



## Alachua County Green Infrastructure Investment Program

National Association of Counties  
2008 "Best in Category" Achievement Award  
Planning Category

Submitted by  
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The NACo "Best in Category" award for the "Green Infrastructure" submission recognizes Alachua County's success in integrating and leveraging local investment in land conservation through the Alachua County Forever program and the environmental protection provisions of the County's development review process. Environmental Protection Department Director Chris Bird explained, "Green infrastructure is a framework for understanding the valuable services nature provides for people. I am pleased that Alachua County's commitment to investing in green infrastructure has been recognized as a model for other local governments." As part of this special recognition, Alachua County's "Green Infrastructure Investment" Program will be included in an upcoming "NACo Model Program" publication.

## **1. Abstract of the Program**

Alachua County, FL has implemented a comprehensive green infrastructure program that integrates community investments in private and public green assets. Green infrastructure is a framework for recognizing the valuable services that nature provides for the human environment. Key program components include the Comprehensive Plan, Alachua County Forever land acquisitions, and a unique governance structure which promotes systems thinking, collaboration, and public participation.

Dynamic citizen advisory boards and other public participation venues provide County Commissioners and staff with valuable input on program policies, direction and performance. New web-based, information-sharing technologies have been deployed to support program operation based upon principles of shared information, user-friendly interfaces, and public access. Budget-aligned program performance data is reported using web-based applications and publicly accessible web dashboards.

## **2. The Problem/Need for the Program**

***“Plans to protect air and water, wilderness and wildlife are in fact plans to protect man” -Stuart Udall***

Like most counties, Alachua County has grappled with the negative impacts of suburbanization on natural systems, agriculture, and quality of life. In addition to the loss of forests, farms, and natural areas, past land development practices have been linked to water quality degradation.

In response to local concerns about cumulative loss of natural areas, farms, and forests and water quality degradation, two citizen-based local initiatives received “landslide” approvals in the 2000 General Election. A dedicated local funding source was approved for a new conservation land acquisition program, Alachua County Forever, financed by a property tax increase. Also, the County’s authority to enforce minimum water quality standards within its 9 municipalities was confirmed in recognition that pollution doesn’t recognize city limits.

Alachua County is anticipating an accelerated population growth over the next few decades, with projected waves of relocation residents including retired baby boomers, migration from southern Florida, and coastal residents increasingly anxious about sea level rise. This predicted influx will only increase the investment value of a diverse and sustainable portfolio of local green infrastructure assets.

Since the mid 1990s, Alachua County has also experienced a sequence of extreme weather events, with historic floods, droughts, and wildfires culminating in a 2004 barrage of hurricanes. Predictions for Alachua County’s climate change future suggest even greater extremes in weather conditions, temperatures, and water levels. The critical relationship between green infrastructure and local capacity for climate change mitigation and adaption is becoming clearer. A climate change planning expert recently advised Alachua County that the best local “return on investment” for adapting to climate change is protecting wetlands and floodplains.

### **3. Description of the Program**

Alachua County's investment program for green infrastructure relies on three major elements: the Comprehensive Plan, Alachua County Forever, and a Governance Structure which emphasizes interdepartmental collaboration, systems thinking, performance management, and public involvement.

#### **Comprehensive Plan and Implementing Regulations: A Green Infrastructure Framework**

Florida law requires local governments to update their comprehensive land use plans and regulations on a 7 to 10 year cycle. The state encourages locals to go beyond minimum standards, in deference to community vision, values, policies and practices. Certain state limits related to property and agricultural rights are mandated. A key objective of Alachua County's updated Comprehensive Plan (Plan) was to improve ways to manage conflicts between development, agricultural, and environmental uses.

In May 2005 the updated Plan went into effect. The Plan includes a "greenprint" for establishing a comprehensive green infrastructure portfolio in conjunction with a blueprint for land development and conventional infrastructure. The Plan is embedded with specific policies that require or incentivize the establishment of green infrastructure assets on public and private property. The Plan update process was not without controversy, ultimately requiring a negotiated settlement agreement to resolve conflicts among agricultural, environmental, and development interests. The Plan now requires developers to begin their design with deference to green infrastructure, instead of as an afterthought.

The Plan identifies six categories of protected conservation resources: wetlands, surface waters, floodplains, listed-species habitat, significant geologic features, and the highest category of protection, "strategic ecosystems". Strategic ecosystems are 47 mapped areas that are the most significant natural communities, both upland and wetland, remaining in private ownership. Large scale developments that are proposed in strategic ecosystems must go through a special planning process that demonstrates the continued functioning of the strategic ecosystem that the development is impacting.

An updated set of Land Development Regulations (LDRs), effective January 2006, provide specific standards for preserving green infrastructure assets located on private property. Identified conservation resources are protected during the development review process, and development activities must be conducted in accordance with protective standards. This objective is accomplished through a consensus-based, interdepartmental, interdisciplinary approval process. Minimum conservation standards for these systems include protection of all wetlands and surface waters, protection of at least 50 percent all upland within the strategic ecosystems, conservation easements, management plans, and environmentally friendly designs. Development rights are preserved in that any building units precluded from the conservation areas are allowed either by increased densities on buildable areas or by transfer of development rights to other properties. Conservation areas are maintained in perpetuity by the developer under a conservation-management plan.

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Rural/Agriculture clustered subdivisions provide another alternative for establishing green infrastructure. The clustering of rural residential development protects natural and historical resources, helps promote viable agriculture, provides habitat corridors through linked open space, and reduces the cost of providing infrastructure. A minimum of 50 percent open space is required for subdivisions located in these areas. Roads constructed within a clustered subdivision are designed with the narrowest profile, sited to follow natural topography and existing terrain, and avoid removal of native trees and vegetation. Agricultural areas are further protected by a building setback required for adjacent new developments.

Alachua County has become a leader in promoting Low Impact Development (LID) practices which help reduce water pollution and increase green infrastructure. For zoning and land use, gross density is used instead of lot size requirements, therefore giving more flexibility in design and higher densities where appropriate. Flexibility in road width is provided as well as options for more water-friendly drainage such as vegetated swales instead of paved curbs and gutters for residential streets.

Incentives are provided for developers to use green infrastructure to provide more effective storm water treatment and management. When conservation areas or natural habitat does not exist on a site, the County can authorize storm water facilities to count up to 50 percent of the open space area for residential development. To obtain credit for this open space, the storm water pond must be “enhanced” to qualify as green infrastructure by incorporating biological diversity and water quality treatment beyond minimum county and state regulations. Green infrastructure design standards for storm water ponds include staged elevations and littoral area, forebays, interpretive signs, pedestrian trails, exotic species control, and increased numbers and diversity of plantings within and on the banks of treatment basins.

### **Alachua County Forever**

Alachua County Forever (ACF) is a land conservation program to publicly acquire and protect environmentally significant lands. Though this program, the County seeks to acquire, protect and manage environmentally significant lands, protect water resources, wildlife habitat, and natural areas suitable for resource-based recreation. A key program objective is to preserve the most ecological valuable land remaining in the County. Since 2004, 11,984 acres of the highest valued lands have been preserved by Alachua County Forever.

Another objective is to maximize the leverage of local investment through acquisition and management partnerships with municipalities, regional, state, and federal governments, non-profits, and private entities. Since 2004, two thirds of the \$58,244,630 investment for the public acquisitions has been leveraged from outside sources, exceeding our peer counties performance. ACF has leveraged local funds by applying to state and federal granting programs, acquiring lands with regional Water Management Districts, applying for transportation mitigation funds, using non-profits to provide bridge

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loans and partnership funds, and finally, facilitating donations of land and cash that meet both donor's charitable and ACF's conservation goals. Land management of over half of the acreage acquired is being provided by partner agencies or nonprofits. The referendum allowed for a 10 percent set aside for initial capital improvements, creating a source of funds for enhancing public access to the portfolio. Debt service is paid through a 0.25 mill ad valorem tax for up to 20 years.

Citizens are actively involved in the process: from the initiative's origins, nominating properties for purchase, serving on the Land Conservation Board (LCB) or in the nascent Volunteer Conservation Corps. Appointed by the County Commission, volunteer LCB members evaluate and recommend lands to be acquired for conservation purposes. The LCB meets in noticed, evening public meetings to consider all applications. The County Commission considers every proposed acquisition in noticed, evening public hearings.

### **Governance Structure**

Alachua County's governance structure for the green infrastructure program promotes interdepartmental collaboration, systems thinking, performance management and public involvement. The Board of County Commissioners provide vision, policy, and strategic planning for the green infrastructure investment program, final approval for ACF land acquisition purchases, comprehensive plan amendments affecting green infrastructure, implementation of land development regulations, and key advisory committee appointments.

The Community Planning Group is an interdepartmental functional group focusing on the core services of Managed Growth, Environmental Stewardship, and Economic Development. Key leadership and representation comes from the Growth Management, Environmental Protection, and Public Works Departments.

The Development Review Committee is another interdepartmental and interdisciplinary team that provides technical review and approval of development site plan submittals according to the Land Development Regulations. Technical representation is provided by the Growth Management, Environmental Protection, and Public Works Departments with ex-officio representation from additional county departments and outside agencies.

The Environmental Protection Department is the primary County agency responsible for administrating and staffing the green infrastructure program. Three citizen advisory boards provide review and policy recommendations to the County Commission and staff. The Land Conservation Board evaluates land acquisition nominations and recommends purchases. The Environmental Protection Advisory Committee provides recommendations on watershed protection, pollution prevention, and natural resources protection. The Energy Conservation Strategies Commission provides guidance on local

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climate change policy and the emerging role of green infrastructure in increasing local capacities for effective mitigation and adaption strategies.

**4. Use of Technology**

Since 2006, a Microsoft Sharepoint® Server has been used as a web-based means of enhancing staff collaboration, data sharing, and communication regarding green infrastructure activities and processes. Sharepoint applications are used by the Community Planning Group and Development Review Committee for data, document and information sharing and archiving and management of meeting agendas. These applications reduce paperwork, duplicative data entry, and provide shared databases and digital workspaces. Recently the program has migrated to a new Microsoft Office Sharepoint Server 2007 (MOSS) which is enabling further information sharing with simple Web interfaces to typical distributed Microsoft Office® applications such as Word, Excel, Access, Outlook, and Powerpoint.

Updates on green infrastructure program activities and progress are maintained on publicly available websites, for example Alachua County Forever posts conservation projects, the acquisition list, minutes and agendas, and other links of interest at <http://www.alachuacounty.us/government/depts/epd/land/>. Geographic Information System applications (e.g. ESRI Arc/Info, ArcView, and Map Objects) are used on a daily basis on a desktop level by all levels of staffing associated with the green infrastructure program. Field personnel are equipped with Global Positioning System (GPS) and air card laptops to allow direct data input into networked databases.

**5. The Cost of the Program**

Funding for Alachua County’s green infrastructure investment program is allocated to two budget cost centers: one for the public green assets managed by Alachua County Forever and the other for the private green assets evaluated by the Environmental Planning and Development Review function.

Alachua County Forever	
Annual Costs, Operating Budget	
Personal Services	\$ 457,865
Operating Expenses	\$ 121,751
Total	\$ 579,616
Total Staffing	6.35 FTEs
Cumulative Land Purchases (since 2004)	
County-Funded	\$ 20,634,185
Partner-Funded	\$ 37,610,445
Total	\$ 58,244,630
Total	11,984 Acres

The Alachua County Forever program became fully operational in 2004. Major activities of the program have shifted from an initial focus on land acquisition to the current focus on establishing public access and land stewardship of acquired properties.

Over 50 percent of the acquired portfolio is managed by other entities, including municipalities, nonprofit land trusts, Water Management Districts, state agencies, and private parties.

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Green Infrastructure Planning and Development Review (Annual Costs )	
Personal Services	\$ 107,410
Operating Expenses	\$ 24,188
Total	\$ 131,598
Total Staffing	2.0 FTEs

Budgeted program costs for the environmental planning and development review services associated with the green infrastructure program is \$ 131,598 for the fiscal year beginning October 1, 2007. Current funding sources for these services include \$ 98,598 from ad valorem taxes and \$ 33,000 from site plan application review fees, staffing support site plan and conservation area management plan review, field evaluations and verifications, and database management.

**6. The Results/Success of the Program**

Green infrastructure program performance data is reported using web-based applications that ensure alignment of budget and performance management metrics. Alachua County Forever publishes benchmarks and measures on the web and in the budget documents available for public scrutiny. These include how well the local funds are leveraged (65 percent), what is the program administrative overhead rate (2.5 percent), how much land is acquired, and the costs of stewardship.

Benchmarks: Alachua County Forever Land Purchases (since 2004)	
County-Funded	\$ 20,634,185
Partner-Funded	\$ 37,610,445
Total	\$ 58,244,630
Total Acreage	11,984
County-managed	4,066 acres
Partner-managed	7,918 acres

Benchmarks: Green Infrastructure Planning and Development Review (Since April, 2006)	
56 site plans approved totaling 1934 acres	
839 acres of green infrastructure set aside	
212 acres (11%) total impervious/ built footprint	
883 acres of total pervious developed area	
519 acres in conservation areas	
300 acres of strategic ecosystems	
151 acres of listed species habitat	
185 acres of wetlands preserved	
Less than 1/20 <sup>th</sup> acre of wetlands impacted	

Since April 2006, a total of 1934 acres were approved for development in 56 projects with 212 acres (11 percent) of total impervious area and 839 acres (43 percent) set aside as green infrastructure (natural areas, conservation areas, and other open space, such as community green spaces and landscaped areas). Conservation areas made up 519 acres (62 percent) of the green infrastructure set aside including the protection of 185 acres of wetlands and buffers, 300 acres of strategic ecosystem, and 151 acres of listed species habitat.

## **7. Worthiness of an Award**

Alachua County's green infrastructure investment program is worthy of recognition because of the results achieved. Green assets have been protected on privately developed properties as well as publicly acquired properties, creating a diverse mosaic of natural areas that provide multiple purposes and benefits.

In investing in Alachua County Forever, the average property owner will have contributed \$30 per year over the 20-year life of the program and have protected over 15,000 acres of land with a present worth of over \$60 million.

The overall program is greater than the sum of its parts, due to a noteworthy level of cooperation and collaboration among County departments and the integration of policies and processes. Alachua County has taken advantage of best available information technologies to enhance web-based information sharing and communication and to eliminate duplication in data entry and management. Process transparency and public involvement and access are consistently given a high priority in program development and performance management.



Alachua County's Barr Hammock  
Photo Credit: Mac Stone