

In addition to Dredgers Key and Fleming Key, the only adjacent unincorporated area is South Stock Island. As denoted in Map I-9, the South Stock Island frontage along U.S. 1 has developed as a highway-oriented strip commercial corridor. Monroe County is considering options for improving central wastewater services as South Stock Island, an unincorporated island served by a private utility system. The City is committed to working with Monroe County in jointly assessing the most cost-effective and environmentally secure method of serving South Stock Island should the County request the City's assistance. The City also is committed to investigating issues surrounding service delivery systems to Key Haven as well as South Stock Island together with related implementation measures, including annexation as defined in Objective 1-2.7 and Policy 1-2.7.1. However, the City shall await an initiative by Monroe County for such joint action since the areas of issue are unincorporated areas within the political jurisdiction of Monroe County.

**Area of Critical State Concern**  
9J-5.006(f)(2), F.A.C.

The City of Key West is an area of critical state concern.

**Population Estimates and Projections**  
§9J-5-5.006(1)(g), F.A.C.

Population is a primary determinant of land use requirements, housing supply and demand, and public facility needs and services. The following population analysis is prepared as a major consideration in preparing the comprehensive plan. The current and projected population estimates have been divided into two sub-groups: permanent resident and seasonal visitors. Permanent resident population represent persons who live in the City on a year round basis; whereas, seasonal visitors represent persons who reside in the City for less than six months a year. The level of demand for public facilities and land use consumption may vary between the two sub-groups due to different periods of residency and associated activities. The following tables related to population estimates and projection are presented in this section.

- Table I-2: Summary of 1990 Populations Estimates and 2010 Population Projections
- Table I-3: Historic Permanent Population Estimates: 1976-1990
- Table I-4: Population Estimates and Projections: 1990-2010
- Table I-5: Overnight Tourist Accommodations Used, 1990
- Table I-6: Projected Residential Transient Dwelling Unit Demand: 1990-2010

Table I-2: Summary of 1990 Population Estimates and 2010 Population Projections, presents a summary of population estimates and projections derived in this section.

**Permanent Resident Population Estimate.** According to definitions established by the Bureau of Economic and Business Research (BEBR), a permanent residence is one's "usual residence, or the place one lives and sleeps most of the time."

Based on population estimates for 1990 prepared by the US Census, the City's 1990 permanent resident population is 24,652 comprised of 18,652 civilian residents and approximately 6,000 United States military personnel.

**TABLE I-2**  
**SUMMARY OF 1990 POPULATION ESTIMATES AND 2010 POPULATION PROJECTIONS**

Population	1990	2010
<b>Permanent Residents</b>	<b>24,652</b>	<b>27,701</b>
Civilian (Resides year round)	18,652	21,701
Military (Resides year round)	6,000	6,000
<b>Seasonal Visitors</b>	<b>12,887</b>	<b>13,916</b>
Seasonal Residents (Resides 3-5 months)	1,628	1,895
Overnight Tourists (Stays overnight for a period less than three months in hotels, campgrounds, guest houses, other)	11,259	12,021
<b>Peak Population (Sum of permanent and seasonal totals)</b>	<b>37,539</b>	<b>41,617</b>
Source: Excerpts from Table I-11, Population Estimates and Projections: 1990-2010. Prepared By: Solin and Associates, Inc., 1991.		

**Permanent Resident Population Projection.** The City's 2010 projected permanent resident population is 27,701 comprised of 21,701 civilian residents and approximately 6,000 military personnel.

The permanent resident population projections were based on a methodology appropriate for the City's growth trends and profile. The methodology used has been referred to as "The Mathematical Extrapolation" (same percentage of growth each year) as presented in the guidebook entitled, Population Estimation and Projection Techniques, Florida Department of Community Affairs (DCA), December 1, 1986. The methodology calculates the average growth rate for an historical time frame and uses the percentage (plus one) as a multiplier times a recent base year population to project the following year's population. Application of the method was applied to the permanent civilian population which is assumed to grow similarly to previous years. However, the permanent navy personnel population was held at a constant in future years as explained below.

Approximately 6,000 military personnel reside permanently within Key West. Although five branches of the military are represented in Key West, the Navy has the most personnel. No plans have been promulgated by the Navy to make extreme alterations to local military operations, requiring major increases or decreases in personnel. However, recent national concerns to decrease military spending, as well as current peacetime activity in the Caribbean Sea, portend a stable military population for Key West during the near future. Therefore, a constant population of 6,000 military personnel was used as the population throughout the planning years.

Years 1976 through 1989 were selected as the historical time frame for purposes of identifying past trends in the City's growth rate. The time frame captures both the slight decrease in population between 1976 through 1980 as well as the moderate yet steady growth during the period 1981 through 1989. The time frame selected does not include the large population decrease of the early 1970's attributed to the Department of Defense's actions at the Key West Naval Station and the Naval Air Station (Boca Chica) which resulted in a loss of 3,356 military positions and 568 civilian positions as reported in The Impact of Defense Cutbacks on American Communities, President's Economic Adjustment Committee, July 1973.

Table I-3: Historic Permanent Population Estimates: 1976-1990, provides a record of Key West's population for 1976 through 1989.



1. **Seasonal Residents.** Seasonal residents may be defined as transient persons residing in the City three to six months. Attracted to Key West due to employment opportunities occurring during peak tourist seasons, seasonal residents spend several months within Key West between December and April. Seasonal households are attracted to Key West during the winter months due to the warm, dry climate occurring at that time.

To account for seasonal households in a study of Key West demographics, the 1984 City Action Report utilized information from the 1980 U.S. Census of Housing and Population pertaining to the number of second homes (under the heading Usual Residence Elsewhere). Estimates for seasonal worker populations was based on a labor market study conducted by the Key West Planning Department in 1984, and was included in the aforementioned report. Based on these two sources, 1990 seasonal resident population was estimated at 1,628 persons, comprised of 712 seasonal workers and 916 seasonal households.

2. **Overnight Tourists.** Overnight Tourists may be defined as tourists who visit Key West for periods less than three months at hotels, guest houses, boarding houses, campgrounds, rent homes or condominiums, and stay with friends or relatives. The following list presents the types and number of units of lodging accommodations in the City.

<u>Accommodation Type</u>	<u>Number of Units</u>
Hotel/Motel <sup>1</sup>	3,568
Guest House/Boarding House <sup>2</sup>	699
House/Condo <sup>1</sup>	722
Campgrounds (Sites & Cottages) <sup>2</sup>	78

Source: <sup>1</sup> Humms Guide, 1990.  
<sup>2</sup> City of Key West Building Dept., 1989, updated by HSGA, 1991.

The methodology used to calculate the 1990 population estimate was generally two-phased, however each phase required a short series of computations. First, the number of overnight "tourists" lodging at hotel/motels was calculated. Secondly, the number of overnight tourists lodging at hotel/motels was divided by the ratio of hotel/motel units actually used by tourists as presented in Table I-5, Overnight Tourist Accommodations Used, 1990.

The formula used to calculate the number of overnight tourists lodging in hotel/motel accommodations was as follows: (# hotel/motel units) X (# persons per party) X (% occupancy rate) = # overnight tourists lodging at hotel/motel accommodations.

According to the Key West Humms Guide, 1990, there were 3,568 hotel/motel units in Key West in 1990. On the average, the party size of visitors to Monroe County is 2.5 as reported in the Visitor Profile Report, Monroe County, 1990, by the Division of Tourism, Department of Commerce. Hotel/motel occupancy rates for The Florida Keys averaged about 77% on a yearly basis as reported in the Florida Visitor Study 1989, by the Florida Department of Commerce, Division of Tourism.

Using the figures above, the number of overnight tourists lodging at hotel/motels was calculated as follows:

$$\begin{aligned}
 & (3,568 \text{ hotel/motel units})^1 \times (2.5 \text{ visitors per party})^2 \times (77\% \text{ occupancy rate})^3 \\
 & = 6,868 \text{ overnight tourists lodge daily at hotel/motel accommodations}
 \end{aligned}$$

Source: <sup>1</sup> Humms Guide, 1990.  
<sup>2</sup> Visitor Profile Report, Monroe County, 1990, Florida Department of Commerce, Division of Tourism.  
<sup>3</sup> Pannell, Kerr, Forster from Florida Visitor Study, 1989, Florida Department of Commerce, Division of Tourism.

Thus, on any one day during 1990, 6,868 overnight tourists lodged at hotel/motel accommodations.

For the second phase of calculating the overnight visitor population, it was first necessary to record the ratio that overnight tourists actually lodge at hotel/motel to the total lodging accommodations actually used.

Table I-5, Overnight Tourist Accommodations Used, 1990, presents the distribution of lodging types actually used by overnight visitors to the Florida Keys, as reported in the Wave Two Report by the Monroe County Tourist Development Commission, 1990 and as adjusted by one of the City's planning and economic consultants, Hammer, Siler, George, and Associates (HSGA).

The figures from the Wave Two Report are based on visitors placing calls to a toll-free tourist information line. The shares do not add to 100 percent due to multiple responses. HSGA adjusted the "guest house" and "stayed with a relative/friend" categories after inferring that visitors may be less likely to call a tourist information line because they or their hosts are already familiar with the City. In addition, the campground category was adjusted because most of the campgrounds in the County are located on other keys. For purposes of this analysis, HSGA's adjusted accommodation figures were used. Based on these current accommodation figures as presented in Table I-5, Overnight Tourist Accommodations Used, 1990, 61% of Key West's overnight tourists lodge at hotel/motel accommodations.

The number of overnight tourists who lodged at hotel/motel accommodations on any one day (6868) was divided by the percentage of overnight tourists that actually lodge at hotel/motel accommodations (61%) in order to determine the total estimated overnight tourist population of 11,259 persons for any one day in 1990. Therefore, the total 1990 seasonal population estimate for any one day is 12,887 persons comprised of 1,628 seasonal residents and 11,259 overnight tourists.

Table I-4  
POPULATION ESTIMATES AND PROJECTIONS: 1990-2010  
City of Key West

YEAR On Any One Day in:	PERMANENT RESIDENTS			SEASONAL VISITORS			P E A K Permanent + Seasonal Totals
	Permanent Civilian [2]	Permanent Military [3]	Total Permanent Residents [1]	Seasonal Residents [4]	Overnight Tourists [5]	Total Seasonal Residents	
1990	18,652	6000	24,652	1,628	11,259	12,887	37,539
1991	18,794	6000	24,794	1,641	11,294	12,935	37,728
1992	18,937	6000	24,937	1,653	11,330	12,983	37,920
1993	19,081	6000	25,081	1,666	11,366	13,032	38,112
1994	19,226	6000	25,226	1,678	11,402	13,080	38,306
1995	19,372	6000	25,372	1,691	11,439	13,130	38,502
1996	19,519	6000	25,519	1,704	11,476	13,180	38,699
1997	19,667	6000	25,667	1,717	11,513	13,230	38,897
1998	19,817	6000	25,817	1,730	11,550	13,280	39,097
1999	19,967	6000	25,967	1,743	11,588	13,331	39,298
2000	20,119	6000	26,119	1,756	11,626	13,382	39,501
2001	20,272	6000	26,272	1,770	11,664	13,434	39,706
2002	20,426	6000	26,426	1,783	11,702	13,485	39,911
2003	20,581	6000	26,581	1,797	11,741	13,538	40,119
2004	20,738	6000	26,738	1,810	11,780	13,590	40,328
2005	20,895	6000	26,895	1,824	11,820	13,644	40,539
2006	21,054	6000	27,054	1,838	11,860	13,698	40,752
2007	21,214	6000	27,214	1,852	11,900	13,752	40,966
2008	21,375	6000	27,375	1,866	11,940	13,806	41,181
2009	21,538	6000	27,538	1,880	11,980	13,860	41,398
2010	21,701	6000	27,701	1,895	12,021	13,916	41,617

NOTES:

- [1] The 1990 population estimate comprised of resident civilian & military personnel estimates reported in the 1990 US Census. The 1991-2010 population projections were derived by adding permanent civilian and military residents.
- [2] The 1990 civilian population estimate was derived by subtracting 6,000 military personnel from the 1990 US Census estimate. The 1991-2010 civilian population projection was estimated by multiplying the constant growth rate multiplier (1.0076) from the Future Land Use Element: Data, Inventory and Analysis (FLUE: DIA), Table I-11, to the previous year's population.
- [3] The number of military personnel stationed at Key West is not anticipated to increase during the planning period. If anything, recent federal cutbacks in military spending may result in the reduction of the actual number of military personnel stationed in Key West. The U.S. Navy demographic and housing data identifying population and housing resources associated with naval operations within the City of Key West have not been readily available to the City. The City and the U.S. Navy should develop a formal structure for the exchange of demographic and housing data.
- [4] Seasonal Resident is estimated for 1990 based on seasonal workers and seasonal households, as explained in the FLUE: DIA text. The seasonal resident population is then assumed to remain constant at 8.73% of the projected civilian population throughout the planning period.
- [5] The derivation of the 1990 estimated population of overnight tourists is explained in the text. The overnight tourist population projections account for the City's adopted 1986 Growth Management Ordinance (GMO) and availability of vacant land designated for residential use as explained in the text.

SOURCES:

1990 U.S. Census, City of Key West.  
Solin and Associates, Inc. 1991.  
Humm's Guide to the Florida Keys and Key West, Spring 1991, for number of units used in column [5].  
Additional sources are cited in the text.

PREPARED BY: Solin and Associates, Inc. 1991.

TABLE I-5: OVERNIGHT TOURIST ACCOMMODATIONS USED, 1990<sup>1</sup>

Accommodation Type	Overnight Tourist Accommodations Used	
	Wave Two* (%)	HSGA** (%)
Hotel/Motel	65.3	61.0 <sup>3</sup>
RV/Campground	9.3	5.0
Rented a Residence	8.0	7.0
Guest House	4.0	10.0
Stayed with Friends/Relatives	4.9	15.0
Private Charter Boat/Yacht	1.8	1.0
Other	1.3	1.0
<b>Total</b>	<b>94.6<sup>2</sup></b>	<b>100.0</b>

- <sup>1</sup> This table does not include as overnight tourists, military trainees, military retirees, and other persons who stay in transient military accommodations including military RV parks.
- <sup>2</sup> Wave Two Report figures do not total 100 percent due to multiple answers.
- <sup>3</sup> Example of how to interpret table: 61% of Key West's overnight tourists lodge at Hotel/Motel accommodations.

Source: \* Wave Two Report, Monroe county Tourist Development Commission, 1990.  
 \*\* Adjustments by HSGA, Memo: Municipal Revenue and Expenditure Attributions by Major Industry, March 12, 1991.

Prepared By: Solin and Associates, Inc., 1991.

**Seasonal Population Projection.** The total 2010 seasonal visitor population projection is 13,916 comprised of 1,895 seasonal residents and 12,021 overnight tourists. The following calculations for seasonal resident and overnight tourist population projections were conducted separately due to different methodology employed for each as explained below.

- Seasonal Resident Population Projections.** As explained previously in this study, Solin and Associates, Inc. (SAI) documented that the seasonal resident population was equal to 8.73% of the permanent civilian resident population. This population ratio of seasonal residents to permanent civilian residents is anticipated to remain relatively stable over the planning period. Therefore, the 8.73% ratio was applied annually to each permanent civilian resident population presented in Table I-4, Population Estimates and Projections: 1990-2010 which yields a 2010 projected seasonal resident population of 1,895.
- Overnight Tourist Population Projections.** As presented previously in this study, SAI adjusted HSGA's calculations to determine that the 1990 overnight tourist population was 11,259. This estimate is equal to 60.36% of the 1990 permanent civilian resident population (18,652).

Assuming that the population ratio of overnight tourists population to permanent civilian resident population would remain stable over the planning period, the ratio was applied annually to each permanent civilian resident population to initially derive overnight tourist population projections. However, the initial overnight tourist population projections were converted to transient units which was found to exceed the number of transient units allowable under the City's 1986 Growth Management Ordinance (GMO) which states that the annual increase in the number of new overnight

transient dwelling units shall not exceed 25% of the annual increment increase of new permanent dwelling units projected.

Since 2.5 persons were found to reside in overnight tourist dwelling units as well as permanent dwelling units, the annual increment increase allowable under the GMO was found by using the permanent resident population projections previously calculated. The annual increment increase of permanent residents was multiplied by 25% (application of the GMO) to calculate the annual increment increase of overnight tourist population. For other sections of this plan, the annual increment increase of overnight transient units allowable under the GMO was calculated by dividing the annual increment increase of transient population by 2.5 (persons per dwelling unit).

Therefore, this methodology was used to derive the overnight tourist population projections as presented in Table I-4, Population Estimates and Projections: 1990-2010, which yields a 2010 projected overnight tourist population of 12,021.

3. **Land Use Availability.** A major constraint to population growth is land availability. Available undeveloped land was inventoried and analyzed based on development potential and development constraints. The analysis conducted in this section concludes that adequate land is available to accommodate the dwelling unit demand by permanent and seasonal populations projected above.

Table I-6, Projected Resident and Transient Population and Housing: 1990-2010 relates to land availability which incorporates population projections previously presented in this section and provides a work sheet which explains three methodologies used in projecting permanent and seasonal visitor population housing unit demand.

Undeveloped land anticipated to accommodate future residential development is identified including projected residential dwelling units by structure type. The transient or seasonal unit projection is based on the City's adopted 1986 Growth Management Ordinance as well as the City's availability of vacant land designated for residential use. The vacant land analysis is presented later in this Chapter which includes a tabular summary of remaining developable undeveloped land as presented in Table I-7, Estimated Undeveloped Land.

