

# "IN SOUTH FLORIDA, THE ENVIRONMENT IS THE ECONOMY"

- Carol Browner, Administrator, US Environmental Protection Agency  
October 7, 1998 Board of Governors and Trustees Luncheon  
Greater Miami Chamber of Commerce

Produced By:

*Environmental Economics Symposium Committee*  
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Environmental Affairs Group

&

*Environmental Economics Council*  
National Audubon Society  
Everglades Conservation Office

In conjunction with

South Florida Water Management District

*Partners for Progress & Sustainability: The Everglades & the South Florida Business Community*

June 1999

About the Greater Miami Chamber of Commerce's

**ENVIRONMENTAL AFFAIRS GROUP**

The Greater Miami Chamber of Commerce created the Environmental Affairs Group at the Executive Committee level in 1997. This was a result of a growing recognition that the economy of South Florida is inextricably linked to the health of our sensitive natural environment.

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**ENVIRONMENTAL ECONOMICS COUNCIL**

The Environmental Economics Council was created in 1996 to promote a common, demonstrated understanding among the South Florida business communities of the critical relationships between regional and global economic viability and the sustainability of the South Florida ecosystem, to benefit the quality of life of present and future generations. The Environmental Economics Council is composed of 30 civic and community leaders representing South Florida's business and economic centers. Members include corporate CEOs, bankers, attorneys, small business owners, local government representatives, and elected officials.

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*Sustainability is a new age. It will transform our culture just as the information age has. It is the greatest opportunity we've ever had.*

-David Crockett, President, The Chattanooga Institute  
February 26<sup>th</sup>, 1999 Environmental Economics Symposium

## Foreword

In South Florida, the environment is the economy. Tourism is a \$20 billion industry, upon which 277,750 South Florida jobs depend (Travel Industry Association of American, 1997). A good part of the tourism involves eco-tourism and fishing. Both of these segments of the tourist industry are dependent upon a healthy Everglades and an adequate water supply. Everglades National Park ranks in the top five tourist destinations in this region. If we look at all the South Florida parks, including Everglades National Park, we are talking about six million annual visits and \$500 million in visitor spending.

When the US Army Corps of Engineers came to Florida earlier this century, they created what was then an engineering marvel. They provided flood protection and water supply, enabling millions of people to live in South Florida. The environment was significantly altered, however, and today we have an ecosystem on the brink of disaster. Each year, our canal system channels nearly a trillion gallons of fresh water into the Atlantic Ocean and the Gulf of Mexico. This water is being wasted. The diversion of this water has caused environmental problems in the Everglades ecosystem and will eventually cause problems with our urban water supply. In South Florida, we have been fortunate so far, and haven't begun to experience water shortages that have become all too common in the Tampa Bay area. As the population grows, however, the problem won't just be confined to the Everglades and to wildlife. We'll see drinking water shortages and salt water intrusion of our drinking water aquifers.

We must support the Corps' Restudy. The Corps' plan is to increase the flow of freshwater into the Everglades, for the benefit of both people and wildlife. Their plan is ambitious. It's the largest ecological restoration effort in the U.S. and might be the largest ecological restoration on the planet. The cost of this effort is estimated at \$8 billion. The federal government will pay half of this and the people of Florida will pay the other half. The project will take more than 20 years. Approximately \$2.5 billion will be spent on land acquisition and roughly \$5.5 billion will be spent on construction. The \$5.5 billion that is spent on construction really isn't the end of the story, however, because there's a multiplier effect. Call it the Super Bowl effect.

In January 1999, we hosted the Super Bowl in Miami. The local economic impact of the Super Bowl wasn't limited to the face value of all the tickets sold for the game. Airline revenue increased by people flying in for the game. Hotel rooms were rented; visitors ate and drank and bought souvenirs. We can argue about how big the multiplier is, but the effect is there.

For a project like Everglades restoration, a multiplier of 2 or 3 is conservative. That means there wouldn't be a \$5.5 billion increase in economic activity, it could be \$11 billion or perhaps \$16 billion. Everglades restoration could mean as much as 10,000 new jobs in construction, operations and maintenance. Those new jobs, in turn, will mean more demand for housing, furnishings, and other consumer spending that will total far more than the original \$5.5 billion. In addition to the \$5.5 billion in one-time costs, there will be ongoing maintenance costs of approximately \$165 million per year once the project gets going. We might want to compare this with the economic impact of the Southern Command, which generates about \$100 million per year. The location of the Southern Command was hotly contested plum just a couple of years ago.

I think any way you look at it, the Restudy and restoration of the Everglades is a good thing economically for South Florida. It's going to create a significant number of jobs and it's going to increase government spending and total economic activity in the region. Most importantly, it's going to restore and protect the heart of our economy to ensure future prosperity.

If we don't restore the Everglades, we will end up with conflicting water demands from the environment, from urban areas and from agriculture. The urban areas will end up paying two or three or four times as much for water as we do now. Wildlife and the rest of the ecosystem will probably get the short end of the stick.

Restoration is a "win-win" situation. Our economy and our quality of life are both dependant on Everglades restoration. We don't have an unlimited amount of time. We ask you to support the Restudy and restoration. We also ask you to try to create a sense of urgency in Washington, in Tallahassee, and at the relevant government agencies.

H. James Sigsbee  
Senior V.P. and Chief Financial Officer  
Northern Trust Bank

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## I. INTRODUCTION

The Greater Miami Chamber of Commerce (GMCC) Environmental Affairs Group and the Environmental Economics Council of the National Audubon Society are working in cooperation to promote the long-term positive economic impact of environmental sustainability in South Florida. Efforts to engage local business leaders in South Florida have been made to promulgate the message that improving the environment will improve the economy - the same message advocated by Congress, the Governor's Commission for a Sustainable South Florida, and Vice-President Al Gore. The goal of this effort is to initiate a network of private/public partnerships across the country that will exchange ideas and experiences, and take the message of environmental and economic sustainability forward.

The GMCC has adopted goals to protect the sustainability of the South Florida environment, recognizing its importance - particularly Everglades and Biscayne National Parks - to the economic well being of Miami-Dade County. At the October 1998 GMCC Board of Governors and Trustees Luncheon, US Environmental Protection Agency Administrator Carol Browner gave the Keynote Address. The topic was "The Environment is the Economy." The event was one of the best attended in the Chamber's history with nearly 500 members in the audience. The Administrator received a standing ovation - a very rare occurrence at the Chamber. In December 1998, the Chamber unanimously passed a resolution in support of Everglades restoration. The Chamber commended the US Army Corps of Engineers restoration plan (the "Restudy") and pledged its support of the plan's implementation.

On February 26<sup>th</sup>, 1999, the GMCC Environmental Affairs Group and the Environmental Economics Council, in conjunction with the South Florida Water Management District, hosted a symposium entitled *Sustainable Development, the Economy and the Environment: An Environmental Economics Symposium*. The Symposium featured success stories of other communities' restoration experiences due to the efforts through public and private sector leadership.

The Symposium was a gathering of South Florida business leaders to discuss projects involving environmental restoration, economic revitalization and sustainability, both around the county and locally. A working lunch took place to exchange ideas on such public/private partnerships.

Five workshops were then conducted, geared toward specific industry sectors: Print and Broadcast Media; Development & Real Estate, in partnership with Arvida; Banking & Legal, in partnership with Northern Trust Bank; Travel & Tourism, in partnership with Royal Caribbean Cruise Lines; and the Non-Profit Community, in partnership with Local Initiatives Support Corporation.

These various discussions included the Symposium case studies and ideas to solidify and expand a network of private sector leaders and participants that will carry the message of sustainability throughout the community and across the country. The following were adopted as guiding principles:

- We must take a regional approach to growth management and economic development, as we live in a highly interconnected region, bound by a fundamental dependence on our ecosystem-based economy for a high quality of life.
- We must focus on common goals to unite on our many diverse constituencies and to overcome the perception of divisiveness.
- We have already begun to make great progress on many fronts. However, to be successful, we must not wait for a major crisis (such as catastrophic water shortages). We must act now, creating a sense of urgency throughout the region to ensure success.

The following report, based on the conclusions of the Symposium and workshops, is the next step in this growing effort.

*South Florida, on its present course,  
is not sustainable.*

-Governor's Commission for a  
Sustainable South Florida, 1995

**II. RESTORING OUR FUTURE: EVERGLADES RESTORATION & SUSTAINABILITY**

**The Everglades**

The Everglades is America's most endangered ecosystem and largest subtropical wilderness. Its mosaic of expansive sawgrass marshes, hardwood hammocks, cypress domes, mangrove estuaries, and pine woodlands covers more than half of the Florida Peninsula. From the Kissimmee River Valley in the north through Lake Okeechobee, the Everglades, and Florida Bay, the Keys, and coral reefs to the south, the greater Everglades is a unique and world-renowned eco-region.

**Getting the Water Right: Urban Links**

South Florida is an international, commercial, agricultural, and tourism center, with a growing population reflecting varied ethnic, economic, and social values. The region's diverse population has one thing in common: dependence on a fully functioning Everglades for an adequate fresh water supply. The waters of the Everglades feed the Biscayne Aquifer, the sole source of drinking water for South Florida. This fresh water supply is vital to a healthy, sustainable economy, and overall quality of life.

Concepts like "smart growth," slowing "urban sprawl," and a development initiative termed "Eastward Ho!" have come to South Florida communities. These concepts are directly linked to Everglades restoration, aimed at revitalizing the urban core, and steering new development away from remaining wetlands and aquifer recharge areas to the west along the Everglades. Life in South Florida centers on water from the Everglades. Re-establishing sufficient water storage, along with appropriate water quality, quantity and timing of flow, is the key to successfully restoring the Everglades ecosystem.

**The Environment is the Economy**

The economy and the high quality of life residents and visitors currently enjoy hinges on the successful restoration of the Everglades. There is no greater example of the interrelationships between society, the economy, and natural environment than South Florida. National and international precedents for resolving the complex issues of sustainability, restoration and conservation will be set through restoration of our nation's most endangered and unique habitat.

**Restoration is the Only Alternative (Table 1)**

Agricultural Water Supply	R	G
Lake Okeechobee & Holey Land & Rotenberger WMAs	Y	G
Loxahatchee National Wildlife Refuge	Y	G
Water Conservation Area 2A	R	G/Y
Water Conservation Area 2B	R	R
Everglades National Park	R	G/Y
Florida Bay & Mosaic Lands	R	G
Biscayne Bay	Y	G
Big Cypress National Preserve	Y	G

Green (G) - predicted hydrologic performance will result in recovery and long-term sustainability of ecology and/or water supply  
 Yellow (Y) - marginal or uncertain ability to achieve long-term sustainability of ecological and/or water supply objectives  
 Red (R) - ecological and/or water supply will be severely affected.

US Army Corps of Engineers 1999

**Water Storage**

South Florida receives ~60 inches of rain each year. Unfortunately, much of this is wasted through the current system of drainage canals. A trillion gallons of fresh water are lost to the ocean each year. This represents the equivalent annual water supply for over 15 million people. This wasted water must be stored to satisfy the needs of the Everglades, and to augment the needs of agriculture and urban populations. Surface storage (i.e., reservoirs) is the least expensive and most feasible option for meeting future water needs. Many questions remain concerning other storage options, such as Aquifer Storage and Recovery, due to the unprecedented scale of the project and uncertainty regarding unproven technologies.

**Water Quality**

High quality water is one of the crucial elements of a sustainable Everglades ecosystem and a sustainable human population in South Florida. Much of the current political discussion has focused on phosphorus as the major water contaminant that must be dealt with by reducing concentrations to ten parts per billion or less. The reality is that phosphorus is only one of a suite of contaminants.



*The only extremism we really face is the possibility of leaving our children, and the world, a Florida without a healthy Everglades.*

-Teo Babun, Jr., T. Babun Group

Nitrogen, a variety of residual pesticides, and herbicides are commonly found in agricultural runoff. Urban runoff often contains a complex mixture of contaminants that include heavy metals, petroleum products, nutrients, and sediments.

Contamination of drinking water aquifers and ground water is of great concern, due to the porous nature of much of the surficial limestone aquifer. Contaminants on the surface can rapidly infiltrate groundwater. Ground water pollution concerns are threefold. The first concern is for public water supply; the second is agricultural irrigation waters; and the third is groundwater contamination in the Everglades Protection Area. Ensuring that water entering the Everglades Protection Area is of sufficient quality will preclude causing any imbalances in the Greater Everglades ecosystem.

#### **Wildlife and Natural Habitat: Water Timing and Distribution**

The Everglades, a subtropical ecosystem, has the highest biological diversity value in the continental United States. Recognized as a wetland of international significance, the Everglades is home to some of the world's most distinctive plant and animal communities. It is home to 68 federally listed endangered or threatened species, and 29 candidate species - the most in the country. It is also a critical flyway for a wide variety of migratory bird species. This concentration of biological diversity is the historic basis for South Florida's nature-based tourism economy.

Restoration must restore, maximize, and protect a healthy, self-sustaining mosaic of ecological community types that mirrors the unique diversity of the historic Everglades ecosystem. This involves protecting and expanding the current spatial extent of South Florida's natural ecosystems, restoring lost habitat types, reestablishing connection among ecological communities to reduce fragmentation, and creating buffer zones between developed and natural areas.

Restoration of land to more natural conditions should be a priority goal of the Restudy. This will be accomplished by reestablishing sustainable populations of native plants and animals (especially endangered and threatened species), maximizing the connections among ecological communities, and removing invasive, non-native plants and animals, and reducing nuisance native species, such as cattails, to the extent that they do not affect the Everglades ecosystem.

#### **Setting International Precedents**

Simply put, restoration of the Everglades is the only way to ensure a continuous, sufficient quantity of water for a sustainable South Florida. Sustainability is defined as the state of having met the needs of the present without endangering the ability of future generations to be able to meet their own needs. Restoration is also a critical element to sustain the South Florida economy. This includes the restoration of more natural sheetflow throughout the ecosystem.

Restoration of the Everglades will take decades, and will cost nearly \$8 billion. However, even this expenditure is overshadowed by the benefits to Florida and to our nation of a restored ecosystem and a sustainable economy. The process, planning and product of this public works project will set international precedents and expand understanding of environmental economics and the willingness to invest in sustainability.

*Only through dialogue and cooperative action can we hope to achieve our collective goals for South Florida. Working together, we are establishing a national precedent for economic sustainability and ecological restoration.*

-Gerardo B. Fernandez

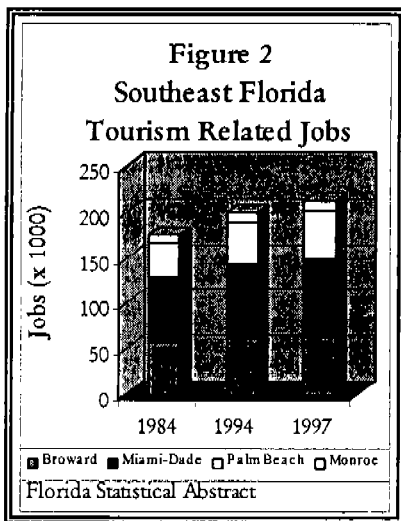
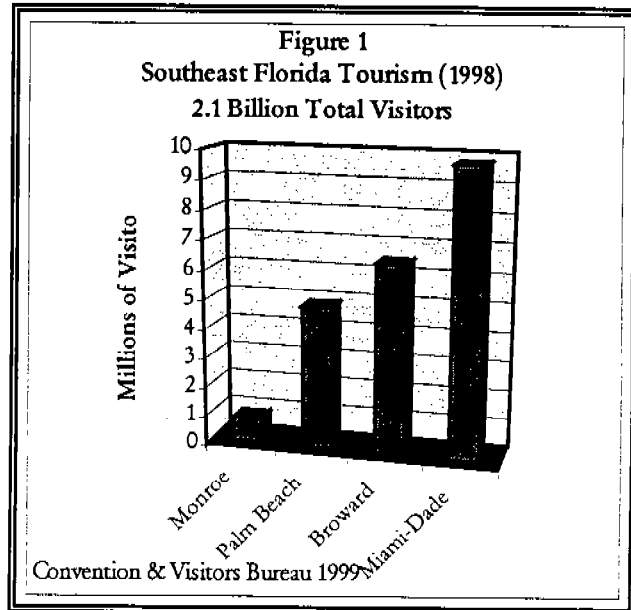
Chairman, Environmental Economics Council

**III. ECONOMIC BENEFITS OF ECO-TOURISM**

**Contribution of Recreational Visitors**

The Everglades makes Florida a world premier tourist destination. The \$20 billion tourist industry is a steady and vital contributor to the South Florida economy (Figure 1). In 1998, according to the Greater Miami Convention and Visitors Bureau, the visitor industry in Miami-Dade County alone generated nearly \$12 billion.

Five of the ten counties most frequently identified by tourists arriving in Florida as their ultimate destinations are in South Florida (SFWMD, 1995). The number of tourism related jobs (restaurants, hotels and other lodging, or amusement/recreation services) has also steadily increased. From 1984 to 1997, jobs in the tourism sector increased in all four southeastern counties - Broward, Miami-Dade, Monroe and Palm Beach - by 12%, 17%, 50% and 40%, respectively (Figure 2).



**South Florida Parks and Preserves**

The importance and magnitude of eco-tourism in South Florida is illustrated in Florida Department of Commerce quarterly surveys of tourists arriving in Florida. Tourists are asked which attraction they visited in Florida. Data from 1995 and 1996 surveys in Broward, Miami-Dade, Monroe, and Palm Beach indicate the following (Table 2):

- \* ~ 20% of southeast Florida tourists alone visited Everglades National Park & other "Parks and Preserves."
- \* Everglades National Park averaged 5th amongst all other Florida attractions.
- \* Parks and Preserves averaged 3rd amongst all other Florida attractions.

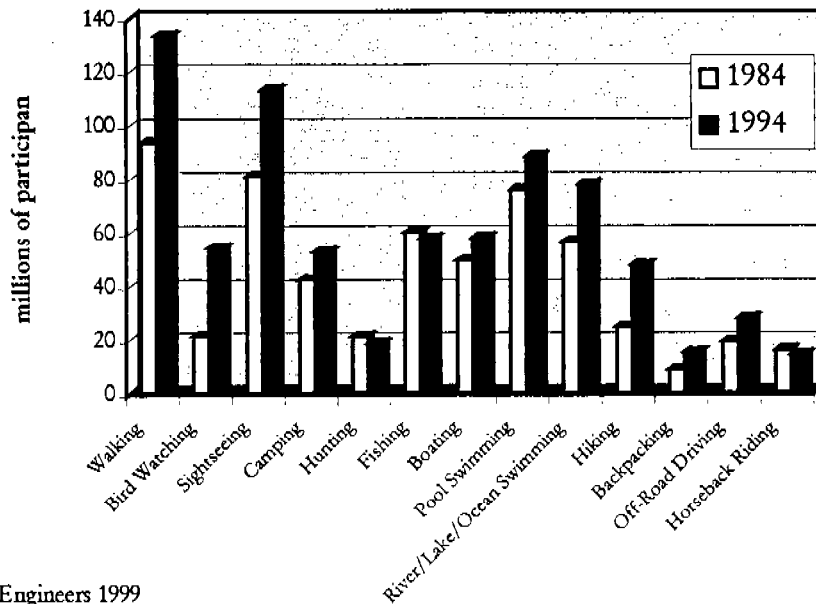
Table 2 Rank of Everglades National Park as a Florida Attraction		
County	For Tourists Arriving Via Automobile	For Tourists Arriving at Airports
Broward	4.50	3.87
Dade	3.00	5.50
Monroe	7.00	5.50
Palm Beach	6.00	5.00
Average	5.13	4.96
Rank of Other Parks & Preserves as Florida Attraction		
County	For Tourists Arriving Via Automobile	For Tourists Arriving at Airports
Broward	4.33	2.00
Dade	4.00	4.14
Monroe	5.50	2.43
Palm Beach	3.00	1.33
Average	3.71	2.48

Department of Commerce - Division of Tourism - Florida Tourism Survey System 1996

Eco-tourism is purposeful travel to natural areas to understand the culture and natural history of the environment, taking care not to alter the integrity of the ecosystem, and producing economic opportunities that make the conservation of natural resources beneficial to local people (Ecotourism Society 1991).

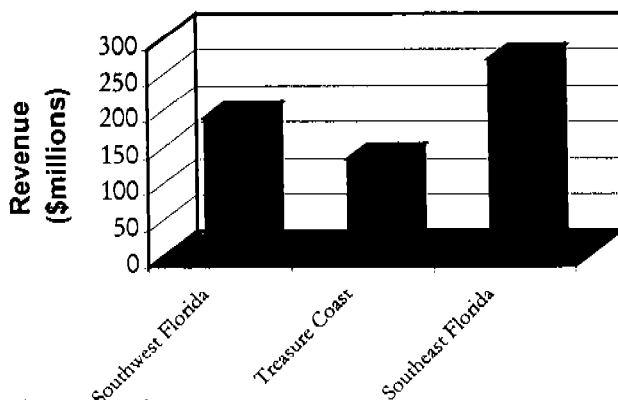
With eco-tourism rising in popularity (Figure 3), South Florida is uniquely positioned to reap the economic benefits of this trend in conjunction with Everglades restoration. This is an opportunity to capitalize on South Florida's greatest assets (Figure 4).

**Figure 3 National Trend Toward Eco-Tourism**



US Army Corps of Engineers 1999

**Figure 4  
South Florida Wildlife Watching Expected To  
Generate \$600 Million per Year by 2000**



US Army Corps of Engineers 1999

*The miracle of the light  
pours over the green and  
brown expanse of saw grass  
and of water, shining and  
slow-moving below, the  
grass and water that is the  
meaning and the central fac  
of the Everglades of Florida*

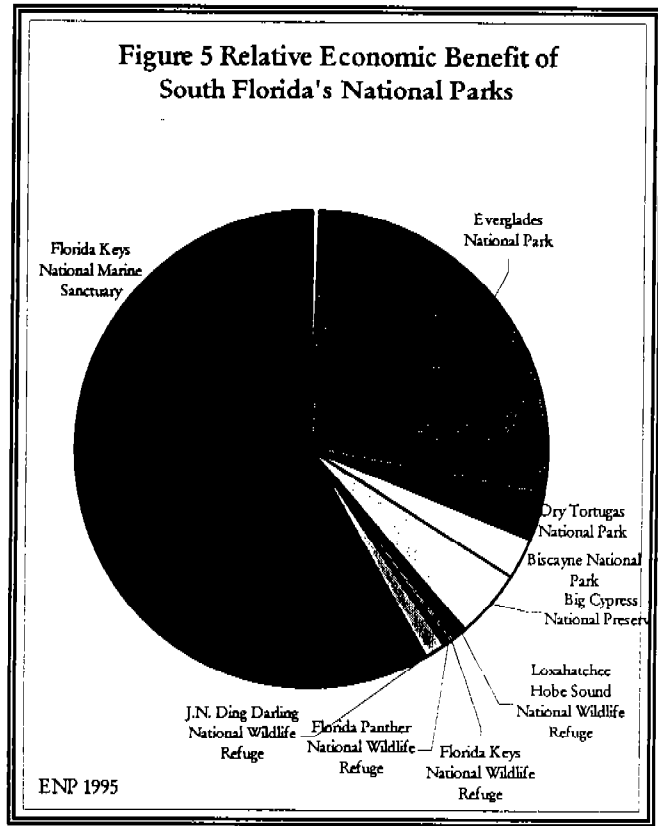
*It is a river of grass.*  
-Marjory Stoneman Douglas  
(1890-1998)

*The Everglades: River of Grass*

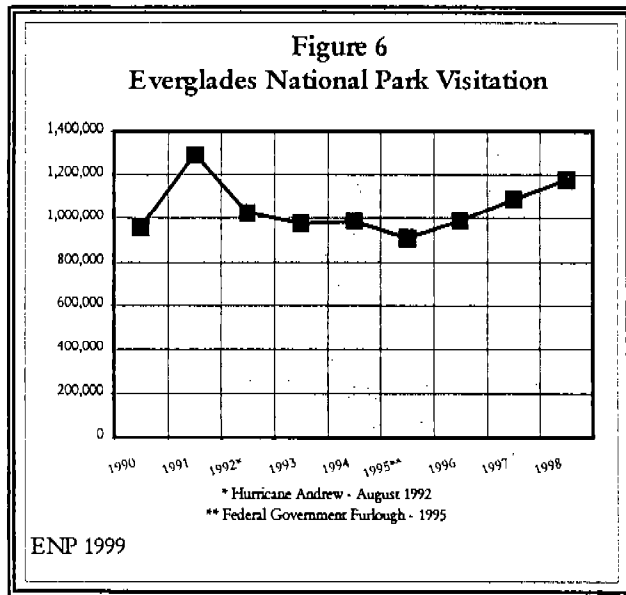
In addition to being a top Florida attraction, South Florida parks and preserves provide a substantial economic benefit to the region (Figure 5). The economic value of South Florida parks was quantified in an Everglades National Park study entitled "Economic Study of Federal Interest Lands in South Florida." Using a methodology to determine the economic benefits of parks to local areas developed by the Park Service, the study estimated three economic benefits - sales benefits, tax benefits, and job benefits (Table 3). Sales benefits include income to local area businesses or individuals for goods and services. Tax benefits include the increases in local tax revenues that result from expenditures at the park. Job benefits include new jobs created in the local area due to the park. The South Florida national parks bring close to one-half billion dollars in sales and tax revenue benefits and close to 15,000 jobs to South Florida.

Sales Benefit	\$428,964,776
Tax Revenue	\$29,002,071
New Jobs Created	14,783

Everglades National Park 1995



The importance of a healthy ecosystem is evidenced by the decline in visitation to Everglades National Park following Hurricane Andrew in August 1992, and the federal government furlough that closed the national parks in 1995 (Figure 6). Despite these events, the economic benefit of Everglades National Park has continued to grow (Table 4).



	1994	1998	% Growth
Sales Benefit	\$119,165,051	\$131,519,619	10 %
Tax Revenue	\$7,745,728	\$8,548,775	10%
New Jobs Created	4,930	5,261	7%

Everglades National Park 1998

**Commercial and Sport Fishing**

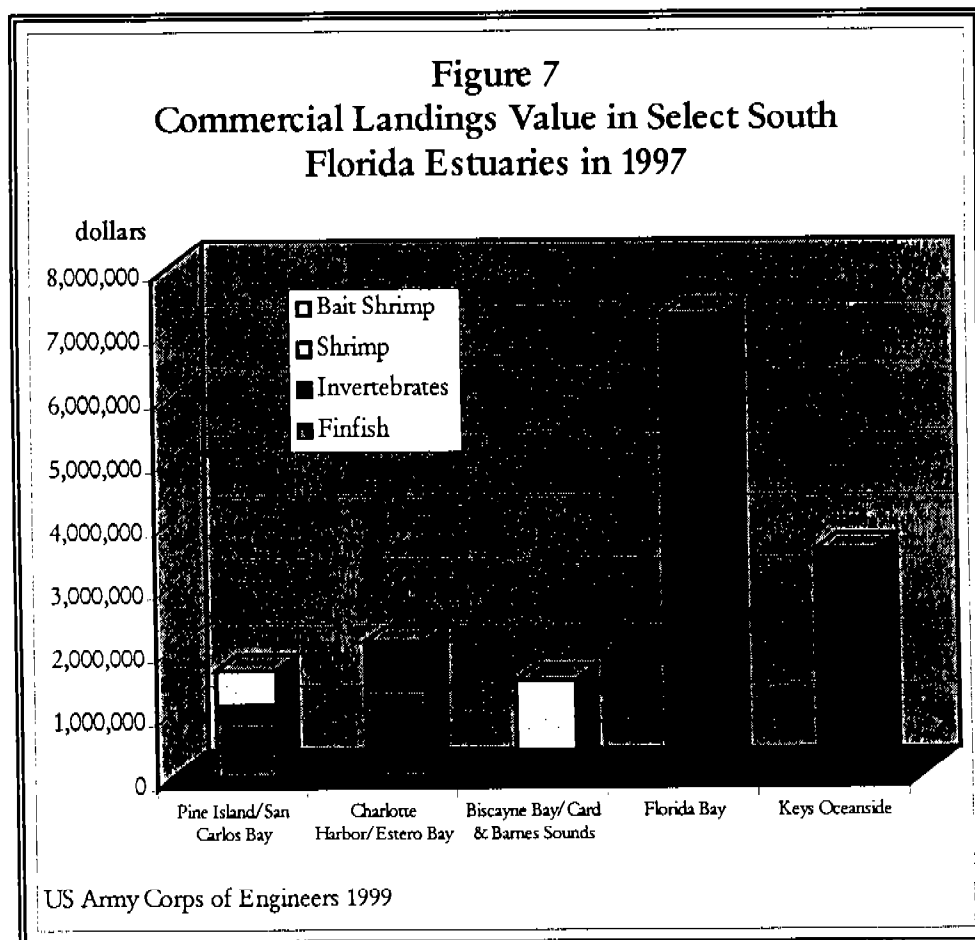
The importance of recreational activities such as hunting and fishing in South Florida is reflected in the number of licenses that have been issued. Each year, roughly 150,000 hunting and fresh water fishing licenses are issued, and generating approximately \$2.3 million in annual revenues. Around 340,000 salt water fishing licenses, representing 30% of all saltwater licenses issued in Florida, are issued in South Florida to produce revenues of approximately \$3.2 million annually (Table 5).

Some of the world's most scenic and productive estuaries are located along South Florida's coast. Biscayne Bay is estimated to have the following annual revenues associated with its fisheries: commercial fishing, \$1.5 million; guided sport fishing, \$1.4 million; and recreational sport fishing; \$8.5 million (US Army Corps of Engineers 1999).

These coastal areas are directly linked to the Everglades. Damage to these estuaries has a direct and significant effect on the economic viability of South Florida. Without restoration, these estuaries will continue to suffer devastating declines resulting from the dumping of freshwater to tide (Figure 7).

Table	Salt Water Fishing Licenses	Fresh Water Fishing Licenses
Broward	\$460,656	\$514,151
Glades	\$2,255	\$145,539
Martin	\$239,236	\$60,309
Okeechobee	\$11,706	\$465,014
Palm Beach		\$557,892
<b>Total</b>	<b>\$3,165,900</b>	<b>\$2,266,465</b>

Florida Game and Freshwater Commission/DEP, Saltwater Fishing License Program 1997

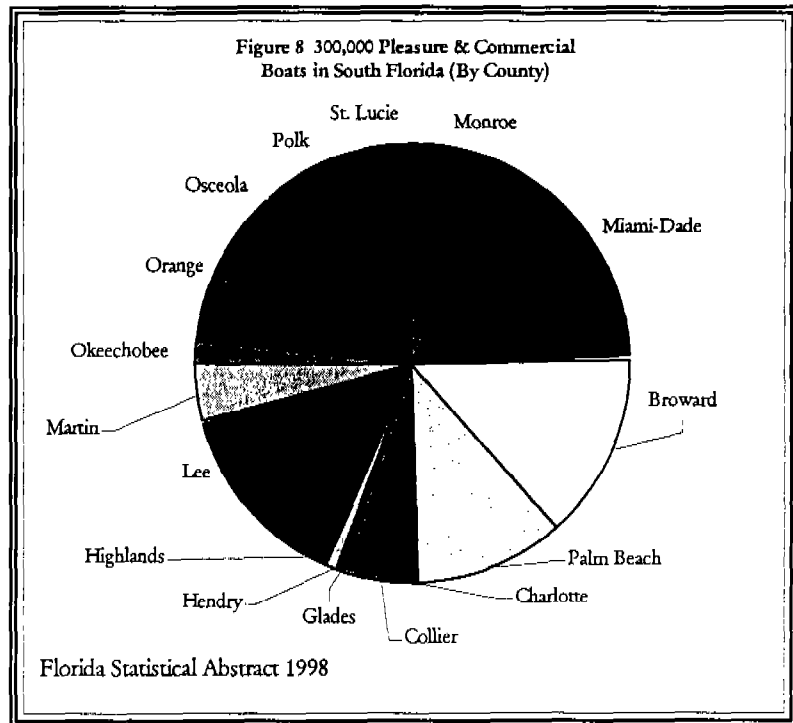


**Marinas and Recreational Boating**

Of the more than 300,000 boats registered in South Florida, more than 95 percent are for pleasure. Additionally, more than half of all South Florida boats are registered in southeast Florida (Florida Statistical Abstract 1998). Much of this is linked to the eco-tourism industry of the region, including diving, snorkeling, and sport fishing. The economic impact includes marinas, guides, equipment providers, towing and salvage, to name a few (Figure 8).

**The Florida Keys**

The Florida Keys are recognized as a microcosm of the entire South Florida region. The economy of Monroe County is heavily dependent on a healthy ecosystem. The Florida Keys are the number one dive destination in the world. Eco-tourism is a fundamental part of Monroe County's economy, with more than 4 million people visiting the Keys each year primarily to engage in water-related sports, including fishing, diving, boating, and other ecotourism activities. Commercial fishing is also a key component of the Monroe County economy (Table 6).



Florida Bay is located between the Florida peninsula and the Keys. Florida Bay's ecosystem has declined significantly in recent years. Therefore, it is imperative that steps are taken to improve the health of the bay. According to the 1994 Congressional Research Service report, "The Florida Bay Economy and Changing Environmental Conditions:"

*The losses [in Florida Bay] since 1986, including indirect and induced effects, total about 500 jobs and \$32 million in annual personal income. However, commercial harvests of spiny lobsters, snappers, and groupers - with about 2,800 primary and secondary jobs and \$200 million in personal income - are threatened by the vegetative changes. (Gorte, 1994:np)*

Table 6 Annual Economic Value of Florida Keys	
Service	Value
Non-market user value of water-related activities	\$360 million
Asset value of the Keys for water-related activities (1990 dollars)	\$22 billion
1990 ex-vessel value of commercial fishing	\$46 million
1986 ex-vessel value of seafood landings	\$27.4 million
Value of seafood landings at the harvesting, wholesale, retail and restaurant levels	\$14.8 million

NOAA 1995

*Healthy coasts are essential to South Florida's economy. Coral reefs, beaches, fisheries and estuaries are the foundation of Florida's tourism, recreation and fishing industries. They are also key indicators of our economic and environmental future. Because in South Florida, the coasts are always downstream - everything flows to the coasts.*

-Sally J. Yozell, Deputy Assistant Secretary, NOAA US Department of Commerce

**IV. SUSTAINING AGRICULTURE IN SOUTH FLORIDA**

Agriculture remains a key ingredient in South Florida's economy - a \$6 billion industry. In southeast Florida alone, agriculture generates more than \$1.5 billion in income, employs nearly 50,000 people, and generates nearly \$3 billion in sales for the regional economy (Table 7). The Everglades Agricultural Area (EAA), encompassing approximately 700,000 acres, is among the most productive in the world. Sugar cane has been grown in this sensitive region for most of this century (Florida Sugar Farmers 1998). Twenty-five percent of America's sugar supply is produced in the EAA, generating \$2 billion annually, and accounting for more than 40,000 jobs statewide.

Tropical vegetables thrive in the sub-tropical climate. This provides a competitive edge, as the region is the largest sub-tropical farming area in the United States. Increased competition from Mexico due to the effects of North Atlantic Free Trade Agreement (NAFTA), as well as increased demand, has motivated many local farmers to diversify their crops. There is a trend toward shifting from row crops to more sustainable ornamentals and fruit tree crops. Other more traditional row crops, however, have been negatively impacted by NAFTA, leaving many farmers questioning the viability of their farms.

The prime tropical vegetables grown are boniato, malanga, calabaza, and cassava. Limes, avocados and mangoes, the area's top fruit crops, grow on approximately 10,000 acres. In 1998, lime trees produced nearly 600,000 million bushels, as compared to pre-Hurricane Andrew production of 1.7 million bushels a year. Despite the drop in production, South Dade's lime groves still constitute 21 percent of all tropical fruit acreage in the country. The value of the ornamental plant industry has increased dramatically in the years since Hurricane Andrew, supplying 25 percent of all foliage sold within the United States and a significant market in Europe and the Caribbean. South Florida communities can continue to enjoy the abundance, variety, and diversity of its agricultural sector by limiting environmental impacts and creating additional economic returns.

A discussion of agriculture would not be complete without a discussion of the largest single threat to the viability of agriculture - urban sprawl. While agriculture continues to have significant economic impact on the South Florida region, it is threatened by the transition of that industry to residential development. The following section defines, identifies and quantifies that development trend that has consumed many agricultural lands in South Florida.

*For the region's agricultural industry to continue to flourish, it must be environmentally and economically sustainable.*

-Governor's Commission for a Sustainable South Florida 1995

Sector Name	Income Generated	Employment Generated	Sales Generated
Dairy Farm Products	\$2,071,651	54	\$3,716,526
Ranching - All Cattle	\$11,113,228	1	\$6,864,285
Food Grains (Rice)	\$12,702,640	371	\$21,812,380
Fruits	\$1,623,313	2,013	\$153,940,229
Vegetables	\$212,259,011	6,098	\$537,190,808
Other Crops	\$76,381,980	22,502	\$114,403,48,015
Greenhouse and Nursery Products	\$441,661,403	11,957	\$838,300,672
Equine Livestock	\$11,600,000	153	\$229,200,000
Misc. Livestock (Tropical Fish)	\$2,354,700	49	\$4,129,800
<b>Total from Agriculture</b>	<b>\$1,615,692,047</b>	<b>17,921</b>	<b>\$2,903,109,524</b>
<b>Total in South Florida</b>	<b>\$106,692,000,000</b>	<b>1,620,204</b>	<b>Unavailable</b>

University of Florida, Bureau of Economic and Business Research, 1996 Florida Statistical Abstract

*Sprawl is the single greatest threat to our economic competitiveness, bar none.*  
 -David Crockett, President, The Chattanooga Institute

**V. THE COST OF SPRAWL: GROWING SMART IN SOUTH FLORIDA**

Urban sprawl has become a major policy issue in South Florida's growing economy. The Florida Department of Community Affairs (DCA) defines urban sprawl through the Local Government Comprehensive Planning Act as:

*urban development or uses which are located in predominantly rural areas, or rural areas interspersed with generally low-intensity or low-density urban uses, and which are characterized by one or more of the following conditions: (a) the premature of poorly planned conversion of rural land to other uses; (b) the creation of areas . . . or uses which are not functionally related to land uses which predominate the adjacent area; or (c) the creation of areas of urban development or uses which fail to maximize the use of existing public facilities or the use of areas within which public services are currently provided. Urban sprawl is typically manifested by one or more of the following land use or development patterns: leapfrog or scattered development, ribbon or strip commercial or other development; or large expanses of predominant low-intensity, low-density or single use development.*

The result of urban sprawl is increased service delivery costs and inefficient land use including rapid consumption of natural resources, conservation lands, water recharge areas, and agricultural landscapes (Table 8).

In southeast Florida, government is working with the private sector to revitalize communities along the urban corridor through a smart growth initiative - *Eastward Ho!* This voluntary initiative was recommended by the Governor's Commission for a Sustainable South Florida in its *Initial Report* to encourage and support infill and redevelopment in urban corridors.

The demographic characteristics of the Eastward Ho! corridor, running from Miami-Dade County through Palm Beach County, include higher levels of poverty, lower levels of education and employment, and translate into a population unable to defend itself against the development juggernaut. To avoid over-gentrification and mass removal of this population - against specific provisions in the President's Environmental Justice Order of 1994 - measures must be put in place that assure the current population still retains their place in these neighborhoods. In short, these neighborhoods should be made sustainable too, or the cycle of exploitation, which inevitably harms the environment, will continue.

Dr. Robert Burchell of Rutgers University, completed the most recent work in the South Florida region on urban sprawl. The study, commissioned by the US EPA and the Florida DCA, serves to ground-truth costs of trend (sprawl) type development versus smart growth patterns associated with the Eastward Ho! Initiative. The study focuses on resource consumption and service delivery for these two different types of development patterns. It compares the inefficiency of sprawl versus well planned growth that focuses on moving people back to the urban corridor.

Burchell's study finds that saving of smart growth development will result in a 8.9% fiscal impact whereas the national average is only 6.9%. South Florida would benefit more than the rest of the nation if more efficient land use patterns are implemented through programs like Eastward Ho! promoting the benefits of efficient land use.

Category of Savings	Home/Business Owners	County Governments	State Government	Total Savings
Land		\$0,476,000	\$3,860,000	\$3,384,000
Local & State Roads	575,670,000	767,560,000	253,580,000	1,596,810,000
Water/Sewer Hookups	292,600,000	-	-	292,600,000
Residential Costs	3,001,000,000	-	-	3,001,000,000
Non-residential Costs	20,020,000	-	-	20,020,000
Fiscal Impacts	-	606,250,000	-	606,250,000
<b>Total</b>	<b>\$4,189,290,000</b>	<b>\$1,678,570,000</b>	<b>\$287,440,000</b>	<b>\$6,155,300,000</b>

Robert W. Burchell, Ph.D. *Eastward Ho! Development Futures: Paths to More Efficient Growth in Southeast Florida*. February 1999, Pages 212-217.



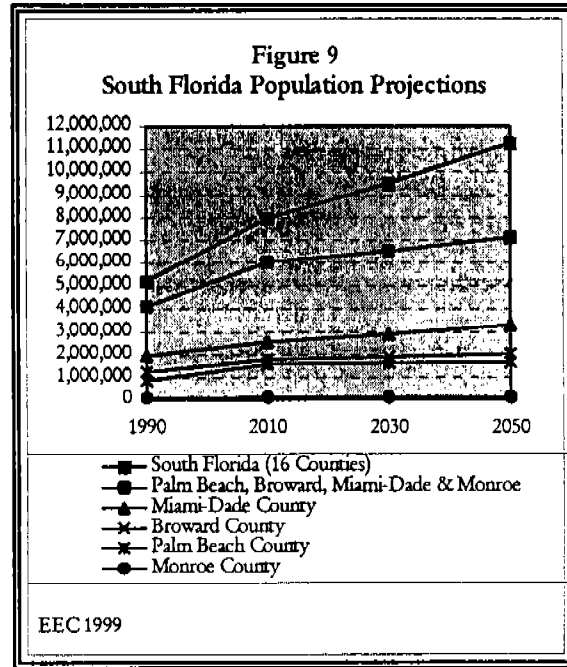
**VI. OTHER ECONOMIC BENEFITS**

**Quality of Life**

Florida is an "outdoors" state. Residents and visitors to South Florida enjoy green space and hundreds of miles of coastline. A number of other parks and preserves are scattered throughout the region, providing ample opportunities to experience South Florida's unique natural environment up close.

Currently, 5.1 million people reside in South Florida - 2.08 million residents live in the Greater Miami area alone. The human population of South Florida is expected to more than double over the next 50 years, threatening to spoil the high quality of life we enjoy (Figure 9).

*We cannot sustain our businesses without an environment that is healthy.*  
-Barry Johnson, AT&T

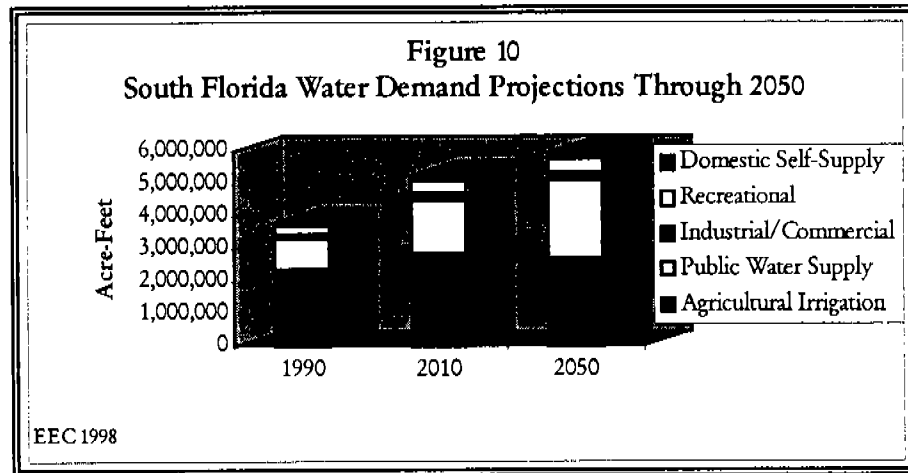


**Plentiful Clean and Inexpensive Water**

South Florida's rapidly growing population reflects varied ethnic, economic, and social values. This highly diverse population depends on a fully functioning Everglades as the basis for a plentiful, clean fresh water supply and a healthy and sustainable economy.

Economically, the South Florida /Everglades ecosystem supports a world center for tourism, commerce, banking, and agriculture. Decisions about the Everglades and how it is restored are clearly business decisions.

The demand for fresh clean water is expected to increase by nearly two-fold (Figure 10). This implies additional water storage needs of more than 2.5 million acre-feet (1 acre-foot equals 325,861 gallons). We must conserve and store fresh water, so that in the dry season it will be available for both the Everglades and the human system.



Everglades restoration is crucial to water storage and water supply for South Florida. There is a direct link between restoring the ecosystem and maintaining the freshwater supply for our growing human population: water from the Everglades recharges our drinking water aquifers. Because of these direct links, the success of the US Army Corps of Engineers' South Florida ecosystem restoration project (the Restudy) will be a crucial test of ecological and economic sustainability.

**Table 9 SUMMARY ECONOMIC IMPACT OF EVERGLADES RESTORATION**

**The South Florida Environment is the Economy**

- South Florida's environment, particularly the Everglades, is of significant economic importance. The Everglades is the base for South Florida's \$20 billion tourism industry.
- Everglades National Park ranks in the top 5 tourist destinations in the region, and generates more than \$150 million in annual revenues.
- More than 277,000 South Florida jobs depend on the regional tourism-based economy supported by a healthy Everglades.

**Restoration - Boosting the Economy**

- Everglades restoration itself is an important economic generator for this region.
- The restoration of the Everglades will be larger than any public works project in our nation's history.
- Everglades restoration will pump more than \$8 billion into the South Florida economy over ~20 years.
- Everglades restoration means nearly 10,000 new jobs in construction, operations, and maintenance.
- Two of South Florida's biggest industries will be significantly effected by restoration: real estate and construction.
- Real estate aspects of restoration will generate more than \$100 million and ~ 800 jobs annually. However, the full impact of real estate transactions will be far greater because as land is converted to cash, much of this newly freed cash will be reinvested in the regional economy.
- The construction portion of the restoration program will be more than \$5.5 billion. The multiplier (trickle-down) effect will represent an economic boom to the region.
- Construction alone will generate approximately \$650 million in outputs and earnings, creating ~ 4,000 new jobs.
- Annual operations and maintenance and monitoring will generate ~ \$300 million in outputs and earnings, and create more than 3000 jobs.

**A Smart Investment for Our Future**

- Real-estate values, development, and sales rely on a stable drinking water supply, which Everglades restoration alone will guarantee - a \$700 million annual value.
- More than 6 million annual visits to South Florida national parks, associated with more than one-half billion dollars in annual visitor spending.
- Everglades restoration improves quality of life: Clean air & clean water rate 1st and 2nd when rating best places to live, ahead of low crime rate, health care, low taxes and good schools (Money Magazine).
- The Everglades acts as a big economic engine, cranking out \$200 billion per year. We are faced with the prospect of a decline in the quality of the natural functioning infrastructure, which we can fix by investing a very small percentage in our community through restoration.
- South Florida's future depends on a healthy, restored Everglades.

*Welcome to the great experiment called South Florida.  
We're just getting started down here.*  
- Walter Revell, Chairman, Environmental Affairs Group  
Greater Miami Chamber of Commerce

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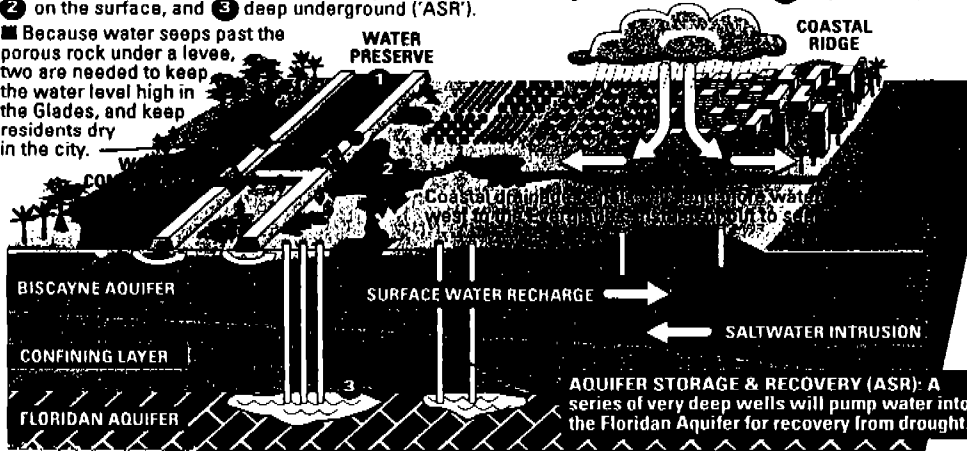
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# Environment comes first in Everglades plan

The Army Corps of Engineers' \$7.8 billion plan would store massive amounts of water for restoring natural resources and slaking the thirst of cities and farms by modifying the existing network of canals and levees.

**USING STORM WATER RUNOFF:** More rain falls on coastal ridges of Florida than elsewhere. Today we drain that water to the sea, but in the future that water must be used to keep the Everglades alive. The goal is to reconnect the coastal and interior water systems, and to store a great volume of water ① in preserves, ② on the surface, and ③ deep underground ('ASR').

■ Because water seeps past the porous rock under a levee, two are needed to keep the water level high in the Glades, and keep residents dry in the city.



## HERE ARE THE PLAN'S GOALS:

■ **Revive Lake Okeechobee:** The lake — which is now used to supply water for irrigation and drinking — would be managed as nature intended. By keeping the lake's depths stable and restoring wetlands at the lake's edge, Okeechobee should enjoy restored health.

■ **Store water underground:** More than 300 deep wells would be built to store as much as 1.6 billion gallons of water a day underground. The water would be withdrawn during droughts to supplement urban water supplies. More than 200 of these wells would be around Lake Okeechobee and the Caloosahatchee River.

■ **Create Reservoirs:** Water would be stored on old farms, ranches and wetlands from just north of Lake Okeechobee on south through South Miami-Dade County. The biggest proposed reservoir — somewhere between 40,000 and 150,000 acres — would be in the Everglades Agricultural Area south of the lake.

■ **Create Water Preserves:** Undeveloped land would be purchased on the western fringe of suburbs in Miami-Dade, Broward and Palm Beach counties to be used for treating and storing polluted storm water, restoring damaged wetlands and reducing seepage of water out of the Everglades.

■ **Protect the Caloosahatchee and St. Lucie rivers:** Stop dumping huge slugs of dirty water into two estuaries that are prized by fishermen and conservationists by storing excess water in new reservoirs and deep wells.

■ **Clean up polluted storm water:** About 30,000 acres of manmade wetlands would treat water flowing away from city streets and farms. These are in addition to 44,000 acres of treatment marshes already under construction in the farmlands south of Lake Okeechobee.

■ **Restore flowing water in the Everglades:** Some canals and levees would be removed from the heart of the historic River of Grass to help water flow again. The easternmost 20 miles of Tamiami Trail would be rebuilt to let sheets of water move into Everglades National Park.

■ **Turn quarries into reservoirs:** About 11,000 acres of old limestone mines in northwestern Miami-Dade would be turned into two massive reservoirs to supply water to both cities and the Everglades.

■ **Reuse waste water:** Build two big wastewater treatment plants in Miami-Dade to make 220 million gallons of sewage cleaner than drinking water. The treated waste water would be discharged into wetlands to replenish underground drinking water reservoirs and improve flows to Biscayne Bay.

■ **Improve the flow of water to Florida Bay and southern Biscayne Bay.**

■ **Modify canals to let water flow more naturally through marshes to the estuaries.**

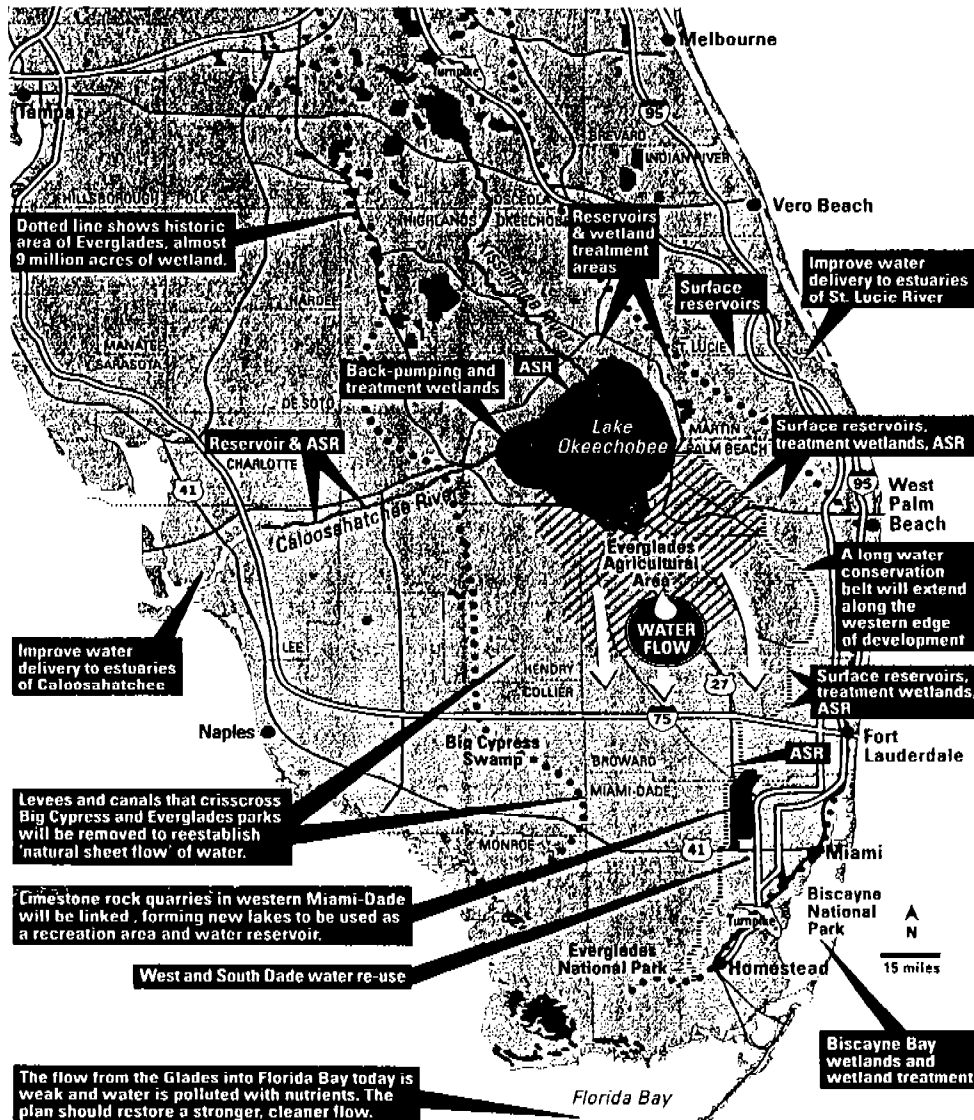
## OTHER PROJECTS ALREADY UNDERWAY:

■ **Kissimmee River restoration:** The corps, which turned the snaking river into a straight 56-mile canal for \$29 million in the 1960s, is spending more than \$500 million to put the bends back in the river.

■ **Everglades Construction Project.** The state is building more than 40,000 acres of marshes at a cost of \$760 million in the first phase of an effort to clean up polluted water flowing out of the agricultural area near Lake Okeechobee.

■ **Modified water deliveries to Everglades National Park.** The corps has already built two massive flood gates along Tamiami Trail and a pumping station in South Miami-Dade at a cost of about \$275 million as part of an effort to restore flowing water to Northeast Shark River Slough and Florida Bay.

■ **C-111 South Miami-Dade Project.** Levees along the C-111 Canal are being removed to let water flow in a broad sheet into eastern Florida Bay.



Improve water delivery to estuaries of Caloosahatchee

Levees and canals that crisscross Big Cypress and Everglades parks will be removed to reestablish 'natural sheet flow' of water.

Cimestone rock quarries in western Miami-Dade will be linked, forming new lakes to be used as a recreation area and water reservoir.

The flow from the Glades into Florida Bay today is weak and water is polluted with nutrients. The plan should restore a stronger, cleaner flow.

GRAPHIC BY ROBERTSON ADAMS / Herald Staff