

**INTRODUCTION AND EXECUTIVE SUMMARY
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1.0 INTRODUCTION AND EXECUTIVE SUMMARY

1.1 Introduction

1.1.1 Purpose

The purpose of the *Monroe County 2030 Comprehensive Plan Technical Document* (the “Technical Document”) is intended to address the data, inventory, and analyses requirements of Chapter 163, Florida Statutes (F.S.). The data, inventory and analyses contained within this document supports the development of goals, objectives, policies, and implementation programs established in the *Policy Document* component of the *Monroe County 2030 Monroe County Comprehensive Plan* (the “Plan”).

1.1.2 Federal and State Influence Upon Land Use Planning in Monroe County

Federal and State government involvement in Monroe County (the “County”) land use planning and decision-making is extensive due to the presence of aquatic and terrestrial resources that are of regional and national significance. This involvement has heavily influenced the County’s comprehensive planning process. Many of the County’s goals, objectives, and policies have been mandated by the State pursuant to the Area of Critical State Concern designation or by the Federal government as conditions for the County’s continued participation in the National Flood Insurance Program. As part of the Plan, the County is compelled to include an Intergovernmental Coordination Element that seeks in part to increase the effectiveness, efficiency, and responsiveness of government, and provide for consistency in decisions and actions between various agencies, including the Florida Department of Environmental Protection, Army Corps of Engineers, and the United States Fish & Wildlife Service. By incorporating the Intergovernmental Coordination Element, however, the County does not assume liability for takings of private property attributed to the adoption or application of regulations by Federal and State agencies, or to the County’s goals, objectives, and policies imposed by the Federal and State government to implement their statutes, including the Clean Water Act and the Endangered Species Act.

1.1.3 Government Structure

The County, created in 1824, is a political subdivision of the State of Florida. The powers and authority of the County government emanate from the Florida State Legislature. The County is a non-chartered county and the government functions in accordance with the Florida Constitution.

The Board of County Commissioners (BOCC), which performs the legislative and executive functions of the county government, consists of five members elected at large by the citizens. Each commissioner represents one of the five county districts and is elected for a term of four years.

1.1.4 Format of the Comprehensive Plan

The Plan is divided into three volumes: a Technical Document, Policy Document, and Map Atlas. The Technical Document contains background information including the technical support data analyses for the various elements of the Plan. The Policy Document contains the goals, objectives and policies for each element, the capital improvements implementation program, and the Comprehensive Plan monitoring and evaluation procedures. The Map Atlas contains maps depicting background information for the various elements (Existing Land Use, Habitat, Existing Transportation, etc.) as well as the Future Land Use and Future Transportation Map series.

Pursuant to Chapters 163 and 380, Florida Statutes, the Technical Document does not require adoption by the Board of County Commissioners (BOCC). The unadopted status of the Technical Document allows for continual updating and refinement of the data contained herein without requiring amendments to the Plan.

The following sections of the Plan require adoption by the BOCC:

- The Goals, Objectives and Policies contained in the Policy Document;
- The requirements for capital improvements implementation including the Five-Year Schedule of Capital Improvements, contained in the Policy Document;
- The procedures for monitoring and evaluation of the Plan, contained in the Policy Document;
- The Future Land Use and Transportation Map series, contained in the Map Atlas; and
- The Plan Adoption Ordinance, included as an appendix to the Policy Document.

This Technical Document contains chapters for each element of the Plan. Each chapter addresses a topic or group of topics involved with the physical development of land within the County and its adjacent planning areas. The elements address the appropriateness of various kinds of land use, the impacts of those land uses on natural resources, the services needed for existing and future development, the fiscal capability of the County to provide those services, and a capital improvement service delivery schedule.

The format of each chapter of this Technical Document provides a purpose for the Plan elements; the level-of-service standards (where applicable); an inventory and analysis of existing conditions and deficiencies; a description of future needs and a listing of planned improvements for inclusion in the Capital Improvements Element.

1.1.5 Planning Time Frame

The Plan was prepared to cover a twenty-year planning horizon (2010-2030) and includes population projections for this twenty-year period.

1.1.6 Data Sources and Limitations

Available data, as provided by various local, regional, and state agencies, has been utilized and sources have been identified throughout this Technical Document.

There are limitations to the data and these limitations have been noted where relevant throughout this document. The 2010 U.S. Census is not scheduled to be released until early 2011; therefore, unless otherwise noted, the local population and housing data is based on the 2000 U.S. Census.

1.2 Executive Summary

1.2.1 Geographic Setting

The County includes the Mainland area and over 1,700 islands which lie along the Florida Straits, dividing the Atlantic Ocean to the east from the Gulf of Mexico to the west, and defining one edge of the Florida Bay. The mainland part of the County is made up of the Everglades National Park and the southern portion of Big Cypress National Preserve. The Florida Keys extend 233 miles southwestward in a gradual arc from Biscayne Bay to the Dry Tortugas in the Gulf of Mexico.

1.2.2 Socio-Economic Characteristics

To effectively create a comprehensive plan that reflects the needs of the County, the social characteristics that define the community must be considered. Using information obtained from the *2009 American Community Survey, 1-Year Estimate*, the following items list several socio-economic facts regarding the County as a whole:

- **HOUSEHOLDS AND FAMILIES:** In 2009 there were 28,335 households in the County. The average household size was 2.52 people. Households include all the persons who occupy a housing unit.

Families made up 57.5 percent of the households in the County. This figure includes married-couple families (46.3%). Non-family households made up 42.5 percent of all households in the County. Most of the non-family households were people living alone, but some were composed of people living in households in which no one was related to the householder.

- **GEOGRAPHIC MOBILITY:** In 2009, 89 percent of the people at least one year old living in the County were living in the same residence one year earlier; 5 percent had moved

during the past year from another residence in the same county, 2 percent from another county in the same state, 3.5 percent from another state, and 0.6 percent from abroad.

- **EDUCATION:** In 2009, 31.5 percent of people 25 years and over had at least graduated from high school and 24.4 percent had a bachelor's degree or higher. Eleven percent were dropouts; they were not enrolled in school and had not graduated from high school.

The total school enrollment in the County was 13,201 in 2009. Nursery school and kindergarten enrollment was 1,500 and elementary or high school enrollment was 8,027 children. College or graduate school enrollment was 3,670.

- **DISABILITY:** In the County, among people at least five years old and older in 2009, 13 percent reported a disability. The likelihood of having a disability varied by age - from 3 percent of people under 18 years old, to 12 percent of people 18 to 64 years old, and to 30.5 percent of those 65 and older.
- **INDUSTRIES:** In 2009, for the employed population 16 years and older, the leading industries in the County were Arts, entertainment, and recreation, and accommodation and food services, 20 percent, and Educational services, and health care, and social assistance, 14.7 percent.
- **OCCUPATIONS AND TYPE OF EMPLOYER:** Among the most common occupations were: Service occupations, 28.8 percent; Management, professional and related occupations, 28.4 percent; Sales and office occupations, 27 percent; Construction, extraction, maintenance, and repair occupations, 9 percent; and Production, transportation, and material moving occupations, 4 percent. Seventy percent of the people employed were Private wage and salary workers; 20 percent were Federal, State, or local government workers; and 10 percent were Self-employed in own not incorporated business workers.
- **TRAVEL TO WORK:** Sixty-one percent of the County workers drove to work alone in 2009, 11 percent carpooled, 1 percent took public transportation, and 20.7 percent used other means. The remaining 6 percent worked at home. Among those who commuted to work, it took them on average 16.9 minutes to get to work.
- **INCOME:** The median income of households in the County was \$49,721. Seventy-six percent of the households received earnings and 21 percent received retirement income other than Social Security. Thirty-one percent of the households received Social Security. The average income from Social Security was \$15,589. These income sources are not mutually exclusive; that is, some households received income from more than one source.
- **POVERTY AND PARTICIPATION IN GOVERNMENT PROGRAMS:** In 2009, 12 percent of people were in poverty. 14.3 percent of related children under 18 were below the

poverty level, compared with 10.7 percent of people 65 years old and over. Seven percent of all families and 28 percent of families with a female householder and no husband present had incomes below the poverty level.

- **HOUSING CHARACTERISTICS:** In 2009, the County had a total of 54,243 housing units, 48 percent of which were vacant. Of the total housing units, 61 percent was in single-unit structures, 24 percent was in multi-unit structures, and 15 percent was mobile homes. Twenty-six percent of the housing units were built since 1990.
- **OCCUPIED HOUSING UNIT CHARACTERISTICS:** In 2009, the County had 28,335 occupied housing units - 17,901 (63%) owner occupied and 10,434 (37%) renter occupied. Four percent (1,193 units) of the households did not have telephone service and six percent (1,696 units) of the households did not have access to a car, truck, or van for private use. Thirty-nine percent had two vehicles and another 9 percent had three or more vehicles.
- **HOUSING COSTS:** The median monthly housing costs for mortgaged owners was \$2,323, non-mortgaged (housing units without a mortgage) owners \$592, and renters \$1,206. 62.2 percent of owners with mortgages, 22.1 percent of owners without mortgages, and 65.8 percent of renters in the County spent 30 percent or more of household income on housing.
- **POPULATION:** Annual population estimates for municipalities and unincorporated areas indicate permanent population fell in the Keys from 2006-2008, with some return to growth evidenced in 2009. The effect of the short term decline is to drive the long term population projections down. Thus, both recent history and future projections from the Bureau of Economic and Business Research (BEBR) suggest a downward trend in permanent population.

There is ongoing ROGO based residential growth and there is a substantial inventory of non-conforming, substandard, live-aboard and RV camp housing. Substandard, non-conforming units are being gradually removed from inventory, however, not at a rate fast enough to net out all residential growth. A portion of the permanent population losses have occurred as a result of the recession, a rise in foreclosures, depletion of affordable housing and increased unemployment; nearly 3,500 units have been foreclosed throughout the Keys since 2005. The rise in home prices and threat of hurricanes has also contributed to some permanent population loss. Losses associated with some of these conditions may be temporary, resulting in renewed growth after the recession. The BEBR annual permanent population estimate for 2009 indicated a net positive permanent population growth in 2009 and small losses in 2010.

On the other hand, of all the new single family housing growth in the County since 1999, nearly 70 percent has been in non-homesteaded units. It is likely this is a function of both growth in seasonal population as well as permanent population loss, which may cause once permanently occupied existing units to become non-homesteaded. This

latter aspect represents a shift from existing permanent population to seasonal population and is why the non-homesteaded mix is so high.

Table 1.1 shows the permanent and seasonal population projections for unincorporated Monroe County through the year 2030.

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Table 1.1- Unincorporated Functional Population Distribution by Sub-Area

Year	Upper	Middle	Lower	Total
2000	29,183	2,138	37,957	69,277
2001	29,205	2,145	38,163	69,512
2002	29,222	2,151	38,364	69,737
2003	29,192	2,155	38,504	69,850
2004	29,150	2,157	38,628	69,935
2005	29,313	2,175	39,027	70,515
2006	29,222	2,174	39,089	70,485
2007	29,075	2,169	39,073	70,317
2008	28,928	2,169	39,240	70,338
2009	29,185	2,199	39,927	71,311
2010	28,980	2,183	39,645	70,808
2011	29,126	2,194	39,846	71,166
2012	29,187	2,199	39,929	71,315
2013	29,248	2,203	40,013	71,464
2014	29,309	2,208	40,097	71,613
2015	29,370	2,212	40,181	71,763
2016	29,429	2,217	40,263	71,909
2017	29,489	2,221	40,345	72,055
2018	29,549	2,225	40,427	72,201
2019	29,608	2,230	40,510	72,348
2020	29,668	2,234	40,592	72,494
2021	29,728	2,238	40,674	72,640
2022	29,787	2,243	40,756	72,786
2023	29,847	2,247	40,838	72,933
2024	29,907	2,252	40,921	73,079
2025	29,966	2,256	41,003	73,225
2026	30,026	2,260	41,085	73,371
2027	30,086	2,265	41,167	73,518
2028	30,145	2,269	41,249	73,664
2029	30,205	2,274	41,332	73,810
2030	30,265	2,278	41,414	73,956

Source: Fishkind & Associates, Inc.

NOTE: Slight differences in totals due to rounding

1.2.3 Land Use

Due to the differences in how the Geographic Information System (GIS) mapping data structures for the existing, future and tier maps were developed, there will be slight variations in the acreages reported. (See **Section 2.3.1** of *Chapter 2.0 Future Land Use* for a detailed discussion related to the limitations of these data structures.)

Table 1.2 shows the existing acreage and **Table 1.3** shows the amount of vacant land available by Land Use and Tier categories within the unincorporated areas of the County. **Table 1.4** shows the amount of land in each land use category and **Table 1.6** provides and estimate of the theoretical density and intensity based upon the corresponding density or intensity allowances for the various land uses identified in **Table 1.5**.

Table 1.2 - Existing Land Use Acreages, Unincorporated, By Planning Area

Existing Land Use	Lower Keys	Middle Keys	Upper Keys	Total	Percent of Total
Commercial	337.0	67.7	495.3	900.0	1.2%
Conservation	36,201.6	1,458.7	17,859.2	55,519.5	75.9%
Educational	49.2	0.0	30.8	80.0	0.1%
Industrial	414.8	0.2	40.6	455.6	0.6%
Institutional	99.6	0.4	60.8	160.8	0.2%
Military	4,025.7	0.0	0.0	4,025.7	5.5%
Other Public Utilities and Right-of-Way (ROW)	1,665.6	141.8	1,429.3	3,236.6	4.4%
Public Buildings and Grounds	17.1	33.0	61.2	111.3	0.2%
Recreational	640.8	132.1	548.3	1,321.2	1.8%
Residential	2,599.9	201.9	2,186.4	4,988.2	6.8%
Vacant or Undeveloped	1,376.2	108.3	854.4	2,338.9	3.2%
Total	47,427.6	2,144.1	23,566.2	73,137.9	100.0%
Percent Total by Planning Area	64.8%	2.9%	32.2%	100.0%	--

Source: Monroe County Growth Management, 2010, "MC_ELU_510"

Monroe County Property Appraiser, 2010, "Public_Parcel"

Note: Slight differences due to rounding.

As seen in **Table 1.2**, the land mass of the unincorporated Keys portion of the County is approximately 73,138 acres. Sixty-five percent of land area is found in the Lower Keys PA, 3 percent in the Middle Keys Planning Area (MKPA), and 32 percent in the Upper Keys Planning Area (UKPA). Since the Lower Keys Planning Area (LKPA) is the largest in land mass, it is not surprising that it has a number of existing land use designations, when compared to the other Planning Areas (PA). The exception applies to Commercial and Public Buildings and Grounds where percent ratios are larger in the UKPA.

More than 75 percent of land in the unincorporated Keys is used for conservation purposes. Other land uses, in descending order, include: Residential (6.8%), Military (5.5%), Other

Public (4.4%), Vacant or Undeveloped (3.2%), Recreational (1.8%), and Commercial (1.2%). All other land uses are less than 1 percent.

Table 1.3 – Vacant Land by Tier and Planning Area

	I	II	III	III-A	0 ¹	U	Vacant acres in Tier	Net Parcels and Acres
Lower Keys								
Vacant Parcels	1,301	418	1,360	27	NA	218	NA	3,324
Acres	753.5	75.3	289.8	9.4	15.7	202.4	1,346.0	1,330.3
Percent Vacant Acres	56.6%	5.7%	21.8%	0.7%	NA	15.2%	NA	NA
Middle Keys								
Vacant Parcels	3	0	414	0	NA	0	NA	417
Acres	28.2	0.0	77.5	0.0	0.1	0.0	105.8	105.7
Percent Vacant Acres	26.6%	0.0%	73.4%	0.0%	NA	0.0%	NA	NA
Upper Keys								
Vacant Parcels	608	0	1,333	227	NA	774	NA	2,942
Acres	352.5	0.0	227.9	63.9	2.2	126.2	772.7	770.5
Percent Vacant Acres	45.7%	0.0%	29.6%	8.3%	NA	16.4%	NA	NA
Total Parcels	1,912	418	3,107	254	NA	992	NA	6,683
Total Acres	1,134.2	75.3	595.2	73.2	18.1	328.6	2,224.5	2,206.4

Source: Monroe County Growth Management, 2010, "MC_ELU_510"; Monroe County Growth Management, 2010, "MC_FLUM_510"; Monroe County Growth Management, 2010, "Tier_0110"

Tiers are:

I = Tier I – Natural Areas

II = Tier II (Big Pine Key and No Name Keys in the Lower Keys Planning Area only)

III = Tier III – Infill Areas

III-A = Special Protection Area (SPA)

0 = Property does not have a Tier designation. Most of these occur in the Upper Keys and some are right-of-way parcels. Some lots were not originally designated because of mapping errors; the majority of which are currently being reviewed by the Tier Designation Review Committee and will be designated at a later date.

U = Undesignated Tier - Properties that originally had a Tier designation but became undesignated by a court order. This court order was in response to the Everglades Law Center’s analysis of the Tier System. As a result of the court order, it was determined that a number of parcels should be re-designated. The Tier Designation Review Committee is currently addressing the issues

Note: Slight differences due to rounding.

Tier 0 is used for illustration purposes only and is not part of the analysis.

Vacant acres in all tiers after subtracting Tier 0.

As seen in **Table 1.3**, the LKPA contains 1,330.3 acres (3,324 parcels), which are vacant and are located within a tier designation. Most of the vacant land, (56.6%) is located in Tier I, comprising 1,301 parcels; and 21.8 percent (1,360 parcels) are designated Tier III. The UNDES Tier accounts for 15.2 percent or 218 parcels of vacant land. This PA is the only

planning area with 418 vacant parcels (5.7%) designated Tier II, which only applies to Big Pine Key and No Name Key. Less than one percent of vacant land (27 parcels) is located in Tier III-A. Until the UNDES land is designated under the Tier System, development potential will remain unclear. The County's ROGO system supports development on parcels designated Tier II, III and III-A. These tiers constitute 28.1 percent of vacant land in the LKPA.

The MKPA has 105.7 vacant acres or 417 vacant parcels, which are located in one of the tiers. Most of the vacant land, 73.4 percent or 414 parcels, are located within Tier III-Infill Area. The remaining three parcels or 26.6 percent is located within Tier I. This analysis is meant for illustrative purposes only and is not a true picture of development potential since a closer review of the individual parcel characteristics is needed in order to capture the Tier System true applicability.

The UKPA includes 770.5 acres or 2,942 parcels of vacant land within the Tier System. Most vacant acres (45.7%) are located in Tier I and constitute 608 parcels. Another 1,333 parcels (29.6%) are located in Tier III, these parcels constitute 227.9 acres. Vacant land located in the UNDES Tier constitutes 774 vacant parcels, 126.2 acres or 16.4 percent of vacant acres. Lastly, 8.3 percent of vacant acres or 227 parcels are located in Tier III-A. Tiers III and III-A include 37.9 percent of the vacant acres. This analysis is meant for illustrative purposes only and is not a true picture of development potential since a closer review of the individual parcel characteristics is needed in order to capture the Tier System true applicability.

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Table 1.4 - Future Land Use Acreages Distribution, Unincorporated, By Planning Area

Future Land Use	Lower Keys	Middle Keys	Upper Keys	Total	Percent of Total
Agriculture (A)	18.8	0.0	1.9	20.7	0.0%
Airport District (AD)	22.6	0.0	19.7	42.2	0.1%
Conservation (C)	19,591.5	489.1	11,553.9	31,634.6	43.2%
Education (E)	28.5	0.0	32.2	60.6	0.1%
Industrial (I)	415.8	0.0	0.0	415.8	0.6%
Institutional (INS)	87.6	0.0	43.5	131.0	0.2%
Military (M)	4,381.2	0.0	0.0	4,381.2	6.0%
Mixed Use / Commercial (MC)	885.4	138.6	1,009.1	2,033.2	2.8%
Mixed Use/Commercial Fishing (MCF)	113.2	25.3	12.6	151.1	0.2%
Public Buildings/Grounds (PB)	20.2	0.0	26.8	47.1	0.1%
Public Facilities (PF)	55.7	27.2	57.4	140.3	0.2%
Recreation (R)	526.8	848.3	638.5	2,013.5	2.8%
Residential Conservation (RC)	12,133.9	266.3	6,189.9	18,590.1	25.40%
Residential Low (RL)	2,846.5	23.9	941.0	3,811.4	5.2%
Residential Medium (RM)	2,922.1	231.3	2,137.3	5,290.7	7.2%
Residential High (RH)	422.3	41.8	903.0	1,367.0	1.9%
Undesignated (UNDS)	2,966.7	52.4	0.1	3,019.2	4.1%
Total	47,438.7	2,144.1	23,566.8	73,149.6	100.0%
Percentage of Total	64.9%	2.9%	32.2%	100.0%	--

Source: Monroe County Growth Management, 2010, "MC_FLUM_510"; Future Land Use Densities and Intensities Table in Goals Objectives and Policies, Pg 3.1-21

Note: Slight differences due to rounding.

As seen in **Table 1.4**, approximately 43 percent of land in the unincorporated Keys has a Conservation Land Use Designation. Other land uses, in descending order, include: Residential Conservation (25.4%), Residential Medium (7.2%), Military (6.0%), Residential Low (5.2%), Undesignated (4.1%), Mixed Use Commercial (2.8%), Recreational (2.8%), and Residential High (1.9%). All other land uses are less than 1 percent.

Allocated density is calculated in dwelling units per gross acre, while maximum net density is calculated in dwelling units per net buildable acre. The net buildable area is that area which is developable and not in open space or required as a minimum buffer yard or setback as provided for in the Land Development Code (LDC). The maximum floor area ratio is the maximum total floor area of the building on a lot divided by the gross area of the lot or site. (MCLDC Sec. 101-1). This system allows for a site-by site determination of the appropriate density and intensity each site proposed for development.

Table 1.5 –Allocated Density and Maximum Floor Area Ratio

Future Land Use	Allocated Density (per acre)	Maximum Allowed Floor Area
Agriculture (A)	0 du	.020-0.25
Airport District (AD)	0 du	0.10
Conservation (C)	0 du	0.05
Education (E)	0 du	0.30
Industrial (I)	1 du	0.25-0.60
Institutional (INS)	0 du	0.25-0.40
Mainland Native (MN)	0.01 du	0.10
Military (M)	6 du	0.30-0.50
Mixed Use / Commercial (MC)	1-6 du	0.10-0.45
Mixed Use/Commercial Fishing (MCF)	3-8 du	0.25-0.40
Public Buildings/Grounds (PB)	0 du	0.10-0.30
Public Facilities (PF)	0 du	0.10-0.30
Recreation (R)	0.25 du	0.20
Residential Conservation (RC)	0-0.25 du	0-0.10
Residential Low (RL)	0.25-0.50 du	0.20-0.25
Residential Medium (RM)	0.5-8 du	0.00
Residential High (RH)	3-16 du	0.00
Undesignated (UNDS)	NA	NA

Source: *Policy Document of the 2010 Monroe County Comprehensive Plan, Policy 101.4.21.*
 Policy 101.4.21: Maximum net density is the maximum density allowed with the use of TDRs

Table 1.5 illustrates the density and density allowances for the various land uses within the County. The County’s current policy determines both allocated and maximum net densities for residential as well as hotel-motel, recreational vehicle and institutional residential uses. For the purposes of the analyses of residential density below, and those within *Chapter 2.0 Future Land Use* and *Chapter 7.0 Housing*, allocated density was used.

Table 1.6 - Vacant Land Theoretical Density and Intensity by Land Use Category and Tier

Future Land Use	I	II	III	III-A	U	Max. Allowed Density	Max. Allowed Intensity
Airport District	0	0	9.2	0	0	0	39,988.1
Conservation	80.1	0.4	0	0	0	0	175,198.3
Industrial	0.2	0	15.2	0	88	103.4	2,701,678.3
Institutional	1.2	0	0.7	0	0	0	32,234.4
Military	94.4	0	0	0	0	566.4	2,056,032.0
Mixed Use/Commercial	51.2	4.1	100.6	34.9	28.1	1,313.10	4,289,897.7
Mixed Use/Commercial Fishing	10.5	9.7	7.1	0	14.2	332.0	723,096.0
Recreation	18.3	0	3.1	0	0.1	5.4	186,523.9
Residential Conservation	360.7	0	2.1	0.5	57.4	105.1	1,832,046.5
Residential Low	373.9	0.9	33.8	13.1	10	215.8	4,700,015.1
Residential Medium	131.8	59.1	341.8	22.9	111.0	5,331.9	0
Residential High	13.7	1.2	39.8	2.0	19.9	1,225.9	0
Total	1135.7	75.3	553.2	73.3	328.7	9,199.0	16,769,710.3

Note: Slight differences due to rounding.

As illustrated in **Table 1.6**, the majority of vacant land is located within Tier I; although development would concentrate in the 702 acres within Tier II, III, and III-A. The maximum allowed density within all tiers are 10,258 dwelling units and intensity of 17,420,733 square feet.

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Table 1.7 provides an analysis of the all the land within the unincorporated areas of the County based upon future land use designation. The theoretical maximum density is based upon the County’s projected population. For unincorporated Monroe County, most of the land is designated as Conservation (43.2%) and Residential Conservation (25.4%). Less than one percent is noted for Agriculture, Airport District, Education, Industrial, Institutional, Mixed Use Commercial Fishing, Public Buildings/Grounds and Public Facilities.

Table 1.7 - Maximum Theoretical Density and Intensity by Land Use

Future Land Use	Acres	Max. Allowed Dwelling Units	Max. Allowed Floor Area (sq/ft)
Agriculture (A)	20.7	0	225,648.08
Airport District (AD)	42.2	0	183,953.9
Conservation (C)	31634.6	0	68,900,049.9
Education (E)	60.6	0	792,312.8
Industrial (I)	415.8	415.8	10,867,087.4
Institutional (INS)	131.0	0	2,283,241
Military (M)	4381.2	26287.2	95,422,536.00
Mixed Use/ Commercial (MC)	2033.2	12198.9	39,853,806.3
Mixed Use/ Commercial Fishing (MCF)	151.1	1208.7	2,632,417.9
Public Buildings/ Grounds (PB)	47.1	0	614,980.1
Public Facilities (PF)	140.3	0	1,833,048.3
Recreation (R)	2013.5	503.4	17,541,699.1
Residential Conservation (RC)	18590.1	4647.6	80,978,388.5
Residential Low (RL)	3811.4	1905.7	41,505,710.4
Residential Medium (RM)	5290.7	42325.7	0.00
Residential High (RH)	1367.0	21872.3	0.00
Undesignated (UNDS)	3019.2	0	0.00
Total	73,149.6	67,643.00	363,634,872.5

Source: Monroe County Growth Management, 2010 “MC_FLUM_510”; Future Land Use Densities and Intensities Table in Goals Objectives and Policies, pg 3.1-21.

Note: Slight difference due to rounding.

1.2.4 *Traffic Circulation*

The roadway network in the County, particularly the Florida Keys, is unique. The Harry S. Truman Blue Star Memorial Overseas Highway (U.S. 1 and S.R. 5), functions as an arterial, collector, and “Main Street” all rolled into one. Nowhere else is there a 112 miles-plus long archipelago connected by over 40 bridges along a single roadway.

Roadway access to and from the County is provided by only two roads: U.S. 1 and Card Sound Road (CR 905A). These two facilities serve the Florida Keys as economic and public safety lifelines. It cannot be overstated the need to assess the operation of U.S. 1 within a regional context to ensure the Florida Keys’ only continuous roadway link will continue to function properly.

While U.S. 1 is the principal highway in the County, it is by no means the only road. Branching off from U.S. 1 are numerous local and collector roads serving the many subdivisions and the five incorporated cities throughout the Keys. As of the end of 2009, the county has a total of 801.445 centerline miles of roadways. Of this total, 583.453 miles are in designated small urban areas and 217.992 miles are in designated rural areas. The daily vehicle miles traveled averaged 3,193,243 DVMT.

A key traffic capacity limitation in the County is the ability of various segments of U.S. 1 to accommodate traffic volume increases at LOS C. The ability of the County to accommodate traffic volume growth varies by segment of U.S. 1 and by collector roadway. Thus, the distribution of potential residential growth by segment of U.S. 1 (and by Planning Area) is a critical factor in determining the future roadway segments which are over capacity. **Table 1.8** presents the estimated 2015-2030 forecasts of reserve volumes and residential capacities for each of the U.S. 1 segments.

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Table 1.8 - 2010-2030 Reserve Volume and Residential Unit Capacity Forecasts per Segment of U.S. 1

U.S. 1 Segment		2010		2015		2020		2025		2030	
		Reserve Volume ¹	Residential Unit Capacity	Reserve Volume ¹	Residential Unit Capacity	Reserve Volume ¹	Residential Unit Capacity	Reserve Volume ¹	Residential Unit Capacity	Reserve Volume ¹	Residential Unit Capacity
1	Stock Island	2,186	342	1,991	311	1,864	291	1,737	271	1,609	251
2	Boca Chica	4,973	777	4,156	649	3,566	557	2,968	464	2,358	368
3	Big Coppitt	549 ²	86	Note 3	Note 3	Note 3	Note 3	Note 3	Note 3	Note 3	Note 3
4	Saddlebunch	2,593	405	1,419	222	584	91	Note 3	Note 3	Note 3	Note 3
5	Sugarloaf	265	41	Note 3	Note 3	Note 3	Note 3	Note 3	Note 3	Note 3	Note 3
6	Cudjoe	2,525	395	2,024	316	1,670	261	1,310	205	942	147
7	Summerland	1,967	307	1,531	239	1,223	191	911	142	593	93
8	Ramrod	1,866	292	1,409	220	1,086	170	758	119	424	66
9	Torch	2,087	326	1,668	261	1,372	214	1,072	167	765	120
10	Big Pine	1,520	238	846	132	371	58	Note 3	Note 3	Note 3	Note 3
11	Bahia Honda	7,187	1,123	5,806	907	4,836	756	3,851	602	2,845	445
12	7-Mile Bridge	3,716	581	2,366	370	1,299	203	248	39	Note 3	Note 3
13	Marathon	17,771	2,777	16,094	2,515	14,792	2,311	13,537	2,115	12,269	1,917
14	Grassy	0 ²	0	Note 3	Note 3	Note 3	Note 3	Note 3	Note 3	Note 3	Note 3
15	Duck	1,565	245	1,023	160	542	85	77	12	Note 3	Note 3
16	Long	6,722	1,050	4,784	748	3,018	472	1,315	206	Note 3	Note 3
17	Lower Matecumbe	940 ²	147	Note 3	Note 3	Note 3	Note 3	Note 3	Note 3	Note 3	Note 3
18	Tea Table	727 ²	114	Note 3	Note 3	Note 3	Note 3	Note 3	Note 3	Note 3	Note 3
19	Upper Matecumbe	611	95	Note 3	Note 3	Note 3	Note 3	Note 3	Note 3	Note 3	Note 3
20	Windley	4,468	698	4,086	638	3,699	578	3,306	517	2,907	454
21	Plantation	2,881	450	952	149	Note 3	Note 3	Note 3	Note 3	Note 3	Note 3
22	Tavernier	9,539	1,490	7,778	1,215	5,991	936	4,178	653	2,337	365
23	Key Largo	9,121	1,425	7,897	1,234	6,065	948	4,501	703	2,915	455
24	Cross	7,187	1,123	5,906	923	4,605	719	3,285	513	1,945	304

NOTES: These individual reserve volumes may be unobtainable, due to the constraint imposed by the overall reserve volume.

1. Value shown is 5% Allocation for 2010. County regulations and FDOT policy allow segments that fail to meet LOS C standards to receive an allocation not to exceed five percent below the LOS C standard. The resulting flexibility allows a limited amount of additional land development (number of residential units as shown) to continue until traffic speeds are measured the following year or until remedial actions are implemented.
2. Residential capacity not determined for future years where forecast reserve capacity is negative.

Based upon the measured and forecasted speeds, reserve volumes and residential capacities for all of the U.S. 1 segments, the following segments are projected to operate below the acceptable LOS C:

Year 2010 (Current):

- U.S. 1 on Big Coppitt Key from MM 9.0 to MM 10.5 (segment 3), LOS D;
- U.S. 1 on Grassy Key from MM 54.0 to 60.5 (Segment 14), LOS D;
- U.S. 1 on Lower Matecumbe Key from MM 73.0 to 77.5 (Segment 17), LOS D; and
- U.S. 1 on Tea Table Key from MM 77.5 to MM 79.5 (segment 18), LOS D.

Year 2015:

- U.S. 1 on Big Coppitt Key from MM 9.0 to MM 10.5 (segment 3), LOS D;
- U.S. 1 on Sugarloaf Key from MM 16.5 to 20.5 (segment 5), LOS D;
- U.S. 1 on Grassy Key from MM 54.0 to 60.5 (Segment 14), LOS E;
- U.S. 1 on Lower Matecumbe Key from MM 73.0 to 77.5 (Segment 17), LOS D;
- U.S. 1 on Tea Table Key from MM 77.5 to MM 79.5 (segment 18), LOS D; and
- U.S. 1 on Upper Matecumbe Key from MM 79.5 to 84.0 (Segment 19), LOS D.

Year 2020:

- U.S. 1 on Big Coppitt Key from MM 9.0 to MM 10.5 (segment 3), LOS D;
- U.S. 1 on Sugarloaf Key from MM 16.5 to 20.5 (segment 5), LOS D;
- U.S. 1 on Grassy Key from MM 54.0 to 60.5 (Segment 14), LOS E;
- U.S. 1 on Lower Matecumbe Key from MM 73.0 to 77.5 (Segment 17), LOS D;
- U.S. 1 on Tea Table Key from MM 77.5 to MM 79.5 (segment 18), LOS D;
- U.S. 1 on Upper Matecumbe Key from MM 79.5 to 84.0 (Segment 19), LOS D; and
- U.S. 1 on Plantation Key from MM 86.0 to 91.5 (Segment 21), LOS D.

Year 2025:

- U.S. 1 on Big Coppitt Key from MM 9.0 to MM 10.5 (segment 3), LOS E;
- U.S. 1 on Saddlebunch Key from MM 10.5 to 16.5 (segment 4), LOS D;
- U.S. 1 on Sugarloaf Key from MM 16.5 to 20.5 (segment 5), LOS D;
- U.S. 1 on Big Pine Key from MM 29.5 to 33.0 (segment 10), LOS E;
- U.S. 1 on Grassy Key from MM 54.0 to 60.5 (Segment 14), LOS E;
- U.S. 1 on Lower Matecumbe Key from MM 73.0 to 77.5 (Segment 17), LOS E;
- U.S. 1 on Tea Table Key from MM 77.5 to MM 79.5 (segment 18), LOS E;
- U.S. 1 on Upper Matecumbe Key from MM 79.5 to 84.0 (Segment 19), LOS D; and
- U.S. 1 on Plantation Key from MM 86.0 to 91.5 (Segment 21), LOS D.

Year 2030:

- U.S. 1 on Big Coppitt Key from MM 9.0 to MM 10.5 (segment 3), LOS E;
- U.S. 1 on Saddlebunch Key from MM 10.5 to 16.5 (segment 4), LOS D;
- U.S. 1 on Sugarloaf Key from MM 16.5 to 20.5 (segment 5), LOS E;
- U.S. 1 on Big Pine Key from MM 29.5 to 33.0 (segment 10), LOS E;
- U.S. 1 on 7-Mile Bridge from MM 40.0 to 47.0 (segment 11), LOS D;
- U.S. 1 on Grassy Key from MM 54.0 to 60.5 (segment 14), LOS E;
- U.S. 1 on Duck Key from MM 60.5 to 63.0 (segment 15), LOS D;
- U.S. 1 on Long Key from MM 63.0 to 73.0 (segment 16), LOS D;
- U.S. 1 on Lower Matecumbe Key from MM 73.0 to 77.5 (Segment 17), LOS E;
- U.S. 1 on Tea Table Key from MM 77.5 to MM 79.5 (segment 18), LOS E;
- U.S. 1 on Upper Matecumbe Key from MM 79.5 to 84.0 (Segment 19), LOS E; and
- U.S. 1 on Plantation Key from MM 86.0 to 91.5 (Segment 21), LOS E.

The County maintains over 600 miles of secondary roads, in addition to 25 bridges totaling less than one mile in length. The County is therefore responsible for a roadway system roughly five times the length of U.S. 1. Approximately 85 percent of the County’s roadways are paved.

For County roadways, the maximum service volume threshold standard is established as LOS D.

Almost all county roadways currently operate at or better than LOS D. The one exception is Palm Avenue between White Street and U.S. 1 (N. Roosevelt Boulevard) which has a peak hour LOS of F based on 2009 traffic data.

1.2.5 Mass Transit

The County is currently served by two main public transit systems:

- Miami-Dade Transit in the northern region of the County with two routes (Dade-Monroe Express and Card Sound Express) serving the County from Key Largo to the City of Marathon; and
- The City of Key West Department of Transportation which operates:
 - Key West Transit with four fixed-route bus routes serving the City of Key West and Stock Island;
 - The Lower Keys Shuttle providing service in the southern portion of the County from the City of Marathon to the City of Key West; and
 - The Key West Park-N-Ride at The Old Town Garage.

Other transit related services providing limited service in the County include:

- Monroe County Transit’s Paratransit Service;

- Guidance Clinic of the Middle Keys; and
- Greyhound Bus Line.

1.2.6 *Ports, Aviation and Related Facilities*

Within the County, there are eight airport facilities. One of these, Key West International Airport (KWIA) is the only commercial airport currently serving the community. The Florida Keys Marathon Airport (FKMA) provides only general aviation services, although non-scheduled air taxi service is provided. There are also four private airports or airstrips, one seaplane facility, and one military aviation facility: the U.S. Naval Air Station Key West. The KWIA and the Naval Air Station are situated in the Lower Keys. The FKMA is located in the Middle Keys. The seaplane facility is located on Stock Island. The four private airstrips are located throughout the Florida Keys.

While there is an abundance of coastline in the County, only two areas are considered port facilities. The Port of Key West, which is owned by the City of Key West and consists of cruise berths and passenger ferries, is located within the northwest quadrant of the city; while the privately-owned Stock Island port is considered to be the only truly industrial, deep water port in the County.

1.2.7 *Housing*

While the bulk of the land uses in the County are for conservation purposes, residential uses comprise the next highest land use activity. The County is predominantly a residential area, with a great deal of focus on a single-family home environment. Its location has attracted residential development not only for permanent, but also for seasonal residents. The amount of vacant land available is more than sufficient to accommodate the low level of projected population growth. However, due to the limited population growth (157 persons a year), the increasing vacancy rate, and the high price of land in a coastal community, there is no significant demand for new residential development from developers.

The responsibility lies with the private sector to provide for both owner-occupied and rental housing; although, the County does provide incentives for the development of affordable housing, including land acquisition and permit fee waivers. By ordinance, the County has adopted the *Florida Building Code, 2007* along with a fire safety code and administers and oversees contractor licensing. **Table 1.9** is an inventory of the housing types based on the 1990 and 2000 Census.

Table 1.9 – 1990-2000 Housing Types

Unit Type	1990		2000		Change 1990-2000	
	Number of Units	% Dist.	Number of Units	% Dist.	Number of Units	% Dist.
Single-Family (Detached)	14,711	45.0%	12,847	52.2%	-1,864	-12.7%
Single-Family (Attached)	992	3.0%	920	3.7%	-72	-7.3%
Duplex (2-units)	1,749	5.3%	669	2.7%	-1,080	-61.8%
Multi-Family (3+ units)	4,398	13.5%	2,561	10.4%	-1,837	-41.8%
Mobile Home/Trailer/Other	10,847	33.2%	7,598	30.9%	-3,249	-30.0%
Total Year-Round Units	32,697	100.0%	24,595*	100.0%	-8,102	-14.6%

Source: Florida Housing Data Clearinghouse, April 2010

*41 units located in the Mainland PA

Note: To be updated on upon 2010 U.S. Census release May, 2011.

Table 1.10 -- Housing Inventory by Occupancy Status and Tenure, 2000

	Lower Keys		Middle Keys		Upper Keys		Total	
	Number Units	Percent	Number Units	Percent	Number Units	Percent	Number Units	Percent
Owner	6,159	71.9	328	81.6	4,847	71.5	11,334	70.4
Renter	2,413	28.1	74	18.4	1,934	28.5	4,421	29.6
Vacant	3,033	26.2	1,029	71.9	4,734	41.1	8,799	36.0
Occupancy	8,572	73.8	402	28.1	6,781	58.9	15,755	64.0
Total	11,605	47.3	1,431	5.8	11,515	46.9	24,554*	100.0

Source: Florida Housing Data Clearinghouse, April 2010

*41 dwelling units located in the Mainland according to Census Block GIS analysis.

Note: To be updated on upon 2010 U.S. Census release May 2011.

Based upon the incorporated County population projections shown previously in **Table 1.1**, **Table 1.11** below illustrates the total housing need through the year 2030. For additional details related to the population projections, see *Chapter 2.0 Future Land Use Section 2.6 Population Projections*.

Table 1.11 - Projected Housing Need by Type, 2010-2030

	Seasonal*		Permanent**		Functional		Housing Need (functional only)
	# of households	Dwelling Units*	# of households	Dwelling Units*	# of households	Dwelling Units+	
2010	13,126	18,751	16,076	17,922	29,202	36,674	--
2015	13,358	19,083	16,225	18,089	29,584	37,172	498
2020	13,748	19,640	16,079	17,925	29,827	37,566	394
2025	14,138	20,197	15,933	17,762	30,071	37,960	394
2030	14,529	20,755	15,786	17,599	30,315	38,354	394
Total Need	--	2,004	--	-323	--	1,680	1,680

Fishkind & Associates, Inc., 2010, *Unincorporated Monroe County Population Projections*; Smith Travel Research; American Community Survey 2008

*Seasonal Dwelling units are # of households multiplied the occupancy rate of 70 percent

**Permanent dwelling units are # of households multiplied by the occupancy rate of 89.7 percent.

+ Functional dwelling units are the sum of seasonal and permanent dwelling units.

1.2.8 Potable Water

The Florida Keys Aqueduct Authority (FKAA) provides potable water to County residents and maintains the water distribution system up to individual property lines. Thereafter, property owners are responsible for those lines located on their land.

The residential Level of Service (LOS) is based on the permanent population plus the portion of the seasonal population living in residences. The seasonal number is defined as the average daily seasonal population living in residences on an annual basis. The existing LOS is 66.5gallons/capita/day.

The nonresidential LOS is based upon building square footages of commercial space in the unincorporated County including hotels and motels. This existing LOS is 0.35 gallons/square foot/day.

The overall consumption goal for the system is 86.00 gallons/capita/day. Based upon the projected population illustrated previously in **Table 1.1**, potable water will adequately meet the projected needs of the service area through 2030.

Table 1.12 - Existing Potable Water Level of Service Standards

Residential LOS	66.5 gallons/capita/day
Non-Residential LOS	0.35 gallons/square foot/day

Source: FKAA

Note: Equivalent Residential Unit: 149 gallons per day (2.24 average persons per household X 66.5 gal/capita/day)

Table 1.13 - Goal Potable Water Consumption

Residential	57 gallons/capita/day
Non-residential	.29 gallons/square foot/day
Overall	86 gallons/capita/day

1.2.9 Sanitary Sewer

Treatment of sewage and the disposal of wastewater within the County historically have been accomplished through septic tanks, on-site treatment and disposal systems (OSTDS), and small to intermediate sized privately-owned wastewater treatment package plants. With expansion and growth, regional systems consisting of treatment plants and centralized sewer have been built providing a greater level of collection and treatment. Several sewer districts, both private and municipal, have been formed to service more densely populated areas.

Over the last 20 years, aerobic treatment units (ATU) for more advanced onsite treatment and secondary treatment plants have been introduced. Although they provide better treatment than septic tanks, including effluent disinfection, ATUs are not an efficient means of removal of phosphorus and nitrogen.

With the adoption of the *Monroe County Sanitary Wastewater Master Plan* (the “Master Plan”) in June of 2000, the County has implemented a program to address these issues. The Master Plan identified 23,000 private onsite systems within unincorporated Monroe County, made up of septic tanks, ATUs, and unknown connections servicing a total of 4.88 million gallons per day (MGD). In addition, 246 small wastewater treatment plants (WWTP) were identified servicing another 2.40 MGD. The Master Plan focuses on utilizing regional systems for treatment in hot spots (areas of high density) and alternative Best Available Technology (BAT) in cold spots (areas of low density), and calls for several measures including the following:

- Replacement or upgrade of onsite systems to Onsite Wastewater Nutrient Reduction Systems (OWNRS);
- Creation of 12 community collection systems, five of which are to be phased into regional systems;
- Address hot spots with community systems by 2010; and
- Upgrade 17 facilities to BAT/Advanced Wastewater Treatment (AWT) by 2010.

In April 2010, the Florida Senate and House approved SB 2018 extending the deadline for compliance to the end of 2015, and postponing fines and potential liens against property owners. In addition, the bill authorized \$200 million of State funding for improvements; however, the source of funding remains unresolved. Meeting the 2015 extension requires a detailed financial plan to implement necessary plant and infrastructure improvements. The funding gap of \$330 million, which has already stretched the County’s capacity for debt service, continues to broaden due to a delayed revenue stream resulting from delays in design and construction of new systems.

1.2.10 Solid Waste

The collection of solid waste is undertaken by private contractors under franchise agreements with the County. Although the original solid waste disposal site stipulated in the haul out contract was the WMI owned and operated Central Disposal Sanitary Landfill (CDSL) located at 3000 Northwest 48th Street, Pompano Beach (Unincorporated Broward County), Florida, all trash, unseparated recyclables and hazardous waste is currently hauled to the Wheelabrator facility in Broward County, Florida, for incineration and disposal.

As illustrated in **Table 1.13**, the historical solid waste generation (excluding Islamorada) shows a steady growth between the years 1998-2001. During the period 2002-2006, the County’s solid waste generation was significantly higher. These higher values do not correspond to normal solid waste generation trends within the County and in actuality result from a cluster of outliers. The outliers are functions of favorable economic conditions (greater consumption of goods and services) and storm events that cause a significant amount of over generation due to debris. Furthermore, during the period of 2007-2008, an economic recession affected solid waste generation, significantly reducing standard trends for generation growth.

Table 1.14 - Solid Waste Generation Trends

Year	Solid Waste Generation (Tons/Yr)	Population			LOS (LBS/CAP/DAY)
		Permanent	Seasonal	Functional	
2000	161,903	72,756	73,491	146,247	6.22
2001	198,314	73,218	73,540	146,758	7.59
2002	254,464	73,651	73,589	147,240	9.71
2003	213,186	74,051	73,639	147,690	8.11
2004	246,890	74,514	73,688	148,202	9.36
2005	285,553	75,857	73,737	149,594	10.72
2006	295,132	74,114	74,828	148,942	11.13
2007	187,177	72,632	75,734	148,366	7.09
2008	143,988	69,758	77,318	147,076	5.50

Source: Monroe County Recommended Functional Population Series, Fishkind & Associates 2010

The LOS Standard utilized in **Table 1.15** for projecting solid waste demands during the planning periods will be 6.97 pounds/capita/day (lbs/cap/day).

Table 1.15 – Solid Waste Projected Demands

Year	Population			LOS (LBS/CAP/DAY)	Projected Solid Waste Generation (Tons/Year)
	Permanent	Seasonal	Functional		
2010	78,200	79,437	157,637	6.97	190,737
2015	77,600	81,580	159,180	6.97	192,604
2020	76,900	83,794	160,694	6.97	194,436
2025	76,200	86,008	162,208	6.97	196,268
2030	75,500	88,222	163,722	6.63	198,100

Source: Monroe County Population Projections, Fishkind & Associates 2010

Notes: FEDP data uses only permanent population for their evaluations.

Notes: Islamorada population is excluded from the County’s population.

1.2.11 Drainage

Objective 101.9 directs Monroe County to provide for drainage and stormwater management so as to protect real and personal property and to protect and improve water quality. In 2001, Monroe County adopted a Stormwater Management Plan.

Section 114-3 of the Monroe County Land Development Code (MCLDC) requires stormwater controls for flood protection and floodplain encroachment, but also includes water quality controls for existing and proposed residential development and addresses retrofitting of existing facilities and redevelopment activities.

Additionally, the County has prepared a *Manual of Stormwater Management Practices* which provides information on acceptable forms of Best Management Practices. This document was prepared with the assistance of the South Florida Regional Planning Council (SFRPC) and the SFWMD and includes BMPs consisting of rate control structures, catch basins with skimmers and baffles, and wet and dry detention/retention facilities.

Furthermore, all new development and select redevelopment must adhere to the following level of service standards:

- Residential and commercial building floors - 100 year, 3 day;
- Emergency shelters/service building floors - 100 year, 3 day;
- Evacuation routes and emergency service road - 100 year, 3 day;
- Arterial roads - 100 year, 3 day;
- Collector roads - 25 year, 3 day;
- Neighborhood roads - 5 year, 1 day;

- Urban sites - 5 year, 1 day;
- Rural sites - 3 year, 1 day; and
- Off-site discharge rates are limited to historic, predevelopment conditions or as previously determined by the SFWMD or the County.

1.2.12 Coastal Management and Conservation

The southern tip of Florida and the Florida Keys contains one of the Country's most diverse assemblages of terrestrial, estuarine, and marine flora and fauna. The region includes the vast freshwater wetlands of the Florida Everglades and Big Cypress, the transitional areas where the waters of the Everglades discharge into the estuarine environment of Florida Bay, one of the world's largest coral reef tracts (the only one in the continental United States), the largest contiguous seagrass community in the world, and the subtropical habitats of the island chain. The environmental setting of the Keys is exceptional and unique, making the region a major travel destination. The County supports local, State, and federal programs aimed at preserving these vital resources and consistently apply regulations that protect them from further destruction.

Portions of the County are located within the Coastal Resource Barriers Resources System (CBRS). Today, the CBRS is comprised of undeveloped coastal barriers along the Atlantic and Gulf of Mexico coasts, including the coasts of the Florida Keys. The CBRS includes a number of units located in the Florida Keys and as such, is most susceptible to the threat of strong storms and hurricanes.

Within the Conservation and Coastal Management element, the County addresses natural disaster planning and hazard mitigation. The County's specific emergency response procedures are detailed in the Monroe County Comprehensive Emergency Management Plan (CEMP) (November 2007). As a low-lying chain of islands with a single main roadway, hurricane evacuation is a major concern.

In 2006, the Florida Department of Community Affairs (DCA) funded the South Florida Regional Planning Council (SFRPC) to carry out an update of the regional hurricane evacuation traffic study component of the South Florida Regional Hurricane Evacuation Study (HES) (includes Miami-Dade, Broward, and Monroe Counties). Additionally, the County funded the University of Utah to update its evacuation model for the County (the "Miller Model"). The 2010 update to the Miller Model (Ewing, 2010) also provided a summary of results from previous hurricane evacuation models. Depending on the assumptions used in the models (e.g., participation rates of evacuees, and traffic flow rates), the clearance times ranged from 16 hours 16 minutes to 23 hours 20 minutes.

1.2.13 Natural Groundwater Aquifer Recharge

The potable water supply resources used by the County, including both the aquifer system and treatment facilities, are geographically located in Miami-Dade County - entirely outside of the County's jurisdiction (see Chapter 8.0, Potable Water Element). In the County, the

surficial aquifer is brackish to saline and contains an inadequate quantity of water for use as a potable water supply. The FKAA is the agency that obtains and distributes potable water in the Keys.

As a result of the potable water source for the County being located entirely within Miami-Dade County, aquifer protection related to the FKAA's Florida City Wellfield is accomplished through the provisions of the Miami-Dade County Wellfield Ordinance. In the County, groundwater resource protection and management takes place in the context of the regulation of public and private interests in relation to wetlands, wildlife, aquifer discharges to surface waters, and other components of the natural system.

1.2.14 Recreation and Open Space

The County is well-served by its recreational opportunities, many of which are focused on the waters surrounding the Florida Keys. There are over 4.07 million acres of publicly-owned (Federal) conservation and recreation lands and waters provided in the County. The mainland portion of the County accounts for 1.62 million acres of this total. The vast majority of these areas are conservation lands which provide, activity-based, water-dependent and water-related recreation opportunities. In addition to these publicly provided lands and waters, many County businesses provide recreational activity-based facilities which are available to the functional population (which includes both the permanent and seasonal populations) of the County.

Using the 2010 functional population of 157,637, this translates into approximately 25,824 acres of conservation and recreation lands and waters/1,000 functional population. Based upon this simple calculation of the demand for recreational land, there seems to be more than enough for the permanent residents and visitors to the County. Adequate access to these facilities is provided for residents, tourists, and visitors of varying ages and physical ability levels.

The majority of the 4.07 million acres are conservation lands and a calculation for recreation lands and facilities is extremely important to the recreation/tourism industry of the County. Equally as important is the provision for a variety of recreational opportunities to the County functional population. In general, residents have indicated that there is a shortage of activity-based recreation areas in the County. Recreational facilities frequently cited as being in short supply included baseball/softball fields, football/soccer fields, equipped play areas, boat ramps, and physical exercise courses.

The LOS for the new planning period (2010-2030) is as follows:

- 1.5 acres of resource-based recreation areas/1,000 functional population; and
- 1.5 acres of activity-based recreation areas/1,000 functional population.

1.2.15 Intergovernmental Coordination

The County maintains intergovernmental relations with a variety of local, regional, and state entities. With the exception of the relatively new agreements with FCAA relating to the development of wastewater treatment systems, and the agreements with the newly incorporated cities of Marathon and Islamorada, those relationships are essentially the same as they were when the original comprehensive plan was adopted in 1995.

1.2.16 Energy Conservation and Climate

The County has adopted a greenhouse gas (GHG) target for county operations (Resolution 067-2010), including a reduction of countywide GHGs of 20 percent by 2020 as measured from a 2005 baseline inventory. The County has also adopted green building standards for County Facilities with Resolution 147-2010; building upon the energy requirements in the Florida Building Code by incorporating the Florida Green Building Coalition's green commercial building standard for county buildings, as the standard to be used for construction of all public buildings.

For a detailed discussion on this topic, see *Chapter 16.0 Energy Conservation and Climate*.

1.2.17 Capital Improvements

The County complies with all budget preparation and financial reporting requirements. The capital improvements program, together with the operating budget, provides the citizenry with a wealth of information about the community. Needed capital improvements have been identified and incorporated into the adopted Schedule of Capital Improvements and made part of the comprehensive plan goals, objectives, and policies. The County's financial position is good and with the exception of the planned wastewater treatment facilities, all projected needs can be financed from current or anticipated revenue sources.

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CHAPTER 1.0 - INTRODUCTION AND EXECUTIVE SUMMARY – COMMENT RESPONSES

Commenter: Kathy Grasser, Comprehensive Planner, Monroe County Planning and Env. Resources Date Received: Email, March 30, 2011, 5:11 PM		
Location	County Comment	K&S Action
1.2.2	Adjust percentages and figures to exactly match the 2009 American Community Survey, 1-Year Estimate source.	Agree, revised as requested and clarified in the text that source is from the “1-Year Estimate”.
1.2.3	Add reference to Policy 1101.4.2	Agree, added.
1.2.11	Add a new paragraph at beginning “Objective 101.9 directs Monroe County to provide for drainage and Stormwater management. . .” Add a new 2 nd paragraph “In 2001 Monroe County adopted a Stormwater Management Master Plan. . .”	Agree, added.
Commenter: Mayte Santamaria, Assistant Planning Director, Monroe County Planning and Env. Resources Date Received: 6/22/11		
Location	County Comment	K&S Action
Table 1.8	Add notes as reflected in Traffic Circulation Element for this table.	Agree. Have revised as suggested.
Table 1.11	Add asterisks.	Agree. Have revised as suggested.
Section 1.2.8	Revise to correct LOS numbers as reflected in Table 1.12	Agree. Have revised as suggested.
Section 1.2.12	Revise to reflect Monroe County funded the update to the Miller Model.	Agree. Have revised as suggested.