

# THE FLORIDA KEYS CARRYING CAPACITY STUDY

Volume 1

July, 2000

## What is the Carrying Capacity Study?

### CARRYING CAPACITY STUDY CATEGORIES:

#### Natural Resources

Ecosystems  
Species of Concern  
Water Quality

#### Social Environment

Regional Economy/  
Fiscal Impacts  
Community Character  
Quality of Life

#### Human Infrastructure

Population Forecast  
Hurricane Evacuation  
Wastewater/Stormwater  
Traffic Circulation  
Marinas, Ports, &  
Heavily Traveled Channels  
Other Infrastructure Services

### Public Meeting Dates:

Tuesday, July 18  
Key Largo Library  
5:30 p.m.

Wednesday, July 19  
Marathon Government  
Center  
5:30 p.m.

Thursday, July 20  
Harvey Government Center  
5:30 p.m.

In order to maintain the beauty of our islands and our quality of life, we must know just how much development the Florida Keys can sustain. The purpose of the Florida Keys Carrying Capacity Study is to determine the ability of the Florida Keys ecosystem to withstand all impacts of land development while addressing the economy, hurricane evacuation, quality of life and community values and expectations. The Florida Keys Carrying Capacity Study is the first step in creating a sustainable future for the Keys.

Comprehensive planning is required in Monroe County to assure the sustainability of its unique resources and to address the complexity of the Florida Keys. The Florida Keys Carrying Capacity Study is a logical extension of the ongoing planning efforts within Monroe County to support a healthy sustainable environment and economy.

In the past, like all local governments in Florida, Monroe County was required to prepare a comprehensive plan. In addition, through its designation as one of the Areas of Critical State Concern, Monroe County had to meet more stringent planning standards. Among the specific planning requirements were:

**Levels of Service:** The requirement that local government establish acceptable and legally enforceable standards for service levels for six public facilities: roads (traffic congestion), sanitary sewer, stormwater, potable water, solid waste, and parks and recreation.

**Concurrency:** Once levels of service standards are set, local governments cannot issue development orders if levels of service will be reduced below the standard. Improvements to public facilities necessary to maintain levels of service standards must be committed concurrent with development orders. In the face of such mandates, local government must choose either the capital cost of expanding public facilities, or the political and/or fiscal consequences of either denying development

or passing on to development applicants the full cost to mitigate development impacts. In this way, the citizen is not burdened with the cost of new development.

**Hurricane Evacuation:** The requirement to "maintain or reduce" hurricane evacuation times, seldom a difficulty in most communities, pose a serious constraint in the Keys where the evacuation time was estimated to be 35 hours.

**Economic Feasibility:** This requirement states that the comprehensive plan must demonstrate economic feasibility and be accompanied by a detailed five year Capital Improvements Element specifying facilities necessary to maintain levels of service, their cost and funding sources.

Upon review of the specific planning requirements, several challenges appeared:

#### The Environmental Challenge

Even the most ardent supporters of unrestrained development acknowledge that the Keys' environmental resources are stressed. In-shore water quality is degraded as a result of thousands of septic systems and cesspits operating on porous limestone rock.

#### The "Capacity" Challenge

Growth in the Keys is limited by a number of finite resources: potable water must be piped in from the mainland, traffic capacity, and the ability to evacuate residents from approaching hurricanes. Particularly with respect to the safeguarding of lives and property from the hurricane threat, these capacity limitations raised serious issues of public health, safety, and welfare.

#### The Economic/Fiscal Challenge

Because a significant portion of land area in the Florida Keys is publicly owned and non-revenue producing, local governments are caught between exceptionally high costs of providing public facilities

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**T**he Florida Keys Carrying Capacity Study team is comprised of leading professionals in their respective fields ranging from marine biology to social economics. The project is managed by Ann Lazar from the Florida Department of Community Affairs (DCA), Debbie Peterson from the United States Army Corps of Engineers (USACE) and Ricardo Calvo, Ph.D., from the engineering firm Dames & Moore.

**Ann Lazar** recently joined DCA as a planning manager coordinating Monroe County projects. Ann spent eight of her 13 years with the Florida Department of Environmental Protection in the Florida Keys and received the Sustained Exemplary Performance Award. Ann received a Master of Science from the University of South Florida in Botany.

**Debbie Peterson** is a coastal engineer for the USACE with a Master of Science degree in Natural Resource Management from the Florida Institute of Technology and is a professional engineer registered with the state of Florida. Debbie serves on the Technical Advisory Committees for the Monroe County Sanitary Wastewater and Stormwater Master Plans.

**Ricardo Calvo**, Ph.D., serves as both a consultant and scientist with Dames & Moore and has successfully managed complex environmental projects, some of which have had far-reaching socioeconomic implications. Ricardo holds a doctorate degree in Ecology and his scientific work includes both theoretical and experimental work in plant ecology and population biology.

and services and a reduced taxable land base. This results in escalating property taxes and gentrification for residents and businesses, denying affordable housing for the Florida Keys' low and moderate-income workers.

### **Plan Implementation**

Although the principal implementation tool of the Monroe County Year 2010 Comprehensive Plan went into effect in 1992, the plan itself was subjected to a number of legal challenges that lasted four years. These administrative proceedings highlighted specific aspects of the Florida Keys ecosystem as having already exceeded carrying capacity thresholds, including nearshore water, seagrasses, and the endangered Key Deer. Hurricane evacuation was also considered to have reached its upper capacity limit.

In 1996, the Florida Administration Commission and the governor, called for the preparation of a "carrying capacity analysis" for the Florida Keys. In a cooperative effort, the U.S. Army Corps of Engineers, the Florida Department of Community Affairs and Monroe County have begun the Florida Keys Carrying Capacity Study to look at the impact of land development in the Keys.

The study will provide an information database and planning analysis tool that may be used to determine the level of land development activities that will avoid further irreversible and/or adverse impacts to the Florida Keys natural resources. This study also will address such factors as levels of service for public facilities, hurricane evacuation time, the regional economy and quality of life for residents. Tying development to the critical measure of carrying capacity will give all of us choices and options.

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