

Briefing Paper on the Florida Keys Carrying Capacity Study
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The Florida Keys Carrying capacity Study is an outgrowth of environmental advocacy and litigation concerning the application of Florida's growth management law to Monroe County (the Florida Keys) in the early 1990s. The original land use plan adopted by the county was greatly deficient and was disapproved by the state. After several environmental groups joined the state's legal challenge, the County agreed to completely re-write the plan, based upon an overall "carrying capacity" approach. The amended plan was still deficient, in the eyes of the state and even more so in the eyes of the environmental groups, and the resulting legal challenge by 1000 Friends of Florida and other environmental groups resulted in dramatic findings by a state administrative law judge that the carrying capacity of the Keys' nearshore waters to assimilate additional nutrient (wastewater and stormwater) pollution had been exceeded. The plan was again invalidated and the next re-write (in response to concerns by scientists and environmentalists that the carrying capacity of land - based habitats to accommodate further degradation had also been exceeded) included a requirement that an overall carrying capacity study be performed and that the land use plan be amended by the fall of 2003 to implement the findings of that study.

That was 1996. Because the Florida Keys are formally designated by the state as an "Area of Critical State Concern", the plan changes that require the study and the subsequent amendments to implement the study are at the same time legal requirements of a state administrative rule and the local government comprehensive (land use) plan. During the 6 years that it has taken to complete the study, the state rule and the comprehensive plan also placed additional limitations on development (both the annual number of permits, and the development standards) and included additional requirements for resource management - such as land acquisition, wastewater and stormwater management plans, etc during the interim.

The specific legal requirement for the study is as follows:

"The carrying capacity analysis shall be designed to determine the ability of the Florida Keys Ecosystems, and the various segments thereof, to withstand all impacts of additional land development activities. The carrying capacity analysis shall consider aesthetic, socioeconomic (including sustainable tourism), quality of life and community character issues, including the concentration of population, the amount of open space, diversity of habitats, and species richness. The analysis shall reflect the interconnected nature of the Florida Keys' natural systems, but may consider and analyze the carrying capacity of specific islands or groups of islands and specific habitats, including distinct parts of the Keys' marine ecosystem."

Then, once the study is done, by September 2003, Monroe County and the state must:

"Implement the carrying capacity study by, among other things, the adoption of all necessary plan amendments to establish a rate of growth and a set of development standards that ensure that any and all new development does not exceed the capacity of the county's environment and marine system to accommodate additional impacts. Plan amendments will include a review of the County's Future Land Use Map series and changes to the map series and the "as of right" and "maximum" densities authorized for the plan's future land use categories based upon the natural character of the land and natural resources that would be impacted by the currently authorized land uses, densities and intensities."

The U.S. Army Corps of Engineers (USACE) and the Florida Department of Community Affairs (FDCA) have been jointly responsible for completing the \$6 million study. They developed a draft conceptual scope of work in 1996-1997. A panel of external experts was used to peer review the scope of work, which became final in September 1998. In 1999 and early 2000, the USACE and the FDCA sponsored a series of nine technical workshops to seek guidance from a multi disciplinary group of experts on questions and issues regarding the natural resource category of the FKCCS. The modeling contractor was selected and placed under contract in October 1999. Just this month, a final version of the Study has been completed. Among its chief findings are:

- "Overall, the current peer-reviewed scientific information proved insufficient to develop a comprehensive carrying capacity analysis framework that would allow for undisputable determinations of whether future development scenarios fall within the carrying capacity of the Florida Keys. Yet the study and the impact assessment model clearly document several untenable effects of development on the environment in the Florida Keys and will provide solid technical support for decisions on comprehensive plan amendments and development standards in the Keys."
- Development in the Florida Keys has surpassed the capacity of the upland habitats to withstand further development."
- Any further encroachment into areas dominated by native vegetation" ... "would exacerbate habitat loss and fragmentation." It further finds that "the Lower Keys marsh rabbit and silver and the silver rice rat, are highly restricted and likely could not withstand further habitat loss without facing extinction." It makes a similar finding relative to the Key Deer, and finds that any further habitat loss would place the Stock Island tree snail in jeopardy.
- Development in the Florida Keys has surpassed the capacity of several protected species to withstand the effects of further development activities."
- "Secondary and indirect effects of development further contribute to habitat loss and fragmentation"
- Any further development in the Florida Keys would exacerbate secondary and indirect impacts to remaining habitat."
- The Study recommends that encroachment into native habitat be prevented.
- The Study also suggests that precluding any further development is a logical response to its conclusions. "If further development is to occur", it should focus on "redevelopment and infill."

- Regarding the Marine Ecosystem, the Study finds that the existing data "are insufficient to establish quantitative, predictive relationships between land use or development and the marine environment. However, there is plenty of evidence of human effects on the marine ecosystems and species in the Florida Keys. Seagrass scars, boat groundings, beach closings, coral collisions, and poor water quality in canals and other confined waters clearly expose the effects of humans on the marine environment. The ... scenario analysis strongly argues for the benefits of wastewater treatment, but other impacts are more related to resource management than to land development. Recreational opportunities in the Florida Keys attract visitors from the Keys and beyond. Once in the Keys the impacts that boaters, fishermen, snorkellers, divers and others may have on the marine resources is largely related to their behavior."

The process of getting to a final report has been long and difficult. Environmental advocates strongly objected to both the draft scope of work and substantive report for many reasons. Primarily, the concern was that the study was calculated simply to provide relevant information to the health of the ecosystem but not to clearly answer the question of whether the carrying capacity had been exceeded. Throughout the multi-year process, these efforts have been fairly successful and the resulting final report included the findings mentioned above.

In 2002, a panel of the National Academy of Sciences issued a strong critique of some of the study's components, sending it back to the drawing board for improvements. A final evaluation of the newly-revised study has now been organized and funded by the South Florida Water Management District, the National Oceanic & Atmospheric Administration, the US Environmental Protection Agency, The Nature Conservancy, and Sanctuary Friends, and is due out in early January 2003. In order to meet the state's deadline for a land use plan amendments, the state has initiated The Florida Keys Carrying Capacity Study Implementation Work Group, organized by the South Florida Regional Planning Council. The work group is not a formal advisory or decision-making body, but is intended to bring together representatives from Keys municipalities, state and federal agencies, and environmental and development interests to discuss the nuts and bolts of implementing the study. This working group is discussing land acquisition and an overall specification for implementing the study, which requires Comprehensive Plan amendments to establish a growth rate and development standards that will "not exceed the capacity of the county's environment and marine system to accommodate additional impacts."

The challenge for environmental groups at this point is to three-fold. First, the public attack by opponents of the study must be met with active press work, which gets the word to the public in the Keys that the Study's conclusions concerning terrestrial habitats at least are indeed scientifically valid. Second, they must convince the local elected officials and the state Cabinet to adopt very specific land use plan changes to limit new development in the Keys to strictly adhere to the results of the study - to reduce overall permitting or at least severely restrict building on the remaining tropical hardwood hammocks, pinelands and other

habitats. This coming year, including the annual review of these issues by Florida's Governor and Cabinet, will be a critical one. Third, if the land use plan changes are inadequate, they can be legally challenged.

Based on the straightforward conclusions of the terrestrial module of the Study, certain changes to the County and municipal comprehensive plans and Land Development Codes would seem obvious:

- No public or private development that requires or allows the loss, encroachment or fragmentation of upland habitats shall be allowed. Nor shall any public or private development that would create a secondary adverse impact to an upland habitat be allowed.
- No public or private development that requires or allows the loss, encroachment, or fragmentation of habitat of the Key Deer, the Lower Keys marsh rabbit or the silver rice rats shall be allowed. Nor shall any public or private development that would create a secondary adverse impact to habitat of the Key Deer, the Lower Keys marsh rabbit or the silver rice rat be allowed.
- Only redevelopment and infill development should be allowed.
- The County and municipal comprehensive plans should include a requirement for the preparation of a Florida Keys Ecological Restoration Plan, which should be overseen by the Department of Community Affairs.
- A number of other specific changes should be made to the Habitat Evaluation Index, through which the County implements ROGO points and open space requirements for permitting.

In addition to these changes to the comprehensive plans, it is clear that land acquisition will need to be greatly accelerated in order to allow the Study to be faithfully implemented. For example:

- Land acquisition by the Monroe County Land Authority and the State Division of State Lands must be intensified.
- A toll road should be placed on US 1, with at least 50% of the available revenues dedicated to public acquisition of environmentally sensitive lands in the Keys
- The Working Group should create an Inter-Agency Land Acquisition Working Group, made up of local, state and federal officials or staff, to develop specific recommendations for establishing a coordinated, comprehensive land acquisition program which significantly accelerates and expands the rate and amount of land acquisition in the Keys.