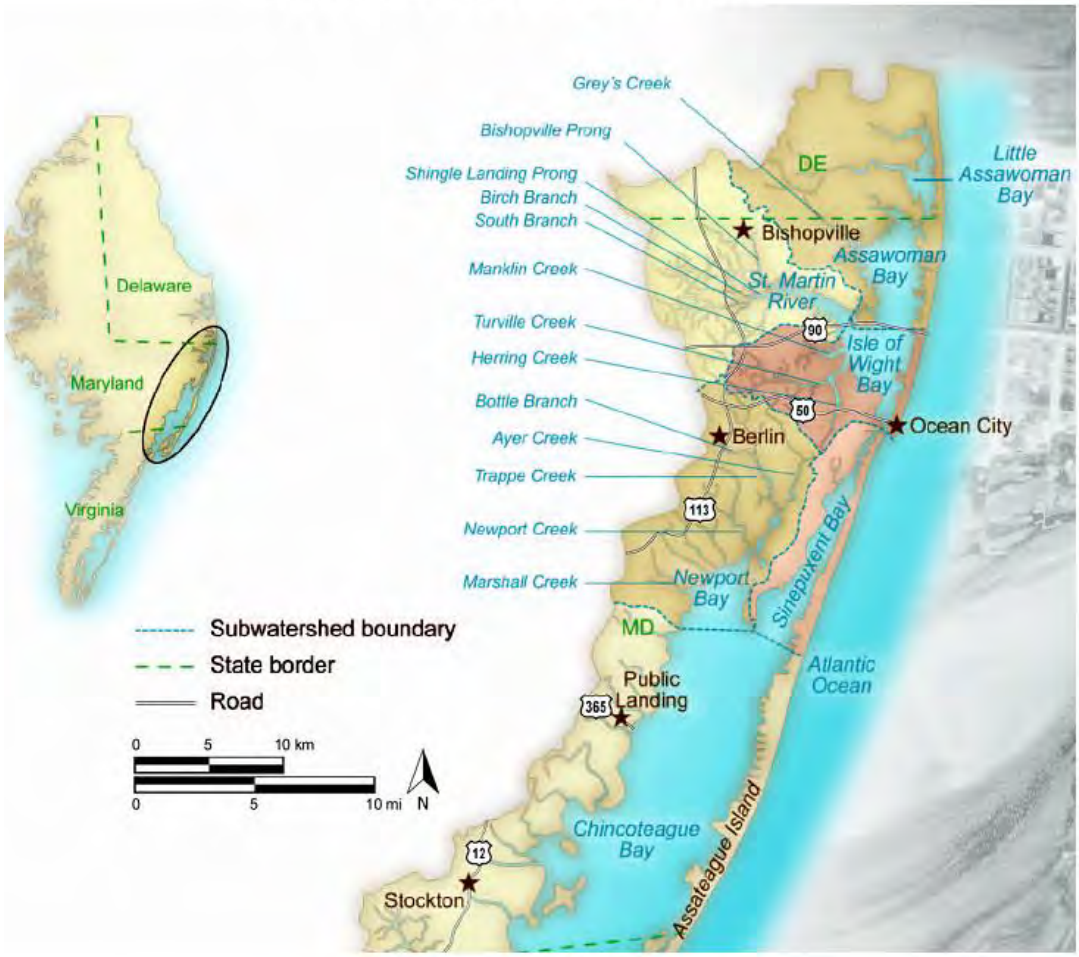
> Healthy Ocean Ecosystems. "Promote ocean ecosystem health, functionality, and integrity through conservation, protection, enhancement, and restoration."
>
> Sustainable Ocean Uses. "Plan and provide for existing and emerging ocean uses in a sustainable manner that minimizes conflicts, improves effectiveness, increases regulatory predictability, and supports economic growth."

The Plan also describes nine objectives and 33 inter-jurisdictional coordination actions that address the Sustainable Ocean Uses goal. These objectives address: National security, Ocean energy, Commercial and recreational fishing, Ocean aquaculture, Maritime commerce and navigation, Offshore sand management, Non-consumptive recreation, Tribal uses, and Critical undersea infrastructure.

Surface Water and Coastal Bays

Surface waters in Ocean City are of two very different types. The Atlantic Ocean exhibits a hardiness and resistance to pollutants due to its currents, tides, and wind driven flushing. The Coastal Bays, on the other hand, have a modest flushing capability. This, combined with their shallowness and proximity to developed land areas, makes them very vulnerable to environmental stress. For this reason, the coastal bays require special care to preserve their viability. Figure 7-4 shows the extent of the Coastal Bays Watershed and its many creeks and bays.

Figure 7-4: Coastal Bays Watershed



Source: Maryland Coastal Bays Program "The State of Maryland's Coastal Bays", 2004.

Table 7-1

The Maryland Coastal Bays Program exists under the umbrella of the EPA's National Estuary Program, designed to protect the most economically and environmentally significant estuaries in the United States. The Coastal Bays behind Assateague Island and Ocean City make up one of only 29 estuaries nationwide that has received this special attention. In these regions, the health of the economy is closely linked to the health of the environment. The Coastal Bays Program is a cooperative effort between Ocean City, Berlin, Worcester County, the state of Maryland, the United States Environmental Protection Agency (EPA), and a host of state and federal agencies which have brought together scientists and diverse groups, including the agriculture, golf, tourism, fishing and development industries, to produce a Comprehensive Conservation and Management Plan (CCMP) for the Coastal Bays.

Embarked upon in 1996 and completed in 1999, the MCB Program has recently updated a Comprehensive Conservation Management Plan in 2015 that provides the most recent indications regarding water quality, fish and wildlife habitat condition within the Coastal Bay and describes proposed management actions for the next 10 years. An annual report card on

the health of the bays called "The State of Maryland's Coastal Bays", also summarizes the environmental status of the bays and indicates the following:

Water Quality

Water quality shows many warning signs of ecosystem change, even though some areas currently still have good water quality. In general, water quality is degraded within and close to the tributary streams and much better in the more highly flushed regions of Assawoman, Isle of Wight, and Sinepuxent Bays. Excess nutrients (nitrogen and phosphorus) typically are the primary causes of degraded water conditions. Variation in water quality between regions is reflecting variation in nutrient concentrations. Excessive nutrients lead to hypoxia (low oxygen levels), limited fish survival, and phytoplankton (single-celled algae) blooms which limit sea grass growth in portions of the watershed including Newport Bay, St. Martin River, and the northern portions of Assawoman Bay.

The presence of sea grasses is an indicator of good water quality. Excess nutrients cause algal blooms which block sufficient sunlight from reaching grasses. Eelgrass and widgeon grass are the two species that occur in the Coastal Bays. Although almost 85 percent of the sea grasses within the watershed occur along the Assateague Island shoreline, sea grasses are also evident along the Ocean City Bay-front, with beds extending from 40th street to 85th street. The area extent of sea grasses has varied over the years as a result of environmental conditions and management actions. Based on a current evaluation through the 2015 Maryland Coastal Bays 'report card', sea grasses are in a period of decline in the bays near Ocean City.

Finfish and Shellfish

Finfish in the Coastal Bays are diverse. The shallow waters are ideal nursery and forage habitat for over 140 species of finfish. Most of the regions' most valuable commercial finfish are composed of estuarine dependent types like summer flounder, bluefish, weakfish, spot, tautog, and black sea bass among others. Since interstate management of summer flounder began in 1989, the stock has recently recovered to the level where no longer considered over fished.

The blue crab continues to be a valuable resource in the Coastal Bays, supporting a steady commercial and recreational fishery. Surveys suggest that abundance fluctuates without an apparent trend, yet there is still a successful annual harvest that even attracts crabbers from the Chesapeake Bay. Hard clams have declined over the past three decades compared to historical abundances, but have been relatively stable for the past 10 years.

Presently there are no viable natural oyster populations inhabiting the subtidal bars of the Coastal Bays. Episodic natural events, in particular the opening and stabilization of the Inlet, fundamentally changed the ecosystem, creating higher salinities in which oyster populations could no longer flourish. Small, relict populations still exist intertidally at a few locations

with occasional spatfall on structures such as riprap, pilings and bridge supports. Bay scallops have also been found in most bay segments but are in low numbers.

Stormwater and Flooding

Ocean City's annual rainfall averages forty nine inches, which translates to approximately 200,000 gallons per acre or 23,000 gallons on a 5,000 square foot lot. Depending on the land cover, it either percolates into the soil or becomes runoff. The more land covered by impervious surface, the more runoff results.

Stormwater is both a water quality and a flooding problem. In terms of water quality, stormwater washes pollutants from roofs, parking lots and streets, carrying the un-treated oil, grease, animal waste, heavy metals, and other assorted pollutants to the bays. Stormwater pollution has a potentially major impact on the ecology of the coastal bays. This is due to the bays' shallow depths and limited flushing capabilities. Also, pollutants in general tend to settle out and concentrate in embayments and canals.

Development can greatly affect the amount and quality of stormwater. Management measures during construction and site planning can reduce its adverse impacts. During heavy rain events, runoff causes localized flooding. Generalized flooding results from rain, winds and tides associated with major storm events. The state passed the 1982 Stormwater Management Act which requires municipalities to adopt stormwater regulations, and Ocean City has adopted and is enforcing appropriate measures. See Chapter 11 Water Resources Element for more information.

For several reasons it is desirable to maximize infiltration of rainwater. This water serves to replenish the groundwater, thereby helping to hold back the salt water wedge. Also, less runoff reduces nuisance flooding and the adverse impacts of stormwater on water quality. The original sandy soils of Ocean City can absorb about eight times as much water as normal Eastern Shore soils. Such soils lend themselves to the use of infiltration practices for stormwater management.

Wildlife

Although Ocean City is a thoroughly urbanized barrier island, it still provides important habitat for many wildlife species. Dune systems established in the 1990's re-established a habitat that had previously been lost for migratory butterflies, birds and small mammals. Wetlands protection regulations along with water quality standards should ensure the continuation of rich ecological areas in the coastal bays. ~~Conscious planting of food and shelter can also increase urban wildlife populations.~~The use of native plants in landscaping is encouraged with all required planting.

The Maryland Department of Natural Resources has compiled a "Summary of Current and Historical Rare, Threatened and Endangered Species of Ocean City, Maryland". The 2017 summary identifies ~~9~~ animal ~~species~~ and ~~36~~ plant species that are either rare, threatened or endangered. Appendix A identifies these species by Scientific and Common names and establishes State and Federal rankings based primarily on known occurrences. An explanation of rankings is included as part of Appendix A. The Maryland Department of Natural Resources "Heritage Program" should continue to assist the Town in assessing possible impacts a development project may have on the habitats of such species to afford them protection.

Climate and Air Quality

Ocean City's climate is greatly influenced by its proximity to the Atlantic Ocean. Average annual rainfall is forty-nine inches, and snowfall averages ten inches per year.

Violent weather comes in several forms. Thunderstorms occur about thirty times a year, bringing heavy short-term rains and high winds. Although rare, tornadoes and water spouts do occur. Hurricanes can make landfall, and northeasters occur regularly. Snowfall is generally light, but occasionally heavy snows occur.

In general, the air quality of Ocean City is good and likely to remain so. The northwest winds during the cooler months are brisk and help to reduce pollutant concentrations. During the summer, Maryland is often under the influence of a Bermuda High (a high pressure system) centered over the Atlantic Ocean. Air movement is slowed, resulting in a higher concentration of some pollutants. Air pollution is more likely during the summer months in the immediate vicinity of sources such as traffic congestion and construction sites. However, consistent onshore breezes along the coast help to disperse the pollutants.

Other pollution problems persist such as ozone, carbon monoxide, and particulate matter. Emerging problems such as acid precipitation will need to be managed at a regional and national level. Acid rain is a result of carbon fuel combustion, such as motor vehicles, which adds nitrogen oxides to the air. In the past, the rainfall in Maryland has been ten times more acidic than natural levels. In areas where soils and geologic formations are thin, acid rain may cause the waters to become very acidic resulting in the decline of fish populations.

Solid Waste and Recycling

Proper and timely disposal of solid waste is a key to a healthy environment. In addition to health, odor and aesthetic considerations are important. Substantial amounts of seafood are consumed in Ocean City, so in summer, collection is required on a nearly daily basis.

Over 34~~0~~,000 tons of refuse are processed annually; peak volumes reach over 350 tons per

day or 20 pounds per household.

Ocean City began developing its recycling program in 1989. Aluminum, plastic, cardboard, newspaper, office paper, metal, and glass are now recycled through regular refuse collection and transport of all waste materials to an energy production recycling facility. The Town's Green Team also supports multiple initiatives to reduce and remove waste products from the environment through a network of volunteers and civic organizations.

The ocean has received a variety of waste products over the years. Sewage sludge, radioactive materials, dredge spoil, industrial by-products, and military ordnance have all been disposed of at sea. The Ocean Dumping Act of 1972 curtailed many past abuses and funded research to further the understanding of the potential hazards and safety issues. The two major dump sites off the East Coast were brought under new regulations. The 12 Mile Site is located 10 nautical miles off Long Island and the 106 Mile deep-water dump site is located 115 nautical miles east of Atlantic City, NJ. Predominately used for sewerage sludge and industrial waste, the 106 Mile Site could affect the water quality of the coast of Ocean City. Currents and Gulf Stream eddies could transport pollutants along the Maryland and Virginia coasts. For this reason Ocean City should continue to support restrictions on ocean dumping and monitor annual water quality testing.

Today, Ocean City, MD is rated as one of the cleanest beaches in the nation by the Natural Resources Defense Council based on regular state and county water quality testing at 8 different locations along the beach. The beach is cleaned each night by the Public Works Department, and numerous volunteers help to adopt sections of town and collect litter from the dunes and beach.

Energy Conservation

While much progress with energy conservation measures has been made in the areas of housing, transportation, and production of goods and services, nationally the need for energy conservation continues to be emphasized along with utilization of green energy sources. Conservation efforts should be supported and energy efficiency should be factored into all public construction and purchases including consideration of energy saving vehicle purchases.

In 2015, Ocean City was successful in bidding a 3 year contract for electricity supply and saved money while achieving a goal of 25% energy from sustainable or renewable sources. Three electric vehicle charging stations have been approved in recognition of the increasing number of EV visitors, and in response to a grant to install a TESLA compatible station. Solar PV installations have continued to be installed in both residential and commercial applications with approximately 10 permits issued annually.

The Maryland Public Service Commission recently approved two offshore wind farm projects for renewable energy credits off Maryland's Eastern Shore near Ocean City. US Wind of Baltimore and Skipjack Offshore Energy, a subsidiary of Deepwater Wind, can build a total of 368 megawatts of capacity. US Wind proposes to build 62 turbines between 12 and 15 nautical miles offshore to generate 248 megawatts and is expected to be operational in early 2020. Skipjack proposes to build 15 turbines between 17 and 21 miles offshore to generate 120 megawatts with completion by the end of 2022. ~~Maryland is currently reviewing two applications for an off-shore 120 MW wind energy facility. This offshore wind farm is to be located more than 17 nautical miles off the coast of Maryland and interconnecting with the existing Delmarva Power 138-kV transmission system in Ocean City, Md. The Wind Farm will be located in the offshore wind energy area designated by the Department of Interior as block OCS-A 0482 and could be in-service by the end of 2022.~~

Night lighting in the resort has been affected by the recent shift to LED light fixtures. While potentially an energy and cost saving measure, it has generated increasing numbers of complaints regarding the glare and intensity of the LED light with impacts to residential properties. Additional study and installation standards may be required to manage this change in the future.

Environmental Threats

Table 7-1 displays major environmental threats to Ocean City and nearby waters. Along with each potential threat are listed potential impacts and a qualitative assessment of each item's severity and scope. Definitions for key terms used in the table including "Potential Severity", "Scope', and "Managed/Regulated" are as follows:

Water					
Ocean	Sewage Outfall	Nutrient Loading	Low	Local	Yes
	Chemical, Toxic Spills	Health Threat to Humans and Wildlife	Major	Widespread	Yes
	Dumping	Beach Degradation	Major	Widespread	Yes
Bays	Sewage Treatment Plants	Nutrient Loading	Major	Widespread	Yes
		Heavy Metals	Major	Widespread	Yes
		Pathogens	Major	Widespread	Yes
	Stormwater	Nutrient Loading	Major	Widespread	Yes
		Hydrocarbons	Major	Widespread	Yes
		Heavy Metals	Major	Widespread	Yes
		Organic Material	Major	Widespread	Yes
		Sediment	Major	Widespread	Yes
		Flooding	Major	Widespread	Yes
	Boating	Hydrocarbons	Moderate	Widespread	Yes
		Organic Waste	Moderate	Widespread	Yes
		Litter	Moderate	Widespread	Yes
		Erosion	Moderate	Widespread	Yes
	Dredging/Channel Maintenance	Destroy Habitat	Moderate	Local	Yes
		Sediment	Moderate	Local	Yes
		Odor	Moderate	Local	Yes
		Destroy Benthic Organisms	Moderate	Local	Yes
		Alter Water Circulation	Moderate	Local	Yes
	Septic Tanks	Nutrient Loading	Major	Widespread	Yes
		Pathogens	Major	Widespread	Yes
	Land Alteration, Construction & Agriculture	Sediment	Moderate	Local	Yes
		Toxic Chemicals	Moderate	Local	Yes
		Increased Runoff	Moderate	Local	Yes
		Organic Waste	Major	Local	Yes

	Bulk heading	Reduces Habitat	Moderate	Local	Yes
		Rise in Flood level	Moderate	Local	Yes
Wetlands	Dredging/Filling	Removes Habitat	Major	Local	Yes
		Sediment	Major	Local	Yes
		Destroys Food Source	Major	Local	Yes
		Increases Erosion	Major	Local	Yes
		Destroys Spawning Areas	Major	Local	Yes
		Alters Water Circulation	Major	Local	Yes
	Stormwater Discharge	Erosion	Moderate	Local	Yes
		Nutrient Loading	Moderate	Local	Yes
		Heavy Metals	Moderate	Local	Yes
		Toxics	Moderate	Local	Yes
Dunes	Construction/Excavation	Reduces Flood Protection	Major	Local	Yes
		Habitat Loss	Major	Local	Yes
		Increased Stormwater Runoff	Major	Local	Yes
	Vehicle & Pedestrian Traffic	Destruction of Dune and Vegetation	Major	Local	Yes
Groundwater	Construction in Recharge Area	Toxics	Moderate	Widespread	Yes
		Hydrocarbons	Moderate	Widespread	Yes
		Septic Waste	Moderate	Local	Yes
	Excessive Pumping	Saltwater Intrusion	Moderate	Widespread	Yes
		Land Subsidence	Low	Local	Yes
Air	Auto Exhaust	Degraded Air quality	Low	Widespread	Yes
	Woodstoves	Degraded Air quality	Low	Local	Yes
	Noise	Nuisance	Low	Local	Yes
	Rain	Alter PH	Low	Widespread	No
	Open Burning	Degraded Air quality	Low	Local	Yes
	Climactic Warming	Sea Level Rise	Low	Widespread	No
Visual	Building Design	Community Character/Appearance	Moderate	Widespread	Somewhat
	Signs	Visual Clutter/Community Appearance	Moderate	Widespread	Yes
	Lighting	Observable Glare, Driving Safety	Moderate	Local	Somewhat

Built Environment

The Town of Ocean City has many characteristics of an urban area and as such is responsible for managing its surrounding environment in unique ways. For human habitat, the importance of buildings and infrastructure to support activities, enclose and organize outdoor spaces, and accommodate natural environmental features is an essential element of the Comprehensive Plan.

Historic Resources are also managed in a way that recognizes the importance of cultural traditions at the beach, while recognizing the need to reinvent and rebuild the built environment.

Past comprehensive plans have described several offenses to the visual built environment, most of which continue to detract from the visitor experience. The most negative aesthetic factors include overhead utility wires and poles, the proliferation of signs, the lack of landscaping, qualities of building design, and the proliferation outdoor displays of merchandise or signage by retail establishments.

Regarding overhead wires and poles, the 1969 Comprehensive Plan made a statement that is still valid today: “The greatest offense to view is the maze of poles and wires which seems to intrude everywhere but on the beach itself... No single accomplishment would more improve the appearance of the town than removal of overhead poles and wires.” Utilities have been placed underground in recently developed areas and in some downtown areas. Ocean City’s concerted effort to continue placing utilities underground would be the single most effective

improvement to the visual environment.

An effective landscaping ordinance adopted in 1984 has added much greenery and greatly enhanced recent development. As parking lots are resurfaced landscaping should be added; . The landscaped medians installed along Coastal Highway in the 1990's show the major aesthetic benefit to be gained by added greenscape. The use of bermed landscaping along Coastal Highway would also improve its aesthetics greatly, as berms are effective at disguising parking lots. Combined with shrubs and trees they can create the illusion of a green space rather than a parking lot. Opportunities to create smaller vest pocket parks or green spaces that provide respite from hardscapes in the Town should be encouraged as development and re-development occur over time.

For many years, Ocean City has been the recipient of the National Arbor Day Foundation's Tree City USA Award and the MD P.L.A.N.T. Award administered by the Maryland Community Forest Committee. The Town of Ocean City Beautification Committee is appointed and commissioned by the Mayor and City Council to help determine the needs of the town for the planting, maintenance, and protection of all trees on the streets and in the parks of Ocean City and to make referrals for the enforcement of the landscape code. They are, also, the appeals board for city landscape code violations.

The Beautification Committee works in partnership with the Department of Recreation and Parks to bring the beauty of the trees and color to our barrier island town. Each year the Ocean City Beautification Committee searches for properties which are attractive, well maintained and pleasing to the eye. To show appreciation for this effort in civic pride, the Committee and the Mayor and City Council present Beauty Spot Awards in eight categories.

A concern for improved building design has been voiced by the town's citizens and officials, and much of the development community has responded with more imaginative design in recent years using variations in bulk, roof lines, and attention to fenestration and color. A noteworthy achievement toward improved design is the Downtown Design Guidelines, developed by the Ocean City Development Corporation in 2002 followed by the Upper Downtown Design Guidelines in 2006. The guidelines are now being successfully applied to all structures in the Downtown area located between the Inlet and 17th street.

The guidelines cover a number of aspects of design including site design, bulk, scale, signage, architectural design and landscaping. Recommended treatment of both private and public improvements is provided. Recommendations for public improvements extend to include treatment of the design in investments in public improvements, including sidewalks, street furnishings, landscaping, public spaces, public parking, Town gateways and waterfront vistas and public art.

This recent accomplishment has provided momentum toward a more pleasing visual environment. The keys to the success of the design review process to date include:

- A clearly written and illustrated design guide which presents standards and examples of what is desired, and which permits design flexibility.

- A partnership process of administering the Downtown and Upper Downtown design guidelines between the Town and the Ocean City Development Corporation (OCDC).

- Incorporation of advisory design guidelines that apply to the entire town into the Site Plan review process and approval by the Planning and Zoning Commission.

- Political and popular support of the objectives of the process.

The proliferation of signs made possible by the town's permissive sign regulations has caused a general degradation of Ocean City's appearance in past years. While signs are important to the success of business, the excess permitted became a blight on the environment, a hazard to vehicular traffic, and a detriment to effective advertising because one sign cannot be seen among the many.

The sign regulations have since been reviewed and amended to reduce the number of signs, better regulate their location, and eliminate more obtrusive signs. The Downtown Design Guidelines establish provisions for better management of signage in the Downtown area. These provisions also recommend treatment for lighting, parking, fencing and screening which are important elements of the built environment.

Ocean City has made substantial progress in the quality and variety of both public and private developments. In many cases, the quality of the natural environment enhances the visitor experience and success of individual businesses. The design review process and continued landscaping will ensure further progress. A more restrictive sign ordinance and control of outdoor displays will also contribute to a successful formula for the continued improvement of its visual image. See Chapter 8 Downtown / Redevelopment for additional strategies for the built environment.

Summary

Overall, Ocean City's environment is of high quality for an urbanized area. Air quality is excellent. The beaches are cleansed by the tides and by the City. Although some degradation has occurred, the bays and ocean retain much of their original quality. It appears the major challenge confronting Ocean City's environment centers on maintaining the quality and resilience of beaches, waters, and wetlands that sustain the tourism economy and add value to the built environment.

Future coastal bays quality will depend on close cooperation among all levels of government. The Maryland Coastal Bays Program is a joint effort involving Ocean City, Worcester

County, the State of Maryland, and the Federal government. It was initiated in 1996 to develop a plan for the protection and preservation of the Coastal Bays. The Town should continue to actively participate in the Program, and implement the recommendations of the Program as they are developed over time.

Beach, Inlet and barrier island preservation will require cooperation among property owners, Ocean City, Worcester County, the State and the Federal government. The USACE projects including Beach Replenishment, Inlet Management, and Sand Bypass are a long-term commitment to maintaining Maryland's most valued coastal resort assets.

Recommendations

1) Air Quality

   a) State and Federal monitoring of air quality should continue to ensure its quality remains high.

   b) Town officials should stay informed of the acid rain issue and lobby state and federal agencies for appropriate actions to ensure acid rain does not disrupt the ocean and bays' ecology.

2) Water (Off-shore)

   a) Ocean City's wastewater system should continue to provide sufficient capacity and treatment so the ocean outfall does not degrade ocean waters.

   b) Off-shore drilling for oil and gas should be opposed to prevent environmental damage and impact to the coastal resort economy.

   c) Ocean City should actively participate with MARCO and the Regional Planning Body to implement the Mid Atlantic Ocean Action Plan.

   d) Off-shore wind energy systems may have significant visual and property value impacts on tourist visitation at the Ocean Beach. Ocean City will continue to oppose wind turbine and substation locations that are visible from the beach and major high rise condominiums.

3) Coastal Management

   a) ~~T~~Continue to monitor threats to beach stability include major storm events, long term coastal erosion and potential changes in federal coastal management on Assateague Island. Propose and implement n~~N~~ew adaptation measures that will be required to maintain the Ocean City Inlet and protect downtown areas from storm surge and tidal flooding. Prepare for shoreline management strategies at t~~T~~he Ocean City Municipal Airport which will be increasingly at risk from unmanaged overwash conditions on Assateague Island similar to those experienced during the

1998 nor'easter storms.

b) Coordinate with federal, state and county partners to c~~C~~ontinue~~d~~ active management of the Ocean City Inlet that is critical to maintaining water quality in the coastal bays, controlling the effects of storm surge, maintaining navigable channels and sediment flow to the ocean shoreline.

~~b)~~c) Prepare a new Plan Element on Coastal Resiliency to be included in the next update in 2022 that expands research and strategies for adaptation to environmental change and sea level rise.

4) Water (Coastal Bays)

a) Continue to meet federal and state standards for d~~D~~isposal of sewage treatment plant effluent that should be limited by the capacity of the ocean and coastal bays to receive the nutrients and process them without significant reduction of water quality.

b) Existing emergency sewage treatment plant discharge or overflow to the bays should be closely monitored to determine compliance with discharge standards and permit requirements. These standards should be strictly enforced.

c) Stormwater should be controlled on-site to reduce negative water quality and flooding impacts. Returning stormwater to the soil should be a priority. Requirements for infiltration should be included in repaving requirements. The use of pervious pavers should be permitted where appropriate.

d) The Maryland Coastal Bays Program should be supported in its efforts to study the bays and recommend management options to maintain and improve their quality. As the program continues to evolve the Town should implement program recommendations that benefit water quality, wildlife habitat and water based recreation.

5) Groundwater

a) Well drawdown and recovery levels should continue to be monitored to determine if pumpage levels are appropriate in specific aquifers.

b) The State and surrounding counties should adopt controls to ensure that no inappropriate development occurs in aquifer recharge areas to protect the integrity and quantity of Ocean City's water supply.

c) Every effort should be made to monitor groundwater quality and to minimize the threat of saltwater intrusion to potable water supplies.

6) Land

a) Wetlands should be preserved, as they are critical to water quality, provide valuable wildlife habitat, provide flood protection, and serve as nursery for virtually all important finfish and shellfish. The federal, state, and local governments should continue to protect them.

b) The Beach Replenishment Program, Navigation channel dredging, and Inlet sand bypass projects should be maintained to provide storm protection and recreational use.

c) No construction or structures should be permitted on the reestablished primary dune and beach.

d) Controlled pedestrian access over the reestablished dune should be strictly enforced.

e) Private seawalls should be generally discouraged as they can accelerate beach erosion.

f) The beaches should always remain accessible to the public, and more public access to the bays should be provided through both public and private improvements. Coordinated access plans with existing state and county park/water access facilities should be identified and information provided to the public through 'green tourism' marketing.~~.~~

7) Fish and Wildlife

a) The town should encourage native plan landscaping for ~~wildlife and provide resource materials and staff assistance~~migratory birds, butterflies, moths and other pollinators. This effort should be integrated into the town's beautification and Critical Area Program efforts.

b) The public should be educated as to the harmful environmental effects of plastic litter. Restrictions on the use of plastic in items that prove to be eventually detrimental to the environment may be necessary.

c) Habitat enrichment programs, such as planting submerged vegetation, should be investigated for their potential for improving the productivity of the bays.

d) Appropriate measures should be used to protect rare, threatened and endangered species.

~~d)~~e) Coordinate with federal and state programs including fisheries management, working waterfronts and other active management of natural resources.

8) Solid Waste

a) The Town's waste-to-energy recycling program should be expanded whenever possible to reduce the waste stream impacts to the environment.

b) Compaction of trash by the ~~public and~~ private sector~~s~~ should be encouraged to manage~~reduce~~ volume and collection frequency during peak periods. ~~prolong the lifespan of the landfill~~.

9) Energy Conservation

a) The town's energy consumption patterns should be monitored and cost effective opportunities should be identified to institute public and private conservation measures.

b) The town should cooperate with the state and other agencies in disseminating energy conservation information.

c) The energy efficiency implications of the town's purchases and operations should always be considered.

~~c)~~d) Promote private solar PV installations through participation in the Solsmart Program and continue to meet public renewable energy goals through power purchase agreements.

10) Built Environment

a) A town-wide urban design, beautification, and landscaping plan should be developed.

b) The Town should continue to administer and enforce The Downtown Development Guidelines in cooperation with the Ocean City Development Corporation (OCDC). These guidelines cover a number of aspects of design including site design, bulk, scale, signage, architectural design and landscaping.

c) Design standards appropriate to other specific town neighborhoods should be developed and an appropriate design review processes for development of all types should be instituted.

d) Recommendations provided by the Ocean City Development Corporation for public improvements should be implemented to the extent practicable. These

include consideration of the design treatment future investments in public improvements, including sidewalks, street furnishings, landscaping, use of public spaces, public parking, and public art as well as protection or enhancement of waterfront vistas and town gateways.

e) A landscaping program for existing development should be developed. Repaving of existing parking lots is an excellent opportunity to achieve this and improve on-site stormwater management.

f) Sign controls should be strengthened to better regulate the proliferation and appearance of signs.

g) A systematic program to bury utility wires should be developed and implemented.

~~g)~~h) Continue active enforcement of EIFS Styrofoam building material controls during construction and renovation projects.

CHAPTER 8: Downtown Development Redevelopment/Reinvestment

Introduction

There has been considerable discussion over the past several decades about Downtown Ocean City. In the 1996 Comprehensive Plan there was extensive commentary on improvements needed in the area, the lack of economic growth, the appearance of the area and the general lack of direction on the part of both the Town government and the private sector. In response, the Mayor and City Council supported the incorporation of the Ocean City Development Corporation to actively promote redevelopment and reinvestment in the upper and lower downtown areas. The success of this effort is a good model for other defined areas of Ocean City in the future.

With the 2016 update, this chapter of the plan will be expanded to include all areas of Ocean City for consideration of how best to manage future development in the context of existing neighborhoods and districts. The 2014 report of the Maryland Sustainable Growth Commission titled *'Reinvest Maryland: Accelerating Infill Redevelopment & Community Revitalization'* has been used as a reference to identify successful practices already underway as well as new ideas for the future.

Goal:

To plan for future development conditions and make public investments in infrastructure, encourage renovation of older structures, and promote redevelopment of properties that continue the traditions and architectural character of Ocean City, Maryland.

Objectives:

In order to achieve the redevelopment goal, the following objectives are adopted:

8.1 Model Block – Interim downtown parking will lead to increased activity and interest in redevelopment opportunities in the Model Block. Marketing for private investment in long term revitalization and mixed use building that will support and encourage additional private investment.

8.2 Sunset Park – Program special events and activities throughout the year to attract visitors to the downtown area and encourage connections between bayside and boardwalk.

8.3 Renovation/Reivestment – Encourage the continued renovation of older structures throughout Ocean City, working with design guideline and grant program assistance where possible and meeting current building standards.

8.4 Redevelopment – Allow and encourage infill development and revitalization of properties while protecting established neighborhoods and districts from adverse impacts.

Overview of Downtown Development Issues

The 1996 Plan noted that the Boardwalk seemed to be thriving as strongly as ever, and the Bayfront had become a popular location for restaurants, bars and marinas. However, the core area between the Boardwalk and the Bay was continuing to struggle. The physical appearance of the area was improving due to public investment and private redevelopment efforts; however, there still seemed to be a lack of initiative on the part of many property owners to improve their properties. The Plan recounted the long series of planning and zoning efforts focusing on the Downtown area, including the following:

Review of Prior Initiatives

Comprehensive Plans for Ocean City (1968, 1978 and 1989) contained general goals and objectives and specific policy and action recommendations, generally referring to special efforts that should be made to retain the unique character of the area:

- Create downtown commercial and historic districts to encourage renovation and retention of historical characteristics.
- Preserve architectural character.
- Establish a Historical Zoning District or zoning provisions to preserve the area.
- Create an "old Town Commercial District" to encourage revitalization of older buildings in their present locations.

The Downtown Revitalization Study (1980) was a project-oriented follow-up to the general recommendations of the Comprehensive Plans. It offered numerous recommendations for public and private projects and actions, some of which have been accomplished either totally or partially including:

- Entry Park.
- Underground utilities.
- Street equipment and tree planting.
- "Jetty Park" improvements.

- Worcester Street Parking lot improvements.
- Public purchase of land for additional parking.
- Relocation of Town's Public Works functions to alternate locations.

Consideration of ***Historic Area Zoning*** (1984) ended when the Mayor and City Council decided not to implement this technique. However, the Town formed an Old Town Committee which presented recommendations aimed at maintaining the character of the Downtown and improving its economic and social vitality. Many of the recommendations were addressed in the Comprehensive Rezoning Study (1986) which attempted to encourage the revitalization of Downtown while retaining the special character and flavor of the area. Building height and density regulations were similar to those adopted in the Comprehensive Plan. No changes were proposed in the treatment of nonconformities.

The TOPICS (Traffic Operations Program to Increase Capacity and Safety) Study (1975) proposed traffic improvements in the Downtown area. The construction of a multi-level parking structure for approximately 500 cars was considered but eliminated as a viable alternative due to construction cost ($1.5 million in 1975) and the potential to create severe congestion on adjacent streets. The Study did recommend the construction of a parking facility at the Worcester Street lot consisting of grade-level parking and one level of parking above-grade.

The Parking Survey and Financial Feasibility Study (1984) identified a parking shortage of approximately 550 spaces in the study area (N. Division Street to the Inlet, ocean to Bay) and recommended a parking structure at the Worcester Street lot. The structure would be planned for 850 to 900 spaces with an initial phase containing about 440 spaces. The projection was that the structure would lose money initially but become self-sustaining within 5 years. The construction cost for the first phase was estimated at $3.4 million, with first-year operating costs of $74,000.

In the ***Ocean City Old Town Revitalization Study (1992),*** the State Department of Housing and Community Development, through the Maryland Main Street Program, recommended a two-year framework of public and private improvements. The recommendations included creation of an Ocean City Revitalization Office and a Commercial District Management Authority. The new organizations were to be tasked with creating a small historic district for the "Olde Towne" area, developing a retail marketing strategy, creating design standards and publishing a newsletter. There were specific project recommendations focusing on a Talbot and Somerset Streets link with the boardwalk to serve as a pedestrian gateway to Olde Towne, a northern beach bus station and development of a "major attraction" in Olde Towne. There was also the intent to create a low-interest loan pool to finance improvements managed by the enactment of the Design Standards Ordinance.

Throughout the 1980's and '90's the City made significant investments in the Downtown, and continues to do so today. The list below (Table 8-1) identifies public improvement projects that had been accomplished following the 1980 Downtown Revitalization Study.

Table 8-1 Public Improvements in the Downtown	
Action	***Cost***
Purchase of property for Entry Park	$142,158
Downtown improvements (1982 bond issue)	$668,900
Baltimore Ave. water main (phase 1)	$1,553,197
Chicago Avenue Park	$100,000
Inlet park and boardwalk (phase 1)	$51,000
Worcester St. parking lot, Whiteside lot	$100,000
Property purchase for Somerset St. parking	$578,000
Property purchase for 5th St./Balt. Ave. parking	$379,000
Fishing/crabbing pier (9th St.)	$40,544
Skateboard park	$77,115
Stormdrain improvements	
Bulkhead, Chicago Ave.	$131,781
Bulkhead, Edgewater Ave.	$161,338
Baltimore Ave. improvements (utils., streets, etc.)	$2,000,000
South Division St. transit center	$41,680
Downtown bayside improvements	$725,000
15th St. water plant	$9,900,000
Boardwalk improvements	$627,000
10th St. to 15th Improvements	$395,000
Worcester St. parking lot, Whiteside lot	$81,410
Worcester St. bayfront deck	$51,875
4th St. parking lot	$61,000
Somerset Plaza	
South 1st Street	
Sunset Park	
Source: Comprehensive Plan, 1997	

The 1997 Plan recommended the following:

- The Mayor and City Council should commit to a comprehensive, long-term revitalization program. The program should be based on the Main Street concept which has proven to be a successful, implementable strategy.

- The Mayor and City Council should create the position of Main Street project manager (or Downtown Improvement Manager). This should be a full-time employee with the sole responsibility of developing and implementing the Downtown Revitalization Program.

- The Mayor and City Council should commit to a program budget for a minimum of three years.

- After committing to the first three recommendations, the Mayor and City Council should apply to the "Main Street Maryland Program" and become eligible to receive assistance from the State in downtown revitalization efforts.

- The Mayor and City Council should continue to make public improvements in the downtown, including Boardwalk improvements and underground utilities.

- Efforts should continue to develop a "major attraction" downtown, such as an aquarium, IMAX theater, museum or urban entertainment complex.

It concluded: "The "shotgun approach" has not had great success in the past; if the Town is truly serious about improving the Downtown, a planning-oriented program with consistent support from the Town and local business owners is needed."

The ***Ocean City Downtown Village Plan of Action*** was prepared in 1999 with the assistance of the International Waterfront Group. The purpose of the plan was to set forth a specific set of proposals and projects to be implemented in the short and long terms.

The Action Plan presented an ambitious three-phased action program. Several years ago the City took the important step of establishing an Inlet Parking Lot Fund from which dedicated proceeds (roughly $300,000 per year) support the activities of the Ocean City Development Corporation ("OCDC"), the entity that now leads the downtown revitalization effort. The organization's work plan has evolved over the past several years and its 2004 newsletter contains the current version of the work plan.

Table 8-2
Downtown Village Action Plan, 1999: Projects and Progress

Project	Description	Status
Phase 1		
Pedestrian Corridor Program	Increase pedestrian traffic to Bay front.	Talbot St Somerset St
Parking Garage/Multimodal Transit Station	Construct on two blocks between Balt. And Phila. Aves.	Transit Station completed
Inlet Parking Lot Enhancement	Redesign 1200-car parking area.	Competed
Transportation Diversification	Acquire parking sites for 400+ cars between 3rd and 27th Sts.	
	Develop park and ride program.	
	Create bayside water transportation system.	Private service available
	Extend existing boardwalk train into d/t core.	
Phase 2		
Inlet Parking Lot Enhancement	Create pedestrian and landscape improvements.	
East-West Corridor Enhancements	Change vehicular and pedestrian features on east-west streets between Balt. and Phila. Aves.	
Philadelphia Ave. Enhancements	Improve pedestrian and vehicular movement.	
Baltimore Ave. Enhancements	Improve pedestrian and vehicular movement.	
Phase 3		
Completion of East-West Corridor Enhancements	Complete pedestrian improvements to Bayside.	
Identification of Development Sites	Offer locations for high-profile projects.	Model Block Project

Source: Ocean City Downtown Village Plan of Action; Thomas Point Associates, Inc.

Table 8-2 Downtown Village Action Plan, 1999: Projects and Progress	
Project	**Description**
Phase 1	
Pedestrian Corridor Program	Increase pedestrian traffic to Bayfront.
Parking Garage/Multimodal Transit Station	Construct on two blocks between Balt. And Phila. Aves.
Inlet Parking Lot Enhancement	Redesign 1200-car parking area.
Transportation Diversification	Acquire parking sites for 400+ cars between 3rd and 27th Sts.
	Develop park and ride program.
	Create bayside water transportation system.
	Extend existing boardwalk train into d/t core.
Phase 2	
Inlet Parking Lot Enhancement	Create pedestrian and landscape improvements.
East-West Corridor Enhancements	Change vehicular and pedestrian features on east-west streets between Balt. and Phila. Aves.
Philadelphia Ave. Enhancements	Improve pedestrian and vehicular movement.
Baltimore Ave. Enhancements	Improve pedestrian and vehicular movement.
Phase 3	
Completion of East-West Corridor Enhancements	Complete pedestrian improvements to Bayside.
Identification of Development Sites	Offer locations for high-profile projects.
Source: Ocean City Downtown Village Plan of Action; Thomas Point Associates, Inc.	

Current Status

Following up on the 1996 Comprehensive Plan the City made the downtown the focus of economic development efforts. The City organized the Ocean City Development Corporation (OCDC) as a non-profit charitable organization with the power to sell tax credits and accept tax-deductible contributions. This organization has responsibility for implementing the recommendations of the 1999 Downtown Action Plan.

The Action Plan presented an ambitious three-phased action program. Several years ago the City took the important step of establishing an Inlet Parking Lot Fund from which dedicated proceeds (approximately $250,000 per year) support the activities of the Ocean City Development Corporation ("OCDC"), the entity that now leads the downtown revitalization effort. The organization's work plan has evolved over the past several years and its 2016 newsletter presents several ongoing projects within the current work plan

There has been significant action on priority projects over the past several years. Current status of key issues is the following:

- Parking structure: Development of additional parking continues to be a leading issue. The plan to build at the Worcester Street lot, replacing the 175-car surface lot, is still on the table. The City hired a consultant to conduct a transportation study and evaluation of parking structure feasibility that has not been advanced further.

- Park and Ride Lot: Located in West Ocean City, the Park and Ride Lot provides remote parking for 700 spaces along the Route 50 gateway corridor with bus connections to the downtown transit station.

- Wrap-around Boardwalk: the concept of continuation of the Boardwalk along the Inlet and bayfront is still a priority. A conditional zoning map amendment of the former Cropper Concrete property was approved in 2016 including a public use easement to allow extension of a bayside boardwalk north of the Route 50 Bridge.

- Sunset Park: the construction of Sunset Park has been one of the significant accomplishments of the Ocean City Development Corporation since its inception in 2000. Sunset Park is designed as a linear park along South Division Street between Philadelphia Avenue and the Bay. This waterfront park contains an entertainment venue for small to medium sized special events. The project includes seating areas, decorative lighting, landscaping, a signature entrance fixture and a viewing area to watch the magnificent Ocean City sunsets. Sunset Park also includes elements reflecting the railroad bridge that once entered Ocean City at this location. The restrooms and storage building adhere to railroad architecture. Original train station bricks from the old downtown train station in Ocean City have been included in the construction of this park. Construction was completed in 2006.

- Main Street Program: Ocean City was designated a Main Street Maryland community in 2012. The OCDC administers this program.

- Façade Improvement Program: the Maryland Department of Housing and Community Development has funded the Community Legacy Program grants to encourage private reinvestment in downtown Ocean City. Over 185 buildings have been renovated under the program with a total investment of over $5.7 million. There have been five façade projects on Somerset Street, which is now a "semi-pedestrian" street.

- Green Building Initiative: This business assistance program, roof replacement program, and property fencing are also administered by OCDC.

- Model Block Program: The Town of Ocean City and OCDC have assembled most of the block between Somerset and Dorchester Streets between S. Baltimore and S. Philadelphia Avenues in order to encourage a sizable revitalization project called the Model Block. An interim parking lot is in use while the project is marketed. The envisioned mixed use development will benefit the downtown area with increased pedestrian activity and economic vitality.

- Downtown Design Standards: the standards, approved in November 2002, provide requirements for signage and architecture. The OCDC Downtown Design Committee is responsible for reviewing site plans and recommending design standards in cooperation with the Ocean City Department of Planning and

Community Development. Limited design standards were codified in 2006 for the Upper Downtown Area.

- Public Art Program: The City sees art work as a way to attract more people to the downtown. There are many projects completed and underway:

  - Marlin sculpture with water features.
  - Osprey sculpture at 4th and Philadelphia.
  - Wall mural of historic postcards.
  - Utility box paintings (25 boxes have been painted)
  - Dolphin Sculpture at the Route 90 gateway

- Ocean City Life Saving Museum: An expansion is planned to improve accessibility, provide additional display and activity areas, and continue to enhance the OC visitor experience.

Table 8-3 summarizes the current work program.

Table 8-3
Ocean City Development Corporation: Projects and Progress

Project	Description
Parking Plan	Construction of multi-level parking structure and relocation of intermodal terminal. In study phase.
Boardwalk and Water Access	Development of "wrap-around Boardwalk on west side of Philadelphia Avenue. Promote public waterfront access as bayside and inlet projects are developed to encourage pedestrian access.
Sunset Park	"Sunset Park" on west side of South Division Street completed.
Model Street Program	Redevelop Somerset St. between Boardwalk and Baltimore St. completed. Study possible Somerset Street extension to the west. South 1st Street completed. Special event promotion with 6 annual downtown events.
Façade Improvement Program	Creation of guidelines and financial incentives. Over 185 buildings renovated to date.
Green Building Initiatives	Energy Star rated doors, windows and cool roof. 33 projects completed.
Business Assistance Program	Financial assistance for fixed interior improvements to downtown businesses looking to start or expand. 12 projects completed
Strategic Demolition and Smart Growth	Financial assistance for demolition of older structures to encourage mixed use and employee housing. 3 projects completed.
Model Block Program	Create high-density mixed commercial/residential development between. Baltimore and Philadelphia Aves. Phase 1 temporary parking lot completed. Seeking development interest and additional consolidation opportunities.
Downtown Zoning Districts	Create new districts and architectural guidelines. Study possible expansion of OCDC program area north to 32nd Street. Update and expand design standards.
Streetscape Improvements	Construct improvements along Baltimore and Philadelphia Ave. crosswalks. Coordinate with City Engineer for Baltimore Avenue improvements South Division Street to 17th Street.
Entry Park Public Artwork	Install public art at key locations. Dolphin sculpture complete.
Seasonal Housing	Relocation and renovation of 'Tarry a While' house completed with 13 bed seasonal housing component.
Downtown Marketing	Newsletter, website, promotional video, annual meeting, walking tour, awards program, publications.
Boardwalk Committee	Review of outdoor display permits, installation of 5 business directory panels, employee appreciation day.

The OCDC works on a number of important long term projects including the housing of seasonal workers. Every summer season Ocean City welcomes roughly 3,000 foreign workers (approximately 20 percent of the seasonal workforce), many of whom live in and around the downtown. The OCDC took the lead in a project to meet workforce housing needs by relocating and restoring an old structure, the Tarry-A-While Guest House. For its ninth year, OCDC has provided seasonal housing for Ocean City seasonal employees as well as office space for its operations. OCDC grant programs administer State funds which can assist new mixed use projects containing an employee housing element.

There has been notable success in attracting new development to the downtown. The redevelopment of the Belmont Towers property on the Boardwalk at Dorchester Street has provided an important example for future redevelopment and a test of the design review process. The fact that it includes a mix of retail and residential uses is very positive.

Redevelopment/Reinvestment

The 2014 report of the Maryland Sustainable Growth Commission titled 'Reinvest Maryland: Accelerating Infill Redevelopment & Community Revitalization' provides new State guidance on how to identify places where growth, revitalization and resource conservation should occur, and how existing communities may best work together with State programs to encourage and manage new development. In many ways, the OCDC has pioneered this cooperative effort within the downtown areas.

For the purpose of this chapter the following terms are defined:

> **Infill** – *the development of vacant parcels within previously built areas.*
>
> **Redevelopment** – *building or rebuilding on parcels that have been previously developed, with redevelopment aiming for a higher and better use of the area for the community and landowner.*
>
> **Revitalization** – *instilling new value and vitality into a community through infill and redevelopment or other activities such as building reuse and renovations, façade improvements, beautification efforts, small business loans, and special events.*

Many state agencies are ready to provide technical assistance and may administer programs which support redevelopment and reinvestment. In particular the MDE Land Management Administration regulates redevelopment activities including underground storage tanks and lead based paint abatement that apply to rental properties and the protection of surface/groundwater during development.

As redevelopment and infill principles are incorporated into current codes and development process requirements, new measures are needed for protection of surrounding neighborhoods and integration into surrounding mixed use development.

Conclusions and Recommendations

OCDC continues to have the strong support of the Mayor and City Council and the business community, and has made significant progress on its initial agenda. The current work plan has been updated with additional priorities and projects. Many of the long-term issues are still unresolved and present a challenge to the ongoing revitalization process:

1) Parking is a still a major issue, as it has been for at least thirty years. OCDC has plans for a parking structure on the Worcester Street site. This project should proceed in some form. In fact it offers a larger opportunity to construct a garage with a mixed-use development.

2) Proximity to the Inlet and low ground elevation creates periodic challenges for access, stormwater utilities, and first floor retail space during storm and seasonal high tide events.

3) The US Coast Guard Station is an important element of the downtown area which should be incorporated into long term redevelopment plans as both a key property and important public service resource.

4) Diversity in programmed entertainment will complement the range of traditional boardwalk attractions. There is a need for another type of destination entertainment venue and there may be a place in the downtown for this type of facility.

5) Ongoing programs such as Sunset Park, the continued development of the wrap-around Bay front Boardwalk, streetscape improvements to N. Baltimore Avenue, and the Model Block program continue to be important and need long-term support. Completion of construction will mean the beginning of a continuing process of maintenance and improvement.

6) OCDC can become more proactive in development by leveraging public properties and development opportunities to expand the range of attractions and promote mixed-use projects that add vitality to the area. The Main Street Program will continue to promote special events and marketing that support downtown businesses.

7) Meeting the need for housing for seasonal employees will represent an ongoing challenge.

8) Opportunity to expand the Upper Downtown Design Overlay District to include area within the Sustainable Community program limits up to 33rd Street.

9) Request technical assistance from state agencies when necessary to promote infill redevelopment and community revitalization.

- 10) Support efforts of the Ocean City Life Saving Museum to enhance and expand the visitor experience in the downtown/boardwalk area.

The progress that has been made in downtown improvements since the 1996 Comprehensive Plan suggests that focused actions have produced many tangible results. In summary, the City has a clear vision for reinforcing the identity for its downtown and other sites for redevelopment and reinvestment. Accomplishing that vision will require substantial effort and an ongoing commitment of resources for many years to come.

CHAPTER 9: Plan Implementation

The preceding plan document and maps provide a new and more focused direction for Ocean City. New initiatives for improving the quality of life in our resort, an emphasis on fostering better site planning and design characteristics in new structures as re-development occurs over time, and meeting the goals of the Annotated Code of Maryland Land Use Article, as amended, are but a few of the plan's many features.

The plan's purpose is not necessarily to produce a major diversion from the past, but rather to fine tune and guide future development and services to enhance Ocean City's vitality as a resort and a community. Many opinions have been expressed as to how to achieve this objective. Of necessity, the plan represents a blending and a compromise, the result of which must represent a balance between individual property rights and the overall community's welfare. The Plan update in 2016 generally incorporates current information into each chapter without proposing major changes. A full revision is scheduled in 2022 following the release of 2020 Census data.

Goal:

To utilize the Comprehensive Plan as a reference and guide for local government decision making, and to identify projects which help to advance the goals and objectives adopted with the Plan. Action items will be evaluated with the annual report to the Maryland Department of Planning and updates will be completed in accordance with a 10 year cycle following release of new census data.

Objectives:

In order to achieve the plan implementation goal, the following objectives are adopted:

9.1 Integration of Comprehensive Plan goals and objectives with all related plan documents such as the Hazard Mitigation Plan, Tourism Master Plan, Capital Improvement Plan, Recreation and Parks Master Plan, Special Events Plan, etc.

9.2 Achieve measurable progress on identified projects and activities

9.3 Initiate small area planning as a tool to define unique neighborhood or district strategies that will meet specific needs or goals

Planning without implementation is merely an exercise. Implementation will require a variety of public and private organizations and individuals to take action. Attempting implementation without broad based public support would produce limited results.

The plan strives to maximize the long-term benefits to the community. Such a perspective requires foregoing some short-term gains. Ocean City faces a future filled with shifting elements: the federal tax structure, changing vacationer expectations and needs, a more competitive economy and a challenging environment. The year-round population has stabilized and may grow or decline in the future. However, physical limitations on new development will slow the historically steady growth in the tax base, thus requiring additional resources to maintain the high level of service which the town has historically provided.

Prospects for tourism remain excellent. Both population and incomes continue to grow substantially in the areas from which visitors to Ocean City come. Mobility has steadily increased with improved road and bridge access and personal vehicle ownership.

Challenges abound, but Ocean City's proven ability and resourcefulness will measure up to the task. Along with experience, determination and a positive attitude, several planning tools are available to prepare for the future. Comprehensive planning has been the first to be put to the task. Next the implementation tools which will carry out the plan must be addressed.

The Land Use Article of the Annotated Code of Maryland encourages the streamlining of regulatory mechanisms and the use of flexible development regulations to promote innovative and cost-saving site design and protect the environment. It has been the policy and practice of the Town to streamline regulations whenever possible, providing such streamlining is not a detriment to public or environmental interests that must be protected. The Town should continue to take advantage of opportunities for streamlining regulations, as long as the public interest is maintained.

The Town has already implemented several innovative regulatory techniques, including overlay zones, transfer of development rights, and the use of special criteria for special types of development. These techniques offer flexibility and greater discretion which may lead to better development. Other tools such as non-conformity of minimum parking criteria is often used to encourage reinvestment in older structures, however the cumulative impact of this incentive should be evaluated.

Outlined below are the approaches for implementing the comprehensive plan. Implementation begins with the Mayor and City Council through aligned priorities in the Strategic Plan, and through funded projects of the Capital Improvement Plan. Traditional methods, such as zoning and subdivision regulations, have withstood legal challenge and proven to have practical value in directing private investment in the community. The plan recommends their continued use with some modifications.

Strategic Plan

The Strategic Plan identifies and establishes short term priorities for projects and actions which often involve multiple City Departments working together to manage and improve

the ongoing operations and services Ocean City provides to its citizens and visitors. Figure 9-1 illustrates the 2016 Strategic Plan summary. A full copy may be viewed on the City Manager's web page.

Figure 9-1

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Capital Improvement Plan

The Capital Improvement Plan (CIP) identifies and establishes long term priorities for capital improvements in the town's infrastructure. The town annually prepares a CIP and should use it to implement the capital recommendations of this plan. This plan should also be used to inform future CIPs.

Briefly, the CIP identifies specific projects, their cost, and sources of funding. Each project is slated for funding in one or more of the program's five future years. Estimates of future income can be developed to determine needs for financing. This process helps elected officials and staff to anticipate major projects, and allows time for arranging site purchase and favorable financing terms.

Projects identified for the current CIP planning period (2016-2020) are incorporated by reference into the Comprehensive Plan. Selected priorities for CIP implementation which expand or change existing land use are identified below:

Public Safety

- Mid-Town Fire Station (proposed relocation of Station 3 from 74th Street to existing 65th Street Public Safety Building Complex)

General Public Works

- Boardwalk Tram Facility (Whiteside) Relocation to St. Louis Avenue between 2nd and 3rd Streets, conversion of existing site to public parking
- Potential Bus Transit Center relocation to 4th Street between Baltimore and Philadelphia Avenues (consolidation with Post Office parcel)

Municipal Facilities

- 65th Street Municipal Campus Plan with new employee parking, transit bus maintenance and public safety support facilities
- Potential relocation of Keyser Point Road Public Works Yard in Worcester County
- Life Saving Museum Annex and renovation

Highways and Streets

- Potential southern extension of Philadelphia Avenue transit bus lane from 17th Street south to 4th Street.
- Baltimore Avenue streetscape improvements from N. Division Street to 15th Street

Recreation and Parks

- Phase 2 construction of a pier at Sunset Park
- Maintenance garage expansion at Northside Park

Environmental

- Construction of a new double lane bayside public Boat Ramp at 64th Street

with channel dredging

Technology and Communications

- Installation of telecommunications equipment at new 1st Street Water Tower

Convention Center

- Phase 3 Expansion of Hall A-B (30,000 square feet to the north)
- Life Saving Museum Elevator and Exit Stairs

Airport

- Taxiway A relocation (60 feet north of current location)
- Hanger K 3 bay expansion per approved master plan
- Combination aircraft hangar and commercial office building within long term parking lot

Water

- Construction of new 1 million gallon water tower at 1st Street and St. Louis Avenue, with co-located utility services, removal of existing water tanks at Worcester Street and 15th Street.
- Proposed water treatment plant at 66th Street with raw water line extension from well field at existing 44th Street water plant.

Wastewater

- Future construction of additional clarifiers within the existing wastewater treatment plant facility
- Installation of a structural liner within a section of the Ocean outfall pipe that lies beneath the beach

Other capital improvements within the corporate limits have been identified as a priority for planning, funding and implementation in partnership with others including:

- Mixed Use Downtown Model Block redevelopment with OCDC
- Downtown Parking Garage funded by a fee-in-lieu or special tax district
- Expansion of Express Transit Bus Service along Coastal Highway with smart tracking technology
- Parking Space Management System with smart signs and online technology to maximize use and capacity of downtown/boardwalk parking
- Expansion of cellular communications networks to support future needs
- Beach Replenishment and Ocean City Inlet maintenance by USACE
- Stormwater outfall tide gates for Flood Protection by FEMA/HMGP
- SHA project to replace the Route 50 bridge along the approved Alternative 5A north parallel alignment
- Future Route 90 Dualization by SHA
- Baltimore Avenue streetscape improvements (N. Division Street to 15th Street)
- OC Municipal Airport obstruction removal/clear zones

Land Use Regulations

Zoning

Zoning regulates the use, intensity, and bulk of buildings, as well as other attributes of development. This regulation is accomplished by segmenting the town into districts, each with its own set of permitted uses and development standards. The recommendations below address the process and content of the zoning code.

- Revise the code when necessary to reflect the location, and development standards and policies of the Comprehensive Plan.

- Modify design guidelines, standards and a design review process to assure that the quality of re-development in various districts within the Town reflect the desired character for each district. This includes standards for buildings and structures, screening and landscaping and provision of open space or public amenities. (See appendices D and E to this plan).

- A long standing recommendation of the Plan is to revise the zoning ordinance to eliminate the current pyramidal zoning framework. The current zoning framework permits conversion of commercial uses in areas zoned commercial to condominium residential development and allows potentially non-compatible commercial use in established residential areas. Although mixed-use and a range of commercial uses is needed to support neighborhoods in Ocean City, all areas should not be considered equally flexible based on potential impacts to surrounding uses. Revisions to the ordinance should encourage new commercial development with first floor uses in commercial districts to those that are commercial but may permit residential development above office or retail uses.

- Establish measures to preclude displacement of basic commercial retail uses by condominium development in appropriate locations.

- Develop incentives to encourage a healthy mix and distribution of commercial restaurant, retail, and service uses throughout the Town and promote mixed-use development which includes a workforce housing component and to minimize dependence on automobile use.

- ~~Consider limitations on short term rental of single family homes in the R-1 zoning~~

~~district to reduce incompatible commercial rental use and activities in established neighborhoods.~~Consider adoption of education and enforcement toold to address impacts of short term rental housing in established single family neighborhoods.

- Review site plan approval procedures and amend as needed, always looking for ways to streamline the development process while assuring compliance with codes and ordinances. Improve plan submission checklists and pre-application conference procedures.

- Examine permitted uses, and uses requiring special approvals; revise if necessary. Evaluate the best means to transition away from pyramidal zoning in specific areas identified through a small area plan process.
- Amend policy and code regarding non-conforming use to require compliance with alternative minimum standards for parking, floor area ration, open space, etc. with any change of use, renovation, or redevelopment requiring site plan review.

- Reduce off-street parking requirements where appropriate, especially for commercial uses. Otherwise, periodically review parking standards and revise if necessary. Establish modified minimum parking standards for non-conforming structures, significant improvements, change of use, and redevelopment.

- Investigate alternative and innovative approaches to zoning. Determine their usefulness and potential effectiveness for achieving Ocean City's goals and objectives.

- Continue the practice of strictly enforcing outdoor display of merchandise by retail stores, as it contributes greatly to the positive visual image of the Town.

- Combine code requirements for landscaping into a single section.

- Evaluate need for areas of commercial zoning east of Coastal Highway in order to meet basic needs for the ocean block, and minimize pedestrian and vehicle crossings of Coastal Highway.

Subdivision and Land Development Regulations

Subdivision and Land Development regulations establish design standards, procedures and information requirements for the legal division of land. The purpose is to establish an orderly process which results in parcels complying with the zoning ordinance and having the proper relationship to streets, utilities, and surrounding properties. The subdivision regulations should be reviewed and improved where appropriate. Many of the design standards recommended for implementation through zoning may also be implemented through the subdivision regulations.

- Incorporate minimum standards for NFIP compliance and CRS criteria.
- Develop review standards for 'land condominium' divisions.
- Review and adopt minimum checklist and development standards to strengthen existing policies such as 8 foot wide sidewalks in heavy pedestrian use areas.
- Consider a street elevation policy to address areas subject to frequent tidal/storm flooding and the implications for future code revisions.

Development Tracking System

The Town's computerized system (Laserfishe) which is used and maintained to track development and record land uses changes as they occur should continue to be improved. Improvements over time should focus on relating the system to the Towns geographic information system. Such a system should also continue to enhance the following characteristics:

- Ability to track a project from site plan review through occupancy.
- Tied to the online permit system so initial construction as well as alterations are automatically recorded.
- Encourage increased use of the new online permit system by property owners, developers and contractors.
- Improve capabilities for inspection/citation/tracking of development activities

Design Criteria, Standards and Review Process

Across the country, many communities are recognizing the need to exert some influence over the design quality of development. This has demonstrated that a shared sense of minimum aesthetic values, does exist and can be codified. In many areas the courts have supported this effort; others have found fault with its implementation. The U.S. Supreme Court stated in upholding a landmark protection law:

> "We emphasize what is not in dispute... This court has recognized, in a number of settings, that states and cities may enact land-use regulations or controls to enhance the quality of life by preserving the character and the desirable aesthetic features of a City..." Penn Central Transportation Co. V. New York City, 438 U.S. 104, 129 (1978).

Design review does not stop projects or greatly reduce their size; rather it concerns items such as compatibility and the details of development. Some common considerations include:

- Building mass (height, bulk and nature of roof line.)
- Proportions (building's emphasis on the horizontal or vertical plane.)
- Surroundings (open space and a building's relationship to neighboring buildings and open space).
- Landscaping (amount and location).
- Facade (location and size of openings, color, texture, offsets and projections to break up mass and add shadow interest).
- Signs and Lighting.

Ocean City has implemented design standards for the Downtown Area in 2002 and Upper Downtown Area in 2006 with a cooperative process of design review including landowners, developers and the Ocean City Development Corporation. The process has worked well and the use of design standards has already improved the quality of new development and re-development within the downtown area.

Simplified design guidelines were adopted as Code Section 110-181(c) for other areas of Town in 2012 which encourages the review of compatible building form as a part of the site plan approval process. Additional recommended infill and redevelopment guidelines were adopted as Appendix D and E of the Comprehensive Plan in 2006. These guidelines should be regularly reviewed, updated and considered for adoption as infill development performance standards in the Zoning Ordinance.

Such standards when adopted as code regulations are intended to allow for design flexibility, even when supplemented with graphic examples for clarity. The standards should be clear enough to allow implementation within the current administrative structure (staff and Planning Commission) or with OCDC assistance.

The proliferation of signs, allowed by the town's permissive regulations in the past has caused a general degradation of Ocean City's appearance. The sign regulations should continue to be periodically reviewed and amended to reduce the number of signs, and better regulate the location, height, lighting and quality of signs.

Economic Development

The Town of Ocean City in its entirety is an area of critical state concern as a major economic generator for the state and as a cultural asset. It is probable that more residents of Maryland visit Ocean City than any other recreational area in the state. It is estimated that 80 percent of Worcester County's state tax revenues originate in Ocean City and Worcester County contributes the highest ratio of taxes to benefits in the state. The state, county and town should continue to work together to improve Ocean City as a resort. This will benefit the state with added tourism and economic development.

The Ocean City Tourism Master Plan is incorporated as a part of the Comprehensive Plan and will continue to serve as the primary tool to promote economic development. New focus areas such as Special Event Management and Free Family Entertainment will be evaluated regularly to determine unique impacts to existing businesses and residential neighborhoods as the community transitions to a year round resort.

New industries that expand and complement tourism will be encouraged such as: Brewery/Distillery, Offshore Wind, and Competitive Sporting Events.

Environmental Resource Management

- The Beach and Dunes - The Atlantic Ocean beach serves as one of Ocean City's main recreational assets. In addition, it provides storm and erosion protection which reduces risk and preserves life and property. The prime management action should be the continued implementation of the Beach Replenishment Project to improve the recreational and storm protection abilities of the beach.

- A part of the coastal management plan relies on the continuation of a Sediment Bypass Project at the Ocean City Inlet by the US Army Corps of Engineers and the National Park Service. Management of a transitional area at the north end of Assateague Island is critical to maintain a naturalized system of beach, vegetated dunes and bayside marsh for approximately 6 miles to the Maryland State Park.

- Grooming and cleaning of the recreational beach should be continued. Construction should not be permitted on the beach. The beach should be accessible to the public, and held in trust under public ownership.

- The Ocean and Bay Waters - Water is what makes Ocean City a resort. Ocean City is in partnership with the Maryland Coastal Bays Program to implement a Comprehensive Conservation and Management Plan (CCMP). This plan focuses on quality of life for the watershed, identifies five priority problems in Maryland's coastal bays: degraded water quality, loss of habitats, changes in living resources, unsustainable growth and development, and poorly planned

recreational use of the bays. With a local economy that is heavily dependent on natural resources, Ocean City should continue to make environmental resource protection a priority, including:

- Protecting sensitive habitats such as wetlands, shady bayside beaches, natural shorelines and native urban landscaping by:
  - Dissuading rip rap and promoting soft shorelines where feasible, and alternative bulk heading materials where appropriate.
- Reducing water quality impacts from stormwater runoff by:
  - Encouraging the retention of open space and reduce impervious surfaces in site plans;
  - Retrofitting catch basins and dead end canals to treat the cumulative effect of runoff from small properties;
  - Source water prevention (minimize flooding by capturing storing and infiltrating stormwater to be released at a slower rate later).
- Reducing threat of development to cultural and natural resources by:
  - Encouraging development practices and design standards that minimize disaster through proper design and construction;
  - Promoting individual business and community evacuation in the event of coastal hazards. Encourage post disaster planning. How will the Town rebuild?
- Enhancing recreational access, opportunities and infrastructure for the public through a Recreation and Parks Master Plan, identification of CIP projects, and encouraging public access easement along bayside boardwalk locations.
- Reducing resource impacts from marinas due to pollution, location and design.
- Other Town of Ocean City action items from the CCMP

Transportation

- Coastal Highway - Coastal Highway is owned by the state and is the key element of Ocean City's land based transportation stem. Efforts should continue to maintain and improve the road's capacity and safety. Walk Smart/Bike Smart programs should continue to promote pedestrian and bicycle safety. Median fence installation and lighting from Route 90 to Convention Center Drive will be installed as a phase one demonstration project in 2017.

- A number of recommendations for pedestrian improvements, street system improvements, bus system improvements and use of the Coastal Bays to augment transportation options are provided in Chapter 4 of this plan. These recommendations should be implemented as financial resources permit over time.

- Continue to strengthen the transit system to increase capacity of a fixed road system during peak use periods.

Citizen Participation

Citizens participate in government in many ways, the most obvious is the electoral process. Legally mandated processes, such as public hearings, are also effective in encouraging public participation. Regular meetings of the City Council, Planning and Zoning Commission, and Board of Zoning Appeals are open to the public and recorded for viewing on the website.
Other public information sources are regularly updated including:

- **Community Newsletter**
  The Ocean City Newsletter has proven to be useful for apprising citizens of progress made and objectives for the future. Informed citizens are important to the operation of local government. The Newsletter should continue to be published and distributed as widely as possible.

- **Annual Report**
  The Planning and Zoning Commission shall prepare an annual report identifying actions taken and development activity occurring for the year. Maps identifying location of subdivisions, site plans approved, granted special exceptions and conditional uses along with zoning map amendments. Further, a description of upcoming work program elements shall be included.

- **News Media**
  The staff and Planning Commission should make positive use of the extensive local media to inform and educate the public about planning and development issues.

- **Social Media**
  Efforts to promote Ocean City under the Tourism Master Plan have combined with Emergency Management notification programs to create a vibrant social media connection with Ocean City residents and visitors. Keeping this information current and engaging is the responsibility of the Town's Public Information Officer working within the City Manager's Office.

- **Website**
  In recent year the Town's website and links to the activities to the many Town departments have perhaps proved to provide the most promising opportunity to better inform residents about services, facility improvements, upcoming forums, and a broad range of Town affairs. New and interesting ways of utilizing this

website should continue to be explored and updated.

Figure 9-2 Chart with Summary of Key Objectives and Projects by Chapter

Recommendations

1) Prioritize goals, objectives and recommendations from all Comprehensive Plan elements to establish a priority work plan on an annual basis

2) Align top priorities with Maryland Planning Visions, Town of Ocean City Strategic Plan, Capital Improvement Plan, Hazard Mitigation Plan and other current planning strategies.

3) Focus action and specific research/study projects toward preparing for the 2022-24 Comprehensive Plan Revision.

4) Incorporate detailed progress report into annual report to the Mayor and City Council and Maryland Department of Planning (July 1 cycle)

CHAPTER 10: Municipal Growth Element

House Bill 1141, adopted during the 2006 Maryland General Assembly legislative session, requires the inclusion of a "Municipal Growth Element" (MGE) in all municipal comprehensive plans. The MGE is to examine past growth trends and patterns, project future population growth and land use needs based on a capacity analysis, consider future annexation needs, and consider the impact of future growth on the municipal infrastructure.

This chapter was prepared separately from the last approved Comprehensive Plan in 2009, and at the time it served as both a summary and update to the overall Plan in 2011. Population projections and evaluation of build-out potential from this analysis provides information that has also been incorporated into water and sewer infrastructure master plans and capital improvement budgets.

With this update, Chapter Ten should continue to provide a summary of key information from all chapters that helps to evaluate future growth projections and infrastructure demands.

The Sustainable Growth and Agricultural Preservation Act of 2012 (SB 236)

On October 9, 2012, the Town of Ocean City adopted a Sustainable Growth and Agricultural Preservation Act of 2012 Map in accordance with the requirements outlined in the Sustainable Growth and Agricultural Preservation Act of 2012 (the Act) (See Map #10-1).

The Act was designed to improve water quality and to encourage smart growth by limiting where major residential subdivisions can be located and establishing parameters for sewerage system service. The Act outlines four basic Tiers (Tiers I, II, III, and IV) which identify where new major and minor residential subdivisions may be located and what types of sewerage system can serve them.

As the entire municipality is currently shown as an existing sewer service area in the Worcester County 1994 Water and Sewerage Plan, and as the Town of Ocean City has no municipal growth areas designated within the 2006 Worcester County Comprehensive Plan, the Town of Ocean City Sustainable Growth and Agricultural Preservation Act of 2012 Map only depicts a Tier 1 designation for the entire municipal boundary.

In accordance with the Act, the Town of Ocean City's Sustainable Growth and Agricultural Preservation Act of 2012 Map is hereby incorporated as part of the Town of Ocean City Comprehensive Plan.

Sustainable Growth and Agricultural Preservation Act of 2012
Town of Ocean City, Maryland
Sussex County, DE
Worcester County, MD
Assawoman Bay
Ocean City
Atlantic Ocean
Isle of Wight
Route 90
Isle of Wight Bay
Route 50
Assateague
N
0 0.5 1 2 Miles
Tier One Boundaries
Served by Existing Public Water/Sewer Services

Map 10-1

Population

Year-round Population

During its early years, Ocean City was a small resort community experiencing slow year-round resident growth. Through four decades from the period 1930-1970 the Town's resident population grew by only 547 new residents. The Town's population declined in the 1950s only to recover in the 1960s when the northern section of the island was annexed. The modest population decline in the l950s has been attributed to permanent residents moving to the mainland, either selling or renting their high-value island property. Since 1970 growth in the year-round population has increased dramatically. Over the past 40 years the year-round population has increased almost 5 fold: from 1,493 residents in 1970 to an estimated 7,102 in 2010.

The growth in the 1970s and 1980s resulted from the increasing tourist economy enabling more households to be supported year-round by the summer trade, and the expansion of public facilities to serve an increasing population. In addition, there has been an influx of retirees who have found Ocean City to be a desirable place to live. Table 1 displays the Town's historic and projected year-round population which reflects more recent trends toward a stabilized population.

Chapter 1, Population Characteristics and Trends, of the Comprehensive Plan, contains a detailed analysis of the year-round population of Ocean City.

Seasonal Visitor Population

In a resort such as Ocean City, it is much more important to understand the demographics of the total population, including year-round residents and seasonal visitors, rather than only the permanent population. Planning for future development and for the provision of public facilities must be based on the total population to be accommodated and served. Ocean City's infrastructure is sized to accommodate the larger seasonal population rather than only the year-round population. Much of the infrastructure and services are scaled back during the off-season and then operated at full capacity during the peak season.

Measuring the seasonal visitor population is a difficult task for any resort community. Since the 1970s, Ocean City has estimated its total population by a mathematical formula called "Demoflush", which estimates population based on flow amounts through the sewage treatment system. When compared to other indicators of population, Demoflush population estimates may seem to overstate the actual number of people in Ocean City, but it is still useful as a tool to compare population over time and by season, since it provides a consistent methodology for estimating seasonal changes in population through the course of the year and for estimation of changes from year to year.

The peak population has remained relatively stable within the range of 320,000 to about 345,000 in subsequent years. The year-round average weekend population has shown only a slight increase of just under two percent and typically ranges from 153,000 to 158,500 over the course of the year. The average weekend populations through the summer months have remained quite stable through the 1992-2005 period. Most noteworthy are trends reflecting more substantial increases in average weekend populations during the peak season shoulder months and winter months.

Chapter 1, Population Characteristics and Trends, of the Comprehensive Plan contains a complete detailed analysis of the seasonal population of Ocean City.

Population Projections

Population projections for Ocean City must be made for both year-round and seasonal projections. Projecting year-round resident and seasonal population in Ocean City is complicated by several factors. The uncertainty about the accuracy of the Census and the small size of the year-round population compared to the total population decreases the accuracy and importance of projecting future year-round population.

Seasonal population projections present their own set of problems. Vacationers and seasonal workers are not counted by the Census, so historical counts rely on symptomatic data that can only offer a surrogate measure as a basis for projection. Future growth depends on a variety of economic and demographic characteristics. Finally, Ocean City's physical capacity (a geographically confined, largely built community with 97% of the land developed) and land use policies will have a major effect. It is likely that much of the change in the capacity of the City to absorb increases in the peak seasonal visitor population will be largely influenced by City redevelopment policies as much as new development over the next 20 years.

Table 1 presents both the historic and projected year-round population. Given the unique characteristics of Ocean City as a resort community it is difficult to develop a single set of year round resident population forecasts that can be considered reliable. The projections are taken from Chapter 1 of the Comprehensive Plan, and project that Ocean City will retain its current proportionate share of the Worcester County population, yielding a year-round population in the year 2030 of 9,473.

The projection of future total, or seasonal, population is more important to planning efforts in Ocean City than the projection of year-round population. It is the total number of people in the city that impact the environment and demand for public services and facilities. Projecting the future total, or seasonal, population is as difficult and uncertain as estimating the current total year-round resident population. In this period the peak seasonal visitor population has been relatively stable, growing at an average rate of .22% annually, and this plan projects that trend to continue in the foreseeable future.

Population estimating methodology used in prior versions of the Plan indicates that between 170,000 and 240,000 people are in Ocean City at any time during the peak season (excluding day visitors). Adding another 10 percent to account for day visitors who are not staying overnight yields a maximum of about 264,000 as a total average summer population (about 85 percent of the Demoflush figure). This population estimate is used for purposes of planning for parks, recreation, police, fire and emergency medical facilities and services as well as Town administrative facilities. A slightly higher Demoflush figure is used in water and wastewater planning to provide a safety factor to assure adequate water supplies and satisfy wastewater treatment capacity needs.

Table 2 shows historic and projected peak-day Demoflush population, both adjusted and non-adjusted.

Growth within the area of Worcester County near Ocean City has an effect on Ocean City's services, since many of the residents and property owners of Ocean Pines, West Ocean City, and the Route 611 corridor visit Ocean City regularly. Growth in West Ocean City, in particular, has accelerated over the past 10 years. This is partially counted for by a 10 percent addition to the adjusted Demoflush data for day visitors. The impact of the nearby area West Ocean City may become greater if growth in Worcester County continues to be directed to existing growth centers. The growth policies of the recently adopted Worcester County Comprehensive Plan reflect this vision.

Growth in the unincorporated area proximate to Ocean City is discussed later in this element.

Housing Stock and Households

Similar to future population, the housing stock is projected to increase at a slower pace than in the past. This is a function of demand for additional seasonal units as well as the lack of vacant land. The majority of the growth of the housing stock will be in the form of redevelopment of older units. Table 3 presents historic data and projections of the housing stock.

The number of households can only be calculated for year-round residents. It is projected to increase at approximately the same rate as the increase in the year-round population.

As is the case with the increase in year-round population, the increase in year-round households has no appreciable impact on town services.

Tourism Dashboard Data

In order to improve the evaluation of seasonal population impacts on municipal services, the Town of Ocean City Tourism Commission has developed a 'dashboard' of monthly information and statistics. A new tourism dashboard published since 2013 collects data to use as a metric in determining tourism productivity. This includes trash collection, bus ridership, parking lot revenue, hotel room tax revenue, amusement and admissions tax,

meals tax and Smith Travel Report hotel occupancy. With three years of data collected, this tool will continue to be used and modified to evaluate the success of tourism management techniques, and changes to the seasonal influences on the local economy.

Land Use

Existing Land Use

Second only to growth policies, the most important factor affecting land use in Ocean City is the geographic limitation of the town. Surrounded on three sides by bodies of water and on the fourth side by the Maryland-Delaware state line, future growth is limited without annexation. The Mayor and City Council has not indicated any desire to consider annexation into Worcester County to accommodate future growth. However, this statement does not preclude such consideration in the future.

Chapter 3 of the Comprehensive Plan presents a detailed analysis of the past and projected land use patterns in Ocean City.

The present land use pattern contains a thorough mixing of residential types and substantial commercial strip and center development along Coastal Highway (see Comprehensive Plan Map 3-1). This unusual development pattern resulted from several factors, which are described in detail in Chapter 3 of the Comprehensive Plan.

Now established, this pattern will continue into the future. In recent years the ocean side's residential diversity has tended to decrease. Infilling and redevelopment has largely involved multifamily structures in condominium forms of ownership. Therefore, the character of the ocean block has become increasingly multifamily with a rise in the number and size of individual units within condominium projects developed in recent years. There is a great variation in the density of residential development. The oceanfront areas range from 20 units per acre to over 80 units per acre in completely developed blocks. In these areas most blocks average from 40 to 70 units per acre.

On the bay side, a few higher density projects dot the waterfront. However, the majority of land is developed at less than ten units to the acre. This is due to extensive use of land committed to commercial uses and the location of a number of single family neighborhoods. Areas developed with townhouse and manufactured homes approach a density of twenty units per acre.

Most important to the analysis of existing land use is the fact that less than 3 percent of land in Ocean City is vacant. Thus the potential for new development, other than redevelopment, is limited. As older development is replaced or expanded, one of the greatest challenges is providing adequate parking to meet zoning requirements as well as meeting minimum market demand for new uses.

Commercial development occurs predominantly along Coastal Highway. The greatest concentration occurs on the bayside where land is less costly. Presently, neighborhood

shopping centers of a variety of configurations are distributed about town. Five community shopping centers are concentrated north of the Route 90 Bridge. Two major amusement areas exist, one at the south end of the boardwalk and pier area, and the other at 30th Street on the bayside. All areas of the Town fall within the standard trade area of a convenience market or a major grocery store. This indicates that, for the most common needs of vacationers, existing commercial developments adequately serve the market.

The pyramidal structure of the Ocean City zoning regulations encourages mixed-use development, but also makes it difficult to identify certain districts as "residential" or "commercial". Generally, however, the 2,010 acres of developable land are zoned as follows:

Residential	1,173 acres (58%)
Commercial	377 acres (19%)
Municipal/Public	103 acres (5%)
Recreation	55 acres (3 %)
Open Space	254 acres (13 %)
Vacant	48 acres (2 %)

Opportunities to maintain or encourage development of commercial uses and/or to promote mixed-use development are being explored to maintain such uses as an important component of the Town's economic base. Sustaining the distribution of commercial restaurant, retail, and service uses throughout Ocean City and promotion of mixed-use development can reduce dependence on automobile use by residents and visitors, thereby reducing demand on transportation system infrastructure and services over time.

New Trends

- Hotels
- Large capacity restaurants with indoor/outdoor seating and entertainment areas
- Renovation of Existing Structures
- Short Term Rental/Workforce Housing
- Special Events

Future Land Use

Based on Census data and American Community Survey estimates, the year-round population of Ocean City is expected to remain constant or decline slightly, however, this growth is relatively unimportant in the context of infrastructure and service needs. The infrastructure is designed to service the seasonal population, which, based on trends over the recent past, is expected to remain at current levels for the foreseeable future.

National trends continue to indicate a generational desire to live near the coast, retire in an active living area, and invest where you vacation. Planning for a moderate growth rate consistent with both State and County estimates is proposed.

The fact that only about 3% of land in Ocean City is vacant means that most future development will be in the form of redevelopment. Existing development patterns are well established, and opportunities for major changes are limited. Major changes are not recommended by the Comprehensive Plan, but some general guidelines are promoted:

- New residential development on the bayside should be of moderate to low density and building height.
- Higher density residential development should continue to be encouraged to locate on the oceanside.
- Stable residential neighborhoods, primarily on the bayside, should be protected from the impacts on non-compatible land uses and activities.
- Limited higher density and taller buildings (maximum of eight stories) on larger bayside parcels may be permitted through the establishment of special, carefully crafted regulations.
- Existing commercial areas should be retained. Future commercial demand should be met through more intensive use of existing areas and also through opportunities outside of the town.
- Mixed-use development is strongly encouraged, especially in the Downtown.
- New Hotel uses located on the bayside should be evaluated for offsite demand for pedestrian safety improvements to cross Coastal Highway, and should be encouraged to provide a private shuttle service for guests to visit the beach.

Build-Out Projection and Analysis

The typical method of conducting a build-out analysis does not readily apply to Ocean City. There are 28,000 dwelling units in the town to accommodate the population of 7,102 (2010 Census). Obviously, the vast majority of the units are used on a seasonal basis by nonresident owners or rented to vacationers. However, except for those that were built before modern building and housing codes, most of these units would be available to house future residents, so additional housing units would not necessarily be needed to meet the demands of future population growth. In fact, many owners of seasonal properties buy with the intent of living in them in the future.

Beyond housing needs, a build-out analysis can be a valuable tool to use when planning for future infrastructure and service expansions. Using the Maryland Department of Planning model as a basis, the following table summarizes the build-out analysis for Ocean City.

"Developable land" excludes all land east of the building limit line (the beach), all wetlands and public streets. It includes vacant land and improved properties that have 4 or fewer dwelling units that were built prior to 1970. These properties are considered to have the potential to be redeveloped in the planning period. Developable land also excludes fragmented parcels smaller than 1,500 square feet in size (the minimum lot area for a townhouse).

Ocean City's zoning regulations allow parcels that are nonconforming as to density to redevelop and retain that nonconformity. In reality, most cannot regain the full nonconformity because other requirements must be met (parking, landscaping, stormwater management, etc.), so reducing the build out by 25% accounts for this fact.

The number of potential additional units identified in Table 5 is the maximum number possible, because it assumes that all re-developable commercially zoned land is developed with residential units, reflecting the pyramidal structure of the zoning code. This would not be the case in reality, but this scenario is used to obtain a maximum build-out result.

Table 5 – Build-Out Projection

Zoning District	Developable Land		Permitted DU per Acre	Maximum Units	Adjusted Units(75%)	Existing Units	Potential Additional Units
	# Parcels	Acres					
B-1	73	16.11	43.6	702	526	410	116
BC-2	25	3.79	43.6	165	124	240	-116
BM-1	25	8.16	43.6	355	267	7	260
BMUD	17	37.32	43.6	1,626	1,219	5	1,214
DM	23	3.97	43.6	173	130	30	100
DMX	159	20.30	43.6	884	663	540	123
DR	4	0.82	21.8	18	13	21	-8
I-1	5	3.06	43.6	133	100	2	98
LC-1	384	140.19	43.6	6,107	4,580	736	3,844
M	7	3.89	43.6	169	127	12	115
MH	44	17.12	43.6	746	559	30	529
R-1	398	54.36	8.7	473	355	321	34
R-2	432	59.47	21.8	1,296	972	625	347
R-2A	28	2.02	10.9	22	17	23	-6
R-3A	436	74.19	43.6	3,235	2,426	3,047	-621
R-3A	191	22.08	30.0	663	497	496	1
SC-1	19	56.67	43.6	2,469	1,851	122	1,729
Totals	**2,270**	**523.52**		**19,236**	**14,427**	**6,667**	**7,760**

As stated earlier, this projection is less meaningful in Ocean City than in other areas because of the existing housing supply. The potential addition of 7,760 units simply adds to the existing surplus of units.

The standard method of projecting an increase in population based on the possibility of an additional 7,760 units does not necessarily lead to an assumed increase in the year-round population because the majority of the new units would probably be used for seasonal occupation. If it is assumed that the additional units would be 100% occupied by an average of 4 persons per unit on one particular day, an additional 31,040 people would be in the Town. Because all units in Ocean City are never occupied at the same time, using this projected increase in population would result in a much higher maximum population than is realistic.

Therefore, for planning purposes, the projected future increase in population based on the current State and County growth rate is used. No change is proposed with the 2016 update.

Impact of Growth on Public Services and Facilities

Even though the build-out analysis indicates that 7,760 additional units could be built in Ocean City, the projected increase in the year-round population is not expected to have any effect on the provision of public services provided by the town. Ocean City's utilities are sized to accommodate the seasonal population, and the level of other services is routinely adjusted to meet the need at any particular time. Additionally, the peak seasonal population is not expected to increase substantially beyond the level of the past 15 years, thus substantial additions to capacities are not anticipated. These trends are monitored continuously, and if larger than anticipated population and housing growth appears to be a possibility, provisions for additional levels of service will be made.

Public Schools

The Worcester County Board of Education's Facilities Master Plan follows the growth concept contained in the Worcester County Comprehensive Plan that promotes future growth in the vicinity of existing population areas. Attendance areas reflect the growth areas identified in the Comprehensive Plan. Students in Ocean City attend North County schools (Ocean City Elementary, Berlin Intermediate, Stephen Decatur Middle, and Stephen Decatur High School) along with students from Berlin, West Ocean City and Ocean Pines.

Historical enrollment figures for the North County schools are presented in Table 6. From 1996 to 2013 the North County enrollment for all schools increased by 23 students per year. Since Stephen Decatur Middle School did not exist in 1991 the total change in student population for the schools attended by Ocean City students cannot be computed.

The 2013 enrollment, projected enrollment, and state-rated capacities of the schools that students from Ocean City attend are presented in Table 7. Berlin Intermediate and Stephen Decatur Middle School project to slightly exceed the State-rated capacity by 2018.

The ten-year enrollment projections for all County schools (K-12) is projected to increase by 83 students by 2023. The school age population of Ocean City (2010 Census) is only about 7.5% of the town's total population compared to about 15.6% of the Worcester County population. Thus the year-round school-age population (present and projected) of Ocean City has a minimal impact on the public school system enrollment.

Public Libraries

Worcester County is responsible for the public library system. A new branch was constructed in 2008 in Ocean City located on Coastal Highway at 100th Street. This facility will serve the projected municipal growth well into the future.

Public Safety

The Ocean City Police Department (OCPD) enforces the criminal and traffic portions of the Code of Ocean City. The OCPD's jurisdiction includes the corporate limits of Ocean City to three miles off-shore. The bays and ocean are not regularly patrolled, but the department has jurisdiction to continue pursuit in these areas.

As with other public services in Ocean City, it is the visitor population that determines the manpower needs of the OCPD. Other sections of the Plan have identified priorities for expanding the visitor population in the shoulder seasons, and increasing the number of special event weekends. Public Safety staffing continues to respond as these changes transition from the historic peak summer season to more year round demand for services.

The same is true for the other public safety sectors of the municipal government, including the beach patrol, fire department, emergency medical services, and emergency management. All of these functions are driven by the seasonal population.

Water and Sewerage Facilities

As with all community infrastructure and facilities, all services are sized to serve the total maximum population (visitor and year-round). All projections of future water and wastewater facility needs are based on the projections of peak visitor population found in the 2006 Comprehensive Plan.

Current Inventory of Water Supply System

A complete analysis of the water system is found in the *Town of Ocean City Comprehensive Water Supply Study – 2005 Update*, and in the new *Water Resources Element in Chapter 11*.

Generally, the existing raw water supply consists of 15 wells in the Ocean City Aquifer and 9 wells in the Manokin Aquifer. The location of the wells has been spread out to the

extent possible to reduce the effects of seasonal draw down and to minimize the potential for increased salt water intrusion by up coning in specific areas. The current available raw water supply safely exceeds the treatment capacity of each associated treatment plant. As the water supply system is improved in the future, additional wells are planned to manage system demand and impacts to the groundwater supply.

The current permitted allocation (8 MGD annual average / 17.6 MGD daily average in the month of maximum use) is more than adequate to meet the projected water demand to the year 2025.

Current Inventory of Water Treatment System

The existing water treatment facilities are producing excellent quality potable water meeting all regulatory requirements. There are three treatment plants (15th Street, 44th Street, and Gorman Avenue) that treat raw water to remove iron, manganese, and chlorinate the water. Improvements to the plants completed over the past several years have improved operations and reliability, and extended the useful life of the facilities. The current design treatment capacity of 18 MGD is more than adequate to meet the projected 2025 maximum day demand of 16.8 MGD.

Current Inventory of Water Storage and Distribution Systems

The town's water storage and distribution facilities have been expanded and upgraded over the years to meet maximum day water demands and fire flows. There are seven elevated and one ground level water storage facilities spaced along the near 10 mile length of the town. These tanks provide a total useable storage of 6.3 million gallons. Improvements to the distribution system are made according to a detailed improvement program. A new 1 mgd elevated water tank at 1st Street will replace the existing downtown Worcester Street facility in 2017.

Saltwater Intrusion

A threat to Ocean City's water supply is saltwater intrusion, which is the horizontal movement of saltwater into the freshwater aquifer from the ocean or the bay. It could also occur from a vertical movement by downward leakage from the ocean or bay, or upward leakage from lower aquifers.

Testing in the past had shown a rise in chloride levels in the 44th Street area. This is caused by heavy year round water use in the area and leakage between the Ocean City aquifer and the saltier Manokin aquifer in this area. The up coning of salt water at the 44th street plant stabilized after much of the pumpage was shifted to the Gorman Avenue Plan in 1989 and 1990, indicating a state of equilibrium may have been reached. Saltwater intrusion is occurring in localized parts of the unconfined Columbia Aquifer, but it is not considered a major threat. However, it is still possible that a salt front is moving in from the oceanside or bayside near 44th Street.

The "Comprehensive Water Supply Study" recommends spacing future wells to distribute drawdown from the aquifers and relieve the salt intrusion in any particular area. The study also notes that any future water supply production wells should probably be located in the northern part of the Town where the hydrogeologic conditions are more favorable with respect to available drawdown and saltwater intrusion. The Study also states that future planning must recognize the possibility of saltwater intrusion, and flexibility in design of the water supply system must be provided so that the problem may be addressed if and when intrusion occurs.

Wastewater Treatment

In 1994, the Town of Ocean City assumed control of the Ocean City wastewater system from the Worcester County Sanitary Commission. The system has collection, treatment and disposal capabilities. The treatment plant at 64th Street was constructed in 1969, with expansions and secondary treatment upgrades completed in 1974, 1981, 1990 and 1993, 1998, 2001 and 2006.

The plant's Wastewater treatment design capacity is currently 14 million gallons per day (mgd) based on average daily flow. Additional sludge handling capabilities constructed in 1998 increased the capacity from 12 to 14 mgd. An additional clarifier was installed in 2016/17 which allows an increase in treatment capacity to 16 mgd.

The average daily flow treated during the maximum month between 2003 and 2008 was 10.87 MGD in July of 2006. The available or unused capacity has averaged 23.6% during this time. Year 2020 maximum wastewater treatment flows are projected to increase to approximately 12. 4 MGD for the Town of Ocean City and West Ocean City combined. Recent engineering studies have concluded that the future wastewater treatment capacity required will be~~y~~ 16 MGD.

A portion of West Ocean City is now served by a new Worcester County treatment facility. This facility has allowed for public sewer connection at the Ocean City Municipal Airport with a beneficial re-use of treated effluent as spray irrigation at the Golf Course.

Again, all future planning is based on the total visitor population projections.

Stormwater Management

Three approaches are used in Ocean City to remove stormwater from City streets. Sheet flow is used on the ocean block and essentially it uses the street to conduct the water west to Coastal Highway and eventually to the bay. On Coastal Highway, Baltimore Avenue and Philadelphia Avenue and the bayside, both a traditional stormwater system and sheet flow with sediment basins are used. Sediment basins are only at selected street ends.

The pipe and catch basin system suffers from the island's lack of relief. Without the required fall, water can back up. Several streets on the bayside are simply sloped toward

the bay. At the end of the street, a sediment basin removes pollutants and debris. Tides have a significant impact on the conveyance system. Submerged outfalls back water up until the tide recedes.

Private and public development is required to meet all State and local stormwater management regulations. As more development covers the land with concrete and black top, stormwater problems will increase. Several alternatives exist for controlling stormwater on site, including infiltration beds and trenches, pervious black top and open cored pavers. These items, as well as "low impact" development techniques, are being promoted to the extent possible to attenuate stormwater flows, reduce sedimentation and improve the overall quality of stormwater discharges.

The fact that development and redevelopment is and will be required to meet current, more stringent standards means the stormwater problems should be lessened in the future.

Recreation and Parks

Ocean City offers a variety of recreational opportunities and services to its year-round residents and visitors. Programs offered include camps, classes, clinics, sports, events and tournaments. Lessons in exercise, fitness, dance, and gymnastics, creative arts, swimming, first aid and CPR, boating and seamanship to name a few, are given. Programs are structured to support the needs and interests of adults, seniors, and youth of all ages. Special events and outings round out the spectrum of recreational program offerings.

The 15 town-owned and operated parks and recreational facilities occupy about 80 acres spread out through the town. Including the 319 acres of beach, which is open space accessible to the public and maintained by the town, the total park and open space is 399 acres, surpassing the State guidelines for the provision of park and open space lands of 30 acres per 1,000 residents (approximately 240 acres).

It is the Town's policy to meet the recreational needs of the seasonal and year-round population. Demand is monitored and, as facilities approach capacity, new ones are planned and constructed. It is important to note that given the high land costs in a oceanfront community, utilization of existing parkland more efficiently is often more cost effective than public acquisition of additional parkland to satisfy demand for recreation facilities. Nevertheless, land acquisition for parks remains a planning objective and existing parks should not be converted to non-recreational uses.

Financing Future Public Services and Infrastructure

The Mayor and City Council have an adopted Capital Improvements Program (CIP) that identifies future infrastructure needs, priorities, and financing mechanisms.

The CIP anticipates funding from the issuance of general obligation bonds, with pay-as-you-go revenues that may include current year tax receipts, development fees, donations,

and water and wastewater user fees. State and federal grants are primarily received for transit projects and recreational and park improvements that qualify for funds from the State of Maryland Program Open Space program. Under the taxing authority of Worcester County, the Town receives receipts from a tax on the sale of food and beverages sold in the Town. The receipts may only be used to fund the debt service for expansion of the Roland E. Powell Convention Center.

General obligation bonds are bonds that are secured by the full faith and credit of the issuer. Authorized by ordinance, they are secured by a pledge of the Town's property taxing power. Payment of future debt service of the bonds, however, may be from property taxes or by user fees such as debt repaid from the water and wastewater funds.

Outstanding debt represents 0.90% of the assessed valuation of property in the Town. The debt limit is 5.2% of assessments, leaving a legal debt margin of $371 million dollars.

All potential capital funding resources are evaluated to ensure equity of funding for the CIP. Equity is achieved if the beneficiaries of a project or service pay for it. For example, general tax revenues and/or general obligation bonds appropriately pay for projects that benefit the general public as a whole. User fees, development fees, and/or contributions generally pay for projects that benefit specific users. Other factors considered when funding the capital plan are whether the financing method provides funding when needed and the other financial costs associated with the funding source.

Water and wastewater fees are comprehensively studied and rates are established over a five-year period to adequately fund operating and capital costs.

In 2005, the Mayor and City Council began assessing impact fees on new development. These fees help pay for infrastructure improvements necessitated by new development, and ensure that development pays a fair share of those improvements. The fees are specifically allocated toward future water, wastewater, and general infrastructure improvements. The fee structure is reviewed periodically and increased when appropriate to reflect rising costs.

Rural Buffers and Transition Areas

The fact that Ocean City is surrounded on three sides by water and on the fourth by the State of Delaware makes the consideration of rural buffers and transition areas inappropriate. There are transition areas within the corporate boundaries (such as between zoning districts), but bodies of water and a state line provide the buffers and transitions to the unincorporated county.

Burdens on Municipally Provided Services and Infrastructure Beyond Municipal Growth Limit

The Town of Ocean City provides fire protection, emergency medical service, and limited wastewater treatment services to the area of Worcester County generally know as West Ocean City. This unincorporated area is immediately across Route 50 and the bay from the town limits.

The West Ocean City service area contains about 11 square miles and extends approximately 3.5 miles west, 4.5 miles south, and 3.0 miles north of the Rt. 50 entrance to Ocean City. The Ocean City Fire Department owns and maintains a fire station in West Ocean City to provide quicker service. The Fire Department averages about 175 calls for service per year to this area. The EMS division also serves this area and averages between 150 and 200 calls for service each year.

Assuming the same agreement for fire and EMS service continues into the future, growth in this area will certainly mean more calls for service and responsibility to the town.

When Ocean City assumed its wastewater treatment responsibilities from Worcester County in 1994, it was agreed that the town would provide wastewater treatment and outfall capacity of 1 MGD for unincorporated West Ocean City. This is the maximum responsibility of the town, so future growth in that area should not be a burden on the municipal system.

Other Municipal facilities are located in West Ocean City including the Ocean City Municipal Airport, Eagles Landing Golf Course, and the Keyser Point public works yard.

The population of the unincorporated area outside the municipal limits is indirectly served by the town in other ways. While there has been considerable retail and service growth in that area, many of those residents come to Ocean City for our beaches, restaurants, shops, marinas, etc. Day trip visitors use the street system, public transportation, generate solid waste, and are serviced by the police, fire, EMS, Beach Patrol, and Recreation and Parks departments, among others. Any future increases in day trip visits from new West Ocean City hotel construction and campground expansions will also increase demand for parking and transit solutions. These visitors are accounted for when total (seasonal) population is estimated and projected.

Protection of Sensitive Areas

The "Sensitive Areas and Environmental Protection" chapter of the Comprehensive Plan discusses important environmental considerations in detail. That chapter contains goals, objectives, principles, policies, and standards designed to protect sensitive areas from the adverse effects of development. Sensitive environmental areas specific to the Atlantic Ocean coastline and the coastal bays include the following: 1) 100-year floodplains, 3) habitats of threatened and endangered species, 4) coastal bays and buffers, 5) wetlands and tidal/nontidal buffers, 6) dunes, and 7) beaches.

Ocean City's land area includes approximately 2,853 acres or 39% areas within a Special Flood Hazard Area. This floodplain area is defined along with other flood risk areas by adopted Flood Insurance Rate Maps that are based on a FEMA Coastal Flood Risk Study completed in 2015. As a growth area that is already 95 percent developed, development in the 100-year floodplain cannot be avoided. Ocean City's flood protection and stormwater management regulations take into account the problems inherent in developing in the floodplain, and strict enforcement of these regulations continues.

An inventory of threatened and endangered species is provided in Appendix A of the Comprehensive Plan. Habitats of threatened and endangered species should be protected and state and federal guidelines for their protection should continue to be adhered to.

The sensitive areas most vulnerable to the effects of growth are the Coastal Bays. The town participates actively in the Maryland Coastal Bays Program and implements many activities identified in the Comprehensive Conservation and Management Plan (CCMP) developed by the Program. Stormwater management is the single most important protective measure the town can take in protecting and improving the water quality in the bays. State stormwater regulations are administered by Ocean City through the Critical Area program, the physical stormwater system is continually upgraded, and as redevelopment takes place on-site stormwater management is improved, reducing pollutant loads entering the bays.

Vision of Ocean City's Future Character

The Town of Ocean City will continue to improve its standing as a premier seaside resort and a desirable place to live and work. Redevelopment will present a unique opportunity to improve the quality of the built environment in terms of aesthetics, structural safety, and environmental sensitivity while protection favorite traditions and providing new activities and destinations each year.

As a growth center and State-designated Priority Funding Area, Ocean City will continue to improve its infrastructure and expand it when necessary to meet the needs of future development. This vision, in conjunction with Worcester County's dedication to smart growth and agricultural and rural preservation, will guide the future development of the town.

Ocean City has a vision of being a walkable, pedestrian-friendly community, especially in the Downtown, and a community less dependent on the automobile. The public transportation system is an important factor in achieving this vision. (See Chapter 4 of this Comprehensive Plan.)

The town's future depends on a healthy natural environment. Every development action, both private and public, will be analyzed with respect to its impact on the environment. The quality of the ocean and bay waters must be maintained in order for the vision of the future to be achieved.

Chapter 11: Water Resources Element / Mineral Resources Element

Maryland Land Use Code Sec. 3-102 lists required comprehensive plan elements: 3-106 requires all Maryland municipalities to include a water resources element in the comprehensive plan; and Section 3-107 requires the preparation of a mineral resources element if geologic information is available. For coastal Maryland areas, these subjects are a related story with layers of sand and clay separating groundwater aquifers.

The water resources element must address the following topics:

1. Drinking water and other water resources that will be adequate for the needs of existing and future development proposed in the land use element of the plan; and
2. Suitable receiving waters and land areas to meet stormwater management and wastewater treatment and disposal needs of existing and future development proposed in the land use element of the plan.

The water resources element for the Town of Ocean City, Maryland Comprehensive Plan was originally adopted in October 2009 and has been updated and combined with a new mineral resources element with this Plan. The chapter presents analyses of land use and facilities impacts that can be expected as a result of the projected growth of the Town's year-round population and seasonal peak use periods. The water resources/mineral resources element provides a strategy to sustain the water needs and coastal protection for Ocean City's population through the year 2035 and beyond. The comprehensive plan contains the following goal and objectives that relate to the water resources and mineral resources element:

Goal:

Maintain and protect the town's current water resources for their ecological and water supply benefits and to understand and mitigate, to the extent possible, adverse effects of future growth on these resources. Maintain and protect the structure and resilience of Maryland's barrier island coastline, and the Ocean City Inlet through coordinated Federal, State and Local management of sand resources.

Objectives:

In order to achieve the water resources/mineral resources goal, the following objectives are adopted:

11.1 Maintain the highest possible drinking water quality through consistent monitoring of the groundwater supply and the infrastructure used to acquire and treat water.

11.2 Protect and preserve groundwater resources as the primary water supply for the present and future population of Ocean City.

11.3 Manage peak season groundwater withdrawal in compliance with State permits and sustainable practices.

11.4 Coordinate with State and Federal agencies to meet regional standards for source water protection of critical watersheds, groundwater recharge areas, wells and treatment facilities.

11.5 Continue and enhance land management practices including beneficial use of dredge material, allocation of ocean sand resources, balanced approach of natural system management that provides protection of barrier island system and wildlife habitats.

11.6 Actively participate with the Maryland Coastal Bays Program in seeking management of the Coastal Bays Estuary which maintains navigable waterways, channels and water depth to support a healthy and diverse ecosystem that meets State water quality standards.

11.7 Identify sand resources necessary for long term beach replenishment, and potential emergency dune or breach repairs.

11.8 Prepare strategy for incrementally raising land elevation to minimize flood risk within the municipal limits as redevelopment occurs.

11.9~~7~~ Provide for adequate municipal water, wastewater and stormwater services to facilitate the desired amount and pattern of growth.

11.10 Continue to manage nutrient loading through the Coastal Bays Critical Area Program implementation by improved stormwater management, required open space, and increased pervious land coverage with redevelopment.

Section 1 - Coastal Geology and Groundwater Resources

Ocean City is located in the Coastal Plain, and occupies the southern end of a barrier island named Fenwick Island. Such land forms are dynamic in their development and continue to be active. Fenwick Island, like most barrier islands, was formed through wave, wind, and tidal action.

Beginning at the surface, the soils of the Coastal Barrier Islands are predominantly sediments consisting of loose sand and shells. No arable soils have developed. These soils are suitable for only the most tolerant vegetation and present limitations for urban development.

Maryland's Atlantic coast is rich in natural resources. We prize these natural assets for their intrinsic ecological, industrial and recreational value. Mineral resources from this region are used as construction materials, and in agriculture and aquiculture. Water resources include habitats for wildlife, shellfish and fin fish, and sources of potable and irrigation water. Land resources are managed as wildlife habitats and for agriculture. We also enjoy the recreational benefits of these priceless resources. It would be impossible to hike, fish, play, hunt, boat, surf

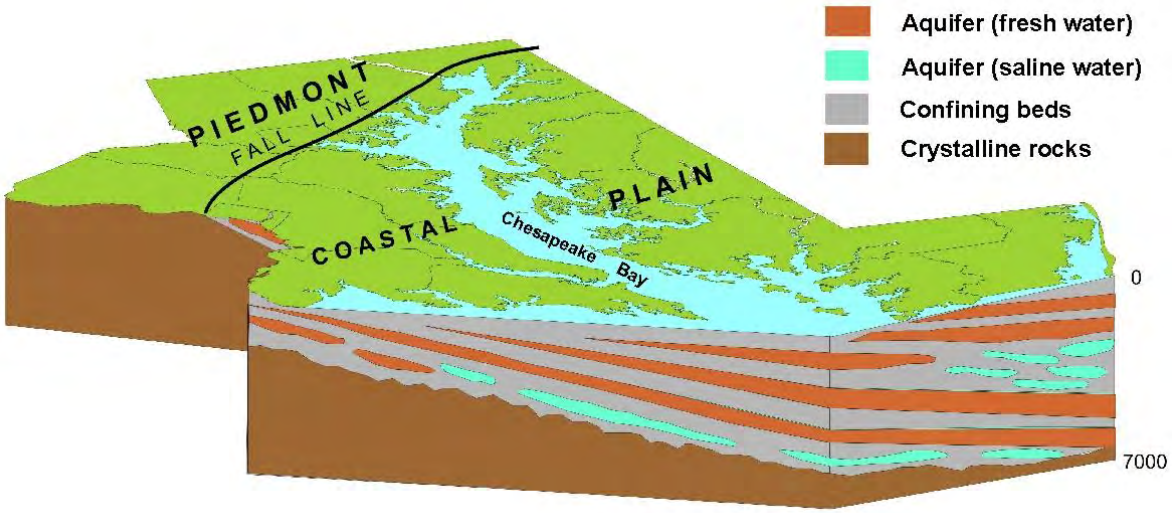
or swim without them.

Natural resources must be used and maintained wisely. Maryland Geological Survey conducts many studies that explore the evolution, current state, and behavior of geologic environments that comprise our natural resources. Sand is an important resource that is found on Maryland's Atlantic coast. Sand is used in the construction industry, and for restoring and protecting eroding beaches. The Coastal and Estuarine Geology Program at MGS is currently assessing potential offshore sand resources.
http://www.mgs.md.gov/coastal_geology/offshore.html

Mineral Resources

The Town of Ocean City overlays substantial deposits of sand and some gravel. Extraction of these resources is limited by economic and environment restraints, since the Town is fully developed, commercial excavation of sand and/or gravel deposits is precluded. Moreover, traditional impacts associated with quarrying activity, e.g., heavy trucking, dust and noise, are not consistent with the town's character. Ample sources of these materials, to support community needs for them, exist nearby in more rural areas of Worcester and Wicomico Counties. Presently, the Zoning Code of Ocean City does not permit mining within the town. This is due to the disruptive effect such activities would have on the town's tourism dependent economy.

Extraction of materials from beneath the bays or near shore coastal areas, other than for normal maintenance dredging poses similar difficulties. Environmental impacts to wildlife habitats, as well as the sport and commercial fisheries must be considered along with potential impacts on tourism. In light of potential problems with energy exploration and mineral extraction, proposals for such activity should be approached with much caution and full consideration of environmental and economic externalities. The US Army Corps of Engineers has completed the necessary study and permits for many beneficial use and navigation projects along the Maryland coast, the Ocean City Inlet and the Coastal Bays.



Coastal Plain sediments thicken from northwest to southeast, increasing from a few feet at the Fall Line to greater than 7,000 feet at Ocean City. Most aquifers in the Coastal Plain are overlain by low permeability clay

layers (forming confined or artesian aquifers) which prevents surface contaminants from reaching the aquifers. In the Coastal Plain physiographic province, groundwater flows through pore spaces between sand and gravel particles – known as intergranular flow. Wells in the Coastal Plain commonly have moderate to very high yields. Groundwater levels are not affected significantly by short-term variations in climate (droughts and wet periods), but typically do respond readily to increased groundwater withdrawals.

http://www.mgs.md.gov/groundwater/md_groundwater.html

Groundwater

Four groundwater aquifers underlie Ocean City. The upper two, the Pleistocene and Pocomoke, suffer from vulnerability to salt intrusion. The lower aquifers, Ocean City and the Manokin, are used for water supply, although portions of the Manokin, between 28th Street and about 80th Street, contain brackish water.

The Ocean City and Manokin aquifers provide good quality water, but could be threatened by salt water intrusion. Intrusion can occur either vertically or horizontally. Vertically, brine could move from leaks in the upper aquifers or be drawn up from the salty St. Mary's aquifer. Studies performed in the past by the U.S. Geological Survey indicates that vertical intrusion is not currently a problem. Above the water supply aquifers lies a confining layer which prevents inter-aquifer leakage. The St. Mary's formation below is very dense and requires a high pressure differential for leakage to occur which is not considered likely.

However, horizontal intrusion could come from the salt water being drawn in from the ocean. The probability of this occurring has not been scientifically determined, but if Ocean City is similar to other Atlantic Coast situations there is no imminent danger. In any case, the location of the offshore "salt wedge" should be monitored so an accurate picture can be drawn for future policy decisions.

The water supply aquifers are recharged in the Manokin subcrop. This subcrop is a seven mile wide band beginning northwest of Salisbury in the Hebron area and spreading northeast through Laurel, Georgetown, and ending at the coast at Broadkill Beach in Delaware.

Section 2 - Land Use Plan Analysis and Growth Projection

The comprehensive plan anticipates a slow rate of population growth consistent with the last 10 years and a trend toward retirees with multifamily units continuing to be the majority of housing structures. There is a lack of land available for future development. A demand for seasonal use and multi unit housing will persist throughout the planning period. Single-family detached housing has been and will continue to be less than 10% of the total housing supply because of limited land area for development.

The lack of affordable employee housing is being addressed through the conversion of older structures and new mixed use development. Some recommendations to accommodate the future employee population of Ocean City include employer-provided housing, a seasonal housing community in West Ocean City, and on-site housing provided within the larger commercial developments. Otherwise, Ocean City has the housing capacity to absorb year-

round growth with existing housing stock and available infrastructure, excluding changes to our infrastructure and services.

Upgrades to our infrastructure will occur as needed. Recent trends to use single family housing for short term rentals and conversion of residential housing to work force housing should be studied for possible impacts to water demand quantity and peak use periods. New commercial uses include brewery/distillery which will increase water demand and create new wastewater treatment needs.

The existing land use map (Chapter Three, Land Use and Community Character) indicates existing residential and commercial development. Commercial uses on the Oceanside of Coastal Highway may be increased to provide services to residents on that side of the road. There are desirable services that cannot be found in Ocean City. In those cases, shoppers must travel outside the town to West Ocean City, Berlin, and Salisbury.

The future land use map (Chapter Three, Land Use and Community Character) proposes a majority of residential land use east of Coastal Highway which may include multi-use projects. Larger commercial uses will remain west of Ocean City due to the lack of developable land in Ocean City.

Year Round Population

Very little increase in residents occurred between 1930 and 1970 (Table 1-1). The largest increase in residents happened between 1970 and 1980 when over 3,000 new residents moved to Ocean City. The year round population remained stable at 7,102 in 2010 (U.S. Census Bureau) (Figure 1-1). Nevertheless, we will focus on the impact of the seasonal population as it affects water demand and wastewater treatment since we must maintain effective infrastructure to support the maximum demands of the summer seasonal population.

In the past, the unique characteristics of Ocean City as a resort community made it difficult to develop a year-round resident population forecast that can be considered reliable. After 15 years of all metrics demonstrating stability in the year round population, the long range projection has been modified to accommodate our local share of projected State and County population growth at an estimated rate of 1.5%.

Seasonal Population

Seasonal population has traditionally been estimated by a formula called “Demoflush”, which estimates population based on wastewater flows using a pre-determined number of gallons per person per day. The equation contains adjustments to account for infiltration and “day trippers” who do not use the wastewater system to any great extent.

The formula for figuring the demoflush population is:

The number of gallons of wastewater flow minus infiltration into the system is divided by the number of gallons per person per day (36.04). Infiltration is estimated to be 570,00 gallons per day. Example: If the wastewater flow on a Saturday is 10,000,000 gallons, subtract 570,000

and divide by 36.04 and the result is 261,654 people for that day. The 36.04 results from an assumption of the gallons per person per day attributed to permanent residents (60), overnight visitors (40), and day visitors (7), and the percentage of each of these groups (4%, 86%,10% respectively).

The peak demoflush population (Table 1-2) is more important in our planning efforts than the year-round population estimate from the U.S. Census. It has been relatively stable in recent years, increasing by only about .22% per year. This plan projects the peak weekend population to continue to rise slightly through the next planning period. (Figure 1-1)

"Adjusted" population figures, which are 85 percent of the demoflush population, are discussed in Chapter 1 – Population, of the Comprehensive Plan, and in the Municipal Growth Element. For the purposes of projecting future water and wastewater need, however, the full demoflush estimate is used.

Figure 1-2 projects future total population through 2035 based on historic demoflush population figures. It is likely that much of the increase in the peak seasonal population will be influenced by Town's redevelopment policies rather than new development over the next 20 years.

New metrics are needed in the future to provide an alternative to the demoflush calculations.

Recommendations

The water resources element provides the Town with an assessment of its water resources and how future growth will affect them. The assessment assists the Town in determining the needs of its residents and visitors and helps avoid unnecessary future expenses. The 2017~~6~~ update to the comprehensive plan anticipates about 6,000 new residents by 2035 and a slight but steady increase in the seasonal population. There are no anticipated annexations outside municipal boundaries during the planning period. Based on previous calculations and advanced planning, it is not anticipated that population growth or significant development activities will exceed the design capacity of the Ocean City's water supply system.

Water Supply

Introduction

Ocean City's water supply system includes 3 water treatment plants which treat raw water to remove iron, manganese, and chlorinate the water. The 15th Street plant was constructed in the mid-1990's and replaced two old plants. Ocean City supports a proactive approach to public health. One of the Town's goals is to maintain the highest possible drinking water quality through consistent monitoring of the ground water supply and the infrastructure used to acquire and treat water. A comprehensive water study was performed by the consulting firm of Whitman, Requardt, and Associates in 1997 and updated in 2005. The firm was directed to conduct an investigation of the drinking water treatment and distribution system. The study indicated that the water supply within the Manokin and Ocean City aquifers had been and will

remain safe and adequate to supply the Town of Ocean City, Maryland's safe drinking water needs beyond the planning period, ending in 2025.

There are extreme seasonal differences in population served with approximately 7,000 year-round residents augmented by over 250,000 visitors during a peak summer weekend; in essence, two completely different treatment and distribution system scenarios.

Ocean City Water System - Ownership

The Ocean City Water System is owned by the Mayor and City Council of Ocean City, Maryland, and operated by the Town of Ocean City Municipal Water Department. The system is comprised of 24 production wells (Figure 2-1), 3 treatment plants, 7 elevated water storage tanks and 1 ground storage tank. A well maintenance program is also in place to ensure that the wells maintain their productivity and reliability.

Supply and Demand

The Ocean City Water System must have adequate capacity to serve the peak seasonal population. In 2008 the system served an estimated population of 300,000 during the peak season. The maximum daily demand was 14.41 MG. The ultimate build-out population has been projected to be approximately 381,000 in the year 2025 as estimated by the Town's consulting engineers. This figure differs from the lower estimate of about 360,000 projected using Demoflush. Historical data for recent years indicates the maximum day per capita demand of 44.0 GPD. The corresponding maximum days system demand at build-out is projected to be 16.8 MGD.

Future water system requirements were evaluated in 1997 on the projected Year 2020, 16.6 MGD maximum day demand. Recent evaluation of demand by Whitman, Requardt and Associates indicates that adding allowance for additional development at year 2005 may place demand in the year 2020 somewhat higher at 17.12 MGD The existing raw water supply consists of 15 wells in the Ocean City aquifer and 9 wells in the Manokin aquifer (Figure 2-2) distributed along the length of Ocean City corresponding to the distribution of existing and projected development.

The use of low flow water fixtures wherever possible by property owners can reduce the waste of additional water resources. Broken water lines within unoccupied units have been reported to the Building Office in order that repairs can be made and water saved. Rationing of outdoor water use could be an option if supplies become short.

Water Quality, Capacity and Treatment

The Ocean City Aquifer has a 7,900,000 gallon month of maximum use withdrawal. The Manokin Aquifer has a 9,700,000 gallon month of maximum use withdrawal.

The Ocean City Water System consists of 3 water treatment plants. The first plant, located at 15th Street, using wells in the Ocean City aquifer, is a 6.0 MGD plant. The second plant, located on 44th Street, uses water from the Ocean City aquifer and is a 4.0 MGD plant. The

third WTP is located in North Ocean City at Gorman Avenue with wells in the Manokin aquifer and is an 8.0 MGD plant.

The Town conducts required regulatory water quality monitoring. According to Whitman, Requardt recommendations, additional monitoring sites within the distribution system should follow when budgetary conditions allow. Rising chloride levels in an Ocean City aquifer well serving the 44th Street plant had raised concerns about intrusion of salt water into the fresh water aquifers, but this appears to have stabilized.

Continuing improvements in desalination technology have led to a change in philosophy with respect to the possible salt-water intrusion problem. The preferred approach would be to continue to pump water from the existing well fields and, if the water became brackish, to treat it by using either the reverse osmosis procedure or the electro-dialysis reversal process installed only when needed. This approach is judged to be more cost-effective, and more environmentally acceptable because it would prevent further westward movement of the salt-water front.

Desalination, if required in the future, could be constructed at the 15th Street Plant on the site. Additional land would be required to add desalination at 44th Street. At the Gorman Avenue Plant, desalination facilities could be constructed on the site previously occupied by the police station, or could be located offsite. Due to the naturally protected characteristics of the confined aquifers, Ocean City water supply is not susceptible to the other inorganic compounds. The wells serving Ocean City water supply pump water from confined aquifers. Confined aquifers are naturally well protected from activity on the land surface due to the conforming layers that provide a barrier for water movement from the surface into the aquifer below. A properly constructed well with casing extended to the confining layer above the aquifer and with sufficient grout should be well protected from contamination at the land surface.

Research indicates that rising sea levels resulting from climate change could result in increased saltwater intrusion into the groundwater in coastal regions. This is cause for concern and should be studied in depth over the next few years. The Town is prepared to deal with desalination when the time comes.

Saltwater Intrusion

A threat to Ocean City's water supply is saltwater intrusion, which is the horizontal movement of saltwater into the freshwater aquifer from the ocean or the bay. It could also occur from a vertical movement by downward leakage from the ocean or bay, or upward leakage from lower aquifers.

Testing in the past had shown a rise in chloride levels in the 44th Street area. This is caused by heavy year round water use in the area and leakage between the Ocean City aquifer and the saltier Manokin aquifer in this area. The upconing of salt water at the 44th street plant stabilized after much of the pumpage was shifted to the Gorman Avenue Plan in 1989 and 1990, indicating a state of equilibrium may have been reached. Saltwater intrusion is occurring in localized parts of the unconfined Columbia Aquifer, but it is not considered a major threat.

However, it is still possible that a salt front is moving in from the oceanside or bayside near 44th Street.

The "Comprehensive Water Supply Study" recommends spacing future wells to distribute drawdown from the aquifers and relieve the salt intrusion in any particular area. The study also notes that any future water supply production wells should probably be located in the northern part of the Town where the hydrogeologic conditions are more favorable with respect to available drawdown and saltwater intrusion. The Study also states that future planning must recognize the possibility of saltwater intrusion, and flexibility in design of the water supply system must be provided so that the problem may be addressed if and when intrusion occurs.

An increasingly attractive solution to salt intrusion is the rapidly developing technology and operating methods of desalination of brackish water. Desalination could be accomplished as needed by converting existing water treatment plans. By employing desalination, the saltwater intrusion could be contained at the coastline indefinitely.

Water direction frequently reverses at many points in the distribution system as treated water is pumped into the system from different plants. These reversals generally contribute to improved water quality by limiting biofilm accumulation.

Storage/Maintenance

The Town has 7 elevated tanks and 1 ground level tank with a total useable storage capacity of 6.30 million gallons (Figure 2-3). The present storage facilities have adequate capacity to support a maximum day demand of 18.00 MG. Under normal operation, water levels in the tanks do not significantly fluctuate. Mains are typically flushed twice each year to remove debris and iron sediment. The pipes, themselves, are in acceptable condition with little evidence of corrosion. No new storage towers are expected to be erected during the planning period.

Potential Service Area

The Town of Ocean City extends from the Ocean City Inlet to the Maryland/Delaware line and is separated from West Ocean City by the Isle of Wight Bay. The existing Ocean City Water System covers the entire municipal area. Maps of the water lines are shown as Attachment "A" and were part of the 2005 Water Study done by the firm of Whitman, Requardt, and Associates. A West Ocean City connection to the Ocean City water system does not seem necessary or likely.

Appropriations for the Ocean City aquifer are 3.6 mgd/daily average. Appropriations for the Manokin aquifer are 4.4 mgd/daily average. The total average is 8 mgd. 80% of which is 6.4 mgd. The average withdrawal was 5.49 mgd, less than 6.4 mgd (2008). By the end of the planning period Ocean City will have reached total build-out of available lands. It has been estimated that approximately 381,000 people will need about 16.8 mgd. The maximum possible water withdrawal is 18 mgd.

The maximum per day per capita demand for water in 1997 was approximately 60 gallons per day. The corresponding maximum day system demand at build out was projected in 1997 to be

16.6 million gallons per day (MGD). Future water system requirements were evaluated in 1997 on the year 2020's 16.6 MGD maximum day demand. Recent evaluation of demand indicates that adding allowance for additional development at year 2005 may place demand in the year 2020 somewhat higher at 17.12 MGD (Figure 2-4), acceptably less than the 18 MGD limit. A water usage rate of 44 gallons per capita per day was applied to the peak weekend population projections, resulting in a 2025 maximum water demand of 16.8 MGPD (44gpcd x 381,114 = 16,769,016), per Whitman, Requardt, and Associates.

Conclusion

The projected maximum peak population may require 17.2 mgd, and water withdrawal will not surpass the maxiumum withdrawal of 18 mgd through the year 2020. Ocean City has more than ample quantities of groundwater resources available from the Ocean City and Manokin aquifers for its projected growth and development. Clean water sources are sufficient to handle the needs of future populations.

Upgrades to the municipal water withdrawal and treatment systems should be correlated with population changes and as equipment warrants replacement. Ocean City should continue to work with Worcester County government and the Maryland Coastal Bays Program to assure that the goals of the Isle of Wight subwatershed plan are realized. The Town will continue to implement the Maryland Coastal Bays Critical Areas Program actions, promote effective Stormwater Management techniques, and encourage Environmentally Sensitive Design standards to protect the source water for the town's future.

There are operational issues in Ocean City that may not be present with other drinking water utilities with more stable consumer populations. Ocean City's future withdrawals from its wells will have little to no impact on the water resources.

It is recommended that: Well drawdown and recovery levels are monitored, inappropriate development does not occur in aquifer recharge areas, groundwater quality is monitored, and the threat of saltwater intrusion is minimized.

Section 3 - Wastewater

Introduction - Treatment

In 1994, the Town of Ocean City assumed control of the Ocean City wastewater system from the Worcester County Sanitary Commission. The system has collection, treatment and disposal capabilities. The service area includes the boundaries of the Town of Ocean City, Maryland (See Chapter 10 for Tier 1 Map). The treatment plant at 64th Street was constructed in 1969, with expansions and secondary treatment upgrades completed in 1974, 1981, 1990 and 1992, and 1998.

The plant's wastewater treatment design capacity is currently 14 million gallons per day (MGD). Additional sludge handling capabilities constructed in 1998 increased the capacity from 12 to 14 MGD. The plant will serve the same physical land area of Ocean City

throughout the planning period with no anticipated decreases or increases in service area coverage. (Figure 3-1)

Maximum month wastewater treated has ranged from 10.4 to 11.6 MGD for the period 1990 through 2003. The available, or unused treatment capacity, has fluctuated between 2.4 MGD (17% of the total capacity) in 1994 and approximately 3.59 MGD (25% of the total) in 2003. The average flow treated during the maximum month through the period was 11.2 MGD representing roughly 80 percent of total capacity. The average daily flow treated during the maximum month between 2003 and 2008 was 10.87 MGD in July of 2006. The available or unused capacity has averaged 23.6% during this time.

Year 2020 maximum wastewater treatment flows are projected to increase to approximately 12.14 MGD for the Town of Ocean City and West Ocean City combined. Work is currently being conducted by the City to evaluate needs for future wastewater treatment plant improvements.

Ocean City is looking into adding a fourth secondary clarifier at which point, we would have the capability of treating 16 MGD. We are currently permitted for 14 MGD. The limit for expansion of the current treatment plant is about 16 MGD. If our permit were to change and require us to begin nitrogen and phosphorous removal, we would require that some equipment changes and additions be made. Currently, we are only required to monitor these levels.

Sunset Island was the most recent new development with an increase in sewer demand of 200,000 GPD with no limits to the amount of flow.

Wastewater Discharge

Discharge point "001" is the Atlantic Ocean off of 64th St. between 3600 ft. & 4600 ft. from shore. Diffusers are located near the ocean floor at 50 foot intervals. Outfall point "002" is located at the Northwest corner of the treatment plant complex on the Assawoman Bay. This outfall would only be used in an emergency situation. To date, the Assawoman outfall has never been used. If it ever does the treatment level to the bay would be "secondary" only. This level of treatment would not be adequate and we would have to repair the ocean outfall as quickly as possible. We do flush the bay outfall annually, in February, to keep the line clear. Our NPDES permit allows us to perform this annual maintenance. We must notify MDE in advance of the date and time. The Atlantic Ocean is and shall remain the most suitable receiving water body for discharge. These discharge points will not change in the foreseeable future. Presently, our NPDES permit does not require us to report nutrient loads. A total maximum daily load for nutrients (TMDL) was adopted for the Coastal Bays by EPA in 2014. Worcester County is currently working on a Watershed Implementation Plan to achieve minimum State water quality standards in partnership with Ocean City, Maryland Coastal Bays Program and others. Herring Creek and Turville Creek have previously established TMDL's. .

Liquid and solid wastes leave the plant after treatment. Treated secondary effluent (liquid) is pumped from the treatment plant to the Atlantic Ocean through a 30" diameter pipeline. Treated Class "A" biosolids (solid) are transported to local farms by OC tractor trailers for land application on a daily basis during the summer season and less frequently during the winter months. Any solid waste that does not meet Class "A" criteria is transported to the Worcester

County Landfill for final disposal. Ocean City does have the capacity to continue these practices through the planning period.

We are in the process of renewing our NPDES permit for operating the plant through MDE. Our current permit is good through January, 2011, and the next permit is good for five years from its issuance. We do not anticipate any changes to the new permit.

Septic Systems

Ocean City has no septic systems in use at the present time.

Future Land Use and Capacity

Future land use patterns will involve redevelopment throughout the Town as existing uses are re-evaluated and replaced. This development will have very little impact on resources as the Town's wastewater treatment capacity will remain sufficient to handle the projected increase.

Wastewater treatment capacity limits are currently and will continue to be set in anticipation of maximum peak summer populations through the planning period. There will be sufficient wastewater treatment capabilities to handle projected population increases to the year 2035.

The Municipal Growth Element (Chapter 10) contains a more detailed discussion of future growth and needs.

Wastewater Treatment Milestones

• Reach 11.2 MGD (80% of rated capacity) –Triggers planning for future growth

• Reach 12.6 MGD (90% of rated capacity) – Triggers construction for future growth

• At 16 MGD – Probable maximum month capacity –With planned improvements

• At 14 MGD - treatment plant MDE - rated capacity

Section 4

Stormwater and Non-Point Source Pollution

The Ocean City Stormwater Management Ordinance, Article III, Section 30-141 of the City Code was adopted May 17, 2010: "The purpose of this article is to protect, maintain and enhance the public health, safety, and general welfare by establishing minimum requirements and procedures to control the adverse impacts associated with increased stormwater runoff. Proper management of stormwater runoff will minimize damage to public and private property, reduce the effects of development on land, reduce local flooding, and maintain after development, as nearly as possible, the pre-development runoff characteristics."

Non-point source pollution comes from many sources. This pollution is caused by rainfall moving over and through the ground. As the runoff moves, it picks up and carries away natural

and human-made pollutants, finally depositing them into wetlands, coastal waters, and even our underground sources of drinking water. Non-point source pollution is the leading cause of water quality problems. The effects of non-point source pollutants on specific waters vary. These pollutants have harmful effects on drinking water supplies, recreation, and wildlife.

To a large extent, the amount of non-point source pollution is determined by a municipality's land use. Impervious surfaces are an environmental concern because runoff amounts increase as impervious surfaces increase, causing a strain on existing stormwater control systems. Ocean City's annual rainfall averages forty-nine inches, which translates to approximately 200,000 gallons per acre or 23,000 gallons on a 5,000 square foot lot. Depending on the land cover, it either percolates into the soil or becomes runoff. The more land that is covered by impervious surface, the more runoff results.

Impervious surface coverage can be limited by restricting land use density or increasing requirements for pervious cover. Restricting density causes land elsewhere to be developed to accommodate the growing population (see Figure 4-1). In a designated growth area such as Ocean City, construction practices and open space requirements can decrease runoff while still allowing sufficient development within the coastal area limitations of shallow depth to water table and tidal influence.

It is desirable to maximize infiltration of rainwater. This water serves to replenish the groundwater, thereby helping to hold back the salt water wedge. Also, less runoff reduces nuisance flooding and the adverse impacts of stormwater on water quality. The original sandy soils of Ocean City can absorb about eight times as much water as normal Eastern Shore soils. Such soils lend themselves to the use of infiltration practices for stormwater management.

The efforts of the Town of Ocean City to minimize impervious surfaces and control stormwater runoff are vital to our goals of decreasing polluted stormwater from reaching the coastal bays. The coastal bays and the Atlantic Ocean are and will remain the primary receiving waters for stormwater run-off. The best management practices we are using in these efforts will significantly reduce the impact of future development. Our practices are listed in the Assawoman Bay and Isle of Wight Bay Subwatershed section below.

Ocean City has no septic systems or agricultural activities. The Town does not operate under NPDES Permit MS4 for stormwater management due to the Town not being a Phase II community.

Existing water quality impairments to the Coastal Bays led to the adoption of a TMDL study to control the release of nutrients into local waters. The Town of Ocean City is participating with Worcester County and the Maryland Coastal Bays Program to prepare a watershed implementation plan for nutrient management which is reflective of Ocean City's existing urban development, significant previous efforts to manage nutrient removal, and Tier One growth area designation.

Assawoman Bay and Isle of Wight Bay Subwatershed (from Worcester County Comprehensive Plan)

This subwatershed includes Ocean City, Ocean Pines, some of West Ocean City, and most of the Route 50 commercial corridor. The headwaters are near Selbyville, Delaware, north of Bishopville, and contain agricultural lands and a planned industrial area. This area has been the traditional focus of population growth and development in Worcester County because of employment opportunities and access to Ocean City and the near-by state and national parks.

In the Isle of Wight Subwatershed, development and redevelopment should be located in the priority funded/smart growth area. Ocean City is completely within these designations. Allocations of pollutant loads should be designated first to these areas. In determining water quality impacts to the watershed resulting from development and redevelopment in Ocean City, the Town maintains a database of all BMPs and requires periodic maintainance. Ocean City is virtually completely urban and developed. Most development activity is and will remain re-development.

Redevelopment activities in Ocean City are subject to Stormwater Management and adopted Critical Area Program regulations. Thus, all development is subject to improving water quality per MDE and DNR guidelines as adjusted for Ocean City. Environmentally Sensitive Design is recommended in treating the Water Quality volume. These designs include Bio-swale, rain gardens, infiltration trenches, rooftop gardens, pervious paving material, cisterns for water re-use, and/or reducing impervious surfaces. The overall post construction pollutant loads will be 10% below pre-construction loads with a minimum 50% reduction of impervious surface. With only 496 acres (Table below) of developable land in the town, current regulations and required stormwater management practices will continue to help protect our groundwater resources.

Ocean City Non-Point Source Loading

Pollution by nutrients causes many problems, such as algal growth and oxygen reduction. Aquatic life is directly affected by this type of pollution. Total loadings are calculated ~~below~~ by land cover types and have been approved through the adopted TMDL study for the Maryland Coastal Bays.

The calculations for future nutrient loading ~~are the same for the current loadings because future development of~~for Ocean City will account for~~primarily be~~ redevelopment of existing, already developed properties and incremental change at the site scale. Even so, we anticipate that efforts to require more open space, increased pervious land coverage, and improved stormwater management, together with Coastal Bays Critical Areas Program implementation along with future redevelopment projects, will reduce nutrient loading in the future. Specific recommendations from the adopted TMDL and Watershed Implementation Plan will be incorporated into the Comprehensive Plan revision.~~n~~

Conclusion

In order for Ocean City to remain a viable and successful community, adequate infrastructure must be available. Meeting the demand for high quality potable water, properly treating

wastewater, and protecting water quality by managing stormwater runoff are essential for our future. The Town is committed to achieving these mandates as evidenced by the continua l monitoring of the systems, by the periodic updating of the *Comprehensive Water Supply Study*, and rigorous enforcement of environmental regulations.

Recommendations

1) Future land use planning should continue to manage urban nutrient and pollution loads necessary to assist Worcester County in meeting State water quality standards.

2) Require site development techniques to meet adopted Critical Area Program standard for Ocean City, minimize impervious area with redevelopment, and incrementally reduce nutrient loads per unit of development.

3) Incorporate specific recommendations from the adopted TMDL and Watershed Implementation Plan into the next Comprehensive Plan revision.

APPENDIX A Summary of Current and Historical Rare, Threatened and Endangered Species Ocean City, 2017						
		LAST	RANKS		STATUS	
SCIENTIFIC NAME	COMMON NAME	YEAR	Global	State	MD	U.S.
Animals						
Calidris canutus rufa	Red knot	2017	G4T2	S1N	(T)	LT
Caretta caretta	Loggerhead sea turtle	2013	G3	S1B	T	LT
Charadrius melodus	Piping plover	1962	G3	S1B	E	LT
Chelonia mydas	Green sea turtle	2013	G3	S1N	T	LT
Cicindela lepida	Ghost tiger beetle	1972	G3G4	S1	E	
Fundulus luciae	Spotfin killifish	1913	G4	S2?		
Gelochelidon nilotica	Gull-billed tern	1992	G5	S1B	E	
Lepidochelys kempii	Kemp's ridley sea turtle	2013	G1	S1N	E	LE
Rynchops niger	Black skimmer	2017	G5	S1B	E	
Sterna antillarum	Least tern	1999	G4	S2B	T	
Thalasseus maxima	Royal tern	2017	G5	S1B	E	
Thalasseus sandviciensis	Sandwich tern	2003	G5	S1B		
Plants						
Buchnera americana	Bluehearts	1908	G5?	SH	X	
Carex silicea	Seabeach sedge	1940	G5	S1	E	
Carex tenera	Slender sedge	1932	G5	SH	X	
Coelorachis rugosa	Wrinkled jointgrass	1894	G5	S1	E	
Desmodium strictum	Pineland tick-trefoil	1878	G4	S1	E	
Eleocharis albida	White spikerush	1893	G4G5	S2S3		
Fuirena pumila	Dwarf umbrella-sedge	1932	G4	S2S3		
Gymnopogon brevifolius	Shortleaf beardgrass	1980	G5	S1	E	
Honckenya peploides	Sea chickweed	1910	G5	S1	E	
Juncus megacephalus	Big-head rush	1932	G4G5	S1?		
Juncus torreyi	Torrey's rush	1932	G5	S1	E	
Melothria pendula	Guadeloupe cucumber	2007	G5?	S2	E	
Panicum flexile	Wiry witch grass	1908	G5	S1	E	
Paspalum dissectum	Walter's paspalum	1908	G4?	S2	T	
Pluchea camphorata	Marsh fleabane	1945	G5	S1	E	
Potamogeton pusillus	Slender pondweed	1903	G5	S2S4		
Prunus maritima	Beach plum	2015	G4	S1	E	
Rhynchospora torreyana	Torrey's beakrush	1893	G4	S2	T	
Schwalbea Americana	Chaffseed	1893	G2G3	SX	X	LE
Scleria reticularis	Reticulated nutrush	1878	G4	S2S3		
Spiranthes odorata	Sweet-scented ladys' tresses	1931	G5	SH	X	
Symphyotrichum concolor	Eastern silvery aster	1932	G5	S1	E	
Triglochin striatum	Three-ribbed arrow-grass	1893	G5	S1	E	
Xyris smalliana	Small's yelloweyed-grass	1909	G5	S1	E	
Zizaniopsis miliacea	Southern wildrice	1930	G5	S1	E	

* This report represents a compilation of information in the Wildlife and Heritage Service's Biotics Database as of August 21, 2017. It does not include species considered to be "watch list" or more common species. Please refer to the attachment for an explanation of the rank and status codes. Source: Maryland Department of Natural Resources, Wildlife and Heritage Service.

RANK AND STATUS CODE DEFINITIONS

Maryland Department of Natural Resources
Wildlife and Heritage Service
Natural Heritage Program

September 17, 2015

The global and state conservation ranking system is used by NatureServe and all state Natural Heritage Programs and Conservation Data Centers in the U.S. and other countries in this hemisphere. These conservation status ranks result from an assessment of the risk of elimination or extinction of species and ecological communities. Because they are assigned based upon standard criteria, the ranks can be used to assess the global or range-wide status of a species, as well as the status within portions of the species' range (i.e., states or provinces). The primary rank factors used in the assessments are related to threats, long-term and short-term trends, and rarity, including population size, area of occupancy, range extent, and number of occurrences. Additional factors considered include the current level of protection and environmental specificity. Global and state ranks are used in combination to set inventory, protection, and management priorities for species and ecological communities at the state, regional, and national levels.

Rank	Definitions (Global / State)
GX or SX	**Presumed Extirpated** — Species or ecological community believed to be extirpated from the jurisdiction (i.e. global, or state/province). Not located despite intensive searches of historical sites and other appropriate habitat, and virtually no likelihood that it will be rediscovered.
GH or SH	**Historical (Possibly Extirpated)** — Known only from historical records, but still some hope of rediscovery. There is evidence that the species may no longer be present in the jurisdiction (i.e. global, or state/province), but not enough to state this with certainty.
G1 or S1	**Critically Imperiled/Highly State Rare** — At very high risk of extinction or extirpation due to very restricted range, very few populations or occurrences, very steep declines, very severe threats, or other factors. Typically occurring in fewer than five populations.
G2 or S2	**Imperiled/State Rare** — At high risk of extinction or extirpation due to restricted range, few populations or occurrences, steep declines, severe threats, or other factors. Typically occurring in 6-20 populations.
G3 or S3	**Vulnerable/Watchlist** — At moderate risk of extinction or extirpation due to a fairly restricted range, relatively few populations or occurrences, recent and widespread declines, threats, or other factors. Typically occurring in 21-80 populations. [A non-standard rank of S3.1 is used infrequently to identify species that are of higher conservation concern because of the global significance of Maryland populations. Although not currently imperiled, Maryland occurrences may be critical to the long-term security of the species.]
G4 or S4	**Apparently Secure** — At fairly low risk of extinction or extirpation due to an extensive range and/or many populations or occurrences, but with possible cause for some concern as a result of local recent declines, threats, or other factors.
G5 or S5	**Demonstrably Secure —** At very low risk of extinction or extirpation due to a very extensive range, abundant populations or occurrences, or little to no concern from declines or threats.
GU or SU	**Status Uncertain** — A numerical rank cannot be established with confidence for reasons including lack of historical records, low survey effort, cryptic nature of the species, or concerns that the species may not be native to the state. Uncertainty spans a range of more than 3 ranks, as defined above.
GNR or SNR	**Not ranked —** Conservation status has not yet been fully assessed.

	Global Rank Qualifiers (at end of Global Rank)
?	**Questionable Rank —** Indicating uncertainty that may span 2-3 numeric ranks, as defined above.
Q	**Questionable Entity —** Indicates that the taxon has questionable, controversial, or uncertain taxonomic standing (e.g., treated by some taxonomic authors as a full species, whereas others treat it as a subspecies or variety or not at all).
T	**Taxon —** Indicates the rank of a subspecies or variety (i.e., an infraspecific taxon).
	State Rank Qualifiers (at end of State Rank)
?	**Questionable Rank —** Indicating uncertainty that may span 2-3 numeric ranks, as defined above.
B	**Breeding** — Conservation status refers to Maryland's breeding population of a migratory animal.
N	**Nonbreeding** — Conservation status refers to Maryland's non-breeding population of a migratory animal.
M	**Migrant** — Migrant animal that occurs regularly during migration at particular staging areas or concentration spots where the species might warrant conservation attention. Conservation status refers to the aggregating transient population of the species in the state.

Status	State Legal Status Definitions[1]
X	**Endangered Extirpated** — A species that was once a viable component of the flora or fauna of Maryland, but for which no naturally occurring populations are known to exist in the State.
E	**Endangered** — A species whose continued existence as a viable component of the State's flora or fauna is determined to be in jeopardy.
T	**Threatened** — A species of flora or fauna which appears likely, within the foreseeable future, to become endangered in the State.
I	**In Need of Conservation** — An animal species whose population is limited or declining in the State such that it may become threatened in the foreseeable future if current trends or conditions persist. [This category does not apply to plants.]
	State Legal Status Qualifier (at end of State Legal Status)
*	**Range Restriction —** The species is listed in a limited geographic area only; not statewide.
Status	**Federal Legal Status Definitions[2]**
LE	**Listed Endangered —** Species listed as endangered; in danger of extinction throughout all or a significant portion of its range.
LT	**Listed Threatened** — Species listed as threatened; likely to become endangered within the foreseeable future throughout all or a significant portion of its range.
PE	**Proposed Endangered** — Species proposed to be listed as endangered.
PT	**Proposed Threatned** — Species proposed to be listed as threatened.
C	**Candidate** — Candidate species for listing for which the Service has on file enough substantial information on biological vulnerability and threat(s) to support proposals to list it as endangered or threatened.

State Legal Status Definitions[1]
This is the status of a species as determined by the Maryland Department of Natural Resources, in accordance with the Nongame and Endangered Species Conservation Act. Definitions for the categories have been taken from Code of Maryland Regulations (COMAR) 08.03.08.

Federal Legal Status Definitions[2]
This is the status of a species as determined by the U.S. Fish and Wildlife Service's Office of Endangered Species, in accordance with the Endangered Species Act. Definitions for the categories have been modified from 50 CRF 17.