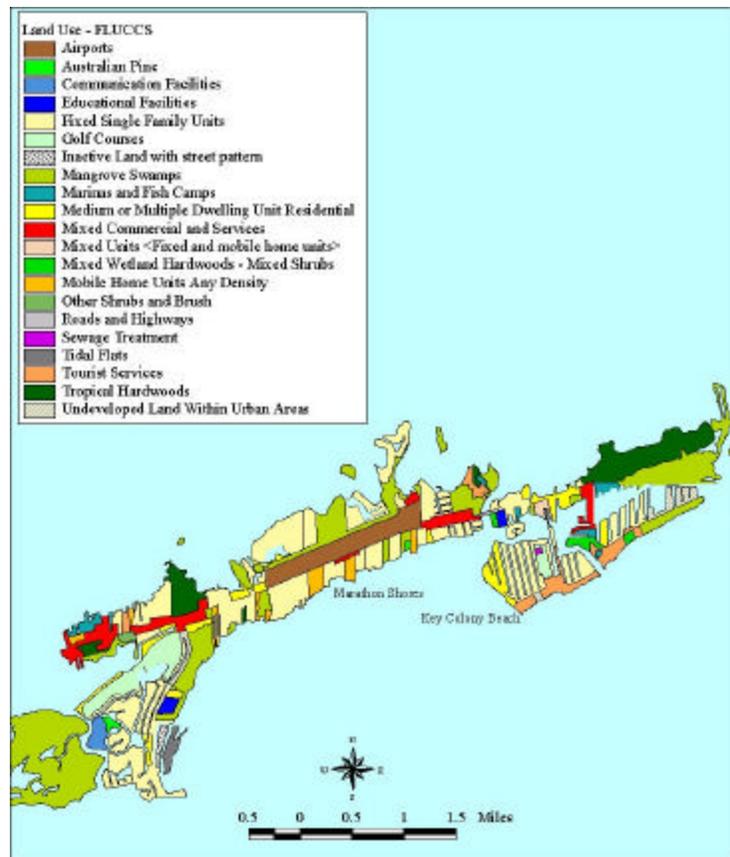


3.0 LAND USE DATA FOR THE FLORIDA KEYS

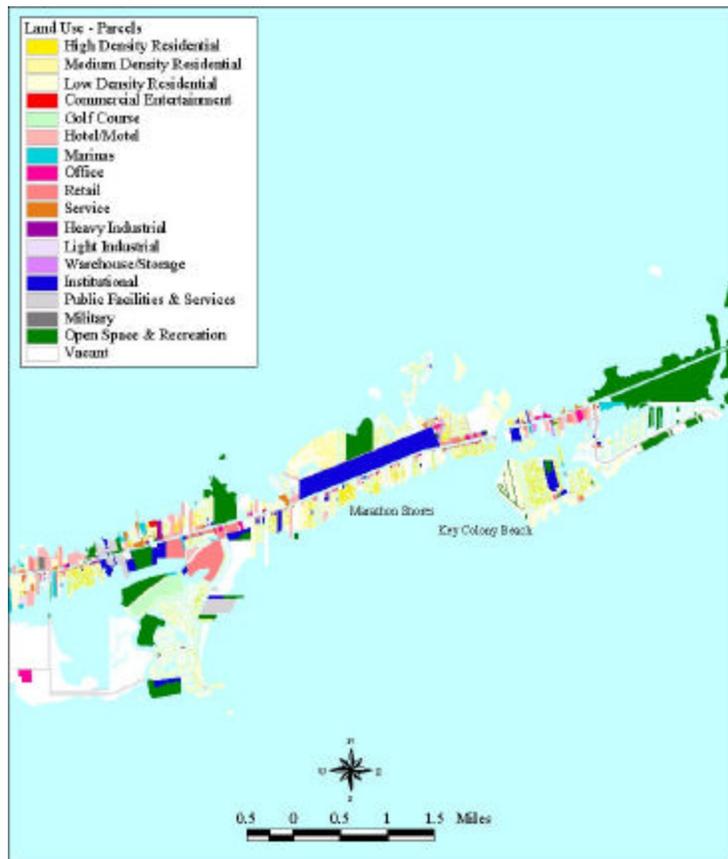
Land use is the fundamental dataset in the model and establishes the initial conditions against which any scenario is defined. However, there are no up-to-date land use maps for Monroe County. Three potential sources of land use data were evaluated. First, the Monroe County Growth Management Office provided the FKCCS with a multitude of Digital Exchange Files (DXF). DXF data have no geographic coordinate system and, therefore, could not be “translated” into a GIS data format for the CCIAM. In addition, there are no attribute fields associated with these DXF data. Second, SFWMD maintains a 1995 land use and land cover map that applies the Florida Land Use and Land Cover and Forms Classification System (FLUCCS, Figure 3.1). The FLUCCS is widely used in Florida for planning and environmental applications. For this study, however, the FLUCCS is insufficient in providing information such as vacancy or land ownership.

FIGURE 3.1
EXAMPLE FLUCCS LAND USE DATA IN THE FLORIDA KEYS



Third, the parcel GIS layer from the Monroe County Property Appraiser’s Office is a parcel-by-parcel map of the Florida Keys (Figure 3.2). Its associated tax roll database includes numerous fields of information about each parcel, including ownership, development status, taxable value, and sale price, among others. The combination of a spatial coverage linked to a detailed database made the parcel dataset more appealing for the study than the FLUCCS map. However, the parcel GIS layer and the tax roll were developed to serve specific purposes, primarily maintaining official taxing and property records. These purposes are quite different from those of the FKCCS. In particular, the spatial data and the tabular data were not designed to provide land use or zoning information, nor are the data required to be accurately geo-referenced in order to serve their purpose for the Property Appraiser. Therefore, the study team faced several challenges in order to effectively use the parcel database and the tax roll in this study.

FIGURE 3.2
EXAMPLE LAND USE FROM THE PARCEL DATASET



When overlaid on other spatial data, such as Digital Ortho Quarter Quadrangle (DOQQ) aerial photography, the Monroe County parcel GIS layer appears “shifted” (Figure 3.3).

FIGURE 3.3
PARCELS PRIOR TO MANUAL CORRECTION



Technically, the data exhibits rotations, skews, and shifts throughout the Florida Keys. The spatial discrepancy increases from the Lower to the Upper Keys and with increasing distance from U.S. 1. The Study Team and FMRI developed a simple method to manually shift the parcels to achieve a “best fit” using the 1995 DOQQ as a visual reference (Figure 3.4). While this method is not appropriate for cadastral mapping, it provided sufficient accuracy for a regional planning model such as the CCIAM.

FIGURE 3.4
PARCELS AFTER MANUAL CORRECTION OF SPATIAL SHIFT



The Property Appraiser’s Office downloaded a portion of their tax roll dataset for use in the FKCCS. The resulting DBASE file contains 54 columns or “fields” of data for each of the approximately 70,000 parcels in the Florida Keys. These fields provide information regarding each parcel, such as property ownership, property value, and data that were used to approximate land use. For example, the property code (PC) field can take one of 99 values that represent land use for that property.

Two other fields, termed “LL1” and “LL2” show one of 297 possible values, which denote environmentally sensitive areas, a wide variety of commercial uses, or unique residential characteristics. The study team allocated a considerable amount of effort to understand the characteristics, limitations, and appropriate use of these fields, including numerous interactions with FMRI and the Property Appraiser’s Office. Ultimately, the values from the PC field were used to define the land use categories used throughout the model (Table 3.1; Appendix G, Map 2).

TABLE 3.1
PC CODES UTILIZATION TO DEFINE LAND USE CATEGORIES FOR THE FKCCS

Land Use in the FKCCS	Corresponding PC Values in the Tax Roll
Vacant Land	00, 10, 40, 70
Residential (high, medium, low density)	01, 02, 03, 04, 05, 06, 07, 08, 09, 36
Retail	11, 12, 13, 14, 15, 16
Office	17, 18, 19, 23, 24
Service	21, 22, 25, 26, 28, 29, 30, 61
Marina	27
Commercial Entertainment	31, 32, 33, 34, 35, 37
Golf Course	38
Hotel/Motel	39
Light Industrial	41, 44, 45, 46
Heavy Industrial	42, 43, 47
Warehouse/Storage	48, 49
Public Facilities and Services	83, 84, 85, 91, 94
Institutional	20, 71, 72, 73, 74, 75, 76, 77, 78, 79, 90
Agriculture	69
Open Space and Recreation	80, 82, 86, 87, 88, 89, 92, 99
Military	81
Submerged Lands	95

Similar to land use, no GIS-based zoning data exists for the Florida Keys. However, the Property Appraiser's Office attempts to assign a zoning category to each parcel in the tax roll. Since zoning is truly a land use planning responsibility, the Property Appraiser does not actively maintain these zoning data. Therefore, these data do not constitute an official zoning map. However, this information is the best available in the Florida Keys. After additional coordination with the Property Appraiser, the available zoning data was linked to the parcel GIS layer. In addition, numerous inspection of available, recent aerial photography (First American Realty Solutions 2001) helped address and clarify obvious discrepancies or missing zoning values.

Model tests showed inconsistencies between the number of dwelling units and population calculated for the current conditions versus those reported by the Census 2000 (reported in the November 2001 draft of this report). This discrepancy suggested anomalies in the PC values or in the application of those values to certain land uses. Further evaluation of the Tax Roll and aerial photography revealed that parcels coded as "county" (PC = 86) or "federal" (PC = 88) were categorized as "open space" when, in fact, the parcel had other land uses. For example, Dredgers Key, in Key West, has a PC code of 88, but it includes over 100 housing units that were undetected in the initial model test (Figure 3.5). Similarly, the Key West Airport was coded 86 and initially interpreted as "open space." Corrections based on these findings have resulted in the calibration of current condition housing units to within 5 percent of the Census 2000 values Keys-wide (48,792 and 51,571, respectively).

FIGURE 3.5
LAND USE AND PROPERTY CODE DISCREPANCY



The parcel data and Tax Roll database from the Monroe County Property Appraiser’s Office, after adjustments, constituted the land use basis for the study.