

# AGRICULTURE AND RURAL AREA STUDY

## *Related Studies Coordination Task 3.b.*

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## **I. INTRODUCTION**

Pursuant to Task 3(b) of the Scope of Services, Freilich, Leitner & Carlisle (“FLC”) has assembled the foregoing summary of relevant studies, programs, and analyses that relate to the work being done by the Consultants or that relates in some way to the subject matter of the Agriculture and Rural Area Study (the “Study”). This Report, and a number of the summaries themselves, has been completed with the assistance of various members of the Citizens Advisory Committee (CAC), Technical Advisory Committee (TAC), County Staff, and other Consultants involved in the Study.

In order to maintain an objective approach in our analysis, we have erred on the side of comprehensiveness – including every study brought to our attention; and objectivity – setting forth study descriptions that are neutral in their presentation. Each member of the Consultant Team should review this Report and should obtain copies of any studies of particular relevance or significance to their work. Contact information has been provided.

Task 3(b) of the Scope limits the current analysis to studies and plans prepared since 1990. Indeed, most of the studies described herein fall within that timeframe. However, on one occasion it seemed appropriate to look further into the past. During the early 1980s, the County, in coordination with the Cooperative Extension Service, performed a comprehensive Planning Project similar in scope and purpose to the current Study. The Consultant Team has determined that that Project was so similar, in fact, that the CAC, TAC, and Consultant Team would be disserved by not reviewing that study. A

description of that study is set forth below, beginning on page 41. Task 2 of the Study will be performed in light of this earlier planning initiative.

We have categorized the relevant studies reviewed in this Report into eight major headings as follows:

- Agriculture
- Best Management Practices
- Environmental Protection, Land Use, and Conservation
- Land Acquisition
- Non-Government Organization
- Planning
- Relevant Legislation and Policy Determinations

Within each of these headings, the studies are distinguished according to the level of government (whether federal, state, regional, or local) that conducted the study. Therefore, the reader is able to quickly assess what work, if any, a particular level of government has contributed in a particular field. Note, however, that in a number of instances more than one level of government participated in the study – often by providing the funding for the work. In these instances, the study has been listed under the highest level of government that had a significant role in the work.

Following the description of the scope for each study, we have included the implication of the study for continuing agriculture in South Miami-Dade County. Each implication is preceded by a one-word description as follows: “compatibility,” “competition,” “viability,” and/or “adaptability.” “Compatibility” describes the extent to which agricultural uses may reasonably operate in conjunction with, or in proximity to, non-agricultural uses. “Competition” refers to how changing land uses in the Study Area are affecting the supply of and the demand for agricultural land. “Viability” refers to

elements, other than the consumption of land, that may imply significant consequences for the practice of agriculture. Finally, “adaptability” refers to studies that suggest ways farmers can adapt their farming practices to address the obstacles that farmers currently face. These headings are included to help the reader gain a frame of reference for what each study may imply in light of the current Study.

The purpose of Task 3(b) is to identify studies that have come before and to take advantage of research previously performed, data previously gathered, and conclusions previously reached. Simply put, as the Consultant Team embarks on the most critical phases of the Study, we should avoid doing work already done by others or merely repeating studies and analyses completed in years past. In the course of preparing this Report, FLC has identified several studies and analyses that will inform and focus the work we will perform under Task 2 of the scope. We anticipate that other CAC, TAC, and Consultant Team members will do the same after reviewing this Report. In future deliverables, we will identify studies relied upon in the course of our work. Other Team members should do the same.

## II. AGRICULTURE

### A. FEDERAL

#### 1. A New Look at Agriculture: Redefining Agriculture's Role in Our Economy, Landscape, Environment and Social Culture, *Executive Summary*, 2001

**Entity:** U.S. Department of Agriculture, Natural Resources Conservation Service  
Florida Stewardship Foundation  
South Florida Ecosystem Restoration Working Group

**Scope:** This document was prepared for the South Florida Ecosystem Restoration Working Group/Task Force. The purpose of this concept paper is to take a new look at the role agriculture plays in the economy, landscape and environment. This report describes the obstacles faced by agriculture and actions that can be taken to overcome them. These actions are grouped under two major headings:

1) Economics:

Goal #1 Improve profitability;

Goal #2 Create a conducive business climate; and

Goal #3 Ensure adequate infrastructure, and

2) Environment:

Goal #4 Support and encourage environmental compatibility; and

Goal #5 Integrate agriculture into the landscape.

The draft document was issued on March 2001.

**Implication:** *Adaptability.* Methods identified and discussed in the report may benefit the industry and help overcome obstacles facing modern agriculture. Successful land use policy depends on an increasingly sophisticated understanding of how the local economy is impacted by changes in agricultural production and viability.

**Contact:** Craig Evans, President  
Florida Stewardship Foundation  
One Park Place, Suite 240  
621 N.W. 53<sup>rd</sup> Street  
Boca Raton, Florida 33487  
webpage: <http://us-farm.com>



## **2. Impact on Agriculture from Hydrologic Changes Associated with South Florida Ecosystem Restoration Plans**

- Entity:** U.S. Department of Agriculture; Agricultural Research Service
- Scope:** This program involves research and development of a computer model that predicts and models the impact water storage will have on flooding and agricultural production in Miami-Dade County.
- Implication:** *Viability.* The computer model aids in the understanding of the negative and positive consequences and implication of water storage on agricultural land within the Study Area. Agriculture's continued viability depends, in part, on the industry's ability to respond to the changes in hydrology brought about by various environmental restoration plans.
- Contact:** Dr. Reza Savabi  
USDA-Agriculture Research Service  
13601 Old Cutler Road  
Miami, FL 33158  
(305) 254-3633  
(305) 238-9330 (Fax)

## **B. STATE**

### **1. Proceedings of the Dade County Conference of Agricultural Land Retention; October 18, 1991; dated December 30, 1991**

- Entity:** Florida International University Joint Center for Environmental and Urban Problems
- Scope:** These proceedings document the substance of a one-day conference on "agricultural land retention in Dade County," held on October 18, 1991. Then-County Commissioner Larry Hawkins sponsored the conference noting an "increasing concern for competition between agricultural and urban development for the remaining developable (non-environmentally sensitive) land ..." Fifteen state and local entities provided financial support for the conference, which was attended by more than 175 people.
- Implication:** *Viability.* As these proceedings illustrate, lessons can be learned from a variety of sources of various expertise. The success of the current Study

depends on a continued dialogue with various interests represented across the spectrum of the Study Area.

**Contact:** Miami-Dade County  
Department of Planning and Zoning  
1110 Stephen P. Clark Center  
111 N.W. First Street  
Miami, Florida 33128-1972  
(305) 375-2835

## **2. Using Summer Cover Crops to Reduce Nutrient Leaching in South Florida**

**Entity:** University of Florida; IFAS Tropical Research and Education Center

**Scope:** Summer crops are used for weed control and to retain nutrients during the heavy summer rains. This results in less pesticide use and less nutrient leaching and run-off.

**Implication:** *Adaptability.* Farming techniques, such as the one identified in this report, that reduce the cost of farming and increase the productivity of the land, make farming more profitable. As the pressure to convert existing agricultural lands to suburban and urban uses, agricultural viability may be perpetuated in the Study Area by incorporating the efficiencies of use discussed in this IFAS report.

**Contact:** Herb Bryan  
University of Florida; IFAS Tropical Research and Education Center  
(305) 246-6340

## **3. Economic Impact of Agriculture and Agribusiness in Dade County, Florida; December 1990**

**Entity:** Special Agricultural Advisory Committee and the Dade County Farm Bureau, with the support of Metropolitan Dade County, Dade County Youth Fair, Inc., the City of Homestead, Dade County Agri-Council, Dade County Chapter of Florida Nurserymen and Growers Association, and the Dade County Farm Bureau

**Scope:** This study evaluates the impact of agricultural production and various related activities on the Dade County economy. The authors noted

evidence that historic estimates tended to underreport the economic impact and value of agriculture in Dade County. The study focused on row crops, including traditional and tropical vegetables, tree crops, and commercial ornamental horticulture. Similar to the economic analysis used in future studies; the authors used the input-output methodology to determine economic impact. That analysis indicated that sales of agricultural produce contributed \$910 million to Dade County, approximately \$300 million to the County's income, and generated over 23,000 full-time jobs. The vegetable industry was the heaviest contributor in this regard, followed by the nursery and fruit industries. The report also included a description of selected commodities produced in the County, as well as a historical view of agriculture in Dade County.

**Implication:** *Viability.* This report's quantification of the economic contribution of the agricultural sector in Dade County demonstrates the economic significance of agriculture in Dade County. Future land uses will be determined to a large extent by these dynamics, many of which have shifted over the last decade and are being reevaluated as part of the current Study.

**Contact:** Anne E. Moseley  
Robert L. Degner  
Food and Resource Economics Department  
University of Florida  
Gainesville, Florida 32611

#### **4. Farms to Schools Program; Pending.**

**Entity:** USDA-Natural Resources Conservation Service

**Scope:** This program would facilitate the opportunity for Miami-Dade County Schools to purchase fresh vegetables directly from local farmers. This can be advantageous to all parties by reducing food costs to the County, providing fresh vegetables to children, and increasing profits for the farmers. This is a national program and has been successfully used in other areas. An initial meeting between the School Board and various farmer organizations is currently being coordinated.

**Implication:** *Adaptability.* The changing face of agriculture within the Study Area will bring with it changes in distribution of agricultural product. The farms-to-schools program has not been fully engaged in Dade County, however, and its implications on the future of agriculture or the Study Area in general are unclear.

**Contact:** Thaddeus Hamilton, Urban Conservation Planner  
USDA-Natural Resources Conservation Service  
6191 Orange Drive, Room 6183-Q  
Davie, FL 33314-3457  
(954) 792-1984  
e-mail: [thaddeus.hamilton@fl.usda.gov](mailto:thaddeus.hamilton@fl.usda.gov)

## **5. Utilization of Municipal Waste Products as Agricultural Soil Amendments; 1999.**

**Entity:** University of Florida; IFAS Tropical Research and Education Center

**Scope:** This three-year tomato-calabaza rotation experiment using clean organic waste compost (from food and yard refuse), Bedminster co-compost (from organic and biosolid waste), and Baltimore biosolids was completed in the summer of 1999. Study data showed that monthly groundwater levels of nitrates were lower during the rainy season for clean organic waste compost and Bedminster co-compost.

**Implication:** *Adaptability.* The off-site impacts of agriculture can be reduced using different waste disposal techniques, many of which will affect the compatibility of competing uses in the Study Area.

**Contact:** Herb Bryan  
University of Florida; IFAS Tropical Research and Education Center  
(305) 246-6340

## **6. Safe Pest Management in South Florida; Ongoing.**

**Entity:** University of Florida IFAS Tropical Research and Education Center

**Scope:** This program responds to the trend in South Florida for several crops to be grown in the same locality at the same time. A community-based pest management program was initiated to ameliorate potentially significant complications resulting from improper or inadequate pest management. This program includes recommendations such as using insecticides on an as-needed basis, choosing insecticides with short residual effects, and integrating biorational and biological products in pest management, as well as others.

**Implication:** *Adaptability.* As this report discusses, implementing different techniques of pest management, such as using insecticides on an as-needed basis, can

yield greater benefit for the resources invested in agricultural land, and ameliorate unwanted impacts on surrounding land uses.

**Contact:** D.R. Seal  
University of Florida; IFAS Tropical Research and Education Center  
(305) 246-6340

## **7. Insect Pest Management Program Using Environmentally Benign Materials**

**Entity:** University of Florida IFAS Tropical Research and Education Center

**Scope:** This program contemplates alternatives to the use of harmful insecticides in insect pest management, including benign insecticides with minimum effects on the environment. Use of certain biorational and biological products are safe for the biotic environment and provide lasting management of target pests.

**Implication:** *Adaptability.* This report suggests that effective pest management techniques may be invoked without significantly diminishing the environmental quality of the land. Pest management is an issue of relevance, and in some cases, urgency, for all in the agricultural industry. The ability to incorporate innovative pest management techniques that are less likely to harm the natural environment will enhance the continued viability of two of the Study Area's most competitive land uses: agriculture and natural resource preservation.

**Contact:** D.R. Seal  
University of Florida; IFAS Tropical Research and Education Center  
(305) 246-6340

## **8. Development of Management Practices to Prevent/Reduce Flooding Damage of Crops in the Frog Pond Agricultural Area; Ongoing.**

**Entity:** University of Florida IFAS Tropical Research and Education Center

**Scope:** Flooding caused by tropical storms and existing high water table is a major risk to fresh vegetable production in south Florida especially the south Dade area. Although most soils are normally well-drained, low-lying areas are often prone to flooding during periods of high rainfall. In

Miami-Dade County, agriculture loss estimates from flooding as a result of rainfall (13.9") in December 2000 was \$13 million. In October 1999, vegetable crop losses due to hurricane Irene were estimated to be about \$77 million with nearly 19,000 acres damaged by floods. IFAS is currently conducting a project to develop effective management techniques to prevent or reduce flooding damage to vegetable crops.

**Implication:** *Viability.* As competition between agricultural and non-agricultural uses increases, farmers that wish to retain their land for agricultural purposes will increasingly be in demand of techniques that increase productivity and efficiency of operation. A significant threat to productivity and efficiency are catastrophic, non-cyclical events like flooding, whether severe or moderate, which can destroy the production of a growing season or worse. The high water table in some parts of the Study Area only exacerbates this problem. To the extent farmers can incorporate techniques to reduce damage from flooding, the greater are the opportunities to retain agricultural lands for those who wish to do so.

**Contact:** Dr. Yuncong Li  
University of Florida; IFAS Tropical Research and Education Center  
(305) 246-7001, ext. 282

## **9. Testing of Flood Tolerant Cover Crops to Enhance Vegetable Production**

**Contact:** Dr. Herb Bryan  
University of Florida; IFAS Tropical Research and Education Center  
(305) 246-7001, ext. 280

## **10. Identify the Cause(s) of Bean Diseases in the Frog Pond Agricultural Area**

**Contact:** Dr. Randy Ploetz  
University of Florida; IFAS Tropical Research and Education Center  
(305) 246-7001, ext. 321

## **11. Development of GIS Database for the Frog Pond Agricultural Area; 2002**

**Entity:** University of Florida IFAS Tropical Research and Education Center

**Scope:** This extensive study was undertaken, among other objectives, to analyze the natural and developed environment of the South Dade County Agricultural Area and document the economic importance of agriculture to Miami-Dade County. This was achieved by developing a Geographical Information System (GIS) for the area. The study revealed that agricultural sales in Miami-Dade County raised revenue that exceeded \$1.07 billion, and produced 14,795 jobs in the 1997/98 crop year. The study also outlined a geographical description of the County, including its land area, climate, soil, fruit and vegetable production, and the distribution of farm sizes. The primary factors effecting the production of agricultural products included social and political considerations. Finally, the few of the study's recommendations include development of an improved hydrological data collection system to monitor water table levels, an indemnification program to protect farmers against losses, and a close working relationship between Florida farmers and the USDA and University researchers.

**Implication:** The use of GIS operating systems and data management techniques has been an integral component of the current Study, and in fact, Ms. Minkowski, author of the above report, has provided a similar report as a deliverable from the University of Florida. That report is titled "An Overview of Geographic Information Systems Applications for Agriculture in Miami-Dade County," and has been provided to the Consultant Team, and is available to the CAC and TAC.

**Contact:** Karen Minkowski  
University of Florida; IFAS Tropical Research and Education Center  
(305) 246-7001, ext. 295

## **12. Cropping History and Potential Crops for the Frog Pond Area**

**Entity:** University of Florida IFAS Tropical Research and Education Center

**Scope:** This study spans the history of the frog pond area cropping history from 1926 to 2000. The purpose of the study was to determine the traditional crops and success of each, and using such information to project potential crops and rotation. Historically, the area was suitable to tomatoes and cucumbers. Later, the Army Corps of Engineers helped to produce rotations of corn, beans and squash. In recent years, flooding has restricted the produce to short season crops, such as sweet corn and bush beans. From this research, Dr. Bryan concluded that a wide variety of



crops could potentially be maintained, including cabbage, collards, turnips, cantaloupe, lettuce, peppers, potatoes, and specialty Asian crops.

**Implication:** The success of the current Study depends in large part on the accuracy of the historical context in which it fits. As the economic and land use viability of agriculture remains a critical component of the Study, the historical analysis described here provides that context, as well as some insight into the future of agriculture in the Study Area.

**Contact:** Dr. Herb Bryan,  
University of Florida; IFAS Tropical Research and Education Center  
(305) 246-7110, ext. 280

### **13. Soil Analysis and Evaluation in the Frog Pond Area; Ongoing**

**Entity:** University of Florida IFAS Tropical Research and Education Center

**Scope:** The Frog Pond was one major vegetable and tropical fruit production area in Miami-Dade County. Major soil types are Chekika, very gravelly loam (Loamy-skeletal, carbonatic, hyperthermic, Lithic Udorthents), Krome, very gravelly loam (Loamy-skeletal, carbonatic, hyperthermic, Lithic Udorthents) and Biscayne marl (Loamy, carbonatic, hyperthermic, shallow Typic Fluvaquents). Soils are suitable for most vegetables and some tropical fruits. However, these soils are characterized by an alkaline pH, very gravelly texture, and low water holding capacity but rapid permeability. In addition, soils associate with shallow depths and high water tables. Those unique soil conditions create universal problems for crop production in this area such as low use efficiency of fertilizers, microelement deficiencies, and potential leaching of nutrients into groundwater.

**Implication:** In order to increase crop productivity and to reduce negative impacts to soil and water quality, it is necessary to determine the physical and chemical properties of soils in the area. Although the productivity of soils in the Study Area, wetlands and areas of high water tables notwithstanding, soil analyses indicate which areas may be least viable for continued agricultural uses and more appropriate for agricultural support or other non-crop activities.

**Contact:** Dr. Yuncong Li  
University of Florida; IFAS Tropical Research and Education Center  
(305) 246-7001, ext. 282



## **14. Evaluation of Arthropod Biodiversity in the Frog Pond Area**

**Contact:** Dr. Jorge Pena  
University of Florida; IFAS Tropical Research and Education Center  
(305) 246-7001, ext. 223

### **C. LOCAL**

#### **1. Water Re-Use Plan for Miami-Dade County in 2050; Ongoing**

**Entity:** Miami-Dade County Water & Sewer Dept.

**Scope:** A major proposed user of recycled wastewater is agriculture. If water usage fees or infrastructure changes are required by Miami-Dade County, then additional financial burdens could cause the profit margin to slide below bearable levels and cause farmers to sell their land.

**Implication:** *Viability.* Governmental and quasi-governmental decisions on issues such as fees and major infrastructure, including long-term water sources, transmission, and re-use affect the viability of agriculture in the Study Area. While the ability to recycle certain municipal waters may enhance the community's fiscal viability, the method of financing these programs will have potentially serious impacts on property owners in the Study Area.

**Contact:** Miami-Dade County Water & Sewer Dept.  
(786) 552-8113

### III. BEST MANAGEMENT PRACTICES

#### A. FEDERAL

##### 1. BMPS to Protect Ground and Surface Water from Agricultural Chemicals in the South Dade Basin

- Entity:** U.S. Department of Agriculture  
University of Florida Institute of Food and Agricultural Sciences
- Scope:** This is a joint study conducted by the USDA-Agricultural Research Service and the University of Florida IFAS. The study generally builds upon on-going work and has as its four major objectives the following: 1) a systematic evaluation of agricultural BMPs for vegetable crop production in the context of groundwater quality protection; 2) an evaluation and analysis of pesticide and nutrient loading to groundwater from their normal use in the production of selected vegetables crops; 3) an assessment of the fate and transport of indicator pesticides in soil and shallow groundwater; and 4) a comprehensive characterization of hydraulic properties of the Biscayne aquifer in sufficient detail to permit solute transport modeling at the farm and field scale.
- Implication:** *Viability and Compatibility.* As the competition between agricultural (including agricultural support) and non-agricultural uses increases, best management practices, to the extent they reasonably can be adopted, will enhance the viability of future farming operations as well as the compatibility between agriculture and resource protection uses.
- Contact:** Herb Bryan  
University of Florida Institute of Food and Agricultural Sciences  
(305) 246-6340

#### B. STATE

##### 1. Best Management Practices for Agrichemical Handling and Farm Equipment Maintenance; May, 1998.

- Entity:** Florida Department of Agriculture and Consumer Services  
Florida Department of Environmental Protection

**Scope:** The report attempts to familiarize farmers, farm managers, and farm workers with BMP and pollution (nonpoint) prevention actions that can be implemented at farm maintenance areas to protect the environment and improve farm efficiency. The report is intended to be informational, not regulatory in nature.

**Implication:** *Viability and Compatibility.* As is discussed above, incorporation of identified best management practices may enhance not only the long-term viability of agriculture, but also the ultimate compatibility of competing land uses, including resource protection and, potentially, certain urban or suburban uses.

**Contact:** Miami-Dade County Extension Office  
(305) 248-3311

## **2. Irrigation and Fertilization Optimization Project to Extend Best Management Practices to Fruit and Vegetable Growers in the South Dade Basin; May 2002.**

**Entity:** University of Florida; IFAS Tropical Research and Education

**Scope:** This project demonstrates the application of Enviroscan technology on six tropical fruit and six vegetable crops to optimize water use efficiency and reduce leaching of fertilizers into the ground water.

**Implication:** *Adaptability and Viability.* In some cases, new technology may be exploited to achieve efficiencies for the agricultural operations and productivity. These technologies, and the feasibility of adapting them in the Study Area, will impact the viability of agriculture in Dade County.

**Contact:** Bruce Schaffer  
University of Florida Institute of Food and Agricultural Sciences  
(305) 246-6340

## **C. LOCAL**

### **1. Protect Our Groundwater: Handbook for the Voluntary Retrofit of Open, Uncased Agricultural Wells; December 1997.**

**Entity:** Dade County Department of Environmental Resources Management, et al.

**Scope:** Following a brief description of the environmental problems caused by the use of uncased boreholes as a water source for agricultural uses, this report sets out three methods for retrofitting existing boreholes to eliminate direct discharges into open, uncased wells.

**Implication:** *Compatibility.* As with many of the best management practices discussed in identified reports, the ability to protect groundwater and other environmental features may enhance the ability of agriculture to coexist with other non-agricultural uses.

**Contact:** Judy Nothdurft  
Agricultural Waste Program  
DERM  
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Miami, Florida 33130-1540  
(305) 372-6905

## **IV. ENVIRONMENTAL PROTECTION, LAND USE, AND CONSERVATION**

### **A. FEDERAL**

#### **1. Biscayne Bay Coastal Wetlands; Ongoing.**

**Entity:** U.S. Army Corp of Engineers

**Scope:** This is a Comprehensive Everglades Restoration Program (CERP) project that began in October 2001 and is considering the quality, quantity, timing, and distribution of fresh water flows into Biscayne Bay in the South Dade area. Review of land uses will be a component of this project. The project will also involve review of the water management system in South Dade, as well as various land acquisition efforts currently underway in the area. The Project Management Plan, the first component of this multi-year project, is to be completed by April 2002.

**Implication:** *Viability.* Given agriculture's dependence on the availability of quality water, the decisions of local, regional, and state agencies regarding water management in South Dade will impact the success of continued agriculture in the Study Area.

**Contact:** Jill Tefts  
U.S. Army Corp of Engineers  
(904) 232-3508  
[www.cerpzone.org](http://www.cerpzone.org)  
[www.evergladesplan.org](http://www.evergladesplan.org)

#### **2. Environmental Quality Incentives Program (EQIP); Ongoing.**

**Entity:** U.S. Department of Agriculture

**Scope:** EQIP was established in the 1996 Farm Bill to provide a single, voluntary conservation program for farmers and ranchers to address significant natural resource needs and objectives. It represents the USDA's commitment to streamlining and improving conservation services, by combining the following: (a) the Agricultural Conservation Program; (b) the Water Quality Incentives Program; (b) the Great Plains Conservation Program; and (d) the Colorado River Basin Salinity Control Program.

EQIP provides technical, educational, and financial assistance to eligible farmers and ranchers to address soil, water, and related natural resource concerns on their lands in an environmentally beneficial and cost-effective manner. The program provides assistance to farmers and ranchers in complying with Federal, State, and tribal environmental laws, and encourages environmental enhancement. The program is funded through the Commodity Credit Corporation. The purposes of the program are achieved through the implementation of a conservation plan that includes structural, vegetative, and land management practices on eligible land. Five- to ten-year contracts are made with eligible producers. Cost-share payments may be made to implement one or more eligible structural or vegetative practices, such as animal waste management facilities, terraces, filter strips, tree planting, and permanent wildlife habitat. Incentive payments can be made to implement one or more land management practices, such as nutrient management, pest management, and grazing land management.

Fifty percent of the funding available for the program will be targeted as natural resource concerns relating to livestock production. The program is carried-out primarily in priority areas that may be watersheds, regions, or multi-state areas, and for significant statewide natural resource concerns that are outside of geographic priority areas.

As of February 2001, over fifty long-term EQIP contracts were in place in Miami-Dade County.

**Implication:** *Adaptability and Compatibility.* Programs like EQIP, assist farmers in their efforts to adapt different farming techniques to the larger environmental and land management objectives of the larger area. If successfully implemented, these programs may enhance the compatibility of competing land uses and governmental objectives.

**Contact:** Christine Coffin  
USDA, Natural Resources Conservation Service

### **3. Central and Southern Florida Project Comprehensive Review Study: Final Integrated Feasibility Report and Programmatic Environmental Impact Statement; April 1999**

**Entity:** U.S. Army Corps of Engineers, Jacksonville District  
U.S. Fish and Wildlife Service

U.S. Environmental Protection Agency  
National Park Service  
U.S. Geological Survey  
Natural Resources Conservation Service  
Florida Game and Fresh Water Fish Commission  
Florida Department of Environmental Protection  
South Florida Water Management District

**Scope:** This report recommends a “comprehensive plan for the restoration, protection, and preservation of the water resources of central and southern Florida, including the Everglades.” The purpose of the study, which resulted in the report, was to reexamine the Central and Southern Florida Project, first authorized by Congress in 1948, to determine whether the original project could be modified to restore the south Florida ecosystem. The restoration plan would, the report concludes, achieve “the restoration of more natural flows of water, including sheetflow, improved water quality, and more natural hydroperiods in the south Florida ecosystem.” The report sets out the major features of this restoration plan and the anticipated impacts of the plan on existing resources.

**Implication:** *Competition and Viability.* Restoring the south Florida ecosystem will consume land that is being used for agriculture or could be used for agriculture. The extent to which the demand for environmentally protected lands – through either acquisition or technique – can be satisfied while agriculture remains a viable enterprise, will impact policies that the County may eventually adopt. While urban and suburban uses will increasingly demand lands now given to agricultural uses, environmental protection and water management will continue to place substantial demands on property owners in the Study Area.

**Contact:** Russell Reed  
U.S. Army Corps of Engineers  
P.O. Box 4970  
Jacksonville, Florida 32232-0019  
(904) 232-3967

#### **4. Reconnaissance of Agrichemicals in Water from Open Irrigation Wells in Dade County, Florida; 1993**

**Entity:** U.S. Geological Survey (U.S.G.S.)  
Florida Department of Environmental Protection (FDEP)

**Scope:** In 1993, the U.S.G.S. took and tested water samples from open wells in South Miami-Dade County, most of which were used for pesticide and fertilizer mix-loading and/or irrigation in both row crop areas and groves. The study resulted in a recommendation that voluntary guidelines, specific to Miami-Dade County, be developed in order to protect groundwater. Accordingly, a series of “Open Well Workshops” were held between 1994 and 1996. The workshops were attended by farmers, well drillers, irrigation specialists, and various government representatives. Based on the information and data gathered during the workshops, three open well retrofit designs were developed that would eliminate direct discharges into open, unencased wells resulting from spills and overflows from mix-loading agrichemicals. These designs are described in the *Handbook for the Voluntary Retrofit of Open, Unencased Agrichemical Wells*, Miami-Dade County DERM.

**Implication:** *Adaptability.* New farming methods help protect resources, such as groundwater, that are important for farming and the community in general. Implementation of these techniques will impact the ability to adequately plan for future land uses.

**Contact:** Barbara Howie, U.S.G.S.; Miami Subdistrict Office  
(305) 717-5811

Rich Deurling  
Florida Department of Environmental Protection, Underground Injection  
Control Program  
(850) 921-9417

## **5. National Water-Quality Assessment (NAWQA) Program, 1997**

**Entity:** U.S. Geological Survey

**Scope:** This program involved a ground and surface water survey of a mixed-agricultural land-use area in south Dade County and was conducted in November 1997. The NAWQA team conducted an intensive water quality study in the C-111 basin to better understand the connection between the shallow groundwater and surface water. The NAWQA Program also has extensive water quality information for all of South Florida, including nutrients, pesticides, and volatile organic compounds.

**Implication:** *Viability.* A better understanding of the hydrology of the region can be used to create an efficient system of water use and to better understand the impact of agricultural activity on water quality.



**Contact:** U.S.G.S., Miami Office  
9100 NW 36 Street, Suite 107  
Miami, Florida, 33178  
(305)717-5800  
<http://srv3sfltpa.er.usgs.gov/gw/gwintro.html>  
<http://search.usgs.gov/query.html?col=nwi>

## **B. STATE**

### **1. Miami-Dade County Archipelago; 1999**

**Entity:** Florida Department of Environmental Protection (FDEP)

**Scope:** The study area of this program covers 1,023 acres in Miami-Dade County, which contain rockland hammock and the endangered pine rockland natural community near Everglades National Park. Many plant species within the study area are sensitive to adjacent urban and suburban development activities, as well as on-going agricultural activities. Additionally, due to a substantial reduction in acreage due to past urbanization, certain lands within the study area will be set aside as botanical sites to preserve unique plant communities.

**Implication:** *Competition and Adaptability.* Restoring the south Florida ecosystem will consume land that is being used for agriculture or could be used for agriculture, and can force farmers near environmentally-sensitive areas to adjust their farming techniques. Property owner perception of the economic impact and scope of these restoration programs will impact decisions regarding conversion and competition among uses.

**Contact:** Florida Department of Environmental Protection, Southeastern District Office  
(561) 681-6600

### **2. Biscayne Bay Partnership Initiative; Ongoing.**

**Entity:** Biscayne Bay Foundation,  
Florida Atlantic University GIS Lab  
FICUS Network  
Florida Conflict Resolution Consortium  
Florida Institute of Government  
FAU/FIU Joint Center for Environmental and Urban Problems

**Scope:** The Initiative was created by the 1999 Florida Legislature to survey the status of Biscayne Bay's resources and their management, and to produce a final report on its findings and recommendations to the Legislature in early 2001. The mission of the initiative is as follows:

The development of an open and inclusive, community-based forum to survey public and private sector activities and programs affecting Biscayne Bay, and to provide recommendations for actions to protect, improve, and enhance the Bay's resources, its social, economic, and natural values, and its ecological health.

A new committee is meeting currently and has recommended legislation to ensure some funding for this project.

**Implication:** *Competition/Adaptability.* As is the case with a number of the environmental reports identified here, the long-term viability of agriculture is directly impacted by the developing policies of local, state, regional, and federal agencies. The findings of the Biscayne Bay Partnership Initiative may be of significance to the Study, and will be monitored should it be completed prior to the completion of the current Study.

**Contact:** Susan M. Markley, Chief  
Miami-Dade County  
Natural Resources Division  
Department of Environmental Resources Management  
33 S.W. 2<sup>nd</sup> Avenue  
Miami, Florida 33130  
305-372-6754

### **3. South Florida Ecosystem Restoration; Ongoing.**

**Entity:** South Florida Ecosystem Restoration Task Force/Working Group, Noxious Exotic Weed Task Team

**Scope:** This Task Team is to coordinate the implementation of the Working Group Assessment and Strategic Plan for managing invasive exotic plants in South Florida. The Team will develop an implementation plan, a science plan, coordinated multi-agency budget, a calendar for accomplishment of goals, and set forth steps and actions identified in the invasive exotic strategic plan.

**Implication:** *Viability and Adaptability.* Policies that impact the eradication or perpetuation of exotic weeds will directly impact the viability of agriculture in the Study Area. The findings and conclusions of the Noxious Exotic Weed Task Team may impact the policies the County may eventually adopt with regard to the Study Area and the scope of the current Study.

**Contact:** Bob Doren  
National Park Service/ENP  
40001 S.R. 9336  
Homestead, FL 33034  
(305) 242-7810  
(305) 242-7836 (fax)  
bob\_doren@nps.gov

#### **4. Evaluation of Environmentally Friendly Plant Protection Systems for Use in or Adjacent to the Everglades National Park**

**Entity:** University of Florida IFAS Tropical Research and Education

**Scope:** The objective of this project was to demonstrate that phytophagous arthropods can be managed through innovative, non-polluting techniques. Native ornamental plants grown under this system have the same marketability as those grown under traditional farming systems.

**Implication:** *Adaptability and Compatibility.* New farming methods help protect resources, such as groundwater, that are important for farming and the community in general. The ability to incorporate these techniques into existing farming operations will influence the adaptability and compatibility of agricultural uses with non-agricultural uses in the future. As is discussed above, a major competing use for agriculture is environmental protection. To the extent the two can coexist, the viability of long-term agriculture will be enhanced for those property owners who wish to keep their land in agricultural production.

**Contact:** J. Pena  
University of Florida Institute of Food and Agricultural Sciences  
(305) 246-6340

## C. REGIONAL

### 1. Biscayne Bay SWIM Plan; 1995

**Entity:** South Florida Water Management District

**Scope:** In 1987, the Florida Legislature passed the SWIM Act, mandating that plans be developed for various water bodies that would protect water quality and marine habitat. The South Florida Water Management District prepared this Plan in order to comply with the Act. The Plan, last updated in 1995, contains extensive information and data on water quality and on efforts to protect the Park and South Biscayne Bay waters. Although the Plan focuses on water issues generally, it also considers the larger watershed and land use issues (e.g., stormwater) that impact the quality of the Bay.

**Implication:** *Adaptability.* Again, regulatory efforts to protect water quality in the region – whether by acquisition or regulation of use – will impact the nature and viability of farming as a viable land use in the Study Area.

**Contact:** Richard Alleman  
South Florida Water Management District  
(561) 682-6716  
[www.sfwmd.gov](http://www.sfwmd.gov)

### 2. Summary Report of South Dade Endosulfan Monitoring Information; 1991-1996

**Entity:** South Florida Water Management District

**Scope:** This report summarizes the results of twenty-five surface water sampling events occurring between November 1991 and July 1996, at five SFWMD structures in the Homestead area. The report provides information on the number of samples above the minimum detection limit for endosulfans under conditions of “flow” and “no flow” at the subject sites. The detection of pesticides in these surface waters presented a potential challenge to the ecosystem of the Everglades and the aquatic life in Florida Bay. The Agriculture/Surface Water Quality Working Group was coordinated by FDACS to address the challenge. Various strategies were developed to retain pesticides at the site of application and to prevent the migration of pesticides into the surface water including an IFAS Fact Sheet entitled *Management Practices to Protect Surface Water From*

*Agricultural Practices.* Funding was also obtained for an Application Equipment Specialist.

**Implication:** *Adaptability and Compatibility.* The greater extent to which agricultural operations are able to contain potentially damaging impacts on site, the greater the likelihood that conflicts with less intense uses will arise.

**Contact:** South Florida Water Management District, Miami Office  
(305) 377-7274

### **3. Eastward Ho! Brownfields Partnership; Ongoing.**

**Entity:** South Florida Regional Planning Council  
Treasure Coast Regional Planning Council  
Florida Department of Community Affairs  
U.S. Department of Environmental Protection

**Scope:** The program is a public-private, regional-state-federal collaboration that targets the remediation and sustainable reuse of urban properties that are underutilized due to real or perceived contamination (brownfields). This partnership supports the Eastward Ho! initiatives and Everglades restoration strategies, and include: an inventory of brownfields, socio-economic data, site inventories, encouragement of community participation in the redevelopment process, the establishment of financial tools and strategies for streamlining the public process, the revitalization of such sites, and the redevelopment of four demonstration projects in collaboration with various federal agencies.

**Implication:** *Competition.* To the extent brownfields in existing urban areas are successfully redeveloped, pressure to convert lands in the Study Area to urban or suburban uses may be diminished. However, local regulatory policies, allowable densities, for example, likely will have a more significant impact on the future of the Study Area than will the redevelopment of various brownfields. Nonetheless, Eastward Ho! policies, taken as a whole, may significantly impact future growth in the area.

**Contact:** South Florida Regional Planning Council  
3440 Hollywood Blvd.; Suite 140  
Hollywood, Florida 33021  
(954) 985-4416

## **D. LOCAL**

### **1. South Biscayne Bay Watershed Management Plan; Pending.**

**Entity:** Miami-Dade County  
South Florida Water Management District  
Biscayne National Park

**Scope:** This constitutes the third prong of the County's Land Use and Water Management Planning Project, and marks an attempt to protect the major drainage basins that are essential for preserving environmental, economic, and community values of Biscayne National Park. The ultimate goal of the Watershed Management Plan is to identify and establish land uses that are compatible with Biscayne National Park, while protecting individual landowner's property rights.

By way of the Plan, the County will seek to implement policies that ensure the protection of private property rights while defining a balanced and sustainable economy. The agricultural element of the Plan generally tracks Task 1 of the Agriculture and Rural Area Study itself, with significant involvement of the University of Florida.

The plan will direct the comprehensive management of land use and the quality, quantity and distribution of surface and ground water to ensure the restoration and sustainability of the environment, continued viable agricultural production, adequate flood protection, and supply of potable drinking water.

**Implication:** *Adaptability.* The findings and conclusions of this study may significantly impact future land use policies in the Study Area.

**Contact:** Miami-Dade County Department of Planning & Zoning  
111 N.W. 1<sup>st</sup> Street; Suite 1220  
Miami, Florida 33128  
(305) 374-2835

## V. LAND ACQUISITION

### A. FEDERAL

#### 1. South Dade Wetlands Addition; Ongoing.

- Entity:** South Florida Water Management District  
Miami- Dade County
- Scope:** This joint acquisition program will involve about 7,000 acres of public and private land in South Miami-Dade County, accomplished variously through purchase of development rights, easements, and fee title within the “South Dade Wetlands Addition.” Among the natural features to be acquired will be wetlands, prairies, agricultural lands, rock mines, and undeveloped open space. The project is intended to reconnect fragmented wetlands and open space essential to the hydrology of Biscayne Bay. There is little development pressure on the lands identified for acquisition and at this time other acquisitions are taking precedent. Nonetheless, the District and the County are working on a memorandum of understanding regarding the Model Lands program.
- Implication:** *Competition.* Restoring the south Florida ecosystem will consume land that is currently in agricultural production. The perception of agriculture as a continued, viable use will impact the extent to which acquisitions are voluntarily sought or consented to by property owners in the area. Eventually, these restoration/acquisition programs likely will compete with encroaching nonagricultural uses.
- Contact:** Dennis Rogers  
South Florida Water Management District  
(561) 682-6846

### B. STATE

#### 1. Land Acquisition Plan; Pending.

- Entity:** South Florida Ecosystem Restoration Task Force/Working Group, Land Acquisition Task Team

**Scope:** This Task Team is to develop a strategy for land acquisition needed for ecosystem restoration projects that are either federally or jointly funded by state and federal agencies. The plan will focus on acquisition efforts for lands where there is a federal or joint interest in surface water storage reservoirs and ASR facilities and habitat protection. The Task Team will limit the scope of the plan to those lands that will be acquired with federal funds or as part of a federal cost shared project, and will not infringe on existing “missions, authorities, or jurisdictions” or participating agencies. When completed, this plan should provide a broad picture of all current land acquisition initiatives that contribute to the restoration.

**Implication:** *Competition.* Again, acquisition of lands in the Study Area, whether for protection, water storage, or some other governmental objective, will influence the land use decisions made by property owners in the Study Area. The findings and conclusions of this Plan will be relevant to the current Study.

**Contact:** Joan Lawrence  
Theresa Woody  
South Florida Ecosystem Restoration Task Force/Working Group  
(305) 348-1665

## **C. REGIONAL**

### **1. East Coast Buffer/Water Preserve Areas; 2001**

**Entity:** South Florida Water Management District (SFWMD)  
U.S. Department of the Interior  
U.S.A.C.E.

**Scope:** This project involves the acquisition of land parcels located along the eastern side of the Everglades Protection Area in western Palm Beach, Broward, and Miami-Dade Counties. The majority of the lands are either undeveloped (wetlands) or contain very low-density development. These lands are needed to fully implement the Everglades restoration plans. The benefits of the program are identified as follows: improved water supply for restoring hydro patterns of the Everglades, improved water quality, and the preservation of wetland habitats.

**Implication:** *See above.*

**Contact:** South Florida Water Management District, West Palm Beach  
1-800-432-2045



## **VI. NON-GOVERNMENTAL ORGANIZATION**

### **1. Rural Florida: Opportunities for the Future; 2002**

- Entity:** Florida Chapter of the American Planning Association  
1000 Friends of Florida
- Scope:** This “white paper” was coordinated and prepared by 1000 Friends of Florida and the Florida Chapter of the American Planning Association, with input from numerous other partners. The document outlines the “community needs and challenges faced by rural residents as a result of declining agricultural economies, growth-related pressures, changing land values and environmental considerations.” In addition to extensive background information and context, the paper is considered to be only one piece of a “larger project involving education, planning, policy analysis and community outreach as well as land acquisition and conservation easements.” Although a “final draft” was recently completed, the paper is considered a “living document” and will be amended and added to, as additional research is completed and as new policies develop and are implemented.
- Implication:** *Viability.* This paper provides additional background on the circumstance of rural Florida and the range of environmental and land use issues that impact it. It is general in scope, compared to most of the studies described in this Report, but is valuable as a source of context and background.
- Contact:** Florida Chapter of the American Planning Association  
(85) 222-0808  
[www.floridaplanning.org/whats\\_new.htm](http://www.floridaplanning.org/whats_new.htm)

### **2. Status and Preservation of the Agricultural Industry in South Florida; January 1998.**

- Entity:** National Audubon Society – Everglades Conservation Office
- Scope:** This study evaluated the current state and future outlook of agriculture in Miami-Dade, Broward, and Palm Beach Counties and identified ways of preserving sustainable agriculture throughout the region. Hazen and Sawyer, environmental engineers and scientists, performed the study and

assembled its final report in January 1998. The study includes the input of over fifty agricultural experts and will be used to develop policy reports regarding the inclusion of agriculture as part of the ongoing Everglades restoration process. The study contains: 1) options for improving the sustainability of agriculture; 2) methods used in other areas of the country to preserve agriculture; and 3) recommendations to ensure the survival of agriculture.

**Implication:** *Adaptability and Viability.* Again, this report provides a useful overview of the issues surrounding the future viability of agriculture in south Florida. The study concludes that the viability of some agricultural products – winter vegetables and certain citrus, for example – is questionable. The study suggests a range of retention tools, like conservation easements, protection zoning, and TDRs, for preserving agriculture in South Florida. These tools, among others, will be discussed in Task 2 deliverables as part of the current Study.

**Contact:** National Audubon Society  
Everglades Conservation Office  
444 Brickell Avenue, Suite 850  
Miami, Florida 33131  
(305) 371-6399

### **3. Water Preserve Areas: Acquisition Status & Future Directions; June 1999**

**Entity:** National Audubon Society

**Scope:** This report sets out the history of the Everglades Water Preserve Areas, or WPAs, their role in ecosystem restoration, and the need for their continued implementation.

**Implication:** *Viability and Competition.* The identification and protection of water preserve areas will directly affect the suitability of competing land uses in much of the Study Area. However, funding from federal, state, and local sources is uncertain. Until WPAs are implemented, their implication on the current Study is difficult to ascertain. The status of this program will be monitored for the duration of the current Study.

**Contact:** National Audubon Society  
Everglades Conservation Office  
444 Brickell Avenue, Suite 850  
Miami, Florida 33131  
(305) 371-6399

#### **4. Mobile Irrigation Laboratory (MIL) Program; Ongoing.**

**Entity:** South Dade SWCD

**Scope:** This program is intended to provide farmers and urban homeowners with free evaluations of their irrigation systems, and to make specific recommendations to improve the efficiency of these systems.

**Implication:** *Adaptability and Compatibility.* Reviewing current practices, such as irrigation, can reduce the fiscal and environmental costs of farming, while at the same time conserving regional resources. Again, the extent to which environmental and agricultural uses can be made more compatible will influence the future of the Study Area and its mix of appropriate uses.

**Contact:** Morgan Levy, South Dade SWCD (Non-Profit Organization)  
Bob Carew, MIL Team Leader  
(305) 242-1288  
e-mail: [sodadeswed@aol.com](mailto:sodadeswed@aol.com)  
web site: [www.southdadeswed.org](http://www.southdadeswed.org)

#### **5. Aquaculture Feasibility Study and Industry Development for South Florida; Pending.**

**Entity:** South Florida Resource Conservation & Development Council

**Scope:** Expansion of agricultural commodities being produced in Miami-Dade County to include freshwater prawns. This study is pending the allocation of funding.

**Implication:** *Viability and Competition.* As the mix of alternative uses changes in the Study Area, so too will the competition among various uses. If the range of agricultural commodities produced in South Dade comes to include freshwater prawns, then resistance to urban uses may be perpetuated. However, as non-urban alternative uses diminish or become nonviable for current property owners, the appeal of urban uses will increase. Allowable densities and land uses will be influenced by these dynamics.

**Contact:** South Florida Resource Conservation & Development Council (SFRC&D)  
Greg Garvey, Coordinator  
(305) 246-4319  
e-mail: [ggarvey@sfred.org](mailto:ggarvey@sfred.org)  
web site: [www.SFRCd.org](http://www.SFRCd.org)

## **6. South Dade County Nursery Project, 1998**

- Entity:** Center for North American Integration and Development, National Council of La Raza
- Scope:** This involved an assessment by the Center for North American Integration and Development at UCLA and a series of visits to South Florida to assess regional industries' ability to absorb workforces that were experiencing "trade-driven job losses in row crop agriculture and tropical fruits." The philosophy of the study was that "trade adjustment should focus on supporting regional industries with two characteristics: (i) a believable future in an open trading regime given 'manageable' technical and financial assistance; (ii) job requirements that the typical displaced worker could meet with 'reasonable' continuing education and training." The main objective underlying this project was to identify "support mechanisms for regional industries where a social investment in opportunities for the impacted profile of worker makes sense."
- Implication:** *Adaptability.* As agricultural land diminishes, so does the agricultural workforce. The agricultural workforce will need assistance adapting to job opportunities provided by different sectors of the economy. Implications on the local labor force will be an important component of any land use policy alternative proposed by the CAC or adopted by the County.
- Contact:** Curtis M. Dowds, Ph.D.  
Center for North American Integration and Development/National Council of La Raza  
3518 ½ Union Street  
San Diego, CA 92103  
(619) 683-2142

## **7. Down on the Farm: NAFTA's Seven-Year War on Farmers and Ranchers in the U.S., Canada and Mexico; June 2001**

- Entity:** Public Citizen's Global Trade Watch (PCGTW)
- Scope:** This report provides the PCGTW's perspective on the impact the North American Free Trade Agreement (NAFTA) has had on family farmers and ranchers in North America. The report makes the following general assertions:

- NAFTA has coincided with agricultural trade deficits
- Agriculture prices and farm incomes have collapsed since NAFTA
- NAFTA has been used to justify shredding farm safety nets
- NAFTA, free trade and deregulation accelerated concentration in Agribusiness
- NAFTA encourages commodity dumping
- U.S. corn dumping into Mexico devastates Mexican farmers and genetic diversity
- NAFTA seeds monopolies
- FTAA (Free Trade Area of the Americas) would expand NAFTA's attack on farmers

The reports concludes that Congress should have an increased and more prominent role in the U.S. farm policy debate – “from setting the U.S. agenda to selecting appropriate prospective trade partners with whom to negotiate ...”

**Implication:** *Viability.* The economic pressures on agriculture come from local, regional, national and international sources. These pressures, which, in many cases are unforeseeable and uncontrollable, will impact the economic viability of the Study Area as an agricultural region.

**Contact:** Public Citizen's Global Trade Watch  
1600 20th St. NW  
Washington, DC. 20009  
(202) 588-1000  
[www.citizen.org](http://www.citizen.org)

## **VII. PLANNING**

### **A. FEDERAL**

#### **1. Homestead Air Reserve Base Closure and Realignment; Ongoing.**

**Entity:** U.S. Department of Defense  
U.S. Environmental Protection Agency

**Scope:** Following Hurricane Andrew, this 2,940-acre base was closed. The Air Force decided to dispose of about 2/3 of the surplus property for community use as a restoration benefit and also to encourage economic

development and revitalization in South Miami-Dade County. Clean-up of the base is on-going, while the ultimate use of various portions of the site is still being determined. Its impact on nearby agricultural uses is unclear.

**Implication:** *Competition and Compatibility.* The redevelopment of the Homestead base has and will continue to impact the future of this region of south Florida. However, until a master use plan is adopted and the disposition of the property is finally determined, the implications on agriculture are unclear.

**Contact:** U.S. Air Force  
AFBCA/PA Homestead SEIS  
1700 North Moore Street; Suite 2300  
Arlington, Virginia 22209  
(703) 693-9091

## **2. South Florida Community – Urban Resource Partnership Ecosystem Restoration Project; 2000**

**Entity:** U.S. Department of Agriculture  
Natural Resources Conservation Services (NRCS)  
U.S. Department of Housing and Urban Development  
U.S. Department of Environmental Protection

**Scope:** This partnership of various agencies will facilitate cooperation of various environmental groups and organizations interested in addressing environmental projects.

**Implication:** As is discussed above, environmental policies and initiatives will continue to be an integral component of the land use mix within the Study Area. This partnership marks an effort to coordinate the work of various regulatory agencies within the area. The direct implications on agriculture are unclear.

## **B. STATE**

### **1. Comprehensive Corridor Development Strategy in the South Dade U.S. 1 Corridor; Ongoing.**

- Entity:** FAU/FIU Joint Center for Environmental and Urban Problems
- Scope:** This study reviewed and analyzed alternative development and transportation scenarios that would encourage a more sustainable urban form. The study was intended to assist the residents and businesses of South Dade County by integrating transportation management with urban planning functions and policies. Funding was derived from both the State Department of Community Affairs and Miami-Dade County.
- Implication:** *Competition.* Efficient transportation systems encourage infill and compact development, which ease the pressure for development on the urban fringe. To the extent that the Corridor Development Strategy successfully directs urban densities to established urban areas, development pressures within the Study Area may be diminished. However, this result will depend on the identification of a sufficient amount of land that can be redeveloped within the urban development boundary. Otherwise, the positive impacts of corridor redevelopment will likely be greater within the redeveloped area than within the Study Area.
- Contact:** FAU/FIU Joint Center for Environmental and Urban Problems  
220 S.E. 2<sup>nd</sup> Avenue; Tower 704  
Ft. Lauderdale, Florida 33301  
(954) 762-5255

### **2. Eastward Ho! Corridor Revival Development Trends Fiscal Impact Analysis; 1998**

- Entity:** Florida Department of Community Affairs  
U.S. Department of Environmental Protection
- Scope:** Commissioned by the Governor's Commission for a Sustainable South Florida, this study compared the cost of current trends in development patterns to planned development patterns (infill and redevelopment). The study area included a largely urban 150-mile corridor spanning the eastern

portions of Miami-Dade to St. Lucie Counties. By curbing urban sprawl, the study contemplated the protection of South Florida's ecosystem.

**Implication:** *Competition.* As with the Joint Center's Comprehensive Corridor Development Strategy, the implications of this study will depend on the extent to which urban infill policies are adopted and implemented.

**Contact:** South Florida Regional Planning Council  
3440 Hollywood Blvd.; Suite 140  
Hollywood, Florida 33021  
(954) 985-4416

### **C. LOCAL**

#### **1. Comprehensive Development Master Plan; Last Amended April 2001**

**Entity:** Miami-Dade County

**Scope:** This is the County's comprehensive plan, adopted and implemented pursuant to Chapter 163, F.S. The plan sets forth an overall, long-range vision of the County's future growth, and specifically addresses the following matters by way of an independent planning element:

- (a) Land Use
- (b) Transportation
- (c) Housing
- (d) Conservation, Aquifer Recharge and Drainage
- (e) Water, Sewer and Solid Waste
- (f) Recreation and Open Space Element
- (g) Coastal Management
- (h) Intergovernmental Coordination
- (i) Capital Improvements; and
- (j) Education

The Plan is not regulatory in nature, although all development and all adopted land development regulations must be consistent with its provisions.

**Implication:** Current comprehensive planning policies may be subject to revision as a result of the current Study. The Plan provides the foundation to any policies the County may eventually adopt. Under Florida law, all future development – and zoning regulations – will have to be “consistent with”



those policies. The Plan plays an important role in the future of the Study Area.

**Contact:** Miami-Dade County  
Department of Planning and Zoning  
1110 Stephen P. Clark Center  
111 N.W. First Street  
Miami, Florida 33128-1972  
(305) 375-2835

**2. Agricultural Land Use Planning Project incl.:**  
**Issues and Study Objectives, 1980**  
**Economic Studies of Dade County Agriculture**  
**Profile of Dade County Agriculture, 1981**  
**Economic Studies of Dade County Agriculture**  
**Land Use and Land Ownership Data for Agricultural Areas in**  
**Dade County, Florida, 1981**  
**Management Options for the Retention of Land for**  
**Agriculture**  
**Agricultural Land Use Plan for Metropolitan Dade County,**  
**Florida, 1983**

**Entity:** Dade County Planning Department  
Dade County Cooperative Extension Department

**Scope:** The purpose of the Agricultural Land Use Planning Project was to identify ways to curb the premature and unplanned conversion of agricultural lands to urban uses. The Project sought to do the following:

- (1) Determine which lands in Dade County are best suited for agriculture;
- (2) Determine which lands should be kept in agriculture for the long term in order to retain agriculture as a viable industry in the County;
- (3) Produce an Agricultural Plan; and
- (4) Recommend management strategies for preserving Dade County's best agricultural lands.

The Project occurred in several phases and resulted in various documents and studies. These are described below.

## **Issues and Study Objectives**

The preliminary document was released at the outset of the Project, and was intended to introduce the reader to the nature and extent of the agriculture industry in Dade County and the problems it faced immediately prior to and during the study period.

## **Economic Studies of Dade County Agriculture**

This analysis presented the “historical cost and return trends” for the major crops in Dade County during the study period, and projections of future trends for economic indicators for agriculture.

## **Profile of Dade County Agriculture**

This was a resource document generated from interviews with local growers and experts, as well as existing published data. The Profile describes the characteristics of the local agriculture industry, cultivation practices, and economic aspects of the County’s agricultural production. The authors of the report recognized that the citizens of Dade County largely were unfamiliar with the role and nature of the agriculture industry in the area. To that end, they prepared this component of the Project as a basis to facilitate that understanding and to facilitate the ensuing planning process.

## **Land Use and Land Ownership Data for Agricultural Areas in Dade County, Florida**

This report described the methods used in developing baseline land use and land ownership size data for the Project. Using 1980 as the base year, this report compared land uses as they existed in 1980 with those in existence in 1970, noting specifically which lands had converted from agricultural to urban or suburban uses over that timeframe. Additionally, land ownership changes and “parcelization” trends were reviewed for their impact on future land use patterns and trends. Finally, this report described the potential for future residential and other urban development in light of the zoning regulations in place at that time.

## **Management Options for the Retention of Land for Agriculture**

This report set forth various management techniques used by state and local governments to protect or retain specified lands for agricultural purposes. Additionally, this report evaluated the land use regulations in

place at that time and surveyed other programs used in other areas to protect farmland.

### **Agricultural Land Use Plan for Metropolitan Dade County, Florida**

This report marks the last in a series of documents prepared as part of the Agricultural Land Use Planning Project, and summarizes the conclusions and recommendations of the Project. The report includes an overview of the issue of agricultural land loss in the United States, generally, and in Dade County, specifically. The report sets forth in a comprehensive fashion the land use patterns that have typified the study area and the impact these patterns have had on agricultural areas. Finally, the report advances a number of “final plan proposals,” under the three general headings of “Agricultural Area” (the designation of a special agricultural district within south Dade), “Comprehensive Development Master Plan” (setting the context of recommended agricultural policies within the existing CDMP), and “Agricultural Area Actions” (proposed guidelines for land use and development activities within the designated Agricultural Area).

**Implication:** *Viability, Compatibility, Competition, and Adaptability.* As the CAC is well aware, this study was an initial endeavor into the subject matter of the current Study. Existing policies were shaped by the recommendations made in that study – whether they were incorporated or not. Those policies are under review as part of the current Study and will be reevaluated in light of their relative success and their applicability to the recommended approach adopted by the CAC.

**Contact:** Miami-Dade County  
Department of Planning and Zoning  
1110 Stephen P. Clark Center  
111 N.W. First Street  
Miami, Florida 33128-1972  
(305) 375-2835

## VIII. RELEVANT LEGISLATION AND POLICY DETERMINATIONS

### 1. Florida Rural and Family Lands Protection Act; enacted 2001

**Entity:** Florida Legislature

**Scope:** This piece of legislation provides participating landowners several options for protecting ranch and timberlands. The Department of Agriculture and Consumer Services will cooperate with landowners who wish to preserve their lands and who avail themselves of either of the following alternatives:

- (1) purchase of traditional permanent conservation easements;
- (2) purchase of less restrictive rural land protection easements;
- (3) purchase of agricultural protection easements, which are 30-year restrictions on development and subdivision with an option for the state to buy the land; or
- (4) pay farmers to manage their lands in a manner that will protect wildlife and improve wildlife habitat and water resources under a permanent conservation easement.

Departing somewhat from traditional programs of this sort, the Act includes a range of protection alternatives and gives the landowner the flexibility to choose which preservation program best suits his or her needs.

**Implication:** *Viability and Competition.* State laws that promote continued agriculture will impact the viability of existing agricultural lands. To the extent these programs are used by property owners in the Study Area, they will influence the property owner's land use decisions. Jurisdictions where these programs are used see a decrease in urbanization. This recently-adopted state policy will be evaluated in regard to its likely influence on property owner perceptions and viability as an alternative to urban conversion.

**Contact:** Department of Agriculture and Consumer Services  
The Capitol  
Tallahassee, Florida 32399-0800  
(850) 488-3022

## **2. Redland Incorporation; On-going.**

- Entity:** Redland Area Municipal Advisory Council (RAMAC)
- Scope:** The County Commission approved the RAMAC in 2000 to analyze and study the feasibility and advisability of incorporation. RAMAC is interested in preserving a rural lifestyle, the integrity of existing farmlands, and to nurture agriculture by assuming control of planning and zoning. The analysis process is underway and continuing and will be monitored closely by the Consultants.
- Implication:** Any shift in the political dynamic within the Study Area, as may be caused by the incorporation of the Redland, will have potentially dramatic impacts on the future of agriculture in the area. At this point, it is not possible or productive to speculate as to what those impacts would be. To the extent official action is taken over the course of the current Study, its impact on the Team's analysis will be taken into account.

## **3. Feasibility Study and Summary Analysis and Conclusions: Redland Incorporation Alternative; January 18, 2000**

- Entity:** Redland Incorporation Study for Agriculture (RISA)
- Scope:** This Study reviews numerous issues and aspects of the potential incorporation of the Redland area of Dade County. The authors reviewed various incorporation proposals from other parts of Dade and Broward Counties to ensure that essential elements and areas of relevance were included in the Redland analysis. The Report identifies various problems associated with the incorporation process (including the role of the state in the local planning process, the sustainability of agricultural uses in the area, and the economic realities of continued agricultural activity) and proposes various solutions (including new zoning amendments and policies, incorporation, special agricultural district designation, and intermediate forms of government). The study includes the results of a survey distributed and completed by Redland residents and concludes with a "Recommended Option: The Case for Incorporation."
- Implication:** *See above.*
- Contact:** Geoff Knights  
Pat Wade  
Redland Incorporation Study for Agriculture