CONSERVATION STRATEGIES

1. Introduction

The citizens of Alachua County do not accept environmental degradation as part of their vision for a sustainable community. Awareness of environmental concerns has increased steadily over the last few decades, and with that, have come new and innovative attempts to address these concerns. Alachua County reaffirmed its commitment to environmental protection through strong support of Charter Amendment 1, Alachua County Forever, membership in the Florida Sustainable Communities Network, and the Air Quality Initiative, as well as policies of the comprehensive plan, and many other plans, programs, policies and actions. This is a bifocal vision with both near and distant horizons.

Alachua County has numerous citizens' advisory committees and organizations, such as the Sierra Club, Women for Wise Growth, Sustainable Alachua County, Environmental Protection Advisory Committee, Recreation and Open Space Committee, Land Conservation Board, and Alachua Conservation Trust, as well as responsible individuals in the development community, and our farming and forestry families, who share this commitment. Their dedicated efforts help advance our knowledge of environmental concerns, and find effective solutions for all members of the community. New organizations continue to emerge in response to evolving issues. The Scenic 441 Corridor Advocacy Group, Santa Fe Land Trust, and Conservation Trust of Florida are some of the more recent examples. These are examples of adjusting our vision for the near horizon.

In past decades, land use decisions were made with little consideration given to the natural attributes of the land. Environmental features were often considered obstacles or hindrances to be overcome through engineered design solutions or intensive site modifications. As a result, urban land uses were often allowed to replace or permanently alter environmentally sensitive lands and natural systems. With a better understanding of the ecological impacts of land uses, it has become clear that the natural carrying capacity of the land must be carefully considered in land use decisions if the natural attributes and functions of the environment are to be maintained for future generations. Policies and regulations that appropriately preserve or conserve valuable natural resources, while allowing for orderly economic growth, should continue to be implemented. In addition, complementing these strategies with a new land acquisition program, and a strong commitment to maintaining working partnerships with citizens, land trusts, agencies and organizations, will add important new dimensions to an increasingly comprehensive approach to environmental conservation in Alachua County.

Public input into the update of the Comprehensive Plan over the last five years has contributed to the generation of several long-term planning directions or principles, which provide the basis for the goals, objectives and policies of the Conservation Element. These directions reflect the kind of community the residents of Alachua County desire and envision for the future. Forefront among these guiding principles is recognition of the need for sustainability. This is an example of distant horizon visioning.

Although there is no general agreement regarding a precise definition of sustainable development, most interpretations of the term refer to the availability of natural resources and ecosystem functioning over many generations, and to the enhancement of human living standards through ecologically sound economic development. The United Nations has defined sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

A commitment to sustainable development requires us to reconcile the desire to raise the standard of living with the limitations imposed on us by our local and global constraints, in view of the need to consider our actions over greater lengths of time. Sustainable development requires innovative solutions for improving our welfare that are derived from practices and technologies that work harmoniously with earth's systems and across diverse groups of people.

Patterns of human development – physical, social, and economic – affect sustainability at the local and global level. County and regional planning is integrally tied to defining how, where, and when human development occurs, which affects resource use. Planning can therefore play a crucial role in improving the sustainability of communities and the resources that support them. However, a range of indicators suggest that there is a growing gap between human consumption of resources and Earth's capacity to supply those resources and reabsorb resulting wastes. Species extinction is one example. Human activity is creating a biodiversity deficit by destroying ecosystems faster than nature can create new ones. In North America, an estimated 36% of fish, 35% of amphibians, 17% of mammals, and 11% of birds are either in jeopardy or are already extinct (APA, 2000).

Many of these environmentally unsustainable practices are directly connected to incremental local – including remotely influenced local – decision-making. Some examples in Alachua County include suburban sprawl, loss of agricultural land and open spaces, degradation of water resources, loss of wetlands, traffic congestion and air pollution.

What is contributing to unsustainability? Overconsumption, population growth, dependence on non-renewable resources, pollution, environmentally and socially destructive development patterns, and inequities in resource distribution are major contributing factors. Scientists estimate that our present consumption level exceeds the Earth's carrying capacity by 30%. The ecological footprint (estimated amount of land to support consumption and waste generation patterns) of the typical U.S. resident per year is 25.5 acres, compared to 6.9 acres for the average world resident and 2 acres for the average resident in India (APA, 2000). Historically, human development has not considered the natural processes upon which we depend, thereby damaging or destroying the systems that support us. The typical suburb paves over land that was once the habitat of other species, or productive arable land.

One of the root causes of the problems described above is the failure to recognize the fundamental limits to Earth's ability to withstand alterations to its natural systems. As a result, most Americans consume wastefully, using our limited resources inefficiently and inequitably. People need to acknowledge that we are an interconnected part of nature. Policies and actions must reflect the important linkages among a healthy environment, a strong economy, and social well-being.

Planning for sustainability promotes responsible development rather than an anti-development philosophy. The protection of a sustainable local economy is directly related to ecosystem protection and the sustainable use of resources. A variety of techniques can by used in Alachua County to provide for balanced economic growth, sustained quality of life and the protection of our natural heritage for future generations. The approach in the Conservation and Open Space Element is to encourage restoration and protection of viable, native ecosystems and listed species by limiting the impacts of growth on those systems; direct incompatible growth away from them; encourage environmentally sound land use planning and development and recognize the carrying capacity and/or limits of stress upon these fragile areas.

The first policy in the first section of the Conservation and Open Space Element sets the framework for a comprehensive, multi-faceted approach: rather than emphasize regulations, it positions them amongst a diverse array of potential options for the long-term maintenance of natural systems in Alachua County. These strategies include information, education and outreach, public and private partnerships, public acquisition, incentives, and regulations. Coordination of all of these strategies is needed to promote conservation of natural resources.

2. Information Strategies

Section 2 of the goals, objectives and policies in the Conservation and Open Space Element is an entirely new section devoted to environmental information management. This section expresses the commitment of Alachua County to tracking environmental quality and informing the public about the health of our natural resources. The manner of communicating this information is critical. Information must be conveyed in a manner that is understandable and useful to non-planners and non-regulators, so that all members of the public can make informed decisions about their health, safety, and welfare. This means employing a variety of tools and efforts, from the Alachua County Environmental Protection Department (ACEPD) website, with its helpful hints and hyperlinks, to printed brochures, checklists, and worksheets, verbal presentations to neighborhoods, schools, and citizens groups, participation in multi-disciplinary workshops, task forces, and volunteer cleanups, as well as day-to-day consultations with citizens of Alachua County. The public will be provided with knowledge of practices they can use to become better stewards of our natural resources.

A. Indicators tracking

Effective conservation requires that we know what resources exist, where they are found, and in what condition. The identity and geographical distribution of water resources, natural communities and species, important agricultural soils and open spaces, become among the most important information needed for preservation efforts to succeed. Policy 2.1.1 calls for mapping and database management of important environmental resources in the County.

Indicators provide a glimpse of a bigger picture. They reveal whether our community, the economy, or the environment is going forward or backward, increasing or decreasing, improving or deteriorating, or staying the same. Knowing where we are, and where we are headed will reveal declining or improving trends. Policy 2.1.2 calls for the County to establish a comprehensive monitoring program using performance indicators to detect and document long term trends in environmental quality, to support research efforts, and to confirm the effectiveness of environmental protection efforts. The information gained from monitoring will help citizens, planners, and state and local government officials understand the impacts of our decisions on natural resources.

Not only must the indicators be identified and measured, they must be analyzed and reported annually. The goal is to have feedback on our policies and regulations, to identify areas that need improvement to ensure the meaningful protection of natural resources. Another goal is to integrate these indicators into a performance-based development review process, so that a development proposal does not go forward unless it meets minimal standards of sustainability.

The establishment of this monitoring program will require a concerted work effort within Alachua County government and among its constituents. Fortunately, there are already a number of citizens groups

dedicated to this task. Sustainable Alachua County, Women for Wise Growth, Sierra Club, and the Environmental Protection Advisory Committee, among others, have each spearheaded important research efforts and built momentum for this type of accountability-based approach. Within the last two years, the University of Florida has initiated an indicators approach through the development of its sustainability indicators report. Alachua County will build on these efforts, and work together with these and other partners in synthesizing the components of a program that will offer a reasoned, scientific basis for decision-making. Such planning decisions should be made in a holistic and fully-informed manner that involves broad-based community participation and input.

B. Technology

Although many organizations have been using computer-based business information systems for over 30 years, this is an area that is still characterized by rapid technological development. During the last decade, many new technologies such as the internet, relational database management systems, data warehousing, geographical spatial information management, and imaging systems have been developed, offering many exciting possibilities for aiding the County in its mission. The ACEPD strives to adapt to this continuous evolution of information technology in order to provide better service to its customers and increase productivity of its employees. According to the Florida Department of Environmental Protection (FDEP), over half of all households now own computers and about 40% are connected to the internet (FDEP 2000). Opportunities for cyber-democracy range from passive public access to information to interactive services and e-commerce.

Alachua County is attempting to respond to current trends in information technology through a management strategy that combines increased public access to information and services, increased internal efficiency, increased functionality of data, systematic data gathering and storage.

Increase public access: ACEPD recognizes the potential of the internet to change the way the public gathers environmental information, participates in environmental decision making and engages the services of environmental agencies. It is our goal to establish and continually refine the EPD's internet website to provide ready public access to information including laws and regulations, general environmental problems and conditions, and opportunities to participate as environmental citizens.

More functional data storage and presentation: There is no shortage of data and information; providing useful and relevant information is the challenge. Improved document imaging systems have allowed a number of departments to better acquire and store certain forms of information while at the same time reduce paper records. Similarly, the use of GIS database systems that relate data to specific geographic areas allows for visual representation of data, making it easier and faster to ascertain the points of environmental interest.

As part of the Comprehensive Plan update, ACEPD spearheaded an effort to communicate policy changes through a new electronic data format, with hyperlinks to lead citizens through old and new policies and highlight policy changes. As part of the implementation of this update, we aim to provide citizens user-friendly copies of the data and analysis, as well as the goals, objectives, and policies of the Conservation and Open Space Element. A multi-media color presentation, including not only text, but also interactive maps, digital photos of natural resources and resource concerns, and hyperlinks to cross-referenced state statutes, supporting studies and reports, local regulations and policies in other elements, will breathe life into what should be a citizen-oriented planning tool that continually evolves in response to community conditions and needs.

Increase internal efficiency: The County recognizes the role that information technology plays in increasing productivity. Interoffice communication and networking remains the focus for achieving productivity gains.

C. Education and outreach

Education and outreach is the most important natural resource protection strategy. Local officials cannot make informed decisions about land uses in natural resource areas if they do not understand the relationship between land uses within resource areas and environmental quality. Homeowners, farmers, golf course superintendents, and public works officials will not reduce their use of fertilizers if they do not understand the impacts of their actions on groundwater that feeds springs. The successful resolution of many other threats to natural resources is dependent on the actions of an educated populace.

Instilling an awareness of the impact of disruption to natural processes conveys the relationship between environmental quality and environmental protection, and provides information about maintaining and improving the environment around us. Education can nurture appreciation of Alachua County's natural resources and bring about cooperation and voluntary actions to protect the environment. Therefore, it is our responsibility to inform students, citizens, and local leaders about the values, function, and protection needs of natural resources. The public must be informed about threatened resources. However, a positive message must also be delivered: we can still protect our resources if we work together.

Policies under Objectives 2.2 and 2.3 demonstrate Alachua County's commitment to advancing the environmental stewardship of all of our citizens. The term environmental stewardship is a convenient way to describe the responsibility we have to the natural world around us. Environmental stewardship involves knowing our relationship to Florida's environment and then taking appropriate action based on that knowledge, and tailoring management and protection strategies to the nature and scale of the resources to be protected (such as watersheds, regional corridors, or greenways) rather than transitory political boundaries. Environmental stewardship is the idea that we are an integral part of our environment.

As part of our commitment to environmental stewardship, we must provide Alachua County's landowners the tools to protect natural resources. This includes disseminating and providing technical assistance on the implementation of best management practices (BMPs), for topics such as landscape fertilization, agriculture, silviculture, stormwater management, and golf course design and management. BMPs, when properly implemented, may provide effective protection without the need to implement new regulations.

The County's webpage, interpretive facilities at county natural parks and preserves, distribution of brochures and reports, staff presentations to groups, and participation in collaborative working groups and task forces represent just a few ways that the County can engage the public. We should also be proactive in forming and supporting teams to partner with citizens, agencies, and our academic institutions in the protection and restoration of environmental quality.

> *"Places need keepers – people who know how things are changing, whether from bad to good, or vice versa. People who have their eyes on the place and their hearts in it. The land itself needs people who know it, care about it, keep track of it, and work on its behalf." – Scott Russell Sanders, author and essayist.*

Land conservation measures are undertaken by governments, community leaders, non-profit organizations and private landowners in recognition of the human connection to the land and in response

to the responsibility felt by many to steward land for future generations. Land stewardship isn't only a government responsibility. The bulk of Florida's land area is controlled and managed by large private landowners, many of whom are excellent stewards of the land. Small landowners, such as family farmers and suburban and urban homeowners, can help too. No single government agency has the sole authority or resources required to provide complete protection for our natural resources. Participation by all of our citizens is imperative for environmental conservation.

D. New framework for public involvement

With the Consensus Project that formed as an outgrowth of this Comprehensive Plan update, Alachua County has taken a tremendous step towards creating a new framework for public involvement that seeks to honor and explore the perspectives of all citizens. In September 1998, the Board adopted more than 250 recommendations for needed plan amendments as part of the Comprehensive Plan Evaluation and Appraisal Report (EAR). The EAR-based plan amendments (Plan Update) are adjusting the goals, objectives and policies in all of the adopted elements of the Plan. To manage the Plan Update, and to facilitate greater public involvement early in the process, the Comprehensive Planning Team (staff) presented the public policy proposals through a series of "Issue Papers." The purposes for developing the papers were to stimulate public dialogue and present proposals about interrelated community concerns rather than single Plan Elements.

Staff presented six papers to the Alachua County Planning Commission and the Board in workshops beginning in January and ending in May of 2000. Topics ranged from infrastructure, utilities and sustainable construction to integrating neighborhoods into communities. Through these workshops, three interest groups emerged. The Committee for Smart Growth, the Alliance for Responsible Growth, and the Alachua County Forestry and Agricultural Coalition are umbrella associations with members from the builder community, citizen activists on growth management and the environment, foresters, farmers, and landowners. A fourth group, the Committee for Social Concerns was also created.

Staff provided assistance to the four emergent stakeholder groups and asked each participant group to consider policies contained in each of the six Issue Papers. The groups met together, working through their concerns, and presented findings for their representative groups in writing. Staff later met with the groups to clarify information, ask questions, and collect the ideas presented by the participants.

As the work sessions continued, staff recognized the opportunity to develop a broader dialogue with these groups through a consensus project. It is not staff's intention to imply that this part of the consensus project has successfully included all potential stakeholders; however, these groups represent the first steps toward transforming a potentially adversarial climate into one where participants can seek creative solutions to the issues facing Alachua County.

The results identify stakeholder positions and ideas. One possibility would be to use this work as the basis for creating a roundtable that allows for representation from all affected interests to complete the search for consensus in follow up to the Comprehensive Plan update. To date, these groups have not had the opportunity to engage in this type of consensus process. Although consensus may or may not be found, it is through the search process that one gets clearer about one's own and others' interests and ideas.

The diverse ideas emerging from the issue paper phase of the Comprehensive Plan update offer staff new perspectives and possibilities. Moreover, the potential exchange between the stakeholder groups, representing environmental, development, and social concerns, provides an opportunity for deeper

understanding of what is best for the community as a whole. This is especially true when the discussion extends beyond special interests and the bureaucratic process.

The goal is to find strategies that offer the diverse interests in the community ways to accomplish their goals through honoring and exploring the perspectives of all citizens. Using the energy of diversity to generate wisdom, we begin to see clearly, not just from a single viewpoint, but the larger picture we have painted together.

The challenge to Alachua County will be to try to continue to engage these stakeholder groups in ongoing community planning and visioning, and also to expand participation to citizens and interests that have remained outside of the process to date. This will require going beyond our efforts which have traditionally been limited to statutorily mandated notifications of public hearings. Rather, we must provide interactive opportunities through town meetings, surveys, and public work sessions, as well as neighborhood discussions, church groups, internet exchange, and other non-traditional forums that invite interested members to become involved.

E. Intergovernmental coordination

To ensure that the County's resources are protected and managed appropriately, it is imperative that the appropriate state, regional and local land planning agencies, environmental agencies and service providers coordinate and provide accurate information and recommendations to decision makers so that full consideration is given to environmental issues when making land use decisions.

3. Land Acquisition Program

Alachua County's natural topography includes pinelands, prairies, hardwood hammocks, sandhill, swamps, marshes, lakes, and rivers. As population continues to grow at a steady pace, urban sprawl is incrementally taking its toll on natural areas. In 1999, 84% of Alachua County voters polled felt that if natural lands are not protected now, they will be lost forever. Alachua County Forever was created to alleviate these fears and to help keep Alachua County beautiful and ecologically viable.

Land acquisition is currently recognized as the best way to protect natural resources from land use practices that reduce environmental quality. In order to be effective, acquisition must be accompanied by proper management that preserves and, where necessary, restores the natural functions and conditions of the land. Presently, the primary protection afforded natural resources in Alachua County is through public ownership and management of natural areas as preservation lands.

In Alachua County, most public acquisition of land has been by the state or the water management districts over the last 10 years. Alachua County still lags behind other neighboring counties, as well as other counties within the region, with respect to conservation purchases. In recognition of the need to do more, the citizens of Alachua County voted on November 7, 2000 to approve our own local acquisition program. Various state programs, as well as our new Alachua County Forever (ACF) program, are described briefly below.

A. State programs

Since the 1909 acquisition of the Olustee Battlefield Site, Florida has pursued the preservation of its unique natural and cultural resources. Through purchases, long-term leases, donations and other means, the state has acquired lands to protect endangered species, natural communities, archaeological and historical sites, geological features, and water resources. Protection of these lands enhances the quality of the environment, as well as the quality of life of the state's residents. Conservation lands provide habitat for wildlife, beneficial services such as water storage and flood protection, and outdoor recreation opportunities for millions of residents and tourists. In addition to other benefits, these public lands also serve to protect the state's water quality and drinking water supply.

Florida's first organized land acquisition program began in 1963. The largest state funded acquisition programs, the Conservation and Recreation Lands (CARL) and Save Our Rivers (SOR) programs, began in 1979 and 1981, respectively. In 1990, the Florida legislature approved the Preservation 2000 (P2000) Act, an initiative to increase funding for land acquisition programs by providing an additional $300 million annually for a ten-year period. In 1999, the Florida Forever Act was adopted to continue the state's commitment to buying natural, recreational and culturally important lands. Funding under the P2000 program was focused on the purchase of environmentally important lands whereas, under the newly constituted program, more money is being allocated for water resources and land purchases in urban areas to protect open space and parks. At the same time, additional acres of sensitive lands are being purchased as well. The new Act distributes an annual allocation of $300 million in Florida Forever funding among the following programs: CARL program (35%), water management districts (35%), FCT (22%), Florida Recreational Development Assistance Program (1.5%), FFWCC (1.5%), Division of Forestry (1.5%), Division of Recreation and Parks (1.5%), Office of Greenways and Trails (1.5%).

Water Management Districts

Since 1991, both water management districts have actively pursued land acquisitions in Alachua County, adding approximately 33,346 acres of preservation lands through 1997. The main funding sources for these land acquisition programs are the Save Our Rivers Program (see s. 373.59, F.S.) and the Preservation 2000 Program (see s. 259.101, F.S.), supplemented by district funds from ad valorem taxes.

In its Land Acquisition & Management 1998 Five Year Plan, SJRWMD reports on acquisitions to date and future acquisition plans. The southeastern part of Alachua County, including Paynes Prairie and the Orange Creek Basin are part of the Ocklawaha River Basin. As of 12/97, SJRWMD had some ownership interest in lands in Alachua County. These include the Newnans Lake CARL Project, the Lochloosa Wildlife Conservation Area, the Lochloosa Less-than-fee easement, and the Orange Creek muck farm.

In its Land Acquisition and Management Plan 1996, the SRWMD identifies its main land acquisition focus as the Suwannee River and its tributaries, including the Santa Fe River. The Santa Fe River Basin planning area consists of 1,390 square miles draining into the river, which originates in the Santa Fe Lake/ Santa Fe Swamp / Lake Alto area. As of 10/31/95, SRWMD owned 7,781 acres along a total of 15 miles of the Santa Fe River and proposed to acquire 12,315 additional acres. Of this acreage, 1,629 acquired acres were located in Alachua County; 4,250 additional acres in Alachua County were proposed for acquisition as of 12/97. Acquisition objectives are to preserve headwater wetlands, to protect buffers around springs and along spring runs, and to preserve natural communities in headwater wetlands and surrounding springs.

Statewide Greenways

A statewide system of greenways, which eventually will connect natural areas throughout Florida, also is being developed. Greenways are corridors of protected open space that are managed for conservation and recreation. Greenways follow natural land and water features, such as ridges or streams, or human landscape features such as abandoned railroad corridors or canals. They link natural reserves, parks, cultural and historical sites.

The state's Greenways and Trails program, managed by the FDEP, assists citizens, landowners, and developers in constructing greenways and trails, and provides funding. At the federal level, the USDA Forest Service has a program to acquire land to provide a route for the Florida National Scenic Trail. The Florida Trail Association works with the USDA Forest Service to build and maintain FNST and other hiking trails in Florida.

B. Alachua County Forever

In addition to these state programs, about one-third of the counties in Florida have passed referenda creating and funding local land acquisition programs for the purpose of open space, recreation, and environmentally sensitive land purchases. Some of these funds area used to match state program grants or private land conservation efforts.

On November 7, 2000, Alachua County joined their ranks when voters approved a property tax to fund up to $29 million for land acquisition and management through Alachua County Forever (ACF). The purpose of the program is to acquire and manage environmentally significant lands that contribute to the quality of life and enjoyment of our citizens. These lands will provide opportunities for both existing residents and future generations to enjoy wild and scenic areas.

ACF is a voluntary program. Landowners can decide whether or not to participate. If the owner wants to preserve their property, but does not want to sell, there are other options. For example, conservation easements prevent development, construction, or other activities that would disturb the environment while allowing property owners to reside on the property. They do not have to allow public access to the property.

Land acquisition is only the first step. Without management, many of the lands could lose the ecological characteristics that make them so important to protect in the first place. ACF staff will develop a management plan for each site that is acquired. These sites may then be made accessible to the public for compatible, resource-based recreation, provided there are no significant adverse impacts to the ecological or historical values of the property. Depending on the site, nature trails, parking areas, or educational displays may be added to facilitate public access.

C. Local land trusts

There are now three active local land trusts in Alachua County. Formed in 1988, the Gainesville based Alachua Conservation Trust was the first and has initiated and collaborated on acquisitions of numerous sites in its nearly 15-year tenure. The mission of the Alachua Conservation Trust is to protect the natural, historic, scenic and recreational resources in and around Alachua County. Land protection is promoted through purchases, donations, conservation easements and public advocacy. The Alachua Conservation Trust has completed real estate transactions, grant applications, research efforts or advocacy programs for

projects such as: Paynes Prairie CARL Additions (over 2460 acres), Hogtown Creek Greenway FCT Grant (over 900 acres), Historic Haile Homestead (acquisition, building restoration and site work), SRWMD Small Parcel Acquisitions (over 1000 acres), and The Saarinen Preserve (80 acres). Most recent achievements include successful pursuit of FCT funding for the Blues Creek Ravine/Fox Pond FCT Grant (over 320 acres).

The Micanopy based Conservation Trust of Florida formed in 2001 to protect working rural landscapes (family farms, ranches, and timberlands), as well as natural areas, through conservation easements, land purchases, and by helping rural landowners retain their traditional and productive land-use activities. Most recently, the Santa Fe Land Trust formed in the fall of 2001 in order to secure a 10-mile long wildlife corridor between the 7,000 acre San Felasco Hammock Preserve State Park and the Santa Fe River. The trust wants to conserve 4,000-5,000 acres of mostly low-lying land, and several big wetlands, including the now-dry Burnett Lake, and more than 2,000 acres of hardwood forest.

The dedication of these groups, and the individuals that comprise them, reveals another aspect of the strong commitment to environmental protection shared among citizens of Alachua County. Through working partnerships with these groups, as well as various state agencies and water management districts, Alachua County aims to maximize use of funds for valuable acquisitions through ACF and other acquisition programs.

D. Means of acquisition

There are a variety of tools through which acquisition may be accomplished, from fee simple purchase, to conservation easements, conservation trusts, land donations and dedications, transfer or purchase of development rights, long-term leases, and restrictive covenants. Our policies seek to use these tools in the most cost effective manner that ensures long-term protection of natural areas and open space.

Outright acquisition of property is probably the most easily understood of all of the options. This is also referred to as fee simple purchase, which involves the purchase of all of the rights in the property. This can be accomplished either by deed or by will. Together with outright purchase, rights of first refusal and options to purchase are additional tools which may be integrated into an overall acquisition strategy.

Another type of legal mechanism involves donations of remainder interests. The right to live on the property until a person dies is called a “life estate” or a “life tenancy. ” The act of making the gift of the land now, to take effect at death, is called the gift of a “remainder interest. ” When a remainder interest is donated, the person decides to reserve the right to live on the land but upon death the property will then go to a conservation organization or other qualified entity for conservation purposes. To satisfy the conservation purposes test, the contribution must truly add to the public conservation good; interpreted as contributing to the preservation of open space, significant wildlife habitat, threatened farmland or watershed, or historic property.

A fee simple (leaseback) is another possible method of protecting the property. This would allow the property owner to donate or sell full title to the property. The land would be leased back to the previous owner or a third person subject to appropriate conservation restrictions.

A conservation easement is a voluntary legal agreement between a landowner and an easement holder that permanently limits uses of the land in order to protect scenic or wildlife resources. Each easement is tailored to fit the owner’s personal management objectives and goals for the property. The proven, effective approach provides for land conservation in addition to tax savings through reduced property

assessments. With the purchase of development rights, ownership of the land remains with the private property owner, but development of the property is constrained as provided in the contract agreement. Silviculture, hunting, and low intensity agriculture are examples of the uses that may be allowed under the agreement.

According to Tall Timbers Research, Inc., saving land through conservation easements is the fastest growing movement to protect land in the US. They note that there are 1,213 non-profit trusts operating throughout the country, and that as of 1998, approximately 4.7 million acres of land have been protected by local and regional land trusts (an area larger than the states of Connecticut and Rhode Island combined). The Land Trust Alliance serves as the national clearinghouse and information center for land trusts and easements.

Private restrictions are used predominately in residential subdivisions to limit land use and to prevent nuisances. Frequently, private restrictions are found in homeowners' association documents where many individuals live in ordered communities containing common areas. Other examples are residential restrictions that call only for single-family residences and building line restrictions which prohibit the erection of a building nearer than a specified distance from the lot lines.

Under the appropriate circumstances, each of these techniques could be utilized in acquiring property for conservation. Donating land for conservation purposes may be the best strategy for a landowner who does not wish to pass the land on to heirs, owns property that is no longer being used, owns highly appreciated property, has substantial real estate holdings and wants to reduce estate tax burdens, or wants to be relieved of the responsibility of managing the property. An outright land donation may involve an agency or a land trust that would own and protect the land.

E. Recreational opportunities on public lands

Uncontrolled public access to natural resources often leads to a range of ecological problems, including damage to habitats, trampling of vegetation, and littering and dumping. Proper management for recreation can be relatively easy and effective, and starts with a management plan. Management actions can protect natural resources from damage associated with uncontrolled or inappropriate recreational use.

Increased access to recreation and open space areas requires awareness and planning to minimize any adverse impacts to our natural systems. As we coordinate the acquisition of environmentally sensitive lands with our network of recreation and open space facilities, we must identify the kind and degree of human access which natural systems in these areas can support. As we link these natural areas into an interconnected system, we must consider the broader implications of that linkage. Opening areas to human contact can be detrimental if development is allowed to proceed in a manner that fragments natural systems. On the other hand, allowing natural areas to serve the community's needs and desires for recreation can be an effective way to preserve these areas for future generations.

The balance between access to recreational opportunities and the preservation or restoration to health of natural systems is a critical consideration for policy changes. The location of transportation corridors, including paved and unpaved roadways, as well as bicycle and pedestrian trails, must be strategic to avoid fragmentation of natural systems. Research has identified ways to reduce the impacts of habitat fragmentation by creating "permeable" roadways or corridors allowing wildlife to cross roads and highways through oversized culverts in different habitats. However, policy and economic impediments are the current barriers to facilitating viable habitat and wildlife populations. A challenge for this community and the future of wildlife and habitat in the County is to preserve the integrity of natural areas

as affected by recreation and open space issues, as well as transportation modifications, and to recognize their value to the public's well-being and its legacy of stewardship.

Lands acquired by public entities for conservation or preservation purposes must be managed to achieve the objectives of the purchase. The SJRWMD has codified its land management policy in Rule 40C-9, FAC, and focuses its activities on three priorities: (1) water resource conservation and protection, (2) ecosystem restoration and preservation, and (3) public recreation. Land management plans for SJRWMD lands in the Lochloosa Wildlife Conservation Area, the Prairie Creek Conservation Area, and the Gum Root Swamp Conservation Area. The Lochloosa Wildlife Conservation Area is managed by the SJRWMD and is open to public access, including fishing, hunting, horseback riding, boating, camping, and hiking. The Prairie Creek Conservation Area, managed by FDEP as part of Paynes Prairie, is open to public access, including fishing, boating, and hiking. The Gum Root Swamp Conservation Area, managed by the City of Gainesville, is open to public access, including fishing, horseback riding, camping, and hiking.

The SRWMD codifies its land management policies in Rule 40B-9, FAC, and also balances public recreation and use with resource conservation objectives for the land. The Santa Fe Swamp Wildlife Environmental Area, managed cooperatively by the SRMWD and the Florida Game and Fresh Water Fish Commission, is open to public access, including fishing, seasonal hunting, hiking, bicycling, and horseback riding. The Lake Alto area is open to hiking and fishing, although no vehicular access is allowed. The SRWMD also supports region-wide Greenway initiatives and concepts of Greenways proposed for the Suwannee River Valley and will participation in acquisition activities that link communities and protected open spaces, provide corridors for wildlife and recreational trails, support ecotourism, and protect natural, scenic, and historic resources of the region.

Linear open space recreational opportunities presently existing within the county include the Gainesville to Hawthorne Rail Trail, a 17-mile converted railbed running from Gainesville's Boulware Springs Park to the City of Hawthorne and designed for walking, cycling, and horseback riding. In addition, the City of Gainesville, with the County's participation, received matching funds from the Florida Communities Trust to acquire land for the Hogtown Greenway project. As part of the project, the County purchased a parcel of land at the southwestern terminus of the proposed project at Lake Kanapaha in order to provide alternative access to Kanapaha Botanical Gardens.

In addition, the county owns approximately 754 acres of nature parks which could be evaluated, monitored, and managed for native species and diversity goals.

F. Eco-tourism

Eco-tourism is one area in which resource protection interests and economic development interests can overlap. Land held in either public or private ownership can be opened to public use and enjoyment in a way which preserves its resource values while providing recreational, educational, cultural, and entertainment values to people.

One key element in a resource protection program which has been gaining popularity in the North Central Florida region may be local resource tourism built around recreational trails. Developments demonstrating the draw of these features are the Suwannee River Bicycle Tours, the first year-round bicycle touring company in the state (based in White Springs, now known as Suwannee Bicycle Association, a nonprofit), and the Florida state bicycling program, located within FDOT. Travel and tourism writer Herb Hiller, who writes for numerous magazines and developed both programs listed

above, describes heritage tourism as a way of maintaining habitat for wildlife while offering a sense of the original Florida.

The linking of greenways and trails can serve both to create a recreational network and to link wildlife habitats within counties, regions, and the state. In so doing, it can also create a critical connection between tourism as an economic sector and tourism as a way to stimulate a shared sense of who we are together in this state. The State Office of Greenways and Trails, part of the Florida Department of Environmental Protection, is currently developing and testing a cost-benefit decision model to assist communities in evaluating the relevant costs and benefits associated with five types of greenways and trails - ecological, recreational, historic/scenic, transportation-bases, and multi-purpose.

4. Regulatory Approach

Controls on land use are nothing new. They have existed in various forms since 451 B.C. (Code of Roman Law), and were present in England for hundreds of years before the founding of the United States. Early controls on land use in the U.S. extend back into the colonial period (Wright and Webber, 1978). The U.S. Supreme Court long ago recognized that the concept that police power is essential to government. As generally interpreted in the U.S., the police power is the right of government to interfere with private activity (or the use of private property) for the protection of the public health, safety and general welfare. Zoning is the most common use of the police power as it affects land, although related subdivision regulations and building codes are also important exercises of the police power. In thousands of state and federal court cases, the courts have upheld the right of local government to intervene in private activity to protect the public health, safety and welfare.

It is the police power that allows the government to require a landowner to clean up a cesspool leaking onto a neighbor's property or to remove a junkpile that attracts vermin to a residential area. It is under the police power that a local government adopts zoning regulations that prohibit the operation of junkyards and auto repair shops in residential neighborhoods. Under the police power most local governments prohibit landowners from distracting motorists with flashing signs that look like traffic signals and that those same governments prohibit noisy or noxious businesses near residential areas.

As our society has become more populous, with more people living relatively close together, the police power has become more important. It is a sort of civilizing agreement among humans living in a community that allows them to live in peace. Communities depended upon the police power to separate heavy industry from homes and businesses during the first century of the industrial revolution. Today, other police power regulations require that industry eliminate most pollution, thus making it a better neighbor and making separation less important. By the mid-1950s the Supreme Court recognized that government could legitimately use the police power to make a city "beautiful as well as healthy," and it is under that principle that today most communities prohibit billboards and large flashing signs in residential areas. As the Florida Supreme Court noted in Graham v. Estuary Properties (399 So.2d 1374, Fla. 1981), a landowner does not have an absolute right to change the natural condition of the land when the purpose of the change is not appropriate to the natural state of the land, and the proposed change would injure others.

Alachua County continues to embrace regulatory techniques as one component of a comprehensive approach to environmental conservation. The regulatory component has been in effect across the U.S. for the last seventy years with some enhancements -- providing relief for those who suffer great economic hardships but otherwise allowing property owners and the free market to operate freely without undue

government intervention. If a government rezones land from a zone allowing only farming to one permitting shopping centers, and thereby increases the value of property, and the property owners pays nothing for that, this is considered a windfall for the property owner. On the other hand, if it reduces (or even lessens the increase of) the value of the shopping center by denying the construction of a gasoline station at the entrance corner, this is sometimes construed as a wipeout and results in.a "takings" claim. One way to fund efforts to compensate landowners for every reduction in value caused by regulation is also to charge landowners for every increase in value caused by government action, such as regulating the use of adjacent property or construction a new highway. Most property owner groups, however, oppose this funding mechanism; they are unwilling to pay for their gains but they still expect to be compensated for their losses. Planners are not enthusiastic about such a system of payments for gains and benefits because it would require a complex bureaucracy to administer.

The simple fact remains that, for the most part, the system works well. Although there are some hardship situations under some local regulations, the vast majority of property owners are able to function under local regulations and most also benefit from local regulations that prevent other property owners from generating excessive air or water pollution. Most property owners accept the regulations imposed on their property, and recognize that their neighbors must also accept some limitations to live together in relative harmony. Thus, they all share in the responsibility of living in a modern society. The vast majorities of communities and regulators, including Alachua County, take very seriously their responsibilities of protecting both the public interest and respecting individual property rights.

A. Whole-systems thinking

Regulations form only one component of an approach that places new emphasis on an array of strategies that include incentives and acquisition, as well as education and outreach. Regulations are necessary because the protection of the quality of life for present and future citizens is undermined by piecemeal development. To ensure resources are maximized and used in the most cost effective manner, a framework is needed to provide the basis for land use decisions in order to create and maintain sustainable communities. Protection begins with the policies in the Conservation Element, but these policies must be coordinated with implementing ordinances and regulations, as well as fair and consistent administration and enforcement.

The Conservation Element has adopted a whole-systems thinking approach. According to Green Development: Integrating Ecology and Real Estate, "Whole-systems thinking is a process through which the interconnections between systems are actively considered, and solutions are sought that address multiple problems at the same time." Unfortunately, as the various design and engineering professions have become highly specialized in recent decades, conventional development has moved further and further from the whole-systems approach. Architects think about building design, mechanical engineers about HVAC systems, lighting designers about electric lighting, and interior designers about how to utilize and beatify the resulting spaces. This separation of design functions and professions has largely prevented whole-systems thinking from occurring.

By conducting the fundamental planning work up-front with all players at the table, the whole systems thinking approach can be put to work by developers. In standard developments, resource efficiency and environmental impacts are often considered only as afterthoughts, if at all, despite the potential for substantial and continued saving throughout a development's life cycle. Greater up front investments of time and money typically are required, but those costs are often recovered, with interest, by avoiding such downstream costs as expensive redesigns, drawn out approvals, litigation, and stalled construction.

Undertaking a development in an environmentally responsible manner can reduce capital costs in a number of important ways: costs of infrastructure, such as storm sewers, can be lowered by relying on the land's natural features; mechanical systems can be downsized or even eliminated through smart energy design; and approval can be expedited if opposition to a project is reduced. By using native landscaping in place of standard turf grass, the need for mowing, irrigating, and chemical treatments can be eliminated, while enhancing groundwater recharge and wildlife habitat. Day-lighting designs in office building can reduce the need for artificial lighting during the daytime.

The County's sustainable approach towards growth management eliminates the concept of "waste" water; all water must be managed as a resource, used to accomplish a wide range of multiple public objectives. Growth and development, including roads and public facilities, can only take place consistent with environmental protection. County government, in coordination with other governments, the private sector and its citizens, must continue to take an approach which coordinates land and water management in an effort to manage stormwater, wastewater and provide potable water supplies in a manner that protects, improves and restores the natural environment.

B. Conservation land use categories

Policies under Objective 3.1 of the Conservation Element define two conservation land use categories in order to recognize privately owned natural resources, and protect and enhance the ecological, recreational, and economic values of these resources. Environmental features within these two categories, Primary Conservation and Secondary Conservation, have more stringent development design or performance criteria associated with them. These areas may be used for wildlife management, appropriate resource-based recreation, and environmental restoration/preservation.

Primary conservation areas are particularly sensitive areas that are highly vulnerable to alterations and would be severely impacted by development. These areas include wetlands, water bodies, wellfields, significant geological features such as sinkholes and steep slopes, as well as areas of exceptional environmental significance and habitat of listed species. Alteration due to development would result in destruction or severe degradation of the natural resource function. As a result, these areas are unsuitable for all but extremely low-density development. The transfer of density to non-environmentally sensitive portions of the site is required. Development can be transferred at the same density allowed by the existing land use category. If there is no area suitable for density transfer, development can be allowed at the rate of impact of ½-acre per ten acres. The amount of density may also be limited by other applicable requirements and ordinances such as the requirements for stormwater retention, open space and landscaping, buffers, setbacks, transportation access and any concurrency requirements. This may result in less density than the maximum density allowed by the land use category in which the parcel is located.

Secondary conservation areas are areas that require special considerations for development due to significant environmental constraints. This category includes the 100-year floodplain, significant habitat, designated scenic corridors, and areas that contain special status trees. Best management and design standards are required of potential development in order to ensure that the ecological integrity and ecological and historical resource values of these resources are protected. Assessed impact upon natural resource determines density and/or intensity within a prescribed range within which the parcel is located.

Native habitats possess ecological and physical characteristics that warrant maintaining these important natural resources. As an overall environmental constraint, all development must preserve wetlands and native uplands onsite in grouped, clustered orientation with connection to offsite habitat corridors and natural resources in accordance with the policies in the Conservation and Open Space Element.

C. Preservation land use category

Certain areas in Alachua County have been recognized or are beginning to be identified by federal, state and local programs as worthy of special protection due to their environmental sensitivity and special value. Policies under Objective 3.2 define the Preservation land use category, which includes lands that have actually been purchased by any of a number of public entities for conservation purposes.

Activities on and adjacent to these properties will be prescribed based on management plans specific to each property, as provided in policy 3.2.3. Only activities compatible with protection of natural resource values and ecological integrity will be allowed on and adjacent to these sites. This may include variable degrees of access and limited modifications to portions of the property, including parking and other facilities which make possible the management of the resource and the public enjoyment of the resources. The resources within these areas shall be subject to the conservation policies of the Comprehensive Plan that are applicable to resources within those areas. For example, wetlands shall be protected in accordance with policies under Objective 4.7 of the Conservation Element.

Some examples of properties in this category include Austin Cary Memorial Forest, Devil's Milhopper State Geological Site, Dudley Farm State Historic Site, Goethe State Forest (Watermelon Pond Unit), Gum Root Park/Gum Root Swamp Conservation Area, Lake Alto Swamp, Lochloosa Wildlife Management Area (portions), Lower Santa Fe Conservation Area, O'Leno State Park, Orange Lake (Bird Island), Paynes Prairie Preserve State Park, Poe Springs, Prairie Creek Conservation Area, River Rise State Preserve, San Felasco Hammock, Santa Fe Swamp Conservation Area, and Warren Cave.

In addition, this category includes properties acquired or managed under the new Alachua County Forever program, as well as Florida Communities Trust, Save-Our-Rivers, and Conservation and Recreation Lands, provided the purpose of acquisition is for the preservation of natural resources in perpetuity. As policy 3.2.2 indicates, the identification of less-than-fee properties as preservation areas will be based on the management goals and objectives of the property.

Environmentally sensitive lands that are acquired under these programs will be reclassified to the Preservation land use designation during the next plan amendment cycle following acquisition, and identified on the Future Land Use Map.

D. Resource protection standards

Implementation of policies and regulations to protect sensitive environmental features will be accomplished through use of resource protection standards provided under Objective 3.6. Regulations will provide specific criteria, standards, and procedures for development and activities that have similar adverse affects to the environment, including provisions such as appropriate setback, buffers, natural open areas, BMPs, minimization and mitigation, and restoration requirements to protect the sensitive environment.

Ecologically sensitive features on or adjacent to a development site may include, for example, significant upland habitats, wetlands, surface water bodies, sinkholes, floodplains, problem soils, archaeologically significant areas, scenic roads, or threatened/endangered species habitat. For large development projects, such features can often be preserved without reducing development potential by clustering development on less sensitive portions of the development tract. In other cases, development potential may be reduced by the presence of these features on a site.

It can be shown that protection of sensitive site features during the development process is more efficient than remediation of environmental problems later. Therefore, it is important (1) to identify potentially sensitive ecological features as early as possible during the development review process, and (2) to permit flexibility in the site design process in order to accommodate sensitive features requiring some degree of protection. Fostering an attitude of respect for the natural features and natural environmental functions of every acre of land in the county is the foundation of this approach.

Development regulations can play an important role through techniques such as buffer requirements, setback requirements, mitigation provisions, restoration requirements, minimizing impervious surfaces, drainage studies involving design capacities/discharge areas and storm water treatment, monitoring requirements, tree and vegetation preservation, soil erosion provisions and endangered species regulations.

When land development involves the conversion of native habitat, the County's open space requirements are fulfilled first with native habitat that qualify for conservation. Other types of open space may be used to fulfill any remaining open space requirements. Representative wetland and upland habitats are typically retained and incorporated into open space areas of cluster and planned developments. These areas often become amenities which aid in the sale of properties within the development. The cluster and planned development options require that open space areas be retained in perpetuity, or for a period of not less than 99 years, and that continued management of the native habitats and open space areas occur to ensure that their long-term functions and values are retained.

The designation of such environmentally sensitive areas as preservation or conservation on final subdivision plats ensures that no development occurs within these areas after surrounding properties are sold to individual owners. This is not always the case when environmental areas are incorporated into individual lots, and thus are under individual ownerships. The development of subdivisions on uniform lots of 5 or 10 acres in size in the rural area offers no real protection and thus adversely impacts natural resources. This issue is addressed by the policy to require clustering, or the implementation of other measures to minimize adverse environmental impacts, whenever areas of significant native habitats are involved. Alternatives which allow variable lot sizes are provided to address concerns that clustering in the rural area changes the character to a more suburban lifestyle.

E. Natural resources maps

Large-scale, generalized environmental feature maps are included within the Data and Analysis portion of the Conservation Element and in overlays to the Future Land Use Map. These maps contain general representations for informational purposes only; they do not constitute new development standards and have no regulatory effect. Specific mapping of environmental features on-site is required prior to any development approval, as provided in policies under Objectives 3.3 and 3.4.

The maps in the Conservation Element map series are intended to provide guidance to decision makers involved in public land acquisition, land use planning, development regulation, and other conservation efforts. The maps represent our best estimate of those lands within Alachua County that require some form of conservation to ensure that natural resources are sustained for future generations. However, these maps represent only a snapshot of conservation needs at one time. As a consequence, some areas identified for protection may already be in public ownership or may no longer support the habitat features or species predicted to occur there. The maps have not been incorporated into policy or regulation as inviolate zones in which no development may occur. Rather, the maps are to be used as a layer of

information when decisions are made concerning land acquisition, land use planning, and development regulation.

New data are continually being added to the project database as new parcels of land come into public ownership, new records of the locations of listed species become available, and more up-to-date vegetation maps are created. As a result, the latest versions of the project maps actually reside in the computer. Before using the maps in this Element for detailed management decisions, users should contact the ACEPD for the latest information.

Alachua County will continue to pursue environmental protection on many fronts. Increasingly, innovative partnerships and agreements that promote voluntary efforts of the regulated community will be promoted. At the same time, there is still a role for time tested approaches to compliance through regulatory measures. The county will also employ outreach, training, and education efforts to address issues where awareness, knowledge and informed decisions will result in better compliance and protection. We are all temporary stewards of Florida's environment striving to achieve a lasting legacy of environmental protection.

5. Incentives

Incentives to landowners can be enacted to protect the environment and preserve native habitats. They can include tax relief or increased flexibility in site development, clustered subdivisions, planned development techniques, variable lot size, and the ability to transfer development rights. The Rural Land Stewardship Program may provide a mechanism through which transfer or purchase of development rights is viable in Alachua County. There are also numerous cost-share and certification programs that the County endorses and will promote in order to achieve conservation objectives.

A. Tax breaks

The most common form of tax relief is the reduced ad valorem taxation of land devoted to agricultural use. This relieves some of the development pressures faced by landowners who own properties on the urban fringe and who wish to retain their land in agricultural use. The retention of land in agricultural use offers the potential of preserving open space. However, agricultural operations do not always preserve environmentally sensitive areas or native habitats to the same degree as other development techniques. Therefore, other incentives are needed to encourage continued agricultural operations in the County and to preserve environmentally sensitive areas.

B. Innovative planning & zoning

Some of the ways in which protection and preservation can be provided to environmentally sensitive areas include incentive mechanisms such as density bonuses, development flexibility to concentrate development away from sensitive areas, height relief, tax credits, conservation easements, and provision for common natural areas (open space). Policies in this element encourage innovative planning and zoning such as flexible lot sizes, clustering, onsite density transfer, and planned developments to design in harmony with the natural features of each site.

Flexibility: Clustering and planned developments

Clustering and planned developments are two development options that preserve environmental areas and open space. Under these options, no minimum lot sizes are required and the property owner can cluster the development away from environmentally sensitive areas. The permitted density, and thus the property rights, for the overall tract of land is retained. These development options require a certain percentage of the land to be set aside as open space.

Transfer of Development Rights

Landowners, by law, have certain rights that are associated with their land. For example, a person has development rights, mineral rights, fishing and hunting rights. These rights can be sold in total or conveyed in part to someone else. Natural resource and farmland protection may be achieved by conveying a portion of a development property right, while retaining others, through a process called the Transfer of Development Rights (TDR).

For example, a farmer can sell the right to develop his land to a developer. The developer then is authorized to transfer the development rights to another more suitable property closer to county and municipal services. Usually the newly purchased development rights allow the developer to increase developable density in an area more suitable for such development. The person farming the original land is paid a sum of money for their development rights, thereby foregoing the ability to develop their land in the future. The county and community benefit because the program prevents sprawl and it avoids the requirement for costly infrastructure and public service extensions in the rural area. The developer benefits by getting increases in developable density within the defined receiving area. Receiving areas are made more marketable offering by urban services.

TDRs tend to work better when large tracts of agricultural lands are available and farmers are willing to sell their development rights. Equally important, the receiving area must be a place where developers can build and attract potential homebuyers. Residents of these areas must also be willing to accept the increased densities. For the TDR approach to work effectively, it must also be coupled with appropriate zoning. For instance, if too much density is allowed in counties as a whole, it diminishes the value and impact of the TDR program. At present, TDRs have not been shown to be a viable alternative in Alachua County.

As a Florida example, Palm Beach County established a TDR program in 1992 to help preserve agricultural lands. 1000 Friends of Florida has assisted the county with its mandatory TDR program, as contained in the local comprehensive plan. Under the program, to increase density in urbanized areas, developers will "buy" development rights from environmentally sensitive land and farmlands in the Agricultural Reserve, thereby precluding its future intensive development. The TDR program can reduce costs to developers in certain instances, allowing them to obtain density increases without having to seek an amendment to the comprehensive plan.

Rural Land Stewardship Areas

In 1995, the Legislature created a section of state law dealing with "innovative planning and development strategies" (S. 163.3177, F.S.). That law was expanded in the 2001 Legislative Session to provide for the designation of Rural Land Stewardship Areas. Under this program, the Florida Department of Community Affairs is authorized to test a new concept involving clustering development in rural areas and using the

purchase of development and density rights to preserve the land around the development. The method referred to in the legislation involves the use of transferable rural land use credits. These credits can only exist inside a designated Rural Land Stewardship Area.

A local government may apply to the Department of Community Affairs for the establishment of Rural Land Stewardship Areas. Five such areas are authorized to be designated under this pilot program. Those approved will be subject to a joint agreement between the DCA and the local government. According to the law, a stewardship area shall not be less than 50,000 acres and shall not exceed 250,000 acres in size. Designation of the receiving areas will take place by way of Local Comprehensive Plan amendments which will also be reviewed by the Department of Community Affairs.

Transferable rural land use credits may be assigned different ratios of credits per acre, with the highest number of credits being given to preserve environmentally valuable land. Each receiving area will buy credits from the designated preservation areas. If the price is too high for the credits, then developers may be reluctant to buy them. Developers will also need to sell the property in the receiving area in order to justify buying more credits.

Agencies are being asked to encourage land stewardship agreements by offering incentives such as landowners being allowed to accumulate extended permit agreements, recreational leases, payment for land management services on public land and options to sell land to government if certain conservation objectives are achieved.

One of the stated purposes of this legislation is to acknowledge the problem inherent with scattered development by attempting to use both innovative planning tools and transferable development rights to stop sprawl or spot development. The pilot is further aimed at exploring the potential for protecting environmentally sensitive lands and better preserving agricultural areas through this approach. The market will in large measure determine how successful it may be from a land preservation standpoint.

Among the unknowns of this new concept is what effect existing federal or state land conservation programs will have on the stewardship areas. No county has requested such a designation at this time.

C. Cost-Shares and Certification Programs

In the 1980s, federal and state agencies began to focus on voluntary participation programs to address water quality problems, particularly with agriculture. Cost-share programs became the policy institution of choice and continue to dominate today. Cost-share programs essentially transfer funds from public agencies to agricultural practitioners who install conservation practices or new waste management structures on their farms. As with the best available control technologies, payments are tied to the installation of specific practices or structures that are expected to reduce the offsite effects of land management. In recent years, these practices have been termed BMPs.

The financial scale of cost-share programs is quite large. Between 1996 and 2002, the USDA will have distributed over $1.6 billion to farmers through the Environmental Quality Incentive Program and the Wildlife Habitat Incentive Program. While cost-share programs provide important financial resources for land based conservation, it is not clear that they alone will be sufficient to meet the goals of the Clean Water Act. Instead of requiring specific levels of pollution reduction associated with installation of new practices, cost-share payments require only the installation of BMPs. Programmatic success is determined by the number of different practices that were installed rather than actual gains in water

quality or resource protection. For this reason, cost-share programs cannot be relied upon in isolation, but may provide one of several important means of achieving Alachua County's conservation objectives.

There are numerous forest certification programs that have developed over many years in an effort to promote BMPs and various management concepts that address natural resource concerns. The principles and criteria advanced by the Forest Stewardship Council (FSC) as advancing the most encompassing ecosystem management approach and the highest protective standard for biodiversity across species, ecosystem, and landscape scales. The County is also fortunate to have many small family operations certified by the long-standing American Tree Farm System, as well as key industrial operations that subscribe to the emerging Sustainable Forestry Initiative. The County encourages all foresters to become acquainted with the principles and criteria of these programs and will attempt to incentivize and facilitate certification of public as well as private lands in Alachua County. FSC principles may be used in conjunction with other certification standards to ensure ecosystem and landscape level natural resource protections that may not be addressed in other programs.

Please see the Agricultural and Silvicultural Practices section for more detailed discussion of cost-share and certification programs.

6. Conclusion: A Synthesis

Conservation of biological diversity cannot be accomplished by any one of the above strategies alone. Nor can effective conservation be achieved by government alone, or by any single level of government. Each strategy has its practical, financial, and legal limits. Each level of government has its own sphere of authority and limitations. Each private conservation organization has its particular strengths and weaknesses. Understanding and being sensitive to these is necessary if effective coordination of these various strategies is to be achieved.

It is also important to keep in mind that though public support of conservation goals has remained strong, changing times require different strategies. At the beginning of the 20th century, over-harvest of birds and other species for their feathers, their meat, or their fur was a dominant conservation concern. As the century draws to a close, that threat has receded in importance for most species. The tools for dealing with yesterday's threats are not likely to be well suited for handling tomorrow's challenges. In addition, in the last half century, many shifts in national mood have occurred with respect to the relative roles of state and federal governments, the need for stringent regulation of private activity, the importance of competing social goals for limited public spending, and other factors. Smart conservation recognizes that each of these shifts presents not just challenges but opportunities. The availability of a diverse array of conservation strategies, and the ability to shift emphasis from one to another as the prevailing sentiments dictate, will make possible a sustained effort at conserving the County's natural resources.

Conservation must ultimately take place at specific sites and be carried out by local communities. Each place represents a unique mix of ecological and human values, and effective conservation efforts must take both into account. On the other hand, while conservation action typically occurs at the local level, natural resources conservation is not just a local enterprise. It is precisely because conservation has regional, national and even global dimensions that this section takes a broad view of the status of natural resources across the county.

References

APA. American Planning Association. 2000. Policy Guide on Planning for Sustainability.

Carmichael, Carol. 2001. A Primer for Sustainable Technology and Development. Georgia Institute of Technology.

FDEP. Florida Department of Environmental Protection. 2001. Florida and the Environment: Naturally.

Florida Springs Task Force. 2000. Florida's Springs: Strategies for Protection and Restoration. FDEP.

Local Government Commission. 1994. The Ahwahnee Principles.

Matus, Ron. January 23, 2002. "Group seeks wildlife corridor." *In* Gainesville Sun.

Sohngen, Brent. 1998. Incentive Based Conservation Policy and the Changing Role of Government. Center for Agriculture in the Environment. CAE/WP98-6.

Stein, Bruce A., Lynee S. Kutner and Jonathan S. Adams, eds. 2000. Precious Heritage: The Status of Biodiversity in the United States. The Nature Conservancy.

Wilson, Alex, Jenifer L. Uncapher, Lisa A. McManigal, L. Hunter Lovins, Maureen Cureton, & William D. Browning. 1998. Green Development: Integrating Ecology and Real Estate. John Wiley & Sons.

Wright and Webber. 1978. Land Use. West Publishing Co.