COMPREHENSIVE PLAN

Town of Ocean City, Maryland

August 2006

TOWN OF
OCEAN CITY
The White Marlin Capital of the World

MAYOR & CITY COUNCIL
P.O. BOX 158
OCEAN CITY,
MARYLAND 21843-0158

www.town.ocean-city.md.us

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

April 4, 2006

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

Dear Mayor Mathias 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 – 2006 for your consideration and adoption. This is a revision to our existing Comprehensive Plan that was adopted on December 1, 1997. The revision is required by and has been prepared in accordance with Article 66B 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 correct some mistakes of the past and create a better Ocean City for 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,

Dr. Geoffrey Robbins
Chairman

Jesse C. Houston
Director of Planning and
Community Development

Ocean City, MD
All-America City
2001

RESOLUTION

BY THE OCEAN CITY PLANNING AND ZONING COMMISSION APPROVING **THE COMPREHENSIVE PLAN FOR OCEAN CITY, MARYLAND – 2006** AND RECOMMENDING ADOPTION OF SAID PLAN BY THE MAYOR AND CITY COUNCIL OF OCEAN CITY.

WHEREAS, the Ocean City Planning and Zoning Commission has made careful studies and comprehensive surveys and studies of past and present conditions and possible growth trends in Ocean City; 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 Article 66B 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 – 2006** 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 October 18, 2005, 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 – 2006**, 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 – 2006** by the Mayor and City Council of Ocean City as an official document of Ocean City, Maryland.

Dated this 4th day of April, 2006.

PLANNING AND ZONING COMMISSION

Dr. Geoffrey Robbins, Chair

John Staley, Secretary

Jesse C. Houston, Director
Planning and Community Development

Town of Ocean City Maryland
Comprehensive Plan

Acknowledgments

Mayor and City Council

Richard W. Meehan, Mayor
James S. Hall, President
Nancy L. Howard, Secretary
Joseph T. Hall II
James W. Hancock III
Lloyd Martin
Joseph M. Mitrecic
James N. Mathias, Jr. (Former Mayor)

Planning Commission

Geoffrey H. Robbins, Chairman
Pam Greer Buckley
Joel Brous
Peck Miller
Larry A. Sawyer
Thomas J. Singman
John C. Staley, Secretary
Lauren Taylor
William E. Esham III, Attorney

Town of Ocean Contributing City Staff

Department of Planning and Community Development
Jesse Houston, Director
R. Blaine Smith, Zoning Administrator
Karen Zera, GIS Coordinator
Robert Nelson, Planner

Airport
Capt. W. (Bill) Simmons, Airport Manager
George Goodrow, Airport Manager

Engineering Office
Terence McGean, City Engineer
Gail Blazer, Environmental Engineer

Finance Department
Martha Bennett, Director

Police Department

Bernadette Dipino, Chief
Capt. Kevin M. Kirstein, Command Staff

Recreation and Parks Department
Thomas J. Shuster, Director

Roland E. Powell Convention Center
Mike Noah, Director

Department of Public Works
Hal Adkins, Director

Transportation Division
George Thornes, Superintendent

Water Division
Perry Linz, Superintendent
Bob Stevens, Asst. Superintendent

Wastewater Division
Charles Felin, Superintendent

Maryland State Highway Administration
Gene Cofiell, Asst. District Engineer, Traffic

Consultant Assistance
Redman/Johnston Associates, Ltd.
416 Goldsborough Street
Easton, Maryland 21601

Town of Ocean City Maryland
Comprehensive Plan

Table of Contents

Chapter 5: Community Facilities and Public Services

Chapter 6: Housing

Chapter 7: Sensitive Areas and Environmental Protection

List of Tables

Chapter 1: Population Characteristics and Trends

Chapter 2: Economic Development

Chapter 4: Transportation

Chapter 5: Community Facilities and Public Services

Chapter 6: Housing

Chapter 7: Sensitive Areas and Environmental Protection

Chapter 8: Downtown Development

List of Figures

Chapter 1: Population Characteristics and Trends

Chapter 2: Economic Development

Chapter 4: Transportation

Chapter 5: Community Facilities and Public Services

Chapter 6: Housing

Chapter 7: Sensitive Areas and Environmental Protection

List of Maps:

Follows Page

Chapter 3: Land Use and Community Character

Chapter 4: Transportation

Chapter 5: Community Facilities and Public Services

Appendices:

Chapter 1: Population Characteristics and Trends

Ocean City has experienced consistent, and in some time periods, remarkable growth. The number of both year-round residents and seasonal visitors has increased substantially over the years. The year-round population, in particular, has shown a dramatic increase in recent years. 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 future community planning.

The Town of Ocean City is a diverse community. This diversity is underscored by the wide range in characteristics of the seasonal visitor population and growing number 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 limited availability of data requires that the above groups be consolidated into two groups, year-round residents and seasonal visitors. Despite this consolidation, available information provides a substantial amount of information 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 support future growth. 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 invaluable for estimating future demand for community facilities and services.
- Proposals for action. The proposals 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.

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. Since 1970 growth in the year-round population has increased dramatically. Over the past 34 years the year-round population has increased over 5 fold: from 1,493 residents in 1970 to an estimated 8,187 today. 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 1-1 below displays the Town's year-round population over time.

Table 1-1: Year-Round Population, Ocean City 1930-2005

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%
2005 (estimate)	8,248	3.0%

Source: U.S. Census for years 1930 through 2,000. 2005 estimate shown assumes the same growth trend in year-round population evident from 1990 to 2000 for the period 2000 to 2005.

Figure 1-1: Change in Year-Round Population, Ocean City, 1930-2005

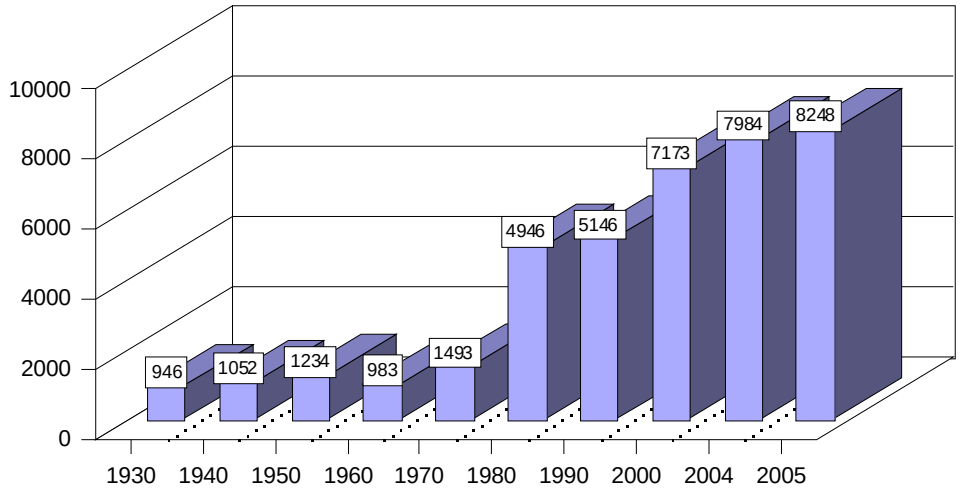


Table 1-2 compares the growth of Ocean City's permanent population to that of the County, Eastern Shore Region and the State of Maryland. The substantially higher rate of growth in year-round population reflected in Ocean City probably influenced by a number of factors including its growing desirability as more than a resort community and its capacity to absorb year-round growth with existing housing stock and available infrastructure which has traditionally been required to support its visitor population.

Table 1-2
Population Change in Ocean City and Selected Jurisdictions
1970-2000

	1970	1980	1990	2000	Average Annual Change 1970-2000
Ocean City	1,493	4,496	5,146	7,173	12.7%
Worcester County	24,442	30,889	35,028	46,543	3.0%
Lower Eastern Shore	127,988	145,240	163,043	186,608	1.5%
State of Maryland	3,922,399	4,216,933	4,780,753	5,296,486	1.2%

Source: U.S. Census of Population and Housing

It should be noted that the Ocean City Office of Planning and Community Development has indicated the official 1990 Ocean City population of 5,146 as determined by the U.S. Census was considered substantially lower than the number of actual year-round residents. However, for planning purposes, the number of permanent residents is not as important as the total number of people in the Town at any time, including 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 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.

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, but it is valuable 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.

Table 1-3 shows the peak demoflush population for each year since 1977. This is the number of people in Ocean City on the peak day in each year. The table indicates that the peak day population of 162,900 in 1977 virtually doubled some 10 years later to 332,400 by 1987. Since that time the peak population has remained relatively stable within the range of 320,000 to about 345,000 in subsequent years.

The average weekend population by month is shown in Table1- 4. Since 1993 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. Through the period shown in Table 4, the months of January, March, April, October, November and December each recorded substantial weekend population increases in excess of 23% or more.

Information shown in Table 5 appears to confirm trends toward increases in visitor populations during the non-summer months. Table 5 shows the average weekend population during the summer season from 1992 through 2005 has reflected virtually no change. 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 were average weekend populations have grown by over 40% over the past 11 years. These changes suggest that efforts to expand the traditional tourist season have been somewhat successful.

Table 1- 3 Peak Summer Seasonal Population Estimates, Ocean City		
Year	Peak Summer daily Population	Annual Percent Change
1977	162,900	
1978	163,800	0.6%
1979	191,900	17.2%
1980	213,900	11.5%
1981	258,900	21.0%
1982	257,800	-0.4%
1983	266,300	3.3%
1984	269,300	1.1%
1985	304,200	13.0%
1986	294,700	-3.1%
1987	332,400	12.8%
1988	317,980	-4.3%
1989	339,345	6.7%
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%

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

Table 1-4
Average Weekend Population Estimates, Ocean City
1992--- December 2005

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	% Change
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	61.5%
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	17.6%
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	23.0%
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	18.7%
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	4.0%
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	1.9%
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	(3.0)%
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	(2.6)%
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	(1.1)%
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	27.3%
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	44.1%
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	65.8%
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	9.1%
% 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/Public Relations, 2005

Figure 1-2: Average Weekend Population Estimates, Ocean City 1992 - 2005

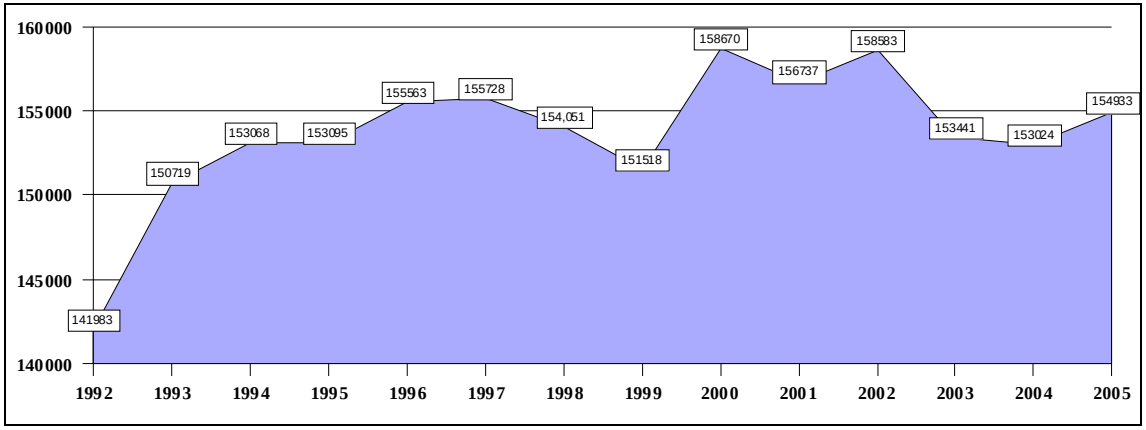


Table 1-5
Average Weekend Population by Season
1992--- 2005

		1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	% Change
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	43.8%
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	12.6%
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	(1.5)%
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	14.7%

Source: Redman/Johnston Associates and Town of Ocean City, Dept. of Tourism/Public Relations, 2005

As noted earlier, estimating the visitor population using the Demoflush methodology probably overestimates the population. To illustrate, comparing the 2000 average summer population (286,213), less about 10 percent day visitors, to the number of housing units (26,320 as reported by the 2000 Census plus about 9,500 hotel units) results in an average of 7.5 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 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 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.

Population Density

Total land area within the Town of Ocean City is approximately 4.6 square miles or just under 3,000 acres. Table 1-6 presents the population density (persons per square mile) for the year-round population (1,559 persons per square mile) and for the average weekend demoflush population by season (16,307 to 62,220 person per square mile, depending on the season). By way of comparison, the population density of Baltimore City is approximately 9,109 persons per square mile and the density within the City of Annapolis is approximately 5,300 persons per square mile.

Table 1-6
Population Density– 2000
Town of Ocean City

Population type	Population	Density (persons per square mile)
Year-Round Population	7,173	1,559
Winter (Average Weekend)	75,014	16,307
Spring (Average Weekend)	129,812	28,220
Summer (Average Weekend)	286,213	62,220
Fall (Average Weekend)	143,642	31,227
Average (Yearly Weekend)	158,670	34,494

Source: 2000 U.S. Census; Town of Ocean City Department of Tourism/Public Relations

Resident Population Characteristics

It is common for a comprehensive plan to analyze the various characteristics of a community's population, such as age, sex, race and education. Since such data only exists for the year—round population, some discussion is provided regarding the characteristics of Ocean City's resident population. While such information can serve to inform many actions related to future planning, the size and characteristics of the community's visitor population is 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 this 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; a much greater rate of growth than had been evident in the County in previous decades. (See Table 1-7)

Table 1-7
Selected Population Characteristics, 1990-2000 and Estimated 2004
Town of Ocean City and Worcester County

Population	Ocean City	Worcester County
1990	5,146	35,028
2000	7,173	46,543
2004 Estimated	7,984	49,870
2000 Population by Sex		
Male	3,680	22,695
Female	3,493	23,848
Male/Female Ratio	1.04	.95
Percent Population Change		
1990-2000	39.39%	32.87%
Median Age in 2000	47.2	43.0

Source: 2000 U.S. Census; Redman/Johnston Associates, Ltd.

While Ocean City remains a popular tourist destination, few young adults and households migrate here. For the most part those relocating to the Town are in pre-retirement and retirement age groups. Both Ocean City and Worcester County are similar to many other locations in the US where the population age 65 and older is growing much faster than the age 18 and under

population. However, the year-round population of working households in the surrounding County is also expanding.

Age and Sex Characteristics of Year-Round Population

Table 1-8 presents a breakdown of the age characteristics of the year-round permanent population of Ocean City. Table 9 identifies the sex characteristics of the resident population.

Table 1-8

Year Round Population
Year 2000 Age Characteristics

Age	Number	Percent
Under 5 years	214	3.0%
5 to 9 years	220	3.1%
10 to 14 years	239	3.3%
15 to 19 years	234	3.3%
20 to 24 years	427	6.0%
25 to 34 years	1,007	14.0%
35 to 44 years	1,016	14.2%
45 to 54 years	937	13.1%
55 to 59 years	526	7.3%
60 to 64 years	545	7.6%
65 to 74 years	1,136	15.8%
75 to 84 years	577	8.0%
85 years and over	95	1.3%
Median Age	47.2	
% population 62 year of age and older	30.0	

Source: 2000 U.S. Census

Table 1-9

Year Round Population
Year 2000 Sex Characteristics

	Number	% of total
Male	3,680	51.3 %
Female	3,493	48.7 %

Source: 2000 U.S. Census

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

- The population is evenly divided between males (51.3%) and females (48.7%). However the male population represents a larger percentage of the population than it did in 1990 when only 50.7% were males and 49.3% were females.

- The population under 18 years of age represents a much smaller percentage of total population (11.3%) than population under 18 years of age in Worcester County (20.5%) and the State of Maryland (25.6%)

- The school-aged population, in the age group 5-17 years of age, makes up a mere 8 percent of the total population as compared to the County school age population which represents 15.3% of the total County population.

- The median age of the Town's population is 47.2 years of age. This is substantially higher than the median age of the Worcester County population (43.0) and the State (36.0)

- There is a significant difference between the median age of men (44.7 years of age) and women (49.7 years of age) as compared to the County (43.0 years of age for men and 42.5 years of age for women) and State (36.1 for women and 35.9 for men).

- 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).

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%

Source: U.S. Census

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.

Racial Characteristics of the Year-Round Population

Table 1-11 shows that the population of Ocean City continues to be overwhelming white. The black population has increased relative to the total, but only by 1% since 1980. Year-round residents of other races grew from 61 residents in 1990 to over 150 by the year 2000 and represented the greatest proportionate share increase in the total population from 1990 to 2000. This was primarily driven by growth in residents of Asian or Mixed-Race origin.

Table 1-11: Racial Characteristics–-Year-Round Population						
Race	1980		1990		2000	
	Number	Percent	Number	Percent	Number	Percent
White	4,815	97.4%	4,956	96.3%	6,839	95.3%
Black	76	1.5%	129	2.5%	179	2.5%
Other	55	1.1%	61	1.2%	155	2.2%

Source: U.S. Census

Educational Attainment of the Year-Round Population

Educational levels in Ocean City are high compared to the County. Table 1-12 shows the educational attainment level of the year—round population of Ocean City compared to the County and State. Among Ocean Cities year-round residents, well over one-half (55.5%) have some college experience as compared to 47.5 percent of County residents. Similar comparison with State-wide educational attainment levels shows the Ocean City population with slightly less educational attainment than the State as a whole (55.5 percent of Ocean City residents with some college experience versus 57 percent of State residents).

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

Educational Attainment	Ocean City		Worcester County (%)	Maryland (%)
	Number	Percent		
Less than9th Grade	152	2.6	5.1%	5.1%
9th to 12th Grade (No Diploma)	597	10.3	13.2%	11.1%
High School Graduate	1,842	31.7	34.1%	26.7%
Some College	1,318	22.7	20.6%	20.3%
Associate Degree	278	4.8	5.2%	5.3%
Bachelor's Degree	1,172	20.1	14.6%	18.0%
Graduate or Professional Degree	458	7.9	7.1%	13.4%

Source: U.S. Census

Income

People who work in the service and hospitality industries depend on the tourist season for a majority of their income. However, owners of businesses in these industries may make healthy profits during the summer season and sustain themselves through the year. This situation is reflected in the distribution of income in the Town (Table 1-14).

Table 1-13 Households (2000) By Household Income: Ocean City (Town) and Worcester County				
Household Income	**Ocean City**	**%**	**Worcester County**	**%**
Less than $15,000	534	14.1	2,872	14.6%
$15,000 - $24,999	636	16.8	2,695	13.7%
$25,000 - $34,999	658	17.4	2,776	14.1%
$35,000 - $49,999	667	17.6	3,798	19.3%
$50,000 - $74,999	644	17.0	3,930	19.9%
$75,000 - $99,999	245	6.5	1,907	9.7%
$100,000 - $149,999	222	5.9	1,060	5.4%
$150,000 - $249,999	140	3.7	497	2.5%
$250,000 - $499,999	37	1.0	145	0.7%
$500,000 and more	10	0.3	26	0.1%
Total	**3,793**		**19,706**	
Per Capita Income	$27,916		$22,505	
Median Household Income	$36,549		$40,650	
Average Household Income	$52,309		$52,478	
Source: Claritas, Inc.; Thomas Point Associates, Inc., U.S. Census Bureau 2000 Census				

- The median household income is $36,549.
- Almost half of the households make less than $35,000 annually, which is a significantly higher proportion than in the County.
- Around 11% of the households have an income of above $100,000.

Characteristics of the Visitor Population

Since 1987, each summer, the Ocean City 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 2003, the Public Relations staff interviewed 1,481 visitors at 4 pre-set locations in Ocean City. Some of the key findings include:

- 83.7% of visitors surveyed indicated their visit to Ocean City was a return visit. Only 16.2% were first time visitors.

- 78.1% of interviewed visitors indicated they visit Ocean City each year. Only 21.8% were not perennial visitors.

- 46.1% of the sample surveyed indicated they have been visiting Ocean City for over 10 years.

- 44.1% of visitors indicated they would be visiting Ocean City only once in 2003. 23% indicated they had or would visit Ocean City 3 or more times during the course of the year.

- Length of stay in Ocean City by visitors surveyed ranged as follows:

Weekend	20.9%
3 days	12.2%
4 days	13.3%
Week	38.5%
Longer	14.1%
Daytrip	0.7 %

  The same survey conducted in 1994 found 50% of those surveyed stayed for one week with Daytrips representing a much larger proportion of visitors (6%).

- Among visitors sampled, just under half (49.1%) had visited Ocean City's Website. 50.8% had not.

- Accommodations selected by visitors during their stay included:

Hotel/Motel	39.4%
Condo/Apartment	35.3%
Camping	6.3%
House:	6.1%
With Family	11.8%

- Total Household incomes for visitors interviewed were:

$18,000 to $25,000	9.1%
$26,000 to $35,000	11.5%
$36,000 to $50,000	22.6%
$51,000 to $75,000	24.3%
$76,000 to $95,000	19%
$96,000 or more	13.2%

- 33.6% of visitors drove Five hours or more to get to Ocean City

- The level of spending by visitors during their stay was wide-ranging. 29.7% spent less than $500; 26.8% spent between $500 and $1,000; 31% spent from $1,000 to $2,000 and

11.5% spent over $2,000 during their stay.

- Visitors to Ocean City surveyed in 2003 were from the following states:

Delaware	2.1%
Maryland	33.7%
New Jersey	5.8%
New York	6.2%
Ohio	2.0%
Pennsylvania	31.3%
Virginia/DC	6.9%
West Virginia	1.7%
Misc. States	7.6%
International	1.2%

- Activities engaged in by those interviewed included:

Visiting the Boardwalk	96.7%
Fishing	28.2%
Golf	18.7%

Review of the results of a similar survey conducted in 1994 indicates that the profile of the visitor population has not changed substantially over the past 10 years.

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 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 95% 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 re-development policies as much as new development over the next 20 years.

Year-round Population Projections

For planning purposes, the size of Ocean City's year-round population is relatively unimportant. 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.

Nevertheless the rate of growth in the Town's year-round population increased rather dramatically from 1990 to 2000 when compared to most previous decades; rapid growth from 1970 to 1980 being the exception. Likewise Worcester County sustained a much greater rate of growth through the 1990's.

Table 1-15 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. Therefore, two alternative forecasts or projections are provided utilizing two different approaches based on two varying assumptions. 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) and (15.4% in 2,000)] will remain relatively constant at 15.4% 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 3% annually over the twenty year period from 1980 to 2000.

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 success or failure of Maryland's Smart Growth initiatives 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. However, since the Town has the capacity to absorb year-round growth with existing housing stock and available infrastructure which has traditionally been required to support its visitor population, it is not inconceivable that the trend growth projections may materialize.

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	
	Proportionate Share	**Trend Growth**
2005	**7,900**	**8,248**
2010	**8,308**	**9,485**
2015	**8,609**	**10,908**
2020	**8,863**	**12,544**
2025	**9,048**	**14,426**

Note: Figures shown in Table under Proportionate Share assume the Town will maintain it's proportionate share of the county population in future years as established by the 2000 Census (15.4% of County Population. Figures shown under "Trend Growth" assume the Town's rate of growth in Year-round population from 1980-2000 (approximately 3% annually) will continue in future years.

Total (Seasonal) Population Projections

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. This plan projects future total population based on the demoflush population figures from 1994 through 2005 (Table 1-15). In this recent period the peak seasonal visitor population has been relatively stable; growing at a rate of less than one-half of one percent annually and this plan projects that trend to continue in the foreseeable future. "Adjusted" population figures are presented which are 85 percent of the demoflush population. (See discussion on page 1-8.)

Table 1-15 Estimated Recent and Projected Peak Summer Seasonal Population Town of Ocean City			
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	331,505	**.47%**	281,779
2015	339,369	**.47%**	288,463
2020	347,419	**.47%**	295,306
2025	355,660	**.47%**	301,311
Source: Ocean City Department of Planning and Community Development			

* Demoflush Population
** Adjusted Population (85% of Demoflush)

Both the adjusted peak population and the adjusted average weekend population are projected to increase at an average of 0.47 percent per year which reflects the increase from 1994-2005. These projections assume that there is no major change in local policy toward or regulation of development, and that some additional hotel facility and condominium development and/or re-development will occur through the 2005-2025 period to increase capacity to absorb visitors during peak weekends.

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 accounted for by a 10 percent addition to the adjusted demoflush data for day visitors. The impact of the nearby area may become greater if growth in Worcester County reflects the "Visions" of the Maryland Planning Act of 1992 which encourages growth to be directed to existing growth centers. The growth policies of the recently adopted Worcester County Comprehensive Plan reflect this vision.

Recommendations

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

- 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.

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

- 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.

- 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.

- 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.

- While the "Demoflush" method of estimating population is valuable in allowing comparison of levels from one year to another, the "adjusted" Demoflush figures should be used when greater accuracy is needed.

- An improved Demoflush formula, or other method of estimating seasonal population, should be developed. Changes in water consumption have caused questions about the accuracy of demoflush.

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 three categories: 1) accommodations (hotels, motels, and condominium rentals), 2) restaurants and nightclubs, and 3) retail shops and malls, and 4) amusements. Two businesses founded in Ocean City, Phillips Seafood Restaurants and Seacrets nightclub, are nationally recognized and among the top privately held restaurants and nightclubs in the country. It is estimated that over eight million people 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.

Goal:

To maintain a healthy and growing economy that supports the quality of life of residents and tourists. The economic development effort should focus on retaining and attracting jobs that are more varied and better paid; 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:

- Promote orderly real estate development that enhances the Town and generates taxes to support required services.
- Promote redevelopment of properties and locations that are underdeveloped or obsolete.
- Promote mixed-use projects that integrate commercial and residential development.
- Encourage the County to develop an industrial park in the northern part of the County in order to provide additional work opportunities for Ocean City residents.
- Promote opportunities for job development in technical and other skilled employment sectors within the Town.

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

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

- Enhance the local retail environment with specialty stores that provide entertainment and capture a larger share of potential tourist spending.

- Expand year-round social services to meet demand from the growing population.

- Expand year-round cultural activities in the Town and the County.

- Provide enhanced support for seasonal workers with additional housing, public transportation support services, including training and legal assistance.

- Support County economic development efforts to expand commercial air service.

- 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.

- Attract good quality restaurants with a broad range of cuisines to face increasing competition in eating and drinking establishments.

- Expand the range of tourist attractions to include entertainment venues, better quality restaurants, etc.

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

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

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

- Create a seamless approach to promote the Town and the region with a clear message that binds the distinct elements---the Convention Center, tourism and business development entities---with a single brand and message.

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

- Consider a mixed-use development project (including parking, retail and possibly housing) at the Worcester Street parking site.

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

- Take advantage of the benefits offered by participation in the Lower Eastern Shore Heritage Management Plan and being part of the Blue Crab Scenic Byway.

Fiscal and Economic Trends

The Town's fiscal position appears to be healthy based on reported revenues and expenditures. Overall growth in revenues from 1993 to 2004 was $6.1 million in constant dollars, representing a real (i.e., inflation-adjusted) increase. Table 2-1 summarizes revenues and expenditures in 1994, 2003 and 2005.

Table 2-1
Revenues, Expenditures, Other Financing Sources and Uses
Town of Ocean City General Fund, 1994, 2003 and 2005

	1994		2003		2005	
	Amount ($)	**%**	**Amount ($)**	**%**	**Amount ($)**	**%**
Revenues						
Property Taxes	18,392,907	56.8	21,942,128	46.0	28,893,748	48.0
Penalties and Interest	263,648	0.8	175,312	0.4	203,681	0.3
Other Taxes	5,974,972	18.5	11,998,532	25.3	12,561,124	21.1
Licenses and Permits	2,499,833	7.7	4,089,698	8.6	5,017,242	8.4
Fines and Forfeitures	449,462	1.4	560,924	1.2	523,138	0.8
Charges for Current Services	3,677,729	11.4	6,304,858	13.3	8,429,121	14.2
Revenue from Other Agencies	607,379	1.9	1,785,236	3.8	2,963,921	4.9
Other Revenue	794,580	2.4	651,459	1.4	747,846	1.2
Discounts Allowed	(299,665)	-0.9	-	0.0	-	
Total	$32,360,845		$47,508,147		$59,339,819	
Expenditures						
General Government	3,089,400	9.9	2,023,593	5	2,210,767	3.8
Public Safety	9,532,243	30.5	17,624,686	39.3	22,603,945	39.2
General Public Works and Beach	2,250,816	7.2	3,312,548	7.4	5,319,516	9.2
Sanitation and Waste Removal	3,668,270	11.7	5,331,082	11.9	5,894,927	10.2
Highways and Streets	2,334,556	7.5	3,423,383	7.6	5,818,748	10.1
Tourism and Community Relations	4,641,405	14.8	3,495,288	7.8	3,995,845	6.9
Recreation and Parks	2,448,178	7.8	4,828,920	10.8	6,386,759	11.1
Interest	1,694,188	5.4	1,665,365	3.7	1,376,678	2.4
Retirement of Long-Term Debt	1,610,764	5.2	3,121,080	7.0	4,129,534	7.2
Total	$31,269,820		$44,825,945		57,736,719	

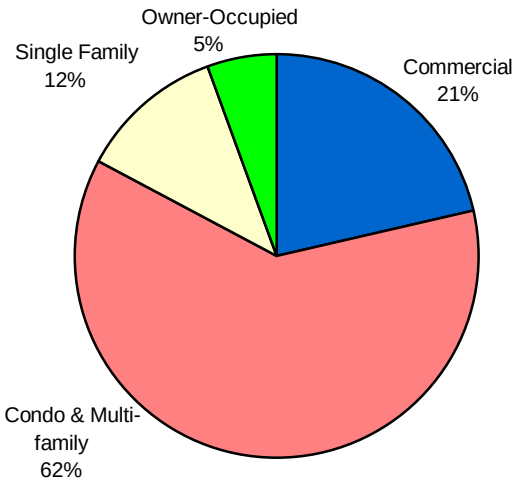
Source: Finance Department, Town of Ocean City

On the revenue side, taxes other than property taxes, licenses, permits and service charges make up a larger share of the recent budget, while property taxes are dramatically less. In its expenditures the Town is now allocating far more of its budget to public safety (40%) while tourism and community relations are a much smaller piece of the budget.

The reduced share of revenues that property tax revenues make up is somewhat surprising in light of recent trends in development, especially in relation to real estate development in the last two years.

The importance of residential property in the overall distribution is apparent; residential properties make up almost 80 percent of the total value. Figure 2-1 shows the relative values of residential and commercial real estate assessments in 2004.

Figure 2-1
Value of Assessments By Type, Ocean City, 2004



Source: Department of Planning, Town of Ocean City

The data for the two years (Table 2-2) show tremendous growth over the two-year period. Condominium and multi-family housing are not only the largest category of value (61% of the total) but also the fastest growing (35%).

Table 2-2
Assessments By Type, Ocean City, 2003-2004 (dollars in thousands)

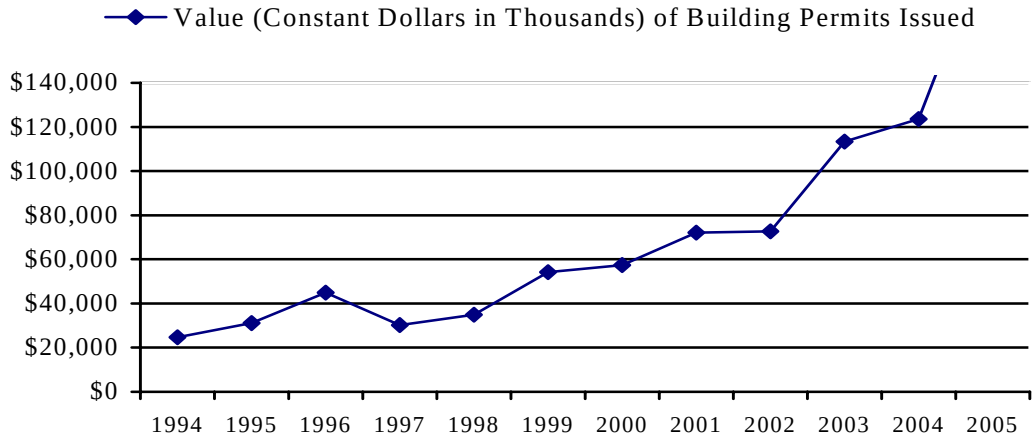
	2003		2004		
	Number	**Value**	**Number**	**Value**	**% Change in Value, 2003-4**
Commercial	1,245	939,951	1,200	991,981	5.5%
Condo & Multi-family	20,038	2,106,734	22,281	2,850,942	35.3%
Single Family	3,783	482,118	3,087	545,736	13.2%
Owner-Occupied	2,277	281,786	1,957	252,215	-10.5%
TOTAL	27,343	3,810,589	28,525	4,640,874	21.8%

Source: Department of Planning, Ocean City

New development is driving the increased level of assessments. Figure 2-2 shows the trend in terms of value of building permits issued in the period 1994-2003. There was a growth spike in 1996 and then steady growth from 1999-2002 and a very big increase in 2003

continuing through 2005.. The construction resulting from these permits drove the increased assessments described earlier.

Figure 2-2



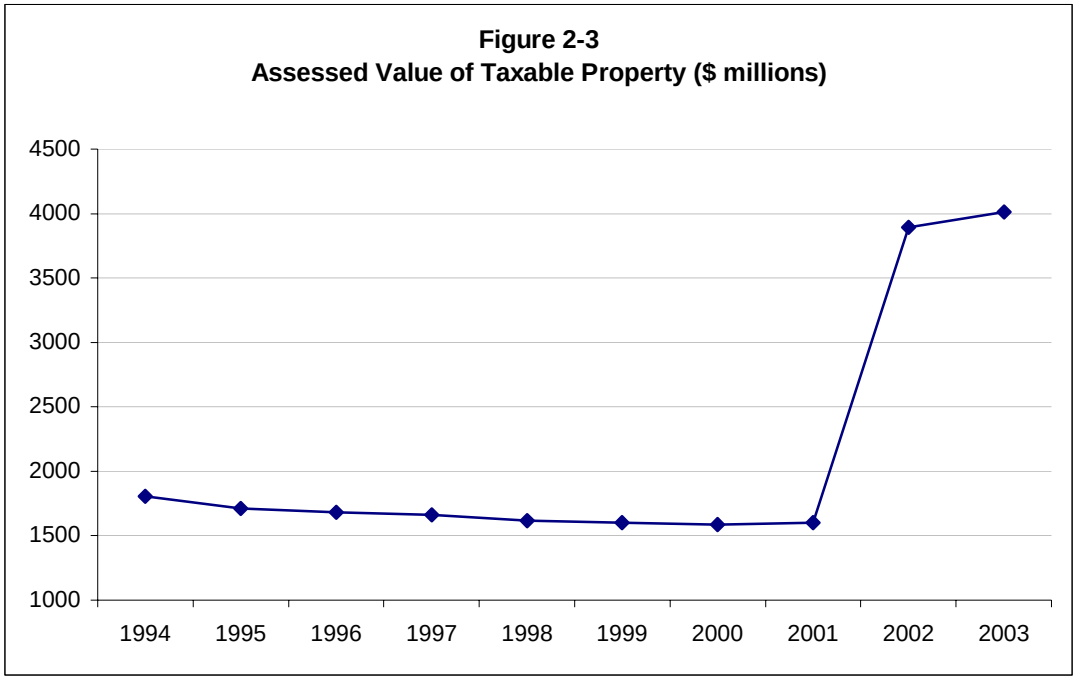
The ten-year trend in assessed value of taxable property also tells a positive story (Table 2-3 and Figure 2-3), based on a tremendous increase between 2001 and 2002. Assessments were $4.85 billion for fiscal 2004, a 20.9 percent increase over 2003.

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

Fiscal Year	Real Property	Personal Property	Corporate Property	Total Value	% Change
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: Town of Ocean City, Department of Fiscal Services.

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



The new construction category accounted for the largest share of growth over this period (Table 2-4). Alterations have declined from roughly a third to a fifth of the value of permits issued.

Exhibit 2-4
Number and Value (Dollars in Thousands) of Building Permits Issued
Ocean City, 1994-2005

Calendar Yr.	Total Issued		% Change from Previous Year
	No.	Value	
2005	1,416	210,063	69.9%
2004	1,545	123,623	9.0%
2003	1,300	113,417	56.1%
2002	1,255	72,634	0.7%
2001	1,265	72,148	25.6%
2000	1,190	57,453	5.8%
1999	1,162	54,280	55.8%
1998	1,199	34,847	15.5%
1997	1,055	30,179	-32.8%
1996	1,053	44,907	44.4%
1995	1,068	31,097	25.9%
1994	1,050	24,705	

Source: Town of Ocean City Planning and Community Development Office

Employment

Service, sales, and marketing are the major employers, creating more than half the Town's jobs (Table 2-5). Almost a third of the 3500 Town jobs are sales and office positions.

Table 2-5
Employed Population 2000, Age 16 and Older, by Occupation:
Ocean City Town and Worcester County

Occupation	Ocean City	%	Worcester County	%
Management, Business, and Financial Operations	580	16.4%	2,970	13.8%
Professional and Related Occupations	539	15.2%	3,329	15.5%
Service	853	24.1%	4,560	21.2%
Sales and Office	1,034	29.2%	5,971	27.8%
Farming, Fishing, and Forestry	12	0.3%	198	0.9%
Construction, Extraction and Maintenance	336	9.5%	2,505	11.6%
Production, Transportation and Material Moving	184	5.2%	1,977	9.2%
Total	**3,538**		**21,510**	

Source: 2000 US Census.; Thomas Point Associates, Inc.

The three main activities that generate employment are:

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

The six major employers in Ocean City are all in tourism and property management/development industries:

- Harrison Group (golf resort).
- Purnell Properties (hotel management).
- O.C. Seacrets, Inc. (night club).
- Trimpers Rides (amusement park)
- Dough Roller Restaurants
- Bayshore Development
- Clarion/Gateway Hotels

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

Tourism

Tourism drives employment in Ocean Town, and strongly influences household incomes. 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.

Phillips Crab House is renowned as one of the most popular dining destinations for visitors to the Eastern seaboard

Issues associated with tourism are complex. Visitation has been flat at approximately 8 million per year for the past five years. Roughly half this figure comes in peak season, June through August, and the other half comes in off-season (April-May, September-October). The objective is to maintain present levels and not lose visitors to competitive locations.

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, 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 17 courses in the area); these two markets contribute significantly to visitor attendance in the spring, fall, and winter months.

Heritage Tourism

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 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 herby incorporated, by reference, in *The Comprehensive Plan for Ocean City*.

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


Roland E. Powell Convention Center

major employer and an obvious reference point for economic development in the Town. It is Maryland's major convention facility on the Eastern Shore.

- The facility has a footprint of 189,000 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 108 events, including 33 conventions, in 2002.

- These events generated 292,027 visitors to the center, a 19% increase over 2001.

- The facility has created about 1,900 full-time jobs, and also generates $5 million in sales and local taxes.

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 is set to expire in 2015 when the debt is fully retired. At that time the Town will take over full responsibility for the operational deficit (negative cash flow last year was $1.8 million). There had been growth in this activity after the expansion of the Convention Center several years ago but the activity in recent years has been flat. According to the facility manager there are three limiting factors on convention business in Ocean City:

- 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.

- Air service is limited: just one carrier, USAirways, serves the Salisbury/Ocean City Airport, which is located roughly 30 minutes from Ocean City.

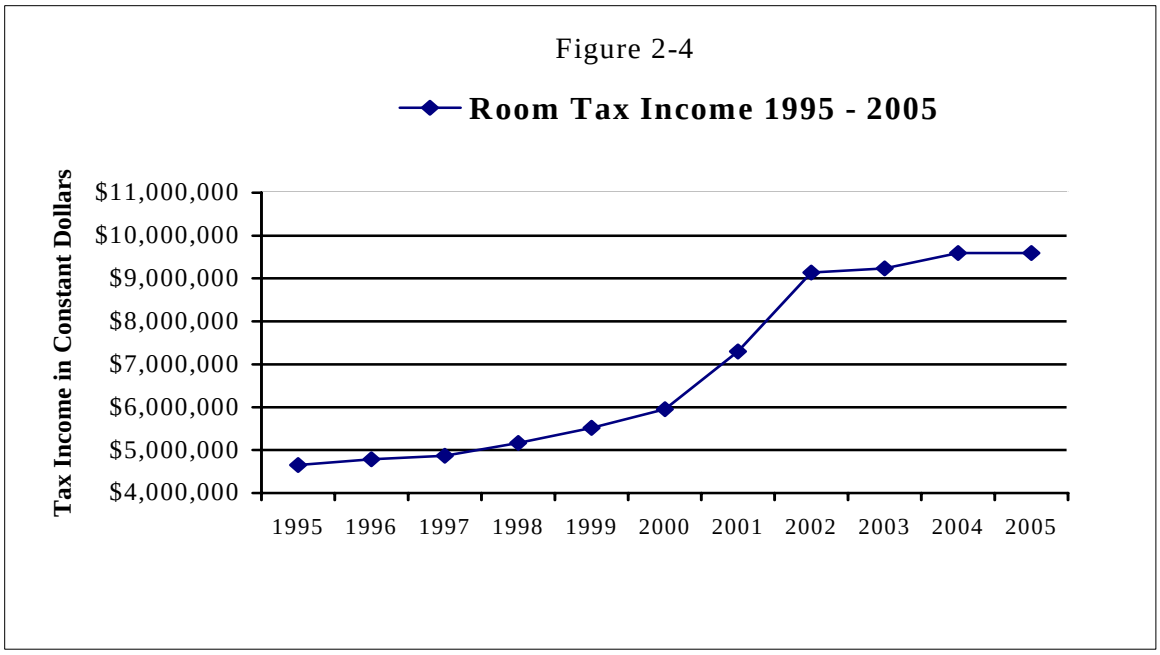
Accommodations

The hotel/motel and condominium rental industry is a very large part of the Town's economic picture. Overnight accommodations generate roughly $9 million per year for the general fund from a 9 percent tax (4 percent County, 5 percent State). Room use has been flat in the past 4-5 years, according to the Executive Director of the Hotel/Motel Association. However, the trend in room tax collections over the past ten years

The nostalgic quality of Ocean City's oldest hotels has charmed generations of families and kept them returning year after year.

(Figure 2-4) shows dramatic growth from 2001 to 2005. (It should be noted that the dramatic increase from 2001 to 2002 was largely due to an increase in the room tax.)

Figure 2-4



Industry issues, according to the Director, include the following:

- The City spends $1.2 million on tourism advertising, an inadequate amount in relation to competitive locations.
- The Association has been intensifying its efforts to work with the golf industry, a sector that has declined in recent years.
- The Association is strongly opposed to gambling on the belief that it will not engender additional spending and may cause problems as have occurred at other ocean resorts.
- The loss of over 1,000 restaurant seats in the past 2 years is significant, the result of pressures for development of residential condos.

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. In spite of the loss of restaurant seating reported by the Hotel/Motel Association over the past two years Food and Beverage Tax Revenues to Ocean City have remained strong through the period 1998 through 2004, and have increased by over 26 percent through the period (see Table 2-6). Not surprisingly some 58% of the revenues derived from food and beverage taxes are generated during the summer months.

Table 2-6
Food and Beverage Tax Revenue

Fiscal Year	Amount
2004	$1,887,032
2003	$1,795,244
2002	$1,813,792
2001	$1,697,614
2000	$1,741,333
1999	$1,466,945
1998	$1,487,510

Source: Town of Ocean City

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.

The Golf Industry

Ocean City has in recent years become a mecca for golfers. 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 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.

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.

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 Sportfishing Industry

A number of marinas in Ocean City cater to recreational sportfishermen competing in the annual White Marlin Open

Ocean City's sportfishing 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 sportfishing industry. The Open draws about 400 boats to compete for the largest prize money payouts in tournament sportfishing in the world. Winning boats collected record-setting awards of over $1 million each in 2003 and 2004. In 2004, the revenue generated for Ocean City during this annual, week-long event was estimated to be $20 million.

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.

Downtown Development

In recent years the City has made the downtown the focus of economic development efforts. The City organized Ocean City Development Corporation 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.

Other Business Issues and Views

The Director of the Chamber of Commerce 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. There is a push for development of a vocational school in Worcester County that would offer vocational internships and apprenticeships.

- 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 already opened new stores.

Future Business Park Development

The County partners with the Town and the Ocean City Development Corporation in economic development matters. The County's economic development office sees the need to locate an industrial park in the northern part of the County, closer to Ocean City than the Pocomoke Park, but the challenge is to acquire property at a reasonable price. The County is now reviewing the distribution of water and sewer infrastructure, and Ocean City has the highest priority in this review.

Conclusions

Ocean City seems to be in good fiscal condition, a result, in part, from steady appreciation in real estate values and positive tourism activity. Trends in the past decade that affect this situation include the following:

- New real estate development and redevelopment have brought an increased level of assessments as a result of significant growth in 1996, steady growth from 1999-2002 and

a very big increase beginning in 2003.

- The trend in room tax collections over the past ten years shows modest increases and then dramatic growth dramatic growth beginning in 2001. The Convention Center is now one of the top attractions in Ocean City, generating a significant level of visitation and spending.

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

- 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.

- 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.

- The Town has lost some businesses to residential redevelopment. Lower land values in West Ocean City are attracting some retailing activity away from the Town, where residential development is more attractive to developers since it commands higher returns on land. Retailing in general is strongly attracted to less expensive locations outside the resort area that are closer to the growing, year-round population. However, these trends are largely market-driven and demand for services influences the supply.

- There is a need to give visitors more reasons to spend money at attractions, such as entertainment venues and better quality restaurants. However, while additional entertainment may be a key factor in increasing visitation, market area demographics will not support this on a year-round basis. Moreover, entertainment in itself is a high-risk business that offers little in economic benefit to the local economy.

- The growth of the retirement population, aged 55-65, is a trend that creates new challenges in the health care field and the need for projects and programs related to independent and assisted living.

- The Ocean City Development Corporation (OCDC), established to lead the downtown redevelopment process, seems to have good support from the Town and the business community and it has made significant progress on its initial agenda. Now there is a need to update the work plan with additional priorities and projects.

- The competitive environment related to resort area conference and convention activity is growing and the Town should reevaluate its spending on marketing and business development. Reduced spending on tourism marketing may not be the answer in the face of increasing competition from other locations in the Mid-Atlantic region.

- Worcester County partners with the Town in its formal economic development efforts and the relationship seems to be positive. The eventual development of an industrial park in the northern part of the County, closer to Ocean City than the Pocomoke Park, will provide additional work opportunities for Ocean City residents.

- The Town and County must preserve, protect and restore the island's and bay's natural assets and water quality to sustain their attractiveness to tourism.

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

Chapter 3: Land Use & Community Character

Introduction

The Land Use Plan should be considered the most important element of this Comprehensive Plan. It establishes the relationship between the Town's existing patterns of growth and development and 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 provides the means to integrate the various planning goals and objectives into a comprehensive whole. Ocean City's plan to protect natural resources and open spaces, improve transportation systems, maintain and enhance community facilities, enhance pedestrian connectivity within the Downtown, and protect the Town's character are all elements associated with and incorporated into the Land Use Plan. Ocean City's Land Use Plan is the fundamental element that will determine the Town's future qualities and character.

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 form 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 to support 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. By now, more and more tourists were traveling by car and by 1933, Coastal Highway, was extended from the resort's northern limits to the Delaware State line.

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 destruction of wetlands. Also the first high-rise, the Highpoint, was constructed in 1969. During this period public utilities were extended to the town's new boundary, the Maryland/Delaware state line. The early 1970s brought the completion of the second span of the Bay Bridge.

Two major development boom periods occurred during the last three decades. The first occurred in the early 1970s which lasted for three years 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. Today, 95% or more of the land located within Ocean City has been developed. Much recent development has been in the form of redevelopment; new modern structures are replacing older less desirable ones. Recent redevelopment projects show an average increase in units of 25 percent.

The history of the development of 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 several years and will define and reflect the character of Ocean City in the future. These considerations today prompt the following land use goal and objectives:

GOAL: **To foster a legible pattern of land use which accommodates variety in development type and scale appropriate to distinct neighborhoods or districts within the town and which meets the residential, commercial and cultural needs of the community.**

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

- To the extent practical, establish and define a series of land use districts 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 manifest in each district.
- Maintain the integrity of existing residential neighborhoods.
- Protect residential neighborhoods from unwanted traffic and encroachment by commercial activities, except in a planned mixed use context.
- Encourage infill and redevelopment of existing vacant or underutilized sites.
- 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.

- Provide for a full array of commercial services that meet the needs of the Town and its residents and visitors.
- 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.
- Minimize the environmental impacts of all development and re-development to insure pollution does not adversely affect the Coastal Bays and ocean, dunes, and beaches.
- Establish guidelines for development design that reflect the traditional character of those districts where appropriate, notably the Southern portions of the Town.
- 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.

- Utilize an appropriate mix of regulations and incentives to retain a healthy mix of commercial retail and service uses to support the shopping and personal service needs of Town residents and visitors.

- 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.

- Support the continuing improvement to the Boardwalk and the development of an inlet and bayside boardwalk to increase opportunities for water vistas.

Existing Land Use

The present land use pattern contains a thorough mixing of residential types and substantial commercial strip and center development along Coastal Highway (see Map 3-1). Industrial development, other than a few examples, is notably absent. This unusual development pattern resulted from several factors:

- Ocean City has a large proportion of absentee property owners. The orientation of these owners is more as an investor rather than as a member of a traditional community.

- In the past, vacationers' transience led them to overlook development aspects which in their home community might be unacceptable. A growing year-round residential population is showing more concern about the quality of development in recent years.

- The island's long narrow shape and simple circulation system limited the creation of more traditional distinct identifiable neighborhoods.

- A strong vacationer demand exists for ocean side and bayside accommodations, and development has occurred to meet that demand.

- Few large developments were platted and developed as an integrated whole, except for a few residential neighborhoods.

Under ordinary circumstances, resistance to such an intermixing of uses and density would be great, but Ocean City is different. Property values have grown dramatically despite this unorthodox situation. While unusual for year—round communities, such a pattern is not uncommon among resorts that have experienced intense growth pressure.

Now established, this pattern will continue into the future. In recent years the ocean side's

residential diversity has tended to decrease. In filling 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 only 5.5 percent of land in Ocean City is vacant. Thus the potential for new development, other than redevelopment, is limited.

Residential Land Uses

Ocean City's residential land uses include mobile homes, rooming houses, motels, hotels, single family residential units, duplexes, mid-rise apartments, and high rise condominiums.

Residential development is distributed throughout the town. The lack of a major industrial area or other noxious 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.

"High rise row"

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 individuals 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.

Commercial Land Uses

Six main types of commercial development exist in Ocean City:

- Boardwalk businesses.
- Free—standing retail and service operations; for example, 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.

Commercial development occurs predominantly along Coastal Highway. The greatest concentrations occur 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.

Lacking a formal central business district, Ocean City's commercial uses are distributed along Coastal Highway. This strip development carries with it all the problems commonly associated with such development; for example, numerous mid-block curb-cuts exist which encourage a variety of turning movements into and out of high traffic generators. However, this dispersal 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. 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.

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 commercial uses and/or to promote mixed use development should be 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.

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. 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.

West Ocean City WalMart

Both development of mixed use projects and re-development of commercial properties represent a major opportunity to improve Ocean City's image, while supporting residents' needs for goods and services. Improved landscaping and signage 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 Bayfront Boardwalk along specific reaches of the Town's bayfront should be developed together with subsequent street system and walkway improvements that improve and strengthen the vehicular and pedestrian connections between the Ocean and Bayfront 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 pedestrian traffic to support a broader mix of commercial uses within the downtown area.

Parks and Open Space

Ocean City 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). Although Northside Park is only one of some 15 locations used for recreation purposes, its 58 acres of land represent over 80% of all land in park use.
Vast expanses across the beach, ocean, and bays provide 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 available to the public.

Industry and Utilities

One major industrial use and several utility installations are located in Ocean City. The industrial use, a concrete plant, is located on the bay just north of the Kelley Bridge. Electric transformer stations, telephone switching buildings, and Ocean City public works facilities comprise the utility uses.

Due to Ocean City's resort and residential nature, additional heavy industrial uses are inappropriate. Smoke, noise, and major truck traffic would have an adverse effect on year-round and vacationer populations. Without opportunities for buffering, such industry would be detrimental to surrounding properties. The town's limited street capacity would be adversely impacted by heavy truck traffic.

Streets

Streets occupy nearly 600 acres, which is about 25 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 pedestrian movement.

Vacant and Redevelopable 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.

Summary

Ocean City's land use pattern is established. The oceanside 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 95 percent of developable land, so redevelopment will be a major component of 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 development of commercial uses and/or to promote mixed use development 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.

Commercial-marine uses require bayside access, but some of these sites have been developed in other uses. Zoning should continue to favor these activities, 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.

Industrial land uses are limited in number and scope. An increase would be detrimental to the town's resort character.

FUTURE LAND USE PLAN

Future development, like 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.

As discussed earlier, the majority of Ocean City's visitors reside in the Washington—Baltimore regions and south-Central Pennsylvania. Growth and income levels in those areas will be the primary determinants of growth in Ocean City. Growth in the number of households will be greater than population growth as average household size continues to decrease. This should encourage an even higher demand for accommodations.

As developable sites in Ocean City continue to diminish, nearby mainland unincorporated sites are coming under more intensive development pressures. With the sewering of West Ocean City and advancement of spray irrigation techniques, substantial development may occur. Presently over 3,000 buildable lots are in Ocean Pines with substantial acreage unplatted and slated for future development. West Ocean City contains about 2100 vacant buildable lots. The recently adopted Comprehensive Plan for Worcester County intends to limit growth in the Berlin and Showell areas to 9,114 people over the planning period.

Glen Riddle Farm Development, West Ocean City

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 daytrippers. The costs of providing these services should be borne by all users.

An important caution is in order about the preceding analysis. Historically, demand for resort accommodations has far exceeded growth in households in the prime market area. This may be accounted for by pent-up demand and/or the growth in incomes expanding the market for second homes. For this reason, production rates should be monitored and projections adjusted as conditions change. (Given present market conditions and tax regulations, it appears the projected modest production rates are reasonable in the near term.)

The land use plan recognizes Ocean City's existing development pattern which is well established since 95 percent of the buildable land is now developed. The opportunities for major change are

limited. However, the plan attempts to direct future development and foster patterns of re-development to the town's best advantage.

In general, major changes in permitted land uses and densities are not recommended by the plan. Current zoning regulations are so entrenched that sweeping changes could unfairly burden property owners. However, 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.

The Plan proposes the provision of additional public bayside access. Such access points would be public miniparks, piers, and docks. Public and private marinas would be desirable.

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 condominium development. Future need for commercial services will be met through more intensive use of existing shops and off-island centers. Additional community scale shopping centers are not encouraged, especially in the north end of town, because they are major traffic generators. 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 locate on both sides of Coastal Highway to better serve the residential population in all areas.

Industrial

The plan recommends limiting industrial 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 crafts, 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 explored to assure it can function over time in a manner that continues to support growth of tourism as the major industry of the community.

Marinas, boat repair, and fueling are suitable in locations with deep water access. Close proximity to the inlet is desirable. Designated areas would incorporate marine—related retailing and services.

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, although much of that has been lost over recent years.

Uniform scale and architecture enhance downtown character.

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.

Refer to Chapter 8 for a more in-depth discussion of Downtown Revitalization.

Planned Areas

A number of key parcels with unusual 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 redevelopable 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.

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.

In its natural state, the beach provides flood protection benefits and wildlife habitat.

Future Land Use Plan Map

The Future Land Use Plan is depicted graphically at the end of this chapter on Map 3-2. This plan is based on the following assumptions.

- No prolonged disruption of national peace or economy occurs.
- The demand for ocean- and bay-related recreation remains strong, with Ocean City's market share remaining at least constant.
- Infrastructure and public services are provided to meet needs, and new physical or environmental constraints do not develop.
- The beach and seawall are maintained and continue to provide 100-year storm protection.
- Existing commercial development can accommodate more intense commercial usage.

- Ocean City's land area remains relatively constant without additions through dredge and fill operations or reductions due to erosion or sea level rise.

Residential Land Use Designations

- Single Family — Includes detached single family uses with densities less than approximately 7,500 square feet of land per unit; building heights of three or less stories; yard requirements provide relatively large open spaces.

- Low Density Multifamily — Includes areas of mixed residential types with generally low density; densities of about 4,000 square feet of land per multifamily unit and 2,000 for hotel units, and heights of five stories or less are permitted.

- Medium Residential — Includes medium density development including a variety of single family, duplexes, townhouses, motels/hotels, and apartments; density of about 2,000 square feet per multifamily unit and 1,000 for hotels, and building heights of five or less stories; open space would be used to break long expanses of buildings; bayside marina facilities would be encouraged.

- Mixed Use — Primarily includes the downtown area which is developed with mixed commercial and residential uses at relatively high densities and generally low rise in character. These existing use, density, and height characteristics (1,000 square feet per multifamily units and 500 for hotels, with a four or five story height limit) are encouraged to continue. Single family homes are also encouraged in this area.

- Moderate Residence — Includes areas of generally mid and low rise construction appropriate for moderate levels of density; the areas of this designation are either oceanblock areas east of substantial bayside development or serve as an intervening area between the oceanblock and Coastal Highway; permitted densities are, 1,000 square feet per unit for hotels and 1,450 square feet per unit for multi-family development; building height of five or less stories with no provision for taller buildings.

- General Residence — Includes areas suitable for oceanfront or near oceanfront development of higher density residential uses; new development of buildings over five stories in height on larger parcels would be appropriate; density would be about 1,000 square feet per multifamily unit and 500 for hotels.

- Mobile Homes — Includes areas of existing mobile home parks; permitted densities would be 4,800 square feet per unit; building heights of one story would be permitted. Additional landscaping and screening is recommended especially along Coastal Highway. Note: Stick-built homes are allowed in Montego Bay.

Commercial Land Use Designations

While residential development is permitted in commercial districts, commercial uses should always be required. The density of residential uses in commercial districts should be low or moderate on the bayside so as not to compete with commercial development as the primary use.

- Local — Includes individual businesses and neighborhood shopping centers offering services and retail goods which conveniently meet the daily needs of residents and vacationers.

- Boardwalk Commercial — 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 sideyards) on the first floor should be encouraged to eliminate small, dark vacant spaces. These spaces tend to accumulate trash and are a safety and security hazard. Residential uses and hotel development, mixed with commercial development, would be appropriate at the intensity of the General Residence district.

- Shopping Center District — Includes major existing community-scale shopping center. Such areas have major traffic concentration impacts and should be located with sufficient buffers from residential areas. New community shopping centers are not encouraged.

- 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.

- Downtown Bayside Marine — Includes the area of the Downtown which has developed with a bayside water orientation. Similar to the rest of the Downtown, this area's existing character contains a variety of uses of relatively high intensity. This character is encouraged to continue with an emphasis on marine activities.

Overlay Districts

Several overlay districts are proposed in an effort to address special needs and to add flexibility to the zoning regulations. Each overlay district will have its own unique standards which will be contained in the zoning ordinance. Owners of property that meet the standards may apply for an overlay designation and follow the process set forth in the zoning ordinance.

The function of an overlay district is to encourage large scale projects that result in superior developments by offering certain incentives in exchange for the provision of improvements that meet public needs. Incentives could be in the form of increased building heights, reduced parking requirements or design flexibility. In exchange for these incentives, the project may provide

additional open space, public art, enhanced landscaping and an enhanced design review process.

Three overlay districts are proposed by the Plan:

- 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. Projects using the Commercial Marine overlay must contain commercial marine uses.

- Amusement — This overlay designation would implement 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 would be part of the review process. Consideration of traffic and compatibility with existing development would .also be part of the review process for new amusement areas.

Retaining amusement uses is key to maintenance of the Town's image as a family resort destination.

- Planned — This overlay district would apply to areas which present special development opportunities and are important to-the orderly development of Ocean City. Special development review procedures would be established to add design flexibility and increased public input into site and architectural design.

Other Uses

- Public Buildings/Parks — Both existing and future proposed public buildings and parks should be designed and maintained to provide a positive image of the town and set an example for private property owners. The city should take the lead in landscaping by using native plants and by adequately maintaining property as this will help instill pride in the town's appearance.

- Sensitive Areas — Wetland and beach areas which should be preserved and enhanced. These areas act as buffers protecting property from natural hazards and are critical to the tourism and sport-fishing industries. Maintaining these areas is, therefore, very important to the public's safety and general welfare. All storm drains discharge directly into the sensitive areas.

- 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.

Recommendations, Proposals and Special Projects

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 Plan.

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

- 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.

- Future development should be directed to create a quality image for Ocean City. As vacationers' expectations increase, Ocean City must keep pace.

- Nonconforming uses, when redeveloped, should be encouraged to reduce their level of nonconformity. Incentives for compliance with existing codes may be appropriate.

- 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.

- 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.

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

- Hotel/motel needs should be monitored to determine suitable production targets 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 bonafide hotel 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.

- A design review process should be established to ensure compatibility of new and redevelopment projects. Design guidelines should be prepared 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)

- In concert with the design guidelines, a townwide 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.

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

- 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.

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

- The Town should coordinate with Sussex County, Delaware and with Worcester County so development of the mainland is complimentary and compatible with Ocean City's long-term objectives. This is especially important along the Routes 50 and 90 corridors. This should include efforts to control strip development and manage access to development through the use of shared entrances and service roads.

- Existing single family neighborhoods should be protected from development influences that could degrade their quality of life.

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

- The zoning ordinance should be revised to promote mixed use development. 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.

- 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

Building modulation, fenestration, and changes in roof configuration reduce building mass.

- 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.

- 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.

- Dunes should be placed in the southern part of the Town where the beach is widest to provide habitat.

- Pockets of Local Commercial zoning should be located in appropriate locations on the Oceanside of Coastal Highway and Philadelphia Avenue.

Summary

Ocean City faces important future challenges. The economy, even more than in the past, will rely on the resort emphasis as its economic generator. In the past, land development shared this role to some extent. As the town approaches build-out, development's role will be less prominent.

For this reason, the town should concentrate on keeping pace with trends in the tourism industry. More affluent and better educated, the vacationer of the 21st Century will have higher expectations. Therefore, aesthetic and cultural improvements, along with strides to accommodate our guests, will position Ocean City to compete in this changing environment. The town has an obligation to its citizens to achieve and maintain success.

The guidelines and proposals contained in the plan are designed to anticipate and address these issues. Elected and appointed officials must continue to interpret this plan as circumstances change and will need to adjust the specifics as time passes.

As noted in the 2004 fiscal report for the town:

"During the 2004 fiscal year, the Town of Ocean City (the Town) again experienced soaring real estate sales and increasing property values. The significant amount of new development prompted public over-development concerns, building moratorium proposals and a review of the Town's Comprehensive Plan that is currently underway. A recent population trend study shows moderate population increases during the spring, summer and fall seasons with the most surprising and significant increases during the winter months. More property owners are opting to utilize their investment throughout the year rather than rent while a growing number are deciding to stay year round. The Town's goal is to anticipate and accommodate development needs that will balance competing land use objectives and coordinate local with regional interests. The Town is becoming more than a resort community, and we embrace this change and challenge".

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. 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 deal with existing conditions with an eye to improvement.

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, the following objectives are adopted.

- Implement context sensitive solutions for highway safety and capacity projects.
- Identify and implement opportunities for short and long-term improvements to the road system.
- Continue to develop public transportation system alternatives to and on the island to its

maximum potential to minimize automobile congestion and damage to air quality.

- Utilize off-island lands in key locations to accommodate parking, park and ride and public transportation facilities where possible to augment Island facilities.

- Determine the feasibility of developing a bikeway system using alleys, secondary streets, and the Boardwalk.

- Install additional bike storage (racks) and lockers to encourage additional bike use.

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

- Encourage walking by enhancing the pedestrian environment through the use of pedestrian signals, pedestrian pushbuttons, and crosswalk-appropriate locationing. Improve pedestrian safety and accommodate pedestrian circulation throughout the Town.

- Explore the use of trolleys to augment transit system on St. Louis Avenue to reduce transit congestion on Philadelphia Avenue in the downtown area.

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

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

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

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

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

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

- Identify feasible long-range local and regional transit options along with demand and financing requirements.

- Enhance pedestrian connections between the Oceanfront and bayfront to foster greater pedestrian activity, particularly within the downtown.

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

- 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. Work toward the reduction of vehicular traffic in those areas, when possible.

- 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.

- Encourage and work with the State of Maryland and Worcester County to improve the flow of traffic on the Rt. 50 corridor.

Ocean City's Transportation System

Ocean City's transportation system has developed into a true multi-modal system, made up of highways, streets, public transportation, and air travel. The system is still dominated by the automobile, especially during the summer season. 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 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 system is simple but is called on to work hard to meet seasonal demand.

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 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. Often during storms this route is flooded. 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.

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.

Annual average daily traffic volumes (AADT) along Coastal Highway have remained rather constant in recent years and have actually shown some decline. Table 4-1 identifies AADT volumes for the past five years, at locations on Coastal Highway above and below the Route 90 bridge intersection.

Table 4-1
Annual Average Daily Traffic Volume
Coastal Highway (MD 528), North and South of Route 90 Bridge

Year	AADT .3 miles north of Route 90	AADT .7 miles south of Route 90
1998	25,600	23,875
1999	21,975	24,350
2000	22,650	25,125
2001	23,625	26,100
2002	21,175	21,775
2003	21.450	22,050
2004	21,725	22,325
2005	25,575	21,675

Source: Maryland Department of Transportation, State Highway Administration Traffic Counts, 1998 - 2005

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 reduced the number of accidents and has also improved pedestrian safety.

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.

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. The Federal Functional Classification of Coastal Highway is "Urban Other Principal Arterial" from 33rd Street north to North Division Street and "Urban Minor Arterial" from North Division Street to 9th Street, and "Urban Minor Arterial" from North Division Street to 1st Street.

Average Annual Daily Traffic Use counts for 2004 in the vicinity of 20th Street indicate an annual average daily traffic flow of 22,325 vehicles per day and in 2005 of 21,675 vehicles 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.

A number of Rooming Houses create old town charm and enhance the Baltimore Avenue Streetscape.

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.

Intercity Roads

Traffic entering Ocean City from the Route 50 corridor crossing the Harry Kelley Memorial Bridge

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 improved congestion. The completion of the Salisbury bypass in 2002 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 23,350 to 24,750 depending on the location of the station count (see figure 4-1). However, in-season traffic volumes during the summer range from 43,000 to 52,000 vehicles daily.

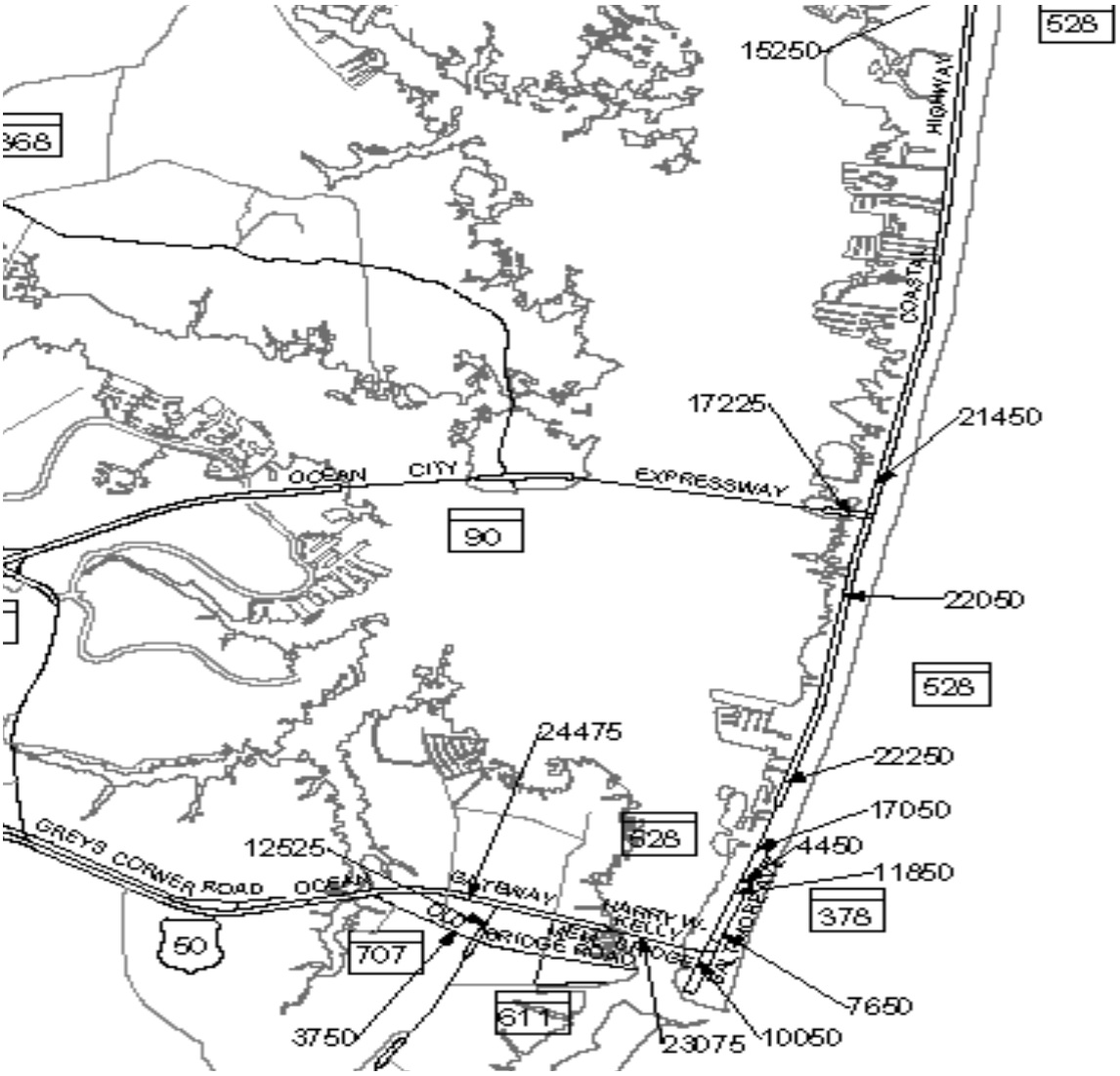
The U.S. Route 50 drawbridge was built in 1942. Although it is structurally adequate and has at least another 20-year life expectancy, the State Highway Administration has begun preliminary studies to determine the location/system changes needed for a potential new structure. A $2.5 million Project Planning Study was added to the FY 2005-2011 Transportation Program (CTP) to study bridge replacement alternatives. The study was initiated in November, 2004; options to be considered include rehabilitating the existing structure or constructing a new bridge.

A vital part of the Route 50 access to Ocean City is the Chesapeake Bay Bridge. In 2004 a number of structural problems with bridge components have required repairs prompting periodic congestion. Improvements and repairs are currently underway. 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. Substantial development along Route 50 in Worcester County west of Ocean City has also caused increased congestion in recent years. 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.

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

Figure 4-1



Source: Maryland Department of Transportation, State Highway Administration, Traffic Volume Map, Revised 5-21-2004

18,475. 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 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, but at this time no funding is available nor anticipated. The City should continue pursuing this project because of its many advantages: reducing traffic on Route 90 and enhancing its safety; creating another entrance into Ocean City, thus reducing traffic congestion at the existing entrances; and providing an additional hurricane evacuation route.

Town of Ocean City and Connecting Routes

A project for MD Route 90 (Ocean City Expressway), from U.S. Route 50 to MD Route 528 in Ocean City is currently included in SHA's Highway Needs Inventory (HNI) for reconstruction as an access-controlled, divided highway. Inclusion in the H.N.I. is a recognition of need, not a commitment to fund a project. The SHA have worked with Worcester County to develop an access control concept along U.S. route 50 from Herring Creek to MD Route 346 in Berlin. 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. Feeder roads link it to the shore points of Delaware and Maryland.
In conjunction with Route 13, Route 113 to the north links Ocean City to Pennsylvania and the other Middle Atlantic States. To the south, it links Delmarva with Virginia and points south.

Like Route 90, Route 113 has experienced many serious accidents over the past several years and safety improvements are needed. In order to handle the present and future traffic volumes safety, the existing two lane sections of Route 113 are currently being widened to four lanes. U.S. 113 is classified as a "Rural Other Principal Arterial" highway from U.S. route 13 to Germantown road in Berlin; an "Urban Freeway Expressway" from Germantown Road to U.S. Route 50 and a "Rural Other Principal Arterial" highway from U.S. Route 50 to the Delaware State Line. U.S. Route 13 is functionally classified as "Rural Other Principal Arterial."

The State Highway Administration has included a project in the FY 2005-2010 CTP to upgrade the existing 2-lane highway to a 4-lane divided highway from U.S. route 13 Business, in Snow Hill, to south of Berlin (16.3 miles). The project has been broken into four phases. Phase I, from Market Street to Public Landing road, is currently funded for construction, which is underway. A future interchange study for the intersection of MD Rt. 12/U.S. Rt. 113 is also being completed. Design is underway for: Phase II, from Hayes Landing Road to North of Massey Branch (4.3 miles); Phase III, from north of Massey Branch to Five Mile Branch Road (4.0 miles); and Phase IV, from Five Mile Branch Road to north of Public Landing Road.

Construction of each phase will be accomplished as funding becomes available.

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 daytrippers and boardwalk-oriented traffic, downtown employees, and the limited off-street parking provided by early development 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 which are located throughout the Town.

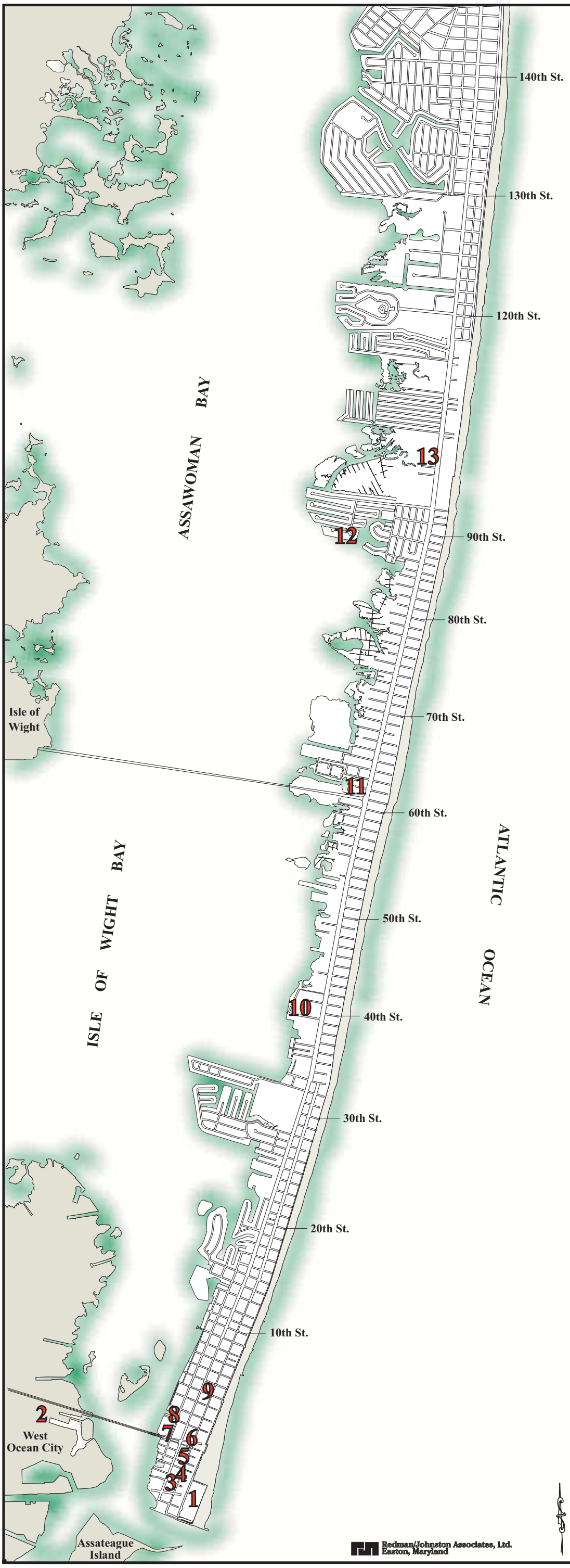
Table 4-2
Public Parking Facilities, Town of Ocean City, Maryland

Location	Number of Parking Spaces
Inlet parking lot	1,206 spaces
Worcester Street lot	170
Somerset Street lot	29
Dorchester Street lot	25
North Division Street lot	42
1st Street and St. Louis lot	30
2nd Street and St. Louis lot	22
St. Louis Avenue and bridge	5
4th Street and Baltimore Ave. lot	56
61st Street bayside lot	28
Rusty Anchor Road lot	9
Convention Center lot	1,021
100th Street lot	285
West Ocean City Park and Ride	704
Total public parking spaces	**3,632**

Source: Ocean City Department of Planning and Community Development

Recent 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

COMPREHENSIVE PLAN
Town of Ocean City, Maryland



LEGEND

1. Hugh T. Cropper Inlet Parking Lot
2. West Ocean City Park n' Ride
3. Worcester St. between Baltimore Ave. and Philadelphia Ave. (metered)
4. Somerset St. & Baltimore Ave. (metered)
5. Dorchester St. & Baltimore Ave. (metered)
6. N. Division St. & Baltimore Ave. (metered)
7. N. Division St. & St. Louis (metered)
8. 1st St. & St. Louis Ave. (metered)
9. 4th St. & Baltimore Ave. (metered)
10. Convention Center
11. 61st St. & Coastal Hwy bayside (metered)
12. Rusty Anchor Road
13. 100th Street Parking Lot

Redman/Johnston Associates, Ltd.
Easton, Maryland

Map 4-1
Public Parking Facilities

Version 2/7/05

become stuck in traffic seeking access to parking and constrain traffic flow. Advance notification to drivers indicating the lot is full or has only a limited number of spaces could improve this condition.

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.

Public Transportation

Investment 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. From a total of 58 vehicles in 1996, the continually expanding bus fleet in 2005 will include 67 vehicles. The fleet includes 48 forty foot Thomas buses, 8 35-foot buses, 8 new rubber tired trolleys scheduled to be online in late 2005, and 3 para-transit vans. The bus system operates year-round, twenty four hours per day. 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, service is continual.

In 1991, the fare system changed from 75 cents per ride to a $1.00 all day fare. As shown in Table 4-3, ridership more than doubled in the first year (from 1.1million to 2.8 million annually), and with some exceptions continued to increase each year through 2001. The current (2005) all day fare of $2.00 was instituted in 2002 and has not appeared to deter ridership.

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. Recent evaluation of the Downtown Area Transportation system indicates that current Tram operations 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.

Table 4-3

Annual Bus Ridership, Ocean City Transit System, 1990 through 2005

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
January	10,846	10,849	20,118	23,170	21,272	23,401	21,259	24,737	28,773	29,003	27,600	31,166	34,332	26,726	28,500	31,900
February	11,205	11,163	19,725	14,262	22,761	22,946	22,855	27,857	28,300	31,095	28,823	32,613	33,183	26,251	29,881	32,310
March	15,053	17,038	28,272	23,457	31,967	35,516	34,693	40,638	43,165	44,210	37,489	43,856	50,509	41,056	41,148	44,075
April	18,433	21,128	46,159	41,466	50,350	52,203	47,410	44,735	65,417	58,014	49,729	61,595	64,316	49,021	54,457	57,091
May	66,249	150,680	180,148	222,514	256,604	267,283	233,868	224,448	237,822	245,725	248,716	258,422	327,777	255,221	318,923	256,353
June	280,829	595,361	673,056	707,372	813,168	813,392	769,372	830,815	808,815	850,430	893,797	884,551	884,359	742,971	816,074	772,224
July	329,551	719,571	748,667	849,823	904,735	953,300	850,218	902,922	971,648	1,088,689	986,806	1,019,838	892,163	804,858	856,793	850,995
August	317,785	708,415	693,362	797,594	825,758	819,949	790,771	847,160	823,493	801,933	874,146	916,398	750,956	728,559	684,292	758,991
September	93,864	228,270	335,723	326,375	289,549	394,116	255,236	258,125	337,967	303,287	320,798	399,886	352,324	260,368	374,381	420,943
October	23,120	41,379	48,389	55,442	51,493	49.093	47,740	55,033	69,123	72,093	88,875	98,035	78,340	75,296	91,110	96,844
November	14,857	24,379	28,524	29,354	31,009	31,798	31,753	31,796	35,680	37,004	46,798	48,908	34,583	36,098	37,411	44,579
December	12,084	19,208	19,208	24,794	27,638	27,161	27,718	29,831	33,885	39,624	36,525	44,486	30,581	29,968	37,951	30,416
Total:	**1,193,876**	**2,805,351**	**2,805,351**	**3,115,623**	**3,326,304**	**3,400,158**	**3,132,893**	**3,318,097**	**3,484,088**	**3,601,107**	**3,640,102**	**3,839,754**	**3,533,423**	**3,076,393**	**3,370,921**	**3,396,721**

Source: Ocean City Transportation Department, 2005

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. 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 being prepared by Kimley-Horn and Associates, Inc. as well as recommendations based on discussion with Transportation Department staff in 2005. These 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 1996 study, 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 (3l%).
- 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 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.

Funding

- As the Ocean City transit system has grown, federal and state funding has remained stable. As a result, Ocean City contributes a larger share of the operating cost of its 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 funding that an urban system would receive. Ocean City should attempt to have this classification changed to reflect the true nature of the system.

- Convention Center provision of "free transportation" as a marketing device results in a net loss in transit system revenue derived from ridership. While this marketing device may be beneficial to the overall economy of the Town and businesses, some record of non-paying ridership attributable to convention trade or other promotions should be kept to provide a clearer picture of the cost to the community and to improve accountability.

Bus Operations

- The attractiveness of bus service to riders is significantly reduced by very crowded conditions, slow service due to frequent stops, long waits due to irregular spacing between buses, and competition with vehicles on the road. Conditions have improved in recent years with greater bus system capacity, but many of these issues remain a consideration in planning future service improvements.

- There is a continuing need to decrease reliance on vehicles 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 could improve this condition.

- 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.

- Within the downtown area there are difficulties in maintaining consistent headways and providing adequate bus system capacity. The Town should explore demand-based bus dispatching versus headway dispatching in this area during peak use periods, as well as turn-back operations for Coastal Highway at 60th Street.

- Recent study by Kimley-Horn indicates there is some difficulty getting buses out of the South Division Transit Station onto Baltimore Avenue and for buses, southbound on Philadelphia turning left into the transit station. Trimming back the median on south Division to accommodate a larger turning radius is recommended to solve the latter problem. Coordination with the State Highway Administration is suggested to have vehicle detectors checked for proper operation to improve bus movement from the Station to Baltimore Avenue.

- 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.

- Eliminating the practice of bringing buses into the public works compound at 64th Street while still in revenue service to make driver reliefs was recommended in the study conducted by Craine and Associates in 1996. Action has since been taken to implement this recommendation and discontinue this practice.

- Given the seasonal demands posed by the transit system the Town will need to continue to enhance driver recruitment efforts to ensure a reliable work force during the summer months.

Maintenance

- Maintenance is performed by permanent employees of the Town fleet service center. The Town has taken a number of steps in recent years to address past deficiencies at the maintenance center. The maintenance center was expanded in 1998 to add additional maintenance bays and to add an automatic bus washer.

- As was recommended in the 1996 Craine study, the appearance of the bus fleet would benefit from an investment in a strong eye-catching paint scheme or theme for the buses which would promote ridership and add to the Town's overall image. The current use of "wrap advertising" is unsightly and should be re-considered. Although it is expected to generate $123,000 in advertising in 2006 it costs the Town some $20,000 or more in damages to buses each year. Wrap advertising is reducing window visibility for passengers and creates security problems since visibility into and out of the bus is

limited. Moreover, display ads create user confusion since they are misinterpreted by prospective passengers as bus destinations.

- As the Town proceeds with the planned replacement of the fleet with newer buses, it should protect its investment by improving its comprehensive maintenance record keeping system.

Service Extensions and Coordination with Other Systems

- Possible service extensions to the west in 1996 were considered at which time it was determined such extensions would probably have poor patronage and would require a substantial subsidy from the Town. As development continues to occur in West Ocean City, opportunities for such service extension should be re-evaluated. A growing number of commercial services and retailers in West Ocean City suggests the need and demand for linking residents to these shopping opportunities may be in the offing. The location of the West Ocean City Park and Ride in 2002 and recent system service to the nearby factory outlet stores has already demonstrated an increase in ridership.

- 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 is currently being designed 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 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.

- As development continues to occur in West Ocean City, opportunities for transit service extension should be evaluated.

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. These past studies should continue to provide the basis for future improvements to accommodate bike movement.

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. Finally recommendations include installation of a shared bike and pedestrian path on the west side of St. Louis Avenue, 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.

Pedestrian Movement

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.

Key pedestrian improvements can improve the environment and enhance the Town.

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 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 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

Boat traffic, like automobile traffic, peaks during the summer. In season, the bays and open ocean provide recreational opportunities for pleasure boating and sportfishing enthusiasts. Commercial shipping is limited to local and some transient fisherman and their catch. 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.

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.

Airport

The Ocean City Municipal Airport is located on Route 611 about 5 miles from downtown. It began operation in 1958 after the initial land acquisition and the construction of a 2,300 foot turf-aggregate runway.

A master plan for the airport was completed in 1979 and updated in 2002. Many improvements have been made since 1977, resulting in a facility that is a valuable part of the area's transportation system.

The Ocean City Airport offers the following services:

- Fuel sales (11OLL and Jet A)
- Major and minor power plant repair
- Major and minor airframe repair
- Flight and sky-diving instruction
- Community and T-hangers
- Paved tie-downs
- Bus transportation available in summer
- Rental cars

Aircraft activity (2004):

Based aircraft

Single engine	37
Multi-engine	7
Ultra-lights	1
	45

Annual aircraft activity (2004):

Local	7,400
Itinerant	29,000
Military	600
	37,000

Economic Impact (2002):

Jobs	27
Personal Income	$1,081,000
Revenue	$1,983,000
Taxes	$201,000
Local Purchases	$189,000

Source: MD Aviation Admin. Study 2003

Runways: Primary 14/32 4,070 feet
Crosswind 02/20 3,200 feet

Navigational Aids:

Visual Approach Slope Indicator-(VASI) runway 14/32
Weather Reporting – Automated Weather Reporting System (NOAA)
Non-Precision Instrument Approach Procedures available

Localizer to runway 14
GPS to runways 14 and 02
Very high frequency omni-range (VOR) to all runways

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.

The Ocean City Airport is a non-towered field; airport personnel are issuing advisories over the Unicom. These advisories consist of wind speed and direction, altimeter settings and the "recommended" runway. The pilot in command is responsible for the safe operation of his/her aircraft.

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 are scheduled to be built in 2005-2006 and will house between twenty and thirty additional aircraft.

Flight service information can be obtained from Leesburg or Pautuxent River as well as weather briefs from the National Weather Service. Runway lights are controlled by the pilot from the aircraft.

The most recent (2002) update of the Airport Master Plan suggests several improvements that are needed at the airport, including:

- Acquisition of clear zone and obstruction easements
- Installation of several safety enhancements
- Extension of Runway 14/32 by 500 feet
- Construction of T-hangers
- Construction and improvement of taxiways

The airport can be a valuable alternative to the automobile for many vacationers. As airplane ownership grows, 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 expansion of the Convention Center in 1996 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 bulk of transit occurs on land. Pleasure and sport-fishing boats ply the bays and open ocean along with commercial fishing at sea. The airport provides rapid access for visitors from the Middle Atlantic States. Like much of the town's other infrastructure the transportation system is strongly influenced by Ocean City's long and narrow shape.

The thoroughfare system carries its seasonal burden adequately most of the time. However, at peak periods it is stretched to the limit. Future improvements will be needed to keep pace with any increase in the seasonal population and 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:

Highways and Street Systems

- Continue to work with the State Highway Administration to improve the efficiency and safety of Route 90, including the Route 90/Coastal Highway interchange.
- Reduce the quantity and improve the quality of stormwater runoff.
- Provide a third access to the island at the north end of town.
- Keep the remaining alley system open, and improve alleys to be more pedestrian and bicycle friendly.
- Minimize curb cuts on Coastal Highway to maintain capacity.
- Continue to monitor the structural integrity of the Kelly and Route 90 Bridges to ensure their safety and serviceability.
- Continue to cooperate with the state to improve the safety and capacity of Coastal Highway.
- Continue to implement the street system improvements identified in the capital improvement plan for improvement of 75 miles of town streets.

Parking

- Provide additional public parking in the downtown area in the form of a parking garage or decks. If feasible, incorporate retail stores at the ground level of the garage to enhance commercial activities downtown. The architectural design of the garage should be attractive and compatible with the old town atmosphere and should be constructed in a manner that reinforces or enhances the downtown streetscape.

- Continue to provide public parking lots where needed throughout the town.

- Monitor off-street parking requirements in the zoning code to ensure consistency with demand.

- 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.

- Require compact car only parking at corners in need of greater sight distance.

- 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).

Transit/Bus System

- Provide more widespread dissemination of transit routing, schedule, and fare information at visitor centers, in visitor guidebooks, through motels and hotels, and other means.

- Explore demand-based bus dispatching versus headway dispatching in the downtown area to improve service during peak use periods, as well as turn-back operations for Coastal Highway at a mid-town location.

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

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

- Install an Automated Vehicle Locator (AVL) system to permit monitoring and adjustments to intervals between buses along the length of Coastal Highway.

- Until the implementation of the bus Automated Vehicle Locator system is completed, the town should continue to improve street supervision and dispatcher control over bus

operations and intervals between buses.

- The benefits of an additional Park and 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.

- 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.

Pedestrian and Bike Movement

- Develop recreational and destination bike routes minimizing the use of Coastal Highway. Explore the development of oceanfront bike paths in appropriate areas.

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

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

- Shorten pedestrian signal cycle lengths, install additional pedestrian signal heads and additional pedestrian pushbuttons in key locations identified by Kimley Horn in the 2005 Downtown Area Transportation Study.

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

- Provide several one-way pair street segments to accommodate vehicle circulation while narrowing pavement widths. This permits wider sidewalks and assures vehicular traffic is less dominant in the Downtown area.

- 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. Establish additional pedestrian-only streets wherever possible.

- 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.

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

- Explore the establishment of a Citizen Transit Commission to assist the Town with the operation of the public transportation.

Waterways

- Continue to conduct channel maintenance dredging. Study the possibility of using channel dredge spoil for beach replenishment.

- Encourage retaining commercial harbor in West Ocean City to continue to the A.C.E. maintenance of the inlet.

- Continue to improve channel markings to improve navigation

- Explore opportunities to increase the availability of and access to marina facilities and boat launching facilities. Encourage the provision of private marina facilities and examine potential sites for public marinas.

- 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.

- 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.

- Augment boat access under the Kelley 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.

Airport

- Continue to improve the safety aspects of the airport.
- Extend and improve the runways for use by critical aircraft.
- Increase hangar capacity to meet demand.
- Improve taxiways.
- Work with Worcester County to ensure compatible land uses in the vicinity of the airport.
- Improve navigational aides to include G.P.S., lighting, and signage to improve the safety and utility of airport.
- Support scheduled commuter services to the airport.

Chapter 5: Community Facilities & Public Services

Ocean City's public services and utilities are of vital importance to the continued health, safety and well being of present and future Town residents and visitors alike. The provision of water supplies, wastewater treatment facilities, solid waste disposal services, libraries, parks and recreation areas as well as police, fire and medical services and facilities are essential to the health of the community. Expansion of certain basic economic activities can be more readily accomplished provided that public and private utility and services systems are adequate for the existing and projected Town population. Adequate maintenance and expansion of such facilities is therefore necessary to the physical, economic and social well being of the Town. Therefore, the major goal of the Town is:

Goal:

To provide for the continued maintenance and expansion of community facilities and 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.

- Adequate services will be provided to meet the needs of year-round residents and visitors.
- City-wide water, sewer, and solid waste systems will be expanded and improved when necessary to provide cost efficient service for planned growth.
- Public safety services will ensure the health and safety of residents and vacationers.
- Sufficient park, boat launch, and other sport facilities will be provided to meet the needs of year-round residents and vacationers.
- A variety of recreational outlets will be provided to meet the needs of all age groups.
- Ocean City will cooperate with the school district to provide high quality education that is able to prepare students for a rewarding and productive future.
- Ocean City will cooperate with Worcester County to maintain and enhance the library

system, including the construction of a new library at 100th Street.

- Sufficient resources will be allocated to plan for and implement necessary emergency management measures.
- Ocean City will cooperate with state and county officials to ensure a complete range of social and human services.
- Developer-constructed infrastructure will be constructed to appropriate City standards.
- Adequate performance bonds will be required from developers as needed.

Water System

The following section provides an overview of present conditions and current plans regarding 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 and Supply

Table 5-1 identifies water supplies pumped monthly to serve the Town for the years 1999 through 2005.

Table 5-1:
Ocean City Water Department Monthly Pumpages 1999 - 2005

Month	2005	2004	2003	2002	2001	2000	1999
January	70.34	82.29	64.18	70.96	73.81	98.11	59.93
February	62.02	72.56	63.68	70.47	68.77	88.58	59.12
March	73.03	74.41	79.25	87.95	82.33	104.08	83.18
April	84.09	88.16	91.85	112.81	97.93	118.90	99.83
May	131.94	156.46	143.24	164.21	151.24	174.99	163.61
June	219.23	222.49	220.33	255.98	238.83	244.17	252.80
July	305.75	311.73	305.72	343.77	333.17	338.48	356.62
August	308.76	298.74	313.64	336.29	327.46	324.99	321.44
September	191.31	181.26	165.42	187.38	195.54	189.76	186.74
October	108.16	105.03	113.60	113.47	122.37	124.62	123.93
November	80.94	68.60	84.49	83.14	87.45	89.94	99.41
December		65.92	72.39	72.76	75.58	78.06	85.96
Totals	**1,635.57**	**1,727.65**	**1,717.79**	**1,899.19**	**1,854.48**	**1,974.68**	**1,892.57**

Source: Town of Ocean City Water Department

Figures shown reflect the seasonal variability of demand for water supplies. Through the five year period shown, annual pumpage has ranged from just over 1.7 billion gallons to 1.97 billion

gallons.

The reduced level of consumption over recent years likely reflects use of more efficient fixtures in new construction and redevelopment in recent years and a growing use of water conservation measures.

Evaluation of the Town's water demand and supply was conducted in 1997 and has been updated concurrent with this Comprehensive Plan update. Much of the description of the water supply system which follows is extracted from the "Comprehensive Water Supply Study--1997 Update", prepared by Whitman, Requardt and Associates, consulting engineers. This study should be consulted for more detail.

The Ocean City water system must have adequate capacity to serve the peak seasonal population. The 1997 Water Supply Study based its projections for future demand for water on the projected seasonal peak weekend population of 277,499 residents and visitors contained in the Ocean City Comprehensive Plan (1997).

The maximum per day per capita demand for water in 1997 was approximately 60 gallons per day based on review of historical data and an anticipated 3 percent increase in future consumption due to a greater number of plumbing fixtures in modern units and the requirements established in the Town's Landscaping Ordinance which applies to all new construction. The corresponding maximum day system demand at build out was projected in 1997 to be 16.6 million gallons per day (MGD). Hence, 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 indicates that adding allowance for additional development at year 2005 may place demand in the year 2020 somewhat higher at 17.12 MGD

The projected year 2020 demand of 17.12 mgd is currently planned to be distributed along the length of Ocean City corresponding to the distribution of existing housing units and hotel/motel units by census tracts in the Town combined with anticipated demand in key areas identified in 1997 where redevelopment could be expected due to the construction of new hotels and renovation of older hotels/motels. Table 5-2 illustrates the distribution of demand for water supply by census tracts for the 1994 maximum day demand of 14.41 MGD as well as the projected year 2020 maximum day demand of 17.12 MGD.

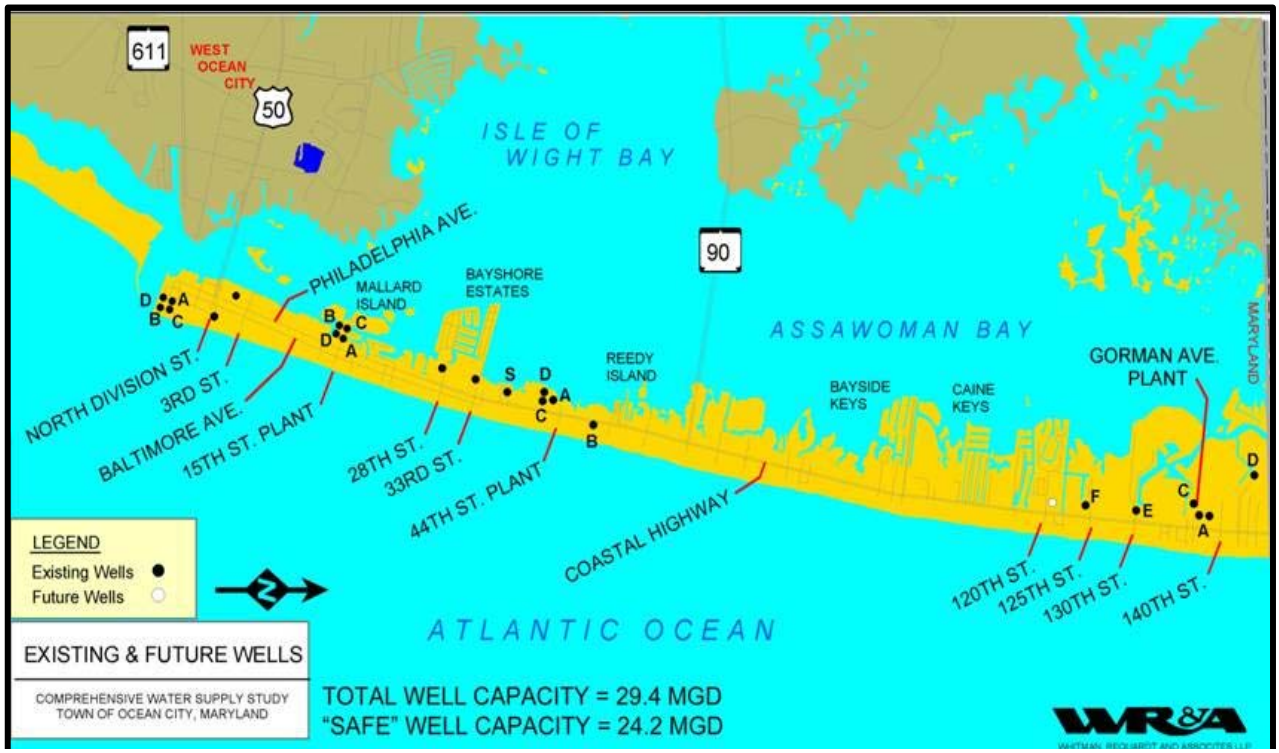
The existing water supply is provided by a total of 23 production wells. These include 14 wells in the Ocean City Aquifer and 9 wells in the Manokin Aquifer.

Table 5-2
Projected distribution of Maximum Day Demand for Water Supply By Census Tract
Town of Ocean City Maryland

Census Tract	Year 1994 14.41 MGD	Year 2020 16.6 MGD (60 gpcd)	Added year 2020 Demand (MGD)
9901	0.75	0.81	0.06
9902	1.53	1.68	0.15
9903	0.88	0.96	0.08
9904	1.56	1.70	0.14
9905	0.55	0.59	0.04
9906	1.19	1.31	0.12
9907	1.70	2.22	0.52
9908	1.95	2.35	0.40
9909	0.52	0.56	0.04
9910	0.82	0.98	0.16
9911	1.14	1.35	0.21
9912	0.75	0.92	0.17
9923	1.07	1.17	0.10
Yet to be distributed		0.52	0.52
Total	**14.41**	**17.12**	**2.71**

Source: Comprehensive Water Supply Study, 1997, Town of Ocean City, Maryland by Whitman Requardt Associates and 2004 information provided Whitman Requardt as part of ongoing study update.

Figure 5-1: Town of Ocean City: Existing and Future Wells



Source: Whitman/Requardt & Associates, 2004

The water supply sources are illustrated in Figure 5-1. It shows the location of the 23 production wells currently in operation; 13 in the Ocean City aquifer and 9 in the Manokin aquifer. Two of these wells have been constructed since 1997. The 1997 Water Supply Study called for 4 additional wells over the next 25 years.

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.

An analysis of water system demand and supply is currently being updated by Whitman Requardt & Associates. Since the forthcoming update of the Towns water supply study will be based on recommendations contained in this 2005 Comprehensive Plan, information concerning current plans and water supply requirements may change as part of the systems re-evaluation.

Water Treatment

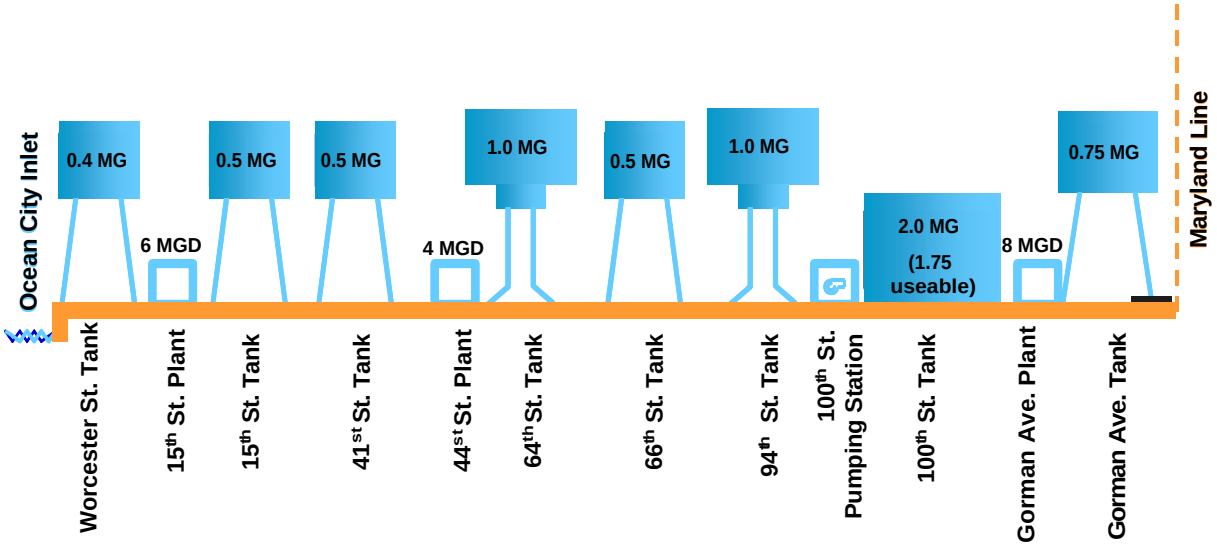
Water treatment plant at 15th Street

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. It has a treatment capacity of 6 mgd. The plant at 44th Street has a 4 mgd capacity, and the Gorman Avenue plant has a capacity of 8 mgd. The total treatment capacity of 18 mgd is adequate to meet the maximum day capacity. The 44th Street plant was upgraded in 2000/2001 and the Gorman Avenue plant is scheduled for upgrade in FY2020.

Water Storage

The water 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. The estimated maximum day demand at build out of 18.1 mgd is projected to occur in the year 2015. The newest elevated storage tank, constructed at 66th street has 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 2005 water system plan update. The location and capacity of both existing water

Figure 5-2: Water Distribution System



Source: Whitman/Requardt & Associates, 2004

storage and treatment facilities are shown in Figure 5-2

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 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. 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", prepared by Whitman, Requardt and Associates, 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. 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 salt water intrusion could be contained at the coastline indefinitely.

Water System Improvement Needs

The "Comprehensive Water Supply Study--1997 Update", prepared by Whitman, Requardt and Associates, 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.

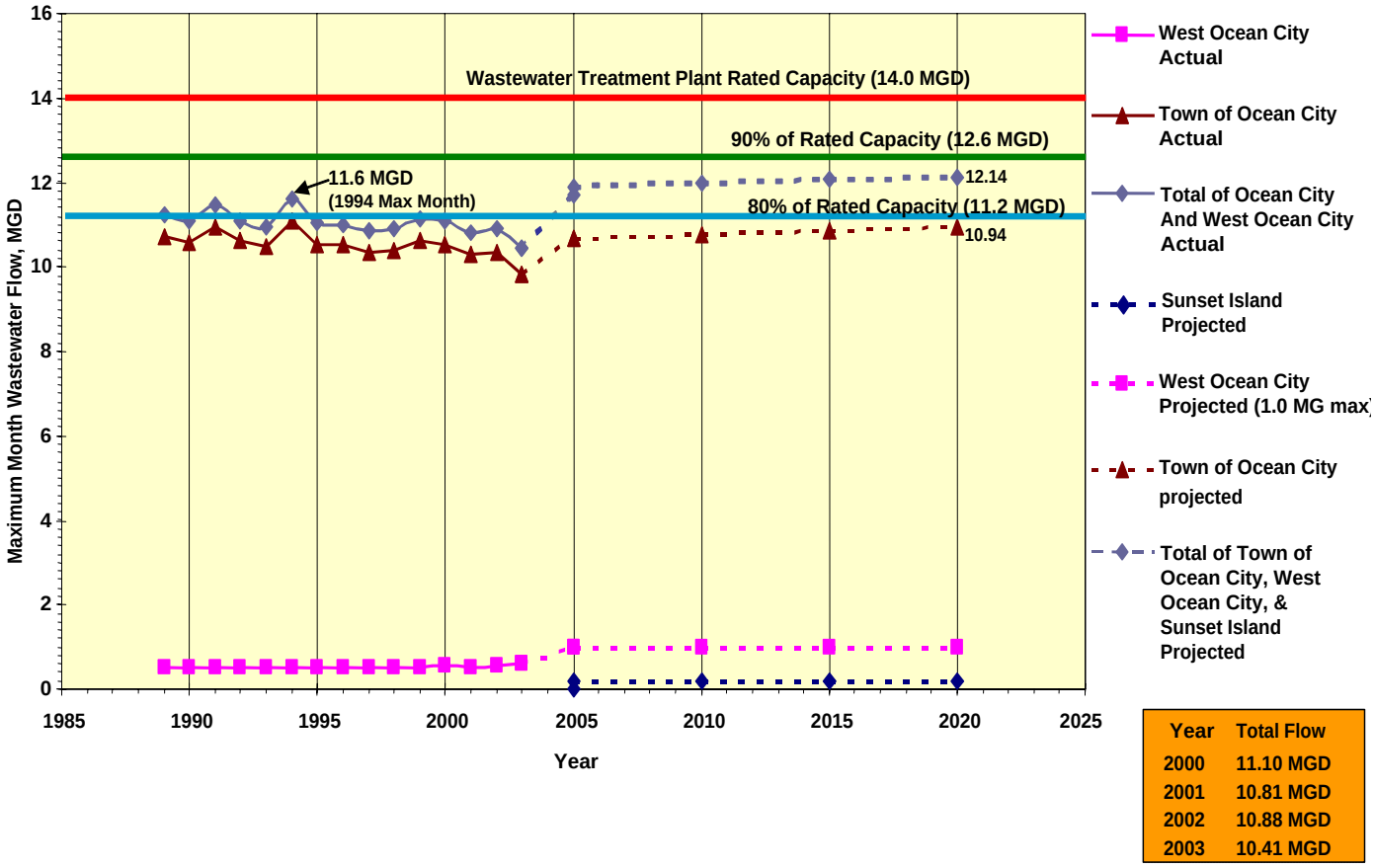
Wastewater Treatment

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 1992, and 1998.

The plant's Wastewater treatment design capacity is currently 14 million gallons per day (gpd). Additional sludge handling capabilities constructed in 1998 increased the capacity from 12 to 14 mgd.

Figure 5:3 shows the actual maximum month wastewater flows for the period from 1990 through 2003 and provides projections for maximum month flows to the year 2020.

Figure 5-3: Town of Ocean City Maximum Month Wastewater Flows



Year	Total Flow
2000	11.10 MGD
2001	10.81 MGD
2002	10.88 MGD
2003	10.41 MGD

Source: Whitman/Requardt & Associates, 2004

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.

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.

Wastewater Treatment Plant Facilities at 64th Street

Storm Water Management/Flooding

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.

Use of sheet flow on the ocean block results in regular and severe flooding of Coastal Highway. It is not uncommon for the eight lane road to be reduced to two slow moving lanes during storms.

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 should be used to the extent possible to attenuate stormwater flows, reduce sedimentation and improve the overall quality of stormwater discharges. Catch basins are on the median and contribute to the flooding problem. Additional stormwater management/flooding issues include:

- All streets do not have sediment basins
- Flooding is impacted by the tides
- Flooding occurs from just tidal events
- Storm drain system must have a maintenance program

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.
- Development of retrofit program for existing stormwater infrastructure.
- Reduction in volumes of stormwater generated through on-site controls.
- 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.
- Quality control for new or redevelopment east of coastal Highway and north of 33rd Street with maintenance.

Solid Waste Management and Recycling

The Town 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.

The Town has operated the 65th Street Recycling Center since 1991. Recycling containers are made available on request for curbside residential pick-up at scheduled times in eight locations currently including Montego Bay, Caine Woods, Caine Keys, 94th Street, Little Salisbury, 28th street, Mallard Island and downtown.

Recycling drop-off stations are also currently provided in a number of locations including:

- Worcester Street Municipal Lot (under the water tower)
- 2nd street Trailways Bus Terminal
- 28th street bayside,
- the Convention Center satellite parking lot at 39th street,
- 66th street (under the water tower)
- 94th street parking lot (southwest side)
- 130th street (behind Montego Bay Shopping Center), and
- 137th street next to the water plant.

A new pilot program for Condo-side recycling has also recently been initiated.

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.

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

- 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 structure 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.

- Dorchester Beach Volleyball Park: Located just off the boardwalk between Dorchester and Talbot Streets this facility provides 10 public courts for summer use.

- 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, landscaping, and playground facilities.

- 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.

- 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's Departments 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.

- 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.

- 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.

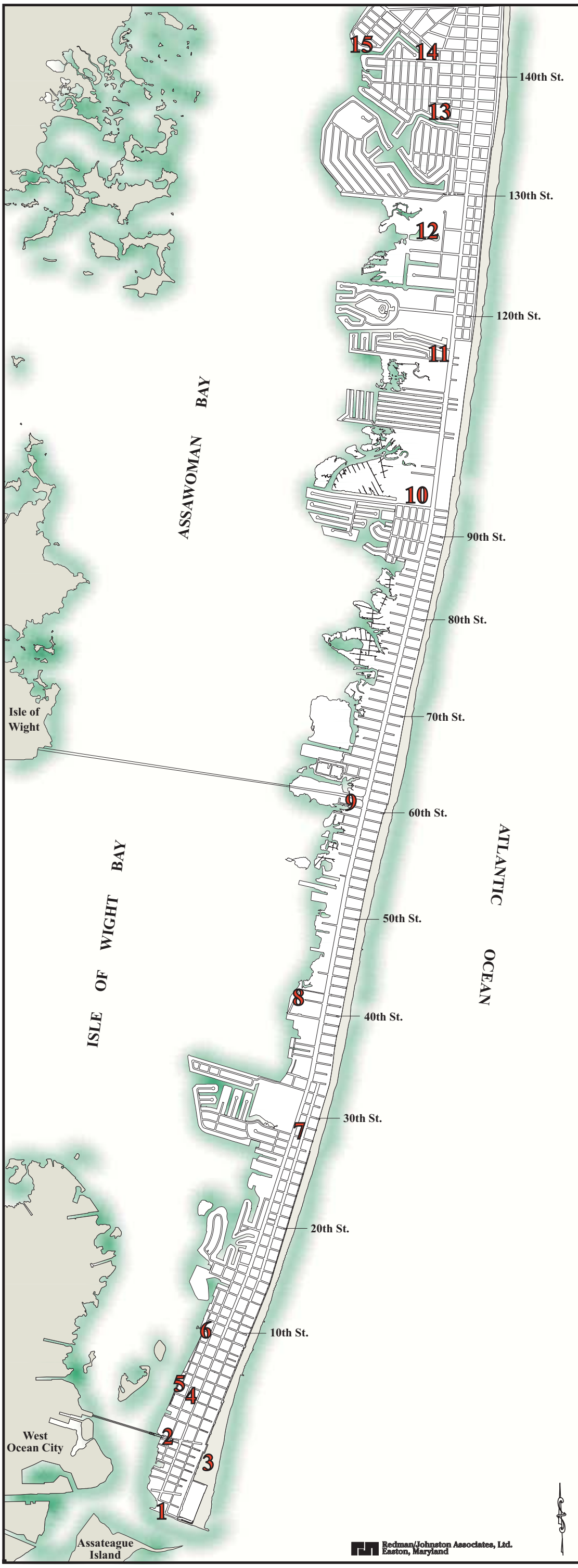
All told, these many and varied park facilities are located on approximately 80 acres of public lands dedicated to park and recreation use.

The location and distribution of these park facilities is shown on Map 5-1. Generally speaking they are well distributed throughout the community.

Because of the unique nature of Ocean City, with a smaller year-round population as well as a much larger seasonal population, guidelines typically used to assess the adequacy of existing park land and facilities to serve community population needs cannot be strictly applied. Maryland guidelines for the provision of park and open space lands are 30 acres per 1,000 residents. Although a strict application of these State guidelines indicates a shortfall in available land and recreational improvements, this is, in part, due to a large percentage of the seasonal population that increases seasonal demand for recreation improvements. It should be noted that the beach, ocean and bays as well as a number of privately owned recreational areas, provide recreational opportunities that are not counted in this inventory. Facilities are, however, nearly adequate to support the needs of the year-round population. For these reasons, any shortfall of recreational land and improvements evident in the inventory is not as extreme as it may appear.

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 should remain a planning objective and existing parks should not be converted to non-recreational uses.

COMPREHENSIVE PLAN
Town of Ocean City, Maryland



LEGEND

1 Inlet Park
2 Entry Park
3 Dorchester Beach Volleyball Park
4 Third Street Park
5 Fourth Street/Chicago Avenue Park
6 Ninth Street Fishing Pier
7 Robin Park (Sunset Park)
8 Convention Center Park
9 Ocean City Tennis Center/Leisure Park
10 Little Salisbury Park
11 Jamestown Park
12 Northside Park
13 Gorman Park
14 Fiesta Park
15 North Surf Park

Map 5-1
Park and Recreation Facilities

Redman/Johnston Associates, Ltd.
Easton, Maryland

Version 2/7/05

Several potential additions to recreational facilities present opportunities for increasing and diversifying Ocean City's recreational offering. Golfing has become a major draw for the area with construction of a number of new courses over the past 15 years. Construction of several quality courses in the area, including the city owned and operated Eagle's Landing Golf Course, and aggressive marketing have transformed the Ocean City area into a regional golf destination. These facilities have also contributed substantially to increased shoulder season visitation and spending in the community. The continued growth of golf in the area should be encouraged.

Ocean City is a water-oriented community. Unfortunately, when cold weather arrives there is no indoor swimming facility available to the general public. An indoor facility in or near Ocean City should be developed to meet this need.

Recommended improvements to the recreational opportunities in Ocean City include:

- Continued improvements to Northside Park such as rest rooms, nature walks, athletic fields, basketball courts, and event venues.
- Expansion of the Beach Patrol facilities.
- Development of Sunset Park in the Downtown.
- Additional playgrounds to serve local neighborhoods and replacement of older existing equipment.
- Development of recreation amenities on the beachfront or bayside.
- Construction of an additional indoor recreational facility for soccer, lacrosse, tennis, etc.
- Re-design and reconstruction of the skate park downtown.
- Additional biking/hiking/jogging trails that permit user interaction with natural wetland environments that can be used to augment fishing/crabbing opportunities or to develop natural environmental interpretive facilities to increase appreciation of the region's environmental resources.
- Plant native trees and plants in parks – especially, cedars and berry-producing trees for migratory birds.
- Ocean City would benefit from having a passive recreation park geared toward our wildlife.

Other Public Services

The Town of Ocean City government provides a full array of public 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.

Public services are described below. More detail on each is available in specific departmental plans, mission statements, and budgets.

Ocean City Police Department

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.

The OCPD is located in the state-of-the-art Public Safety Building on 65th Street. Also located in the Public Safety Building are the Communications Center, the Emergency Medical Services, and Emergency Management.

Staffing of the Department varies with the season. The full-time, year-round force includes 98 full-time sworn officers and 20 civilian personnel. During the visitor season, approximately 120 seasonal police officers and fifty non-sworn members of the department augment the core year-round staff. These figures include public safety aides, who are responsible for processing and transporting prisoners, enforcing parking laws, directing traffic and generally assisting visitors.

In 1996 the OCPD received 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.

Table 5-3 provides a profile of the serious crimes experienced in Ocean City as identified in the OCPD's "Uniform Crime Report" for 1996 as well as the more recent three year period (2001 through 2003).

Overall, Ocean City experienced a 3.39% increase in serious crime from 2002 to 2003. For the same period crimes against persons decreased by 12.14% while crimes against property increased by 7.31% in 2003.

TABLE 5-3 Serious Crime Town of Ocean City, Maryland						
Category/type	**1996**	**2001**	**2002**	**2003**	**2004**	**% Change 2003-2004**
Criminal Homicide	0	0	2	0	0	0
Forcible Rape	3	2	6	18	10	-44%
Robbery	18	17	58	40	30	-25%
Aggravated Assault	28	201	255	224	196	12%
Breaking/Entering	144	209	163	169	150	-11%
Larceny/Theft	829	990	1,055	1,136	1,048	-7%
Motor Vehicle Theft	29	53	53	59	48	-19%
Total Offenses	**1,051**	**1,472**	**1,592**	**1,646**	**1,482**	**-9%**
Source: Ocean City Police Department						

Community policing is at the core of the Department's commitment to provide quality police services and assistance to the community. Some noteworthy initiatives by the OCPD include:

- R.A.A.M. (Reducing the Availability of Alcohol to Minors), which is a community policing initiative addressing underage drinking and its related unacceptable behavior.
- R.A.D. (Rape aggression Defense) System, which is a program of realistic self-defense tactics and techniques for women with focus on awareness, prevention, risk reduction and risk avoidance.
- radKIDS, which provides children with skills to recognize, avoid, resist and, when necessary, escape physical violence and/or harm.
- Neighborhood Watch
- Citizen's Police Academy which enables citizens to learn more about the OCPD.
- Reserve Officer Unit. This unit, established in 1999, is trained to support the Police Department by providing volunteer services to supplement regular law enforcement

personnel. Reserve Officers are typically tasked with civilian and/or administrative functions and are also vested with the authority to issue parking and municipal citations. Members of the Reserve Unit have volunteered over 19,115 hours of service to the Town since 1999.

- Computer Aided Dispatch (CAD) and Mobile Data Terminals (MDT), which are be shared with the Volunteer Fire Department, Fire Marshal's Office, Communications and Management Information Systems.

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. 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 (Ocean City's Hazard Mitigation Plan has been approved by the Mayor and City Council. The Plan is under review by the Maryland Emergency Management Agency).
- Response: planned procedures and actions during the emergency.
- Recovery: post disaster rebuilding and re-establishment of keys services.

These functions are detailed in the Emergency Operations Plan. The plan covers hurricanes, storms, 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 third all-weather access in the northern end of Town would greatly improve the capacity to evacuate the island during an emergency. Delaware Route 54 is in a good location, but it floods easily. Improving this road may be the most cost-effective approach. Increased capacity for evacuation would decrease the lead time for the decision to evacuate.

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.
- Disaster planning should include wetland conservation and restoration.

Wireless Communication

During the past year (2004), the Town upgraded its existing frame-relay/ISDN network with a converged network that provides voice, data and video services over wireless connections. The phone and data network equipment was replaced with wireless equipment at 17 Ocean City local government sites, providing a private, consistent phone system with centralized phone directory and call accounting.

For a cost of $1.5 million, the new system provides enough bandwidth for a geographical information system, video and future projects such as an automatic vehicle locator system, and cost savings for general maintenance that can now be administered by Town staff. This system of design, equipment, and service was chosen to provide a solid means of communication that will enable optimal performance between all general administrative and public safety departments. In the future, the Town should monitor the approval and placement of new buildings that may potentially threaten the system.

Beach Patrol

The Beach Patrol provides emergency ocean rescue and beach safety services from the Inlet to the Delaware Line, from Memorial Day to late September. The seasonal staff of over 150 man stations distributed along the beach. These stations are located based on the intensity of beach use.

The most common occurrences requiring assistance are swimmers near rock groins and individuals caught in rip currents. Drownings or serious injuries are very rare. In addition to rescue work, guards are responsible for enforcing beach rules. These rules regulate alcohol, noise, ball playing, pets, and glass containers. Recent efforts to educate the public about beach and ocean dynamics have proven very popular.

While it is the policy of the Town to provide the highest quality beach safety services, it should

be recognized by those who bathe in the ocean that risk is associated with such activity. Individuals should take care to assess the surf conditions and their ability to deal with conditions.

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 27 part-time filed personnel. The full-time staff consists of 33 Nationally registered Paramedics/Firefighters and one 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. During the winter months the Dorchester Street station is not

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 2004, the Ocean City Volunteer Fire Department/EMS division responded to 5,056 calls, a 20% 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.

Fire Department

The Ocean City Volunteer Fire Company consists of 200 members and provides fire protection

to Ocean City and West Ocean City from 5 (five) stations. In addition to the volunteers, 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 2004, the OCVFC responded to 1,390 calls for service (fires, silent alarms, medic assist, and rescues).

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, 4) the extent of the town's fire safety/prevention programs.

Needs identified for OCVFC include:

- A training facility on the mainland.
- A computerized building data base identifying the configuration, construction characteristics, and location of power and gas shut-offs for all buildings in Ocean City.

Recommendations

- Continue with improvements to Northside Park including rest rooms, nature walks, athletic fields, basketball courts and event venues.
- Complete development of Sunset Park and assess potential to utilize site to support water taxi service functions.
- Re-design and re-construct Skate Park downtown.
- Establish additional biking/hiking/jogging trails that permit user interaction with natural wetland environments that can be used to augment fishing/crabbing opportunities or to develop natural environmental interpretive facilities to increase appreciation of the area's environmental resources.
- Construct an additional indoor recreational pool facility for soccer, lacrosse, or other activities.
- Develop additional playgrounds to serve local neighborhoods and replace older existing equipment where needed.
- Work with Worcester County toward construction of new library facilities.
- Support the Ocean City Volunteer Fire Company to develop a training facility in the West Ocean City Area.
- Continue dialog with the State Highway Administration regarding improvements to Coastal Highway.
- Dumpsters should be hidden from public view either by locating them away from public streets or by completely enclosing them on all four sides.
- Wireless communication technology should be pursued to make Ocean City a wireless community.

Chapter 6: Housing

Introduction

Ocean City has long been considered one of the Mid-Atlantic area's premier beach and resort communities. In recent years the Town has experienced an extraordinary amount of new development, in both number of units and value. In fiscal 2004, 1,245 permits were issued for new construction and alterations, with a total value of over $133 million, 27 percent higher than in 2003. Permits for new construction alone n 2004 had a value of over $125 million and included development on Sunset Island, a significant project consisting of 522 units valued at over $400 million. In fiscal 2003, the total value of permits issued for new construction and alterations was $105 million, 53% higher than in 2002.

The 2005 Worcester County Comprehensive Plan notes that lack of available land is constraining new development in Ocean City, and the number of older properties being redeveloped as residential properties is subsequently on the rise. This is evident in the number of out-dated buildings that are being replaced by modern, upscale residential units. The National Association of Realtors (NAR) also notes that residential real estate is now more valuable in Ocean City than commercial real estate, with some commercial properties being torn down and replaced by condominiums. Luxury condominium projects totaling 552 units have been approved for construction in fiscal 2004-2005.

The recent boom in construction is being fueled by investors from nearby metropolitan areas, such as Baltimore, New York City, Philadelphia, and Washington, D.C., who build and occupy vacation homes during the off-season and rent them out during the summer. Ocean City is within a two- to three-hour drive from one-third of the country's population; the permanent population of Worcester County is around 43,000, less than 10,000 of which live in Ocean City. But during the summer season, the county's population peaks at between 300,000 and 350,000. Even the off-season is popular, with the population swelling to around 150,000 on weekends.

In 2003, Worcester County (which includes Ocean City, Berlin, and Ocean Pines) had the largest number of individual properties sold in the state. The County also saw a 17 percent increase in property values between 2001 and 2003, and a 25 percent increase in home prices between 2003 and 2004.

Yet even with those substantial increases, the NAR notes that Ocean City property values still are not as high as many other east coast resort communities. Vacation home prices are still low relative to where they are expected to be once the Baby Boom generation begins to retire in force. The number of baby boomers (i.e., retirement age group) purchasing vacation homes in the coming years is expected to climb dramatically, fueled by an increase in home equity, favorable

tax laws, record-low mortgage rates, and changing lifestyles. Recent NAR statistics show that the vacation home market is a young, dynamic and growing market. That information, coupled with the projected rise in the year-round residential population discussed in Chapter One, supports the assertion that the housing market in Ocean City will continue to grow in the coming years.

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 provided 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.

- Protect and enhance the quality of residential neighborhoods.
- Provide a balanced housing stock with housing opportunities for all residents.
- Increase housing inventory to provide affordable, adequate housing for young, working families and the seasonal employee population.
- Require site plan and planning review for all major developments to ensure a functional design, quality living environment, and compatibility with overall Town character.

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 (not including mobile homes or trailers) is uncommon in the Town and comprises only 9% of the total housing stock, compared to the County average of 39% (Table 6-1). The mobile home/trailer population is significant, comprising 7% of the total number of units.

The majority of Ocean City's housing inventory is comprised of multi-unit residential condominiums.

Table 6-1 Total Housing by Units in Structure: Ocean City and Worcester County, 2000				
Housing Units by Units in Structure	**Ocean City**	**%**	**Worcester County**	**%**
1 Unit Attached	1,440	5.5%	1,963	4.1%
1 Unit Detached	2,484	9.4%	18,549	39.2%
2 Units	616	2.3%	1,034	2.2%
3 to 19 Units	8,415	32.0%	9,431	19.9%
20 to 49 Units	4,835	18.4%	5,098	10.8%
50 or More Units	6,718	25.5%	6,911	14.6%
Mobile Home or Trailer	1,793	6.8%	4,254	9.0%
Boat, RV, Van, etc.	19	0.1%	120	0.3%
Total	**26,320**		**47,360**	
Source: Claritas, Inc.; Thomas Point Associates, Inc.				

The overwhelming majority of multi-family units are in those complexes with three to nineteen units per structure. A review of building permit data from 1980 to 2003 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).

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.

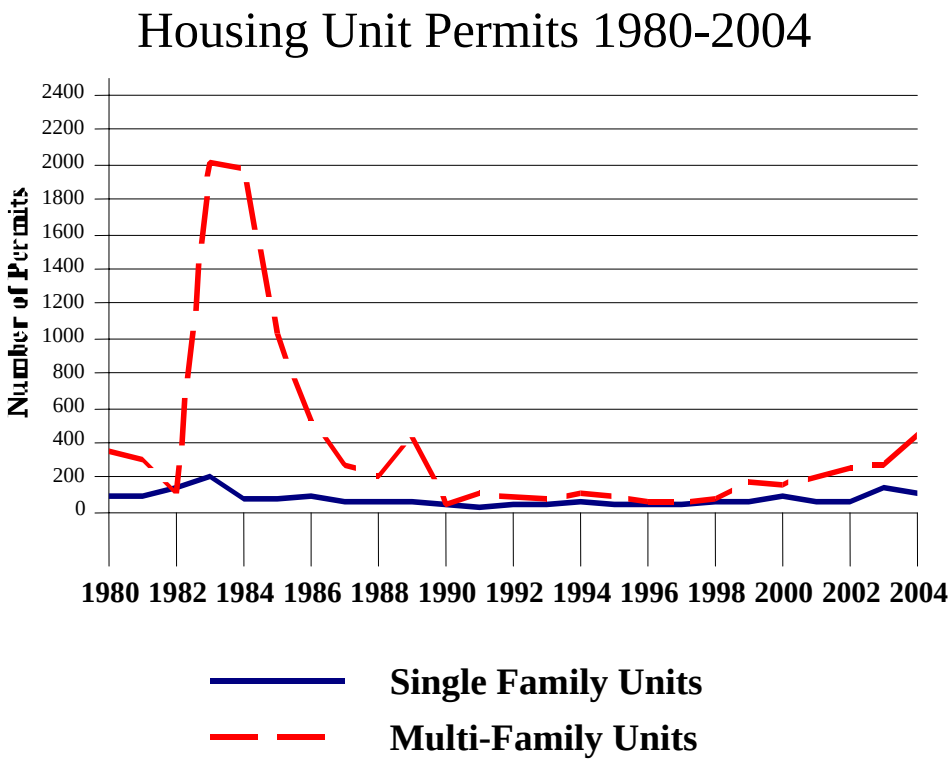
Table 6-2
Housing Unit Building Permits for Ocean City, 1985 - 2003

	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%	432	81%	12	47	373	70%
2005	527	118	22%	409	78%	12	31	366	69%

Source: U.S. Dept. of Housing and Urban Development State of the Cities Data Systems, 2005; Redman/Johnston Associates

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 2003. 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.

Figure 6-1



Historical data for housing units, segregated by decade built, appears in Table 6-3, below.

Table 6-3 Ocean City Housing Units by Year Built pre-1939 through 1979	
Year Structure Built	**Number of Housing Units**
1999 to March 2000	255
1990 to 1998	1,697
1980 to 1989	1,874
1970 to 1979	9,407
1960 to 1969	2,127
1950 to 1959	961
1940 to 1949	393
1939 or Earlier	579
Total units built pre-1939 through March 2000	**17,293**
Source: Claritas, Inc.; Thomas Point Associates, Inc.	

Housing Units and Householders

In 2004, one-third of the Town's year-round occupied housing units were renter-occupied, compared to the county average of one in every four (Table 6-4). The average length of residence in the Town (11 years) is somewhat less than that of the County (13 years).

Table 6-4: Estimated Year-round Housing Tenure, 2004: Ocean City (Town) and Worcester County				
Tenure of Year-round Occupied Housing Units	**Ocean City**	**%**	**Worcester County**	**%**
Owner Occupied	2,591	68.3%	16,124	75.7%
Renter Occupied	1,202	31.7%	5,174	24.3%
Total	3,793		21,298	
Average Length of Residence (years)	**11**		**13**	
Source: Claritas, Inc.; Thomas Point Associates, Inc.				

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.

Table 6-5
Status of Vacant Housing Units, 2000:
Ocean City (Town) and Worcester County

	Ocean City		Worcester County	
	#	%	#	%
TOTAL HOUSING UNITS	**26,317**		**47,360**	
TOTAL OCCUPIED UNITS	**3,750**	**14%**	**19,694**	**42%**
TOTAL VACANT UNITS	**22,567**	**86%**	**27,666**	**58%**
For rent	4,426	19.61%	4,687	16.94%
For sale only	87	0.39%	293	1.06%
Rented or sold, not occupied	88	0.39%	207	0.75%
For seasonal, recreational, or occasional use	14,287	63%	17,681	63.91%
For migrant workers	10	0%	12	0.04%
Other vacant	3,669	16%	4,786	17.30%

Source: 2000 U.S. Census, Redman/Johnston Associates, Ltd.

As noted in the Introduction to this Chapter, housing values have reportedly been appreciating steadily in recent years. In 2000, the median value of owner-occupied housing in Ocean City was estimated at $150,750.00, twenty percent higher than the median value of owner-occupied housing in Worcester County. (Table 6-6). The 2000 U.S. Census recorded very little housing priced above the $400,000.00 range in Ocean City, however data from Maryland PropertyView shows that the median value for all residential in 2003 was $231,833, a 54% increase from 2000. It is anticipated that the amount of higher-priced housing will increase as the value of residential properties increases due to the limited land available for new residential development. This will be true particularly for beach-front properties.

Given recent dramatic increases in the Town's assessable base, it is clear that the value of units today is appreciably higher than in the year 2000, although no recent data since the 2000 Census is available to confirm this.

Table 6-6 Percent and Totals of Owner-Occupied Housing Units By Value Ocean City and Worcester County, 2000				
	Ocean City		Worcester County	
Value of Owner-Occupied Housing	**#**	**%**	**#**	**%**
Less than $20,000	6	0.2%	251	1.7%
$20,000 - $39,999	10	0.4%	639	4.3%
$40,000 - $59,999	124	4.9%	844	5.7%
$60,000 - $79,999	313	12.4%	1,709	11.6%
$80,000 - $99,999	342	13.5%	2,466	16.7%
$100,000 - $149,999	775	30.7%	3,973	26.9%
$150,000 - $199,999	482	19.1%	2,168	14.7%
$200,000 - $299,999	286	11.3%	1,757	11.9%
$300,000 - $399,999	105	4.2%	589	4.0%
$400,000 - $499,999	58	2.3%	185	1.3%
$500,000 - $749,999	21	0.8%	125	0.8%
$750,000 - $999,999	5	0.2%	31	0.2%
$1,000,000 or more			38	0.3%
Total	**2,527**		**14,775**	
Median Value: Owner-Occupied Housing	$150,750		$121,500	
Source: Claritas, Inc.; Thomas Point Associates, Inc.				

Table 6-7 illustrates the value of owner-occupied housing by number of units per structure.

Table 6-7 Average Value of Owner-Occupied Housing Units By Number of Units in Structure Ocean City and Worcester County, 2000				
	Ocean City		Worcester County	
	# of Units	**Average Value/Unit**	**# of Units**	**Average Value/Unit**
1, detached	973	$203,785	11,953	$155,019
1, attached	307	$142,060	494	$146,493
2	73	$199,212	130	$171,769
3 or 4	116	$164,181	123	$162,663
5 or more	831	$113,039	914	$112,716
Mobile home	227	$96,894	1161	$63,516
Total	**2,527**		**14,775**	
Source: 2000 U.S. Census; Redman/Johnston Associates				

One and two-person households make up 82 percent of the households in Ocean City, a significantly higher proportion than Worcester County (61 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, 2000
Ocean City and Worcester County

	Ocean City		Worcester County	
	#	% of Total	#	% of Total
Total:	**3,750**		**19,694**	
1-person household	1468	39%	5180	26%
2-person household	1620	43%	8149	41%
3-person household	356	9%	2934	15%
4-person household	195	5%	2189	11%
5-person household	78	2%	869	4%
6-person household	23	1%	243	1%
7-or-more person household	10	0.3%	130	1%
Avg. Persons per Household	**1.91**		**2.33**	

Source: 2000 U.S. Census

Table 6-9 is an analysis of Ocean City's housing units by the number of bedrooms in each. Data for Worcester County is included for comparison purposes. In Ocean City, two-bedroom housing units outnumber all other units by a wide margin, underscoring the demand for smaller units as a result of the increasing number of retirees and demand for seasonal use units in the Ocean City housing market. In comparison, the number of two-bedroom housing units in Worcester County is close to the number of three-bedroom units in the County, where the percentage of families with children under the age of 18 is far greater than Ocean City.

Table 6-9
Housing Units By Number of Bedrooms, 2000

	Ocean City		Worcester County	
Number of Bedrooms	**Number**	**% of Total**	**Number**	**Percent of Total**
No bedroom	633	2%	746	2%
1 bedroom	3,920	15%	4,836	10%
2 bedrooms	14,775	56%	20,321	43%
3 bedrooms	5,964	23%	17,288	37%
4 bedrooms	835	3%	3,474	7%
5 or more bedrooms	193	1%	695	1%
Total Units	**26,320**		**47,360**	

Source: U.S. Census Bureau Census 2000

Housing for Seasonal Employees

In 1997, 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 man the resort's attractions and restaurants. With Ocean City's accelerating rehabilitation of older properties, 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 in the true sense low or moderate income residents. 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. Another option considered was to let the private market handle the problem by increasing wages to offset housing costs and thus enable Ocean City employers to compete with jobs in the workers' hometowns.

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. Consideration should be given to housing seasonal employees in West Ocean City where land and housing costs are cheaper; however, this would require transporting them to job destinations on the island. The West Ocean City Park & Ride might facilitate this approach.

Young and low income families moving to Ocean City must also compete for a limited amount of affordable housing. Statistics indicate that an increasing number of 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 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. Unless steps are taken to correct gaps and shortages in the existing housing market, many of the Town's young families, low and moderate income families, and seasonal employees will be forced to either remain in housing which is unsuitable for their needs or leave the Town to find suitable housing elsewhere.

Recommendations

- Encourage the private sector to address the seasonal employee housing problem through wage adjustments, employer-provided housing, or a private nonprofit housing corporation.

- 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.

- Large-scale commercial developments should be required to provide on-site housing for employees.

- Perform a detailed analysis of seasonal housing demand by type.

- 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.

- Consider incentives to encourage utilization of upper floors of business uses to provide seasonal employee housing.

- 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.

- New construction should be built to the most energy efficient and environmentally sensitive standards possible. Existing buildings should be encouraged to retrofit to become more energy efficient and environmentally sensitive.

Chapter 7: Sensitive Areas and Environmental Protection

Ocean City is a ten-mile-long barrier island bounded on the east and west by the Atlantic Ocean and Isle of Wight and Assawoman bays, respectively. Since its beginnings, Ocean City has depended on the environment. Its vegetation provided convenient pastures for Worcester County's earliest farms. Tourism began in the late 1800s 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 its history. 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.

The environment is comprised of the land, sea, air, and the products of man. The following sections establish the goal and objectives for protection 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.

Objectives:

In order to achieve this goal, the following objectives are adopted.

- Continue to inventory and evaluate the town's natural resource base and establish policies to protect and preserve resources.

- Continue to preserve and enhance the beach and maintain the Beach Replenishment Program.

- Continue to monitor and maintain air quality at its present high level.

- Monitor the Town's energy consumption patterns and identify opportunities for instituting energy conservation measures when appropriate.

- Continue to enhance the Town's recycling program where possible to increase the amount and types of materials captured in the recycling stream.

- Encourage use of water conservation measures to reduce draw-down of the groundwater supplies and to prevent salt water intrusion.

- Maintain and enhance the quality of the coastal bays and the ocean. Continue to actively participate in and implement actions in the Maryland Coastal Bays Management Plan. Provide resources to implement actions.

- Utilize development standards for the location and construction of structures to minimize the impacts of flooding and to mitigate major flood hazards.

- Protect and preserve wetlands as valuable spawning areas and to maintain the benefits they provide for water quality, shoreline stabilization, and wildlife habitat.

- Encourage the use of 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 participate in the Community Rating System (CRS), which provides reduced flood insurance premiums to reward stringent flood hazard protection regulations.

- Require all forms of development and re-development to avoid sensitive areas whenever possible.

- Use 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.

- Upgrade and retrofit stormwater management.

Sensitive Areas

One of the visions of the 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 sensitive areas from the adverse effects of development. Sensitive areas, include the following: 1) streams and their buffers, 2) 100-year floodplains, 3) habitats of threatened and endangered species, 4) steep slopes, 5) coastal bays and buffers, 6)wetlands and tidal/nontidal buffers, 7) dunes, and 8) beaches.

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 within the 100-year floodplain. As a growth area which 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 enforcement of these regulations should continue to be stringent.

An inventory of threatened and endangered species is provided in Appendix A. Habitats of threatened and endangered species should be protected and state and federal guidelines for their protection should continue to be adhered to.

Geology and Land Form

Ocean City is located on 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.

Beginning at the surface, the soils of the Coastal Plan are predominantly recent 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.

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, e.g., heavy trucking, dust and noise, are not

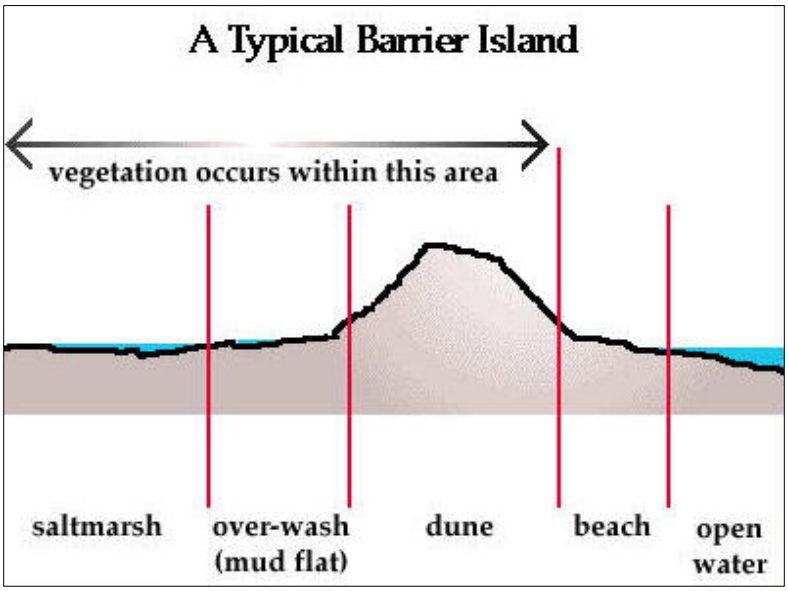
consistent with the Town's character. Ample sources of these materials, to support community needs for them, exist nearby in more rural areas of Worcester and Wicomico Counties. Presently, the Zoning Code of Ocean City does not permit mining within the town. This is due to the disruptive effect such activities would have on the town's tourism dependent economy.

Extraction of materials from beneath the bays other than for normal maintenance dredging poses similar difficulties. Environmental damage to the sport and commercial fisheries must be considered along with potential impacts on tourism. In light of the potential problems with mineral extraction, proposals for such activity should be approached with much caution and full consideration of environmental and economic externalities. Such activities should not be encouraged in or near Ocean City.

Coastal Hydraulics

Due to its location on a barrier island, Ocean City is especially exposed to the 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 or inland areas 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 runoff from mainland streams and rivers. Figure 7-1 illustrates the features and structure of a typical natural barrier island.

Figure 7-1



Source: United States Geological Survey

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 wind. Dunes are stabilized naturally by plants (sea oats, bitter pancum) 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.

- 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 move sand from the north to south.

- Tides, which move sediments into the salt marshes and eventually fill them in. Thus, the bay side of barrier islands tend to build up as the ocean side erodes.

- Winds, which blow sediments from the beaches to help form dunes and build marshes.

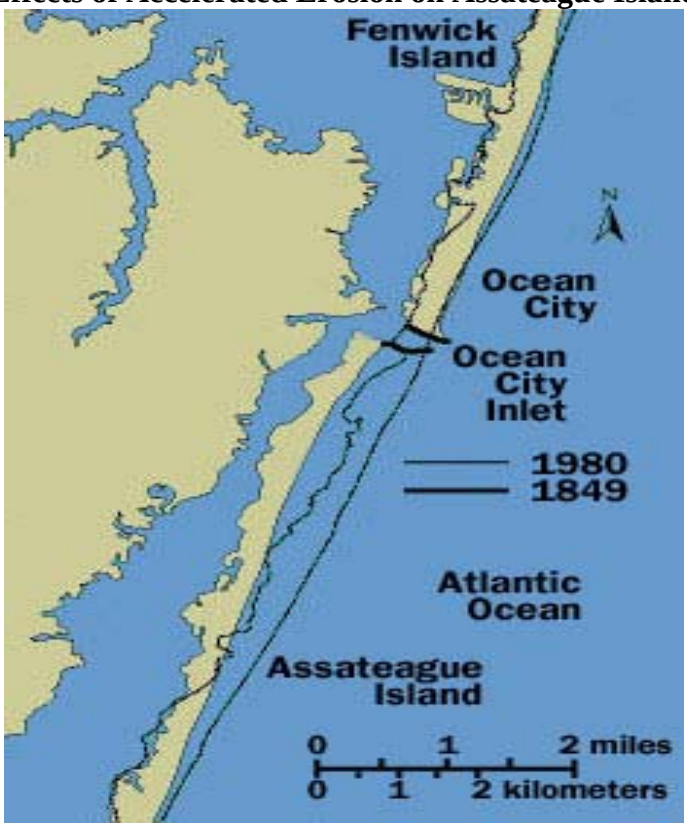
- Sea level change; rising sea levels tend to push barrier islands toward the mainland.

- 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 and performs maintenance dredging. 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. The accelerated erosion has shifted Assateague Island almost one-half mile (.8 km) inland.

Figure 7-2
Effects of Accelerated Erosion on Assateague Island



Source: United States Geological Survey

Much of the early development of Ocean City took little account of the natural processes and constraints of its location on a barrier island. This approach entailed obvious risks, and in hindsight early development could have been more environmentally sensitive. However, on the positive side, by developing Ocean City intensely the demand for development in other coastal areas was diminished. In fact, 75 percent of Maryland's coast has been preserved nearly in its natural state through establishment of the Assateague Island State and Natural Seashores.

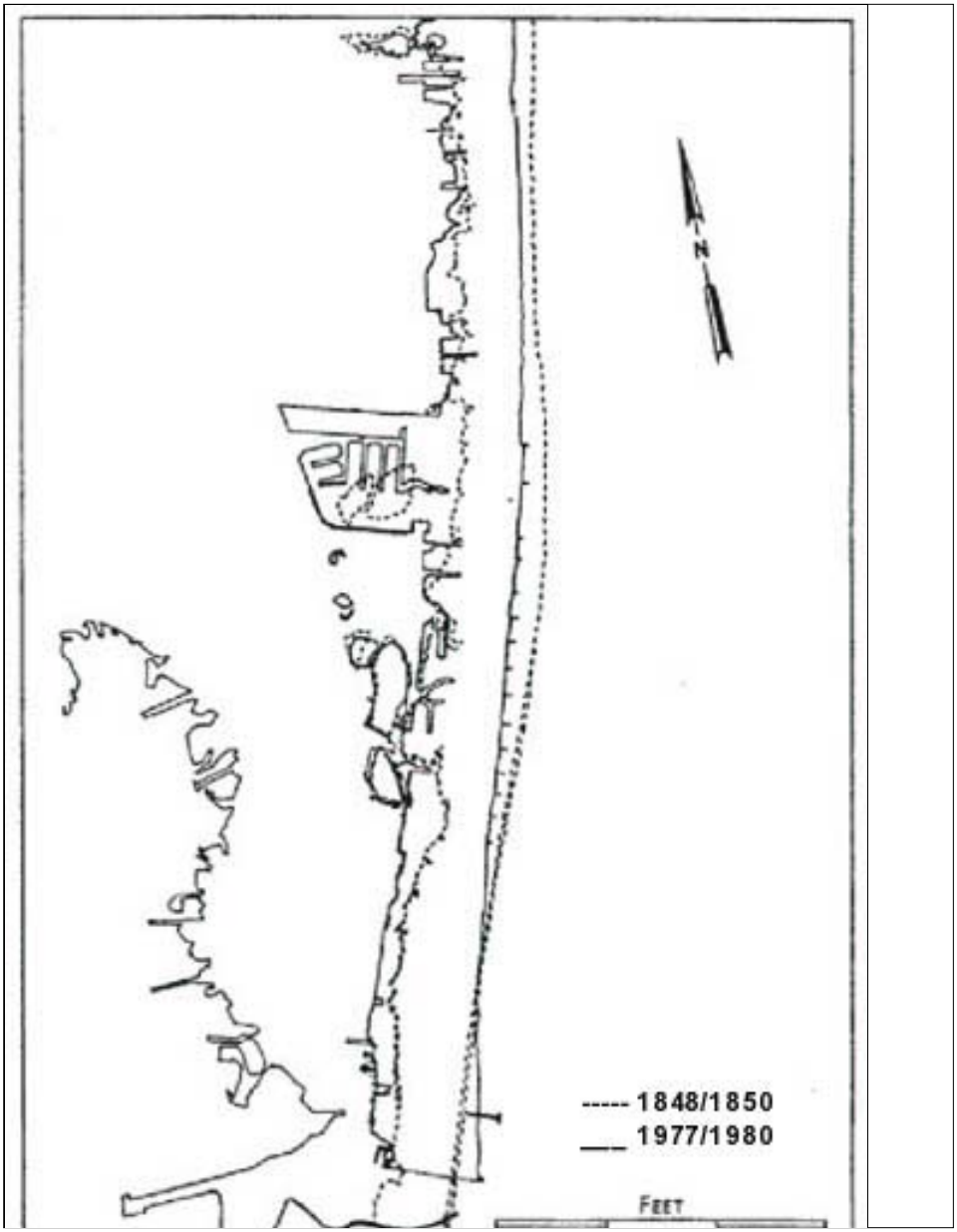
Threats to Beach Stability

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, although some areas have shown accretion over various time

Figure 7-3.
Comparison of Historical Shoreline Changes, Ocean City, Maryland (1850-1980)



periods. 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, and 1962. 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 1962 have been less appreciable. 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 human modifications of the shore, notably groins, sand scraping, and some beach fill. However, it is likely that a lull in hurricane activity since 1960 is also a key factor.

Sea Level Rise

The Atlantic Coast of Ocean City, Maryland, is also undergoing long-term shoreline retreat as a result of sea level rise. Sea level rise, theoretically caused by long term global warming, has an effect on all coastal areas. During the period 1940-1980 data from the National Oceanic and Atmospheric Administration (NOAA) has documented the sea level rise at the following stations near Ocean City:

- Atlantic City, New Jersey .013 ft./yr.
- Lewes, Delaware .006 ft./yr.
- Norfolk, Virginia .012 ft./yr.

From this data, it is estimated that the rate of historical sea level rise at Ocean City has been on the order of .010 feet per year.

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 when sea level rises over the next century.

- 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 over the next four to five decades.

- 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, a much longer and taller sea wall, and maintenance schedules with sufficient financial backing to adequately protect real estate.

- 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.

Storms

Ocean City is subject to hurricanes and northeasters, which have caused 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 such an event.

Northeasters, large in scope and long in duration, 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. They create a back-up of water in the bay and do not allow the tides to go down as they normally would. 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 concrete capped 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.

A maintenance fund has been established for periodic renourishment and repairs to the beach, dune and seawall. Thus, a long-term commitment has been made to this promising solution to the beach erosion problem. The Town must continue to provide its share of the maintenance effort and press the Federal, State and County governments to do the same.

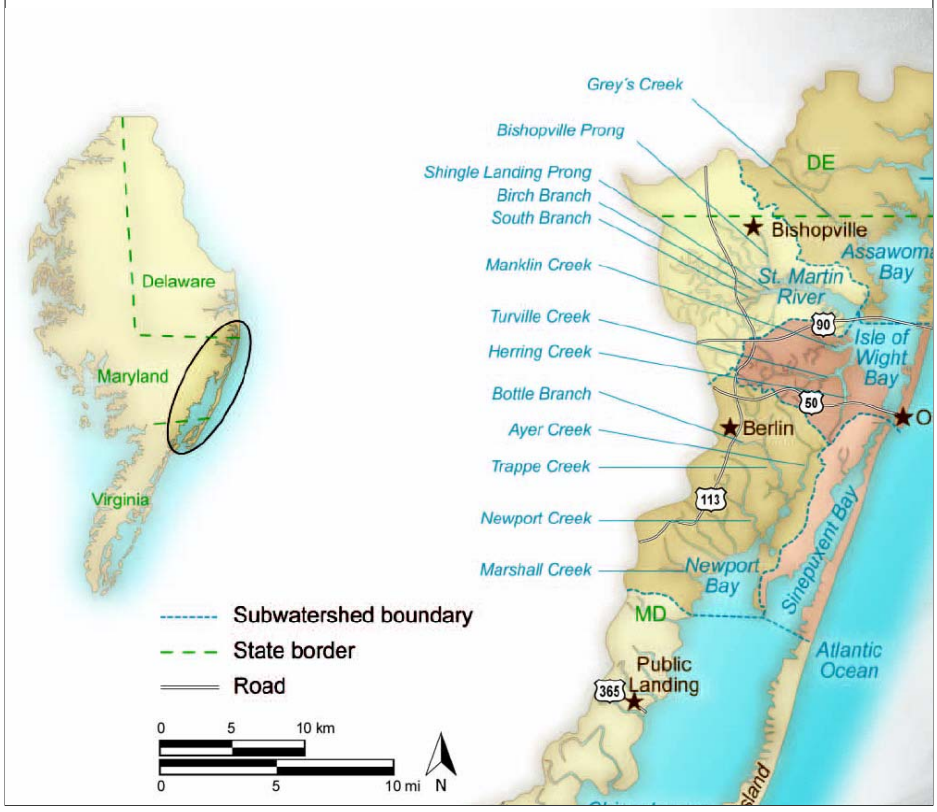
Water Quality

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.

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.

The Maryland 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 the Maryland Departments of Natural Resources, Agriculture, Environment, and Planning, which have brought together scientists and citizens, including the agriculture, golf, tourism, fishing and development industries, to produce a Comprehensive Conservation and Management Plan (CCMP) for the Coastal Bays.

The 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.

Established in 1996, the Program developed a report in 2004 that provides the most recent indications regarding water quality, fish and wildlife habitat condition within the Coastal Bay. Entitled, "The State of Maryland's Coastal Bays", it 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) 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 amount of sea grasses has been increasing in recent years. The 2002 acreage in the Coastal Bay represents a 320 percent increase since annual data began to be collected in 1986.

Finfish and Shellfish

The diversity of finfish in the Coastal Bays makes sportfishing one of Ocean City's most popular attractions.

Finfish in the Coastal Bays are diverse. The shallow waters are an ideal nursery and forage habitat for over 140 species of finfish. Most of the regions' most valuable commercial finfish are 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 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.

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 will not be 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 determined 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.

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.

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.

Ocean City is subject to two types of flooding, localized and storm surge general. All of Ocean City is located in the 100-year flood zone. The V (velocity) zone on the oceanfront is

subject to wave action in addition to flooding. Since avoiding developing in the floodplain is not an option, elevated construction, floodproofing, and special construction methods are required to protect property from flooding.

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.

Wetlands protection regulations along with water quality standards should ensure the continuation of these rich ecological areas. Conscious planting of food and shelter can also increase urban wildlife populations using native species.

The Maryland Department of Natural Resources has compiled a "Summary of Current and Historical Rare, Threatened and Endangered Species of Ocean City, Maryland". The 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 any possible impacts a development project may have on the habitats of such species to afford them protection. The Atlantic Coastal Bays Critical Areas Program also requires consideration of wildlife habitat.

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 brought under control. Acid rain is a result of fossil fuel combustion, such as motor vehicles, which adds nitrogen oxides to the air. In general, the rainfall in Maryland is ten times more acidic than natural levels. In areas where soils and rocks 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 and odor, 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 30,000 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, waste oil and glass are now recycled. Several recycling drop-off sites are located throughout the town (see community facilities chapter), and a limited collection system is operated in some residential neighborhoods.

An ordinance passed in 1992 requires all holders of alcoholic beverage licenses to separate glass and aluminum, which is collected by the town. This effort has been quite successful. The town now recycles over 2,800 tons of material per year, or almost 10% of the total solid waste collected. Efforts to improve this performance are continuing.

The ocean has received a variety of man's waste over the years. Sewage sludge, radioactive materials, dredge spoil, industrial by-products, and military ordnance have all been disposed of at sea. These items contain varying amounts of pollutants including highly radioactive materials, toxic substances, heavy metals, carcinogens, silt, and oxygen consuming materials.

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.

A recent addition to the waste reduction arsenal, seaborne toxic waste incineration, has caused a great deal of public concern. The major issues surround leaks or spills during transportation, effectiveness of incineration in destroying the waste, and the danger of collision of the incinerator ship. The progress of this method should be closely monitored.

Visual Environment

Past comprehensive plans have described several offenses to the visual environment, most of which continue to exist. The most negative aesthetic factors include overhead utility wires and poles, the proliferation of signs, the lack of landscaping, architecture and qualities of building design, and the proliferation outdoor displays of merchandise by retail establishments.

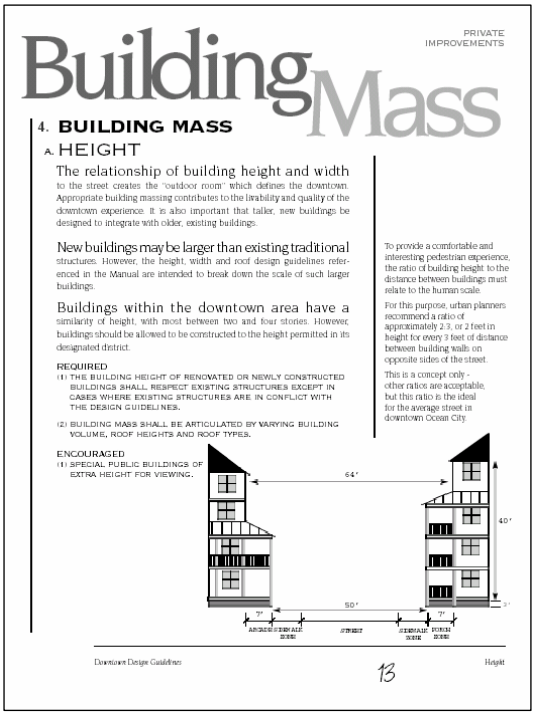
Regarding overhead wires and poles, the 1969 Comprehensive Plan made a statement that is still valid today: “The greatest offense to view is the maze of poles and wires which seems to intrude everywhere but on the beach itself... No single accomplishment would more improve the appearance of the town 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 explored as development and re-development occur over time.

Vest pocket parks and green spaces provide respite from hardscapes in the Town

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 2003. The guidelines have been successfully applied to all structures in the Downtown area located between the Inlet and 3rd 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, waterfront vistas, and public art.



The Downtown Design Guidelines cover a number of aspects of design

This recent accomplishment has provided momentum toward a more pleasing visual environment. Design guidelines are now in place in the upper downtown area between 3rd and 17th street. Development of design guidelines that encourage protection of the distinct character of this area would clearly continue the progress that has been made. 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 design guidelines between the Town and the Ocean City Development Corporation (OCDC).

- Political and popular support of the objectives of the process.

The proliferation of signs made possible by the town's overly-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 visual environment.

Visually, Ocean City has made substantial progress both in public and private developments. 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.

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 has been progressively de-emphasized. This trend should be reversed; conservation efforts should be supported and energy efficiency should be factored into all public construction and purchases including consideration of energy saving vehicle purchases.

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:

Potential Severity

- Low — Poses low probability of immediate threat, but should be monitored for long-term consequences.
- Moderate — Direct environmental effects have been detected. Generally requires mitigation effort to prevent further decline.
- Major — When it occurs, a severe disruption of habitat or environmental quality can be expected.

Scope

- Local — Effects are generally proximate to occurrence or site of activity.
- Widespread — Effects disburse or activity is pervasive.

Managed/Regulated

- Yes — Activity is regulated and/or examined for its environmental impact.
- No — Not monitored for environmental impact.

The items in the environmental threat table can be classified in three groups. One group are threats which have occurred or are on-going sources of environmental degradation which have control measures in place. These items require continued enforcement and monitoring of compliance. Examples of this class include sewage treatment plants, dredging, land alteration,

industrial waste treatment, and automobile exhaust.

Table 7-1
Environmental Threats

Environmental Medium	Threatening Activity	Potential Impacts	Potential Severity	Scope	Managed/ Regulated
Water					
Ocean	Sewage Outfall and Trash Debris	Nutrient Loading	Low	Local	Yes
	Chemical, Toxic Spills	Health Threat to Humans and Wildlife	Major	Widespread	Yes
	Dumping	Beach Degradation, Litter	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, Bacteria	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
	Bacteria	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
	Bulkheading	Destroys Habitat, Toxic Material	Moderate	Local	Yes
		Rise in Flood level in Wood Bulkheads	Moderate	Local	Yes

Environmental Medium	Threatening Activity	Potential Impacts	Potential Severity	Scope	Managed/ Regulated
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, Trash, Debris, Litter	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
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
	Buffers	Building Envelope/Loss Encroachment	Major	Major	Yes

The second group is comprised of potential problems resulting from accidents or other specific events. Items in this category include chemical, toxic and radioactive material spills, oil tanker spills, tanker truck spills, natural gas leaks, nuclear war.

The third group includes those threats which are on-going but do not have an effective system of control mechanisms or rely on voluntary compliance. Some examples are agricultural runoff, development in aquifer recharge areas, boating, and climatic warming.

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 of beaches, waters, and remaining wetlands.

Future coastal bay 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 preservation will require cooperation among property owners, Ocean City, Worcester County, the State and the Federal government. The Beach Replenishment Project is a long-term commitment to maintaining Ocean City's most valued asset.

Recommendations

<u>Air Quality</u>

- State and Federal monitoring of air quality should continue to ensure its quality remains high.

- 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.

Water (Off-shore)

- Ocean City's wastewater system should continue to provide sufficient capacity and treatment so the ocean outfall does not degrade ocean waters.

- Off-shore disposal of dangerous and toxic chemicals should be tightly regulated to prevent damage to Ocean City's waters and shores.

- Off-shore dumping of waste should be prohibited.

- Off-shore drilling for oil and gas should be tightly regulated to prevent environmental damage.

Water (Coastal Bays)

- Disposal of sewage treatment plant effluent should be limited by the capacity of the bays to receive the nutrients and process them without reduction of water quality.

- Existing sewage treatment plants discharging to the bays should be closely monitored to determine compliance with discharge standards and permit requirements. These standards should be strictly enforced.

- All new marinas should implement Clean Marina practices and all existing marinas should be retrofitted to become clean marinas.

- Stormwater should be controlled on-site to reduce negative water quality and flooding impacts. Mainland development affects water quality behind Ocean City. Returning stormwater to the soil should be a priority. Requirements for infiltration should required utilized where appropriate. The key is to treat and hold runoff before it flows to the Assawoman and Isle of Wight Bays.

- 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 and supply research to benefit water quality and wildlife habitat. The existing infrastructure should be retrofitted with innovative Best Management Practices.

- Efforts should be undertaken to improve the water quality and recreational potential of dead-end canals. Possible actions include retrofitting drainage into canals, interconnecting canals, dredging, and educating property owners about proper backyard management.

Groundwater

- Well drawdown and recovery levels should continue to be monitored to determine if pumpage levels are appropriate in specific aquifers.

- The state and surrounding counties should adopt controls to ensure that no inappropriate development occurs in aquifer recharge areas to protect the integrity of the region's water supply.

- Every effort should be made to monitor groundwater quality and to minimize the threat of saltwater intrusion to potable water supplies.

Land

- 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.

- The Beach Replenishment Program should be maintained to provide storm protection and recreational use.

- No construction or structures should be permitted on the reestablished primary dune and beach.

Pedestrian access over reestablished dune should continue to be controlled and enforced.

- Controlled pedestrian access over the reestablished dune should be strictly enforced.

- Private seawalls should be generally discouraged as they can accelerate beach erosion.

- The beaches should always remain accessible to the public, and more public access to the bays should be provided.

- Alternative to bulkheading and stone riprap should be used for shoreline protection where feasible.

Fish and Wildlife

- The town should encourage landscaping for wildlife and provide resource materials and staff assistance. This effort should be integrated into the town's beautification efforts. Native species should be encouraged.

- 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.

- Habitat enrichment programs, such as planting submerged vegetation, should be investigated for their potential for improving the productivity of the bays. The Town should also be mindful of the fact that it is within the Atlantic Flyway and that the Flyway is affected by Ocean City development developments.

- Appropriate measures should be used to protect rare, threatened and endangered species.

Solid Waste

- The recycling program should be expanded whenever possible to reduce the waste stream. All town facilities must engage in the recycling efforts.

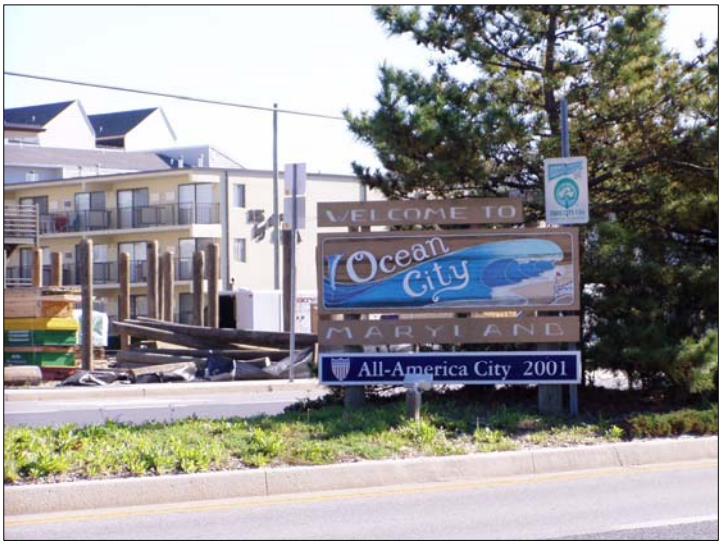
- Compaction of trash by the public and private sectors should be encouraged to reduce volume and prolong the lifespan of the landfill.

Visual Environment

- A town-wide urban design, beautification, and landscaping plan should be developed.

- 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.

- Design standards appropriate to other specific town neighborhoods should be developed and an appropriate design review processes



Recommendations for public improvements include the enhancement of town gateways.

for development of all types should be instituted.

- 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.

- A landscaping and stormwater management improvement 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.

- Sign controls should be strengthened to better regulate the proliferation and appearance of signs.

- A program to bury all overhead utility lines should be developed with implementation to be completed in a reasonable time period.

Energy Conservation

- The town's energy consumption patterns should be monitored and cost effective opportunities should be identified to institute public and private conservation measures.

- The town should cooperate with the state and other agencies in disseminating energy conservation information.

- The energy efficiency implications of the town's purchases and operations should always be considered.

- The Town should actively encourage utilization of "green building" techniques in both public and private sector development.

Hazard Mitigation

The Mayor and City Council have prepared a "Hazard Mitigation Plan" which has several purposes:

1. To identify and assess the hazards to which Ocean City is most vulnerable.

2. To establish policies and proposals to reduce or eliminate the human and economic loss from future natural hazards.

3. To promote long-term solutions to repetitive loss problems.

4. To meet the mitigation planning requirements that are prerequisite to requests for financial assistance in pre- and post-disaster situations.

5. To serve as the "Floodplain Management Plan" required by the Community Rating System (CRS), a program under the auspices of the Federal Emergency Management Agency, which rewards local communities that improve their resistance to flood damage by reducing flood insurance premiums paid by property owners. Toward this end, this plan assesses the flood hazards facing Ocean City; assesses the more specific problems, including repetitive loss properties; sets goals and objective for the community; reviews alternative methods of addressing the problems; and proposes specific actions to remedy problems.

The goals of the Hazard Mitigation Plan are to:

1. Protect lives, property, essential services, and critical facilities from natural hazards.

2. Reduce repetitive flooding of susceptible properties.

3. Reduce short and long-term recovery and reconstruction costs after a disaster.

4. Clearly identify the natural hazards confronting Ocean City.

5. Education and inform the public of the impacts of natural disasters and enable the public to be better prepared.

6. Increase Ocean City's ability to receive federal and state funding for disaster planning, recovery and reconstruction.

7. Facilitate sustainable development that will reduce or eliminate the potential impacts of disasters.

Chapter 8: Downtown Development

Introduction

There has been considerable discussion over the past several decades about Downtown Ocean City. In the 1997 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. The 1997 Plan acknowledged that most of the concerns were valid: there was no "plan" for the downtown at that time and implementation of past plans to that point had been sporadic and without continuity. Since then there has been dramatic growth in the downtown even as underlying problems remain.

Overview of Downtown Development Issues

The 1997 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 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:

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. However, public reaction was so negative that the Planning and Zoning Commission decided to send no recommendation to the Mayor and City Council. Interestingly, a review of the recommendations of the study shows that they are quite similar to those adopted later in the 1989 Comprehensive Plan for Ocean City. 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 had made significant investments in the Downtown. The list below (Table 8-1) identified over $32 million in 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
Rt. 50 bridge improvements	$1,837,960
Boardwalk improvements	$4,789,422
City Hall renovations	$3,439,900
Inlet parking lot improvements	$557,626
Somerset Street improvements	$189,720
Worcester Street restroom	$688,075
Baltimore Ave. 15th St. – 33rd St. improvements	$7,194,595
TOTAL	**$32,873,382**

Table 8-1 Public Improvements in the Downtown	
Action	***Cost***
Source: Comprehensive Plan, 1997, Ocean City Department of Planning, 2005	

In spite of these investments there was still no strong commitment to developing an ongoing improvement program that could be followed from year to year with clear goals. According to the 1997 Comprehensive Plan, "the history of the Downtown revitalization in the 1980's was stop and start, hit and miss, with no clear plan."

The 1997 Comprehensive Plan recommended the following:

1. 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.

2. 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.

3. The Mayor and City Council should commit to a program budget for a minimum of three years.

4. 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.

5. The Mayor and City Council should continue to make public improvements in the downtown, including Boardwalk improvements and underground utilities.

6. 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
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 1999 Downtown Village Plan of Action, the City has 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. OCDC's Vision includes an economically sound and socially healthy downtown, achieved through revitalization that capitalizes on the positive aspects of the area to create a sense of character, charm, and community for both residents and visitors. OCDC's stated Mission is to:

"…create and foster a safe and attractive environment in which innovative public and private sector partnerships will collaborate to maximize available resources and opportunities, and eliminate barriers to revitalization in downtown Ocean City."

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. A transportation study was recently completed for the Town, and recommended several centralized parking facilities, including a Worcester Street lot.

Worcester Street surface parking lot

- Wrap-around Boardwalk: the concept of continuation of the Boardwalk along the Inlet and bayfront is still a priority.

- Sunset Park: the construction of Sunset Park has been one of the goals 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 stage and provides a 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 are included in the design of this new park.

The downtown design standards recommend first floor parking uses to be screened as much as possible to improve the pedestrian appearance.

- Model Street Program: the streetscape portion of this program on Somerset Street has been completed and the Ocean City Development Corporation created the Somerset Plaza Merchant's Association to work on bringing in the correct business mix.

- Façade Improvement Program: the State Department of Housing and Community Development have funded this program. There have been over 24 projects

completed and others yet to be done. This grant program, which pays up to $10,000 for half of a façade renovation cost, has made grants of $157,000 that have leveraged total investment of over $1 million. There have been five façade projects on Somerset Street, which is now a "semi-pedestrian" street.

- Model Block Program: the City owns about a third of the block and efforts are underway to secure more of the property.

- Downtown Design Standards: the standards, approved in November, 2002, are legally in place. They provide guidelines for signage and architecture. The Downtown Development Corporation assists in reviewing site plans and enforcing design standards. However there have been new projects in the downtown that work against street activation and other good principles of urban design. Design standards are also in place for the "Upper Downtown" (3rd Street to 17th Street).

- Public Art Program: The City sees art work as a way to attract more people to the downtown. Six projects are now completed, including:

  - Marlin sculpture with water features.
  - Seahawk sculpture at 4th and Philadelphia.
  - Wall mural of historic postcards.
  - Utility box paintings (fourteen boxes have been painted)

Transformer boxes decorated with artwork

  The City's latest public art project is Paver Art along Philadelphia Avenue.

- The area from the Inlet to 17th Street has been designated a Community Legacy Area by the State of Maryland. This designation provides eligibility for various State funding opportunities.

- In conjunction with the "Lower Eastern Shore Heritage Management Plan", the Blue Crab Scenic Byway, a 210-mile drive through the lower Eastern Shore, routes through downtown.

Table 8-3 summarizes the current work program of the OCDC.

Table 8-3 Ocean City Development Corporation: Projects and Progress	
Project	**Description**
Parking Plan	Construction of multi-level parking structure and intermodal terminal.
Boardwalk	Development of "wrap-around Boardwalk on west side of Philadelphia Ave.
Model Street Program	Redevelop Somerset St. between Boardwalk and Baltimore Ave.
Façade Improvement Program	Creation of guidelines and financial incentives.
Model Block Program	Create high-density mixed commercial/residential development between. Baltimore and Philadelphia Aves.
Downtown Zoning Districts	Create new districts and architectural guidelines.
Streetscape Improvements	Construct improvements along Baltimore and Philadelphia Ave. crosswalks.
Entry Park Public Artwork	Install public art at key locations.
Source: Ocean City Development Corporation, Inc. Newsletter; Thomas Point Associates, Inc.	

There has been notable success in attracting new development to the downtown. The redevelopment of the property on the Boardwalk at Dorchester Street will be a major improvement. The fact that it includes retail and residential uses is very positive.

Sketch of Belmont Towers project, under construction on Dorchester Street (mixed use project). Source: OCDC

The Old Ocean City Road Scenic Byway has now been replaced by the Blue Crab Scenic Byway and this scenic byway designation has now been expanded in downtown Ocean City to no longer only come over the Route 50 bridge and terminate at the Lifesaving Station, but now runs northward up Baltimore Avenue to 3rd Street and returns via Philadelphia Avenue to the Route 50 bridge. The whole Blue Crab Scenic Byway creates a 210 mile route through the three lower shore counties (Worcester, Wicomico and Somerset) in Maryland. The Byway is currently State-designated; National Scenic Byway designation is pending.

Conclusions and Recommendations

OCDC has the strong support of the Mayor and City Council and the business community, and has made significant progress on its initial agenda. Now there is a need to reevaluate the current work plan and update it with additional priorities and projects.

Many of the long-term issues are still unresolved and present a challenge to the ongoing revitalization process:

- Parking is a still a major issue, as it has been for at least thirty years. Planning is underway 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, including some retail space on the ground and housing in air rights.

- Diversity in entertainment and the range of attractions is still lacking. There is a need for a theater or other type of entertainment venue and there may be a place in the downtown for this type of facility.

- Ongoing programs such as the construction of Sunset Park, the continued development of the wrap-around Bayfront Boardwalk and the Model Street 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.

- 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.

- Meeting the need for housing for seasonal employees represents an ongoing challenge that must be addressed by the Town and business community.

The progress that has been made in downtown improvements since the 1997 Comprehensive Plan suggests that focused actions have produced many tangible results.

In summary, the City has a clearer vision for reinforcing the identity for its downtown. 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 Maryland State Planning Act of 1992 and Maryland Smart Growth initiatives established in 1997are 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 be a balance between individual property rights and the overall community's welfare.

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, and a more competitive environment. The year-round population continues to grow. However, physical limitations on new development will slow the historically rapid growth in the tax base, thus requiring additional resources to maintain the high level of service which the town has historically provided.

In a positive vein, prospects for tourism are excellent. Both population and incomes continue to grow substantially in the areas from which visitors to Ocean City come.

Challenges abound, but Ocean City's proven ability and resourcefulness will measure up to the task. Along with 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 Planning Act of 1992 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.

Outlined below are the approaches for implementing the comprehensive plan. Traditional methods, such as zoning, subdivision regulations and capital improvements programming, have withstood court challenge and proven to have practical value. The plan recommends their continued use with some modifications.

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 zoning code where necessary to reflect development locations, standards and policies of the Comprehensive Plan.

- Establish 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).

- Revise the zoning code to modify the pyramidal zoning structure. The current zoning framework is permitting 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 above office or retail uses.

- Establish measures to preclude displacement of basic commercial 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 to minimize dependence on automobile use.

- Review site plan approval procedures and amend as needed, always looking for ways to streamline the development process.

- Examine permitted uses, and uses requiring special approvals; revise if necessary.

- Reduce off-street parking requirements where appropriate, especially for commercial uses. Otherwise, periodically review parking standards and revise if necessary.

- Investigate alternative and innovative approaches to zoning. Determine their usefulness and potential effectiveness for achieving Ocean City's goals and objectives.

- The current practice of allowing the outdoor display of merchandise by retail stores should be reconsidered, as it contributes greatly to the degraded visual image of the Town.

- **Subdivision Regulations**

Subdivision 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.

Development Tracking System

The Town's computerized system 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 Town's geographic information system. Such a system should also continue to enhance the following characteristics:

- Use of the computer for storage, retrieval and manipulation of data.

- Ability to track a project from site plan review through occupancy.

- Tied to the permit system so initial construction as well as alterations are automatically recorded.

- Contain key information about each parcel; for example, present use, number of units, parking facilities, and zoning.

- Retrieval should be simple and be used on any of the parcels' characteristics.

- Utilization of the Town's recently acquired aerial photography as a component of the geographic information system.

Capital Improvement Program

The Capital Improvement Program (CIP) identifies and establishes priorities for the 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 comprehensive plan should also be used to prepare 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.

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 instituted design standards for the Downtown Area and a cooperative process of design review with landowners and the Ocean City Development Corporation. After only a few years in practice, the process seems to be working and the use of design standards has already improved the quality of new development and re-development within the downtown area.

Written review standards and procedures should be established for additional areas, north of the Lower Downtown area which also manifest distinct district boundaries with structural fabrics that demonstrate unique characteristics that should be protected or enhanced to maintain their identities and the character and quality of neighborhoods. They provide a starting point for discussion and refinement in cooperation with the development community and interested civic organizations of interest. Such standards should allow for design flexibility, provide an appeals mechanism and be further supplemented with graphic examples for clarity. The standards should be clear enough to allow implementation within the current administrative structure (staff and Planning Commission).

The proliferation of signs, allowed by the Town's overly-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 in that it is a major economic generator for the state and is something of 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 and city should continue to work together to improve Ocean City as a

resort. This will benefit the state with added tourism and economic development.

This Plan also recommends the recognition of the Lower Eastern Shore Heritage Committee Plan and the Blue Crab Scenic Byway Corridor Management Plan, and the Town's commitment to achieving the goals and objectives in those plans that support heritage tourism, economic development, and resource protection for Ocean City.

Environmental Resource Management

- The Beach and Dunes - The beach serves as one of Ocean City's main recreational assets. In addition, it provides storm and erosion protection which 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.

- Grooming and cleaning of the beach should be continued. Construction should not be permitted on the beach. The beach should be accessible to the public, and, whenever possible, it should be held in public ownership.

- The Ocean and Bay Waters - Water is what makes Ocean City a resort. The Maryland Coastal Bays Program's Comprehensive Conservation and Management Plan (CCMP), which 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 and storing 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 planning in the event of coastal hazards. Encourage post disaster planning. How will the Town rebuild?

- Enhancing recreational access, opportunities and infrastructure for the public.
- Continue street sweeping to reduce runoff.
- Reducing resource impacts from marinas due to pollution, location and design.

Transportation

- Coastal Highway - Coastal Highway is owned by the state and is the key element of Ocean City's land based transportation system. Efforts should continue to maintain and improve the road's capacity and safety.

- 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.

- Recognize the Blue Crab Scenic Byway Corridor Management Plan.

Citizen Participation

Citizens participate in government in many ways, the most obvious the electoral process. Legally mandated processes, such as public hearings, are also effective in encouraging public participation.

Other public participation activities that should be undertaken or continued include:

- **Community Newsletter**

  The Ocean City Newsletter has proven to be useful for apprising citizens of progress made and objectives for the future. An informed Citizenry is 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 should 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 rezonings would be useful. Further, a description of upcoming work program elements would be informative.

- ## 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.

- ## Website

  In recent year the Town's website and links to the activities to the many Town departments have perhaps proven 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.

- ## Intergovernmental Coordination

  The town should continue to take advantage of opportunities to coordinate with Worcester County, the State of Maryland, and federal agencies. It is especially important to be aware of growth trends in the County and their impact on Ocean City.

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.

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 34 years the year-round population has increased over 5 fold: from 1,493 residents in 1970 to an estimated 8,000 in 2009.

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.

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 valuable 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.

Table 1-3 of Chapter 1 of the Comprehensive Plan (updated below) shows the peak Demoflush population for each year since 1977. This is the number of people in Ocean City on the peak day in each year. The table indicates that the peak day population of 162,900 in 1977 virtually doubled some 10 years later to 332,400 by 1987. Since that time the peak population has remained relatively stable within the range of 320,000 to about 345,000 in subsequent years.

The average weekend population by month is shown in Table1- 4 of the Comprehensive Plan.. Since 1992 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. Through the period shown in Table 1-4, the months of January, March, April, October, November and December each recorded substantial weekend population increases in excess of 23% or more.

Chapter 1, Population Characteristics and Trends, of the Comprehensive Plan contains a complete detailed analysis of the seasonal population of Ocean City.

Population Projections

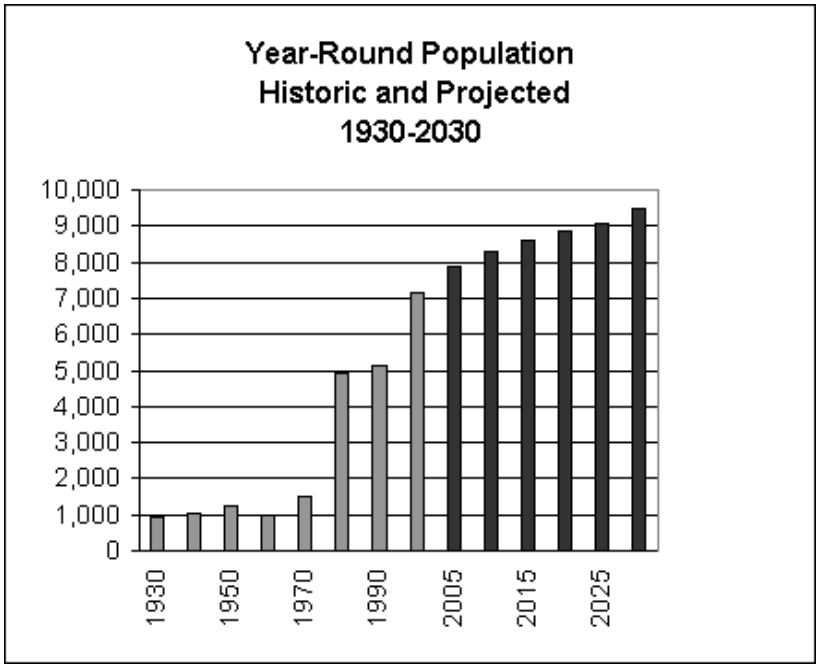
Population projections for Ocean City must be made for both year-round and seasonal projections. Projecting year-round resident and seasonal population in Ocean City is complicated by several factors. The uncertainty about the accuracy of the Census and the small size of the year-round population compared 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, such as wastewater flows (Demoflush) 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 95% 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.

For planning purposes, the size of Ocean City's **year-round population** is relatively unimportant. 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. The following table 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.

Table 1

Year	Population
1930	946
1940	1,052
1950	1,234
1960	983
1970	1,493
1980	4,946
1990	5,146
2000	7,173
2005	**7,900**
2010	**8,308**
2015	**8,609**
2020	**8,863**
2025	**9,048**
2030	**9,473**



Source: U.S. Census of Population, 1930-2000.
Maryland Department of Planning
Ocean City Dept. of Planning and Community Development

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. This element updates the

future total population projections found in Chapter 1 based on the actual Demoflush population figures from 1990 through 2008. 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.

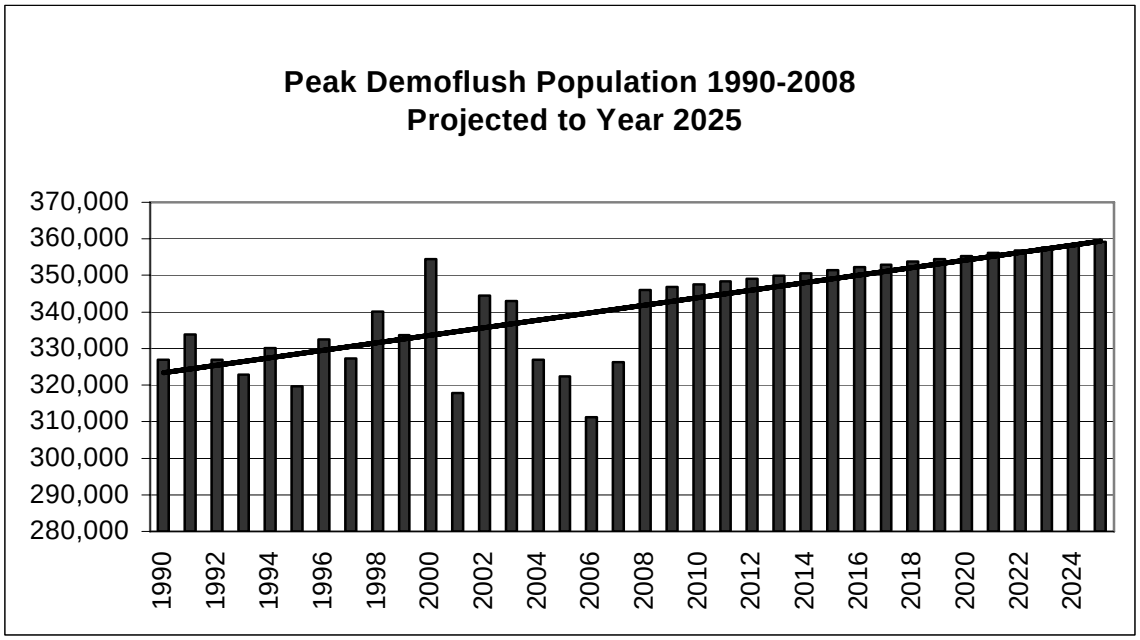
"Adjusted" population figures are presented which are 85 percent of the Demoflush population. Adjusted figures are presented because it appears that estimating the visitor population using the Demoflush methodology probably overestimates the population. To illustrate, comparing the 2000 average summer population (286,213), less about 10 percent day visitors, to the number of housing units (26,320 as reported by the 2000 Census plus about 9,500 hotel units) results in an average of 7.5 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 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 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, the higher Demoflush figures are 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.

Table 2
PEAK DEMOFLUSH POPULATION
1990 - 2025

YEAR	PEAK POPULATION	85% ADJUSTED PEAK POPULATION
1990	326,859	277,830
1995	319,755	271,792
2000	354,400	301,240
2005	322,308	273,962
2010	**347,586**	295,448
2015	**351,426**	298,712
2020	**355,309**	302,013
2025	**359,235**	305,350



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 may become greater if growth in Worcester County reflects the "Visions" of the Maryland Planning Act of 1992, which encourages growth 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

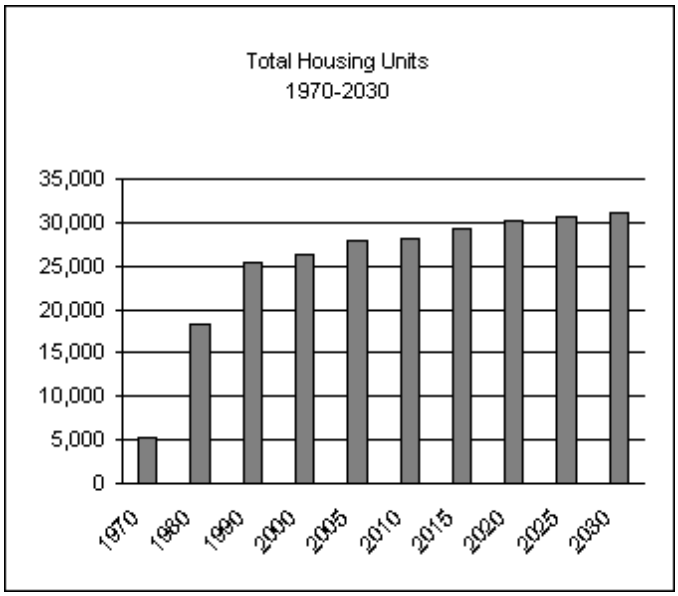
Similar to future population, the housing stock is projected to increase at a slower pace than in the past. This is a function of demand for additional seasonal units as well as the lack of vacant land. The majority of the growth of the housing stock will be in the form of redevelopment of older units. Table 3 presents historic data and projections of the housing stock.

Table 3

TOTAL HOUSING UNITS

1970 - 2030

Year	No. Units	Percent Change
1970	5,193	
1980	18,221	250.9%
1990	25,494	39.9%
2000	26,317	3.2%
2005	27,937	6.2%
2010	28,110	0.6%
2015	29,304	4.2%
2020	30,082	2.7%
2025	30,691	2.0%
2030	31,014	1.1%



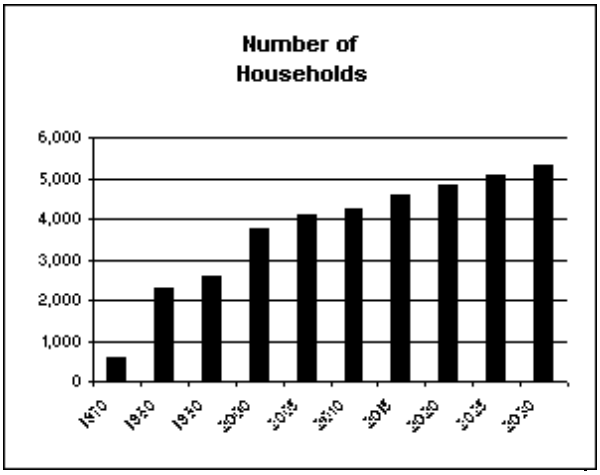
Source: U.S. Census 1970-2000

Projections by Md. Dept. Of Planning

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.

Table 4

Year	Households
1970	600
1980	2,281
1990	2,595
2000	3,750
2005	4,103
2010	4,262
2015	4,583
2020	4,849
2025	5,094
2030	5,296



As is the case with the increase in year-round population, the increase in year-round households has no appreciable impact on town services.

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 only 5.5 percent of land in Ocean City is vacant. Thus the potential for new development, other than redevelopment, is limited.

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 2,500 acres of developable land are zoned as follows:

Residential	1,818 acres (73%)
Commercial	555 acres (22%)
Mixed Use	123 acres (5%)

In recent years there has been substantial pressure for condominium residential development that, because of pyramidal zoning, in many cases has displaced a number of commercial uses including restaurants, office uses and shops. 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.

Future Land Use

As discussed earlier, the year-round population of Ocean City is expected to continue growing at a moderate pace, but 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 grow at a modest pace for the foreseeable future.

The fact that only about 5% 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.

- 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 opportunities outside of the town. Additional community scale shopping centers are not encouraged.

- Mixed-use development is strongly encouraged, especially in the Downtown.

Build-Out Projection and Analysis

The typical method of conducting a build-out analysis does not readily apply to Ocean City. There are 26,320 dwelling units in the town to accommodate the population of 7,173 (2000 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 redevelopable 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.

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 increase in the Demoflush population discussed earlier is used.

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

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 1991 to 2009 the North County enrollment for all schools increased by 63 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.

Table 6
Historical Enrollment – North County Schools

Area and Schools	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
North County Area**																		
Buckingham Elementary School	549	600	572	579	592	623	515	500	471	446	422	415	415	406	435	461	446	449
Ocean City Elementary School	472	468	477	474	520	549	494	491	520	509	473	497	486	484	517	547	561	575
Showell Elementary School	626	644	695	752	747	751	649	649	570	590	578	555	490	472	467	506	529	506
Berlin Intermediate School	717	735	732	804	883	933	609	649	771	748	811	805	783	724	744	732	703	713
Stephen Decatur Middle School	0	0	0	0	0	0	604	634	642	632	659	676	662	666	649	631	663	645
Stephen Decatur High School	837	895	938	985	1,020	1,076	1,111	1,167	1,248	1,251	1,319	1,302	1,374	1,384	1,389	1,436	1,389	1,390
Total North County Area	**3,201**	**3,342**	**3,414**	**3,594**	**3,762**	**3,932**	**3,982**	**4,090**	**4,222**	**4,176**	**4,262**	**4,250**	**4,210**	**4,136**	**4,201**	**4,313**	**4,291**	**4,278**

Source: Worcester County Board of Education Facilities Master Plan 2009-2010.

The 2008 enrollment, projected enrollment, and state-rated capacities of the schools that students from Ocean City attend are presented in Table 7. Only Stephen Decatur Middle School projects to slightly exceed the State-rated capacity by 2018.

The ten-year enrollment projections for all County schools (K-12) is projected to decrease by 26 students by 2018. The school age population of Ocean City (2000 Census) is only about 8% of the town's total population compared to about 15.3% 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.

Table 7

North County School Enrollment Projections (K-12)
2008 - 2018

Year	Ocean City Elementary	Berlin Intermediate	Stephen Decatur Middle	Stephen Decatur High	Total County Schools
2008	575	713	645	1,390	6,671
2009	574	702	627	1,392	6,673
2010	592	711	616	1,367	6,699
2011	575	734	639	1,352	6,647
2012	591	748	631	1,311	6,652
2013	588	747	643	1,315	6,729
2014	600	777	660	1,297	6,796
2015	595	765	674	1,334	6,856
2016	616	767	685	1,342	6,918
2017	623	742	700	1,369	6,966
2018	628	791	683	1,398	6,645
State-Rated Capacity	740	798	677	1,518	

Source: Worcester County Board of Education Facilities Master Plan 2009-2010

Public Libraries

Worcester County is responsible for the public library system. A new branch was recently constructed and opened in Ocean City. 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.

Staffing of the Department varies with the season. The full-time, year-round force includes 97 full-time sworn officers and 20 civilian personnel. During the visitor season, approximately 110 seasonal police officers and fifty non-sworn members of the department augment the core year-round staff. These figures include public safety aides, who are responsible for processing and transporting prisoners, enforcing parking laws, directing traffic and generally assisting visitors.

The size of the year-round population has little impact on the staffing of the OCPD. As with other public services in Ocean City, it is the visitor population that determines the manpower.

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.*

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 upconing in specific areas. The current available raw water supply safely exceeds the treatment capacity of each associated treatment plant. Therefore, no additional wells are planned for the immediate future.

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.

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.

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 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 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 by 16 MGD.

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 infrastucture 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 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.

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. These people 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. 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 these issues in detail. That chapter contains goals, objectives, principles, policies, and standards designed to protect sensitive areas from the adverse effects of development. Sensitive areas include the following: 1) streams and their buffers, 2) 100-year floodplains, 3) habitats of threatened and endangered species, 4) steep slopes, 5) coastal bays and buffers, 6) wetlands and tidal/nontidal buffers, 7) dunes, and 8) beaches.

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 within the 100-year floodplain. 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 enforced, 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 development in terms of aesthetics, structural safety, and environmental sensitivity.

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 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

Introduction

The State of Maryland requires all Maryland jurisdictions with zoning authority to prepare a water resources element to be added to the comprehensive plan. This directive comes from House Bill 1141.

The water resources element must address the following topics:

1. Water supply needs for the present and future population of Ocean City.
2. Wastewater treatment, septic supply (not applicable to Ocean City), stormwater management capacity to meet current and future needs.
3. The impact of meeting these needs on water resources.

This is the water resources element for the Town of Ocean City, Maryland's Comprehensive Plan (adopted month September, 2006). It presents analyses of land consumption and facilities impacts that can be expected as a result of the projected growth of the Town's year-round population. The "planning period" extends up to and through the year 2025. By this action the water resources element becomes part of the *Comprehensive Plan of the Town of Ocean City, Maryland.* The comprehensive plan contains the following goal and objectives that relate to the water resources element:

Objectives

1. Provide adequate public health, safety, social, recreation, and waste disposal services
2. Protect drinking water supplies
3. Preserve and protect natural resources and their ecological functions
4. Accommodate future growth and redevelopment with standards designed to minimize environmental disruption, create an attractive theme, allow architectural variety, retain identifiable neighborhoods, and preserving special and historic buildings using incentives.
5. Provide for adequate public services to facilitate the desired amount and pattern of growth.

The water resources element's goal is to:

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, the

adverse affects of future growth on these resources. The water resources element provides a strategy to sustain the water needs for Ocean City's population through the year 2025.

Section 1 - Land Use Plan Analysis and Growth Projection

State and local governments establish regulations for governing the development and use of land within their jurisdictions. The goal of these land use regulations is generally to promote sound physical, social, and economic development.

The Ocean City Comprehensive Plan, Land Use Chapter, states the need to maintain and encourage development of commercial uses and promote mixed use projects with the intent of sustaining the distribution of commercial restaurant, retail, and service uses. Also, we will promote mixed-use projects to reduce the strain on the transportation system's infrastructure and services by reducing the need for driving to commercial establishments. Through the use of design standards we hope to maintain and create more open space. Industrial and utility projects are considered inappropriate uses due to their adverse impacts on adjacent properties.

Presently, town streets occupy about 25% of the town's land area. Redevelopment may decrease that amount and allow for more open space. For over forty years, our land use pattern has remained "natural", meaning that it is driven by market forces. This pattern will continue into the future as the economy and other factors affect why visitors come to the beach.

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.

The majority of land on the bayside is developed at less than ten units to the acre. Much of the bayside is being used for commercial uses and also has a number of residential neighborhoods that have remained for decades, improving with time.

The aging of the United States population will offer unprecedented challenges and opportunities. The arrival of the Baby-Boom generation is creating unparalleled urgency for understanding the need for geriatric services and making ADA code compliance in the homes being built in Ocean City all that more important. With people age 65 and older constituting 20% of the national population by 2030, Ocean City will meet their water demands and the

wastewater infrastructure needed to support this changing culture. The high-rise condominiums and privately-owned homes built during the 1960s through the 1980s are being replaced with multi-use projects and more efficient residential units together with commercial amenities. Preserving the character and quality of development with a focus on design variety is one of our main objectives.

The comprehensive plan anticipates population growth and a steady increase in 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 should continue to be less than 10% of the total housing stock.

The lack of affordable employee housing is the main housing problem. 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.

The existing land use map (Chapter Three, Land Use and Community Character, 2006 Comprehensive Plan) indicates existing residential and commercial development. Commercial uses on the Oceanside of Coastal Highway should 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, 2006 Comprehensive Plan) proposes a majority of residential projects east of Coastal Highway which may include multi-use projects. Larger department stores will remain west of Ocean City due to the lack of developable land in Ocean City.

Current land uses and regulations have limited commercial development along the east side of Coastal Highway, and many of those commercial uses do not sustain visitor's basic daily needs. There is a great variation in the density of residential development. The oceanfront areas have blocks averaging from 40 to 70 units per acre.

An increase in mixed-use developments will provide Ocean City's residents and visitors with the basic necessities. With the appropriate zoning in place it will be possible for commercial use to be more prominent on both sides of Coastal

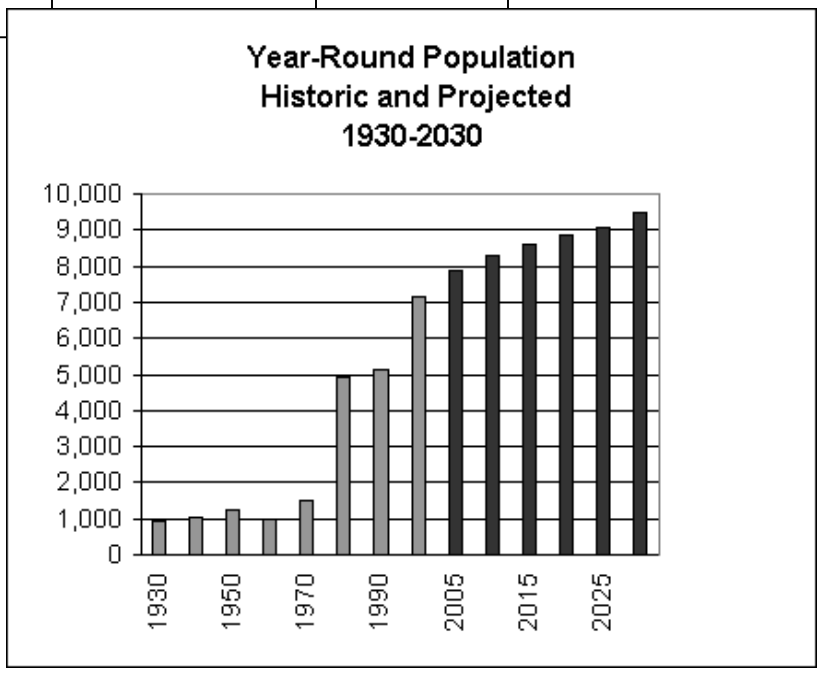
Highway. However, supermarkets, hardware stores, and big box retailers will continue to be situated along U.S. Route 50, within a few miles of Ocean City.

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 was determined to be 7,137 in 2004 (U.S. Census Bureau) and could easily reach 9,000 by 2025 (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.

Table 1-1
Historical and Projected Populations

Year	Population
1930	946
1940	1,052
1950	1,234
1960	983
1970	1,493
1980	4,946
1990	5,146
2000	7,173
2005	7,900
2010	**8,308**
2015	**8,609**
2020	**8,863**
2025	**9,048**
2030	**9,473**



Sources: U.S. Census Bureau, Maryland Department of Planning, Ocean City, MD Dep't. of Planning and Community Development

Given the unique Characteristics of Ocean City as a resort community it is difficult to develop a year-round resident population forecast that can be considered reliable.

Seasonal Population

Seasonal population is 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. 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 planning period. (Figure 1-1)

PEAK DEMOFLUSH POPULATION
1990 – 2025 – Table 1-2

YEAR	PEAK DAY POPULATION	85% ADJUSTED PEAK POPULATION
1990	326,859	277,830
1995	319,755	271,792
2000	354,400	301,240
2005	322,308	273,962
2010	**347,586**	295,448
2015	**351,426**	298,712
2020	**355,309**	302,013
2025	**359,235**	305,350

The Town's ability to provide vital services must be coordinated with seasonal population growth and certain demographic aspects of the population, such as age, gender, and educational levels.

"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 2025 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.

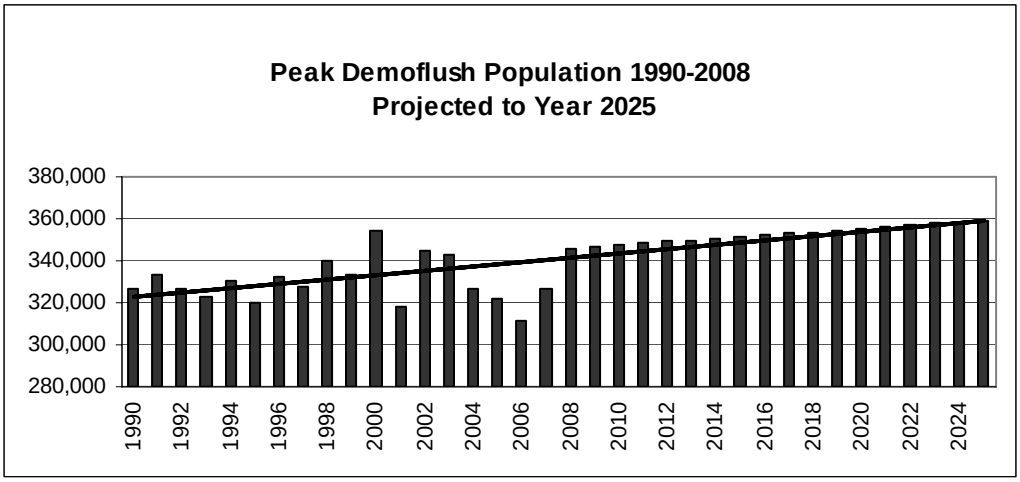


Figure 1-2

Note: Peak demoflush population estimates a year's (Summer season) highest weekend population; numbers have not been adjusted and are weekend totals

Conclusion

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 2006 comprehensive plan anticipates about 6,000 new residents by 2025 and a slight but steady increase in the seasonal population. There are no anticipated annexations outside municipal boundaries during the planning period. Clean water sources are sufficient to handle the population's needs with ample water supply to last past the planning period.

Section 2 - Water Supply

Introduction

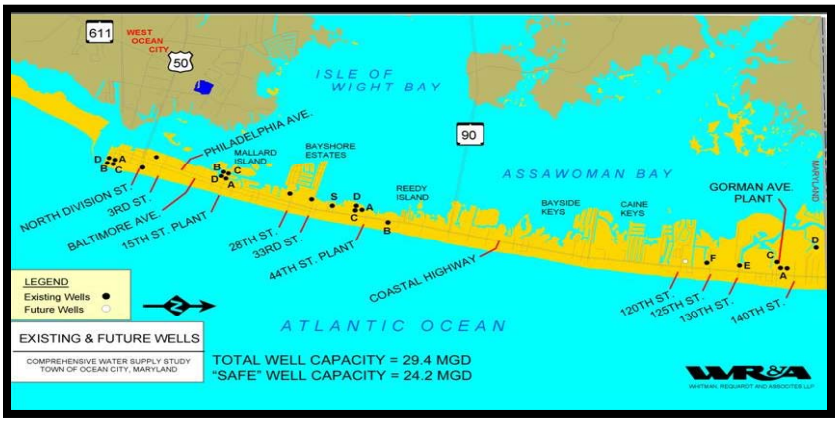
Ocean City's water supply system includes 3 water treatment plants which treat raw water to remove iron, manganese, and chlorinate the water. The 15th Street plant was constructed in the mid-1990's and replaced two old plants. Ocean City supports a proactive approach to public health. One of the Town's 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.

Figure 2-1



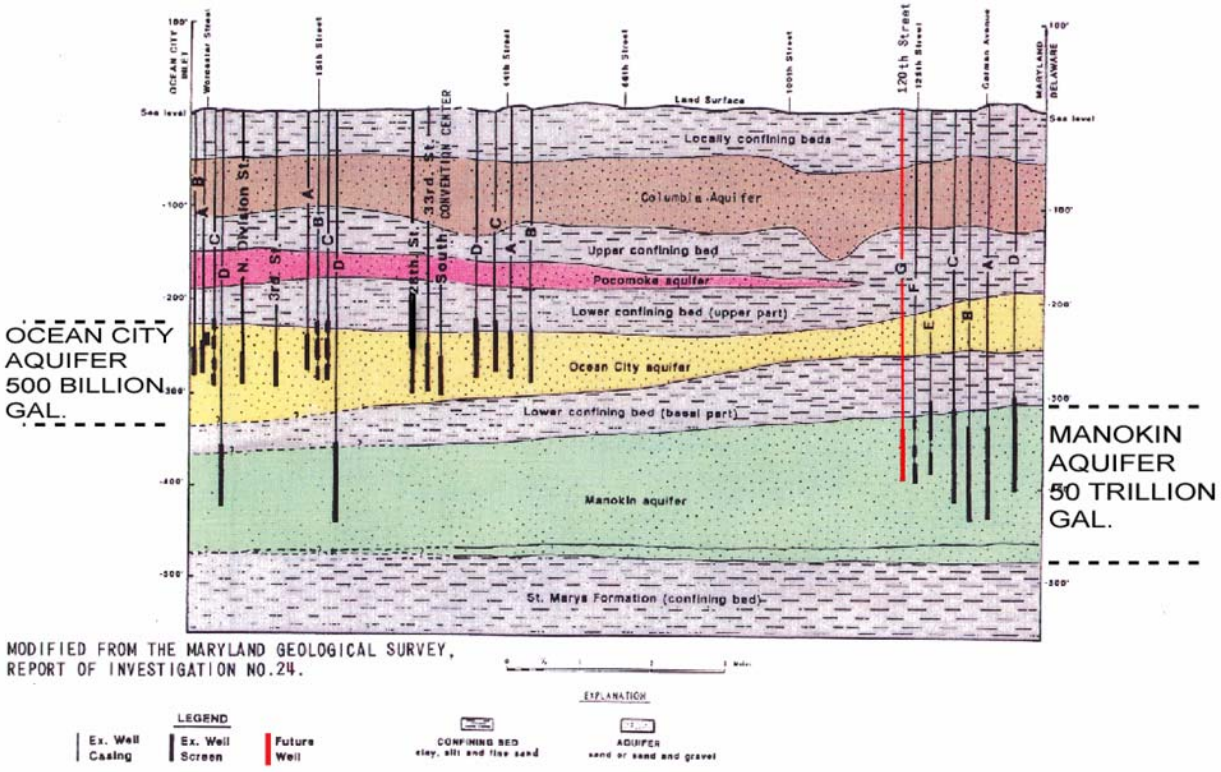
Supply and Demand

The Ocean City Water System must have adequate capacity to serve the peak seasonal population. In 1994 the system served an estimated population of 330,133 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.

Figure 2-2



GEOLOGICAL CROSS SECTION AND WELL FIELDS

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.

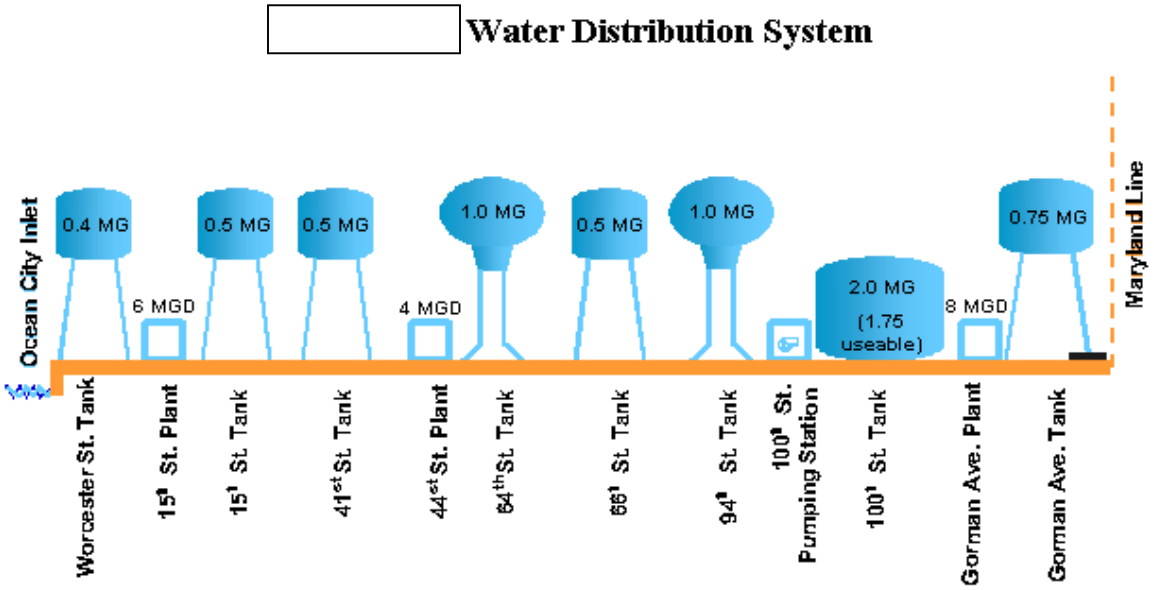
An increasingly attractive solution to salt intrusion is the rapidly developing technology and operating methods of desalination of brackish water. Desalination could be accomplished as needed by converting existing water treatment plans. By employing desalination, the saltwater intrusion could be contained 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

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.



Source: Whitman/Requardt & Associates, 2004

Figure 2-3

Potential Service Area

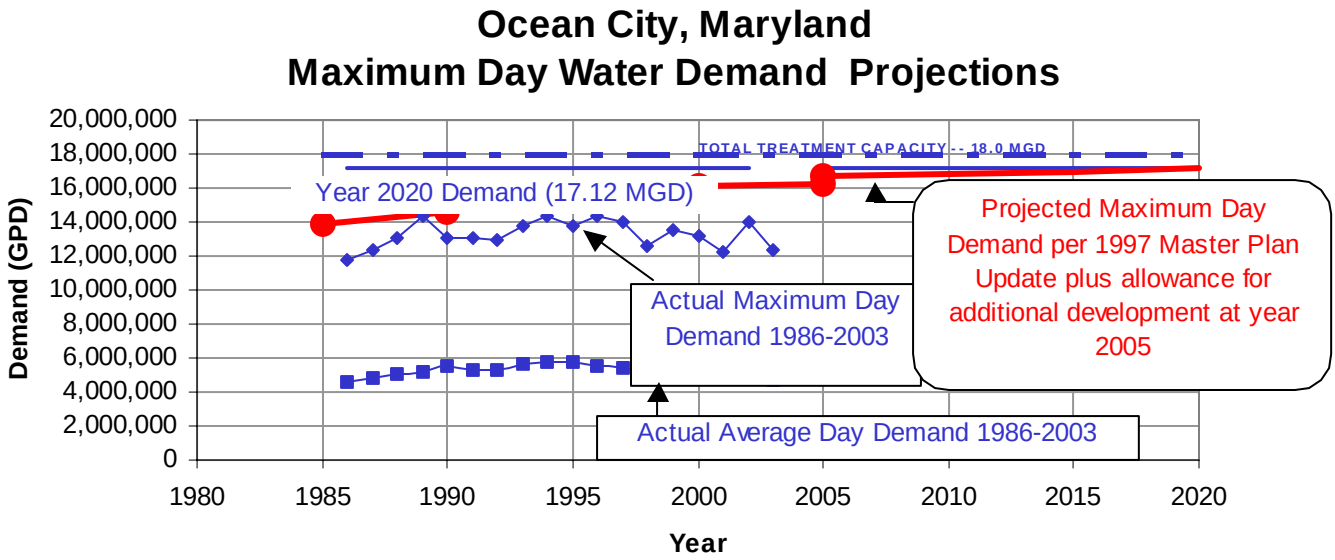
The Town of Ocean City extends from the Ocean City Inlet to the Maryland/Delaware line and is separated from West Ocean City by the Isle of Wight Bay. The existing Ocean City Water System covers the entire municipal area. Maps of the water lines are shown as Attachment "A" and were part of the 2005 Water 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.

Figure 2-4



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 is, for the most part, the boundaries of the Town of Ocean City, Maryland. There are currently no maps of the wastewater service area to include in this report. 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.

The Sunset Island development has a 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. There is no TMDL for wastewater nor any impairments of our receiving waters. There is a TMDL for the Assawoman Bay that is incomplete. The Isle of Wight main bay TMDL is currently being established. Herring Creek and Turville Creek have established TMDL's. (engineering staff). Since Assawoman Bay has no TMDL, the suitability of receiving waters cannot be determined at this time.

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 it's 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 2025.

The Municipal Growth Element 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

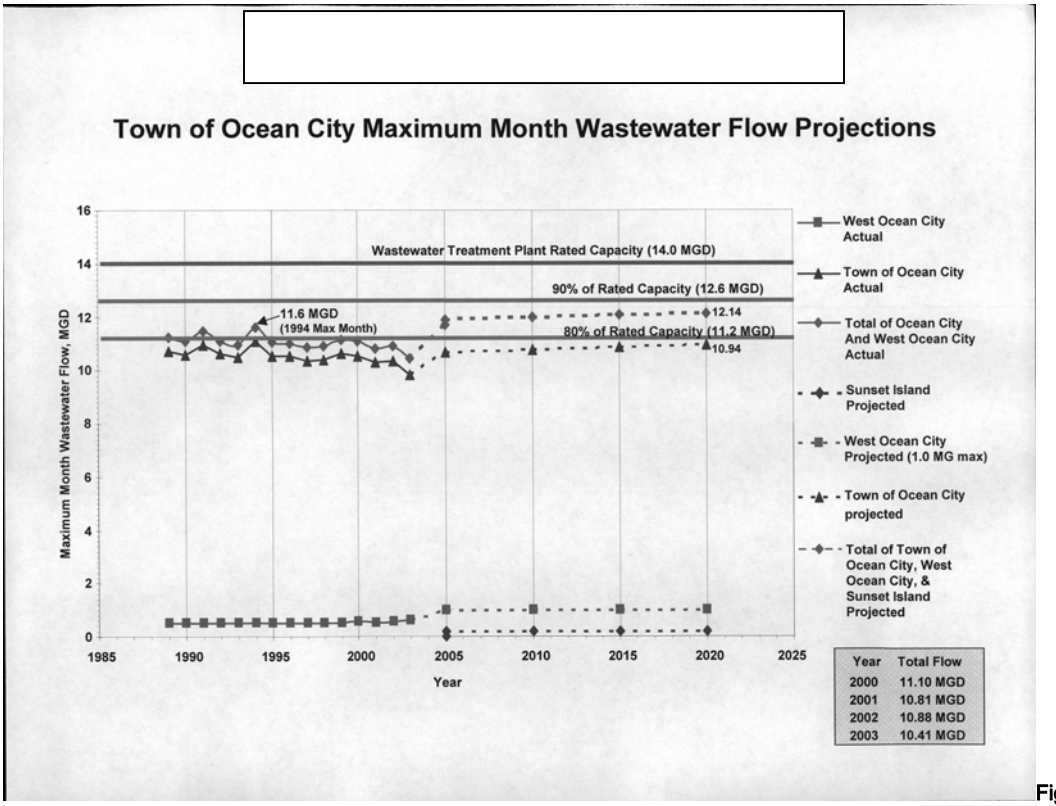


Figure 3-1

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 June 18, 2001: "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, control stream channel erosion, 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.

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 Isle of Wight 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 (engineering staff).

<u>Isle of Wight Bay Subwatershed (from Worcester County Comprehensive Plan)</u>

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 uses the WRE non-point source spreadsheet to assess the impacts. 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 the Critical Area regulations. Thus, all development is subject to improving water quality per MDE and DNR guidelines. 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 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.

Developable Land and Build-Out Projections

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

Figure 4-1

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.

The calculations for future loading are the same for the current loadings because future development of Ocean City will primarily be redevelopment of existing, already developed properties. 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 restrictions on future redevelopment projects, will reduce nutrient loading in the future.

Land Use Area Summary			
	Initial (Acres)	Future (Acres)	Change (acres)
Development	2,234	2,234	0
Agriculture*	0	0	0
Forest	321	321	0
Water	0	0	0
Other**	314	314	0
Total Area	**2,869**	**2,869**	0
Residential Septic (EDUs)	0	0	0
Non-Residential Septic (EDUs)	0	0	0

Figure 4-2

Nitrogen Loading Summary			
Land Use/Cover	Initial (Lbs/Yr)	Future (Lbs/Yr)	Change (Lbs/Yr)
Development	13,273	13,273	0
Agriculture	0	0	0
Forest	449	449	0
Water	0	0	0
Other**	701	701	0
Total Terrestrial Load	**14,423**	**14,423**	**0**
Residential Septic (EDUs)	0	0	
Non-Residential Septic (EDUs)	0	0	
Total Septic Load	**0**	**0**	
Total NPS Nitrogen Load	**14,423**	**14,423**	

Figure 4-3

Phosphorus Loading Summary			
Land Use/Cover	Initial (Lbs/Yr)	Future (Lbs/Yr)	Change (Lbs/Yr)
Development	892	892	0
Agriculture	0	0	0
Forest	6	6	0
Water	0	0	0
Other**	28	28	0
Total NPS Phosphorus Load	**927**	**927**	**0**

Figure 4-4

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 continual monitoring of the systems, by the periodic updating of the *Comprehensive Water Supply Study*, and rigorous enforcement of environmental regulations.

APPENDIX A
Summary of Current and Historical Rare, Threatened and Endangered Species
Ocean City, 1997

SCIENTIFIC NAME	COMMON NAME	LAST YEAR	RANKS		STATUS	
			Global	State	MD	U.S.
Animals						
Caretta caretta	Atlantic Loggerhead turtle	1972	G3	SHB	T	LT
Charadrius melodus	Piping plover	1962	G3	S1B	E	LT
Cicindela dorsalis media	White tiger beetle	1913	G4T4	S1	E	
Fundulus Luciae	Spotfin killifish	1913	G3G4	S2		
Rynchops niger	Black skimmer	1997	G5	S1S2B	T	
Sterna antillarum	Least tern	1987	G4	S2B	T	
Sterna maxima	Royal tern	1997	G5	S1B	E	
Sterna nilotica	Gull-billed tern	1987	G5	S1B	T	
Sterna sandviciensis	Sandwich tern	1997	G5	S1B		
Plants						
Agalinis fasciculate	Fascicled gerardia	1931	GS	S1	E	
Aster concolor	Silvery aster	1932	G4?	SH	X	
Buchnera Americana	Blue-hearts	1908	G5?	SH	X	
Carex silicea	Sea-beach sedge	1910	G5	S1	E	
Carex tenera	Slender sedge	1932	G5	SH	X	
Centella erecta	Coinleaf	1894	G5	S1	E	
Coelorachis rugosa	Wrinkled jointgrass	1894	G5	S1	E	
Desmodium strictum	Stiff tick-trefoil	1878	G4	S1	E	
Eleocharis albida	White spikerush	1893	G4G5	S1	E	
Eleocharis tortilis	Twisted spikerush	1880	G5	S2		
Eupatorium leucolepis	White-bracted boneset	1932	G5	S1S2	E	
Fuirena pumila	Smooth fuirena	1932	G4	S1	E	
Gyanopogon brevifolius	Broad-leaved beardgrass	1880	G5	S1	E	
Honckenya peploides	Sea-beach sandwort	1910	G5	SH	X	
Juncus megacephalus	Big-headed rush	1932	G4G5	SH	X	
Juncus polycephalus	Many-headed rush	1932	G5	SU		
Juncus torreyi	Torrey's rush	1932	G5	S1	E	
Leptochloa fascicularis	Long-awned diplachne	1878	G5	S1	E	
Limonium nashii	Nash's sea lavender	1940	G?	SU		
Lycopodiella caroliniana	Carolina clubmoss	1932	G5	SH	X	
Oldenlandia uniflora	Clustered bluets	1979	G5	S2		
Panicum flexile	Wiry witch-grass	1908	G4G5	S1	E	
Panicum oligosanthes	Few-flowered panicgrass	1931	G5	S1	E	
Paspalum dissectum	Walter's paspalum	1908	G4?	S2	E	
Pluchea camphorata	Marsh fleabane	1945	G5	S1	E	
Potamogeton pusillus	Slender pondweed	1903	G5	S1		
Prunus maritima	Beach plum	1984	G4	S1	E	
Pycnanthemum setosum	Awned mountain-mint	1891	G3?	S2	T	
Rhynchospora glomerata	Clustered beakrush	1932	G5	S2	E	
Rhynchospora torreyana	Torrey's beakrush	1893	G4	S1	E	
Schwalbea Americana	Chaffseed	1893	G2	SX	X	LE
Scleria reticularis	Reticulated nutrush	1878	G3G4	S2		
Spiranthes odorata	Sweet-scented ladys' tresses	1931	G5	SH	X	
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 Division's Biological and Conservation Database as of September 27, 1997. 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 Division

EXPLANATION OF RANK AND STATUS CODES

The global and state ranking system is used by all 50 state Natural Heritage Programs and numerous Conservation Data Centers in other countries in this hemisphere. Because they are assigned based upon standard criteria, the ranks can be used to assess the range-wide status of a species as well as the status within portions of the species' range. The primary criterion used to define these ranks is the number of known distinct occurrences with consideration given to the total number of individuals at each locality. Additional factors considered include the current level of protection, the types and degree of threats, ecological vulnerability, and population trends. Global and state ranks are used in combination to set inventory, protection, and management priorities for species both at the state as well as regional level.

GLOBAL RANK

G1: Highly globally rare. Critically imperiled globally because of extreme rarity (typically 5 or fewer estimated occurrences or very few remaining individuals or acres) or because of some factor(s) making it especially vulnerable to extinction.

G2: Globally rare. Imperiled globally because of rarity (typically 6 to 20 estimated occurrences or few remaining individuals or acres) or because of some factor(s) making it very vulnerable to extinction throughout its range.

G3: Either very rare and local throughout its range or distributed locally (even abundantly at some of its locations) in a restricted range (e.g., a single western state, a physiographic region in the East) or because of other factors making it vulnerable to extinction throughout its range; typically with 21 to 100 estimated occurrences.

G4: Apparently secure globally, although it may be quite rare in parts of its range, especially at the periphery.

G5: Demonstrably secure globally, although it may be quite rare in parts of its range, especially at the periphery.

GH: No known extant occurrences (i.e., formerly part of the established biota, with the expectation that it may be rediscovered).

GU: Possibly in peril range-wide, but its status is uncertain; more information is needed.

GX: Believed to be extinct throughout its range (e.g., passenger pigeon) with virtually no likelihood that it will be rediscovered.

G?: The species has not yet been ranked.

_Q: Species containing a "Q" in the rank indicates that the taxon is of questionable or uncertain taxonomic standing (i.e., some taxonomists regard it as a full species, while others treat it at an infraspecific level).

_T: Ranks containing a "T" indicate that the infraspecific taxon is being ranked differently than the full species.

STATE RANK

S1: Highly State rare. Critically imperiled in Maryland because of extreme rarity (typically 5 or fewer estimated occurrences or very few remaining individuals or acres in the State) or because of some factor(s) making it especially vulnerable to extirpation. Species with this rank are actively tracked by the Natural Heritage Program.

S2: State rare. Imperiled in Maryland because of rarity (typically 6 to 20 estimated occurrences or few remaining individuals or acres in the State) or because of some factor(s) making it vulnerable to becoming extirpated. Species with this rank are actively tracked by the Natural Heritage Program.

S3: Rare to uncommon with the number of occurrences typically in the range of 21 to 100 in Maryland. It may have fewer occurrences but with a large number of individuals in some populations, and it may be susceptible to large-scale disturbances. Species with this rank are not actively tracked by the Natural Heritage Program.

S3.1: A species that is actively tracked by the Natural Heritage Program because of the global significance of Maryland occurrences. For instance, a G3 S3 species is globally rare to uncommon, and although it may not be currently threatened with extirpation in Maryland, its occurrences in Maryland may be critical to the long term security of the species. Therefore, its status in the State is being monitored.

S4: Apparently secure in Maryland with typically more than 100 occurrences in the State or may have fewer occurrences if they contain large numbers of individuals. It is apparently secure under present conditions, although it may be restricted to only a portion of the State.

S5: Demonstrably secure in Maryland under present conditions.

SA: Accidental or considered to be a vagrant in Maryland.

SE: Established, but not native to Maryland; it may be native elsewhere in North America.

SH: Historically known from Maryland, but not verified for an extended period (usually 20 or more years), with the expectation that it may be rediscovered.

SP: Potentially occurring in Maryland or likely to have occurred in Maryland (but without persuasive documentation).

SR: Reported from Maryland, but without persuasive documentation that would provide a basis for either accepting or rejecting the report (e.g., no voucher specimen exists).

SRF: Reported falsely (in error) from Maryland, and the error may persist in the literature.

SU: Possibly rare in Maryland, but of uncertain status for reasons including lack of historical records, low search effort, cryptic nature of the species, or concerns that the species may not be native to the State. Uncertainty spans a range of 4 or 5 ranks as defined above.

SX: Believed to be extirpated in Maryland with virtually no chance of rediscovery.

SYN: Currently considered synonymous with another taxon and, therefore, not a valid entity.

SZ: A migratory species which does not inhabit specific locations for long periods of time.

STATE STATUS

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 following categories have been taken from Code of Maryland Regulations (COMAR) 08.03.08.

E Endangered; a species whose continued existence as a viable component of the State's flora or fauna is determined to be in jeopardy.

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.

T Threatened; a species of flora or fauna which appears likely, within the foreseeable future, to become endangered in the State.

X Endangered Extirpated; a species that was once a viable component of the flora or fauna of the State, but for which no naturally occurring populations are known to exist in the State.

PE Proposed Endangered; a species whose continued existence as a viable component of the State's flora or fauna is determined to be in jeopardy.

PT Proposed Threatened; a species of flora or fauna which appears likely, within the foreseeable future, to become endangered in the State.

PX Proposed Endangered Extirpated; a species that was once a viable component of the flora or fauna of the State, but for which no naturally occurring populations are known to exist in the State.

PD Proposed; proposed to be deleted or removed from the State Threatened & Endangered Species list.

FEDERAL STATUS

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 following categories have been modified from 50 CRF 17.

LE: Taxa listed as endangered; in danger of extinction throughout all or a significant portion of their range.

LT: Taxa listed as threatened; likely to become endangered within the foreseeable future throughout all or a significant portion of their range.

PE: Taxa proposed to be listed as endangered.

PT: Taxa proposed to be listed as threatened.

C: Candidate taxa for listing for which the Service has on file enough substantial information on biological vulnerability and threat(s) to support proposals to list them as endangered or threatened.

Appendix B
Comprehensive Plan
Town of Ocean City

Strengths, Weaknesses, Opportunities, Threats (SWOT) Rankings

The following Strengths, Weaknesses, Opportunities and Threats (SWOT's) were identified by the Town of Ocean City Planning Commission during the course of preparation of this Comprehensive Plan. Many of these SWOT's and their rankings were used to frame Plan goals and objectives as well as policies and recommendations contained in previous sections of this plan document.

Strengths

6 Boardwalk
6 Beach/waterfront/ocean
5 Downtown mixed-use character
5 Strong tax base/financial health
4.5 Quality of services
- Bus/street cleaning/EMS/police
- Recreation programs

3 Residential neighborhoods
2 Convention Center (as focal point)
1 Boating
1 Weather/barrier island
1 Family resort image
.5 Amusements/Trimpers, Jolly Roger
- Miniature golf
- Water sports
- Ice skating

0 Coastal cottage feel/setting
0 Northside Park
0 Linear corridor form
0 Best sunsets
0 Back bay/alternate transportation
0 Swimming
0 Fishing
0 Crabbing
0 Sunbathing
0 Sense of community attitude
0 School system
0 Fabulous restaurants
0 Assateague Island

Weaknesses

8 Competing use for transportation corridor
- cars/buses/walkers

7 Pyramidal zoning
- conflicts/residential in middle of commercial
- doesn't assure maintenance of commercial uses

5 Lack of seasonal worker housing
4 Lack of performing arts center
3 Moving people/transportation system
3 Undersized airport
- 5000 foot runway needed

3 Lack of design guidelines
1 Deliveries any time of day impair transportation system
1 Demand and need for in-town parking affects quality of streetscape
0 Limited cinema (need IMAX)
0 Lack of cultural facilities
0 No indoor public pool
0 No YMCA type facility
0 Over-ambitious parking standards
0 Not enough Park and Rides
- Off Rt. 90 corridor
- Northern end from Delaware

Opportunities

6 Parking garage in key locations
5 Downtown as pedestrian environment
4.5 Foster mixed use development
4 Diversify cultural offerings
- Performing Arts
- IMAX theater
- Environmental awareness
- aquarium

3 Reduce parking requirement/commercial
3 Use waterways/bay for travel/water taxis
3 Express bus service (40^{th} to 100^{th} Street with parking centers at each end)
2.5 Encourage extension of downtown north and development of coffee shops/bakeries/candy shops
2 Move people in entertaining ways
1 Charge more for parking in town
1 Re-development can improve:

- Health
- Safety
- Character

0 Make parking free in west Ocean City
0 Build “dedicated” worker/resident parking downtown as opposed to public parking
0 Beach access/boardwalk promenades to Third Street
- Convention Center to Princess Bayside

0 Worker dormitories/community in west Ocean City
0 West Ocean City for parks, waste disposal
0 Public boat landing on Isle of Wight
0 Enhance canals
0 Work with County on efficient transit

Threats

10 Character/quality of development
8 West Ocean City and Sussex County (sprawl)
6 Day and night trippers and traffic
5 Residential neighborhoods not priority for enhancement
- “Little Salisbury”

4 Threat to our access and services
1 Canals not maintained
1 Poorer design

Appendix C
Ocean City, Maryland
Comprehensive Plan Vision Statement

The following statements combine to establish a Vision Statement regarding how the Town of Ocean City can best be characterized in the year 2025 as a result of actions taken today and in the future to define the future Town. These statements were prepared by the Town of Ocean City Planning Commission during the course of preparation of this Comprehensive Plan. Many of these statements were used to establish the direction taken in this plan and to frame Plan goals and objectives as well as policies and recommendations contained in previous sections of this plan document.

Vision Statement

In the year 2025 Ocean City is:

- A viable family resort destination.
- A great year-round residential community.
- A community with great parks, schools and recreational programs and cultural facilities.
- A town with a safe, clean beach.
- A community with an excellent transportation system utilizing land based, water based and air based modes of transporation.
- A pedestrian-friendly community.
- Not requiring additional land in downtown for parking.
- Decks, garage parking in other locations.
- A Town with a beautiful bayfront boardwalk.
- A Town that provides interesting pedestrian connections between bay and ocean boardwalks.
- A more compact downtown that generates much activity.
- A town with successful boating/recreational fishing/golf offerings which has maintained and enhanced it's environment.

- A town with a tax base that has grown to permit maintenance of a low tax rate.
- A viable location for business and second home investments.
- A town with affordable housing in nearby locations.
- A town with a business community that has constructed employee housing for seasonal employees.
- A town with a third new bridge crossing/connection to the mainland.
- A town now planning for it's fifth park & ride facility.
- A town with a Convention Center 50% larger than it was 20 years ago.
- A town that continues to have a number of amusement parks that provide family fun and entertainment.
- A town with an airport that has expanded to support tourism.
- A town that has sustained a strong seasonal visitor population and gradually increased shoulder months visitation over the years.
- A town with design standards that have reinforced the identity of neighborhoods and business districts.
- Protected neighborhoods or district character (Inlet to 3rd).
- Managed the scale of structures from 3rd to 17th Street.
- Reinforced low-rise residential development from 17th to 33rd streets.
- Permitted variety in the height and scale of structures from 33rd Street north depending on their location but required them to be designed to demonstrate character and architectural quality.
- A town where tourism remains #1 industry.
- A town where our infrastructure (sewer and water) continue to support our needs (off Island).
- A town that has protected environmental areas and permitted several environmentally sensitive areas to serve as environmental interpretive facilities with trails.

- A town with a Performing Arts Center.
- A town with a privately-owned water taxi business(s) that is thriving and has helped diversify transit offerings (tax motive).
- A town with health care facilities that have grown to meet needs in both north and south town areas.
- A town that is easier to get to for visitors with the 3rd and 4th Chesapeake Bay crossings.
- A town with new post office and library service the downtown area.
- A no gambling community.

Appendix D
RECOMMENDED RESIDENTIAL, MIXED USE AND SMALL HOTEL, INFILL AND REDEVELOPMENT GUIDELINES
Town of Ocean City, Maryland

Table of Contents

INTRODUCTION

Ocean City's residential neighborhoods, hotels, business districts, and downtown mix of uses all contribute significantly to the communities' character, identity, and high quality of life. The following design and development guidelines are intended to encourage enhancement of these areas and to promote qualities and character in future development that is consistent with adopted goals and objectives identified in the Ocean City Comprehensive Plan.

The following design and development guidelines are advisory for permitted uses, but may also be used for those uses requiring discretionary review to encourage the highest level of design quality while at the same time providing the flexibility necessary to encourage creativity and innovation on the part of developers and designers.

These guidelines do not constitute regulation although many could be incorporated into design standards in the future. They apply to infill and redevelopment of residential, hotel and mixed use sites located from 3rd Street to 33rd Street, and like the commercial guidelines (see appendix C), they emphasize appropriate design linkages and context sensitivity in site planning and building design. They supplement the design standards already established within the Downtown area, which are administered by the Town in cooperation with the Ocean City Development Corporation (OCDC). Persons proposing residential development or re-development in the Town of Ocean City are advised to consult these guidelines and incorporate them to the extent practicable in development plans.

PURPOSE

The design guidelines presented below are primarily intended to ensure quality infill development and quality redevelopment of existing single family and multi-family residential structures in various Town neighborhoods. Ocean City contains a number of mature neighborhoods, including residential neighborhoods with limited opportunity for new single-family construction. Compatibility with nearby residences in these areas is of considerable importance, therefore the purpose of these guidelines are:

1. To establish design guidelines for residential in-fill and redevelopment.
2. To establish design principles that result in new single family detached in-fill housing and rebuilds that are more sensitive to existing housing and neighborhoods.
3. To establish design principles that result in new multi-family and condominium unit housing and rebuilds that are more sensitive to the character of neighborhoods in which they are located.
4. To suggest a range of possible solutions with the goal of achieving a high standard of design.

Future proposed development/re-development should not be restricted to the confines of traditional architecture. Opportunities for contemporary design should not be precluded. The guidelines are intended to stimulate the imagination of designers rather than to limit development

flexibility or to dictate actual design solutions.

STREETSCAPE/NEIGHBORHOOD

Infill and redevelopment in existing neighborhoods should incorporate distinctive architectural characteristics of surrounding development. For example, these characteristics include complementary window and door detailing, decoration, architectural styles, materials, roof style and pitch, finished-floor height, porches and bay windows. New development should also continue the relationships of the surrounding neighborhood. Examples of common patterns that should be continued include entries facing the street, roof pitches, balconies, and front porches.

In assessing the "fit" of an infill dwelling or multi-family residential/condominium structure, the neighborhood must be considered at two levels:

- The immediate context, i.e., how the building relates to and impacts upon adjacent buildings or buildings in the immediate vicinity.
- The broader context, i.e., how the building relates to the visual character and scale of the neighborhood created by the collection of structures on both sides of the street in which the building is situated.

The former refers to how the design of the new building is influenced by the adjacent structures. The latter refers to what effects the new building may have on the neighborhood or district in which it is located.

In some neighborhoods visual character is clearly defined and there is little flexibility to do something "different" and contrary to existing patterns. However, Ocean City displays a wide variety and richness in visual character of many of its neighborhoods, often from one street to another. Thus, in many circumstances, the building designer will be presented with unique and unusual design opportunities. There will be some neighborhoods where major changes are taking place and/or where the existing streetscape has little visual cohesiveness. In these circumstances it may be appropriate for the designer not to harmonize with the existing structures but to set new standards.

Building patterns and rhythms, which define the visual character, should be respected. A street will develop a certain pattern or rhythm giving cohesiveness to the whole streetscape. A sudden change in this pattern can appear disruptive and visually upsetting. These patterns and rhythms are established by various design elements, which include:

- Building height
- Building form (bungalow, 2 story, or multi-story larger condominium units structure, etc.)
- Roof shape
- Architectural massing
- Finish materials, ornamentation and details
- Landscaping

Generally new residential structures on infill lots should rhythms, and massing, respecting proportions and details and, if appropriate, incorporating some of these into the new design.

ELEMENTS OF DESIGN

"Designing in context means providing enough visual linkages between existing buildings and a proposed project so as to create a cohesive overall effect" (*Fundamentals of Urban Design*, Richard Hedman with Andrew Jaszewski, American Planning Association, 1984). These residential infill design guidelines examine five fundamental and related elements of design. They are intended to be used in an advisory capacity and as a supplement to any existing standards contained in the Zoning Ordinance. The five primary areas that the guidelines address are:

- Siting and Location
- Architectural Envelope
- Openings
- Texture and Details
- Landscaping

The applicant should identify repeated forms, patterns and rhythms within the block face which can be repeated or complimented with new design elements. Side-by-side placement of very similar designs is discouraged. Photographs of the site and the surrounding houses, including the existing streetscape elements, e.g., sidewalks, street trees and landscaping, signage, etc, should accompany any application for infill residential projects.

SITING AND LOCATION

The location of the proposed development site and the position of the building on that site guide the most basic principles about design.

When the proposed structure is to be located on a corner it should respond to and enhance the streetscape of the front and flanking street without adversely affecting the adjoining properties. The design should respond to the dual frontage of corner lots by incorporating the same level of interesting architectural treatment (windows, projections, ornamentation, etc.) in the flanking street design as in the frontage design.

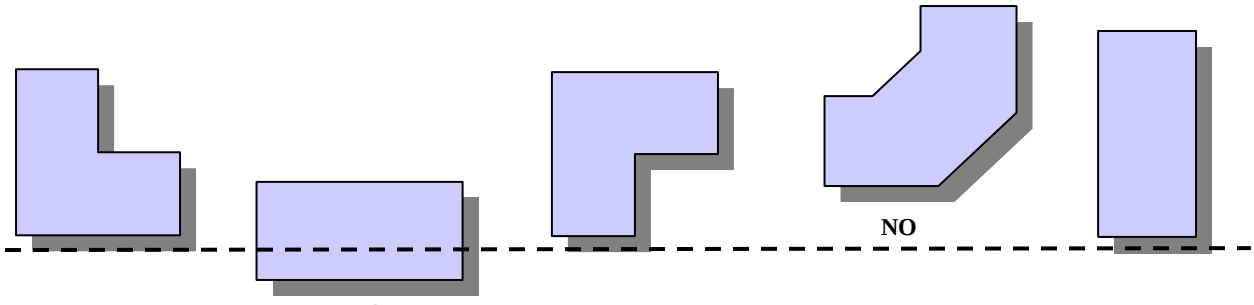
Sound corner lot treatment of mixed use structure in Downtown area. Building incorporates same level of interest and design on both fronting and flanking streets.

Buildings located on corner lots should take advantage of the dual frontage, make an architectural statement, and create interest in architecture and human activity on each street. Such a statement can be accomplished by providing wrap around porches, bay windows, turrets, varied exterior materials, roof features, hureinforce existing patterns, 2es, and articulation. Varied materials should be consistent with one another.

Setbacks

Building setbacks are the distance between a structure's edges and the property lines. They create yard spaces for outdoor activity and landscaping. The pattern of street setbacks helps establish a rhythm to the streetscape and provides a transition between the public realm and the privacy of the house.

Single-family development in existing neighborhoods must be well integrated with existing dwelling units in the surrounding area. Site setbacks for infill or rebuilt units should generally equal the average of setbacks on both sides of the street. In cases where averaging is applied, the new building may be averaged in a stepping pattern between the front yards of the adjacent structures, or the new building's entire frontage may be built on the average setback line.



Front

Front setbacks vary from neighborhood to neighborhood, and established streetscape patterns may differ from setback requirements of the zoning district. Unless handled carefully, a setback that varies significantly from the established pattern may be disruptive to the streetscape. The extension of architectural elements (such as bay windows, chimneys, and fireplaces) into the front yard may add welcome variety to street facades.

Side

Relaxation of side yard requirements may be appropriate in some instances to facilitate interesting and innovative design solutions, provided that the encroachment into the setback does not adversely affect the privacy, sunlight or views of the adjacent property, nor restrain the potential of the adjacent property for future development.

These architectural elements and treatments (such as bay windows, chimney elements, indentations, and fireplaces) which project into the side yard should be setback from the front facade to lessen the impact on streetscape.

Where a neighboring structure is very close to the property line a larger minimum setback may be warranted.

Rear

Neighboring properties may have much greater rear yard setbacks than those of a proposed new dwelling unit. Where such a house projects into the rear yard beyond the established pattern of existing structures, privacy, access to sunlight and views are important design considerations.

To reduce overshadowing of neighboring properties, the proposed dwelling unit can be stepped back in design, with single story portions closer to the property line and two story portions confined to the central part of the plan.

Above grade balconies, decks and windows should be carefully placed and may be oriented to face away from neighboring yards to respect the neighbors' wish for privacy. The use of landscaping and fencing may increase the visual separation between the residences and enhance the streetscape, however, care should be taken to consult with immediate neighbors as some may welcome a degree of 'social encroachment' if it contributes to neighborhood security. As well, inappropriate landscaping may disrupt views and sunlight.

Parking

Parking should be not sited in the front yard, reserving this area primarily as open space. Front drives can function as visitor parking. Parking should be placed to the rear of buildings where feasible with access from alleys, if they are provided. Alternatively, parking may be accessible from the front and located in the rear of the site, to the side, or in front, provided it is adequately setback from the principal entry.

Alleys can provide access to parking behind buildings.

Front Loaded Parking

Front loaded garages should conform to the following development guidelines:

- Upper level dormers should be used to de-emphasize the garage.
- Porches or façades should protrude at least five (5) feet in front of garage doors.
- Garage openings, trims, and color should de-emphasize the role of the visual impact of the garage in relation to the building as a whole.

Rear Loaded Parking

Rear loaded garages should conform to the following development guideline:

- Detached garages located behind the principal structure but accessible from the street should be considered accessory structures and should be consistent with the architecture and design of the principal structure.
- Consistency of design includes use of the same or compatible siding, roofing, trim, and colors.

Side Loaded Parking

Side loaded garages with parking on the side should conform to the following development guidelines:

- Shared driveways are encouraged when two lots with parking located on the side are adjacent to one another.
- Windows, doors, and roof treatments of the garage-facing street should incorporate architectural detail expressive of a residence.

Traditional linear driveways are encouraged. To preserve the pedestrian friendliness that exists in many of the existing single-family neighborhoods and to minimize the amount of land devoted to parking, access and impervious surfaces, U-shaped driveways should be prohibited.

Driveways on corner lots should be placed as far as possible from the intersection.

When a front drive or parking in the front setback is provided additional landscaping and screening should be provided to soften the visual impact. For instance, a low hedge or shrub bed might be located between the neighboring property and the parking pad or a vine-covered trellis may define the boundary between the pad and side yard access to the rear. The intent is to make the pad an integral part of the landscaping - not an afterthought poured on the front yard. The house may be shaped to provide partial screening of the parking pad (such as an “L”).

To reduce surface runoff and increase green space, property owners should consider a permeable alternative to pavement, e.g., “grasscrete”, tire strips or other permeable paving materials and solutions.

Street Connections

The design of infill development should ensure that new streets provided for infill developments that are compatible with the established street pattern and support the expansion of the overall grid street system. This may be accomplished by evaluating future street connections prior to

submitting a preliminary plat.

To the maximum extent practicable, infill projects should provide a complete connection through the site to tie into existing streets. Future expansions of existing cul-de-sacs and other street extensions should be examined to avoid placing limitations on redevelopment options. The use of cul-de-sacs in place of complete through-street connections is strongly discouraged. Dead end streets should not be permitted except in cases when the street is designed to connect with future streets on adjacent land.

Pedestrian Pathways

Pedestrian connections from the front door of a dwelling to the sidewalk are encouraged and should have a minimum width of three feet. Residents are required to maintain the sidewalks in front of their property.

- New public sidewalk surface material in the residential areas should reinforce the context of each neighborhood.

Lot Coverage

In general, the lot coverage for residential rebuilds should not exceed 30 percent of the lot. However, established lot coverage patterns in the adjacent area should dictate appropriate coverage ratios for new single-family development. Lot coverage for multi-family/condominium sites may be higher but should also respect the coverage patterns in the adjacent area.

Impervious Surfaces

All land not covered by structures, driveways, walkways, porches, and patios should be appropriately landscaped with trees, grasses, shrubs, and other plants to minimize the amount of impervious surfaces that create runoff.

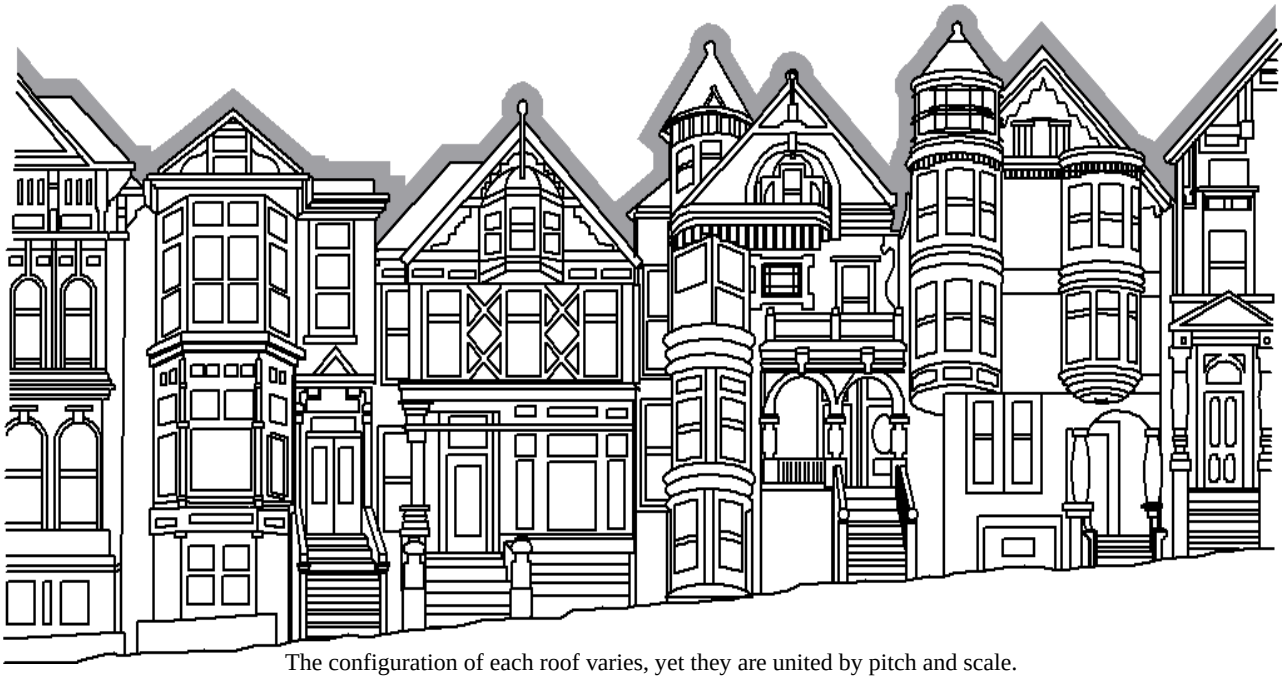
ARCHITECTURAL ENVELOPE

Orientation

Building orientation should reflect that of the neighboring properties. For example, where the predominant pattern in the block is gable ends of dwellings oriented perpendicular to the street, new infill development should be so oriented.

Roofs

Infill development and rebuilds should have roof pitches that are complementary to existing ones along the block where redevelopment is proposed. Respect roofline patterns if there is a dominant attractive form. The roof should relate in style and slope to the existing streetscape. Details that characterize the roof should reflect the slope, existing materials, soffit, overhang



The configuration of each roof varies, yet they are united by pitch and scale.

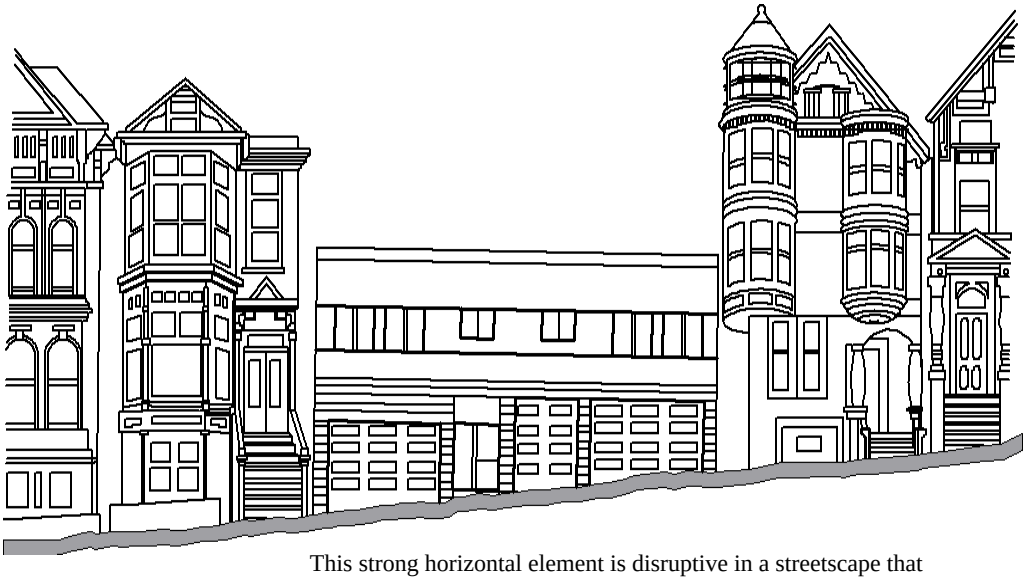
Source: Fundamentals of Urban Design, Richard Hedman, American Planning Association, 1984

depth and decorative elements common to the character of the neighboring buildings. In general, a strong repetition of rooflines consistent with a streetscape requires similar construction. A consistent pattern may not be apparent unless the entire block is considered. If there is not apparent pattern to the roof forms, the design may respond more specifically to one pattern over another. Picking up on several themes may help tie the visual impact of the streetscape together.

If a new building is taller than its neighbors, setting the taller element back from the lower level at the street facade may be appropriate. Corner buildings may benefit from this type of setback on oth frontages. One principal roof form should be chosen for the main body of the house. This will set the roof slope and material for all other roof elements. Roof forms on corner lots should acknowledge frontage on both streets.

Massing and Proportions

Massing and building proportion of established housing should be reflected in new development. Massing has to do with the overall bulk



This strong horizontal element is disruptive in a streetscape that is dominated by vertical elements.

of a building and how it is distributed in space. Proportion has to do with how the parts or elements of the building relate to each other in terms of dimensions. Massing and proportion can have a significant impact on how a building fits into a streetscape or neighborhood. A building with strong horizontal elements in a streetscape with vertical elements can be disruptive. Likewise, a building with a strong vertical element in a streetscape dominated by horizontal elements can be equally disruptive.

A strong vertical element in a streetscape dominated by horizontal elements can also be disruptive.

When similar massing is not possible to achieve, the building facade of a dwelling can be broken into smaller elements creating an illusion of a smaller building in scale with its neighbors.

New infill development and rebuilds of existing structures should maintain the scale of the surrounding block face with respect to height, bulk, and structure size. In areas where existing rooming houses, hotels, or other residential structures are predominantly two or three stories in height, new infill development and rebuilds should be limited to no more than three stories, even if existing zoning regulations allow four or five.

In areas with predominantly smaller dwelling units, new infill development and rebuilds are encouraged to respect the existing scale of development and prevent becoming dominant features. Where there is not consistent streetscape in a block the proposed structure should relate to its immediate neighbors possibly incorporating some of the more appealing features found along the street.


Similar massing of structures shown here on Baltimore Avenue reinforces sense of streetscape.

Building and Lot Orientation

- The orientation of infill development should be consistent with the established pattern of the neighborhood.
- Building Entrance. The front entrance to a single-family or duplex dwelling should be located on the front façade, and oriented towards the front yard and primary access street.
- Attached Garages. The front wall plane of all attached garages should be recessed behind the front wall plane of the dwelling's ground floor living area or a covered porch by a minimum of four feet.
- Lot Orientation. To the maximum extent practicable, the orientation of new lots created by subdivision or splitting of existing lots should repeat the predominant relationship of

buildings to buildings and buildings to street along the same and facing block faces.

OPENINGS

Entryways, the placement of windows and doors, (fenestration) and porches make up the most distinctive elements of a building or house facade.

Entryways

Character buildings in existing neighborhoods emphasize the principal entry. The entryway is most often placed on the front facade; it may have a wide set of stairs with an intermediate landing leading to it; the door itself may be elaborately paneled and have a glaze transom or sidelights.

The Admiral Hotel's principal entry combines stairs with wrap around porches to create a distinctive and inviting sense of arrival.

The entryway of new structures should be apparent and clearly visible. The entryway should be emphasized by echoing character elements from neighboring houses or by introducing equivalent focal detail. Entry porches are encouraged where existing streetscape has such features.

Where possible, the height of the entry from the street should reflect that of its neighbors. Ground level entry in a street of raised entries could disrupt visual continuity.

Stairs to the principal entry should be wide and interesting from the street. They may include planters, intermediate landings, sidewalks, banisters, and walkway lighting.

Windows

The proportion, size and detailing of windows should relate to that of neighboring houses. The number, size and composition of windows should approximate ratios of its neighbors. From the street, excessive use of glazing should be exercised carefully and should be tempered by the need to retain a certain amount of solid wall surface. At the same time. the excessive use of solid wall should be tempered with the need to provide light and fresh air within the structure, and to provide views and security to the front yard and street. Careful arrangement, placement, proportioning and detailing of windows and trim can add interest, balance and order to the facade.

Windows in older structures are often framed by a variety of elements such as sash, stained glass, lintels, sills and pediments. New structures should have windows that are similarly differentiated from the wall surface utilizing details such as wide wood trim.

Infill structures should as much as possible reflect the window style predominant to the neighbors. Generally, vertical window proportions should be used; however, they may be assembled into large horizontal openings.

In general, window placement should respect the privacy of adjacent properties. Windows should be oriented away from neighboring yards and windows. If this in not possible, they should be positioned to maximize privacy for the new house and its neighbors, although some neighbors may welcome some loss of privacy if there are positive aspects such as increased security. Neighbors should be consulted regarding the effect of window placement.

Porches

Porches are highly encouraged in locations where they have traditionally been part of the streetscape. Porches, where provided, should be at least sixty (60) square feet, with a minimum dimension of six (6) feet in depth. Structures that do not include porches should provide an articulated by not overly pronounced entryway. Examples of articulated entryways include rounded doors, columns, and/or other similar features.

Garage Doors

Garage doors along the street front should be discouraged. They can dominate the streetscape, as they are the largest opening in the front facade. When they must be front facing, the garage door and its immediate surround should be visually interesting. Detailing such as recessing the doorway to create deep shadows, providing plant shelf recesses flanking the door or setting the garage facade back from the rest of the house will lessen its visual impact.

Under the appropriate set of circumstances, a detached garage could be used as an element of design in resolving issues of privacy and site planning. The garage could be located in the rear yard to help define social space. In rare cases a front yard siting may be sought through the variance process.

TEXTURE AND MATERIALS

Finishes and Materials

Predominant exterior building materials should be of high quality. These include brick, wood or vinyl siding, stone and tinted/textured concrete masonry units.
The choice and mix of materials on the facades of structures is important in providing an attractive streetscape environment. Materials should be consistently applied and should be chosen to work harmoniously with adjacent materials.

Exterior finishes and materials should be consistent with those used in the neighborhood. The repetition of similar finishes and material along the street contributes to the visual continuity of the neighborhood. Exterior finishes vary from street to street and include narrow horizontal siding, brick, asbestos shingles and cedar shingles. New structures should use materials and

finishes that are visually compatible and harmonize the new with existing structures. The building need not duplicate or replicate the neighbors but could reference the traditional style through the selection of materials.

The choice of materials can help express the buildings proportions and massing. Different materials may be used to define different levels of the house such as the base and the top. Material should be chosen for their textural appearance (rugged, smooth) or for some symbolic meaning (massive base, foundation stone).

Materials, finishes and ornamentation should appear as integral parts of the structure rather than stuck on. Front facade treatments should wrap around the sides of the house visible from the street. Corner lots should have both exposed facades treated equally as well as any other side walls exposed to the streets.

Ornamentation

Structures should have finished architectural facade treatment and detail on all elevations that are visible from public ways or adjoining properties. Facades greater than 100 feet in length should incorporate recesses and projections along at least 20% of the length of the facade. For larger buildings, windows, awnings and arcades should total at least 60% of the facade length visible from a public street. Greater architectural interest should be encouraged for larger structures by directing the use of a repeating pattern of change in color, texture and material modules at intervals of no more than 30 feet."

The level of richness in ornamentation of the neighboring houses should be uses as a guide without literal mimicking. Ornamentation should be uses with restraint and in the context of the existing neighborhood. When incorporated into the design, the use of brackets, eaves, cornices, columns and capitals should come from an understanding of their original structural use.

Ornamentation varies with periods of architectural style. The infill house designer should understand the predominant style of a particular streetscape and may design the infill dwelling unit to echo those themes. This does not mean copying or repeating details, but rather using the existing details as a basis for incorporating contemporary but visually related detail into the new house.

Roof Detail

Pitched roofs and gables are encouraged. Where pitched roofs are not practical from an engineering basis or are not cost effective, false gables and mansards can achieve a similar appearance. Flat roofs with exposed mechanical fixtures should be avoided. For larger structures, variations in rooflines should be required to reduce scale and add visual interest. Roofs for larger structures should have at least two of the following features: overhanging eaves, sloped roofs and three or more roof planes."

Incorporation of character elements such as dormers, eaves and secondary roof elements over bay windows, porches, etc., are encouraged to reduce the impact of large roof areas and to

provide a sense of scale to the house.

Color

Facade colors should be of low reflectance, subtle or neutral earth tone colors. The use of high-intensity colors, metallic colors, black or fluorescent colors should be prohibited. Building trim may feature brighter colors, but neon tubing should not be permitted.

Color schemes which are compatible with the neighborhood are encouraged. Older character homes often have painted wood surfaces - siding or shingles. Often color schemes are muted with one or two strong accent colors on trim elements. While there are some successful exceptions, particularly recalling historical color schemes, vibrant colors should be used with extreme discretion and in small amounts.

ADDITIONS

In planning an addition it is important to pay careful attention to the architectural style of the existing structure. In many cases, additions can dramatically change the appearance of the structure and, therefore, the character of the neighborhood. Examples of ways to guide the quality of additions include the following:

- Ensure that the scale and mass of the addition is in keeping with that of the original structure, and that when completed the redeveloped residence does not visually overwhelm neighboring structures.
- Limit the location of additions to the side and rear sides of the structure, so as not to disrupt established setback of the building. In particular, the construction of garages should never project beyond the plane of the original facade.
- Ensure that the additions roof matches or complements the design of the original structure.
- Architectural elements such as windows should respect the prevailing geometry of the original structure. For instance, windows with a vertical orientation can compete with those of a horizontal orientation.
- Ensure the materials used for the addition are consistent with those of the original structure.

LANDSCAPING

Foundation landscaping and shade trees should be used to soften the appearance of buildings and add visual appeal to pedestrian plazas and sidewalks.

Adequate landscape buffering and screening along site perimeters should be used to protect adjacent residential neighborhoods and residential and mixed-use zoned properties. Landscape buffers between incompatible uses should be wide and dense enough to completely screen proposed development from adjoining properties. Landscape buffers should also be planted along the frontage of Coastal Highway corridor.

Front yards are prominent features of the streetscape. The area is often treated as a grassed semi-public zone with detailed planting beds particularly at the base of the house. In general front yard landscaping should reflect that of the neighborhood, understanding that plant size and maturity may be somewhat less than the neighbors.

As much as possible, infill projects should retain healthy mature trees on the lot. Any mature tree that is removed to accommodate the new house should be replaced with one or more other specimens. Placement of the new tree should respect neighbor's concerns, e.g., loss of views, overshadowing and so on.

In front yards, infill projects should provide for soft landscaping to define the line between the public domain and private property.

Mature trees are one of the elements that contribute to the distinct character of neighborhoods. To protect these features and resources, infill projects should work with the context and integrity of this environment by preserving natural features to the maximum extent practicable.

Existing significant trees and natural features, such as drainage corridors, should be preserved to the maximum extent practicable.

To the maximum extent practicable, significant trees should be preserved and integrated into the site or lot layout. "Significant" trees include the following:

- Deciduous trees with twelve (12) inch minimum caliper;
- Evergreen trees twelve (12) feet or more in height; or
- Groups or stands of ten (10) or more trees with a minimum caliper of six (6) inches.

If a significant tree designated to be preserved is removed or substantially damaged during clearing, grading, or construction, the applicant or developer should replace the removed or damaged tree with new trees. Replacement trees should be the same or similar species to the trees removed or damaged, or alternately a species native to Worcester County.

Appendix E
COMMERCIAL INFILL AND REDEVELOPMENT GUIDELINES
Town of Ocean City, Maryland

Table of Contents

INTRODUCTION

Commercial and business redevelopment opportunities in areas of the Town of Ocean City fronting on Coastal Highway and Philadelphia Avenue or in other locations north of 33rd street are uniquely challenged to utilize re-development opportunities to upgrade the character and quality of development and thus the image of Ocean City. Given the mix of land uses found within this area and along the corridor different types of land uses and land use intensities are often adjacent or in close proximity to each other. Redevelopment and infill projects should not fragment existing positive street patterns. New structures should complement, and where possible, enhance existing buildings by employing appropriate orientations, design characteristics, setbacks, or adequate screening. Successfully reinforcing a pattern of mixed use or mixed-intensity development in infill and redevelopment projects will require more sensitivity to overall community character than has been evident in the past. Too many projects in the past have been designed to make their own statement as opposed to reflecting context sensitive design criteria.

Infill and redevelopment potential are not limited to site fronting Coastal Highway. Suburban shopping centers and individual commercial and business sites located "off-highway" (e.g., along the bayfront or near bayfront locations) also present opportunities for infill and redevelopment that can benefit the image of Ocean City through improved visual appearance, as well as better access and circulation. Finally good design is good business and can translate to improved sales and property values to business and property owners.

PURPOSE

The following guidelines apply to infill and redevelopment of commercial and business sites (generally referred to as "commercial"). Like the residential and mixed use guidelines, they emphasize appropriate design linkages and context sensitivity in site planning and building design. And like the residential guidelines, these are not regulations. Persons proposing commercial, business, office, condominium and or mixed-use development in locations north of 33rd street in Ocean City are advised to consult these guidelines and incorporate them in development plans.

SITE PLANNING

The appearance of typical, monolithic strip commercial and big-box retail centers should be strongly discouraged. Instead, more modestly scaled commercial structures grouped in clustered settings with pedestrian-oriented open spaces and plazas should be encouraged. Where the physical separation of structures is not practical or is cost prohibitive, variable facades and storefront setbacks can achieve a similar appearance.

Site Amenities

- Site amenities and features such as outdoor plazas and public art offer attractive spaces for people to gather and shop and generally create an inviting image for both customers and employees. The use of such amenities can be particularly effective in drawing residents to areas that have experienced infill or redevelopment. Site amenities provide areas for interaction, enhance the quality of development, and contribute to the character of the area.

- Larger commercial infill and redevelopment project (15,000 square feet of floor area or greater) should contribute to the creation or enhancement of public spaces by incorporating 2 or more site amenities. Examples include, but are not limited to, the following:

    - Patio or plaza with seating area;
    - Mini-parks, squares, or greens;
    - Transportation amenities, including bus stops where appropriate;
    - Customer walkways or pass-throughs containing window displays;
    - Water feature;
    - Clock tower;
    - Public art;
    - Any other well designed area and/or focal feature that enhances such development and serves as a gathering place.

SITE LAYOUT/DEVELOPMENT PATTERN (DEVELOPMENT SETBACK/ORIENTATION)

Developments should have primary access to major roadways or service roads and streets with immediate access to major roadways. Wherever practical, businesses should have customer entrances facing local streets and service roads rather than Coastal Highway. Where commercial development may be patronized by community residents, secondary traffic access and pedestrian connections to a local street, may be desirable. Structures should have clearly defined and highly visible customer entrances with features such as canopies, porticos, arcades, arches, wingwalls and architecturally integrated planters utilized to define such entries.

Site Layout and Building Orientation

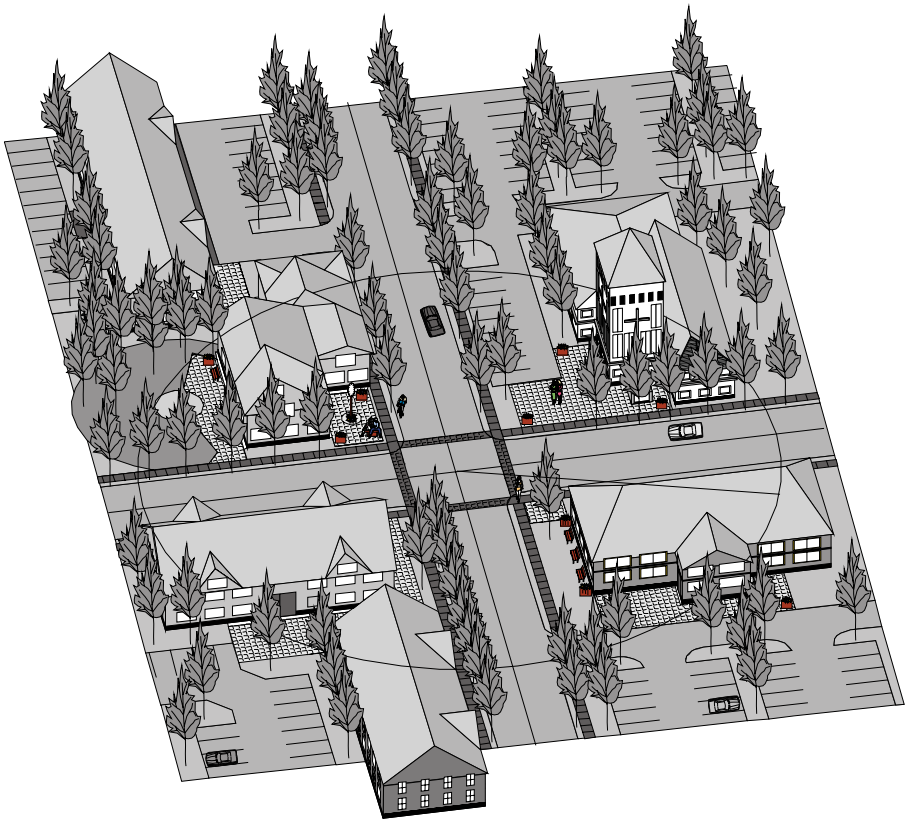
The layout of principal buildings and accessory structures and parking areas along a street is an example of a repeated site pattern that creates a cohesive visual identity and attractive pedestrian street scene for an area. Creating a strongly defined street edge will improve an area's visual appeal. This principal applies to development along Coastal Highway as well as near bay-side locations. Ocean front re-development can be viewed in much the same way with a need to create a strongly defined Beach edge. As redevelopment of northern reaches of Ocean City occurs the opportunity to create new centers from which edge uses expand outwards will grow

over time and modify the overall fabric of development. This, in turn, creates opportunity to establish a sense of neighborhoods along the corridor where neighborhood identity may currently be absent.

The orientation of a building strongly influences a development site's focus of activity. A building oriented at least in part to an adjoining public street can create a strong presence in the public realm, and can contribute significantly to a pedestrian-friendly built environment. On the other hand, street frontage interrupted by long stretches of parking lot asphalt or other "empty spaces" can detract from a positive pedestrian experience. These guidelines encourage the creation of a continuous, defined street edge, whether comprised of buildings, walls, or vegetation, in order to enhance the pedestrian experience, while in return allowing a developer to maximize the developable area of an infill or redevelopment parcel.

Design Guidelines

- General Site Layout Along Major Street Frontages:
    - At least some (a minimum of thirty percent) of a development site's street frontage(s) along major streets (arterials and major collector streets) should be occupied by building wall. Such building wall may be part of a principal building, pad site building, or accessory building. In the case of drive-thru facilities, a site wall of a minimum three (3) feet in height, that reflects the building architecture may be used to meet the 30% target.
    - The remaining frontage along major streets should be occupied by a decorative architectural feature such as a wall placed on the setback line to screen the parking area, or substantial landscaping, landscaped entryway signage or features, and/or site amenities.
    - Site Layout and Building Orientation at Major Intersections.
    - Major intersections of commercial activity need special attention so that all four corners are linked and function as a whole, and so that a sense of place and "arrival" is maintained or created. Commercial developments located at the intersection of two major streets should comply with the following guidelines:
    - Primary parking areas and drive-through facilities should not be located within a 150-foot radius measured from the intersection of the centerlines of the two thoroughfare streets.
    - It is important to determine the required stormwater prior to the design of the site footprint based on the density and zoning. Stormwater management is last to be considered. Architects should not be maximizing the site and not leave room for stormwater management.



Development located within a 150-foot radius from the intersection of the centerlines should include two or more focal point features visible from the intersection.

- Development located within a 150-foot radius from the intersection of the centerlines of the two thoroughfare streets should include two or more focal point features which are visible from the intersection streets such as:
- a distinctive design that does not represent standard franchise architecture;
- a taller architectural feature or appendage (e.g., a clock tower, spire, or interesting roof form);
- public art or sculpture;
- fountains or other water feature;

- public plazas or other open space; or
- landscape feature that makes a statement.

- Additions to Strip Centers.
  - To the maximum extent practicable, additions of leasable square footage to strip commercial centers should avoid extending the linear pattern or line created by an existing strip building(s).
  - Additions of leasable square footage or structures should be arranged to help frame and define the fronting streets and the walking and shopping areas along those streets.

- Orientation of Entry Facades.
  - Entry facades should orient towards the primary street or the active pedestrian zone within the site to create an inviting image and consistent front and street edge definition.

Multiple-Building Developments/Pad Sites

The siting and design of smaller retail stores, or "pads," can create an inviting appearance in a larger, multiple-building development by reducing a project's scale and expanding the range of activities and businesses found within a single development. Adding pad sites to a commercial center can help to improve the development's visual interest by framing entries and placing storefront spaces closer to the street to create a more active street scene. The siting and orientation of these smaller stores should create spaces that relate to both the primary buildings and the street frontage and should be architecturally compatible with the primary or anchor buildings of the development.

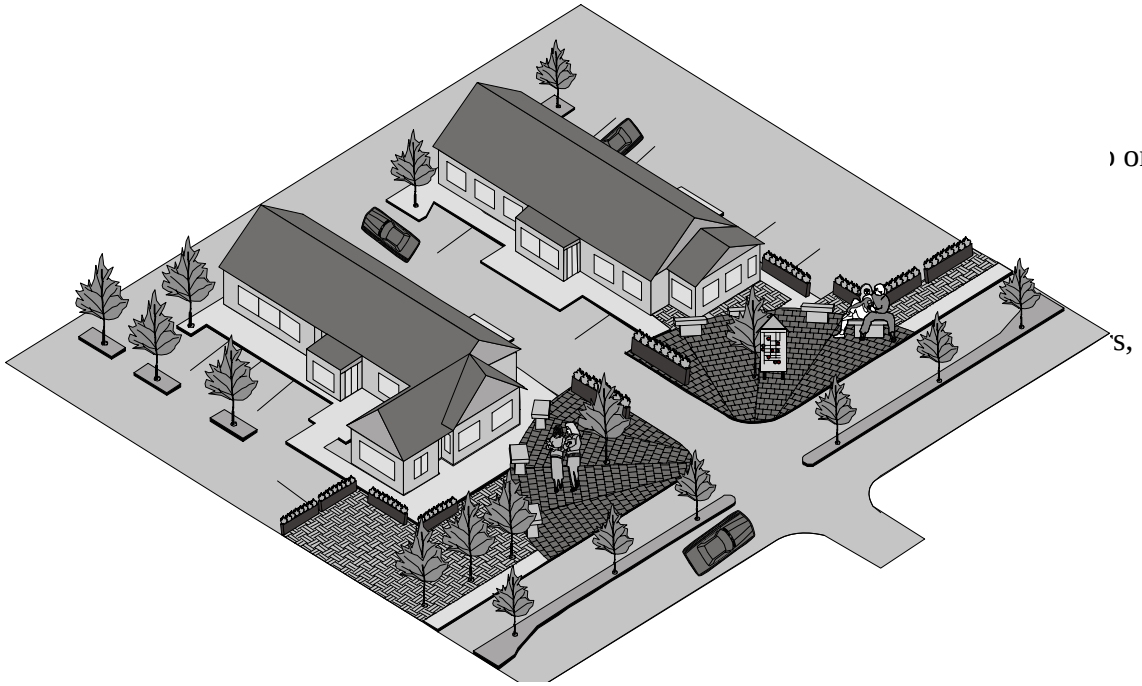
- Design Guidelines
  - Location of Pad Sites.

    Pad site buildings should be sited along the edge of entry drives or between a large parking lot and the street to help define the streetscape and lessen the visual impact of the parking lot from the street.
  - Building Orientation On Pad Sites.

    Any side of a pad site building that directly faces a public street should contain a combination of at least two (2) of the following:

- customer entrance, windows, trellises, awnings, arcades, pergolas, or planters. Customer entrances should be emphasized through incorporation of a building recess, projections, canopy, or similar design element.

- To the maximum extent practicable, spaces between adjacent pad site buildings should be improved to provide small pockets (preferably heavily landscaped) of customer parking, pedestrian connections, small scale project amenities, or focal points. Examples include, without limitation:



To the extent possible, spaces between pad site buildings should incorporated landscaped pedestrian ways, public seating areas, landscaped areas, and sculptures or foundations.

- Facade colors;
- Pedestrian entry locations and entryway architecture/design;
- Amounts of glazing on facades visible from public streets; and
- Other distinctive architectural features.

- Significant departures from "off-the-shelf" standardized franchise building design may be required to meet the above standard.

- Pad site buildings should incorporate exterior building materials from the material palette used on the primary commercial building(s).

Relationship to Surrounding Development: Operational Compatibility

Commercial infill and redevelopment adjacent to or in relatively close proximity to residential uses should relate well to surrounding development. Such development should respect adjacent residential uses and surrounding neighborhoods by ensuring intensive operations, such as loading areas, do not adversely impact neighbors.

Commercial infill and redevelopment adjacent to or in relatively close proximity to residential uses should relate well to surrounding development.

- Design Guidelines
    - The Planning Commission may impose conditions upon the approval of development applications to ensure that infill and redevelopment projects will be compatible with existing neighborhoods and uses, including, but not limited to, conditions on the following:

        (1) Location on a site of activities that generate potential adverse impacts on adjacent uses such as noise and glare;
        (2) Placement of trash receptacles;
        (3) Location of delivery and loading zones.

Vehicular Access and Circulation

Internal vehicle circulation should provide a clear visual path to provide safe, convenient and efficient vehicular access within and between developments. Circulation patterns should be designed to limit points of access from major thoroughfares and minimize the impacts of non-residential traffic on adjacent residential properties.

- Design Guidelines

  - Primary Vehicle Access-Large Commercial Centers.

    (1) Primary access to large commercial centers should be from the major collector street system. In order to maximize the efficiency of the street network, major traffic generators should be located so that their primary access is from a major collector or commercial access road.

    (2) Large commercial centers should be located at the intersection of major streets so that access is available for both east/west and north/south traffic. Primary access points should be located so that commercial traffic is separated from the residential street system and sufficiently separated from the intersection to provide turning lanes.

  - Primary Vehicle Entrances. The number and location of vehicle entrances to a commercial development should be consistent with the existing or anticipated design of adjacent streets.

    (1) To the maximum extent feasible, the number of entry driveways on a thoroughfare street should be minimized in order to reduce the number of conflicting points and facilitate traffic flow.

    (2) It is recognized however that certain existing tracts may not be able to fully comply with these guidelines due to limited frontage or other constraints. When compliance with the guidelines is precluded due to the location of driveways on adjoining properties, attempts should be made to obtain alternative access where feasible, including joint access driveways,shared parking with adjacent landowners, access easements to adjoining properties, or access to intersecting streets.

  - Internal Vehicle Circulation.

    (1) Internal vehicle circulation patterns should provide a clear and direct path to the principal customer entrance of the primary building, to outlying pad sites, and to each parking area.

    (2) In large commercial centers, a clear system of main circulation drives (containing few or no parking spaces that directly access the main drives) should be established to carry the highest volumes of traffic within the site. To the maximum extent feasible, the intersection of two main circulation drives should be designed as a "t" intersection, rather than a four-legged intersection, to minimize vehicular conflicts.

(3) In small commercial centers (less than 25,000 square feet), where traffic volumes are lower and, consequently, pedestrian-vehicular and vehicular-vehicular conflicts are less likely, more flexibility is available in the location and design of internal drives.

(a) Because of the lower traffic volumes, entry drive throat lengths can be shorter.

(b) The use of four-legged intersections can be utilized more extensively.

(c) Depending on the size of the shopping center and the number and location of access points, fewer restrictions may be placed on the extent to which traffic entering the site is directed to the drives along the building facades.

(4) Main drive aisles should be continuous and connect to the main entrance to the development site.

(5) Internal intersections must have adequate sight lines, design geometrics, and/or traffic controls to minimize accident potential.

- On-Site Truck Traffic/Loading and Circulation.

(1) Every shopping center is required to provide loading and delivery facilities separate from customer parking and pedestrian areas.

(2) Due to their greater size and lower maneuverability, truck circulation paths should be designed with larger curve radii and more maneuvering room.

(3) As the size of the development and the volume of trucks increase, internal circulation patterns should reflect an increasing separation between automobile and truck traffic in order to minimize accidents and congestion.

- Vehicle Connections With Adjacent Properties.

(1) Adjacent Non-Residential Uses:

(a) To the maximum extent feasible, connections between adjacent non-residential development parcels shall be provided by siting a logical array of access points continuous to the adjacent development.

(b) To the maximum extent feasible, common or shared service and delivery access should be provided between adjacent parcels and/or buildings.

(2) Adjacent Residential Uses: Commercial drives or on-site streets should not align with access to adjacent residential developments. Exceptions may be made in cases where physical constraints dictate that no other option is possible.

(3) Emergency Access: All commercial developments must comply with the currently adopted building code provisions regarding emergency vehicle access and fire lanes.

Pedestrian Access and Circulation

Roadside sidewalks should be provided when sites are developed or redeveloped. Sidewalks linking structures to roadside sidewalks should be provided wherever practical.

By creating a safe, continuous network of walkways within and between developments, pedestrians feel more inclined to safely walk or window shop (rather than drive) between stores. By developing a pedestrian network that offers clear circulation paths from the parking areas to the store entries, a friendlier, more inviting pedestrian environment will be created. Walkways should provide an inviting and convenient option for pedestrian movement within a development and promote direct pedestrian and bicycle access to neighboring residential, non-residential, and public uses.

- Design Guidelines

  - Applicants should submit a detailed pedestrian circulation plan with all subject development applications that shows compliance with the following guidelines:

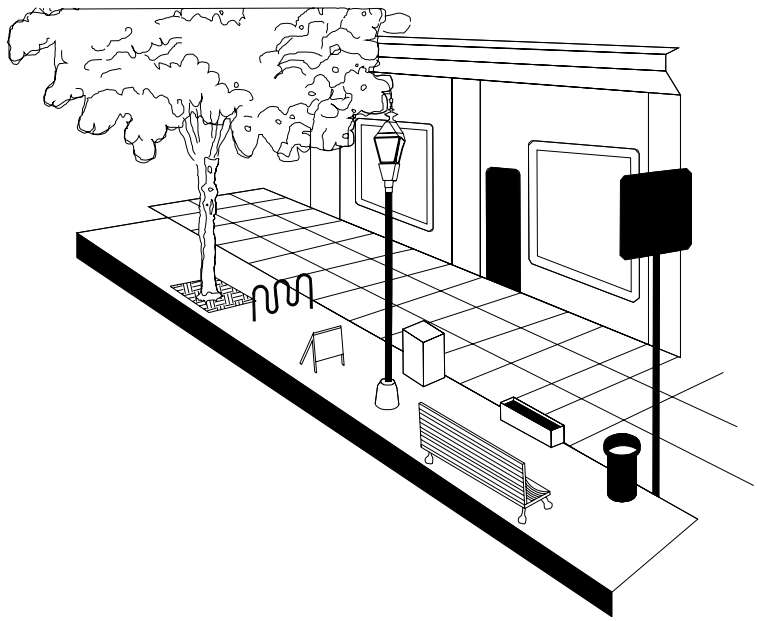
  - Pedestrian Connections. An on-site system of pedestrian walkways should be designed to provide direct access and connections to and between the following:

    (1) The primary entrance or entrances to each commercial building, including pad site buildings;
    (2) Any sidewalks or walkways on adjacent properties that extend to the boundaries shared with the commercial development;
    (3) Any public sidewalk system along perimeter streets adjacent to the commercial development;
    (4) To the maximum extent practicable and appropriate, adjacent land uses and developments, including but not limited to adjacent residential developments, retail shopping centers, office buildings, or restaurants;

(5) To the maximum extent practicable and appropriate, any adjacent public park, greenway, or other public or civic use including but not limited to schools, places of worship, public recreational facilities, or government offices.
(6) All parking areas that serve such primary building; and
(7) Site amenities or gathering places.

- Pedestrian Connections to Perimeter Public Sidewalks. Connections between the on-site (internal) pedestrian walkway network and any public sidewalk system located along adjacent perimeter streets should be provided at regular intervals along the perimeter street as appropriate to provide easy access from the public sidewalk to the interior walkway network.

- Minimum Walkway Width. All on-site pedestrian walkways and sidewalks shall be a minimum of 5 feet wide, except that walkways adjacent to a parking area where cars may overhang the walkway should be a minimum 7 feet wide.



Sidewalk width should provide adequate space for a clear zone and street furniture.

- Walkways Along Buildings.

(1) Walkways Along Primary Buildings: Continuous pedestrian walkways no less than eight (8) feet wide should be provided along the full length of a primary building along any facade featuring a customer entrance and along any facade abutting customer parking areas.
(2) Walkways Along Pad Site Buildings: Continuous pedestrian walkways no

less than five (5) feet wide shall be provided along the full length of a pad site building along any facade featuring a customer entrance and along any facade abutting customer parking areas.

(3) Walkways Through Vehicle Areas in Large Commercial Centers: At each point that the on-site pedestrian walkway system crosses a parking lot or internal street or driveway, the walkway or crosswalk should be clearly marked marked through the use of a change in paving materials distinguished by their color, texture, or height.

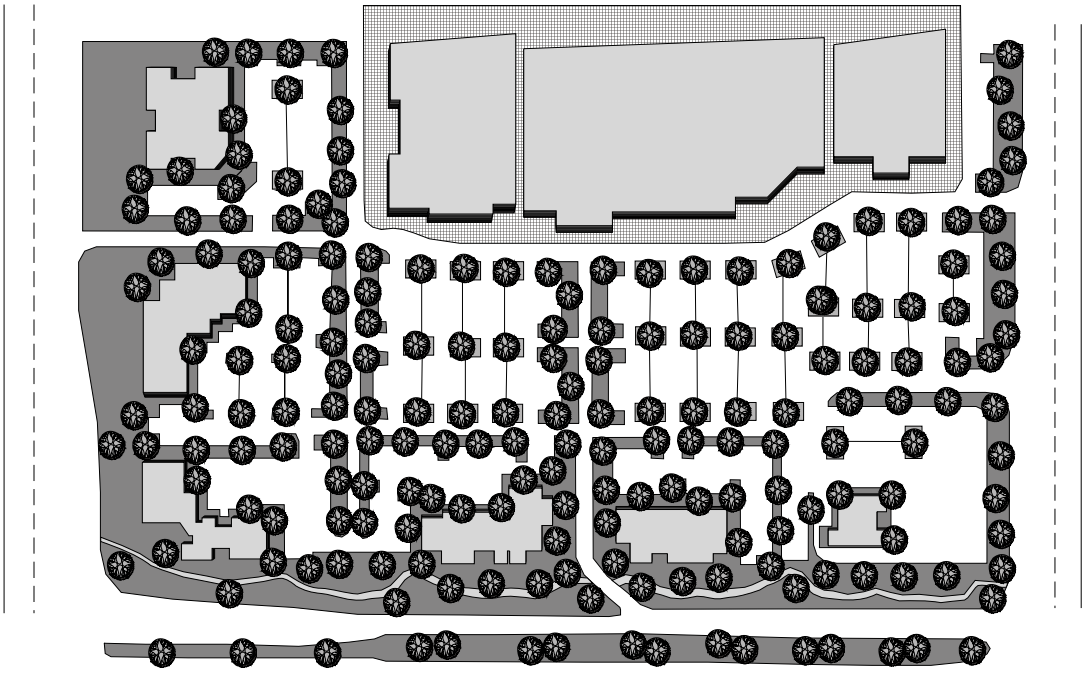
PARKING

Parking Amount and Type

Given the potential for infill/redevelopment projects to develop on smaller or more constrained sites, providing options for shared parking, both on and offstreet is important. While commercial developments should have adequate parking for customers and employees, they should also avoid excessive amounts of asphalt that detract from a pedestrian environment and may limit appropriate development density.

Parking Location and Layout

Parking areas should be located to the rear and sides of structures and should contain perimeter landscaping and landscape islands. The typical suburban commercial development pattern of placing large amounts of parking between the fronts of buildings and the adjacent street and between buildings contributes to a bleak and formless arrival experience and a detached relationship between the building and the street. Locating parking along the side and rear of buildings can help reduce the impression of a "sea of parking" while providing convenient automobile and pedestrian access.



Preferred

Clear building entry, parking broken into blocks, buildings from the street edge, bermed landscape setback with path.

- Design Guidelines

  - Parking Location. A minimum of thirty percent (30%) of the off-street surface parking spaces provided for all uses contained in the development's primary building should be located other than between the front facade of the primary building and the primary abutting street (e.g., to the rear or side of the primary building(s)). Alternative provisions may be considered when the commercial development abuts an existing residential neighborhood.

  - Parking Orientation. To the maximum extent feasible, parking should be oriented to minimize visual and noise impacts on adjacent residential properties.

  - Parking Blocks. In order to reduce the scale of large surface parking areas, the total amount of surface parking provided should be broken up into parking blocks containing no more than 40 spaces for large commercial centers and no more than 26 spaces for all other commercial development:

    (1) Parking blocks should be separated from each other by landscaping, access drives or public streets, pedestrian walkways, or buildings.

    (2) Each parking block should have consistent design angles for all parking within the block.

(3) Parking blocks should be oriented to buildings to allow pedestrian movement down and not across rows (typically with parking drive aisles perpendicular to customer entrances).

(4) Through access should be provided within and between parking blocks; dead end drives are strongly discouraged.

BUILDING DESIGN

These building design guidelines apply to all commercial infill development, multi-unit residential and commercial re-development and major rehabilitation projects as well as minor rehabilitation of large commercial centers.

Building Height/Scale/Massing/Form

Building design that creates or adds to the visual interest of a streetscape and a pedestrian scale is an essential element of infill and redevelopment. Building height, scale, and massing can be used to emphasize important corners, designate points of entry, and create a visible roofline silhouette. The primary mass of structures should include secondary projections that reduce the apparent scale, creates visual interest, and promotes compatibility with adjacent uses. Building design for infill and redevelopment projects should be compatible with adjacent development.

- Design Guidelines

  - Compatibility With Surrounding Development. Infill and redevelopment projects in existing developed areas with an established pedestrian scale and character should be compatible with or complement the established proportions and building mass of adjacent developments.

  - Transition To Adjacent Residential Uses. Where buildings are adjacent to residential uses, building massing should create a transition from the edges of a commercial center inward. To achieve this effect, smaller and lower building mass should be located near edges of the center where adjacent buildings are smaller or residential in scale.

- Building Facades.

  (1) The building facade should incorporate wall plane projections or recesses break-up the overall wall into smaller, appropriately scaled sections; Facades greater than 100 feet in length should incorporate recesses and projections along at least 20% of the length of the facade.

  (2) Each building facade should have a repeating pattern that includes instances of either (1) color change, (2) texture changes, (3) material module change, or (4) expression of an architectural or structural bay through a change in plane, such as an offset, reveal, or projecting rib. Greater architectural interest should be encouraged for larger structures by directing the use of a repeating pattern of change in color, texture and material modules at intervals of no more than 30 feet.

  (3) Structures should have finished architectural facade treatment and detail on all elevations that are visible from public ways or adjoining properties.

  (4) The above guidelines may be waived if the applicant can demonstrate an alternative building design that significantly articulates a wall plane.

- Multi-Story Buildings - Base and Top Treatments. The following guidelines apply to buildings greater than four stories:

  (1) The composition of the building should present a clearly recognizable base, middle, and top, or a clearly defined alternative building composition.

  (2) A recognizable "base" may consist of, but is not limited to:
  - (a) Thicker walls, ledges, or sills;
  - (b) Integrally textured materials such as stone or other masonry;
  - (c) Integrally colored and patterned materials such as smooth finished stone or tile;
  - (4) Lighter or darker colored materials, mullions, or panels; or
  - (5) Planters.

(3) A recognizable "top" may consist of, but is not limited to:
(1) Cornice treatments, other than just colored "stripes" or "bands," with integrally textured materials such as stone or other masonry or differently colored materials;
(2) Sloping roof with overhangs and brackets; or
(3) Stepped parapets.

- Consistency of Style. The design of the building should provide a distinctive quality, consistent, architectural character and style, that avoids monotones and featureless building massing and design.

Architectural Detail: Facades, Entrances, Roofs, Awnings

Doors, storefront windows, and awnings are examples of building features that add to the character of the streetscape and contribute to the pedestrian-oriented character of places. These elements should be used to both improve the visual interest of infill/redevelopment projects and add to the visually unifying appearance along Coastal Highway or within projects containing multiple pad sites.

- Design Guidelines

Architectural Compatibility with Surrounding Areas. Infill and redevelopment projects in existing developed areas with an established character should be compatible with or complement the established architectural character of the area in terms consistency of rooflines, roof materials and roof colors; similar window and door patterns, and similar decorative elements.

- Building Facades. Facades that face public streets, adjacent development, or connecting pedestrian frontage should be subdivided and proportioned using features such as windows, entrances, arcades, arbors, and awnings along no less than sixty percent (60%) of the facade. A minimum of ten percent (10%) of the entire such facade area should be composed of transparent materials, unless the Planning Commission finds that such transparency would be inconsistent with the operational requirements of the building. At least one-half of this amount should be provided so that the lowest edge of the transparent material is no higher than 4 feet above the street level.

- Customer Entrances. Building facades facing a primary access street should have clearly defined, highly visible customer entrances that include features like the following:

(1) Canopies or porticos,
(2) Overhangs, recesses/projections,
(3) Arcades,

(4) Raised corniced parapets over the door,
(5) Distinctive roof forms,
(6) Arches, outdoor patios,
(7) Display windows,
(8) Integral planters or wing walls that incorporate landscaped areas and/or places for sitting.

Doors, storefront windows, and awnings combine to add to the character of the streetscape and create a visually unifying appearance.

- Roofs.

Pitched roofs and gables are encouraged. Where pitched roofs are not practical from an engineering basis or are not cost effective, false gables and mansards can achieve a similar appearance. Flat roofs with exposed mechanical fixtures should be avoided. For larger structures, variations in rooflines should be required to reduce scale and add visual interest. Roofs for larger structures should have at least two of the following features: overhanging eaves, sloped roofs and three or more roof planes.

The Pyramid exemplifies the visual interest created by variation in roofline.

To the maximum extent practicable, where buildings are adjacent to residential uses, rooflines should be of a similar height or stepped down to a similar height to enhance the compatibility with nearby residential areas. In addition, roofs should features such as the following:

(1) Parapets concealing flat roofs and rooftop equipment such as HVAC units from public view are appropriate. Parapets should feature three dimensional cornice treatment and should be the primary means of screening roof top equipment;

(2) Overhanging eaves, extending no less than three (3) feet past the supporting walls;

(3) Sloping roofs that do not exceed the average height of the supporting walls;

(4) Three (3) or more roof slope planes.

- Downspouts. All downspouts should be concealed from view.

- Awnings.

  (1) Awnings should be no longer than a single storefront.
  (2) Fabric awnings are encouraged; canvas awnings with a matte finish are preferred. Awnings with high gloss finish are discouraged. Illuminated, plastic awnings are discouraged.
  (3) Rigid frame awnings should stop at the top section and should not be included in the valence.
  (4) Awning colors should be compatible with the overall color scheme of the facade from which it projects. Solid colors or subtle striped patterns are preferred.
  (5) Awnings for rectangular openings should be simple, shed shapes. Semicircular shapes should not be used for arches.

Building Materials and Colors

Facade colors should be of low reflectance, subtle or neutral earth tone colors. The use of high-intensity colors, metallic colors, black or fluorescent colors should be prohibited. Building trim may feature brighter colors, but neon tubing should not be permitted. Predominant exterior building materials should be of high quality. These include brick, wood or vinyl siding, stone and tinted/textured concrete masonry units.

The exterior materials and colors used in a building's design create impressions of not only the individual building, but of the image the overall community. Commercial infill and redevelopment should use high-quality materials and colors and reflect or enhance the character of established areas.

- Design Guidelines

  - Applicants should submit a color palette and building materials board as part of their development plan application.

  - Building Materials.

(1) All buildings, should be constructed or clad with materials that are durable, economically maintained, and of a quality that will retain their appearance over time, including but not limited to natural or synthetic stone; brick; stucco; integrally colored, textured, or glazed concrete

masonry units; high-quality prestressed concrete systems; water-managed Exterior Insulation Finish Systems (EIFS); or glass.

(2) For larger structures, natural wood or wood paneling should not be used as a principal exterior wall material, but durable synthetic materials with the appearance of wood may be used.

(3) Exterior building materials should not include the following:
   (a) Vinyl siding;
   (b) Smooth-faced gray or stained concrete block, painted concrete block, tilt-up concrete panels;
   (c) Field-painted or pre-finished standard corrugated metal siding;
   (d) Standard single or double tee concrete systems; or
   (e) Barrier-type EIFS (must be contained during construction)

(4) In selecting exterior building materials, consideration should be given to the appropriateness of the materials to the scale of building proposed.

- Building Color.

(1) Color schemes should tie building elements together, relate separate (freestanding) buildings within the same development together, and should be used to enhance the architectural form of a building.

(2) All building projections, including, but not limited to, chimneys, flues, vents, gutters, and downspouts, should match or complement in color the permanent color of the surface from which they project.

(3) Facade colors must be low reflecting, subtle, and neutral. Intense, bright, black, or fluorescent colors should be prohibited.

LANDSCAPING AND SCREENING

Foundation landscaping and shade trees shall be used to soften the appearance of buildings and add visual appeal to pedestrian plazas and sidewalks.

Landscaping is a visible indicator of quality development and must be an integral part of every commercial project, and not merely located in leftover portions of the site. Landscaping is intended to visually tie the entire development together, define major entryways and circulation (both vehicular and pedestrian) and parking patterns, and, where appropriate, help buffer less intensive adjacent land uses.

Plant Materials

- Design Guidelines

    - Site landscaping should include plants similar in form and scale to existing vegetation in the neighborhood or area.

    - Each area required to be landscaped should be covered in live material. Live material includes trees, shrubs, ground cover, and sod. Areas not covered in live material should not exceed twenty percent (20%) and may be covered by woody mulch, other organic or inorganic mulch, or other natural materials other than exposed gravel and aggregate rock.

Site Perimeter Landscaping Abutting Street Edges

Adequate landscape buffering and screening along site perimeters shall be used to protect adjacent residential neighborhoods and residential and mixed-use zoned properties. Landscape buffers between incompatible uses should be wide and dense enough to completely screen proposed development from adjoining properties. Landscape buffers should also be planted along the frontage of Coastal Highway.

The consistent use of plantings along street edges provides a visual cohesion along streets and helps buffer automobile traffic. The intent of these standards is to provide an attractive, shaded environment along street edges that gives visual relief from continuous hard street edges, focuses views for both pedestrians and motorists, and increases the sense of neighborhood scale and character.

Parking Lot Landscaping

Parking areas should be located to the rear and sides of structures and should contain perimeter landscaping and landscape islands. Parking lot landscaping should be used to minimize the expansive appearance of parking lots, provide shaded parking areas, and mitigate negative acoustic and visual impact of motor vehicles.

- Design Guidelines

    - Interior Parking Lot Landscaping.

        The interior of all parking lots containing 10 or more spaces should be landscaped according to the interior parking lot landscaping standards, as prescribed below. Each parking block should be considered an individual parking lot for the purposes of these interior parking lot landscaping requirements. These

requirements for interior parking area landscaping are in addition to the requirements set forth below for perimeter parking area landscaping.

(a) Parking spaces in a parking lot should extend no more than 10 parking spaces without an intervening interior landscaped island no less than 6 feet in width and 18 feet in length. Landscaped islands should be planted with a minimum of one tree and shrubs, live ground cover, or sod.

(b) Lighting for parking lots may be contained within an interior parking lot landscaped area provided the landscaped area is a minimum of 200 square feet in area and provided the landscaping and trees, at maturity and as maintained, should not obstruct the illumination path.

(c) All parking lot islands should be landscaped with organic material. Rock is not an appropriate material.

- Perimeter Parking Area Landscaping.

  Parking lot edges should be buffered from public rights-of-way, public open space, and adjacent properties.

Service Area Screening

Exterior mechanical, storage or service areas should be completely screened from view of any public way or adjoining property. Service, loading, and dumpster areas create visual and noise impacts on surrounding neighborhoods. These impacts should be mitigated by appropriately orienting and visually screening service areas, including trash receptacles, from public rights-of-way and adjacent uses.

- Design Guidelines

  - To the maximum extent feasible, areas for outdoor storage, truck parking, trash collection or compaction, loading, or other such service areas should not be visible from abutting streets and should be oriented toward on-site service corridors.

  - No areas for outdoor storage, trash collection or compaction, loading, or other such uses should be located within 10 feet of any public street, public sidewalk, or internal pedestrian walkway.

  - Loading docks, truck parking, outdoor storage, trash collection, trash compaction, and other service functions should be incorporated into the overall design of the building and landscaping so that the visual and acoustic impacts of these

functions are fully contained and out of view from adjacent properties and public streets. Screening materials should be the same as, or of equal quality to, the materials used for the primary building and landscaping.

- Non-enclosed areas for the storage and sale of seasonal inventory should be permanently defined and screened with landscaping, walls and/or fences. Materials, colors, and design of screening walls and/or fences, and of any covering for such area, should be compatible with those used as predominant materials and colors on the primary building(s).

Mechanical/Utility Equipment Screening

Mechanical and utility equipment detracts from the character of an area. Steps should be taken to mitigate the negative visual and acoustic impacts of mechanical and utility equipment systems on surrounding development.

- Design Guidelines

  - Mechanical/utility screening should be an integral part of the building structure and architecture and not give the appearance of being "tacked on" to the exterior surfaces.

  - All mechanical equipment and utilities should be screened.

Fencing and Walls

While fences and walls are sometimes necessary to buffer uses, they can create visual barriers in an existing neighborhood. Fencing and walls should be provided that complement the design of the overall development and surrounding properties.

- Design Guidelines

  - Fences And Walls.

    (1) General: Opaque fences and walls are allowed only in side and rear setbacks. Open Fences and hedges should be uses in front setbacks if they are enclosing a parking area that abuts a public street, or a defined dining area, or public gathering space.

    (2) Materials: Walls and fences should be constructed of high quality materials, such as decorative blocks, brick, stone, treated wood, and ornamental metal. Chain link fencing is not appropriate.

(3) Breaks for Connections: Breaks in the length of a perimeter fence should be made to provide for required pedestrian connections to the perimeter of a site or to adjacent development, such as perimeter sidewalks and public trails.

(4) Maximum Length: The maximum length of continuous, unbroken, and uninterrupted fence or wall plane should be no more than be 50 feet. Breaks should be provided through the use of columns, landscaping pockets, transparent sections, and/or a change to different materials.

LIGHTING

Exterior lighting should be restrained in design in order to avoid excessive brightness and glare onto adjacent properties. These guidelines are intended to eliminate the adverse impacts of light through spillover; provide attractive lighting fixtures and layout patterns that contribute to unified exterior lighting design of nonresidential developments; and provide exterior lighting that promotes safe vehicular and pedestrian access to and within a development, while minimizing impacts on adjacent properties.

- Design Guidelines

  - Applicants shall submit a unified lighting plan with final plan applications for all commercial infill/redevelopment projects subject to these lighting standards. A point-by-point calculation to show compliance with the lighting standards is required. The calculations shall be measured at grade for lighting levels within the development site. A cut sheet of proposed fixtures, including a candlepower distribution curve, shall also be submitted. A vertical plan footcandle calculation shall be submitted for property lines abutting residential properties.

  - Compatibility With Surrounding Area. The lighting plan should consist of recognizable, distinctive designs and fixtures that are compatible with or complement surrounding neighborhoods.

  - Lighting for Security.

    a. Accent lighting on buildings is encouraged as a security feature.

    b. Interior and exterior lighting should be uniform to allow for surveillance and avoid isolated areas.

    c. Security lighting should be fully shielded and use a decorative fixture.

- Design of Fixtures/Prevention of Spillover Glare. Light fixtures shall use cutoff lenses or hoods to prevent glare and light spill off the project site onto adjacent properties, buildings, and roadways.

- Color of Light Source. Lighting fixtures should be color-correct types such as halogen or metal halide to ensure true-color at night and ensure visual comfort for pedestrians.

- Lighting for Pedestrian Areas

    a. Pedestrian Walkway Lighting. Pedestrian-level, bollard lighting, ground mounted lighting, or other low, glare-controlled fixtures mounted on building or landscape walls should be used to light pedestrian walkways.

    b. Lighting Height. Light pole, building-mounted, or tree-mounted lighting structures should be no more than 20 feet high. Bollard-type lighting should be no more than 4 feet high.

    c. Illumination Levels. Pedestrian areas and driveways should be illuminated to a minimum average of 1 footcandle, with a uniform maximum to minimum ratio of 1:5.

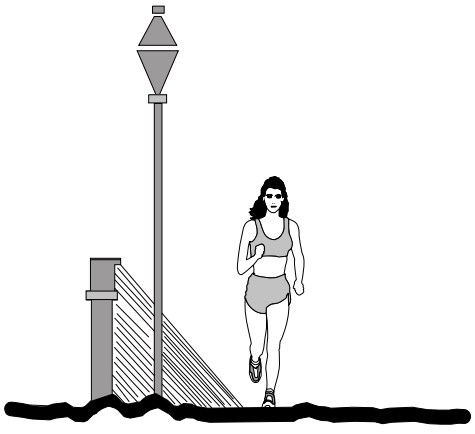
- Parking Lot Lighting Standards

    a. Luminaire Fixture Height. The mounting height for luminaire fixtures should not exceed 33 feet as measured to the top of the fixture from grade.

    b. Average Maintained Footcandles.

        (1) The maximum average maintained footcandles for all parking lot lighting shall be 3 footcandles; the minimum average maintained footcandles should be 1 footcandle. For the purpose of this standard, the average maintained footcandle shall be calculated at 0.8 of initial footcandles.

        (2) The maximum maintained vertical footcandle at an adjoining residential property line shall be 0.5 footcandles, measured at 5 feet above grade.



c. Uniformity Ratios. Luminaire fixtures should be arranged in order to provide uniform illumination throughout the parking lot of not more than a 6:1 ratio of average to minimum illumination, and not more than 20:1 ratio of maximum to minimum illumination.

- Canopy Lighting

a. Average Maintained Footcandles. The maximum average maintained footcandles under a canopy should be 35 footcandles.

b. Fixtures. Acceptable fixtures and methods of illuminate include:

(1) Recessed fixtures incorporating a lens cover that is either recessed or flush with the bottom surface (ceiling) of the canopy.

(2) Indirect lighting where light is beamed upward and then reflected down from the underside of the canopy. Such fixtures shall be shielded such that direct illumination is focused exclusively on the underside of the canopy

SIGNAGE

Signage should be scaled appropriately to appeal to both pedestrians walking on the adjacent sidewalks and to vehicles driving at reduced speeds. All freestanding signs should have an architectural and/or landscaped base. The following sign guidelines are intended to create aesthetically pleasing and cohesive sign standards while reinforcing the existing context of the infill or redevelopment area.

- Design Guidelines

  - All commercial developments shall comply with the signage requirements set forth in the Town Zoning Ordinance.

  - On all street frontages, signage material should be integrated into the overall design of the building.

  - Signs should be located to complement the architectural features of a building such as above the building entrance, storefront opening, or other similar feature.

Appendix F
Comprehensive Plan
Town of Ocean City

State of Maryland Development Visions

▪**Public participation:** Citizens are active partners in the planning and implementation of community initiatives and are sensitive to their responsibilities in achieving community goals;

▪**Growth areas:** Growth is concentrated in existing population and business centers, growth areas adjacent to these centers, or strategically selected new centers;

▪**Quality of life and sustainability:** A high quality of life is achieved through universal stewardship of the land, water, and air resulting in sustainable communities and protection of the environment;

▪**Community design:** Compact, mixed-use, walkable design consistent with existing community character and located near available or planned transit options is encouraged to ensure efficient use of land and transportation resources and preservation and enhancement of natural systems, open spaces, recreational areas, and historical, cultural, and archeological resources;

▪**Infrastructure:** Growth areas have the water resources and infrastructure to accommodate population and business expansion in an orderly, efficient, and environmentally sustainable manner;

▪**Transportation:** A well-maintained, multimodal transportation system facilitates the safe , convenient, affordable, and efficient movement of people, goods, and services within and between population and business centers;

▪**Resource conservation:** Waterways, forests, agricultural areas, open space, natural systems, and scenic areas are conserved;

▪**Stewardship:** Government, business entities, and residents are responsible for the creation of sustainable communities by collaborating to balance efficient growth with resource protection; and

▪**Implementation:** Strategies, policies, programs, and funding for growth and development, resource conservation, infrastructure, and transportation are integrated across the local, regional, state and interstate levels to achieve these visions.