

THE FLORIDA PLANNING TOOLBOX

Funding: The Florida Planning Toolbox was made possible by a grant from the Florida Department of Community Affairs to further regional visioning initiatives in Florida by providing descriptions and examples of planning tools designed to protect and enhance natural resources, promote economic prosperity for all residents, and enable a sustainable quality of life. The Florida Planning Toolbox builds upon a similar product developed in 2006 for the Committee for a Sustainable Emerald Coast, a public-private regional committee established by Executive Order in 2006. That committee's mission was to develop recommendations concerning long-range planning issues related to ensuring sustainable growth and development in Florida's four northwesternmost counties (Escambia, Santa Rosa, Okaloosa, and Walton).

About the Toolbox Author: The Center for Urban and Environmental Solutions (CUES) at Florida Atlantic University prepared this toolbox as part of its mission to work with policy makers and the public in their pursuit of options for managing growth while preserving natural systems, promoting a strong economy, and planning livable communities. The toolbox was prepared by CUES Senior Fellow Jean Scott under the guidance of CUES Director James F. Murley and Robert M. Jones, Director of the Florida Conflict Resolution Consortium at Florida State University and the University of Central Florida.

Acknowledgements: The authors would like to thank the many local, regional, state, and federal government officials, nonprofit organizations, and Florida planning professionals who generously provided information for this planning toolbox. We would also like to extend a very special thank you to two groups of individuals who gave of their time and expertise to ensure a toolbox of the highest quality: a Peer Review Panel and a Florida Planning Toolbox State Focus Committee. The role of the Peer Review Panel and the Focus Committee members (listed on the next page) was to suggest tools for the toolbox, review the portions of the toolbox that were within their area of expertise to help ensure that the information was accurate and complete, and recommend Florida examples to use in the toolbox. The examples provide a representational sampling of many other stellar planning examples in the state.

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Mr. Thomas G. Pelham, Secretary The Florida Department of Community Affairs

Dear Secretary Pelham:

It is with pleasure that we submit *The Florida Planning Toolbox* to the Florida Department of Community Affairs. The document was prepared to support DCA's work in furthering collaborative regional vision planning around the state. To facilitate use of the toolbox, we have made it available in both print and searchable on-line formats.

The tools included in the toolbox were selected to help Florida communities and their regions achieve their goals to establish quality communities with a sense of place; create a diverse, sustainable economy; establish an integrated and enduring process to protect and improve the regional environment; and provide access to the highest quality education and health care and a rich cultural heritage. In addition to a description of each tool, the toolbox includes illustrative examples of Florida communities that have put many of the tools into practice. The examples highlight the broad range of tools being used in our state to preserve natural resources, promote a strong, resilient economy, and plan for the future livability of Florida's communities. Also included are listings of state and national organizations with expertise in specific tools.

To ensure its technical quality, the toolbox was reviewed by a panel of experts selected for their knowledge of the tools and by a focus committee of state and regional agency representatives who also have expertise in the respective planning tools. The peer review panel members and state and regional agency focus committee members, who are listed at the beginning of the toolbox, identified tools to be included and suggested appropriate Florida examples. Panel members' expertise included affordable housing, agricultural viability, benchmarking, climate change and energy efficiency, coastal planning, economic development, financial planning and analysis, land use planning and development, infill and redevelopment, military-community base planning, natural systems, transportation, public involvement, social equity, and water resource planning.

The Center for Urban and Environmental Solutions (CUES) at Florida Atlantic University, in coordination with the Florida Conflict Resolution Consortium at Florida State University and the University of Central Florida, prepared the toolbox as part of its mission to help Florida communities and decision makers address urban and environmental issues through partnerships, education, and research. CUES plans to work with its public and private partners to continue to expand this planning toolbox and make it an enduring resource for Florida communities.

James F. Murley Director

The Florida Planning Toolbox

Prepared for the Florida Department of Community Affairs by the Center for Urban and Environmental Solutions at Florida Atlantic University in coordination with the Florida Conflict Resolution Consortium at Florida State University and the University of Central Florida

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In the productive farmland – the infrastructure for agriculture. Those tools recognize that viable agriculture is the backbone of maintaining a functioning network of agriculture, open space, and natural areas and that a range of strategies should be used to ensure the value of agricultural land. They also recognize that any program to maintain agriculture must address the current pressures on farming and that if the income generated from agriculture is not sufficient to sustain farming, or if development offers a higher return, agricultural land will be converted to development. Tools to preserve the viability of agriculture, many of which are described in this section and the Natural Systems Conservation chapter of the toolbox (for example, Land Acquisition), include techniques that use the development associated with growth to protect rural lands in ways that maintain the value of those lands remaining in agriculture also include establishing programs that offer economic incentives to farmers, such as community-supported agriculture, creating a supportive local regulatory and business environment, and green payments, which provide another source of farm income in addition to crops. The common principles for planning for rural lands (highlighted in the Natural Systems Conservation chapter of this toolbox) also apply to planning for Florida's agricultural lands.

Descriptions of farmland conservation tools is taken from materials published by the American Farmland Trust [www. farmlandinfo.org] and its publication, <u>Saving American Farmland: What Works; Holding Our Common Ground – Protecting America's Countryside</u>, by Tom Daniels and Deborah Bowers [Island Press, 1997]; <u>The Purchase of Development Rights, Agricultural Preservation and Other Land Use Policy Tools</u> <u>– The Pennsylvania Experience</u>, by Tom Daniels [www.farmfoundation.org/1998NPPEC/daniels.pdf]. In Florida, information on planning tools to conserve farmland and on Florida's agricultural industries is available from the Florida Department of Agriculture and Consumer Services [www.doacs.state.fl.us]; 1000 Friends of Florida [www.1000fof.org]; the Conservation Trust for Florida [www.conserveflorida. org]; the Florida office of the U.S. Department of Agriculture Natural Resources and Conservation Service [www.fl.nrcs.usda.gov], which has field offices throughout the state; and the University of Florida's Institute of Food and Agricultural Sciences [www. ifas.ufl.edu] Agricultural Extension offices.

Acquisition in Fee

Fee simple is the most basic type of ownership, wherein the owner has the right to use and dispose of the property at will. Fee simple acquisition for land conservation might involve a local government or agency or land trust purchasing farms outright from willing sellers. The farms are then deed-restricted to permanently preserve them for agricultural use and can be leased or sold to a buyer interested in farming. Purchase criteria might include percentage of high quality soils; percentage of tillable acres; suitable boundaries and buffers, such as other adjacent preserved farms and open space; the local commitment to agriculture (e.g., right to farm ordinances, financial support); size of the farm; agricultural density of the area; and imminence of development. Fee simple acquisition for conservation can boost an area's agricultural industry by providing other farmers with opportunities to purchase farmland at affordable prices that reflect only farm value, not development value.

Agricultural Research

Research related to agriculture and rural issues can play an important role in an overall program to retain and enhance agriculture. Research may be conducted by public and private individuals and institutions, often through grants from the U.S. Department of Agriculture or other governmental entities. Research can be used to discover methods and strategies that make local agriculture operations more competitive. Research can also be used to document and quantify the economic, community, or environmental contributions of agriculture. In Florida, the Institute of Food and Agricultural Sciences (IFAS) at the University of Florida is the primary source of agricultural research. IFAS is a federal-state-county partnership throughout Florida dedicated to improving life by developing and providing knowledge in the areas of agriculture, natural resources, and life sciences.



SUWANNEE RIVER WATER MANAGEMENT DISTRICT (SRWMD) ACQUISITION PROGRAM

The SRWMD has used acquisition, along with conservation easements, to retain working forest land while protecting approximately 320 miles of river frontage by keeping development out of the floodplains. Since 1983, the SRWMD has successfully acquired fee title to over 157,700 acres using a combination of funding sources, including Save Our Rivers, Preservation 2000, and Florida Forever. About half the land owned by the district is used for pine timber. Those lands are managed to enable natural community restoration (the district has replanted over 1,000 acres of pine per year for the last several years) while allowing commercial harvests that provide raw material for local mills and jobs for local residents. (District lands have typically generated \$500,000 to \$1 million per year in timber sales.) The district also uses conservation easements (described in this chapter) to protect water resources while enabling landowners to continue most agricultural and silvicultural activities and retain fee ownership of the land. Benefits of the easement approach include needing less funding for acquisition and property remaining in private management and on the county tax roll. The district acquired its first easement in 1989 and now holds 33 easements totaling more than 116,500 acres. The majority of the lands under easement are managed by the private landowners for a combination of commercial silviculture and hunting. (More information on the SRWMD acquisition and easement program is available from www. srwmd.state.fl.us/index.asp?NID=73.)

Agricultural Zoning

Agricultural zoning is a specialized form of zoning where the type and intensity of land use and land development are compatible and consistent with food and fiber production. Agricultural zones are typically adopted in areas interested in protecting, stabilizing, or preserving the agricultural land base and, at the same time, keeping individuals employed in the production of food and fiber crops. There are two general types of agricultural zoning: exclusive and nonexclusive. The more widely used and less restrictive is nonexclusive agricultural zoning, which recognizes agriculture production as the preferred use in certain areas but does not prohibit other land uses in the agriculturally zoned area. Nonexclusive agriculture zones typically allow non-farm uses of land if approved by a local zoning agency. Nonagricultural land uses must be compatible with agriculture production (for example, livestock feed stores, farm implement dealers, retail nurseries, and greenhouses), and limit population density by requiring large lot sizes for residential units (usually in the range of one dwelling unit per 20 acres or greater). The intent is that the larger lot sizes represent the minimum size land base needed for sustainable agriculture production. Exclusive agricultural zoning is more restrictive. Non-farm residences, non-agriculture activities, and retail businesses are usually prohibited. Allowable uses might be roadside farm sales from producing farms or nursery retail sales from producing nurseries within the agricultural zone. Other uses, which can be placed on lower quality land but which also provide services to the agricultural uses, may be allowed in exclusive agricultural zones. Examples of these uses include cemeteries, landfills, schools, churches, and animal hospitals.

Conservation Easements

A conservation easement is a deed restriction landowners voluntarily place on their property to limit land to specific uses and protect it from development. Agricultural conservation easements are designed to protect farmland. Conservation easements can also be used to protect resources such as productive agricultural land, ground and surface water, wildlife habitat, historic sites, or scenic views. Conservation easements are flexible documents tailored to each property and the needs of individual landowners. They may cover an entire parcel or portions of a property. In a conservation easement, the landowner (grantor) authorizes a qualified conservation organization or public agency (grantee) to monitor and enforce the restrictions set forth in the agreement. Landowners granting an easement retain title to their property and the right to use their land for agricultural purposes, and can still restrict

PALM BEACH COUNTY AGRICULTURAL ENHANCEMENT COUNCIL (AEC)



In 2005, Palm Beach County hosted an economic summit to examine the current conditions and opportunities for future economic growth for seven sectors of the economy. Agriculture (both the equestrian and agribusiness industries) was one of those sectors. One recommendation cited the need to capitalize on research supporting the emerging high-growth agribio and alternative fuel markets that utilize

resources unique to the county. That strategy is being pursued as part of the work of the Agricultural Enhancement Council which serves as the county's agricultural advisory board. The AEC is providing local funding and staff assistance for research on using local crops grown as a biomass source, a current research focus of the University of Florida's Institute of Food and Agricultural Sciences (IFAS), the research and development center for Florida's agricultural and natural resources industries. Funded through state grant funds for alternative fuel research, IFAS is currently building a \$20 million biomass-based ethanol research facility in the county that will use bagasse (a by-product of sugarcane), switchgrass, yard waste, and other plant products. Additional bio-diesel research is being conducted based on Jathropa curcas, an oil-bearing tree. (More information on the Agricultural Enhancement Council is available from www.pbcogov. com/coopext/htm. Information on agricultural research in Florida is available from IFAS [www.ifas.ufl.edu]. Specific information on alternative fuels research is available from the Florida Center for Renewable Chemicals and Fuel [www.fcrc.ifas.ufl.edu].)

public access. Landowners can also use the land as collateral for a loan or sell their property and continue to be eligible for any state or federal farm programs that they were eligible for before entering into the conservation agreement. Most agricultural conservation easements are permanent. (Less-than-permanent or "term" easements impose restrictions for a specified number of years.) Regardless of the duration of the easement, the agreement is legally binding on future landowners for the agreed-upon time period. The value of an agricultural conservation easement is generally the fair market value of the property minus its restricted value, as determined by a qualified appraiser. A landowner can donate an easement for conservation purposes, thus providing significant income and estate tax deductions if the donation meets the criteria established by the Internal Revenue service and helping to avoid capital gains taxes that would have resulted from selling the entire property. Through a Purchase of Development Rights (PDR) (discussed later in this section), a landowner can also sell the conservation easement to a land trust or a local government.

Contingent Valuation Survey

Contingent valuation is a survey-based economic technique to determine the value of non-market resources, typically environmental or agricultural areas. A survey is used to directly ask people how much they would be willing to pay for specific environmental or agricultural services. In some cases, landowners are asked for the amount of compensation they would be willing to accept to provide the specific environmental or agricultural services. The technique is called "contingent" valuation because people are asked to state their willingness to pay, contingent on a specific hypothetical scenario and description of a service. Contingent valuation surveys are useful for measuring the benefit people receive from having a view of a mountain or open-space or the benefits of local agriculture, for example. Communities have used contingent valuation surveys to determine support for a bond issue to fund a PDR program or to make environmental planning decisions.

Florida Rural and Family Lands Protection Act

The 2001 Florida Rural and Family Lands Protection Act was enacted to bring a focus to maintaining Florida's agricultural land base and continuing the economic viability of agriculture, similar to the focus that Preservation 2000 and Florida Forever brought to preserving the state's natural environment. Although the act has never been funded (a fact that many Florida land conservation organizations



MARTIN COUNTY AGRICULTURAL DEVELOPMENT ZONE

The goal of Martin County's agricultural development future land use policies is to preserve areas with soils that are important for agricultural-related uses. Of the 250,974 acres outside the county's Primary Urban Services District (PUSD), the majority (210,552 acres) are in the agricultural designation. In this area, residential development is restricted to one single-family unit per gross 20-acre tract and no centralized water or sewer service is allowed. Farm-related uses, such as congregate housing for farmworkers, are permitted. To further protect the agricultural area, the land areas between it and the PUSD are designated for lower-density rural residential development (one unit per one acre or one unit per two acres) that does not require urban services (centralized water and sewer). (More information on Martin County's agricultural zoning is available from Goal M of the county's comprehensive plan policies [www.martin.fl.us/portal/ page?_pageid=355,1&_dad=portal&_schema=portal].)

hope to rectify), a report called for in the act was completed in 2001 by the Florida Department of Agriculture and Consumer Services' (DOACS) Division of Forestry. The Agriculture and Resource Conservation Assessment: A Requirement of the Rural and Family Lands Protection Act report contains information on agriculture in Florida and forecasts funding needs for the program.

[] Information on the Rural and Family Lands Protection Act and the assessment report is available from www.fl-dof.com/forest_management/acquisitions_index.html.

Green Payments and Other Economic Incentives for Agriculture

Economic incentives are used to help farmers return a profit, thereby keeping their land in agriculture. Agricultural incentive programs are based on the recognition that preserving rural character needs to make economic sense and achieve public objectives. They are also based on the need to recognize farms as a business, which means including the agricultural sector in state, regional, and local economic development programs that typically do not include that segment of the economy in their incentive programs.

Green payments are one form of economic incentive. In this form of incentive, crops are viewed as only one of a range of products associated with the benefits of agriculture and the rural lands that agriculture maintains. Green payments create a double-win: they help farmers engage in conservation practices that result in environmental benefits. Farmers are able to sell the environmental services they provide, which results in often needed revenue for the farmer and environmental benefits for the public. The approach allows farmers to earn a portion of their living by producing environmental services required by the broader community. Such services include the necessary environmental functions that urban areas have to pay for, including providing stormwater attenuation and treatment (through retention, filtration, or reuse on appropriate lands) and cleaner air; supplying groundwater and aquifer recharge; providing wildlife habitat, open space, areas for recreation, and connections between environmentally sensitive areas; creating or preserving wetlands; and sequestering carbon (discussed in the Climate Change chapter). In a green payment program, government looks first to rural lands to provide needed community services that those lands are well equipped for and that have a clear economic value which can be quantified and are important to viable communities. The economic value of those services can represent an additional revenue source



SARASOTA COUNTY AGRICULTURAL RESERVE (AR) RESOURCE MANAGEMENT AREA (RMA)

Sarasota County's AR limits nonagricultural land uses to those that directly relate to a permitted AR agricultural use. The purpose is to strengthen the agricultural economy and protect agricultural resources by permitting a range of small-scale agricultural production and farm-related businesses, such as road-side farm stands and agritourism. Supportive policies include the ability to transfer existing development rights (discussed later in this section) while preserving the agricultural production rights, and prohibiting the construction of major public infrastructure in the AR. The AR is defined in the Sarasota 2050 Plan, which operates as an incentive-based overlay and provides for a tiered approach that moves from urban west of the Interstate to the rural Agricultural Reserve in the eastern of part of the county. (More information on the Sarasota 2050 Plan and the Agricultural Reserve RMA is available from http://scg. co.sarasota.fl.us/Sarasota2050/support/ORD_2001-076_with_ Exhibit_A.pdf and <u>A Guidebook to New Urbanism in Florida 2005</u> [www.cnuflorida.org].)

for agricultural landowners that would contribute to making it financially feasible to keep private lands in agriculture or open space. The production and marketing of those services could become part of the rural landowner's business plan. For example, a local government or industry that discharges nutrients such as nitrogen or phosphorous into waterways can purchase nutrient credits from farmers who adopt practices to reduce nutrient run-off from fields. Establishing a program that makes use of the services requires a mutually-supportive relationship between urban and rural communities. A sampling of organizations with resource information on green payments includes the American Farmland Trust (www.aftresearch. org/ecosystems), the Ecosystem Marketplace (http://ecosystemmarketplace.com/ index.php), the Environmental Trading Network (www.envtn.org/index.htm), and the World Wildlife Fund (www.worldwildlife.org/pes).

In Florida, a number of new green payment-related initiatives are underway. One is the Florida Ranchlands Environmental Services Project (FRESP) that was launched in 2006 to design and field test a program that will pay Florida ranchers in the Lake Okeechobee watershed to provide needed environmental services (for example, water retention, phosphorous load reduction, and wetland habitat expansion) in ways that save taxpayers money, provide additional revenue for ranchers, preserve rural communities, and enhance wildlife habitats. The FRESP anticipates a program in which ranchers will sell environmental services to state agencies and other willing buyers as part of an effort to promote more efficient water management in the state. Partners include the World Wildlife Fund, eight participating ranchers, the U.S. Department of Agriculture's Natural Resources and Conservation Service, and a number of state agencies (the Florida Department of Agriculture and Consumer Services, the South Florida Water Management District, and the Florida Department of Environmental Projection. Technical support is provided by the University of Florida's MacArthur Agro-Ecology Research Center. More information on this initiative is available from www. worldwildlife.org/cci/agriculture_projects.cfm. Two other initiatives are the Florida Forestry Association's (www.floridaforest.org) program to help landowners market carbon sequestration to buyers seeking to reduce their greenhouse gas emissions (described in the Climate Change chapter) and the U.S. Fish and Wildlife Service's Conservation Banking Program, which offers landowners incentives to protect wildlife habitat (www.fws.gov/Endangered/landowner). Landowners are able to generate income by selling habitat or species credits to parties who need to compensate for environmental impacts.



INDIAN RIVER LAND TRUST (IRLT)

The IRLT's mission is to promote the preservation and conservation of natural and historic resources and agricultural lands in Indian River County. It accomplishes this mission through educational programs on the county's land and water resources and by working with landowners who want to conserve the unique and natural features of their properties. The IRLT uses a variety of land protection methods that are designed to meet the individual conservation goals of the landowner, including tools such as the purchase and donation of conservation easement agreements and acquisition in fee. The IRLT has established a Land Protection Fund, which enables it to act as an intermediary to secure important parcels of land that become available for sale. In 2004, the IRLT successfully promoted the passage of a \$50 million county bond referendum that allows for the acquisition of lands to protect water resources, agricultural lands, environmentally sensitive lands, historic sites, open space, and wildlife habitat. Acquisition can occur through a variety of techniques: fee simple and less than fee simple interest, conservation easements, and the purchase of development rights. To date, bond funds have been used to protect 7,750 acres of land. (More information on the Indian River Land Trust is available at www.indianriverlandtrust.org. Information on the county bond issue is available at www.irccdd. com/Code_Enforcement_Division/Environmental_Planning_Section/ ELP/Index.htm.)

Other agricultural economic incentive programs practiced by states and communities include providing loans and grants, assistance with direct marketing and preparing business plans, helping with the distribution of farm products and the development of new products and processing facilities, removing zoning and land use regulation obstacles to diversifying a farming operation, and facilitating access to capital for business development and expansion. Two additional strategies used by communities to enhance the business of farming are to establish a community-supported agriculture program and to employ an agricultural coordinator or manager.

Community-Supported Agriculture

Community-supported agriculture is generally centered in or near urban areas and is used to help farmers direct market their products to residents of nearby communities. In one form of community-supported agriculture, farm customers agree to pay for farm products at the time of harvest and, in return, receive regular delivery of products during the growing season. The benefit to the farmer is less risk because of the guaranteed income. Other methods of supporting local agriculture include community-supported farmers' markets and programs that enable farmers to sell their products directly to restaurants and other food retailers. A growing number of nonprofit organizations focus their work on encouraging and establishing a network among farmers and users of farm products. Partners for Public Spaces' report, *Making the Case for Markets in Hard Cold Cash* (www.pps.org/info/ newsletter/september2007/economic_case_for_markets), documents the positive impacts of public markets on local economies.

Agricultural Coordinator

An agricultural coordinator or manager is typically charged with serving as a single point of contact and liaison between the agriculture community and local government and with developing strategies that will result in more profitable farming and promote the viability and sustainability of agriculture. Activities generally include educating the public on the needs of agriculture, tracking trends that impact the profitability of agriculture, identifying and removing regulatory and other barriers to a farmer remaining in agriculture (for example, codes and zoning regulations, and providing technical assistance to farmers). Technical assistance can include help with economic development activities or with meeting city permitting and regulatory requirements. In Florida, Hillsborough (described earlier in the example Generally speaking, do you feel Lake County is growing and developing too fast, too slowly, or at about the right pace?

Pace of Growth



LAKE COUNTY PUBLIC OPINION SURVEY

In September 2004, the Trust for Public Land (TPL), a national land conservation organization, sponsored a telephone-based poll for Lake County. The county conducted the survey to assess the level of support for a possible ballot measure to finance land conservation, the level of funding voters would support, the purposes that they found compelling, and the fiscal safeguards that made a difference. The survey showed a high level (63 percent on the initial test and 68 percent on the re-test) of support for a \$36 million bond issue and a .3 mill property tax increase for 20 years to acquire and improve land to protect drinking water sources, Wekiva Springs, wildlife habitat, and open space. Support was strongest for the protection of drinking water, followed by protection of rivers, lakes, and streams. A proposal for an annual audit of how the funds would be spent also received a high level (80 percent) of support. In November 2004 the voters approved a \$36 million bond measure, structured as described in the survey, with 71 percent support. (For more information on the Lake County Survey and bond issue, go to www.tpl.org and click on Conservation Services.)

for green payments), Miami-Dade (www.miamidade.gov/agriculture/home.asp), and Palm Beach (www.pbcgov.com/coopext/ag_dev/index.htm) counties have agricultural coordinators.

Purchase of Development Rights (PDR)

In a PDR program, in order to protect their land from development landowners voluntarily sell a conservation easement to a designated private conservation organization or, more typically, a governmental agency. An easement is placed on the landowner's deed and runs with the land, either in perpetuity or for a period of time specified in the easement document. The landowners receive compensation in return for the restrictions placed on their land. As with conservation easements, landowners selling their development rights retain title to their property and the right to use their land for agricultural purposes, and can still restrict public access. Landowners can also use the land as collateral for a loan or sell their property and continue to be eligible for any state or federal farm programs that they were eligible for before entering into the conservation agreement. The value paid for development rights is typically the difference between the fair market value of the land and its agricultural or conserved value. A professional appraiser generally determines easement value. A numerical scoring system that evaluates the suitability for agriculture or environmental conservation purposes can also be used to determine value.

Two tax strategies can facilitate the use of PDRs: 1031 Like-Kind Exchanges and Installment Purchase Agreements.

1031 Like-Kind Exchanges

Section 1031 of the Internal Revenue Code provides, in general, that no gain (or loss) is recognized on an exchange of property held for productive use in business (e.g., land used for agriculture) or for investment solely for "like kind property" also held for productive use or for investment. The exchange of different kinds of business or investment property is treated as like kind property under Sec. 1031. For example, improved realty or agricultural land exchanged for apartments has been held to qualify as a like-kind exchange. The IRS has treated a conservation easement and a fee interest in real estate as like kind under Sec. 1031. Therefore, a properly structured sale of a conservation easement used to buy other agricultural land, a business, or investment property should be treated as a like-kind exchange. Landowners should consult their own advisors about the tax consequences of a potential transaction.



THE HILLSBOROUGH COUNTY AGRICULTURE INDUSTRY DEVELOPMENT PROGRAM (AIDP)

The Hillsborough County AIDP (a component of the county's Economic Development Department) creates a business atmosphere that is conducive to the continuation and expansion of agricultural businesses and that discourages the premature conversion of farmland. Operating under the guidance of an Agricultural Economic Development Council and coordinated by an Agricultural Development Manager, activities include helping to resolve agribusiness problems related to county government agencies; minimizing regulatory process impacts on, and removing barriers to, agriculture's ability to conduct business; and increasing marketing options, alternative crops, value-added processing, and capital financing opportunities. The newest program initiative is the Agriculture Stewardship Program (ASP), which recognizes and rewards the community benefits or services provided by agricultural land. In the ASP, a landowner agrees to not convert agricultural land to a non-agricultural use for 10 years in exchange for an annual Agriculture Stewardship Grant, which is based on a percentage of the ad valorem taxes paid to the county in the prior calendar year on the taxable value of land classified as agricultural and agriculture productionrelated structures located on the land. (More information on the Hillsborough County programs to retain agriculture is available from www.hillsboroughcounty.org/econdev/agriculture.)

Installment Purchase Agreements

An installment purchase agreement (IPA) is an innovative payment plan sometimes used by jurisdictions with a PDR program. IPAs are intended to make PDR programs competitive with developers by providing unique financial and tax advantages. In an IPA, a state or local government issues a long-term bond which is used to purchase development rights over time. In general, state and local governments can enter into IPAs if they have the authority to issue general obligation bonds. Because IPAs constitute long-term debt, agreements typically require the same approval process as bonds. An IPA program requires dedicated funds to cover the interest and principal payments. Use of an IPA benefits landowners and the participating government. IPAs spread out payments so that landowners receive semi-annual, tax-exempt interest over a term of years (typically 20 to 30). The principal is due at the end of the contract term. That payment option enables jurisdictions to use accumulated and future dedicated revenues to protect land while it is still available and relatively affordable.

A PDR program provides benefits to landowners and communities. By selling only their development rights, landowners can convert some of the wealth tied up in their land into cash without relinquishing ownership of the land or use of its productive capacity. That assists landowners who are land-rich and cash poor (a high level of equity and little income). A PDR program provides landowners with a viable financial alternative to selling for development and ensures liquid capital that can be used to reinvest in farm operations or other forms of investment. Landowners may use proceeds from a sale of development rights in any way they choose - purchasing additional acreage, upgrading equipment, paying taxes, or investing for retirement. Removing the development potential from land can also help reduce its market value, thus facilitating the transfer of the land to children of farmers and making the land more affordable for other farmers who want to buy it for agricultural purposes. Removing the development may offer significant tax savings by reducing the taxable value of the land or by reducing future inheritance taxes. PDR programs provide communities a way to share the cost of maintaining farmland with farmers, meet public goals for the protection of farmland, open space, and environmentally important lands, and achieve a more cost-efficient form of development.

Blue indicates properities with acquired development rights.



VOLUSIA FOREVER

Volusia Forever is a \$191 million long-term land conservation program. It was created in 2000 when Volusia County voters endorsed a tax (.2 mills) over the next 20 years to protect the county's natural resources in perpetuity. The county is stretching these funds further by matching them with other funds and forming partnerships. To date, the funds have been used to protect 26,500 acres through a combination of fee simple acquisitions (40 percent of the protected acres) and purchase of conservation easements (60 percent of the protected areas). The decision to sell is voluntary. Examples of lands protected include environmentally sensitive land, water resource protection and outdoor recreation land, and agricultural lands (by purchasing easements, or what is commonly called the purchase of development rights). Agricultural lands protected through easements include silviculture, cattle operations, and sod operations. A ninemember citizen advisory committee provides assistance to county staff, who administer the program through the county's Land Acquisition and Management Division. (More information on the Volusia Forever program is available from http://volusiaforever-echo.com/forever/.)

Rural Land Stewardship Areas (RLSA)

The RLSA is an incentive-based system that uses the market economy to encourage preservation and private stewardship of natural resources, retain agriculture, and promote economic growth and diversification in a sustainable rural environment. Established by the Florida Legislature in 2001 (Section 163.3177(11)(d), F.S.), the Rural Land Stewardship Areas enable counties to designate all or portions of lands classified in the future land use element as predominantly agricultural, rural, open, open-rural, or a substantively equivalent land use as a Rural Land Stewardship Area. The areas must be outside municipal boundaries or established urban growth boundaries. Within those areas, planning and economic incentives are applied to encourage the implementation of innovative and flexible planning and development strategies and creative land use planning techniques.

The RLSA program has six objectives – to restore and maintain the economic value of rural land, maintain the viability of Florida's agricultural economy, promote rural economic activity, protect the character of Florida's rural areas, control sprawl, and identify and protect ecosystems, habitats, and natural resources. Steps involved in the local planning process include:

- Assigning value to agricultural and natural resources;
- Designating the location of the Stewardship Area and allocating "transferable rural land use credits" to the Stewardship Area;
- Dividing the Stewardship Area into credit "sending" and credit "receiving" areas and transferring credits from sending to receiving areas (see the next tool description, Transfer of Development Rights, for a discussion of sending and receiving areas);
- Within receiving areas, using credits to construct the desired development and transferring credits ensures protection of the rural economic base and environmental resources.

Features of the RSLA program include the use of a 25-year or greater population forecast for the RSLA and a minimum size of 10,000 acres. A large RSLA is encouraged to avoid a fragmented approach that will not maintain agricultural viability, protect rural character and natural resources, or contain urban sprawl. To encourage a broader planning area and a coordinated regional stewardship planning, an RSLA may be multi-county. RSLAs are exempted from the twice per



COLLIER COUNTY RLSA

Adopted in 2002, the Collier County RLSA is designed to preserve 90,000 acres of environmentally sensitive land and to maintain an additional 75,000 acres of agricultural lands. It does that by transferring land-based rights through stewardship credits from sending areas designated for natural and agricultural resource protection to receiving areas designated for development. The stewardship credits are based on the natural resource value of the land, with the amount of credits driven by the land characteristics that the public most valued. Compact new towns and villages based on traditional town planning principles serve as the receiving area. Because of the approach, the overall development footprint is one-tenth of the prior Comprehensive Plan, and natural resources are protected through market-based incentives without the need of public funds. (More information is available from the Collier County Comprehensive Planning Department [www.colliergov.net/ compplanning/index.htm] and WilsonMiller [www.wilsonmiller.com].) year limitation on adoption of plan amendments and from the Development of Regional Impact process (with the exception of transportation). To create RSLA, a local government must start the process with a pre-notification conference with the Florida Department of Community Affairs (DCA) and a letter of intent to DCA, which then conducts a local site visit and holds a post-notification conference. The final two steps are a written letter of authorization from DCA to the local government and the adoption and review of the implementing local comprehensive plan amendments.

In 2007 DCA initiated rule-making for potential elaborations on the Rural Land Stewardship Program statutory requirements. The potential revisions will establish minimum criteria and procedures for submittal and review of comprehensive plan amendments relating to the Rural Land Stewardship Area program.

For more information about Rural Land Stewardship Areas, go to www.dca.state. fl.us/fdcp/dcp/RuralLandStewardship/index.cfm

Transfer of Development Rights (TDR)

TDR programs enable landowners to transfer the development potential from one parcel of land to another, either on the same site or another site in a designated growth area, thereby shifting development from agricultural and environmentally sensitive areas to locations with full municipal services. TDRs are often used by local governments to protect farm and forest lands, scenic areas, and wetlands. A local government establishes a TDR program by identifying areas to be protected (called sending areas) and by transferring development rights to areas designated to receive the development rights (called receiving areas). The number of development rights that can be transferred depends on how many development rights credits the government allocates and how much development potential the government allows in growth areas.

To establish a TDR program, a local government first identifies and maps areas for preservation (the sending areas) and then issues development rights credits to landowners in the sending areas. Next, the government identifies and maps the receiving areas and requires that developers who wish to build at increased densities in the receiving areas first purchase a certain number of development rights credits from the landowners in the sending areas. Landowners in receiving areas are generally able to develop at higher densities because of the use of the transferred



NORTH ST. LUCIE COUNTY TOWNS, VILLAGES, AND COUNTRYSIDE PLAN (TVC PLAN)

The TVC plan for the 28-square mile North St. Lucie County area will replace the current planning instructions with a new model that shapes future growth into sustainable towns and villages and uses the market forces of growth as a tool to:

- retain large areas of the countryside
- comprehensively plan for water management
- address traffic and infrastructure needs
- maintain the urban service boundary in its current location
- accommodate the next 50 years of growth in a predictable manner that ensures the preservation of the residents' quality of life.

A TDR program is a core component of the TVC plan. The TDRs are used to change the pattern of settlement by enabling landowners to transfer density from the countryside to be protected to the towns and villages where development is encouraged. (For more information on the TVC plan, go to www.tcrpc.org/departments/studio/st_lucie_charrette/ citizen_master_plan.htm.) development rights. A permanent conservation easement is used to restrict the land after the development rights are transferred. In most TDR programs, the transaction is between a private landowner and a developer. The prices of development rights are determined by developers' bids and landowners' asking prices, the same as in private market real estate transactions. The role of government or a designated authority is to approve and record the transaction and monitor the easement. To facilitate a TDR program, a local government can also establish a TDR bank as a means of providing insurance to landowners in sending areas. The bank, which is funded by the government or another entity or entities, purchases development credits from landowners if they are not otherwise able to sell them. A TDR bank can also serve as a center of contact between landowners and developers, facilitating sales and reducing transaction costs for participants.

TDR programs provide benefits to landowners and communities. Landowners benefit by being compensated for placing land use restrictions on their land, keeping farmland prices affordable for agricultural uses, and removing land uses that impede farming. The public benefits because private sector funds are used to purchase the development rights, thus avoiding large public expenditures, farmland and environmentally sensitive areas are protected, and development occurs in suitable areas, resulting in more efficient public services. Over time, a local government can preserve a significant amount of land while channeling new development into growth areas that make full use of public infrastructure and services, thus helping achieve a balanced growth strategy. Successful TDR programs are a part of the locality's comprehensive plan, involve all stakeholders in the design of the program, and include strategies that nurture the program and create opportunities and incentives for its use.

A TRANSFER OF DEVELOPMENT RIGHTS (TDR) PROGRAM

- Allows landowners to transfer the right to develop from one parcel of land to a different parcel of land.
- Helps shift development from agricultural areas to designated growth areas with access to services.
- Enables communities to conserve farmland using the market forces of growth.
- Enables agricultural landowners to retain the underlying agricultural and natural resource values in their land while realizing the development value.

BENCHMARKING TOOLS

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To remain competitive in a rapidly changing environment, more and more communities and regions are using tools to evaluate progress in a selected set of issues over a period of time and to determine where they stand relative to similar areas. Such tools include community scorecards and audits and community indicators. They can be used to measure where a community is today (the current conditions) and where it is going (the change over time) for either a comprehensive set of issues or a specific issue such as the environment, health care, or economic wealth. Those tools can also be used to assess how a community or region stacks up against similar areas and identify areas for improvement. The idea of regularly evaluating progress against measurable benchmarks or peer organizations is not a new concept. Benchmarking is a process used by successful businesses to identify performance improvement areas by evaluating aspects of their processes in relation to best practices and by comparing operating performance against that of their peers.

The Information on benchmarking tools is available from a variety of organizations, including the Community Indicators Network [www.communityindicators.net], the Sustainable Communities Network [www.sustainable.org], and in Florida, the Center for Urban and Environmental Solutions at Florida Atlantic University [www.cuesfau.org].

Community Indicators

Community indicators enable a community to understand where it has been and where it is going and identify areas for improvement to achieve a different outcome. Indicators projects use measurable data to shed light on trends (both positive and negative) for a current issue or, more typically, for a combination of issues that affects a community's quality of life and economic well-being. The issues tracked in a community indicators project vary by region, based on the driving issues and the important community values. They can measure, for example, economic, environmental, social, educational, and health trends. By tracking trends and progress on important community issues and goals, community indicators provide a focal point for a community dialogue about long-term planning needs and provide the basis for more informed policy decisions. Another value of indicators projects is to show how one issue relates to another (for example, less walkable communities and higher traffic or more air pollution), which in turn can result in a more comprehensive understanding of the issues and can create partnerships between diverse organizations that come together to address a linked cluster of issues. In some communities, community indicators projects are tied to the local decisionmaking process.

A number of communities and regions in Florida sponsor an indicators initiative. In addition to the CUES' South Florida Regional Indicators Project, there are indicators projects sponsored by the Jacksonville Community Council (one of the earliest indicators projects in 1985), myregion.org in Orlando, Tampa-Hillsborough County, Pinellas County, Sarasota County, the Tampa Bay Partnership, and the Pensacola Bay Area Chamber of Commerce. To further the work of Florida's regions in measuring their progress, CUES convenes the Florida Indicators Network (FIN) to share ideas and build cross-region relationships. The FIN, now in its third year, is working to establish a common set of indicators to measure progress throughout the state. Also at the state level, Enterprise Florida (the state's economic development organization) publishes a set of statewide economic indicators. At the national level, a number of organizations provide information on establishing an indicators project. Among them are the Community Indicator Consortium, which serves as a resource on indicators by facilitating the exchange of information among those interested in or engaged in the field of community indicators, and the Alliance for Regional Stewardship (ARS), which provides technical support for community indicators initiatives through its Regional Indica-



SOUTH FLORIDA REGIONAL INDICATORS PROJECT

The South Florida Regional Indicators Project is sponsored by the Center for Urban and Environmental Solutions (CUES) at Florida Atlantic University. Since its first indicators report in 2001, CUES has published three additional reports that track environmental, economic, and social trends in South Florida, a seven-county region extending from Monroe County to the south to Indian River County to the north. The Indicators project is a part of CUES' regional initiative program designed to build a strong capacity to meet regional needs and build a greater awareness of the need to act regionally to solve the complex problems facing the region. The most recent report, Charting the Course: Where Is South Florida Heading?, was released in early 2006. As with the prior reports, that publication provides performance trends for key indicators in each of the three region-binding forces of place, economy, and people. It also compares South Florida with other Florida regions. Expert comments provide insights into future needs and potential choices. (More information is available from www.soflo.org.)

tors Affinity Group. ARS also publishes a monograph, *Regional Indicators: Telling Stories, Measuring Trends, Inspiring Action.*

Four other resource organizations are the International Sustainability Indicators Network, which publishes the *Compendium of Sustainable Development Indicator Initiatives*; Partners for Livable Communities; the Sustainable Communities Network, which hosts a web-based listing of indicators projects; and the Redefining Progress Community (RPC) Indicators Project. RPC provides links to existing and emerging indicators projects and facilitates the development of community indicators initiatives nationwide. RPC provides technical support, publishes a *Community Indicators Handbook*, and hosts an e-mail-based discussion group and a database directory of 200 community indicators projects around the United States. The Jacksonville Community Council also provides resource information on indicators through its *Jacksonville Indicators Manual*.

Derived More information on community indicators is available from the Alliance for Regional Stewardship [www.regionalstewardship.org], the Center for Urban and Environmental Solutions at FAU [www.cuesfau.org or www.soflo.org], Enterprise Florida [www.eflorida.com], the Community Indicators Consortium [www.communityindicators.net], the International Sustainability Indicators Network [www. sustainabilityindicators.org], the Jacksonville Community Council [www.jcci.org], Redefining Progress [www.redefiningprogress.org], Partners for Livable Communities [www.livable.com], and the Sustainable Communities Network [www.sustainable. org/creating/indicators.html].

Community Scorecards and Audits

A community scorecard or audit is a qualitative monitoring tool used by citizens and public officials to evaluate how well existing policies, projects, and plans meet a set of defined principles or to monitor progress in selected topic areas. One use is to evaluate a local government's service in selected areas (for example, fire protection, public safety, land use planning practices, or provision of open space and parks). A scorecard can also be utilized to evaluate community livability, using factors such as neighborhood walkability, the quality of civic spaces, protection of natural systems, and the usability of transit, or to examine the potential benefits and drawbacks of development proposals. The livability factors evaluated are generally drawn from features that residents have said that they value in their community.



SARASOTA COMMUNITY REPORT CARDS

Sarasota's SCOPE (Sarasota County Openly Plans for Excellence) involves residents in learning about the challenges facing the community and in working with others to address those challenges. The goal is to enhance the county's guality of life. To achieve this goal, SCOPE uses a combination of open dialogues and impartial research to establish community priorities, propose solutions, and monitor change. One project is an annual Community Report Card used to increase an understanding of major issues affecting the county. The annual report card contains over 100 indicators that cross many facets of community life and cover a broad range of topics. SCOPE involves citizens in selecting the types of indicators that are reported. The 2006 report covers civic participation, culture and recreation, economy, health and medical care, learning, natural environment, social environment, and transportation and mobility. It also analyzes trends from 2000 and the status of the county compared to the state. (More information is available from www.scopexcel.org.)

A scorecard project, which should be designed for easy citizen use, can be sponsored by a variety of organizations, including a local or state government, regional agency, or a nonprofit civic organization. An example at the national level is the U.S. Environmental Protection Agency (www.epa.gov), which publishes the Smart Growth INDEX (SGI). SGI can be used to increase community understanding of the effects of development alternatives on the local and regional quality of life, provide input for new development alternatives, and demonstrate the environmental benefits of pursuing smart growth strategies.

Derived More information on community scorecards is available from the American Planning Association [www.planning.org], the Growth Management Leadership Alliance [www.gmla.org], Smart Growth America [www.smartgrowthamerica.org], and the Smart Growth Network [www.smartgrowth.org].



Perception of the quality of its in Discussed Country remains high - 03 2% of adults describe their quality of its as accelent, very good an good. However, this is lower than the results in 2002 (20.6%) and 2004 (38.6%), possibly attested by report harrigans with hyr.

THE BROWARD BENCHMARKS

The Broward Benchmarks is a project of the Coordinating Council of Broward, which works to initiate and support more collaborative systems that more efficiently and effectively serve community needs. The benchmarks were established to assess Broward County's progress in addressing the most urgent of these needs. The nearly 300 indicators are organized into seven sections: families and communities, safety, learning, health, economy, environment, and government. Data are collected every two years through public opinion surveys and through updating secondary data developed by stakeholder groups that have volunteered to be responsible for tracking certain indicators. The South Florida Regional Planning Council prepares the benchmark document and updates indicators for which no stakeholder group has taken responsibility. *(For more information on The Broward Benchmarks, go to www.theccb.org.)*

CLIMATE CHANGE TOOLS

► Adaptation	2
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 Education and Outreach 	3
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► Transportation	3
 Urban Landscape 	4
► Waste Management	4
 Water and Wastewater 	4

limate change and its impacts on Florida are high priority issues for the state. On July 13, 2007, during the state-led Serve to Preserve Florida Summit on Global Climate Change, Governor Charlie Crist signed a groundbreaking set of Executive Orders aimed at addressing global climate change, reducing greenhouse gases, and increasing the state's energy efficiency. The state's initiative, which includes three rulemaking projects aimed at reducing greenhouse gases (addressing greenhouse gas emissions reductions from electric utilities, opting into the California motor vehicle emissions standards, and developing a heavy-duty diesel anti-idling program), provides a framework for addressing climate change in Florida. It responds to a strong body of scientific evidence developed over the last 30 years that documents changes in global climate patterns. With 8,400 miles of tidal coastline and some 80 percent of Florida residents living in coastal communities, Florida is more vulnerable to the worst effects of climate change than any other state.



EXECUTIVE ORDERS AND PARTNERSHIP AGREEMENTS

On July 13, 2007, Governor Charlie Crist signed three Executive Orders initiating Florida's energy policy and demonstrating the state's commitment to reducing Florida's greenhouse gases and increasing energy efficiency.

- Executive Order 07-126, *Leadership by Example: Immediate Actions to Reduce Greenhouse Gas Emissions from Florida State Government*, commits state government to measuring greenhouse gas emissions, developing a Governmental Carbon Scorecard, and working to reduce emissions 10 percent by 2012, 25 percent by 2017, and 40 percent by 2025. To achieve these goals, state buildings constructed or leased in the future are to be energy efficient, using solar panels when possible; state purchased vehicles are to be fuel efficient and use ethanol and biodiesel fuels when available; and the state's 2009 rental car contract will be with an energy-efficient rental company.
- Executive Order 07-127, Immediate Actions to Reduce Greenhouse Gas Emissions within Florida, directs the adoption of maximum emission levels of greenhouse gases for electric utilities (a reduction of emissions to 2000 levels by 2017, to 1990 levels by 2025, and by 80 percent of 1990 levels by 2050). Florida will also adopt the California motor vehicle emission standards (a 22 percent reduction in vehicle emissions by 2012 and a 30 percent reduction by 2016), pending approval of the EPA waiver; require energy-efficient consumer appliances to increase efficiency by 15 percent of current standards; and request that the Public Service Commission adopt a 20 percent Renewable Portfolio Standard by 2020, with a strong focus on solar and wind energy.
- Executive Order 07-128, *Florida Governor's Action Team on Energy and Climate Change*, creates a Governor's Action Team on Energy and Climate Change to develop a Florida Climate Change Action Plan that will include strategies beyond the Executive Orders to reduce emissions, including recommendations for proposed legislation for consideration during the 2008 Legislative Session and beyond.

(More information on the Executive Orders is available from www.floridadep.org/climatechange/eo.htm.)

Under the Executive Orders, Florida will pursue more renewable energy sources, such as solar and wind technologies, and alternative energy (ethanol and hydrogen). In addition, Governor Crist committed to partnering with Germany and the United Kingdom to discuss and promote initiatives that broaden the Kyoto Protocol and reduce the emission of greenhouse gases (GHG) beyond 2012. To facilitate the state's response to climate change, the Governor appointed a diverse group of stakeholders to a Governor's Action Team on Energy and Climate Change. The team will develop a Florida Climate Change Action Plan that will go beyond the Governor's Executive Orders to reduce emissions and recommend proposed legislation for the 2008 Legislative Session and beyond. Its November 2007 Phase One report (www.dep. state.fl.us/climatechange/files/20071101_final_ report.pdf) outlines a set of 35 initial findings and 30 initial recommendations regarding the state's energy future. The recommendations, which are compiled in three different sectors (power generation, transportation, and state and local government) are aimed at better tracking and reducing GHG emissions, including energy efficiency and conservation targets. The Action Team's Phase Two report (to be completed in the fall of 2008) will focus on mitigating the impacts to society, public health, the economy, and the environment created by GHG emissions from new growth.



FLORIDA PRELIMINARY GREENHOUSE GAS EMISSIONS INVENTORY

The Florida Department of Environmental Protection's *Preliminary Inventory of Florida Greenhouse Gas Emissions 1990-2004* summarizes the findings of a statewide GHG inventory using the U.S. Environmental Protection Agency's State Inventory Tool. The report shows that total GHG emissions have increased since 1990 at an average rate of 2.5 percent per year. The two primary causes of those increases are electric power and the transportation sectors that are responsible for over 90 percent of Florida emissions:

- Electric power emissions equaled 49 percent of total emissions (down from 51 percent for study period ending in 2003).
- The combustion of motor fuels for all modes of transportation produced 43 percent of the total (up from 40 percent for the study period ending in 2003). A significant factor in the rise in transportation-related GHG emissions is the increase in Vehicle Miles of Travel.
- The balance (8 percent) of Florida GHG emissions were associated with landfills, cement plants, and agriculture.

(For more information about the GHG emissions in Florida, go to www.floridadep.org/air/climate.htm. A copy of the draft report, <u>Preliminary Inventory of Florida Greenhouse Gas Emissions 1990-2004</u>, can be viewed at www.floridadep.org/air/documentation/GHG_Inventory.pdf.)

Strategies to address climate change fall into three categories: getting organized, adaptation (preparing for climate change), and mitigation (reducing GHG emissions). Mitigation strategies typically fall within the following categories: Buildings (Facilities and Operations), Economic Development, Education and Outreach (which should parallel all other activities to become more energy efficient), Land Use Planning, Urban Landscaping, Renewable and Clean Energy, Transportation (Mobility, Fleet Conservation, and Alternative Fuels), Waste Management, and Water and Wastewater. Within the categories, actions are divided between changes within local government and those within the broader community. Some strategies can

be achieved in the short term, while others will take longer to implement and see results. Three principal resources for the strategies listed below are Natural Capitalism's *The Climate Protection Manual for Cities* and the U.S. Conference of Mayors' *Climate Action Handbook* and its *Best Practices Guide*. The strategies, which are organized in two categories, demonstrate the interdisciplinary approach required to effectively address climate change. At the local government level, appropriate departments and agencies need to be involved as a team empowered to think across disciplines. Such a team could include representatives from transportation planning, fleet management, land use planning and zoning, building codes, public health, environmental and park planning, urban forestry, economic development, purchasing, management of waste, water, and wastewater management.

Getting Organized

Getting organized for climate change involves knowing the resources and the steps involved in designing and implementing an effective program.

Florida communities have access to a wide variety of climate change and energy efficiency resources. At the state level, the primary resource is Governor Charlie Crist's climate change initiative Serve to Preserve (www.myfloridaclimate.com), which provides information on the initiatives, climate change science and terminology, and the impacts of climate change on Florida. The Florida Department of Environmental Protection (DEP) (www.dep.state.fl.us/climatechange) has been designated by the Governor to serve as the lead agency for the state's climate change activities. DEP is working to provide sound science-based information to raise awareness among citizens and stakeholders and inform state level policy making. DEP is also providing staff support to the Governor's Action Team on Energy and Climate Change. To help guide the development of a state climate change action plan, DEP regularly conducts an inventory of GHG emissions. Summarized on the prior page, the preliminary report identifies the major categories of GHG emission sources and the general trend of emissions in those categories since 1990. DEP, with the help of other experts in the field, will continue to expand the inventory and post the updates. Of significance to how communities plan is the inventory finding (summarized on the previous page) that 43 percent (compared to 32 percent nationwide) of Florida's GHG emissions are transportation-related. During the time period when the state's population increased by 33 percent, the total number of vehicle miles of travel (the number and lengths of trips) increased

ICLEI CITIES FOR CLIMATE PROTECTION™ CAMPAIGN (CCP)

More than 800 local governments take part in the CCP Campaign by integrating climate change into their decisionmaking processes. There are nine participants in Florida:

- Alachua County
 [www.co.alachua.fl.us]
- Broward County [www.co.broward.fl.us]
- Gainesville
 [www.cityofgainesville.org]
- Hillsborough County
 [www.hillsboroughcounty.org]
- Miami Beach
 [www.miamibeachfl.gov]
- Miami-Dade County [www.miamidade.gov/derm/climate_change_urban_ CO2_reduction_plan.asp]
- Orange County
 [www.orangecountyfl.net]
- Riviera Beach
 [www.rivierabch.com]
- Tampa
 [www.tampagov.net/index.asp]

by 79 percent (up from 69 percent for the study year ending in 2003 and more than double the rate of population growth). In Florida, therefore, GHG reductions resulting from stricter fuel emission standards will be more than offset by the increase in the number of vehicle miles traveled, making tools to reduce the distance Floridians have to travel on a routine basis an essential component of climate change initiatives. As discussed in the Land Use and Transportation chapters of this toolbox, the tools focus on creating development that will result in fewer vehicle miles and trips and more walking, biking, and transit trips. That means compact mixed-use communities with highly connected and pedestrianoriented street networks where jobs, housing, entertainment, and retail are in close proximity and where transit and other forms of non-vehicular transportation are a practical solution. In addition to reducing vehicle miles of travel and, therefore, GHG emissions, such communities promote healthier citizens through cleaner air and the ability to walk to more places, enable older Floridians to remain independent and in their homes longer, reduce traffic congestion and time spent in cars (and the number of cars needed by a family, which also saves money), and protect natural resources.

At the national level, information is available from a wide variety of organizations; the principal ones are described below.

International Council for Local Environmental Initiatives (ICLEI)

ICLEI (www.iclei.org) is an international association of local governments and national and regional local government organizations that have made a commitment to sustainable development. ICLEI operates the Cities for Climate ProtectionTM (CCP) Campaign, a performance-oriented campaign that provides local governments with a mitigation framework to reduce greenhouse gas emissions. Climate Resilient Communities (CRC), a new program administered by the National Oceanic and Atmospheric Administration, focuses on adaptation strategies that will help communities prepare for the impacts associated with climate change that will occur even if GHG emissions were frozen today. The CRC program assists local governments in developing the tools required to identify, assess, and prioritize their vulnerabilities (for example, infrastructure, zoning, and water capacity) and preparing their communities for the impacts and costs associated with predicted global climate change as a part of their existing hazard mitigation plans. Miami-Dade County is one of four CRC pilot communities. ICLEI's

FLORIDA CITIES SIGNING THE USCM CLIMATE CHANGE PROTECTION AGREEMENT (AS OF AUGUST, 2007)

Atlantic Beach Aventura Cape Coral Clearwater Coconut Creek **Cooper City** Coral Gables **Coral Springs** Dania Beach Davie **Deerfield Beach Delray Beach** Doral Fort Myers Fort Pierce Gainesville Greenacres Gulfport Hallandale Beach Hialeah Holly Hill Hollywood Hypoluxo lacksonville Key Biscayne Key West Lake Worth Lakeland Largo Lauderdale Lakes Lauderhill

Leesburg Margate Melbourne Miami Miami Beach Miami Gardens Miami Lakes Miramar Naples North Miami North Miami Beach Oakland Park Palm Beach Parkland **Pembroke** Park **Pembroke Pines** Plantation Pompano Beach Port St. Lucie South Bay South Miami Sunny Isles Beach Sunrise Sweetwater Tallahassee Tamarac Tampa Vero Beach West Palm Beach West Park Wilton Manors

(To view a current list of Florida cities that have signed the climate Protection Agreement, go to http://usmayors.org/climateprotection/ cities.asp?state=FL.)

new publication, *Setting the Course: A Guidebook on Planning for Global Warming*, will help communities plan for the impacts of global warming by integrating climate preparedness strategies into existing hazard mitigation plans, reduce the costs associated with disaster relief, and prioritize vulnerabilities such as infrastructure, zoning, and water capacity. A related initiative is ICLEI's Community 21 Program, which helps local government officials improve the ecological health of their communities while promoting economic vitality and social justice.

Natural Capitalism Solutions

Natural Capitalism Solutions (www.natcapsolutions.org) is a nonprofit organization dedicated to educating senior decision-makers in business, government, and civil society about the principles of sustainability. In February 2007, the group published *The Climate Protection Manual for Cities* (www.climatemanual.org), designed to show public officials and citizens how to reduce greenhouse gases. The manual describes the benefits of taking action now to help local officials build political support for their leadership on climate change and contains detailed "how to" information for implementing the five steps of ICLEI's CRC Campaign (described in Getting Organized below). A Best Bets Section highlights best practices that local governments can implement and programs they can put in place to help businesses and residents reduce emissions and become more energy efficient. Case studies illustrate how the sample programs have worked and what the return on investment has been. The manual also contains an extensive list of useful climate protection resources. A similar manual for businesses is being developed.

U.S. Conference of Mayors (USCM) Climate Change Program

The core of the USCM Climate Change program (http://usmayors.org/climateprotection) is its Climate Protection Agreement (www.usmayors.org/climateprotection) that, to date, has been signed by over 500 mayors. Under the Agreement, participating cities commit to take the following actions:

- Strive to meet or beat the Kyoto Protocol targets in their own communities through actions ranging from anti-sprawl land-use policies to urban forest restoration projects to public information campaigns
- Urge the U.S. Congress to pass the bipartisan greenhouse gas reduction legislation, which would establish a national emission trading system

FLORIDA CLIMATE CHANGE RESOURCE ORGANIZATIONS

- Florida Atlantic University's Center for Urban and Environmental Solutions [www.sfclimatechange.org]
- Florida Center for Environmental Studies
 [www.ces.fau.edu/ccc/index.php]
- Florida Energy Office [www.dep.state.fl.us/energy]
- Florida Green Building Coalition [http://floridagreenbuilding.org]
- University of Florida Institute of Food and Agricultural Sciences [http://livinggreen.ifas.ufl.edu]

FLORIDA RESOURCE PUBLICATIONS

- An Unfavorable Tide: Global Warming, Coastal Habitats and Sportfishing in Florida (published in 2006 by the Florida Wildlife Federation and National Wildlife Federation) [www.fwfonline.org]
- Climate Change, Sustainability & the Next Technology Revolution: Forecasts for Climate Change Impacts on Florida and Emerging Technologies to Reduce Greenhouse Gas Emissions (published in 2007 by the Century Commission for a Sustainable Florida) [www.centurycommission.org]
- The Carbon Boom: State and National Trends in Carbon Dioxide Emissions Since 1990 (published in 2007by the Environment Florida Research and Policy Center) [www.environmentflorida.org]
- Energy Planning in the Twenty-First Century: A Guide for Florida Communities (prepared by the Treasure Coast Regional Planning Council Energy Committee) [www.tcrpc.org/publications/energy_planning_guide.pdf]
- Florida's Resilient Coasts: A State Policy Framework for Adaptation to Climate Change (prepared by the Center for Urban and Environmental Solutions at Florida Atlantic University) [www.sfclimatechange.org]

• Urge their state governments and the federal government to enact policies and programs to meet or beat the greenhouse gas emission reduction target suggested for the United States in the Kyoto Protocol (a seven percent reduction from 1990 levels by 2012)

USCM climate change publications include:

- U.S. Mayors Climate Action Handbook, (www.iclei.org/documents/USA/documents/CCP/Climate_Action_Handbook-0906.pdf)
- United States Conference of Mayors Best Practices Guide (http://usmayors.org/ uscm/best_practices/EnergySummitBP06.pdf)

The USCM also refers cities interested in climate change to the City of Seattle (www.seattle.gov/climate), considered a lead city when it comes to actions to address climate change. Seattle's focus is on reducing climate pollutants, emphasizing solutions that decrease driving, increase fuel efficiency and use of biofuels, and lower energy use in homes and businesses.

The U.S. Environmental Protection Agency (EPA)

EPA's Climate Change website (www.epa.gov/climatechange) provides a variety of resources for local governments. The site includes information on greenhouse gas emissions and the science of climate change and its health and environmental effects. In addition, there are links to help businesses, state or local governments, or agricultural interests address climate change on the road or at home, the office, and school. EPA services include:

- The Clean Energy-Environmental Municipal Network (http://epa.gov/ cleanenergy/stateandlocal/network.htm)
- A searchable resource database (http://epa.gov/climatechange/wycd/stateandlocalgov/local_resources.html)
- ENERGY STAR (http://energystar.gov/index.cfm?c=government.bus_government_local), described below under Building (Facilities and Operations)
- A Smart Growth Office (http://epa.gov/smartgrowth), which provides information on strategies to address climate change

ADDITIONAL U.S. GOVERNMENT RESOURCES

- Climate Change Science Program
 [http://climatescience.gov]
- Department of Energy's Clean Cities Program
 [www.eere.energy.gov/cleancities]
- Department of State [www.state.gov/g/oes/climate]
- Global Change Research Program
 [www.usgcrp.gov]
- National Assessment
 [www.gcrio.org/NationalAssessment]
- National Oceanic and Atmospheric Administration [www.noaa.gov/climate.html]

ADDITIONAL NATIONAL NONPROFIT RESOURCES

- Alliance to Save Energy [www.ase.org]
- American Planning Association [www.planning.org]
- C 40 group [www.c40cities.org]
- Center for Neighborhood Technology Community Energy Cooperative [www.cnt.org]
- Cool Mayors Campaign [www.coolmayors.org]
- FutureWise [www.futurewise.org]
- Institute for Local Self Reliance [www.ilsr.org]
- International City/County Management Association
 [www.icma.org]
- National Wildlife Federation [www.nwf.org]
- Natural Resource Defense Council [www.nrdc.org/globalWarming]
- Nature Conservancy
 [www.nature.org/initiatives/climatechange]
- Sierra Club [http://sierraclub.org/globalwarming]
- U.S. Green Building Council [www.usgbc.org]

Additional EPA initiatives include a *Transportation Emissions Guidebook*, a Heat Island Reduction Program, a Landfill Methane Outreach Program, and a personal online Greenhouse Gas Equivalencies Calculator. The EPA publishes a *Green Communities Assistance Kit* (www.epa.gov/epahome/partners.htm).

Essential to organizing a local program to address climate change is affirming a local government's commitment to reducing GHG emissions and conserving energy. According to the ICLEI Cities for Climate ProtectionTM Campaign, the first two steps in getting started along the right path include:

- Demonstrating local government commitment by passing a local resolution pledging to become more energy efficient and to reduce GHG emissions, both from local government operations and throughout the community. The resolution alerts staff to the importance their public leadership places on addressing climate change and helps educate staff and the public on important climate change-related issues. (A sample resolution is available from ICLEI [www.iclei.org/documents/USA/resolution.pdf].)
- Designating a staff member and an elected official to serve as climate change point people and as the liaison to ICLEI. One of the ICLEI point people can also serve as an Energy Management Coordinator to monitor and evaluate local government climate change and energy efficiency initiatives, promote energy conservation practices both within government and throughout the community, and carry out an education and outreach campaign (described below under Education and Outreach).

Following these two steps, participating local governments move through the five milestones. The milestones provide a standardized means to reduce GHG emissions and can be undertaken concurrent with each other.

- Conduct a baseline inventory of global warming pollutants
- Establish a target to lower emissions
- Develop a local Climate Action Plan to implement actions that reduce global warming pollution
- Implement the local Climate Action Plan
- Measure, verify, and report performance

CLIMATE CHANGE SCIENCE ORGANIZATIONS

- American Association for the Advancement of Science [www.aaas.org]
- Carbon Dioxide Information Analysis Center [http://cdiac.esd.ornl.gov]
- Carbon Disclosure Project [www.cdproject.net]
- Center for Climate Strategies [www.climatestrategies.us]
- Climate Institute [www.climate.org]
- Climate Registry [www.theclimateregistry.org]
- Climate Scientists [www.realclimate.org]
- Climate Trust [www.climatetrust.org]
- Emissions Database for Global Atmospheric Research [www.rivm.nl/en/milieu]
- Intergovernmental Panel on Climate Change
 [www.ipcc.ch]
- International Energy Agency, Greenhouse Gas Programme [www.ieagreen.org.uk]
- International Institute for Applied Systems Analysis
 [www.iiasa.ac.at]
- New Scientist: Environment [http://environment. newscientist.com/channel/earth/climate-change]
- Pew Center on Global Climate Change [www.pewclimate.org]
- Rocky Mountain Institute Community Energy Finder [www.energyfinder.org]
- United Nations' Framework Convention on Climate Change [http://unfccc.int/] and its Environment Program [http://grida.no/climate]

ICLEI provides technical assistance and resource materials to participating local governments. ICLEI, in conjunction with the Center for Neighborhood Technology (www.cnt.org), is developing measurement tools that can be used to accurately monitor and compare GHG emissions. The measurement tools, which will be free, are being developed by Microsoft in partnership with the Clinton Foundation. The tools will allow local governments to collaborate through the web and in online communities, enabling them to monitor progress and share best practices. Natural Capitalism Solutions' *Climate Protection Manual for Cities* helps local governments navigate the five milestones.

Adaptation

I am persuaded that global climate change is one of the most important issues that we will face this century. With almost 1,200 miles of coastline and the majority of our citizens living near that coastline, Florida is more vulnerable to rising ocean levels and violent weather patterns than any other state... Florida will provide not only the policy and technological advances, but the moral leadership, to allow us to overcome this monumental challenge. (Governor Charlie Crist at his July 2007 Serve to Preserve Summit on Global Climate Change) Adapting to climate change involves preparing for and adjusting to its projected impacts. Adaptation strategies need to be coupled with mitigation measures (described in the tools that follow) that aim at decreasing the rate of climate change by reducing GHG emissions. For Florida, the importance of developing adaptation strategies has been recognized by the Governor and the state's Century Commission, the Florida Energy Commission, and the Governor's Action Team on Energy and Climate Change, which is charged with recommending adaptation strategies to combat adverse impacts on soci-

ety, public health, the economy, and natural communities. Florida's Department of Community Affairs also underscored the importance of addressing adaptation to climate change when it supported preparation of the *Climate Change Community Toolbox: THINKING AHEAD* by the South Florida Regional Planning Council. The toolbox is intended to help decision makers and climate change task forces develop effective and community-specific climate change adaptation strategies. An additional emphasis on the importance of climate change came with the National Commission on Energy Policy's request for the preparation of *Florida's Resilient Coasts: A State Policy Framework for Adaptation to Climate Change* by the Center



TREASURE COAST REGIONAL PLANNING COUNCIL (TCRPC) CLIMATE CHANGE ADAPTATION AND MITIGATION PLANS

The TCRPC recognizes the importance of climate change and energy issues in all levels of planning. In 2002, it entered into a contract with the Southwest Florida Water Management District (as part of an EPA grant to coordinate the study of sea level rise throughout the state of Florida.) to conduct a study of land use impacts and solutions to sea level rise within the four-county Treasure Coast region. The TCRPC's report, Sea Level Rise in the Treasure Coast Region, includes maps of the region that distinguish the shores that are likely to be protected from erosion, inundation, and flooding, from those areas where natural shoreline retreat is likely to take place. The report is designed to support the EPA's national effort to encourage longterm consideration of the issues associated with sea level rise. The TCRPC's advisory report, Energy Planning in the Twenty-First Century: A Guide for Florida Communities, includes comprehensive goals, strategies, and policies in the areas of energy planning, energy efficiency and conservation, greater use of solar and other clear alternative energy resources, sustainable communities, energy efficient buildings, and energy efficient transportation systems. The TCRPC is also creating an Energy Element for its Strategic Regional Policy Plan. (More information about the TCRPC's report, Sea Level Rise in the Treasure Coast Region, is available from www.tcrpc.org/special_projects/TCRPC%20SLR%20 *Report%2012-05-05.pdf. Information on its energy planning quide* and related programs is available from www.tcrpc.org/departments/ energy.html.)

for Urban and Environmental Solutions (CUES) at Florida Atlantic University. The report outlines a framework that enables state government to assess the likely impacts of climate change and adopt the policies and programs needed to adapt to and manage those impacts. The Florida Ocean Alliance also underscored the need to develop adaptation strategies in its position statement on climate change and global ocean change: "....The task of developing and implementing strategies to adapt to the consequences of climate change will require the collaborative efforts of a wide range of experts, including physical and natural scientists, engineers, social scientists, medical scientists, those in the humanities, community planners, business leaders, and economists."

A first step in preparing for and adapting to climate change is to involve affected stakeholders, planners, and scientists in understanding and prioritizing its impacts on each sector of the community. The impacts on each sector can be understood as vulnerability (if the sector is subject to disruption or damage), sensitivity (the degree of impact), and adaptability (the ability of systems to continue to operate and thrive under new conditions. In Florida, the impacts will vary by community, but in general could include changes in rainfall patterns (resulting in more droughts and severe flooding, loss of habitat and natural vegetation, wildlife migration, prolonged heat waves, more intense tropical storms, alterations in agricultural production, and the appearance and spread of diseases (such as malaria) transmitted by insects and animals to human populations. Impacts could also occur in the building, water supply, storm and wastewater sewer, transportation, and energy sectors. Coastal communities will also be impacted by a rise in sea level. (EPA projects as much as an 18-20 inch rise in sea level by the next century. Other projections are available from organizations such as Architecture 2030 [www. architecture2030.org] and the International Panel on Climate Change [www.ipcc. ch.org].) Rises in sea level are projected to have significant impacts on the state's tourism industry that relies on the many amenities of coastal areas to attract visitors. Possible impacts include the likely loss of beaches, commercial fisheries, and coastal properties; damage to ports and ecosystems, such as the lower Everglades and Florida's coral reefs which are particularly sensitive to temperature changes; and fluctuations in the supply of fresh water as saltwater infiltrates inland aquifers. Potential economic impacts include rising insurance premiums, interruptions to carrying out business, and lower property values due to more natural disasters.



MIAMI-DADE COUNTY MITIGATION AND ADAPTATION PLANNING

In 1993, Miami-Dade County became an early leader in reducing GHG emissions when it approved a *Long-Term CO² Emission Reduction Plan*. The county was also one of the 12 original local governments signing on to ICLEI's Climate Protection Campaign. In 2006, it established a Climate Change Advisory Task Force to further efforts to reduce GHG emissions and recommend adaptation strategies to minimize the negative impacts of climate change, and was selected as one of five pilot communities for ICLEI's new Climate Resilient Communities program. In 2007, the county was the focus of a DCA-funded *Climate Change Community Toolbox* prepared by the South Florida Regional Planning Council for the Climate Change Advisory Task Force to help decision-makers understand how to develop community-specific adaptation strategies. The toolbox contains a:

- Set of illustrated public information fact sheets summarizing the impacts of climate change on the county.
- Sea Level Rise Map Atlas that illustrates the magnitude and geography of potential sea level rise impacts at one, two, three, and five feet, and what those impacts could mean for infrastructure and land use planning. The maps also show the areas that are generally more vulnerable to sea level rise and those that are likely to experience substantial coastal wetland loss by 2100.
- Compendium of adaptation resources that contains information on adaptation strategies.

(More information on the <u>Climate Change Community Toolbox</u> is available at www.sfrpc.com/climatechange.htm. Information on Miami-Dade County's mitigation and adaptation initiatives is available from www. miamidade.gov/derm/climate_change_urban_CO2_reduction_plan.asp.) The results of a risk or vulnerability assessment can serve as the framework for identifying, prioritizing, and deciding how to pay for and implement the strategies needed to adapt to and prepare for the unknown impacts from climate change. Those strategies, which will be specific to the needs of a community, can include the following.

Buildings and Infrastructure

- Strengthening building codes in coastal areas to provide additional protection for properties from wind and storm surges.
- Changing the placement and design of infrastructure (for example, for water supply, wastewater treatment, power plants and other utilities, and transportation).
- Implementing stormwater management processes that more closely mimic nature by retaining rainfall close to its source so that it can be filtered, stored, and allowed to evaporate (by, for example, adopting Low Impact Development practices, described in the Water Resource chapter).
- Creating more shade and reflective surfaces through building and landscape design to make buildings more comfortable when the weather is warmer.
- Retrofitting roads and bridges, which may involve rebuilding roads and bridges at higher elevations and developing engineering techniques that allow them to float or withstand flooding.

Coastal Defenses and Economies

- Conserving land in coastal areas by removing or limiting development potential through acquisition, conservation easements, and the purchase and transfer of development rights (all described in the Agricultural Land Conservation chapter).
- Protecting and restoring natural defenses such as salt marshes, sand dunes, and natural vegetation. (See the Coastal Planning chapter for a discussion of soft and hard coastal strategies and Florida's Coastal Construction Control Line Program.)
- Constructing hard structures such as seawalls and floodwater control gates where appropriate (for example, urban areas).
- Revising port master plans to reflect the impact of sea-level rise.

ADAPTATION RESOURCES

- The Intergovernmental Panel on Climate Change and its Working Group II on Climate Change Impacts, Adaptation, and Vulnerability [www.ipcc-wg2.org].
- Preparing for Climate Change: A Guidebook for Local, Regional, and State Governments [www. cses.washington.edu/cig/fpt/guidebook.shtml], co-authored by the Climate Impacts Group, King County (Washington), and King County 's climate team. The report is designed to help local, regional, and state governments prepare for climate change by recommending a process for climate change preparedness based on familiar resources and tools.
- The Pew Center on Global Climate Change's guide, *Coping with Climate Change: The Role of Adaptation* in the U.S. [www.pewtrusts.org/our_work_ektid22878. aspx?category=350], which discusses the importance of adapting to climate change, the options available for adaptation, and the challenges of implementing them in the United States.
- Adopting soft defense strategies, such as establishing aquatic vegetation beds, using natural or artificial breakwaters, and beach nourishment, where appropriate (for example, shorelines that are more undeveloped and where a seawall would inhibit wetland migration and damage natural defense systems).
- Addressing climate change impacts in plans for working waterfronts (described in the Coastal Planning chapter).

Emergency and Hazard Planning

- Working with at-risk neighborhoods to develop site-specific approaches.
- Considering the impact of sea-level rise or flooding and storm surges and more frequent and intense tropical storms in local emergency evacuation plans,
- Elevating structures above the minimum threshold for the 100-year storm.

Health and Human Services

- Increasing preparedness and response to outbreaks of diseases that may become more prevalent with warmer temperatures.
- Preparing to reduce and respond to heat stress, which increases the incidence of heart attacks and other emergency room visits.

Land Use and Growth Management

- Considering climate change impacts in all nine of Florida's required comprehensive plan elements, particularly those addressing Coastal Management and Capital Improvement.
- Identifying adaptation projects in a community's hazard mitigation plan.
- Enacting land use policies (for example, overlay zones, described in the Land Use Planning and Development chapter) to minimize development in coastal hazard areas (locating it away from coastal hazards and retreating or relocating public facilities and infrastructure) and low lying interior areas.

- Incorporating sea-level rise scenarios in modeling of the 30-year erosion line used for the Coastal Construction Control Line (described in the Coastal Planning chapter) and revising land suitability criteria to prevent development of vulnerable land.
- Allocating land for long-term potential population migrations.

Natural Systems and Resources

- Using more climate-resilient landscaping and crops that do not require irrigation.
- Examining local and regional water supply plans in light of likely climate change impacts, including an emphasis on greater reuse and recycling of water.
- Implementing fishery and coastal resource management policies that incorporate the likely impacts of global warming on marine food chains, marine life, and marine ecosystems, including coral reefs.
- Developing programs that facilitate species migration (for example, planting foods and providing shelter for birds whose habitat is covered with water).

In addition to Climate Change Community Toolbox: THINKING AHEAD and Florida's Resilient Coasts: A State Policy Framework for Adaptation to Climate Change, cited above, an additional Florida resource useful to understanding the vulnerabilities of Florida's coasts is Living on the Edge: Coastal Storm Vulnerability of the Treasure Coast Barrier Islands (www.cuesfau.org/projects/project.asp?ProjectID=111), also published by CUES. Funded by a NOAA grant to the Florida Hurricane Alliance (a consortium of statewide university-based scientists), the report creates a framework for local governments to craft long-term economic and land development public policy responsive to the threat of natural hazards and to more fully understand the dimensions of community vulnerability and resiliency and better ways to mitigate storm impacts. The Treasure Coast region was selected for the first phase of the study because it was severely impacted during the 2004 storm season. Another report related to understanding the impacts of climate change on Florida is An Unfavorable Tide: Global Warming, Coastal Habitats and Sportfishing in *Florida* (www.targetglobalwarming.org/unfavorabletide), prepared by the National Wildlife Federation and the Florida Wildlife Federation. The report explains how sea-level rise from global warming would likely affect Florida's coastal habitats and the recreational saltwater fisheries the state is known for.

Described earlier in this chapter, ICLEI's Climate Resilient Communities program [www.iclei.org/index.php?id=6687] is a primary resource on climate change adaptation strategies. The purpose of the program is to help communities protect people, property, and resources and become more resilient to climate change. The U.S. Climate Change Science Program also provides information on adapting to climate change. Two 2008 publications will include SAP4.1 – Coastal Elevation and Sensitivity to Sea-Level Rise and SAP4.4 – Adaptation Options for Climate Sensitive Ecosystems [www. climatescience.gov/Library/sap/default.htm#recent]. International resources include the United Kingdom's Town and Country Planning Association [www.tcpa.org.uk/index. asp], which sponsors Adaptation Strategies for Climate Change in the Urban Environment; Climate Change Adaptation Actions for Local Government [www.greenhouse. gov.au/impacts/localgovernment/index.html], developed as part of an effort to prepare Australia's governments, vulnerable industries, communities, and ecosystems to manage the unavoidable consequences of climate change; and the European Commission's European Climate Change Programme II: Impacts and Adaptation [http://ec.europa.eu/ environment/climat/eccp_impacts.htm].

Buildings (Facilities and Operations)

The goal of energy-efficient (green) buildings is to reduce their impact on the environment. Green building practices apply to construction, renovation, operation, maintenance, and demolition. Green building techniques include thermally-efficient roofs, walls, and windows; building shape and orientation; thermal mass and daylighting strategies that reduce cooling loads; smaller heating, ventilation, and air conditioning systems and efficient electrical lighting strategies that capitalize on daylighting; water efficient supply and waste fixtures; and interior designs providing visual access to the outdoors and access to daylight. The concept also features interior finishes and installation methods having lower volatile organic compound emissions; landscaping strategies that require little or no irrigation, groundwater replenishment and on-site stormwater management; and siting to minimize stress on natural systems either by building on previously contaminated sites or avoiding ecologically sensitive areas. Benefits of green building include improved air and



ENERGY STAR, a joint program of the U.S. EPA and the U.S. Department of Energy, is a voluntary labeling program designed to identify and promote energy-efficient products to reduce greenhouse gas emissions. The ENERGY STAR label means that the product

has met strict energy efficiency guidelines set by the EPA and U.S. Department of Energy. Its use has been expanded to include office products, residential heating and cooling equipment, major appliances, lighting, home electronics, and more. EPA has also extended the label to cover new homes, commercial and industrial buildings, and schools. A related program is the ENERGY STAR Challenge, a call-to-action to improve the energy efficiency of public and private commercial and industrial buildings by 10 percent or more. Challenge participants and their members are encouraged to measure and track energy use, develop a plan for energy improvements, make energy efficiency upgrades, and help spread the energy efficiency word to others. Resource materials include the ENERGY STAR Challenge Toolkit and the ENERGY STAR Challenge brochure. (For more information on ENERGY STAR, go to www.energystar.gov and http://energystar.gov/challenge [information on the ENERGY STAR Challenge].)

FLORIDA USGBC CHAPTERS

- Central Florida
 [http://chapters.usgbc.org/centralflorida]
- Florida Capital
 [http://chapters.usgbc.org/floridacapital]
- Gulf Coast
 [www.sustainabletampabay.org]
- Heart of Florida
 [http://chapters.usgbc.org/heartofflorida]
- North Florida
 [http://chapters.usgbc.org/northflorida]
- South Florida [www.usgbc.org/chapters/southflorida]

water quality, reduced solid wastes, conserved natural resources, decreased operating costs and enhanced profits, and reduced strain on local infrastructure.

Local Government

Local government strategies to create more energy efficient buildings (both existing and new) and operations can begin with a number of steps:

- Retain an Energy Service Company (ESCO) to analyze the potential cost savings from altering an existing building. An ESCO develops, installs, and finances projects designed to improve the energy efficiency and maintenance costs for facilities over a seven-to-20 year time period.
- Conduct an energy audit to understand current conditions and the potential cost savings from altering public buildings and implementing energy efficiency retrofits to existing ones. Audits should include both the structural and operational efficiencies (for example, lighting and cooling). An energy tracking and management system should be established to monitor progress over time and make course corrections as needed.
- Encourage and support government staff to become a LEED[®] (Leadership in Energy and Environmental Design) Accredited Professional (a program of the U.S. Green Building Council [USGBC]). A person with that accreditation must demonstrate a thorough understanding of green building practices and principles and familiarity with LEED[®] requirements, resources, and processes. The LEED Green Building Rating System[™] is the nationally-accepted benchmark for the design, construction, and operation of high performance green buildings. The rating system focuses on the whole building: human and environmental health, sustainable site development, water savings, energy efficiency, materials selection, and indoor environmental quality. LEED[®] has programs for commercial buildings (new construction and major renovations as well as interior projects and building operations and maintenance), homes, neighborhood development, municipal buildings, on-campus building projects, schools, and retail.

Strategies to encourage more energy efficient building facilities include:

• Incorporating energy efficiency codes (for new construction and the renovation of existing buildings) to make local government buildings more energy efficient.



ALYS BEACH

Alys Beach, a 160-acre mixed-use New Urbanist resort community in Walton County, features passive solar design, wind energy, parking courts with permeable paving, natural storm drainage, cisterns, narrow streets that reduce stormwater run-off, and on-site reuse and recycling of construction materials. Most home sites are positioned to allow passive heating from the sun and cooling from the Gulf breezes; the internal temperature of homes is regulated by a geothermal system that uses the natural temperature of the earth. Homes' sun-reflecting white exterior walls and roofs and masonry construction add to the community's energy-efficiency. To enhance its natural setting and capture winds from the Gulf, each street leads to the Gulf of Mexico. In addition, the denser urban center is located nearer the beach, and the rural elements are situated toward the preserved wetlands at the north edge of the property. (Information on Alys Beach came from <u>A Guidebook to New</u> <u>Urbanism in Florida 2005</u>, published by the Florida Chapter of the Congress for the New Urbanism [www.cnuflorida.org]. Additional information is available from www.alysbeach.com.)

- Requiring that all new government construction and retrofit projects become LEED[®] certified. LEED[®] provides standards for energy efficient design for a variety of building types, as well as standards for existing buildings and for improving building operations without making major exterior and interior changes.
- Installing green or reflective roofing.

Encouraging more energy efficient operations can include:

- Requiring improved appliance and equipment efficiency standards and implementing energy saving procedures for office equipment, such as computers and copy machines. In addition, looking for the ENERGY STAR label and establishing procedures to turn off and unplug office equipment when not in use (idle office equipment uses energy).
- Adding energy efficiency as a criterion in purchasing policies, including requiring the purchase of ENERGY STAR appliances. EPA provides guiding principles and standards for Environmentally Preferable Purchasing (www.epa. gov/opptintr/epp). It also maintains a database of environmental products and services, along with guidelines, contract language, standards, and specifications for over 600 products and services (http://yosemite1.epa.gov/oppt/eppstand2. nsf/Pages/Homepage.html?Open). The Green Seal Standard and Certification (www.greenseal.org) has been issuing product standards and certifications since 1991.
- Performing heating, cooling, and ventilation system retrofits (for example, boilers, fans, pumps, coolers, belts, and switching from electric to gas heating). Also improving water pumping efficiency and electricity transmission and distribution.
- Using EPA's combined heat and power (CHP) program (www.epa.gov/chp) that produces both electricity and steam for heating and cooling from a single power plant located near consumers. CHP systems recover heat that is normally wasted at power plants and funnels the heat into surrounding buildings, thereby reducing energy costs and GHG emissions. The process lowers pollution by eliminating the need for separate fuel sources for electricity and heating.
- Installing energy-efficient vending machines.



THE PINE JOG ENVIRONMENTAL EDUCATION CENTER

Located in central Palm Beach County, Florida Atlantic University's College of Education Pine Jog Environmental Center occupies 150 acres of preserve surrounded by suburban development. Its new 15,000-square foot green environmental education center (a joint project with the Palm Beach County School District, which has a green elementary school that shares common areas with the Pine Jog Center) will use the site's setting as a learning tool to improve student performance and public understanding of sustainability. The center and school buildings will meet the U.S. Green Building Council's silver or gold LEED[®] Green Building Rating standard. They will use natural lighting, photovoltaic systems, a solar water heater collection system, a water-cooled (versus the less efficient air-cooled) chiller, and a rainwater collection system that will provide water for low pressure irrigation, toilets (waterless urinals will also be used), and related non-potable uses. To the extent possible, landscaping will use xeroscaping to reduce irrigation, fertilizers, and pesticides. Construction waste is being recycled to the extent possible, and low volatile organic compound paints, adhesives, and carpeting are being used to improve air quality and reduce allergens. The parking areas will include some water permeable sections and a comprehensive naturalized water retention area to increase percolation and reduce stormwater run-off. The difference (three-to-five-percent) between conventional and green building construction costs is estimated to be made up in approximately six years at current energy rates. (More information on the Pine Jog Environmental Education Center green buildings is available from www.pinejog.fau.edu/WebPages/ seeusgrow.htm.)

• Using energy efficient lighting (for example, replace conventional incandescent bulbs with more efficient compact fluorescent bulbs) and installing room occupancy light sensors in city and county buildings. Also, installing energy-efficient exit sign lighting and instituting lights-out-at-night and lights-out-when-not-in-use policies.

Community

- Adopt more stringent residential and commercial energy code requirements and promote green building initiatives and retrofits and the use of green roofs (www.epa.gov/nps/roofcover.pdf) through incentives or requiring developers to construct LEED[®] certified or ENERGY STAR homes.
- Promote energy conservation and green building through campaigns targeted at residents and businesses; perhaps establish incentives to promote more energy efficient practices. Also promote participation in a local green business program.
- Implement district heating and cooling and time-of-use or peak demand energy pricing and install energy efficient co-generation power production facilities.
- Promote the purchase of ENERGY STAR appliances.
- Offer weatherization assistance programs for lower-income residents and create a fund to finance energy-efficient projects that lower overall energy costs for consumers.
- Work with local school boards and government planning staff to implement a Safe Routes to School Program (described in the Education and Health chapter), locate schools with good walking connections to user neighborhoods, and incorporate green building practices into school renovations and construction.

An additional strategy is to promote LEED[®] Design for Neighborhood Development (LEED[®] ND), a rating system that integrates the principles of smart growth, urbanism, and green building. Developed by the USGBC, the Congress for the New Urbanism, and the Natural Resources Defense Council, LEED[®] ND focuses more on the location, design, and construction of neighborhoods and buildings than other LEED[®] products (which address green building practices, with only a few credits regarding site selection). In contrast, LEED[®] ND rates how a development protects and enhances the natural environment and the overall quality of the surrounding communities. Best practices emphasize developments that



ESCAMBIA COUNTY ONE-STOP PERMIT CENTER GREEN ROOF

The Escambia County One-Stop Permit Center, designed to centralize all county permitting functions, will utilize a variety of green building practices, energy-efficient techniques, high efficiency glazing, overhangs, HVAC equipment, and energy management systems. A green roof (approximately 30,000 square feet of planted area) will decrease the heat island effect caused by most large buildings, reduce stormwater runoff, and act as a demonstration and educational site for other developers, designers, and builders. The county initiated this approach (funded with the support of a grant from the Florida Department of Environmental Protection), to save on the long-term costs of maintenance and operations, which, over the life of the building, were estimated to far exceed construction costs. (*More information is available from Bay Design Associates [info@baydesign.com].*)

reduce vehicle miles of travel and the location of jobs and services within walking distance of where people live or transit. The health benefits are documented in the *LEED*^{*} for Neighborhood Development Public Health Report, prepared by the LEED^{*} for Neighborhood Development Partnership with funding from the U.S. EPA and the Centers for Disease Control. The report documents the built environment's impacts on health and summarizes the relationship between how communities are designed and public health outcomes, such as physical activity, traffic crashes, and respiratory and mental health.

In Florida, the principal resource organizations on energy efficient, green building practices are the six Florida USGBC chapters (website listings on page 28) and the Florida Green Building Coalition (http://floridagreenbuildings.org), a nonprofit organization dedicated to improving the built environment and that also hosts a state conference called Green Trends (www.greentrend.org). The coalition offers a number of designations for green homes, green development, and green cities and counties (http://floridagreenbuilding.org/standard/govs/default.htm). It has also teamed with the Florida Homebuilders Association to promote affordable green buildings (www.fhba.com/docs/Florida%20Green%20Build ing%20Partnership%20Announced.pdf). An additional resource is the Southeast Rebuild Collaborative (www.southeastrebuild.org), a joint effort of the state energy offices of Alabama, Florida, Georgia, Mississippi, and South Carolina to promote energy efficiency to individuals, school districts, state and local governments, colleges and universities, vendors, trade organizations, and other allies in the member states.

Three other (in addition to the USGBC) national organizations that serve as resources on green building are the American Institute of Architects (AIA), the American Society of Landscape Architects (ASLA), and the American Planning Association (APA). The AIA offers a green building on-line toolkit, developed in partnership with the USCM (www.aia.org/ static/state_local_resources/adv_sustainability). The AIA also adopted a 2030 Challenge position statement that calls for the immediate energy reduction of all new and renovated buildings to half the national average for that building type. Increased reductions of 10 percent are required every five years so that all buildings designed by the year 2030 will be carbon-neutral (they will use no fossil fuel energy). In June 2006, the U.S. Conference of Mayors unanimously adopted the 2030 Challenge. The ASLA (www.asla.org) recently released a new performance report on green roofs and offers a live green roof web cam, and the APA sponsors a Green Communities Program (www.planning.org/yourcommunity/ greencommunities.htm), which offers grants for green affordable housing. That program is presented in conjunction with the Enterprise Foundation (www.enterprisecommunity.org/programs/green%5Fcommunities).

© Other Florida resource organizations include the Florida Solar Energy Center [www.fsec.ucf.edu], created by the state of Florida to conduct research in advanced energy technologies, and Eco-\$mart, Inc. [www.ecosmartinc. com], a Florida House Institute for Sustainable Development initiative to bridge the gap between understanding and applying sustainable development principles. Additional national resource organizations include the Building Codes Assistance Project [www.bcap-energy.org/home.php], which assists states and local jurisdictions in the advancement of energy-efficient building energy codes; Building Green [www.buildinggreen.com]; Capital E, which published <u>Greening America's Schools: Costs and Benefits</u>, a summary of green schools developed across the nation [www.cap-e.com/ewebeditpro/items/O59F9819. pdf]; the Congress for the New Urbanism [www.cnu.org] that worked with the USGBC to develop the LEED® Design for Neighborhood Development standards; the Green Mechanical Council [www.naesco.org]; and the National Association of Energy Service Companies [www.naesco.org].

Economic Development

Local and regional economic development organizations can offer industry recruitment incentives and entrepreneurial assistance programs (discussed in the Economic Development chapter) to attract businesses involved in the emerging clean energy technology sector:

• Help businesses take advantage of the tax refund incentive that Enterprise Florida (the state's primary economic development organization: www.eflorida.com) offers to attract new and expanding businesses in selected targeted industries. Alternative energy is among the targeted industries in the Emerging Technologies cluster. Described below under Renewable, Green Energy, the Florida Energy Office also offers state incentives for the use of renewable energy.

- Encourage developers to utilize the Florida Community Loan Fund (www.greencommunitiesonline.org/about/programs/florida.asp), a joint initiative of the Florida Green Building Council (http:// floridagreenbuilding.org) and Enterprise Partners, Inc., through its Green Communities Initiative (www.greencommunitiesonline. org). The two have joined forces to invest more than \$2.7 million to help build or renovate at least 200 affordable green homes in Florida that promote health, conserve energy and natural resources, and provide easy access to jobs, schools, and services. Incentives include more than \$2.5 million in discounted green loans to developers of affordable residential or supportive housing; \$200,000 in grants to help cover costs associated with building green; technical assistance at no cost through the Florida Solar Energy Center (www.fsec.ucf.edu); and competitively priced equity through the Low-Income Housing Tax Credit.
- Work with the farming community, landowners, and conservation organizations to establish a green payment program (discussed in the Agricultural Land Conservation chapter) that compensates farmers for environmental services provided by their land, thereby providing another source of income. Those services can include carbon sequestration, whereby energy companies begin to purchase carbon credits in the open market, paying farmers to help mitigate climate change by planting grasses or trees or using no-till planting techniques that leave the soil largely undisturbed and trap carbon in the ground instead of releasing it into the atmosphere. Forest land is also an important part of the carbon trading market. The Florida Forestry Association (www.floridaforest.org), which helps landowners market carbon sequestration to buyers seeking to reduce their greenhouse gas emissions, estimates that Florida's forests sequester 5.9 million tons of carbon annually.

Additional resource organizations for attracting green technology business include Ceres [www.ceres.org], a national network of investors, environmental organizations, and other public interest groups working with companies and investors to address sustainability challenges such as global climate change, and Capital E [www.cap-e.com], which provides consulting, technology assessment and deployment, and advisory services to firms and investors in the clean energy industry. The American Farmland Trust [http://ecosystemmarketplace.com/index.php] provides information on green payments and agriculture's role in reaching climate change goals, including offsetting carbons, growing biofuels, and generating alternative energy such as wind and solar power.

Education and Outreach

A sustained, well organized education and outreach effort should serve as the basis for a successful mitigation and adaptation program. Education and outreach activities include the following:

Local Government

- Starting with the chief executive, demonstrate to employees that addressing climate change is an important part of the city or county's mission.
- Establish programs that encourage employees to identify opportunities for emissions reduction and conservation. Promote voluntary programs and provide incentives.

Community

- Conduct a public education campaign about the benefits of reducing GHG emissions to the long-term livability of the community and the state, highlighting steps that residents can take as part of their daily routines.
- Work with schools to integrate energy efficiency into the curriculum. (The American Association for the Advancement of Science [www. aaas.org] provides materials for schools, including its publication *Communicating and Learning About Climate Change: An Abbreviated Guide for Teaching Climate Change*, from Project 2061 at AAAS, and EPA has a free tool called Climate CHECK that teaches school-age children about climate change and how to assess emissions from their school [http://epa.gov/climatechange/wycd/school.html].

- Partner with community groups to sponsor or cosponsor professional events and activities that raise awareness of global warming and promote opportunities for climate protection.
- Educate businesses on the environmental (work and community) and operating cost benefits of reducing energy output. Encourage them to take steps to reduce energy use, and provide technical assistance, "how-to" materials, and incentives (for example, utility incentive programs and joint purchasing of green products and services).
- Use government and community and civic newsletters, websites, brochures, and other media to inform and motivate the public.
- Sponsor or participate in public forums and debates that focus on climate protection (for example, addressing transportation and land use planning, taxation reform, and energy system planning).

Resource organizations on education and outreach programs as part of a climate change strategy include the International Council for Local Environmental Initiatives [www.iclei.org] and the U.S. Conference of Mayors [www.usmayors.org/climateprotection].

Land Use Planning

The fact that Florida's increase in vehicle miles of travel more than doubled the rate of population growth underscores the land use planning-climate change connection and the fact that most Floridians depend on a car to get to where they want to go. The predominant pattern of growth in the state (low density, disconnected development pushing into rural areas and away from urban areas) not only encourages more driving, but also requires it. That has led to longer commutes for daily activities, more time stuck in traffic (meaning higher carbon emissions), less greenspace to sequester carbon, and higher energy consumption. Those outcomes, coupled with limited opportunities for biking, walking, and transit due to the low density form of development, have only magnified Florida's GHG emissions (and explain why 40 percent of those emissions are attributable to transportation). The strategies outlined below (and described in more detail in the Agricultural Land Conservation, Housing, Infill and Redevelopment, Land Use, Natural Systems Conservation, Water Resource, and Transportation chapters) illustrate steps that local governments and communities can take to start reshaping land use patterns, thereby reducing the number of miles Floridians drive each day and the state's GHG emissions.



SARASOTA COUNTY ROADMAP TO SUSTAINABILITY

The 2006 Roadmap to Sustainability provides the guiding framework for the county's climate change initiatives. Public education and involvement are core components. The "Low Carbon Diet: How to Lose 5,000 Pounds in 30 Days" program educates the public on energy conservation and green building, and "It's All About Choice" provides multi-media outreach materials highlighting energysaving initiatives. The county also holds an annual Sustainable Communities Workshop, partners with Florida Power and Light on renewable energy education and outreach, sponsors (along with state and federal partners) energy workshops, and provides technical assistance to local government, community groups, and businesses. Community events encourage residents to take the annual Change a Light, Change the World ENERGY STAR pledge by promising to switch at least one light to an efficient bulb. In other initiatives, the county:

- Was the first in the U.S. to adopt the American Institute of Architects' 2030 Challenge for Carbon Neutrality.
- Adopted Green Development and Green Building ordinances and expedited building permits for more than 1,300 green homes and nine green developments.
- Developed an Ecological Footprint that estimates the amount of natural resources its citizens use.
- With its Economic Development Corporation, encourages natural capitalism and biomimicry business initiatives and, through its Green Business Partnership project, recognized green businesses.
- Began greening its vehicle fleet and requiring that all new county construction and renovation meet commercial green building standards.

(Additional information on Sarasota County's sustainability initiatives is available from www.scgov.net/Sustainability.)

Local Government

- Site facilities next to one another to reduce travel time and maximize building use (also a transportation strategy).
- Utilize brownfields and greyfields for government buildings (discussed in the Infill and Redevelopment chapter).
- Create an Employee Assisted Housing Program to encourage employees to live closer to work (discussed in the Housing chapter).
- Establish targets for reducing vehicle miles of travel in comprehensive plans and in metropolitan planning organization plans.
- Designate priority growth areas for targeting infrastructure investments and other types of funding.
- Use scenario planning (described in the Public Involvement and Education chapter) to understand the impacts of alternative growth patterns on how far people have to drive (vehicle miles of travel).

Community

- Use local zoning and land development regulations to require and/or provide incentives for compact mixed-use, walkable, and transit-oriented development, brownfield and greyfield redevelopment, and infill development (tools discussed in the Land Use Planning and Development, Transportation, and Infill and Redevelopment chapters). Incentives might include density bonuses or impact fee reductions or waivers.
- Adopt an urban growth boundary or other measures to contain growth within a designated urban area (discussed in the Land Use Planning and Development chapter).
- Establish an assessment of GHG emissions as a part of the development review and environmental impact assessment processes.
- Target expenditures through the Capital Improvement Plan (discussed in the Fiscal Analysis and Financing chapter) to existing neighborhoods and town centers to limit sprawl on the edge of town.
- Establish zoning (for example, Agricultural Zoning and Conservation Design) and incentive programs (e.g., a purchase or transfer of development rights program) to protect farmland and natural systems (discussed in the Agricultural Land Conservation and Natural Systems Conservation chapters).
- Create a Main Street program (discussed in the Infill and Redevelopment chapter) to encourage reinvestment in existing downtowns.



GROWING COOLER: THE EVIDENCE ON URBAN DEVELOPMENT AND CLIMATE CHANGE

The 2007 Urban Land Institute book, Growing Cooler: The Evidence on Urban Development and Climate Change, makes a clear case for the relationship between urban development patterns and climate change. It documents that compact development patterns (described in the Land Use Planning and Development chapter) are as important as promoting greater fuel efficiency in combating climate change. Locating homes in conveniently placed, walkable neighborhoods, the report concludes, can significantly reduce the growth in the number of miles Americans drive, shrink the nation's carbon footprint, and give people more housing choices. Just as compact development can be a major contributor in reducing CO² emissions (residents generally drive a third fewer miles than those in automobileoriented suburbs), sprawl development, which increases the number of vehicle miles of travel, is a major contributor in increasing CO² emissions. The report confirms what Florida's Department of Environmental Protection concluded in its inventory of greenhouse gases (see page 18 of the toolbox): The percentage increase in the total number of miles driven will more than offset the expected gains from greater vehicle efficiency and use of low-carbon fuels. As noted in the Growing Cooler report: "The research shows that one of the best ways to reduce vehicle travel is to build places where people can accomplish more with less driving." (More information on Growing Cooler: The Evidence on Urban Development and Climate Change is available from www.uli.org/AM/Template.cfm?Section=Search§ion=Policy_ Papers2&template=/CM/ContentDisplay.cfm&ContentFileID=32909 and from Smart Growth America [www.smartgrowthamerica.org.])

Tor more information on energy-efficient land use planning practices that create more compact walkable, less car-dependent communities and preserve farmland and natural systems, go to the American Farmland Trust [www.farmland.org], American Planning Association [www.planning.org], the Congress for the New Urbanism [www. cnu.org], the Conservation Fund [www.conservationfund.org], the Lincoln Institute of Land Policy [www.lincolninsti.edu], the Local Government Commission [www.lgc. org], the Nature Conservancy [www.nature.org], the Trust for Public Lands [www. tpl.org], Smart Growth America [www.smartgrowthamerica.org], the Smart Growth Network [www.smartgrowth.org] and its <u>Getting to Smart Growth: 100 Policies for</u> <u>Implementation</u> [www.smartgrowth.org/pdf/gettosg.pdf], and the U.S. Green Building Council [www.usgbc.org]. In Florida, resource organizations include the Department of Community Affairs [www.dca.state.fl.us], the Department of Environmental Protection [www.dep.state.fl.us], 1000 Friends of Florida [www.1000fof.org], and Florida's regional planning councils [listed at www.nefrpc.org/links.htm].

Renewable, Green Energy

Renewable, green energy sources come from natural sources such as the wind, sun, tides, and geothermal heat that are constantly being replenished and will not run out. Examples include electricity generated from solar power, wind power, hydrogen, hydropower, and biomass (the organic matter that makes up plants). Biomass and biofuels can also be used to power transportation. Renewable energy sources are in contrast to energy from fossil fuels, such as coal, oil, and natural gas, which draw on nonrenewable sources that will diminish over time and are nonrenewable. According to the National Renewal Energy Laboratory, most renewable energy comes directly or indirectly from the sun in the form of solar energy that can serve a variety of uses, including heating, cooling, and lighting homes and other buildings, hot water heating, and commercial and industrial uses.

Local Government

- Require the purchase of energy from renewable, green sources; purchase renewable energy certificates (a shorter term action). Green energy certificates (also known as green tags or tradable renewable certificates) represent the environmental attributes of power generated from renewable electric plants.
- Install solar thermal and solar photovoltaic systems (systems that use semiconductor materials to convert sunlight to electricity) in government facilities.



GO GREEN TALLAHASSEE

Tallahassee's Go Green initiative uses a multi-prong approach to reducing the city's energy consumption and making the city greener. The Trousdell Gymnastic and Aquatic Center has a 10 kilowatt photovoltaic (PV) solar electric generation system that provides up to 14,000 kilowatts of electric power a year, enough to run the average 1,500-square foot home in Tallahassee. Because it is connected to the grid, the PV system provides power for general distribution to the rest of the city when not being used at the Aquatic Center. The system joins the 18 kilowatt solar system at the Capital Center Office Complex (which has ten 18,000 watt electric vehicle parking spaces) and a 12 megawatt hydroelectric plant. Other solar initiatives include:

- A roof-mounted city hall solar thermal unit to heat water
- \$450 rebates and loans for solar water heating systems on homes or businesses as part of an energy efficiency loan program
- Solar PV power net metering
- Use of solar panels at Florida State University and Florida Agricultural and Mechanical University
- Green Power Choices, which enables consumers and businesses to choose energy from three different products and blends of green power

Additional initiatives include a new green solid waste service building, a biodiesel fuel production facility that creates fuel from cooking oil, and a new 1.2 million gallon/day water reclamation facility. (More information on Go Green Tallahassee is available from www.talgov.com/communications/green.cfm.)

- Generate electricity from landfill or wastewater methane or refuse (discussed below in Waste Management).
- Require use of alternative fuels in city fleets (discussed below in Transportation).

Community

- Create financial incentives for greater use of renewable energy in new construction and in existing buildings.
- Launch green power programs for citizens and businesses.
- Conduct education programs on the benefits of alternative fuel vehicles.

In Florida, a principal resource for information about renewable fuel sources is the Florida Energy Office (www.dep.state.fl.us/energy), the state's primary center for energy policy. In addition to developing and implementing Florida's energy policy, the Energy Office coordinates all federal energy programs delegated to the state. Under the state's Energy Future program, the office is also focusing on advancing clean energy sources, energy conservation, and efficiency through the promotion of hydrogen power, solar energy, bio-based fuels, and clean vehicles. As a part of this focus, the Energy Office maintains a Directory of Biofuels (biodiesel and ethanol) Retailers in Florida and offers a number of financial incentives to businesses, organizations, and residents seeking to use renewable energy technologies (www. dep.state.fl.us/energy/incentives.htm). Those incentives include a Solar Energy Systems Rebate Program, a Renewable Energy Technologies Grant Program, a Renewable Energy Technologies Tax Incentives Program, and the Florida Farm to Fuel Grant Program (described below).

The Department of Agriculture and Consumer Services, through its Florida Farm to Fuel Program (www.floridafarmtofuel.com), is assisting Florida farmers and ranchers with the production of bio-fuel crops to help reduce the nation's dependency on foreign oil. The department is partnering with the Florida Department of Financial Services to explore how Florida's economy could be affected by climate changes and the state's opportunities to expand renewable energy sources (www. floridaclimatechange.com). The Department of Agriculture and Consumer Services also sponsors an annual Farm to Fuel Summit (www.floridafarmtofuel.com/summit_2007.htm).



FLORIDA GOLD COAST CLEAN CITIES COALITION

The Florida Gold Coast Clean Cities Coalition is a public/private advisory board composed of state legislators and representatives from local governments, federal and state agencies, and the private sector who, consistent with the goals of EPA's Clean Cities program, promote practices that contribute to the reduction of petroleum consumption. The role of the coalition is to maximize the use of vehicles that operate on clean alternative fuels throughout the five-county Gold Coast area (Broward, Martin, Miami-Dade, Monroe, and Palm Beach counties). The coalition was created in 1993 by Executive Order of the Governor as part of the Clean Cities program. The coalition works to:

- Reduce dependence on imported oil and improve the environment by creating a sustainable alternative fuel market through the support and promotion of clean fuels.
- Increase the acquisition and use of alternative fuel vehicles.
- Develop an alternative fuel infrastructure.
- Contribute to economic development through the support of the alternative fuel industry.
- Promote the benefits of using alternative fuel vehicles.
- Gain legislative support and funding for alternative fuel vehicle programs.

The coalition has conducted training and extensive public outreach to promote the use and benefit of alternative fuel vehicles. The South Florida Regional Planning Council provides staff support through a contract with the Florida Department of Community Affairs. (*More information on the Gold Coast Clean Cities Coalition is available from www.sfrpc.com/fgcccc.htm.*) At the national level, the EPA and the U.S. Department of Energy provide information on renewable, green power. EPA programs include the Green Power Partnership (www.epa.gov/greenpower), which encourages organizations to buy green power in order to decrease the environmental impacts associated with conventional electricity use and the Landfill Methane Outreach Program (www.epa. gov/lmop). EPA also offers fact sheets on biofuels (www.epa.gov/SmartwayLogistics/growandgo/info.htm) and Renewable Energy Pollution Prevention (www. epa.gov/solar), a web site addressing the pollution prevention benefits of using renewable energy and ways to obtain electricity from green power marketers and utilities. The Department of Energy's Green Power Network (www.eere.energy. gov/greenpower), operated and maintained by the National Renewable Energy Laboratory (www.nrel.gov/learning), provides news and information on green power markets and related activities. The Clean Cities Program (www.eere.energy. gov/cleancities), another Department of Energy initiative, works with a network of volunteer coalitions that develop public/private partnerships to promote alternative fuels and vehicles, fuel blends, fuel economy, hybrid vehicles, and idle reduction. Organizations providing green power in each state are listed at www.eere. energy.gov/greenpower/buying/buying_power.shtml.

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Remaining Balances as of November 26, 2007 **Fiscal Year Fiscal Year** Energy Act Program 06-07 07-08 Solar Rebate \$0 \$1,190,802.98 Renewable Grant Program \$0 \$12,500,000.00 Renewable Tax Credit Hydrogen (Vehicles) \$3,000,000.00 \$3,000,000.00 Hydrogen (Stationary Fuel Cells) \$1,500,000.00 \$1,500,000.00 **Biofuels Infrastructure** \$3,152,517.38 \$6,500,000.00 Renewable Sales Tax Refund Hydrogen (Vehicles) \$0 \$2,000,000.00 Hydrogen (Stationary Fuel Cells) \$0 \$1,000,000.00 **Biofuels Infrastructure** \$0 \$996,017.40

FLORIDA ENERGY OFFICE RENEWABLE ENERGY TECHNOLOGY FINANCIAL INCENTIVES

The Florida Energy Office offers a number of financial incentives to businesses, organizations, and residents seeking to use renewable energy technologies. Those incentives include:

- Solar Energy Systems Rebate Program
- Renewable Energy Technologies Grant Program
- Renewable Energy Technologies Tax Incentives Program
- Florida Farm to Fuel Grant Program

(More information on Florida incentives for renewable energy technologies is available from www.dep.state.fl.us/energy/ incentives.htm.)

Transportation

As the contributor of 40 percent of Florida's GHG emissions, the state's transportation sector needs to address mobility and local government fleet emissions. Changes in those areas can decrease Florida's GHG emissions. Transportationrelated strategies that should be used in combination to reduce GHG emissions include reducing vehicle miles of travel and trip frequency, increasing vehicle efficiency, and using biofuels.

Mobility

Mobility issues in Florida are directly linked to land use planning – where development is located and the proximity of daily needs (shopping, job centers, and schools) to where people live. The more removed and separated those uses are, the further and more often people have to drive each day, thus making the use of alternative forms of transportation less likely. This means that to reduce GHG emissions, communities can make a big difference by changing local zoning and planning regulations and establishing incentive programs to enable and promote the creation of more walkable, mixed-use, and compact developments that support transit and reduce the need to drive to take care of daily needs. Those strategies should be coupled with others calling for interconnected streets (discussed in the Transportation chapter) that provide additional and more direct routes.

Local Government

- Encourage and provide incentives to employees who car- or van-pool, use public transportation, or non-motorized transportation (walking or biking) to get to work. Incentives can include free bus passes and reserved parking at city or county buildings for employees who carpool.
- Facilitate telecommuting and use of flex time to reduce the number of peak hour trips.
- Encourage the use of teleconferencing.
- Use municipal parking pricing to deter travel by car, particularly single-occupancy vehicles.

Community

• Encourage and provide incentives for companies to motivate employees to switch to public transportation, carpooling, biking, and telecommuting and find other ways to save energy and reduce GHG emissions on the way to and from work.

UNIVERSITY OF FLORIDA COMMUTER INCENTIVE PROGRAM

In 2005, the University of Florida (UF) was named to EPA's first Best Workplace for CommutersSM list. To encourage alternative modes of transportation, the UF Office of Sustainability offers:



- A carpool program that includes guaranteed parking at a substantial discount at convenient locations throughout campus and access to free emergency rides home for twoperson carpools and the UF GreenRide online service to find carpool partners.
- Fare-free student and employee use of the Regional Transit System and convenient bus shelters.
- For bicycles, a system of bicycle lanes and paths, no required decal, and plenty of parking for bicycles as well as motorcycles and scooters (at a reduced price).
- To encourage walking, a campus core with shaded improved walks, restricted auto access, and construction of off-campus sidewalks to make walking to campus easier (a collaboration with the city of Gainesville).
- Increased number of and requirements for hybrid and electric cars.
- Flexcar, a unique car-sharing service that offers members affordable hourly access to vehicles for errands, meetings, or personal use.
- Free Campus Cab service providing point-to-point on and nearby off-campus transportation for faculty and staff on official business.

The goal is to make the university's operations, education, research, and outreach a model of sustainability. (Additional information on the University of Florida's being named to the EPA's Best Workplaces for CommutersSM list is available from http://news. ufl.edu/2006/05/23/uf-commuters. Information on the university's Office of Sustainability is available from www.sustainable.ufl.edu.)

- Educate employers and their employees on the benefits of programs that encourage taking alternative forms of transportation to work and reducing the number of drive-along commuting trips.
- Improve traffic light synchronization and, although not related to mobility, install energy-efficient traffic lights (for example, advanced light-emitting diode [LED] technology that can reduce power consumption by 90 percent and last ten times longer than incandescent lighting).
- Develop and promote bus rapid transit.
- Implement a community-wide trip reduction program, including car-sharing.
- Allow additional density near transit as an incentive to use transit.
- Create high occupancy vehicle lanes or other demand management practices such as lane reversals and road pricing (a charge applied for the use of a certain type of road or vehicle or for the use of a road at specific time of day, using for example, a toll, fuel tax, license fee, or congestion fee).
- Implement infrastructure programs to make bicycling (bike lanes, conveniently placed bike racks, and bike racks on city or county buses) and walking more convenient (for example, wider sidewalks and traffic calming). Additional strategies to encourage walking and biking, as well as transit, are discussed in the Transportation chapter under Complete, Walkable Streets.

Fleet Emissions

Actions local governments can take to reduce fleet emissions relate to both conservation and use of alternative fuels. Local governments have access to a wide variety of strategies to reduce fleet emissions, including retiring older, more inefficient and infrequently used vehicles (trucks and buses as well as cars) and purchasing smaller and more fuel-efficient vehicles (discussed in the Renewable, Green Energy tool section).

Local Government

- Retire older, more inefficient, and infrequently used vehicles. When purchasing new vehicles, select ones that are smaller and more fuel-efficient (hybrid or alternative fuel). Minimum fuel efficiency standards should be part of vehicle purchasing programs.
- Restrict idling at local government buildings.
- Install alternative fueling stations for government-owned vehicles.
- Provide more bicycles and more fuel-efficient vehicles, such as scooters, for law enforcement personnel.



PALM BEACH COUNTY URBAN REDEVELOPMENT AREA (URA) PLANNING STUDY AND CORRIDOR MASTER PLAN

The URA (an urban area comprising approximately 30 square miles in central Palm Beach County) Planning Study and Corridor Master Plan outline redevelopment recommendations with a particular emphasis on principal north-south roads (Military Trail and Congress Avenue). The Palm Beach County Board of County Commissioners initiated the study and plan to promote mobility in the area and discourage sprawl. Based on comments from residents, strategies focus on reshaping the current form of development (low-density, single-use buildings that require a car to get around and streets that are unfriendly to pedestrians). The goal is a more urban environment that offers walkable, mixed-use, higher-density places which support greater use of transit, more pedestrian-friendly streets, and more green spaces (trees, parks, medians, greenways). Strategies include spacing mixed-use infill development that incorporates transit facilities throughout the Military Trail and Congress Avenue corridors (no greater than one mile apart) and on main intersections linking north-south and east-west transit routes. Other strategies to enhance mobility include improving north-south connectivity and corridor capacity through the redevelopment of parcels as opportunities arise, improving neighborhood street connectivity, and laying the framework for improved transit on east-west corridors (for example, fast bus, bus rapid transit, and light rail). (More information is available from the Treasure Coast Regional Planning Council [www.tcrpc.org/departments/studio/ura_pbc/ ura_home.htm].)

- Use car-sharing programs where possible instead of a large city fleet, thereby reducing the light-vehicle fleet.
- Improve vehicle performance through enhanced maintenance.
- Eliminate SUVs from local government use in all non-emergency applications; when SUVs are required, consider purchasing gas-electric vehicles.

Community

- Educate residents and businesses on the benefits of using fuel efficient vehicles.
- Promote the use of alternative fuel school buses and taxis.
- Restrict idling at public facilities.
- Open local government alternative fueling stations to the public.
- Provide electric plug-in stations at truck stops and marinas and ports.

Two principal sources of information on transportation strategies to reduce GHG emissions are the U.S. Department of Energy and the EPA. The website entry to Department of Energy information is www.doe.gov/energyefficiency/transportation.htm. The department offers a number of programs, including its Freedom-CAR, Fuel Initiative, Clean Cities Program, and Alternative Fuels Data Center. EPA's transportation-related programs to improve air quality and reduce GHG emissions are listed at www.epa.gov/cleanenergy/stateandlocal/support.htm#3. Those programs encourage the use of renewable fuels, efficient freight transport, diesel retrofit technologies, idling reduction, and alternatives to single occupancy travel. EPA's transportation initiatives include the Best Workplaces for CommutersSM program (www.bestworkplaces.org/index.htm), which is a voluntary business-government program that provides national recognition and resource tools to employers offering commuter benefits such as free or low cost bus passes, strong telework programs, carpool matching, and vanpool subsidies. (In October 2007, the University of South Florida's Center for Urban Transportation Research [CUTR] assumed program management responsibilities for the Best Workplaces for CommutersSM program.) Other EPA programs are the National Clean Diesel Campaign, focused on reducing emissions from diesel fleets, and the SmartWay Transport Partnership that is working to improve the environmental performance of freight operations. EPA also publishes a Green Vehicle Guide that provides fuel economy and emissions information for new cars and light trucks. Additional resources are the Center for Clean Air Policy's Emissions Guidebook (www.ccap. org/guidebook) and the U.S Department of Transportation's Urban Partnership



U.S. ENVIRONMENTAL PROTECTION AGENCY HEAT ISLAND REDUCTION INITIATIVE

This initiative gives communities information and technical assistance to address the impacts of higher urban temperatures, which can be up to 10 degrees higher than rural surroundings. Heat islands form as cities replace natural land cover with pavement, buildings, and other infrastructure. The changes contribute to higher urban temperatures by displacing trees and vegetation, heating air trapped between tall buildings and narrow streets, and reducing air flow. Heat islands also result from the waste heat from vehicles, factories, and air conditioners. As shown in the graphic above, a city's heat island profile is typically warmer in more dense urban areas and lower at the urban-rural border. By planting trees, installing reflective roofs and pavements, and creating more parks, open land, and water, communities can benefit from lower air temperatures, improved air quality, and energy savings that, in turn, reduce greenhouse gases. (More information is available from www.epa. gov/heatisland.)

program (http://ops.fhwa.dot.gov/speeches/ntoc2007/index.htm), which is aimed at reducing congestion on the nation's transportation systems. Metropolitan organizations participating in the program commit to pursuing the "Four Ts" – tolling, which involves broad applications of congestion pricing; transit; telecommuting; and technology.

The leading resource organizations with expertise on improving mobility and reducing vehicle miles of travel are listed in the Land Use Planning and Development and Transportation chapters. Additional information on strategies to reduce fleet emissions is available from DEP's Energy Office [www.dep.state.fl.us/energy] and many of the organizations listed above under Renewable, Green Energy.

Urban Landscape

In urban areas, a critical element of reducing GHG emissions involves the protection of green space and vegetation because they absorb urban heat caused by heat islands, sequester carbon, reduce flooding, and clean stormwater runoff. Trees also provide shade from the sun.

Local Government

• Plant shade trees around local government buildings and in and around parking lots and garages.

Community

- Start an Urban Forest or Plant-A-Tree program.
- Preserve open space and create greenways (discussed in the Natural Systems Conservation chapter).
- Maintain and restore parks.
- Establish a Transfer of Development Rights Program to move density from open space areas to be protected to areas suitable for development (discussed in the Agricultural Land Conservation chapter).
- Establish a green payment program (described in the Agricultural Land Conservation chapter) to compensate farmers for providing cropland that can store carbons, using practices such as no-till farming, and planting grasses and trees.



JACKSONVILLE TREE PROGRAMS

The City of Jacksonville is focused on making the city green with trees.

- Under the Green It Up! Program, nonprofit and volunteer organizations may apply for the Jacksonville Electric Authority's (JEA) Community-Tree Program that is granting 300 thirty-gallon trees each year for the next three years. Organizations must be within the JEA service area, and each applicant can receive up to 25 trees.
- Greenscape of Jacksonville, a nonprofit organization created to plant trees in the city. Greenscape works on a wide range of tree projects (in neighborhood parks, around schools, and along major roadways and interchanges). The goal is to ensure a healthy tree canopy through planting new trees, maintaining existing trees, and making the community more aware of the benefit of trees. Since 1987, some 180,000 trees have been placed in Jacksonville in cooperation with neighborhood and community groups. Planting trees was also part of a variety of projects to make Super Bowl XXXIX in Jacksonville a green, carbon neutral event.

(More information on Jacksonville's tree programs is available from www.coj.net/Departments/Environmental+Resource+Management/ Clean+It+Up+2, http://jea.com/community/communitree.asp [the Green It Up! Program], and www.greenscape.com [Greenscape of Jacksonville].) Two useful documents related to the multiple values of trees to urban areas are:

- Summary Report of Calculated Public Tree Values and Benefits for Historic Springfield District and Mandarin Road: The City of Jacksonville, Florida prepared in 2001 by the city's Urban Forester. The report documents the public values of trees using the U.S. Forest Service's STRATUM (Street Resource Analysis Tool for Urban Forest Managers) Benefit Model. The results quantify the following benefits of trees in two test neighborhoods: energy savings, avoided and sequestered carbon dioxide, air quality, stormwater reduction, and aesthetic, property value, social, and economic benefits. The conclusion: a per tree cost of \$12.52 and a total benefit of \$56.52 means a net per tree benefit of \$44.00.
- Urban Ecosystem Analysis: City of Jacksonville, Florida, a study by American Forests in conjunction with the state of Florida and the City of Jacksonville. The study highlights the ecosystem services that Jacksonville's urban tree canopy (their natural capital) provides. According to the report, the city's urban tree canopy saves money on managing air and water quality, helps meet environmental regulations, and fulfills city environmental protection goals. The Urban Ecosystems Analysis enables city decision-makers to calculate the value of their green infrastructure and apply that information to their planning and investment decisions.

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UNIVERSITY OF MIAMI GREEN U

Green U, a program established to enhance the University of Miami's sustainable initiatives, focuses on acquiring environmentally responsible products and practicing

ecologically sound maintenance and operations. Recycle U, a student-driven initiative with a goal to increase the entire university community's awareness of recycling, is working. In 2006, 3,941 pounds of batteries, 17,689 pounds of lamps, 2,062 gallons of oil, and 1,155 units of electronic parts, such as computer screens and keyboards, were recycled. To encourage recycling, containers have been placed throughout the campus, student organizations are implementing contests and promotions, and the university Green Team is participating in Recycle Mania 2007, a friendly competition among U.S. college and university recycling programs.

Additional Green U initiatives include:

- A 50 percent discount on parking permits for employees and students who drive hybrid vehicles with federal mileage ratings of at least 29 miles per gallon
- Using electric vehicles, including scooters
- Use of biodiesel for the Hurry Cane Shuttle fleet
- Using green LEED[®] approved building and operations practices

(More information is available from www.miami.edu/staticfiles/UM/FTP/umgreen.)

and, in Florida, [www.nationaltreetrust.org/states/?state=FL]; the National Association of Conservation Districts [www.nacdnet.org]; and the Urban and Community Forestry Program [www.fs.fed.us/ucf], a program of the U.S. Department of Agriculture Forest Service.

Waste Management

Waste management tools to conserve energy and reduce GHG emissions focus mainly on reducing, recycling, and reusing waste. Reduction (often called waste prevention or source reduction) programs address consuming and throwing away less – that is, they prevent the generation of waste. Strategies include purchasing durable, long-lasting goods; seeking products and packaging that are as free of toxins as possible; and redesigning and purchasing products that use less raw material in production, have a longer life, or can be reused.

Reuse programs promote selling, repairing, or donating products to charity and community groups. Reusing products can be better than recycling because the item does not need to be reprocessed before it can be used again.

Recycling programs turn materials that would ordinarily become waste into valuable resources. In addition to preventing GHG emissions, reducing water pollutants, and saving energy, recycling provides economic benefits through jobs created by companies engaged in recycling and reduces the need for new landfills and incinerators. In a recycling program, materials such as glass, metal, plastics, and paper are collected, separated, and processed into new materials or products. (EPA estimates that, nationwide, curbside recycling programs, along with drop-off and buy-back centers, resulted in a diversion of about 32 percent of the nation's solid waste in 2005.) Composting, another form of recycling, involves the controlled biological decomposition of organic matter, such as food and yard wastes, into humus that can be used in vegetable and flower gardens, landscaping, and many other applications.

Local Government

- Establish an internal program to recycle paper, plastic, metal, and other products, including printer ink cartridges.
- Purchase refillable pens.
- Require use of durable coffee mugs in offices and at meetings.

EXAMPLES OF WASTE REUSE STRATEGIES

- Use durable coffee mugs.
- Use cloth (not paper) napkins or towels.
- Refill bottles.
- Donate old magazines or surplus equipment.
- Reuse boxes.
- Use empty jars as containers for leftover food.
- Purchase refillable pens and pencils.
- Participate in a paint collection and reuse program.
- Donate office equipment such as computers, printers, and furniture to charities.

- Enact purchasing guidelines that emphasize materials and products with recycled content.
- For waste that must be land-filled, capture the resulting methane and utilize it as a clean, renewable source of energy.
- Use two-sided printing and copying.
- Buy supplies made with recycled content.
- · Consider leasing programs to ensure reuse and recycling.
- Donate used equipment, along with magazines and publications, to schools or other organizations.
- Set up a paint collection program and donate the paint to a local charity for distribution to needy families.
- Require that city or county fleet facilities implement or improve recycling programs for tires, batteries, brakes, solvents, and oils.
- Require that debris collected through trimming trees and cutting grass on public property (parks, medians, around government buildings) be composted and reused as mulch.

Community

- Set recycling goals and monitor results.
- Educate businesses and residents on waste reduction, reuse, and recycling strategies (outlined above) and their benefits.
- Expand community recycling programs. For example, establish a large trash pick-up day and extend recycling to include organic and yard debris collection and composting.
- Implement and educate the public on penalties for non-compliance with recycling programs.
- Establish a Pay-As-You-Throw (PAYT) Program (an EPA initiative that asks households to pay a variable rate depending on the amount of waste they throw away [www.epa.gov/osw/conserve/onthego/index.htm]).
- Establish a Recycle on the Go program (an EPA initiative [www.epa.gov/ epaoswer/non-hw/payt/index.htm]). The program involves placing recycling containers where large numbers of people gather, such as parks, stadiums, transportation hubs, special event venues, and shopping centers.

Greenhouse Gas Emissions Orange County Government



ORANGE COUNTY CLIMATE CHANGE ACTION PLAN

In September 2005, Orange County launched a mayor-led initiative to become a Florida Green Local Government by 2008 and reduce county petroleum consumption by 20 percent over the next five years. In 2007, the county established goals for reducing GHG emissions and sponsored the Orange to Green Climate Change Summit to explore the actions the county must take to reduce GHG emissions. Initial steps include designating a county staff member and an elected official to serve as liaisons to ICLEI'S Cities for Climate Protection and developing a Climate Change Action Plan that outlines policies and measures, along with a timeline, assignments, benchmarks, and financing plan. With the assistance of ICLEI, the county conducted a baseline inventory of emissions from governmental operations and developed an emissions forecast. (Over time, the county plans to incorporate overall community emissions into the inventory and work with the community on potential solutions.) Summarized above in tons, the GHG emissions were calculated using ICLEI's Clean Air Climate Protection software. Using the year 2005 as a base, the Climate Change Action Plan sets targets for reducing projected GHG emissions: 15% by 2010, 28% by 2015, and 40% by 2020. To achieve that, the county plans to move ahead with a number of initiatives, including programs for renewable energy, green procurement and green building, community education, methane recovery, and biomass energy. (More information on Orange County's Climate Change Action Plan is available from www.orangecountyfl.net/cms/default.htm.)

In Florida, the Department of Environmental Protection, through its Division of Waste Management (www.dep.state.fl.us/mainpage/programs/waste.htm), offers information and technical assistance on recycling programs. Division programs include the Recovered Materials Dealers Certification Program, the Construction and Demolition Debris Facilities Reporting Program, and the Green Lodging Program that requires lodging facility improvement in the areas of communication, water conservation, energy efficiency, waste reduction, and clean air practices. Financial programs to encourage recycling include the Innovative Recycling and Waste Reduction Grants Program, a loan program for businesses that engage in recycling; and a Recycling and Reuse Business Assistance Center (www.dep.state. fl.us/waste/categories/recycling/pages/rbac_program.htm). The EPA also offers information about programs to reduce, reuse, and recycle wastes (www.dep.state. fl.us/mainpage/programs/waste.htm) and sponsors a number of waste management programs - the Landfill Methane Outreach Program (www.epa.gov/lmop), Waste-Wise (www.epa.gov/epaoswer/non-hw/reduce/wstewise/climate/index.htm), and the Responsible Appliance Disposal Program (www.epa.gov/ozone/snap/emissions/radp.html).

Addition resources on waste reduction, reuse, and recycling include Florida's America Recycles [www.dep.state.fl.us/waste/categories/recycling/AR/2006/ar06.htm], the International City/County Management Association [www.icma.org], the Local Government Commission [www.lgc.org], the National Recycling Coalition [www.nrc-recycle.org], Recycle Florida Today [www.recyclefloridatoday.org], the Southern Waste Information Exchange [www.wastexchange.org], and the University of Florida TREEO Center [www.treeo.ufl.edu/sw].

Water and Wastewater

Strategies related to water and wastewater focus on energy costs and efficiencies. Local governments can take actions to:

• Improve plant efficiency through the installation of more energy efficient motors and variable frequency drives on water pumps. (A variable frequency drive is an electronic controller that adjusts the speed of an electric motor which matches motor speed to the specific demands of the work being performed, thereby enabling pump operators to fine-tune processes while reducing costs for energy and equipment maintenance.)



GREEN WORKS ORLANDO

Green Works Orlando is the result of a multi-department green team convened by the mayor to develop a comprehensive climate change action plan. Sustainable Infrastructure and Conservation, one of the five pillars of the city's program, focuses on expanding three wastewater treatment plants that produce reclaimed water used to irrigate golf courses, apartment complexes, medians, schools, and parks, thereby reducing the demand on the Florida aquifer by over 50 million gallons per day. Additional strategies include assessing the feasibility of a private solid waste gasification facility, pilot testing a green power reactor that will utilize waste water sludge, and adopting green office standards. The four other Green Works pillars focus on:

Energy Efficiencies and Green Buildings – Design all new municipal buildings to achieve appropriate green building standards.

Transportation – Transition the city fleet to bio-diesel and other alternative fuels within the next five years, convert stop lights and pedestrian signals to Light Emitting Diode technology, implement a downtown car sharing program, and enhance transportation choices.

Green Spaces – Restore the city's tree canopy within five years through a 10,000 Trees Initiative (a strategy that includes mapping the tree canopy with the goal to have 40 percent coverage) and promote community gardens, green roofs, more parks, and the protection of wetlands to sequester carbon dioxide.

Advocacy in Education – Encourage employees, the public, and businesses (through the Green Business incentive and education program) to live green.

(More information on Green Works Orlando is available from www. cityoforlando.net/elected/greenworks.)

- Capture digester gases from wastewater reclamation plants and use them to produce electricity, a practice that can make water treatment plants energy self-sufficient while promoting the sale of excess power to the local energy grid. (Wastewater digester gas can serve as a fuel substitute in equipment such as boilers, hot water heaters, reciprocating engines, and turbines.)
- Improve water distribution systems and leak detection and management.
- Use secondary water from treatment plants for irrigation.

Description A number of water planning resource organizations are listed in the Water Resource chapter. Other sources of information about water and wastewater management include the EPA through its ENERGY STAR Program [http://energystar.gov/index. cfm?c=government.bus_government_local] and its Office of Wastewater Management [www.epa.gov/owm]; the Florida Department of Environmental Protection's Office of Wastewater Management [www.dep.state.fl.us/mainpage/programs/wastewater.htm]; the Florida Water Environment Association [www.fwea.org]; and the Water Environment Federation [www.wef.org/Home].

COASTAL PLANNING TOOLS

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I lorida, known for its inviting coasts, has approximately 8,400 miles of tidal coastline that is inextricably linked to the state's way of life, economy, natural systems, and recreational opportunities. They are an essential component of the state's estimated \$53 billion tourism industry, which contributes an estimated 700,000 jobs to the state, drawing some 29 million tourists each year; its recreational and commercial fishing activities, which inject some \$6.6 billion into Florida communities; and its boating industry, which contributes an additional \$14.6 billion. Coastal areas are also a critical part of the state's diverse natural systems. According to DEP, 43% of the federally listed threatened or endangered species rely directly or indirectly on wetlands for their survival. Over 70% of commercially important fish and shellfish species are dependent on estuaries, and the types of habitat that exist within the state's protected areas include salt marsh, sea grass meadows, coral reefs, tidal flats, mangrove forests, spring-fed rivers, and freshwater marshes.

Demonstrating the appeal of Florida's coasts, 80 percent of the state's residents live in coastal counties. However, the concentration of population in coastal counties, coupled with more intense hurricanes and rises in sea level from global warming, is resulting in eroding beaches, threatened habitat, and a loss of working waterfronts and public waterfront access. Recognizing the importance of its coastal resources, the state of Florida requires that coastal communities include a coastal element in their comprehensive plans. Communities are also addressing coastal threats through a number of planning tools, including Beach Management Plans, Estuarine Conservation Plans, Marine Cleanup Programs, and Working Waterfront Plans.

COASTAL RESOURCE REPORTS

- Florida's Coastal and Ocean Future: A Blueprint for Economic and Environmental Leadership provides an analysis of Florida's coastal assets and the threats to those assets and includes a blueprint for how local leaders and decision-makers can take actions to protect Florida's marine and coastal ecosystems (authored in 2006 by the Caribbean Conservation Corporation & Sea Turtle Survival League, the Clean Water Network of Florida, the Environmental Defense Fund, the Natural Resources Defense Council, the National Wildlife Federation, Reef Relief, the Surfrider Foundation, and the Ocean Conservancy). [www. environmentflorida.org/reports/preservation/preservationprogram-reports/floridas-coastal-and-ocean-future-ablueprint-for-economic-and-environmental-leadership]
- Phase I: Facts and Figures, Florida's Ocean and Coastal Economies describes the economic activities in Florida's coastal geographies, including social and economic changes between 1990 and 2004 (prepared in 2006 by the National Ocean Economic Program for the Florida Department of Environmental Protection). [http://noep.mbari.org/Download/Fl_facts.asp]

Florida's DEP is a principal resource for coastal management tools. Its Coastal Management Program (www. dep.state.fl.us/cmp/) is based on a network of agencies implementing 23 statutes that protect and enhance the state's natural, cultural, and economic coastal resources. The goal of the program is to coordinate local, state, and federal activities to ensure that Florida's coast will be as valuable to future generations as it is today. The program also provides grants for priority projects that protect coastal resources and communities. Another valuable resource is the National Oceanic and Atmospheric Administration (NOAA), through its Office of Ocean and Coastal Resource Management (http://coastalmanagement.noaa.gov). That office administers the National Coastal Zone Management (CZM) Program, a voluntary partnership between the federal government and coastal states and territories authorized by the Coastal Zone Management Act of 1972. It is also responsible for advancing national coastal management objectives and maintaining and strengthening state and territorial coastal management capabilities. Two other national resource organizations include Coastal America (www.coastalamerica.gov) and the National Ocean Economic Program (http://noep.mbari.org). Coastal America has a network of Coastal Ecosystem Learning Centers established in 1996. The three centers in or near Florida's coasts are the Dauphin Island Sea Lab on Dauphin Island, Alabama (www.coastalamerica.gov/text/dauphin.html); the International Game Fish Association's Fishing Hall of Fame and Museum (www.ifga.org) in Dania Beach; and the Florida Aquarium (www.flaquarium.org), located in Tampa.

□ Information is also available from the Coastal States Organization [www.coastalstates.org], the National Resource Defense Council [www.nrdc.org], the Ocean Conservancy [www.oceanconservancy.org], and Reef Relief [www.reefrelief.org]. In Florida, valuable coastal resources include, the Caribbean Conservation Corporation & Sea Turtle Survival League [www.cccturtle.org], which is the oldest sea turtle conservation organization in the world and uses research, training, advocacy, education, and protection of habitat to protect sea turtles; the Center for Urban and Environmental Solutions at Florida Atlantic University [www.cuesfau.org] that, through its Coastal and Ocean Initiative, focuses on the management, planning, policy, and economic aspects of coastal and ocean issues; 1000 Friends of Florida [www.1000fof.org], which offers publications on buying and developing in coastal areas and has worked with the state on its working waterfront program. Other sources of information are the Clean Water Network of Florida [www.cleanwaternetwork-fl.org], Audubon of Florida [www.audubonofflorida.org], the Florida Chapter of the Nature Conservancy [www.nature.org/florida], and the Florida Wildlife Federation of Florida [www.fwfonline.org].

Beach Management Plans

Beach management plans provide Florida coastal communities a way to protect the important functions of the state's 825 miles of sandy coastline. Those functions include providing habitat to hundreds of species of plants and animals dependent upon the beaches, dunes, and near-shore waters for all or part of their lives; recreational opportunities for tourists and residents; and a first line of defense during storms when the beach and dune systems act as a buffer between the storm waves and the coastal structures, absorbing





storm-produced energy and thus reducing damage to those structures. Although Florida's beaches are its signature resource, they are increasingly threatened by erosion. DEP's figures tell the story: over 485 miles, or approximately 59%, of the state's beaches are experiencing erosion. Currently, approximately 387 of the state's 825 miles of sandy beaches have experienced what is called critical erosion, a level of erosion that threatens development, recreational, cultural, and environmental interests. The DEP cites two primary causes of the erosion: storms and the construction and maintenance of navigation inlets. (Because of artificial deepening to accommodate larger vessels, many of the state's 60 inlets contribute significantly to beach erosion and the loss of sand.) Additional information is available from DEP's *Critical Erosion Areas Report* (http://bcs.dep.state.fl.us/reports/crit_ero.pdf), which provides an inventory of Florida's erosion problem areas.

The state's comprehensive beach management planning program was first adopted by the Legislature in 1986. The DEP's Bureau of Beaches and Coastal Systems is responsible for administering the beach management program, guided by the state's Strategic Beach Management Plan (www.dep.state.fl.us/beaches/programs/ bcherosn.htm#Statewide_Strategic_Beach_Managment_Plan). That plan is a multi-year repair and maintenance strategy to address the state's critically eroding shoreline through a comprehensive, long-range statewide program of beach erosion control; beach preservation, restoration, and nourishment; and storm and hurricane protection. The basic planning unit for the strategic plan is sub-regions that were chosen for their coastal uniqueness and continuity. (The strategic plan is implemented by a Long Range Budget Plan, which was put in place to move away from beach management that focused on local short term needs because of short-term budgeting.) Within each sub-region, coastal communities are required to prepare a Long-Range (ten year) Beach Management Plan. (The DEP provides assistance to communities as they develop their long-range plans.) When combined, those plans provide DEP a regional approach to beach management that facilitates coordination among local governments, lowers costs, and provides long-term solutions to beach erosion.

Two strategies for addressing the state's eroding shoreline are the Beach Erosion Control Program and the Coastal Construction Control Line.



Beach Erosion Control Program

The primary vehicle for implementing the state's beach management planning recommendations is the Florida Beach Erosion Control Program, which was established to facilitate coordination among local, state, and federal governmental entities to achieve the protection, preservation, and restoration of its coastal sandy beach resources. Under the program, financial assistance in an amount up to 50 percent of project costs is available to Florida's county and municipal governments, community development districts, or special taxing districts for shore protection and preservation activities located on Florida's coasts (the Gulf of Mexico, Atlantic Ocean, and the Straits of Florida). The state's rules and regulations related to beach restoration are implemented through the Beach and Shore Preservation Program (Chapter 161, Florida Statutes) and the Florida Beach Erosion Control Assistance Program (Chapter 62B-36, Florida Administrative Code). Allowable activities to preserve and restore the state's beaches must be consistent with the Strategic Beach Management Plan. Examples of those activities include physical restoration, such as beach restoration and nourishment, dune restoration and inlet sand transfer, and land use planning and regulatory actions, such as inlet management plans, erosion control overlay districts (see the Land Use Planning and Development chapter for a description of Overlay Zones), regulations for dune crosswalks, and erosion control easements (see the Agricultural Land Conservation chapter for a discussion of easements). Other eligible activities include project design, engineering and environmental studies, and monitoring.

Two strategies used in beach management plans to prevent beach erosion and to protect structures from the effects of coastal waves are structural stabilization approaches, called coastal armoring, and non-structural approaches. Coastal armoring comes in two different forms: hard structural stabilization (solid structures such as seawalls, groins, bulkheads, and jetties) and soft, non-structural stabilization (activities such as beach nourishment, dune restoration, strategic vegetative plantings, and sandfill that maintain natural shoreline dynamics and preserve coastal environments and habitat). Non-structural approaches to preventing erosion and protecting structures from the effects of coastal waves include land use controls, construction setbacks, and relocation or strategic retreat. Strategic retreat policies encourage the landward relocation of high risk coastal development, thereby reducing development pressure on highly erosive beaches and the need for repeti-



BREVARD COUNTY COASTAL CONTROL CONSTRUCTION LINE (CCCL) AND ARMORING POLICIES

To help achieve the goal of not damaging or destroying the function of coastal resources, the Coastal Management Element of Brevard County's Comprehensive Plan makes development seaward of the CCCL subject to a number of policies directed at protecting, enhancing, and restoring a naturally functioning beach management system. Those policies emphasize use of living or soft armoring techniques (at least 50 percent of native dune vegetation seaward of the CCCL must be maintained); give priority to setbacks and other non-structural methods of shoreline protection; and place strict limits on the use of hardening structures. No new shoreline hardening structures are permitted north of the Patrick Air Force Base property (a 10-mile long area). In unincorporated parts of the county south of the base or within the Archie Carr National Wildlife Refuge, no new shoreline hardening is allowed except by emergency revision to the Comprehensive Plan. Soft armor such as engineered geotextiles and bag systems must minimize adverse impacts to the naturally functioning beach and dune system by maintaining adequate sand cover to accommodate sea turtle nesting above the bags. It must be placed far enough landward to prevent adverse impacts to adjacent properties and not impede public access to or along the shore. The county may require softer armoring techniques, such as dune restoration and revegetation, as components or prerequisites to shoreline hardening approval. (More information on the Brevard County CCCL is available from www.brevardcounty.us/zoning/documents/COASTAL4_15_07r.pdf.) tive dredging and nourishment. Such a policy can be coupled with tools to encourage the private sector to build as landward as possible. Those tools might include:

- a dedicated funding source for strategically targeted coastal land acquisition
- a transfer of development rights program to transfer density away from erosive beaches and coastal waves (discussed in the Agricultural Land Conservation chapter)
- restrictive and rolling easements
- restrictive or appropriate setbacks when rebuilding after storms on critically eroded shorelines (including dune protection setbacks)
- redevelopment policies that encourage more landward siting of structures that are rebuilt after storm events
- tax incentives
- buyouts of condemned and repetitive loss properties
- full public disclosure of erosion rates

DEP provides numerous resources for communities seeking to establish a beach erosion program. They include its Coastal Engineering Section which provides technical support for the state's Beach Erosion Control Program through evaluations of coastal conditions, proposed beach and inlet management activities, and analysis of project monitoring data. In addition to DEP, NOAA's Office of Ocean and Coastal Resource Management provides resource information on shoreline management techniques such as coastal armoring and beach nourishment. One of its resources is the Living Shorelines section of its clearinghouse (http:// habitat.noaa.gov/restorationtechniques/public/shoreline_cbmap.cfm). Living Shorelines, as defined by NOAA, are those that provide living space for riverine, estuarine, and coastal organisms. Living Shorelines utilize a variety of bank stabilization and habitat restoration techniques to reinforce the shoreline, minimize coastal erosion, and maintain coastal processes while protecting, restoring, enhancing, and creating natural habitat for NOAA trust resources. Those techniques can include both soft stabilization and hybrid techniques that combine vegetative plantings with a small amount of reinforcing rock.

Coastal Construction Control Lines (CCCL)

The Coastal Construction Control Line (CCCL) Program is an essential element of Florida's coastal management program. While assuring reasonable use of private property, it provides protection for Florida's beaches and dunes from improperly sited and designed structures that can destabilize or destroy the beach and dune system. Adoption of a coastal construction control line establishes an area in which special siting and design criteria are applied for construction and related activities because of the greater forces expected to occur in the more seaward zone of the beach during a storm event. The legal context for the CCCL is Chapter 62B-33 of the Florida Administrative Code, which establishes the design and siting requirements that must be met to obtain a coastal construction control line permit. Approval or denial of a permit application is based upon DEP's review of the potential impacts to the beach dune system, adjacent properties, native salt-resistant vegetation, and marine turtles. DEP resource documents include Frequently Asked Questions about the Coastal Construction Control Line, which highlights the purpose of the CCCL program, the factors used to establish a control line, and when permits are required when rebuilding; Coastal Construction Items of Concern, which alerts an applicant to important beach topics such as the siting and foundation of structures, coastal armoring, turtle nesting, and vegetation and landscaping guidelines; and a Homeowner's Guide to the Coastal Construction Control Line (CCCL) Program.

Additional information on Florida's Beach Erosion Control Program is available from www.dep.state.fl.us/beaches/programs/er-contl.htm. Shoreline management information from NOAA is available at http://coastalmanagement.noaa.gov/programs/coast_div.html. Information on Florida's Coastal Construction Control Line Program is available from www.dep. state.fl.us/beaches/programs/cccl.

Clean Marina Programs

The Florida Clean Marina Program is a voluntary and proactive partnership created to help marine facilities, boatyards, marine retailers, and boaters become environmental stewards and comply with local, state, and federal environmental laws and rules. Participating marinas provide environmentally sound services to the public such as sewage pumpout stations, environmental education materials, and recycling containers. To earn the Clean Marina designation, facilities must demonstrate their commitment to protecting water and marine life by complying with environmental regulations and going beyond compliance by using best management waterway protection practices that address issues such as sensitive habitat, waste management, stormwater control, spill prevention, and emergency preparedness, along with staff training. Participants in the Clean Marina program are able to receive support, including technical assistance and grants, from a number of sources. Both the DEP and other Clean Marina participants (through a mentoring program) provide on-site assistance in implementing best management practices, and program participants, as well as those seeking program designation, may receive assistance through the Clean Boating Partnership and the DEP's six district Clean Marina coordinators. Other benefits of Clean Marina designation include reduced liability as a result of implementing best management practices; a potential for increased revenue as a result of recycling; educational information and items such as free spill kits from the DEP; and the potential of receiving a ten percent submerged land lease discount. (The ten percent discount is in addition to a 30 percent open to the public discount.) The DEP also recognizes Clean Marinas through press releases and information on the DEP website.

The Clean Boating Partnership is a public-private initiative composed of DEP staff, marina owners and operators, the Marine Industries Association of Florida, Florida Sea Grant, and the U.S. Coast Guard and Coast Guard Auxiliary. The partnership's educational and outreach programs target boaters, marinas, boatyards, and marine retailers through workshops, technical assistance, and conferences. DEP resource materials include best management practices guides on a variety of clean marina topics, including Hurricane Preparedness (removing boats and vessels from the water and securing them in a designated and safe location prior to the storm) and a Petroleum Spill Recovery Plan. Other materials include checklists and best management practices for clean marinas, clean boaters, clean boatyards, and clean marine retailers. NOAA, through its Coastal Management Program, also provides resource information on marine clean-up and marine debris programs. Activities related to marine debris include coastal and coral reef clean-ups, adopt-a-beach programs, well-placed garbage disposal and recycling



PENSACOLA SHIPYARD MARINE COMPLEX

The Pensacola Shipyard Marine Complex was one the first marinas in the state to receive Florida's Clean Marina designation. Its program has subsequently been honored by the Council for a Sustainable Florida. Clean Marina initiatives include:

- Upgrading stormwater catch basins
- Establishing recycling locations
- Updating their Stormwater Pollution Prevention Plan
- Developing training procedures for pollution spills and pollution prevention

As a result of participating in the program, the Pensacola Marine Complex has realized numerous benefits, including grants for pump out stations and pressure washing recycling systems; a free spill kit and containment units; and a ten percent discount on the state submerged lands fee. (More information on the Pensacola Shipyard Marine Complex is available from www.psmc.net.) containers in recreation areas, educational programs, and removal of derelict fishing gear. (The Clean Marina program is administered by the DEP's Division of Law Enforcement and is funded through grants from the U.S. Environmental Protection Agency (EPA) and NOAA.)

Dir Florida, more information on Florida's Clean Marina Program is available from DEP's website [www.dep.state.fl.us/cleanmarina/history/default.htm]; the Center for Environmental Education and Research Inc. [now doing business as Marine University], a not-for-profit corporation that promotes boating/water safety [www. marineuniversity.org]; the Clean Boating Partnership [www.floridadep.org/law/clean/ partners.htm]; Marine Industries Association of Florida [www.boatflorida.org]; and Sea Grant Florida [www.flseagrant.org]. Information on NOAA programs is available from its Clean Marina Initiative [http://coastalmanagement.noaa.gov/marine_deb.htm]] and marine debris program [http://coastalmanagement.noaa.gov/marine_deb.htm]].

Estuarine Conservation Plans

An estuarine system is often defined as the bodies of water along the coastline that are formed when freshwater from rivers flows into and mixes with saltwater from the ocean, resulting in a unique mixing of salt and freshwater in tidal cycles and creating and nurturing abundant natural life. Because of the nexus between coastal lands and water, estuaries are critical to the health of coastal environments and to Florida residents' enjoyment of them because of their significant conservation, recreation, ecological, historical, and aesthetic values. Estuarine Conservation Plans focus on protecting important estuarine areas that are threatened by conversion from their natural or recreational state to other uses. The plans typically share five features: they focus on a watershed, use science to inform decision-making, involve the public, emphasize collaborative problem-solving and include both community-based restoration projects and mitigation projects driven by regulatory requirements, and provide for an ongoing mechanism to monitor results. Such plans establish priorities for activities, research, and funding for the estuary and serve as a guide for future decisions and actions. They also address a wide range of environmental protection issues, including water quality, habitat, fish and wildlife, pathogens, land use, and introduced species. Typical restoration strategies focus on the protection of shorelines from erosion through the use of submerged and emergent breakwater reefs that promote the propagation of oysters, crustaceans, and fish and the creation of wildlife communities. Sea grass meadows and salt marsh



PROJECT GREENSHORES

Project Greenshores is a shoreline restoration and environmental enhancement and education project located along the western shore of Pensacola Bay. A consortium (the Design Focus Team) of state agencies, local governments, non-profit agencies, private businesses, and individuals, along with the Ecosystem Restoration Support Organization (a nonprofit organization created for the Project Greenshores project) and the Florida Department of Environmental Protection's Ecosystem Restoration Laboratory, steers the project in a community-based effort to establish an oyster reef and salt marsh within the Pensacola Bay ecosystem. The goal of restoring a bayfront estuary to its historic habitat stabilizes shorelines and provides the essentials for wildlife propagation and conservation. The consortium has successfully completed Site 1 (2003). That achievement was recognized by the Coastal America 2003 Partnership Award and a First Place Gulf Guardian Award for Partnership from the U.S. Environmental Protection Agency's Gulf of Mexico Program. The interest and support of past partners are providing momentum for continuing the project at Site 2, where approximately 22 acres of salt marsh, five acres of oyster reef habitat, and six acres of tidal streams will be constructed. The marshes will provide critical habitat for many species of fish and wildlife, add shoreline stabilization, and enhance the bayfront. Oyster reefs will be constructed as habitat for filter-feeding organisms and to protect the newly created marsh from wave energy and erosion. (More information on Project Greenshores is available from www.dep.state. fl.us/northwest/Ecosys/section/greenshores.htm.)

habitat offer needed protection for juveniles of economically valuable marine life and help eradicate and control invasive and exotic shoreline vegetation. The resulting oysters, sea grasses, and salt marsh plants help improve water quality in estuary systems. Each oyster has the ability to filter up to 50 gallons of water every 24 hours. The plants, in turn, filter out unwanted pollutants and nutrients. Estuarine restoration also helps protect the shoreline from erosion, thereby preventing resuspension of silt and other fine particles that reduce water clarity and oxygen levels.

In Florida, the primary source of information on Estuarine Conservation Plans is the Florida Department of Environmental Protection's Office of Coastal and Aquatic Management, which is responsible for the management of Florida's 41 Aquatic Preserves, three National Estuarine Research Reserves, a National Marine Sanctuary, and the Coral Reef Conservation Program (protected areas that comprise more than four million acres of the most valuable submerged lands and select coastal uplands in Florida.) Two additional resources are the National Estuarine Research Reserve System (NERR) and the National Oceanic and Atmospheric Administration (NOAA) Office of Ocean and Coastal Resource Management and its Coastal and Estuarine Land Conservation Program (CELCP). The National Estuarine Research Reserve System was established by the Coastal Zone Management Act (CZMA) to help address the problem of current and potential degradation of coastal resources brought about by increasing and competing demands for these resources. Section 320 of the CZMA directs the U.S. Environmental Protection Agency to develop plans for attaining or maintaining water quality in an estuary. Participating states develop a Comprehensive Conservation and Management Plan.

Under the system, healthy estuarine ecosystems that typify different regions of the U.S. are designated and managed as sites for long-term research, and used as a base for estuarine education and interpretation programs. The system also provides a framework through which management approaches, research results, and techniques for estuarine education and interpretation. The DEP is an active participant in the NERR. Demonstrating this support, Florida has three designated NERR sites (the Apalachicola, Guana-Tolomato-Matanzas, and Rookery bays). The DEP is also the lead agency in Florida for CELCP, which provides state and local governments with matching funds to protect significant coastal and estuarine lands through purchase in fee or by conservation easement. Projects are ranked for their ecologic, recreation, conservation, historic, and/or aesthetic values.

Department of Environmental Protection information on the state's estuaries, Estuarine Conservation Plans, and the National Estuarine Research Reserve Program is available from [www.dep.state.fl.us/coastal/ programs/nerrs.htm] and [www.dep.state.fl.us/cmp/programs/celcp.htm] - for information on the CELCP program. Additional information on NOAA's estuarine planning initiatives is available from http://coastalmanagement.noaa.gov. The U.S. Environmental Protection Agency's National Estuary Program [www.epa.gov/nep], which was created by Congress in 1987 to improve the quality of estuaries of national importance, also provides information on the conservation of the country's estuaries. Other organizations providing information on the protection and restoration of estuaries include the Biodiversity Partnership [www.biodiversitypartners.org], which is dedicated to promoting and supporting regional and statewide strategies to conserve biodiversity; the Estuarine Research Federation [www.erf.org], which promotes research in estuarine and coastal systems; Restore America's Estuaries [www.estuaries.org], which publishes a booklet, <u>Restore America's</u> Estuaries: Community-Based Restoration, that highlights restoration projects from across the country; and the Florida Chapter of the Nature Conservancy [www.nature.org/wherewework/northamerica/states/florida], which protects lands and waters on a large scale in 11 regions across Florida.

Working Waterfront Plan

Traditional water-dependent uses in Florida consist of marine and maritime industries such as shipping facilities, commercial and recreational fishing operations, marinas, mooring and anchorage areas, boatyards, ferry landings, and ports. (Water-dependent uses require direct access to or location on, over, or adjacent to a water body and use that water as an integral part of core activities.) A subset of these activities – recreational and commercial working waterfronts – contributes significantly to the state's economy, heritage, and overall quality of life and provides the coastal character that visitors come here to experience. However, as the state's coastal population continues to increase, many traditional working waterfront uses are being squeezed out by more intense private residential and commercial developments because of rising property values and the increasingly intense competition for waterfront access. Recognizing the importance of addressing the loss of recreational and commercial working waterfronts, in 2005 and 2006 the Florida Legislature enacted legislation that requires local governments to revise their statemandated comprehensive growth management plans to encourage preservation of working waterfronts. The Florida Statutes now include a definition of recreational and commercial working waterfronts (excluding seaports) and outline a set of comprehensive planning provisions (described to the right).

To combat the loss of and access to working waterfronts and comply with Florida's statutory requirements, many coastal communities are focusing specific planning efforts on their working waterfront areas. The Department of Community Affairs' (DCA) Waterfronts Florida Program provides assistance to local governments in revitalizing their working waterfronts through resources for planning and the provision of intense technical assistance and training. Waterfronts Florida defines waterfronts as "water-edged places where people work, play, and visit," which means that planning for working waterfronts preservation should balance multiple objectives, such as providing public and water-dependent business access to the waterfront, protecting environmental resources while promoting water-dependent uses, retaining viable traditional waterfront economies, addressing hazard mitigation issues, and providing the infrastructure and support facilities required if water-dependent uses are to remain viable. In planning for their waterfronts, many communities involve a citizens' advisory committee that represents all waterfrontrelated interests. They begin with an inventory of waterfront-related features, such as public and private facilities, access points and rights-of-way, parcels suitable for development, and support services.

Essential to preserving recreational and commercial working waterfronts is the use of incentives and regulations to achieve the desired mix of waterfront uses and access to those uses. Such strategies, which recognize that relying on market forces alone will not always yield the right combination of working waterfront uses, should be supported by policies in local comprehensive plans. Incentives can include special value-assessments for water-dependent uses, tax deferral programs, density bonuses, expedited state and local permitting for water-dependent uses,

STATE OF FLORIDA WORKING WATERFRONT COMPREHENSIVE PLANNING PROVISIONS

- All local governments must include waterways in the recreation and open space element of their comprehensive system of public and private sites for recreation (Chapter 163.3177(6)(e), F.S.).
- Coastal counties must include regulatory incentives and criteria that encourage the preservation of recreational and commercial working waterfronts (as defined in Chapter 342.07, F.S. and Chapter 163.3177(6)(a), F.S.) in the future land use element.
- All coastal local governments must include strategies that will be used to preserve the recreational and commercial working waterfronts (Chapter 163.3178(2)(g), F.S.) in the shoreline use component of the coastal management element.
- All coastal local governments are encouraged to include recreational surface water policies that include applicable criteria for and consider such factors as natural resources, manatee protection needs, protection of working waterfronts and public access to the water, and recreation and economic demands (Chapter 163.3177(6)(g), F.S.) in the coastal management element.



and harbor infrastructure improvements. Regulatory strategies can include the use of zoning to designate areas where only water-dependent uses are permitted (for example, through an Overlay Zone (described in the Land Use Planning and Development chapter), and special waterfront districts, which provide a broader perspective of waterfront challenges and enable more comprehensive planning approaches. Such approaches can include both physical and visual waterfront access; design guidelines and standards (described in the Land Use Planning and Development chapter) that address the character of development (scale, height, set-back of buildings, and the use of traditional architectural styles); streetscape design (see related tools such as Complete [Walkable] Streets, Context Sensitive Solutions, Traffic Calming, and Road Diet in the Transportation chapter). More than one waterfront district can be established. The acquisition of key waterfront access points is another way to preserve and increase waterfront access. Acquisition programs can be implemented by local governments or by a land trust (described in the Agricultural Land Conservation chapter), using a dedicated source of financing (for example, from a bond issue, fee, or Community Development District [described in the Fiscal Analysis and Financing chapter]). Purchase and transfer of development rights programs (described in the Agricultural Land Conservation chapter) are also tools to maintain working waterfront access.

Florida's DCA is the principal resource on working waterfronts (www.dca.state. fl.us). Described above, its Waterfronts Florida Program provides a number of resources to assist communities with working waterfront preservation. Its most recent publication is the 2007 *Guiding the Way to Waterfront Revitalization: A Best Management Practices Series.* The guide provides an overview of what is happening at waterfronts around the United States, presents a series of best practices, highlights lessons learned, illustrates the key elements of the Waterfronts Florida Program through case studies, and provides information on additional working waterfronts resources such as funding sources, planning tools, and project management. Through the Waterfronts Florida Program, DCA also offers a variety of resources, including:

- Revitalizing Waterfronts in Florida Communities: Internet Resources for Building Capacity (www.dca.state.fl.us/fdcp/dcp/waterfronts/resources.doc)
- *Key Elements of Success in Building Coastal Communities* (prepared by the Council for a Sustainable Florida in 2002)
- *Revitalization of Florida's Working Waterfronts: A Model for Technical and Financial Assistance* (prepared in 1996)



MONROE COUNTY MARINE MANAGEMENT STRATEGIC PLAN

Monroe County is experiencing the loss and conversion of waterfront marine facilities and their associated businesses. Public water access and the loss of boat ramps and dockage are of continuing concern. To address these challenges, the county contracted with the South Florida Regional Planning Council (SFRPC) and the Center for Urban and Environmental Solutions (CUES) at Florida Atlantic University to prepare a Marine Management Strategic Plan. Completed in 2005, the plan presented a coordinated implementation strategy to help preserve the working waterfronts. Stakeholder interviews and public meetings, which were held throughout the process, demonstrated a desire to protect and enhance working waterfronts as well as public access to them. In a second project phase, CUES and the SFRPC proposed amendments to the county's Comprehensive Development Master Plan and Land Development Regulations to address the mandates of the 2005 Waterway and Waterfront Improvement Act (Chapter 342 of the Florida Statutes), designed to protect, preserve, and retain recreational and commercial working waterfronts statewide. As required by the county's 2010 Comprehensive Plan, a Marina Siting Plan was prepared, and a countywide inventory of marine-related sites and facilities was compiled. Together, those components comprise the Monroe County Working Waterfronts Preservation Master Plan. (More information on the Monroe County Marine Management Strategic Plan is available from the South Florida Regional Planning Council [www.sfrpc. com/mcmmsp.htm].)

• *Profiles of Working Waterfronts* (prepared in 1995 by what is now the Center for Urban and Environmental Solutions at Florida Atlantic University [CUES])

Another Florida organization providing resources for the preservation of recreational and working waterfronts is the University of Florida's Levin School of Law Conservation Clinic (www.law.ufl.edu/conservation/waterways/waterfronts/ access.htm). The Clinic has collaborated with DCA and Florida Sea Grant to provide numerous reports and studies on working waterfront issues, including:

- Creating a Recreational and Commercial Working Waterfront Program to Implement Chapters 2005-157 and 2006-220, Laws of Florida: A Model Comprehensive Plan with Policy Options
- An Annotated Model Tax Deferral Ordinance for Recreational and Commercial Working Waterfronts, which focuses on the property tax deferral program for working waterfronts authorized in 2005 by the Florida Legislature and provides a model ordinance demonstrating how a local government might implement such a program.
- A Waterway Access Analysis Manual: A Guide for Local Decisionmakers; The Water Dependency Test as a Means to Preserve Recreational and Commercial Waterfronts, which examines the central role of zoning in an integrated plan to protect and preserve recreational and working waterfronts and the varying definitions of water-dependent use.
- Preserving Public Access to Public Waters: A Policy Menu for Local Governments. Each policy tool description includes an introduction, its possible relationship to waterfronts, legal issues as they relate to the use of the tool, and best policy practices. The tools include moratoria, zoning, exactions, incentive strategies, design standards, a no-net-loss policy, concurrency, levels of service for public access, transferable slip rights, transfer of development rights, visual access, liability waivers, and rights of way.

Outside Florida, a useful resource is *Access to the Waterfront: Issues and Solutions Across the Nation* (www.seagrant.umaine.edu/documents/pdf/07/access. pdf), which examines trends in coastal access throughout the country and highlights solutions and success stories. Prepared by Maine Sea Grant, with support from Hawaii Sea Grant and an advisory committee from the National Sea Grant network and Coastal Zone Management programs, the report is based on surveys from over 140 extension professionals, coastal managers, and other individuals. It details a variety of tools being used to create and preserve access to working waterfronts. Those tools include acquisition by land trusts, using funds from bond issues and other sources, tax relief programs, changes in local zoning ordinances, mapping waterfront access points, and preparing working waterfront plans.

C Other Florida resource organizations for working waterfronts are the Center for Urban and Environmental Solutions [www. cuesfau.org], which, through its Coastal and Ocean Initiative, has been involved in numerous marine management and boating plans and economic studies; 1000 Friends of Florida [www.1000fof. org], which from 1997 to 2001 coordinated the Waterfronts Florida Program on behalf of DCA; DEP [www.dep.state.fl.us], which publishes a public access brochure; Florida Sea Grant at the University of Florida [www.flseagrant.org], which conducts research and provides study grants to look at issues related to creating a sustainable coastal economy and environment; the Marine Industries Association of Florida [www.boatflorida.org], a nonprofit organization that works to provide more public access to Florida's water resources; and the Florida Public and Private Water Access Coalition [www.water-access.com], which works to secure access for boaters, fishers, water skiers, riparian owners, and other interested parties to Florida waters for recreational and commercial uses. At the national level, resource organizations include NOAA through its Office of Ocean and Coastal Resource Management, which offers information on waterfront access [http://coastalmanagement. noaa.gov/public_access.html] and scenario tools that visualize dock growth [www.csc.noaa.gov/dock_growth/scenarios_intro.html]; the North Carolina Division of Coastal Management [http://dcm2. enr.state.nc.us], which outlines steps the state has taken to ensure public access to coastal areas; and the New York State Division of Coastal Resources [http://nyswaterfronts.com/communities_guidebooks.asp], which offers on-line tools [used as a resource for this tool description] and a guide for working waterfronts.

DIVERSITY AND SOCIAL EQUITY TOOLS

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Illustrative of the way in which Florida's population is changing, by 2030 over 43 percent of the state's population is projected to be Black/African American and Hispanic/Latino, compared to 35 percent today. Reflecting that trend, Florida communities are using a variety of tools to involve a culturally diverse population in local planning processes and help ensure that new investments benefit all residents. Combined, the diversity and equity tools demonstrate that efforts have expanded from a focus on affirmative action in hiring and promotion practices and contractor selection to a broader focus aimed at improving access to education, economic opportunities, housing, public health, and transportation. A principal source of information on diversity and social equity tools is PolicyLink, a national research and action institute that works collaboratively to develop and implement local, state, and federal policies to achieve economic and social equity. PolicyLink, which provided much of the information for this chapter, offers the following steps to plan for a socially and economically equitable community.

Within a Neighborhood

- Understand the economic, political, and social forces at work
- Assess, map, and analyze the potential for displacement
- Support resident participation in land use planning that envisions community-wide economic improvement
- Stabilize current residents in communities experiencing increases in property values
- Expand the range of housing not susceptible to the commercial market through permanent affordability mechanisms
- Promote diverse homeownership opportunities for existing residents
- Plan for newcomers to promote a diverse community mix and ensure affordability
- Target income and asset strategies to stabilize current residents
- · Anchor culturally-rooted commercial, nonprofit, and arts organizations in mixed-income communities

Beyond the Neighborhood

- Build public awareness of the issues and proposed solutions among key players
- Advocate mixed-income development at every turn and across jurisdictions
- Make environmental justice and social equity central components of regional development
- Integrate solutions to public transit, affordable housing, workforce development, and open space issues
- Connect planning for transit investment and affordable housing development. Utilize equity criteria to guide new investment
- Identify key incentives for jurisdictions to adopt mixed-income housing practices
- Secure valuable anti-discrimination practices to ensure fair housing
- Tie affordable housing production to commercial growth
- Strengthen regional cooperation in community and economic development planning
- Craft policies to engage local, regional, state, and federal governments in addressing gentrification pressures

Two other resource organizations are CEO (Clinical, Educational, and Organizational) Services and the Florida Human Rights Commission, the principal Florida resource organization on diversity and social equity.

CEO Services, which sponsors Cultural Competence Online Resources, provides information for organizations, businesses, and training institutions committed to transforming work and organization environments toward ones that are multicultural and culturally competent. CEO Services defines cultural competence as the willingness and ability of a system to value the importance of culture in the delivery of services to all segments of the population and the use of a systems perspective which values differences and is responsive to diversity at all levels of an organization (policy, governance, administrative, workforce, provider, and consumer/client). Several tools are specific to involving and planning for a diverse population. These tools (described in more detail below) are Community Asset Mapping, Diversity and Human Rights Boards, Environmental Justice, Prosperity Campaigns, Social Capital Surveys, and Undoing RacismTM Workshops. Other tools – such as Technology Tools and the use of Study Circles – are included in the Public Involvement and Education chapter of the toolbox. Tools related to social and economic equity (for example, those addressing affordable housing, neighborhood reinvestment, health access, minority business and living wage, and transportation access) are included, respectively, in the Housing, Infill and Redevelopment, Education and Health, Economic Development, and Transportation chapters of the toolbox.

 \square A wide variety of organizations are involved in ensuring that a diverse population is involved in the public decision-making process and in promoting social and economic equity. In addition to PolicyLink [www.policylink. org] and CEO Services [www.culturalcompetence2.com], resource organizations are the Center for Community Change [www.communitychange.org]; the Center for a New American Dream [www.newdream.org]; the Funders Network for Smart Growth and Livable Communities [www.fundersnetwork.org]; the Local Initiatives Support Organization [www.lisc.org]; the National Neighborhood Coalition [www.neighborhoodcoalition.org]; Smart Growth America [www.smartgrowthamerica.org/socialequity.hmtl]; the Sustainable Communities Network [www.sustainable.org]; and Sustainable Measures [www.sustainablemeasures.com]. Other resource organizations are the Alliance for Non-Profit Management, which offers on-line resources on cultural competency [www.allianceonline.org]; Architects/Designers/Planners for Social Responsibility [www.adpsr-norcal.org], Patterns of a Conservation Economy [www.conservationeconomy.net], the Latino Issues Forum [www.lif.org], Sustainable Urban Neighborhoods [www.louisville.edu/ org/sun], Urban Ecology [www.urbanecology.org], and the Urban Habitat Program [www.urbanhabitatprogram.org].

Community Asset Mapping

The name comes from the process used: the mapping of community assets. The process turns what is frequently the traditional way of planning for urban or rural neighborhoods on its head. Rather than beginning a planning process with identifying and assessing problems and deficiencies, community asset mapping begins with identifying community assets as the building block for planning. Asset mapping can focus on:

- Social assets (for example, the skills of local residents and the capacity of nonprofit and civic organizations and institutions, governmental agencies, and informal networks and institutions)
- Physical and natural assets
- Educational assets
- Economic assets

In planning for a diverse population, community asset mapping can be used to understand cultural assets. Residents and planners can develop an understanding and appreciation of what are often the hidden intangible assets of a community – the skills and knowledge of the residents (regardless of age, race, gender, and ethnic background) and the organizations that make up a community. Typical start-up steps in asset mapping include involving the community in:

- Deciding on the goals and focus of the mapping project (for example, the specific geographic area or population groups)
- Deciding on how the results of the asset mapping will be used (for example, publishing an asset resource guide, creating an asset resource database, or building and strengthening networks)
- Determining what skills and assets are to be identified
- Identifying if there are other asset inventories and what type of information those inventories produced, who was involved, and the lessons learned
- Designing the inventory (survey questions) to fit the target group(s)
- Deciding on a timeline and how to keep lines of communication going throughout the process (for example, newsletters of neighborhood organizations and/or a project newsletter and a local newspaper or radio station)
- Developing a plan to collect the information (the resources, the who and how, and the when) and communicating the result of the inventory when it is completed



IMAGINE MIAMI

An initiative hosted by the Human Services Coalition (HSC), Imagine Miami (IM) builds civic engagement and social capital by connecting people to each other, their neighborhoods, and a shared goal of a more just, inclusive, and sustainable county. Several programs focus on understanding and developing a greater pride and identity with community assets, one aspect of community mapping. For example, Community Visits enable residents and neighborhood civic leaders to identify, share and celebrate community assets (e.g., valued gathering places, unsung heroes, and civic projects) during neighborhood tours. Another program enables residents, business owners, and other stakeholders to adopt a block where they live or work. Participants evaluate local assets and challenges and create and implement an action plan for change. Other IM programs include the Pledge, which allows participants to promise to help their community (for example, by picking up trash on their block); ConnectMiami, a civic networking tool that enables people to find others with similar community goals; Soul of Miami (SoM), which connects people interested in using the arts to build civic engagement; and Community Dinners, which bring local networks together for a potluck dinner. Complementary HSC programs include the Prosperity Campaign (discussed below) and Civic Life Academy, which uses the Study Circle dialogue method (discussed in the Public Involvement and Education chapter). (More information on Imagine Miami is available from www.imaginemiami.org.)

The results of the inventory are then used to create an asset map that brings all the information together in a way that participants are able to understand the potential for interrelationships.

© One of the primary resource organizations on community asset mapping is the Asset-Based Community Development Institute (ABCD) at Northwestern University [www.northwestern.edu/IPR/abcd.html]. Other national and regional resource organizations are the Center for Collaborative Planning [www.connectccp.org], the Center for Neighborhood Technology [www.cnt.org], and the Southern Rural Development Center [http://ext.msstate.edu/srdc]. In Florida, resource organizations include the Center for Urban Redevelopment and Education at Florida Atlantic University [www.cure.fau.edu], the Florida Center for Community Design and Research at the University of South Florida [www.ficus.usf.edu], and EDIS [http://edis.ifas.ufl.edu], the Electronic Data Information Source of the University of Florida Institute of Food and Agricultural Sciences Extension.

Diversity and Human Rights Boards

Diversity and human rights boards are created by local governments to ensure equal opportunity and fair treatment of their citizens; eliminate discriminatory practices; and create an environment that fosters mutual understanding of all racial, cultural, religious, and ethnic groups within a community. Typical activities of a diversity or human rights board include:

- Sponsoring programs that promote greater public awareness and appreciation of issues concerning diversity, tolerance, and racial sensitivity
- Identifying and addressing the needs of minority and ethnic communities
- Creating opportunities for residents to discuss issues related to diversity and tolerance; establishing network systems among various ethnic communities
- Publishing a directory of ethnic organizations
- Sponsoring events that feature and celebrate a community's different ethnic organizations
- Promoting minority participation in governmental contracts

A diversity or human rights board board can also be charged (by local ordinance) with investigating and enforcing discrimination complaints at the city or county



THE BROWARD COUNTY DIVERSITY ADVISORY COUNCIL

The Broward County Diversity Advisory Council identifies and focuses attention on the needs and issues of the county's ethnically and culturally diverse population, facilitates communication among elected officials and the ethnic and cultural groups they serve, and brings together and provides assistance to community, civic, religious, business, governmental, and professional groups that are willing to work toward positive community relations in the county. The Council's activities include disseminating reports on ethnic and cultural issues, developing recommendations on ethnic and cultural issues and problems affecting community relations in the county, and sponsoring conferences and other events designed to promote ethnic and cultural understanding at all levels. (More information about the Broward County Diversity Advisory Council is available from www.broward.org/diversity/ welcome.htm.)
level. In that case, such boards are often called a human rights or equal opportunity board or commission. Typical responsibilities include:

- Public education activities
- Investigating and mediating complaints about alleged discriminatory practices (for example, in housing, employment, and areas of public accommodation)
- Monitoring and enforcing applicable anti-discrimination laws
- Informing consumers and businesses about the steps required to comply with local, state, and federal anti-discrimination laws

Some boards are designated by a federal agency to investigate complaints (for example, for the U.S. Department of Housing and Urban Development (www. hud.gov) and the U.S. Equal Employment Opportunity Commission (www.eeoc. gov). Most discrimination laws address discrimination on the basis of race, color, religion, sex, national origin, age, disability, marital status, or familial status.

The principal Florida resource organization on diversity and social equity is the Florida Commission on Human Rights. The Commission has a two-part mission: to prevent unlawful discrimination by ensuring that people in Florida are treated fairly and given access to opportunities in employment, housing, and certain public accommodations, and to promote mutual respect among groups. Two of its initiatives are:

- The Community Relations Services (CRS) unit, which offers programs aimed at educating businesses and communities. Two specific CRS programs are Literacy, Learning and Leadership, an outreach program designed to empower middle school students to become socially conscious citizens and leaders, and Dining and Dialogue, a series of community events that provide local residents the opportunity to join together in a meal at which diversity is the topic of discussion, thereby connecting people in a dialogue about prejudices.
- Diversity and cultural competency workshops, which provide businesses an introduction to workplace diversity (what it is, why it is important, and how to foster a workplace environment that respects and embraces it).

The Commission on Human Rights also offers training on fair housing and discrimination laws.

TAMPA/HILLSBOROUGH COUNTY HUMAN RIGHTS COUNCIL (TCHRC)



The TCHRC brings together citizens of various backgrounds to promote the rights of all individuals through implementation of the city's Human Rights Ordinance. The Tampa Office of Human Rights (TOHR), which is located in the

Division of Community Affairs, coordinates the activities of the Council. It handles allegations of discrimination and conducts mediation conferences for new employment discrimination complaints prior to TOHR's investigation. The TCHRC sponsors an annual awards celebration. Community Awareness Action Teams (a project of the Division of Community Affairs) work with volunteers to maintain an awareness of situations and problems that might produce community tension or unrest and resolve issues or concerns as quickly and appropriately as possible. Tampa also has a Mayor's African American Advisory Council and a Hispanic Advisory Council, which serve as a liaison between the mayor and community groups. A Mayor's Hispanic Heritage Committee hosts an annual Hispanic celebration. (More information on the Tampa/Hillsborough County Human Rights Council is available from www.tampagov. net/dept_community_affairs.)

Additional information on diversity, human relations, and human rights boards is available from the Florida Commission on Human Rights [http://fchr.state.fl.us].

Environmental Justice

The concept of environmental justice (often called EJ) goes back to the civil rights movement in the 1960s and concerns about public health dangers and the higher environmental risks for minority and low-income populations. Those concerns led to the creation of an Office of Environmental Equity (now the Office of Environmental Justice) in 1992 and, in 1994, to Executive Order 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations). Executive Order 12898 directed every federal agency to make environmental justice a part of its mission by identifying and addressing the effects of all programs, policies, and activities on minority and low-income populations. The intent of environmental justice requirements is to:

- Avoid, minimize, or mitigate disproportionately high and adverse health, environmental, and social effects on minority and low-income populations.
- Ensure the full and fair participation by all potentially affected communities in the planning and decision-making process.
- Prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

The U.S. Environmental Protection Agency's (EPA) Office of Environmental Justice serves as a resource on environmental justice. The office provides technical assistance and grants for projects that address local environmental concerns. Its Environmental Justice Geographic Assessment Tool (www.epa.gov/compliance/ whereyoulive/ejtool.html) provides a web-based technology that can be used to assess adverse health or environmental impacts.

For more information on environmental justice, go to the U.S. Environmental Protection Agency [www.epa.gov/compliance/environmentaljustice/index.html]; the U.S. Department of Transportation Federal Highway Administration [www.fhwa. dot.gov/environment/ej2.htm], which provides environmental justice information for transportation planners; and the Environmental Justice Resource Center at Clark Atlanta University, which serves as a research, policy, and information clearinghouse on a range of environmental, race, and civil rights issues, including those related



COMPREHENSIVE EVERGLADES RESTORATION PLAN (CERP) ENVIRONMENTAL AND ECONOMIC EQUITY (EEE) PROGRAM MANAGEMENT PLAN

The EEE Plan was put in place in 2001 to avoid or minimize potential adverse social or economic impacts of CERP and ensure that CERP economic opportunities benefit all citizens. One of the plan's objectives is to provide relevant, timely, valid, and reliable socio-economic and environmental justice baseline data for system-wide and project-specific assessments. To that end, maps showing baseline demographic information were prepared for the 16 CERP service area counties. Using 2000 census data, the maps show the relationship between the minority and household income percentages in each census block and illustrate the diverse population in the project areas, the neighboring areas, and those areas downstream from restoration projects. Pie charts for each census tract show the percentage of Hispanic- and Creole-speaking populations within that area. Consistent with the requirements of the EPA, the maps were used to identify potential areas for environmental justice and prepare outreach materials and activities to ensure maximum public involvement in planning activities. The pie charts were used to develop specific outreach strategies for individuals with limited proficiency in English. (More information on the CERP EEE Program Management Plan is available from www. evergladesplan.org/pm/progr_eee_plan.aspx. A complete set of the 16 county maps is available from www.evergladesplan.org/pm/ progr_eee.aspx#epa.)

to environmental justice [www.ejrc.cau.edu]. Other resource organizations include the Sierra Club [www.sierraclub.org/environmental_justice], the Center for Health, Environment & Justice [www.chej.org], and the National Academy of Public Administration [www.napawash.org], which has a standing Panel on Social Equity in Governance.

Prosperity Campaigns

Prosperity campaigns connect low-wage workers to economic benefits programs available to them, with the goal to help them gain greater economic stability through higher earnings. Prosperity campaign services typically include helping low income people apply for the Earned Income Tax Credit and the Child Tax Credit and providing free income tax preparation assistance. Some programs offer one-stop service centers where lower income people can participate in matched homeownership savings programs, obtain help in resolving credit issues, receive money management and job assistance, and learn how to set up Individual Development Accounts. Current (as of August 2007) Florida counties with prosperity campaigns are Alachua, Broward, Collier, Duvall, Flagler, Hillsborough, Manatee, Miami-Dade, Orange, Palm Beach, Pinellas, and Volusia.

The primary resource organizations in Florida are the Prosperity Campaign Office (housed in Workforce Florida, Inc.) and the Florida Prosperity Council. The Prosperity Campaign Office is responsible for educating citizens about economic benefit programs and the importance of wise financial decision-making. Its services include:

- Offering free tax preparation and economic benefits screening services
- Providing information to businesses to enable them to distribute economic benefit information to employees
- Coordinating existing prosperity campaigns in the state and establishing new campaigns in designated regional workforce areas
- Working with the federal Internal Revenue Service in providing programs for low-wage workers

The Florida Prosperity Council assists the campaign office with a number of duties, including working with businesses and agencies to develop a package of services for citizens participating in prosperity campaigns and coordinating financial literacy classes or programs within each campaign. The council also works with the Florida



NORTHEAST FLORIDA PROSPERITY CAMPAIGN

Called the Real\$ense Prosperity Campaign, the Northeast Florida Prosperity Campaign is a United Way-led coalition of companies, agencies, and other organizations focused on increasing the prosperity of the community through changing the financial behavior of low-to-moderate income families. Services provided by the Campaign include free tax preparation by Internal Revenue Service-certified volunteer preparers at one of 12 different sites, as part of the Campaign's focus to bring a portion of the approximately \$10 million in unclaimed Earned Income Tax Credits (EITC) to Northeast Florida and the people who have earned them, and Matched Savings Accounts + IDA (Individual Development Accounts), which are special matched savings accounts that match every dollar saved with another two dollars up to a specified limit. Another campaign service is free financial literacy training focused on how to open or maximize bank accounts, build up a good credit rating, become first-time home owners, further an education, or start a small business. (For more information on the Northeast Florida Prosperity Campaign, go to www.jaxprosperity.org.)

Department of Education in developing financial literacy instruction as a part of high school life management skills curricula. The Florida Jump Start Coalition, which is a nonprofit membership-based organization, complements the prosperity campaigns with its emphasis on personal financial literacy, particularly in kindergarten through young adults. The Florida Jump Start program is affiliated with the National Jump Start Coalition.

Derived More information on prosperity campaigns in Florida is available from www. floridajob.org/eitc/index.html and from www.flaprosperitycampaign.org. Information on the state and national Jump Start programs is available, respectively, from www. fljumpstart.org and www.jumpstart.org.

Social Capital Surveys

Social capital is a way of conceptualizing or measuring the health of a community's social fabric - how people connect to each other and to family, friends, neighbors, and civic institutions. It is viewed as important to creating the high degree of civic involvement that is important to creating and sustaining successful communities. When promoting social capital surveys, advocates point to Robert Putnam's book, Bowling Alone: Collapse and Revival of the American Community, which describes how civic ties in American society have weakened over the past several generations, resulting in the loss of social capital. The Kennedy School of Government at Harvard University Saguaro Seminar: Civic Engagement in America Initiative is a primary source of information on social capital and social capital surveys. It defines social capital as referring to the collective value of all social networks (who people know) and the inclinations that arise from these networks to do things for each other. The seminar focuses on understanding more about levels of trust and community engagement and on developing strategies and efforts to increase that engagement. Building on a five-year dialogue on how to build bonds of civic trust among Americans and their communities, the Saguaro Seminar is now focusing its research on the interrelationship of workplace policies and practices with social capital, both on- and off-the-job; on the relationship between social capital, diversity, and equality; and on religion and public life. Seminar resources include a Social Capital Blog, Social Capital Glossary, Social Capital Evaluation Guide, and a webpage, Organizations Building Social Capital.



CENTRAL FLORIDA SOCIAL CAPITAL SURVEY

In 2005, six partners (the Central Florida YMCA, the Community Foundation of Central Florida, the Heart of Florida United Way, myregion.org, the Orlando Regional Chamber of Commerce, and the University of Central Florida Metropolitan Center for Regional Studies) joined together to conduct a social capital survey of central Florida (Brevard, Lake, Orange, Osceola, Polk, Seminole and Volusia counties). One reason for the study was the number of new residents in the region and the need to understand how current residents viewed their community. The Institute for Social and Behavioral Science at the University of Central Florida conducted the survey, using the Social Capital Community Benchmark Survey created by the Kennedy School of Government at Harvard University. The partners plan to use survey results, which showed that Central Florida is a microcosm of the U.S., to strengthen Central Florida's social capital. (More information on the Central Florida Social Capital Survey is available from the University of Central Florida Metropolitan Center for Regional Studies [http://metrocenter.ucf.edu].)

C Additional information on social capital and social capital surveys is available from the Kennedy School of Government at Harvard University Saguaro Seminar: Civic Engagement in America Initiative [www.ksg.harvard.edu/saguaro].

Undoing Racism[™]/Community Organizing Workshops

Undoing Racism[™]/Community Organizing Workshops are a project of the People's Institute for Survival and Beyond (PISAB), a national and international collective of anti-racist, multicultural community organizers and educators dedicated to building an effective movement for social transformation. The PISAB considers racism the primary barrier preventing communities from building effective coalitions and overcoming institutionalized oppression and inequities. PISAB helps individuals, communities, organizations, and institutions move beyond addressing the symptoms of racism to undoing the causes of racism through its Undoing Racism[™]/Community Organizing Workshops, technical assistance, and consultations. The workshops are designed to help participants move beyond focusing on the symptoms of racism to understanding what racism is, where it comes from, how it functions, why it persists, and how it can be undone. They emphasize:

- Learning from history
- Developing leadership
- Maintaining accountability to communities
- Creating networks
- Undoing internalized racial oppression
- Understanding the role of organizational gatekeeping as a mechanism for perpetuating racism

^[] More information on PISAB and its Undoing Racism[™]/Community Organizing Workshops is available www.pisab.org. Additional information is available from the Center for Urban and Environmental Solutions at Florida Atlantic University [www.cuesfau.org] and its regional partners, the Collins Center for Public Policy [www.collinscenter.org] and the South Florida and Treasure Coast Regional Planning Councils [www.sfrpc.com and www.tcrpc.org], which joined in regional Undoing Racism[™]/Community Organizing Workshops.



DELRAY BEACH UNDOING RACISM[™] WORKSHOP

The Steering Committee charged with developing Creating Inclusive Partnerships: Downtown Delray Beach Master Plan took steps to focus on the city's social growth, particularly in the area of race relations. The committee engaged the People's Institute for Survival and Beyond to hold a three-day Undoing Racism™ Workshop for committee members, residents, city officials, and the Community Redevelopment Agency. The workshop explored the key concepts of racism and other forms of social oppression and how networking, leadership, and empowerment could begin to undo the impacts of racism on communities and persons of color and whites. Participants used their increased understanding and awareness of racism to create a plan that was fair for the businesses and neighborhoods of West Atlantic Avenue. (More information on the Delray Beach Undoing Racism[™] Workshop and the resulting downtown master plan is available from the City of Delray Beach Community Redevelopment Agency [www. delraycra.org].)

ECONOMIC DEVELOPMENT TOOLS

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ommunities in Florida are using a combination of economic development tools to build a sustainable economy and be competitive in a changing world economy. Those tools are designed to help existing businesses grow, attract new businesses, and maintain or create a diverse economy that it is resilient when changes occur in the national and international economies. The tools also recognize that to compete in the world economy, communities must work together as a region rather than in isolation; that is, it takes a region to supply the ingredients a successful business needs - the workforce, the housing, the training and education, the transportation network, and the technology, for example. In today's economy, businesses make a decision to locate in, or expand in, a region because of the combined assets that are available, not because of the assets of a single community. The two principal sources of economic development information and assistance are Enterprise Florida (EFI) (www.eflorida.com) and the U.S. Department of Commerce's Economic Development Districts (www.eda.gov/ImageCache/EDAPublic/documents/devdirectory/eda_5fdir_5fsec3_28fl_29_2epdf/v1/eda_5fdir_5fsec3_28fl_29.pdf). Enterprise Florida is a public-private partnership that serves as Florida's primary organization devoted to statewide economic development. Its mission is to diversify Florida's economy and create betterpaying jobs for its citizens by supporting, attracting, and helping create business in innovative, high-growth industries. EFI accomplishes its mission by focusing on a wide range of industry



sectors (described below in the Cluster Industry Development Strategy) and by working with a statewide network of regional and local economic development organizations (www.eflorida.com/ContentSubpage.aspx?id=5374) to improve Florida's business climate and ensure the state's global

competitiveness. The Economic Development Districts (EDD), in most regions part of the state's regional planning councils, provide technical assistance to local governments in the form of economic analyses, staff support, leadership training and development, research, federal grant and loan preparation, strategic plans development, and other related activities.

Development is available from the International Economic Development Council [www.iedconline.org], the U.S. Department of Housing and Urban Development [www.hud.gov/economicdevelopment/index.cfm], the U.S. Department of Commerce Economic Development Administration [www.eda. gov], and the Council on Competitiveness [www.compete.org], which hosts a Center for Regional Innovation that helps public- and private-sector leaders find the most effective ways to fuel innovation-driven economic growth. Rural economic development information is available from the U.S. Department of Agriculture's Rural Development Program [www.rurdev.usda.gov] and the University of Florida Institute of Food and Agricultural Sciences Rural Economic Development Initiative (REDI) [http://edis.ifas. ufl.edu/FE426].

Business Assistance Program

Business assistance programs are a core function of a successful economic development strategy. The programs are designed to assist new companies that are considering a location in a community and to improve the competitiveness of existing businesses. Typical services to businesses include assistance with finding a site or building, accessing capital and financial incentive programs, securing workforce training and educational services, maintaining data on community assets, facilitating the permitting process, hosting networking events, and serving as an advocate for business with local government and the broader community. Specific business assistance programs include Existing Business Programs, Entrepreneurial Assistance Programs, and Small Business Assistance Programs.

Existing Business Program

An existing business program is focused on retaining existing businesses in a community and helping them to expand. Such programs recognize that some 80 percent of a community's new jobs are created by existing businesses. Testimonials of satisfied existing businesses can also provide the basis of a marketing program to attract new businesses. An existing business program can also include a direct



JACKSONVILLE REGIONAL CHAMBER OF COMMERCE TOOLS FOR EXISTING BUSINESSES

The Jacksonville Regional Chamber of Commerce's existing business department, a part of the Chamber's Small Business Center (SBC), helps businesses in the seven-county Northeast Florida region solve problems and identify new ways to grow. The team assists businesses with employee recruitment; workforce development; government procurement contracting; international trade; business incentive programs; transportation, water, sewer, and electrical issues; and site selection when it is time to expand or relocate. The program also spotlights existing businesses, helps businesses reduce time spent on procedures such as permitting, and provides a remedy for common problems. Additional SBC services include entrepreneurial education, access to capital, mentoring and counseling, and network support. It also houses two Chamber programs (the Jacksonville Women's Business Center and the Procurement Technical Assistance Center) and offers workshops for existing and startup businesses. Its Business Information Center, a total business resource library, provides an on-line toolkit and assistance with computer software, Internet access, and how-to books and catalogs. The SBC partners with other organizations, including SCORE (www.score.org), a volunteer-based national nonprofit organization that works through local offices to provide counseling to small businesses, and the Green Team Project (www.greenteamproject.org), which educates individuals and small businesses on how they can save money by reducing energy consumption. (More information on the Jacksonville SBC and its existing business program is available from www. *myjaxchamber.com.*)

contact program, which involves personal visits with targeted industries, and surveys to determine what a business needs to stay in business or expand. Interviews and surveys are used to identify businesses that need assistance in overcoming hurdles that interfere with day-to-day operations or that may prevent expansion or cause a move to a new location. A survey can also be used to understand the factors that make an area conducive to business expansion and new investment. Additional services to existing businesses can include assistance with accessing incentives and financing programs, finding a new site or building for an expansion, recruiting and training employees, and securing technical services. (*For more information on existing business programs, go to Enterprise Florida [www.eflorida.com].*)

Entrepreneurial Assistance Programs

Entrepreneurial assistance programs are a specialized area of a business assistance program. The programs help an individual take an idea for a business or an invention into successful production. A number of organizations in Florida provide entrepreneurial assistance. One organization is the Disney Small Business Administration (SBA)/National Entrepreneur Center (NEC) in Orlando, which is dedicated to providing the resources and support needed by entrepreneurs to be successful. The center hosts a Business Information Center and offers training, counseling, and financial assistance. It also offers web-based resources that can be used to help start and grow a business and partners with NEC-affiliated agencies located throughout the state (listed and linked on NEC's website, highlighted below) to provide entrepreneurial assistance. NEC provides links to resources for woman-, minority-, and veteran-owned businesses, including the SBA Online Women's Business Center and the Minority/Women's Business Enterprise Alliance, described in the Minority and Social Equity Economic Development tool section. (For more information on entrepreneurial assistance programs, go to the Disney SBA/National Entrepreneur Center [www.floridanec.org] and Enterprise Florida [www.eflorida.com], which hosts an on-line database of resources for entrepreneurs looking to succeed in Florida's innovation economy and a list of venture funds in Florida. Other entrepreneurial resource centers include the Kaufmann Foundation [www.entreworld.org], the Small Business Administration [www.sba.gov], the Florida TechStart-Florida Institute of Technology [www.fit.edu/floridatechstart], the Business Owners Toolkit [www.toolkit.cch.com], YoungEntrepreneur.com [www.youngentrepreneur.com], Entrepreneur.com [www. entrepreneur.com], the Entrepreneurs' Help Page [www.tannedfeet.com], and Startup Florida [www.startupflorida.com], a Venture Creation company that focuses on building high-growth businesses by providing capital, mentoring and a supportive community for



FLORIDA GULF COAST SMALL BUSINESS DEVELOPMENT CENTER (SBDC)

Florida Gulf Coast University's SBDC is a nonprofit organization that offers free business counseling and customized training workshops and seminars, taught by industry experts and SBDC professional counselors, for start-up and existing businesses. Programs include:

- The Small Business Resource Network provides assistance to existing businesses and individuals thinking about starting a business. In more than a decade of service, network members made nearly 33,000 referrals to business resources, counseled more than 25,000 small businesses, assisted in closing approximately \$144 million in small business loans, and facilitated the creation of more than 3,000 jobs.
- Disadvantaged Business Enterprise (DBE) helps minority and woman-owned businesses become certified and seek county and state contracts. To help bring free business services to hard-to-reach markets, the SBDC and Florida Gulf Coast University hold an annual Saturday morning educational and networking program in one of their service area communities. Participating vendors include the Florida Departments of Finance and Revenue, Consumer Credit Counseling, the Lee County Office of Economic Development, the City of Fort Myers, the DBE program, the U.S. Internal Revenue Service, and the Florida Division of Workers' Compensation.

The SBDC comprises one segment of the Center of Leadership and Innovation and is operated by Florida Gulf Coast University's Lutgert College of Business and the U.S. Small Business Administration. It is a member of the Florida SBDC Network. (*More information on the Florida Gulf Coast University SBDC is available from http://cli.fgcu. edu/sbdc/index.html.*) entrepreneurs. Startup Florida founded the first Angel Investment Fund and launched the first for-profit Incubator in Florida.)

Small Business Assistance Programs

Small Business Development Centers (SBDC) are a principal provider of assistance to small businesses. The U.S. Small Business Administration established the SBDC program in 1976. The Florida Small Business Development Center Network (FSBDCN) was one of the eight pilot SBDCs established by the SBA. FSBDCN assists in the development and education of the state's entrepreneurs and small business community by linking the state's education system with community outreach. The Academy for Entrepreneurial and Economic Development is one of the services of the FSBDCN. The academy provides business education and training to enhance the skills of small businesses. Enterprise Florida also offers assistance to small businesses through its on-line listing of small business resources. It also published a Florida Small Business Start-Up Guide that provides basic guidelines on local, state, and federal requirements for starting a business in Florida, and hosts an online frequently-asked-questions site on how to start a business in Florida. (More information on small business development is available from Enterprise Florida [www.eflorida.com/smallbusiness/assistance.asp?level1=3] and the FSBDCN [www.fsbdc.com].)

Cluster Industry Development Strategy

A Cluster Industry Development Strategy is a principal focal point of many economic development programs because it builds on the strengths of a region's economy and creates a framework for targeting economic development activities for the most impact. The basis for a cluster approach to economic development is understanding the concentrations of related companies in a geographic area (an industry cluster) that do business with each other and have common needs (for example, for the same type of workforce, research, education, technology, or transportation services). The companies in a cluster can be competitors or they may be interdependent through purchases of services or supplies. A cluster can include educational institutions, nonprofits, and governments that support an industry cluster through their services.

Concentrating companies within an industry cluster can increase their productivity and competitiveness by providing access to a larger pool of suppliers; a skilled



THE ENTREPRENEURIAL INSTITUTE AT METROBROWARD

Based in Fort Lauderdale, the Entrepreneurial Institute at MetroBroward was created in 1989 by the MetroBroward Economic Development Cooperative in collaboration with Broward Community College and the South Florida Regional Planning Council. Its mission is to serve as a one-stop resource for real world hands-on advice, coaching, technical assistance, and education for starting, growing, funding, and maintaining a competitive small business. In addition to the Entrepreneurial Institute, MetroBroward provides small business loans, virtual office tenancy (e.g., a receptionist and access to conference rooms), incubation assistance to technology startup businesses, a small business development services help desk, and entrepreneurial education and certification. (*More information on the Entrepreneurial Institute is available from www.metrobroward.org.*) workforce; networking opportunities to share information and address common problems; and specialized support services, such as workforce recruitment, support infrastructure, and research and training programs. Activities within a cluster development strategy can include joint marketing to expand the cluster, collaborative buying, joint research, and e-newsletters and directories to increase communications. For example, the iCoast (www.icoast.com), an alliance of technology companies, universities, and other organizations operating in Southeast Florida, hosts networking opportunities, publishes an e-newsletter, and sponsors on-line training to reinforce the region's growing importance as a hub for technology businesses. Enterprise Florida targets six industry clusters: life sciences (including biotechnology, medical device manufacturing, pharmaceuticals, and health care), information technology, aviation and aerospace, homeland security and defense, financial and professional services, and manufacturing.

Information on cluster industries is available from Enterprise Florida [www.eflorida.com/keysectors/default.asp?level1=22&tn=&bn], the Harvard Business School's Institute for Strategy and Competitiveness [www.isc.hbs.edu/econ-clusters.htm], and the University of West Florida Haas Center for Business Research and Economic Development [www.haas.uwf.edu].

Economic Impact Studies

Economic impact studies are used to predict how a policy or investment decision directly or indirectly affects the economy. Typical measures of economic impact include income, employment, and expenditures. Direct impacts include the number of jobs created, the wages paid by the jobs, and the impacts of the jobs on personal consumption spending. Indirect impacts look at the long-term effects created by a plan or investment decision – how the impacts multiply over time (the multiplier effect). Three of the most commonly used methods to calculate indirect impacts are the Regional Economic Models, Inc. (REMI), the U.S. Department of Commerce Regional Input-Output Modeling System (RIMS II), and the Minnesota IMPLAN model. Those models can be used to predict economic impacts, such as the number of jobs created or lost; increases or decreases in personal income, which influence household-to-business spending; and increases in business productivity and business-to-business spending. Economic impact studies are used for a variety of projects. In addition to the expansion or location of a new business, examples include

Target Industries	FL	Okaloosa	Escambia	Walton
Life Sciences	x	X	X	X
Information Technology	x	X	X	X
Aviation/Aerospace	X	X	Х	X
Homeland Security	X			
Financial/Professional Srvcs	x	X	x	х
Manufacturing	x			
Integrated Building Systems		X	X	X
Recreation and Leisure		X	X	X
Logistics and Distribution		X	x	X

The Okaloosa-Walton Region is Diverse

- Cities and Counties are very different
- Economies are unique; regional assets (Eglin)
- Military is major presence throughout region
- Demographics vary considerably

OKALOOSA & WALTON COUNTY TARGET MARKET ANALYSIS, PHASE ONE

The focus of the Okaloosa & Walton County Target Market Analysis was to understand the significant challenges and opportunities for economic diversification. Building on the competitive advantages offered by the two counties, including existing industry clusters, the study recommended a set of core and emerging target industries. Core industries (those that present immediate opportunities for growth but can withstand economic shifts) include electronics, medical devices, integrated building services, and logistics and distribution. Emerging industries (those that require higher skill levels, pay higher wages, and show growth potential) are business and professional services and information technology. Phase Two of the study is to prepare an economic diversification plan. (More information on the study is available from the Okaloosa County Economic Development Council [www.florida-edc.org] and the Walton County Economic Development Council [www.waltonbusiness.com].)

construction of a new facility, such as a convention center or sports stadium; a large development of regional impact; or a military base expansion or closing.

More information on economic impact studies is available from Enterprise Florida [www.eflorida.org] and the University of West Florida Haas Center for Business Research and Economic Development [www.haas.uwf.edu].

Incentives for Economic Development

Economic incentives and support services are offered by most regional and local economic development programs to make it easier for companies to expand or to locate in a community or region. The incentives can be both financial and nonfinancial. Examples of economic incentives used by Florida communities include a small business revolving loan program; reduction in impact fees, ad valorem and other tax exemptions or reductions; cash incentives for creating certain types of jobs in target industries; and use of industrial revenue bonds. Economic incentives can also be used to carry out other public objectives. For example, they can be used for locating a business in an economically distressed area or near public transit or affordable housing to help address a jobs-housing imbalance (where jobs are far removed from locations that offer employees affordable housing, which causes long commutes, exacerbating traffic problems). Regional and local economic development organizations also provide assistance with accessing the economic development incentives offered by Enterprise Florida. Enterprise Florida's incentives (which are designed to nurture the long-term profitability of Florida businesses) fall into four categories: targeted industries, workforce training, road infrastructure, and special opportunities. Special opportunity incentives are available for urban core areas and rural areas (for example, a Rural Community Development Revolving Loan Fund and Rural Infrastructure Fund to meet the special needs that businesses encounter in rural counties). Special incentives are also available for designated Enterprise Zones and for locating a business in a brownfield site (underutilized industrial or commercial sites due to actual or perceived environmental contamination).

More information on Enterprise Florida incentives is available from www.eflori-da.com/financialadvantages.



THE SOUTH FLORIDA ECONOMIC FORECASTING PARTNERSHIP

In 2003, the South Florida Regional Planning Council, the Treasure Coast Regional Planning Council, the South Florida Water Management District, and Miami-Dade, Broward, Palm Beach, Martin, and St. Lucie counties came together to create the South Florida Economic Forecasting Partnership. The purpose of the partnership is to enhance the ability to conduct demographic and economic analysis and forecasting in the seven-county Southeast Florida region served by the two regional planning councils. The Partnership is using an eight-region version of REMI. The eight regions covered by the model are the five partner counties, plus Monroe and Indian River counties, and the state of Florida. (*More information on the Partnership and REMI is available from www.sfrpc.com/remi.htm.*)

Living Wage Initiatives

Living Wage Initiatives focus on local ordinances that require sufficient wages and benefits to lift residents out of poverty. A living wage ordinance requires that local governments not award contracts or provide certain forms of financial assistance to employers (public or private contractors) that do not pay a living wage at pace with regional cost of living measures. The goal of the higher wages made possible through living wage ordinances is to help low-income residents improve their economic stability. Higher wages also can serve to increase the local tax base. (Typically, a living wage initiative requires hourly wages that are at least equal to federal poverty thresholds, and many initiatives also require employers to provide access to health care as part of the living wage regulation, either by directly supplying health care coverage or through increased wages.) A living wage initiative can be combined with a local hiring program as part of a larger economic development program.

Description of Living Wage Initiatives was taken from PolicyLink's on-line Equitable Development Toolkit [www.policylink.org]. At the national level, additional information is available from the Living Wage Resource Center [www.livingwagecampaign.org] and the Association of Community Organizations for Reform Now, or what is more frequently called ACORN, [http://acorn. org], which is a national organization of low- and moderate-income families working together for social justice and stronger communities. In Florida, ACORN was active in the recent increase in Florida's minimum wage. ACORN has Florida offices in Miami, Orlando, Palm Beach County, St. Petersburg, and Tampa. Information on these offices can be viewed at http://acorn.org/index.php?id=7894&L=0%2Findex. php%3Fid%3D4201. Information on Florida's minimum wage is available from the Florida Agency for Workforce Innovation [www.floridajobs.org/resources/fl_min_wage. html] and the Florida Department of Labor [www.stateofflorida.com/labem.html].

Local Hiring Strategies

Local hiring strategies focus on connecting local residents, particularly lowerincome residents, with jobs. Two examples of local hiring strategies are city/county ordinances which require a specified percentage of local hiring in all publicly funded projects in a target area that are above certain thresholds, and Community Benefit Agreements (CBAs), which are typically the outcome of negotiations



PENSACOLA BAY AREA CHAMBER OF COMMERCE

The Pensacola Bay Area Chamber of Commerce's economic development program offers information on business location tools, including incentives for new and existing businesses. In addition to the incentives provided by Enterprise Florida, the Chamber offers an ad valorem tax exemption for real and personal property for new and expanding businesses meeting certain requirements. It also has a Foreign Trade Zone and three Enterprise Zones, which offer financial incentives including job tax credits for employing residents; sales tax refunds on business equipment and building materials; an Enterprise Zone property tax credit; and sales tax exemptions on electrical energy. In addition to offering incentives for new and existing businesses, the Chamber has partnered with the University of West Florida's Small Business Development Center to sponsor the Pensacola Venture Forum, which provides entrepreneurs with the opportunity to demonstrate their growth potential to an audience interested in investment opportunities. Other entrepreneurial programs offered by the Chamber include a High Growth Business Club (for entrepreneurs to share their success stories through a monthly speaker's series as well as through roundtable mentoring discussions), a Creative Class/Talent Initiative, a Regional Incubator Network, and an Angel Venture Fund. (More information on the Pensacola Bay Area Chamber of Commerce's economic development incentives is available from www.pensacolabayarea.com.)

between community groups and a developer. CBAs apply to one specific development. The goal of both strategies is to tie economic development to local opportunities for training and employment. Programs that link jobs to local hiring can require that a percentage of jobs created by a commercial development go to local residents, which helps to ensure that un- or under-employed residents, including those in economically isolated communities, benefit from economic development and reinvestment in their community. Other programs can require linking urban core and inner-ring suburban residents to employment opportunities around the region, thereby balancing economic opportunities within that area. Local hiring programs can tied to training programs that improve residents' job skills and thereby result in increased earning and employment potential. Such programs can also be used to address discriminatory hiring practices, particularly for communities of color. In addition to the support of local government, local hiring programs often rely on the support of community entities, such as social service providers and faith-based organizations, which should be involved in the planning and implementation process.

Description of Local Hiring Programs was taken from PolicyLink's on-line Equitable Development Toolkit [www.policylink.org]. Other resource organizations are the Center for Community Change [www.communitychange.org], the National Employment Law Project [www.nelp.org], the Corporation for Enterprise Development [www.cfed.org], and the National League of Cities [www.nlc.org].

Marketing for Economic Development

Economic development organizations use a variety of marketing techniques to attract businesses to their community and to retain and expand businesses. Marketing programs can also help enhance a community's image and spread the word about its assets to a broader audience. An important part of a marketing program is honing what the message should be, which requires understanding what appeals to the needs of the target business audience. Techniques in marketing programs generally include a combination of sending direct mails and emails, participating in trade fairs, conducting marketing trips to other regions, hosting a website, producing a marketing brochure that highlights community assets, and conducting special studies on specific regional assets (for example, a labor force analysis). Because regions, not individual communities, now compete for new economic Living Wage Job Increases Relative to Before Ordinance Passage and to Previous Jobs by Race/Ethnicity

Race/ethnicity	Pay Increase After Living Wage Law Was Enforced (Median)	Pay Increase Relative to Previous Job Before Present One (Median)
Black	\$3.17 per hour	\$3.44 per hour
Hispanic	\$2.39 per hour	\$3.84 per hour
Indian*	\$3.15 per hour	\$5.55 per hour
White non-Hispanic**	\$2.64 per hour	\$5.60 per hour

*Figures in this row represent one individual, not the median from a range of individuals.
**Figures in this row represent an average (mean) of two individuals, not a median.

THE MIAMI-DADE COUNTY COMMUNITY COALITION FOR A LIVING WAGE (CCLW)

The CCLW was formed 10 years ago to ensure that workers in Miami-Dade County are paid a living wage. Organized in response to federal and state welfare reform requiring many welfare recipients to enter the workforce, the group supports local ordinances that require employers to pay wages that are above federal or state minimum wage levels, which means that local governments should not contract with or subsidize employers who pay poverty-level wages. The CCLW has successfully pushed adoption of Living Wage Ordinances by Miami-Dade County in 1997, the first such ordinance in the southeastern United States. The ordinance applied to all county workers, workers of service contractors, permittees at airports, and the Public Health Trust. It also created a county commission charged with overseeing implementation and enforcement of the ordinance. Living wage ordinances have also been adopted by the City of Miami Beach (2001), Broward County (2002), and the City of Miami (2006). (More information on the Miami-Dade County Community Coalition for a Living Wage is available from www.hscdade.org/pdf/CCLW.pdf and the Living Wage Coalition [www.livingwagecoalition.com].)

investments, many economic development marketing programs are conducted by a regional organization or collaboration of organizations. For example, in the Tampa region, seven counties that once competed for economic growth came together to create the Tampa Bay Partnership (www.tampabay.org) to be more competitive and have more economic clout.

More information on marketing for economic development is available from Enterprise Florida [www.eflorida.com] and the International Economic Development Council [www.iedconline.org].

Minority Business Enterprise (MBE) Programs

MBE programs focus on increasing opportunities for minority-owned and other emerging small businesses, generally as part of a broader strategy to strengthen the economic health of urban neighborhoods and level the business playing field. Many MBE programs focus on the construction industry because it receives a large amount of public money and offers well-paying jobs for people not having an advanced education. PolicyLink outlines three common approaches to promoting minority-owned businesses:

- A local ordinance that establishes goals (in the form of a stated percentage of the total value of each government-awarded contract) for minority participation in all or most local government contracts
- Community-benefits agreements that require publicly-subsidized developments to hire local firms, including minority-owned businesses, and residents
- Efforts by government and community-based organizations to both build the capacity of, and enhance access for, targeted firms

Each approach requires compliance monitoring to ensure that goals are met and having the desired impact; for example, an MBE program may require that contractors document good faith efforts to hire minority businesses and explain why hiring did not occur in cases where a minority contractor did not win the bid. One way of monitoring progress is an annual diversity study that documents program impacts (for example, the achievements of minority firms' contracting track records and the discrepancy between minority and white firms in local industry participation and in contract awards from city or county government). Strategies to enhance minority and small business access to public contracts include, in the case of projects



FLORIDA'S GREAT NORTHWEST, INC.

Florida's Great Northwest is a regional economic development organization serving 16 counties in Northwest Florida from Pensacola to Tallahassee. Its membership includes county and local economic development groups, workforce boards, colleges, universities, and, comprising the majority of members, private businesses. Florida's Great Northwest's primary mission is the creation of high-wage, high-skill jobs and branding and marketing the region. Marketing efforts include trade trips to promote the region, a marketing brochure that describes regional assets, and one-stop information on the region (its business climate, available properties, educational opportunities, labor force, quality of life, and proximity to markets). It also supports local economic development organizations. In 2006, it received a U.S. Department of Labor Workforce Innovation in Regional Economic Development Grant (one of 15 awarded nationally) to support regional partnerships aimed at expanding employment and advancement opportunities and catalyzing the creation of high-skill, high-wage opportunities. (More information on Florida's Great Northwest is available from www. floridasgreatnorthwest.com.)

without a minority business set-aside program, breaking larger public contracts into multiple, smaller opportunities, which allows smaller firms to bid; establishing a program that provides advance payments to qualified businesses that lack the up-front capital to bid on public contracts; and connecting minority–owned firms with prime contractors (for example, an intermediary can identify minority businesses that are interested in bidding on large projects and connect them with larger contractors). Other programs to strengthen minority-owned business capacity include providing technical assistance with the bonding process; creating business incubators, which provide a supportive environment and can lower overhead through shared space and other capital costs; initiating mentorship programs that pair larger businesses with minority and small businesses; and providing minority business loans, which increase minority-owned business access to capital.

D Much of the information for this description of Minority Business Enterprise Programs was taken from PolicyLink's on-line Equitable Development Toolkit [www. policylink.org]. Other resource organizations are the Black Business Investment Fund [www.bbif.com]; the U.S. Small Business Administration's (SBA) Online Women's Business Center [www.onlinewbc.gov]; and the Minority Business Enterprise Legal Defense and Education Fund [www.mbeldef.org], a nonprofit law firm that focuses on the defense of minority contracting programs and preparation of disparity studies. The SBA also offers minority business resources through its Office of 8(a) Business Development Programs [www.sba.gov/8abd], which helps small disadvantaged businesses compete in the marketplace and gain access to federal and private procurement markets. Information on the SBA's Florida district offices in Jacksonville and Miami is available from www.sba.gov/localresources/district/fl. In addition to the Florida SBA district offices, Florida resource organizations include the Disney/SBA National Entrepreneur Center (NEC) located in Orlando [www.floridanec.org], which provides technical and financial assistance to woman- and minority-owned businesses, and the Florida Office of Supplier Diversity [dms.myflorida.com/other_programs/office_of_supplier_diversity_osd], which seeks to improve business and economic opportunities for Florida's women- and minority-owned businesses through three primary functions: certification of minority business enterprises, advocacy and outreach, and matchmaking activities. Additional Florida resources are the Florida Black Business Investment Board [www. fbbib.com], the Florida First Capital Finance Corporation [www.ffcfc.com], and the Florida Hispanic Chamber of Commerce [www.hispanicbusiness.com].



MINORITY/WOMEN BUSINESS ENTERPRISE ALLIANCE

The Alliance was founded in 1994 as a one-stop resource center to meet the needs of the minority and women's business community in Central Florida. It was initiated by eight public/private sector partners in cooperation with 44 business and community leaders to grow the region's economy by supporting entrepreneurship and developing the resources that respond to the needs of minority, woman-owned, small, or disadvantaged businesses, including those located in low-income communities. Today the Alliance is a full-service business service organization and serves as a designated Certified Small Business Administration Micro Lender, Community Development Financial Institution, National Community Development Agency, and Community Development Entity. The Alliance also sponsors a Business Training Institute and a Women's Business Center and advocates for minority businesses in the community. Through its consulting services, the Alliance provides assistance and customized programs to other minority business development and community development organizations in Florida. (More information on the Minority/Women Business Enterprise Alliance is available from www.allianceflorida.com.)

Workforce Training Programs

Workforce training programs are designed to improve the skills of a community's labor force. Participants can include dislocated or unemployed workers, those just entering the labor market, and currently employed workers who wish to improve their skills or develop new ones. Workforce training programs work closely with businesses in their region to ensure that the region's workforce has the skills needed for businesses to thrive and expand. In Florida, the state resource for workforce training is Workforce Florida, created in 2000 with the passage of the Workforce Innovation Act. Workforce Florida programs and services are carried out by the Agency for Workforce Innovation, which is responsible for implementing state policy in the areas of workforce development, welfare transition, unemployment compensation, labor market information, early learning, and school readiness, and 24 business-led Regional Workforce Boards. The regional boards provide access to developing competitive job skills to citizens who are searching for a first job, trying to get back into the job market, or seeking a better job. They also provide One-Stop Career Centers, which help employers find employees, and they work with employers to provide the training needed to ensure that employees have the skills needed for them to remain competitive and profitable.

For more information on workforce training programs, go to the Agency for Workforce Innovation [www.floridajobs.org] and the U.S. Department of Labor Employment and Training Administration [www.doleta.gov/usworkforce]. To access links to Florida's One-Stop Career Centers, go to www.floridajobs.org/onestop/onestopdir/index.htm.



THE WORKFORCE DEVELOPMENT BOARD OF THE TREASURE COAST (WDBTC)

The WDBTC is building an integrated workforce development system for job seekers and employers. Its Jobseekers program offers a variety of services, including access to phones, fax, copiers, and computers; tips on finding and interviewing for a job; and a resume-writing service. Other services focus on giving employers the tools needed to stay competitive, find the right employee, and make it easier to manage and motivate their workforce. The WDBTC offers two innovative programs that take business assistance, employee training, and job search assistance directly to the employers, employees, and jobseekers. The Employer Learning Library is a no-cost lending library containing training materials and equipment that employers may borrow to upgrade the skills of their workforce. A mobile career center is equipped with a computer lab for accessing job information and is used to provide special training sessions for employees. The mobile center can be stationed at an employer's site for easy access. (More information on the Treasure Coast workforce initiatives is available from www.tcjobs.org.)

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The 1990s have seen a growing number of local, state, and federal programs focused on the ways that development patterns and land use practices impact the health of a community's residents, the ability of older people (soon to be the country's majority population) to remain independent and active, and student learning. One of the driving forces behind the move toward more walkable, mixed-use communities and reducing dependence on cars has been concerns about health, starting with the young (through programs such as Safe Routes to Schools and locating schools in close proximity to existing neighborhoods) and the independence of the country's senior population. A recently released study (*Measuring the Health Effects of SPRAWL: A National Analysis of Physical Activity, Obesity and Chronic Disease*) by the Surface Transportation Policy Project (STPP) and Smart Growth America documents that people who live in countries marked by sprawl-style development tend to weigh more and be more likely to be obese and have high blood pressure. Another recent study (*Aging Americans: Stranded Without Options*) by the STPP, in partnership with the American Association of Retired People (AARP), documents that because of sprawling development patterns and communities built only for the car, many older Americans have no options other than driving. This means that when older Americans can no longer drive, they are housebound, a condition, according to the report, that applies to more than half of older Americans (a number that will dramatically increase because of the aging of Baby Boomers).

Information on these reports is available from Smart Growth America: www.smartgrowthamerica.org/report/HealthSprawl8.03.pdf and www.smartgrowthamerica.org/aging4.04.html. Information on education and health tools is also available from the American Planning Association [www.planning. org], the Institute for Local Government [www.lgc.org], the National Association of Realtors Smart Growth Program [www.realtor.org/sg3.nsf], the National Trust for Historic Preservation [www.nationaltrust.org], and the Smart Growth Network [www.smartgrowth.org]. Information on healthier, active living for all ages is also available from America Walks [www.america.walks.org], the Center For Disease Control, Department of Nutrition and Physical Activity [www.cdc.gov/nccdphp/dnpa/index.htm], Health Policy Coach [www.healthpolicycoach.org], the National Center for Bicycling and Walking [www.bikefed. org], Walk to School Day-USA [www.walktoschool-usa.org], and Walkable Communities, Inc. [www.walkable.org]. An additional resource is the National Association of Local Boards of Health's 2006 report, <u>Land Use Planning for Public Health: The Role of Local Boards of Health in Community Design and Development</u> [www.cdc.gov/healthyplaces/publications/landuseNALBOH.pdf].

Active Living by Design

Active living-designed communities are places where public officials and the private sector (residents and developers) have made a commitment to creating a healthier population by designing places that make daily physical activity the easy choice. The goal of Active Living by Design Programs is to enable residents of a community to integrate physical activity into their daily routine, accumulating at least 30 minutes of activity each day through walking, biking, playing in a park, walking to school, taking the stairs instead of an elevator, and using recreational facilities. Achieving that goal requires changing the design of most communities, which has created barriers to walking, bicycling, and other forms of physical activity. Those barriers include high-speed roads without sidewalks and safe places for bicycles, and jobs and stores located far from homes, requiring a car to reach even the most routine destination. Active Living by Design practices focus on retrofitting those existing places to make them active living-friendly and requiring active living planning principles as a part of new development. Active living planning principles share much in common with the principles of the New Urbanism. They emphasize creating residential areas mixed with shopping so that residents can walk to a grocery or other daily shopping needs, to jobs, to schools, and to well-maintained, safe neighborhood parks. Strategies can be as simple as making stairways more attractive and easier to find through colorful signs that call out the health benefits of taking the stairs.

☐ Information on Active Living by Design programs is available from the Active Living Network [www.activeliving.org], which publishes an <u>Active Neighborhood</u> <u>Checklist</u> [www.activeliving.org/node/681] that is designed to help residents, community groups, local government officials and advocacy organizations determine whether their neighborhoods are activity friendly; Active Living by Design [www.activelivingbydesign.org], a national program of the Robert Wood Johnson Foundation administered by the University of North Carolina's School of Public Health; and the American Planning Association, which offers a number of resource publications on active living by design [www.planning.org/APAStore/Search/Default.aspx?pp=3650].

Aging in Place

Aging in Place programs focus on strategies that enable senior citizens to remain independent and in their own home or in a non-health care environment for as long as their health allows. The goal is to overcome the many barriers that prevent



ACTIVE ORLANDO

The city of Orlando designated its commercial downtown and the surrounding neighborhoods as an Active Living District. The goal is to create an environment that encourages safe physical activity to help overcome Orlando's ranking as one of the most unsafe places for pedestrians and bicyclists. A first step was to involve residents and professionals in a walkability and bikeability assessment of the area, and to create a multi-partner board to advise the city on active living principles and develop a promotional program on the importance of daily active living. The city also requires design elements to be supportive of active living when approving new commercial development in the district. Other plans include improved signage prompting physical activity, bikeway maps, walking/cycling incentive programs, pedestrian and bike safety education, expanding walking clubs, and a campaign that focuses on taking stairs over elevators. (For additional information, contact Dean Grandin at dean.grandin@cityoforlando.net.)

older persons from remaining independent, active, and contributing members of their community, with opportunities to live in intergenerational neighborhoods that offer easy access to cultural, educational, medical, and recreational services. The benefit of Aging in Place programs is to retain the elderly within the community and to reduce the number of those who have to move to institutional living. Those strategies are made all the more important by demographic trends: by 2030, nearly one in five Americans (71.5 million people) will be over age 65. In some Florida communities, the 2030 population over 65 is estimated to be even higher (in some regions, 30-plus percent). The high number of the over-65 population will be further exacerbated by the auto-dependent design of most Florida communities. AARP's 2005 report, *Community Mobility Options: the Older Person's Interest*, highlights this issue: "As the boomer generation ages, an increasing proportion of the population – because of where they live and the lack of public transportation and walkable communities – risks becoming isolated and immobile if they are unable to drive.

Aging in Place strategies address the location and design of development and community infrastructure, as well as the home itself and the support services needed by an older population. Development and design strategies include zoning that enables older residents to remain in their community as their housing needs change by allowing multi-family and accessory dwelling units (ADU), such as garage apartments and "in-law suites" in all residential areas, and that does not isolate residential neighborhoods from daily commercial needs by allowing mixed-income and mixed-housing types to be located close to neighborhood or downtown shopping areas, universities, and cultural institutions. Mobility design strategies include well-lighted and maintained sidewalks and walking paths with plenty of shade and benches for resting, especially at bus stops; well-marked and lighted parking lots and well-marked pedestrian cross-walks; stoplights timed to allow an elderly person to cross the street; larger lettering on street signs to enable easier navigation; and dedicated left turn lanes and signals to facilitate safer driving. Support strategies include in-home services, such as assistance with home repairs; home assessment services that allow the elderly to remain in their own homes; and accessible transit for those who no longer drive.

A principal resource organization on Aging in Place is Partners for Livable Communities (www.livable.org), which recently launched, in partnership with the



AMELIA PARK

One hundred and six-acre Amelia Park in the center of Fernandina Beach on Amelia Island was designed as an intergenerational community that enables residents to begin and end their lives in the same neighborhood. The Amelia Park Master Plan emphasizes creating relationships among residents and enabling residents to age in place. Each neighborhood offers a continuum of housing types and care. Housing options include single-family homes, cottages, row houses, garage apartments, and apartments above neighborhood shops. All residences are within walking distance of shopping, schools, parks, churches, and recreational facilities. To foster the ability to stay in the community, Amelia Park offers skilled nursing care and an infrastructure to facilitate independent living. (Additional information on Amelia Park is available from www. hometownneighborhood.com and from <u>A Guidebook to New</u> Urbanism in Florida 2005, published by the Florida Chapter of the Congress for the New Urbanism [www.cnu.florida.org].)

National Association of Area Agencies on Aging (www.n4a.org) and the MetLife Foundation, an Aging in Place initiative (www.aginginplaceinitiative.org) to help America's communities prepare for the aging of their population and become good places to grow up, live in, and grow old. Two initiative programs are Aging in Place Workshops and JumpStart the Conversation Grants. One of the workshops (described to the right) was sponsored by Hillsborough County. In 2006, Partners for Livable Communities and the National Association of Area Agencies on Aging collaborated with the International City/County Management Association (ICMA), the National League of Cities (NLC), and the National Association of Counties (NACo), with support from the MetLife Foundation, to conduct a survey of 10,000 U.S. cities and counties to determine how they were addressing the needs of their aging populations. The report from this survey, The Maturing of America: Getting Communities on Track for an Aging Population, can be downloaded at www.aginginplaceinitiative.org (click on resources). The same partners also produced a comprehensive toolkit, A Blueprint for Action: Developing Livable Communities for All Ages (also available by clicking on resources at www.aginginplaceinitiative.org). The toolkit is designed to be used as a quick reference kit for local leaders and practitioners who are interested in actively working to create an aging-friendly community. Creating such communities, the toolkit calls out, requires partnerships among different agencies and different community sectors. It also requires that a broad range of local government departments and agencies, ranging from housing and parks and recreation to transportation and planning and zoning, understand the impact of their decisions on an aging population and change their practices as needed.

Other useful Aging in Place-related publications (available from www.aginginplaceinitiative.org) include: *Aging in Place: A Toolkit for Local Governments*, a collaborative project of the Atlanta Regional Commission and the Community Housing Resource Center, which offers a set of strategies to help local governments address interrelated challenges in health care, housing, and land use (for example, more flexible zoning codes to enable mixed-use communities where services are more accessible to older residents); *Livable Communities and Aging in Place*, published in 2005 by Partners for Livable Communities, which examines the problems of appropriate housing, transportation, health care delivery, and supportive services for older persons; and *Livable Communities: An Evaluation Guide*, prepared in

Crossing the Line:

Developing a Livable Tampa Bay Region for All Ages



JumpStart the Conversation >>

www.aginginplaceinitiative.org

DEVELOPING A TAMPA BAY REGION FOR ALL AGES

In June 2007, Partners for Livable Communities and the National Association of Area Agencies on Aging, with the support of the MetLife Foundation, held the first regional workshop of the Aging in Place Initiative in Tampa. (That area has one of the highest percentages of residents over the age of 65 in the country.) At the workshop, community leaders discussed ways to help the Tampa Bay area prepare for the aging baby boomer population and the increasing number of older Americans. The results of the gathering are outlined in Crossing the Line: Developing a Tampa Bay Region for All Ages. Aging with a Comprehensive Approach – the principal workshop theme - was selected to emphasize the need for government agencies, community groups, and private service providers to cross boundaries and work together to provide efficient and comprehensive services to older adults. The Hillsborough County Department of Aging Services has a comprehensive Master Plan (www.hillsboroughcounty.org/bocc/resources/publications/ strategicplanupdate.pdf), developed in conjunction with the University of South Florida. Eligible workshop attendees had the opportunity to apply for small (\$1,000 or \$2,500) JumpStart the Conversation Grants to finance their own Aging in Place projects. (For more information on the The Tampa Bay Region for All Ages workshop reports, go to www.aqinqinplaceinitiative.org and click on Tampa Bay Report.)

2005 by Arizona State University's Herberger Center for Design Excellence for the AARP Public Policy Institute. AARP offers a set of surveys that citizens can use to assess their communities for housing, transportation, health services, and other key components of Aging in Place.

🗁 In Florida, information on Aging in Place is available from the Florida's Communities for a Lifetime Program [www.communitiesforalifetime.org] and the Center for Urban Transportation Research at the University of South Florida [www.cutr. usf.edu]. National organizations providing information on Aging in Place are the American Association of Retired People, which publishes a community Aging in Place audit guide [www.aarp.org/research/housing-mobility/indliving/beyond_50_communities.html]; the Bluemoon Foundation, which published the recent resource, Sustainable Communities for All Ages: A Viable Futures Toolkit [www.bluemoonfund. org/programs/programs_show.htm?doc_id=464305&attrib_id=11422]; the International City/County Management Association [www.icma.org]; NeighborWorks [www.neighborworks.org], which published the report, <u>Aging in Place: Coordinating</u> Housing and Health Care Provisions for America's Growing Elderly Population, by the Joint Center for Housing Studies of Harvard University and the Neighborhood Reinvestment Corporation; and the World Health Organization's report, Global <u>Age-friendly Cities: A Guide</u> [www.who.int/ageing/publications/Global_age_friendly_cities_Guide_English.pdf]. Two useful reports from the Brookings Institution are the 2007 Mapping the Growth of Older America: Seniors and Boomers in the Early <u>21stCentury [www.brookings.edu/views/articles/200705frey.htm] and The Mobility</u> Needs of Older Americans: Implications for Transportation Reauthorization [www. brookings.edu/reports/2003/07transportation_rosenbloom.aspx].

Healthy Food Access

Just as urban planners are examining how community and neighborhood planning influence the ability of residents to improve their health through more active lifestyles, they are also looking at the ways in which where people live influences their access to healthy food. The conclusion is that residents who live in lowincome and underserved neighborhoods do not have access to fresh fruits and vegetables because they are not conveniently available in their own communities. Strategies to remedy this problem focus on creating a combination of incentives (for example, grants and tax incentives) that will improve access to retail outlets



SLOW FOOD MIAMI PLANT A THOUSAND GARDENS

The Plant A Thousand Gardens Collaborative Nutrition Initiative (CNI) began in 2004 when Slow Food Miami partnered with local farms, universities, and community organizations to give five South Florida schools the materials, expertise, and assistance to install and care for sustainable organic gardens. The gardens are used as a tool to bring about lasting attitude and behavior changes related to food. With funding support from the Health Foundation of South Florida and the involvement of health experts, nutritionists, and chefs, the program has blossomed into a comprehensive strategy to improve the health and nutrition of children and their families. During the 2007-2008 school year, the CNI is being implemented at five elementary schools with high concentrations of Hispanic, Haitian, and African-American children from low-income families. The garden-to-table approach allows teachers and school leaders to go beyond classroom nutrition lessons to provide the hands-on experience and support that help children and their families maintain healthier eating habits and overall wellness. (More information on Slow Food Miami Plant a Thousand Gardens is available from www.slowfoodmiami.com. Information on Slow Food USA's Slow Food in Schools program is available from www.slowfoodusa. org/education/projects.html.)

that sell nutritious, affordable food in low-income communities of color. Specific strategies include improving the selection and quality of fresh food in existing smaller stores, encouraging the construction of new supermarkets, and starting and continuing farmers' markets. The strategies address the flight of retail, including grocery stores, to the suburbs, which meant that the only food retailers left in the inner-city neighborhood were generally small independent groceries that charged high prices and offered minimal variety, or corner stores selling a limited selection of processed foods. As a result, because of the long distance to supermarkets, limited transportation options, and the lack of nearby stores, the poor often pay more for food and do not have access to healthy food. PolicyLink reports that although smaller stores are more convenient, they generally offer fewer healthy foods, are poorly maintained, and charge higher prices (generally about 10 percent) than supermarkets. Increasing access to affordable, good quality, healthy food, PolicyLink maintains, is one of a number of strategies to address obesity and related physical conditions, such as diabetes and heart disease, that disproportionately affect lowincome people of color because their only food choices are high in fat and calories. (Studies have shown that access to local places offering healthy food can improve eating behaviors.) Other strategies include promoting increased physical activity and educating lower-income residents on good eating habits through local nutrition programs.

Much of the information on healthy food access was summarized from PolicyLink's (www.policylink.org) on-line *Equitable Development Toolbox* and from its Center for Health and Place (www.policylink.org/ HealthAndPlace/resources.html), which provides technical training and capacity building, policy advocacy, and communications training to advocates working to create healthier communities. The center also develops research reports and offers a *Healthy Food Retailing Toolkit* that focuses on increasing access to retail outlets that sell nutritious, affordable food in low-income communities of color. Its publications include *Reducing Health Disparities Through a Focus on Communities*, published in 2002, and *Research, Practice and Policy: Key Strategies to Reduce Health* *Disparities Through a Focus on Communities*, a report of a convening hosted by the California Endowment and PolicyLink in 2005.

C Additional information on access to healthy food and environments is available from the Funders' Network for Smart Growth and Livable Communities [www.fundersnetwork.org], which explores the relationships among growth patterns, community design, and public health in its <u>Trans-</u> lation Paper #11, Health and Smart Growth; the Joint Center Health Policy Institute, a project of the Joint Center for Political and Economic Studies [www.jointcenter.org]; the National Association of Counties' Counties and Local Food Systems [www.naco.org/Template.cfm?Section=New_ Technical_Assistance&template=/ContentManagement/ContentDisplay. cfm&ContentID=24784], which describes how county governments can support local food systems, a component of an initiative to focus on obesity; the Robert Woods Johnson Foundation [www.rwjf.org], which in 2006 published the report Community Design for Health Eating: How land use and transportation solutions can help, by Barbara McCann; the Smart Growth Network {www.smartgrowth.org]; and Smart Growth Online, which published a recent article entitled "Linking Land Use Planning and the Food Environment" [http://icma.org/sgn/newsdetail.cfm?nfid= 2666&id=#autoID%23]. A Florida resource organization working to promote healthy food access is Florida Organic Certified Organic Growers and Consumers, Inc. (FOG), which sponsors the Neighborhood Nutrition Network [www.nnninfo.org] and the Florida Community Gardens [http://nnn.foginfo.org/gardens], which provides information on how to establish a community garden. FOG was one of 28 recipients of the U.S. Department of Agriculture's 2003 Community Food Projects Competitive Grants designed to create a replicable job training and social entrepreneurship program for teens that will encourage them to teach their peers about local food and nutrition issues and be involved in building a business based on fresh produce and value-added products.

Health Impact Assessments

A Health Impact Assessment (HIA) is used to predict the impact of development projects and land use policies on community and human health. The results of an HIA are used to inform decision-makers and to help them make decisions that maximize the positive health benefits, and minimize the negative impacts, of a proposed policy or practice. The methods used in an HIA are similar to the environmental and social impact assessments required by many federally-funded projects. They include community input and employ qualitative and quantitative analysis techniques. An assessment consists of a scoping phase, identification and assessment of impacts, and a set of recommendations. An HIA also includes a process for ongoing evaluation and monitoring. Employing planning practices that create healthier citizens brings multiple community benefits (for

EXAMPLES OF NACCHO RESOURCES

- Protocol for Assessing Community Excellence in Environmental Health (PACE EH), a methodology to guide local communities in identifying and addressing environmental health priorities
- PACE EH Demonstration Site Project, an expandable compendium of local communities documenting their experiences using the methodology
- Peer Assistance Network for potential and current PACE EH users
- Model Practice Database, an online, searchable collection of practices across public health areas

example, lower health insurance costs for employers and employees and a more productive workforce because of fewer missed work days). A number of organizations serve as HIA resources. At the national and international levels, these organizations include the National Association of County and City Health Officials (NACCHO), the American Planning Association (APA), and the World Health Organization (WHO). In Florida, two resource organizations are the Florida Department of Health (FDOH) and Healthy Development, Inc.

NACCHO has been in a multi-year partnership with the National Center for Environmental Health (NCEH) of the Center for Disease Control and Prevention to provide communitybased environmental health assessments and technical assistance to local



INDIAN RIVER COUNTY HEALTH DEPARTMENT PACE EH PROGRAM

Indian River County used the PACE EH process to conduct environmental assessments and initiate a public campaign to stimulate interest in needed public improvements, particularly in the lower-income Wabasso community. The PACE EH assessment teams identified a number of environmental problems, including sub-standard housing, poor public lighting, and lack of good access to safe public water. As a result, the PACE EH coordinators and volunteers were instrumental in connecting Wabasso to the public water system, raising funds to develop a new Wabasso community center, and building new sidewalks. They were also key players in organizing Project Hope, which will build homes for disadvantaged residents whose housing is demolished for safety reasons. (For more information on the Indian River County PACE EH process, go to www.naccho.org/topics/environmental/ documents/IndianRiverPACE_002.pdf, or www.doh.state.fl.us/ environment/programs/PACE-EH/PACE-EH.htm.)

health departments and their constituents. To further an understanding of how the HIA process works, NACCHO awarded NCEH-funded grants to eight local health departments to serve as Protocol for Assessing Community Excellence in Environmental Health (PACE EH) demonstration sites. NACCHO has also recently entered into a partnership with APA (Healthy Communities through Collaboration) to re-build the bridge between land use planning and public health practices. The goal is to promote an interdisciplinary approach to creating and maintaining healthy communities by improving local planning department and public health agency performance through improved collaboration. Activities are focused on giving planning and health organizations a better understanding of their respective authorities and functions and demonstrating how they can work together to bring information about health needs to the land use planning process and information about land use impacts to health providers. In February 2006, APA and NACCHO sponsored an HIA workshop for local health professionals and land use planners. With assistance from the Tri-County Health Department in Colorado, a checklist for Public Health in Land Use Planning and Community Design was created. They have also developed two fact sheets for elected officials: one defining terms commonly used in the health and land use fields and the other entitled Working with Elected Officials to Promote Healthy Land Use Planning and Community Design. At the international level, the WHO offers a comprehensive overview of HIAs on their website, which includes case studies and examples, HIA procedures, a HIA toolkit, and links to literature on HIAs.

In Florida, FDOH's Division of Environmental Health has been aggressive in promoting a holistic assessment of environmental quality impacts on human health, which in 2005 earned it an award from the Association of State and Territorial Health Officials for its PACE EH Initiative. FDOH has taken a leadership role in encouraging environmental health professionals to use the PACE EH assessment process, with the result that 28 Florida counties have participated. FDOH's leadership in making the health-community design and land use planning link was recently recognized when it was named the first health organization member of the Smart Growth Network. FDOH's emphasis on understanding environmental impacts on public health is driven by Florida's growth, which places strains on a community's built and natural environments and intensifies the need for land use planners and public health officials to establish a relationship. To help implement the PACE EH process in Florida, FDOH offered a number of small demonstration grants. One of the grantees was the Indian River County Health Department, which in 2005 won NACCHO's Jim Parker Memorial Award. Another HIA player in Florida is Tallahassee-based Healthy Development, Inc. (HDI), which specializes in the relationship between development and human health. Using GIS, HDI can project the health care costs and savings and social and economic impacts of changes in the built environment.

The National level, more information on HIAs is available from the National Association of County and City Health Officials [www.naccho.org/topics/environmental/CEHA.cfm], the World Health Organization [www.who.int/topics/health_impact_assessment/en/], and the American Planning Association [www.planning.org/research/healthycommunities.htm]. In Florida, HIA information is available from the Florida Department of Health [www.doh.state.fl.us/environment/index.html] and Healthy Development, Inc. [www.healthydevelopment.us].

Safe Routes to Schools

Safe Routes to Schools programs are designed to improve the health of children and to encourage a healthy, active lifestyle at an early age by making walking and biking to schools safer and easier. The programs typically involve multiple partners, including parents, community members, school staff, traffic engineers, city planners, law enforcement officers, and community leaders. Examples of Safe Routes to Schools activities include walkability and bikeability audits of school travel routes, improvements to sidewalks near schools, use of traffic calming to slow traffic and make streets safer for pedestrians, building crosswalks, adding crossing guards, educating students and drivers about safe travel to school, and promoting greater enforcement of traffic laws. Other Safe Routes to Schools activities can include offering walking school buses (when one or two parents or volunteers escort a group of children on the walk to school) and establishing school construction policies that emphasize renovation and improvement of existing schools and locate new schools in places that reduce walking hazards and avoid major traffic threats. A federal Safe Routes to Schools program, administered by the Federal Highway Administration Office of Safety, distributes funding to states for infrastructure and non-infrastructure activities.

[Information on Safe Routes to Schools programs can be obtained from FHWA [http://safety.fhwa.dot.gov/saferoutes/index.htm] or from the National Center for Safe Routes to Schools [www.saferoutesinfo.org]; the American Planning Association [www. planning.org]; and the Florida Chapter of the American Planning Association [www. floridaplanning.org], which featured an article in its April 2007 issue of its newsletter Florida Planning.

School Facility Siting Standards

Some communities change school location policies that create obstacles to allowing schools located within walking and biking distance of many of the students the schools serve. One option is to reduce the size required for school sites, which typically require large minimum acreage standards, resulting in schools located in greenfields away from the neighborhoods the school is serving and without safe walking and biking access. (The Center for Educational Facilities Planners International, which sets school site standards, has recently eliminated its minimum school siting standards that since the 1970s have required large minimum school site sizes for new schools. For example, under the old standards, a high school of 2,000 would need at least 50 acres. By contrast, older neighborhood schools occupy two to eight acres.) Other school location policy changes include revising requirements for renovation of existing schools, which typically favor new construction over rehabilitation, building new schools in an existing community or neighborhood within walking and biking distance of many students, and retrofitting other facilities for use as schools. Reinforcing the use of existing schools, Florida requires that design professionals with preservation expertise conduct feasibility studies on the renovation of historic schools before the schools can be demolished. A resource for communities or citizen organizations seeking smaller neighborhood schools is the National Trust for Historic Preservation's Smart Growth Schools Fact Sheet



FLORIDA SAFE WAYS TO SCHOOL

The Florida Department of Transportation's Pedestrian and Bicycle Program administers the state's Safe Ways to School initiative. The goal of the program is to involve school traffic safety committees, with input from parents, administrators, crossing guards, and students, in improving conditions that affect children walking and bicycling safely to and from school. A Safe Ways to School Toolkit helps schools assess and improve hazardous conditions around schools and the surrounding neighborhoods. The toolkit includes a student survey, a school site design assessment, a neighborhood site assessment, parent and student attitudinal surveys, a video, and a how-to manual. (Additional information is available from www.dot.state.fl.us/Safety/ped_bike/ped_bike.htm.)

(www.nationaltrust.org/issues/downloads/schools_smartgrowth_facts.pdf), which outlines the benefits and strategies to creating smart growth schools - defined as schools that involve the community in school facility planning; make good use of existing resources, including historic school buildings; create schools that meet the needs of parents and students; are located within neighborhoods and fit into the scale and design of the neighborhood; act as a neighborhood anchor and community center; and are usually small in size. Studies show that smart growth schools improve academic achievement, save money, and improve student health and environmental quality. The National Trust recently partnered with the Council of Educational Facility Planners International, the National Center for Preservation Technology and Training, and the U.S. Environmental Protection Agency to develop Schools for Successful Communities: An Element of Smart Growth. The goal is to help local citizens, city officials, school board members, school district personnel, and land use planners make informed decisions about school renovation and construction. The guidelines build on the National Trust's publication, Why Johnny Can't Walk to School: Historic Neighborhood Schools in the Age of Sprawl. Additional information on those guidelines and other resource materials are available from www.nationaltrust.org/issues/schools or The Center for Educational Facilities Planners International (www.cefpi.org).

[7] Information on school siting requirements is available from Smart Growth America [www.smartgrowthamerica.org], the U.S. Environmental Protection Agency [www. epa.gov/livability/school_travel.htm], the Congress for the New Urbanism [www.cnu. org], and the National Association of Realtors [www.realtor.org/SG3.nsf/Pages/winter 2005?OpenDocument].



HILLSBOROUGH COUNTY MIDDLE SCHOOL PROTOTYPE

In order to build middle schools on smaller sites, in 2006 the Hillsborough County Public Schools District decided to develop a prototype middle school that could be repeated on multiple sites. The prototype, which provides for 130,000 gross square feet of space and 1,550 student stations, consists of four components that can be reoriented and linked in a variety of ways based on specific site size, make up, and access criteria. Its flexible compact campus layout can be reconfigured to any number of small or oddly shaped sites. Design strategies (for example, site orientation, building material, and systems design) reduce energy consumption while increasing occupant comfort. A prototype school is under construction on a seven-acre parcel, in lieu of the typical 20+-acre site that would have been required for a typical middle school. The School District sought the small site design prototype because of the dwindling supply of developable land in the urbanized areas of Hillsborough County and the need for additional school facilities on smaller sites as infill development and redevelopment occurs. As the largest holder of historic sites in the county and recognizing the important role that properly maintained schools can have in supporting the stability of neighborhoods, the district is also committed to maintaining its historic schools as part of the community infrastructure. (More information on the Hillsborough County middle school prototype design is available from Hillsborough County Public Schools [http://facilities.mysdhc.org] or from Wilder Architecture [www.wilderarchitecture.com].)

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In a high-growth state such as Florida, local officials, citizens, and planners are using tools that enable them to do a better job of matching infrastructure with the pace of growth, often achieved through capital improvement programs, and understanding the projected impacts of a proposed development or land use change on the taxes and budgets of the impacted governmental units, using fiscal impact analysis. Through such an analysis, a local government can calculate the difference between the costs of providing services and the revenues generated by a development or land use change, thereby better managing its communities. They are also using tools to finance development through non-governmental entities called special districts.

Florida information on fiscal analysis and financing tools is available from the Florida Department of Community Affairs [www.dca.state.fl.us], the Florida Association of Counties [www.fl-counties.com], and the Florida League of Cities [www.flcities.com]. Resource information on evaluating the costs of alternative land use development patterns includes the American Farmland Trust's cost of community services studies [www.farmland.org/services/fiscalplan-ning/default.asp], the Brookings Institution's <u>Investing in a Better Future: A Review of the Fiscal and Competitive Advantages of Smarter Growth Development Patterns</u> [www.brookings.edu/es/urban/urban.htm], the Smart Communities Network [www.smartcommunities.ncat.org/articles/sprawlbib.shtml], and Smart Growth America [www.smartgrowthamerica.org/economy.html].

Capital Improvement Program (CIP)

A CIP is a financial planning tool that enables a local government to plan for large, high priority capital projects, such as parks, street and drainage improvements, utilities, and public facilities, over a period of time (typically a mid-range planning period of five to six years). The CIP matches the cost of capital improvements to anticipated revenues and provides the policy framework for the allocation of funding for capital projects. A CIP should be consistent with a community's comprehensive plan. One way to link a CIP to community goals outlined in a comprehensive plan is to establish a focused public investment plan, which is a CIP that concentrates public infrastructure investments in targeted areas as a way to encourage new investment and more intense development. In some communities, a local government CIP coordinating team is created to oversee the CIP and track projects to ensure that projects are on-time and on-budget and meet quality standards. Such a team can also work closely with city departments to ensure that programs are aligned with the CIP, reduce duplication, and increase efficiency. A CIP is particularly useful in a high-growth community that needs to increase and update its infrastructure.

In Florida, the state's growth management legislation requires communities to produce a financially feasible Capital Improvement Element (CIE) as part of their comprehensive plan. The purpose of the CIE is to ensure that planned infrastructure improvements are scheduled to be available at the time that the impacts of growth occur. It requires that a local government demonstrate its ability to provide adequate infrastructure, including correcting existing deficiencies, as well as providing new facilities needed due to growth. The CIE is used to set minimum levels of service (LOS) standards for various public services, such as transportation, parks and recreation services and facilities, and solid waste management. In 2005 the Florida Department of Community Affairs (DCA) selected eight pilot communities to demonstrate how the CIE can be used to promote sound growth management practices: the cities of Fort Myers, Gainesville, Hollywood, Jacksonville, Lakeland, and Orlando, and Indian River and Leon counties.

Derived More information on Capital Improvement Programs is available from the Florida Association of Counties [www.fl-counties.com] and the Florida League of Cities [www.flcities.com]. For more information on CIEs, go to www.dca.state.fl.us/GrowthManagement2005/CIEpilot.pdf/.



CITY OF ORLANDO CIP

The city of Orlando uses its CIP as a vehicle to link capital expenditures with adopted public policy. The CIP, which is adopted by the City Council with the adoption of the annual operating and capital budgets, includes all projects in the city's state-required Capital Improvement Element as well as other capital projects to be funded by the city. The CIP represents the city's five-year commitment to ensuring that public facilities and services are provided concurrent with the impacts of new development. The city uses its CIP as a measuring stick that shows how much it will cost the city to preserve the quality of life provided by adopting the CIE-required level of service. If a change in the CIP alters the city's ability to achieve the goals and policies of its growth management plan, an amendment to the city's comprehensive plan is required. (More information on Orlando's CIP is available from www.cityoforlando.net/planning/ cityplanning/MPB/2006%20MPB%20Agendas%20Staff%20Report %20&%20Minutes/August%202006/GMP2006-00040.pdf.)

Community Development Districts (CDD)

Community development districts (CDDs) are independent special-purpose units of government established by the state or a local government at the request of a developer or landowner to finance basic services within a development. More than one CDD may be established to serve a new community. Chapter 190 of the Florida Statues authorizes a CDD to provide an alternative method of planning, acquiring, operating, and maintaining community-wide improvements in new communities and to provide a more timely and efficient way to deliver basic community services without overburdening other governments and their taxpayers. Common infrastructure improvements provided by CDDs include drainage, potable water, sewerage, roads, utilities, and parks. By using a CDD, a developer can obtain access to low-cost financing by issuing tax-exempt bonds that have lower interest rates. (The bonds are paid off by residents and property owners over time [generally 10-30 years], reducing the overall cost to the developer.) CDDs also have the power to collect fees and levy lienable assessments or ad valorem taxes against properties within the project for repayment of debt and for on-going operations. Common property owned by a CDD is tax exempt. The creation of a CDD requires the approval of government. (A CDD of 1,000 acres or less is established by the city or county in which it is located. Florida's governor and state cabinet approve districts of more than 1,000 acres.) Because a CDD must operate as a unit of local government, its board meetings must be noticed in a local newspaper and conducted in public, and records must be available for public review.

More information on CDDs is available from the West Florida Regional Planning Council [www.wfrpc.dst.fl.us] and the Florida Department of Community Affairs [www.dca.state.fl.us].

Fiscal Impact Analysis

A fiscal impact analysis helps local governments understand the financial feasibility of proposed capital improvements or of different growth management policies. The analysis estimates the difference between the costs of providing services or capital projects to the community and any revenues that may be collected as a result of the investment. These estimates help communities do a better job of anticipating and planning for the current and future costs of growth. The analysis can be an effective tool for ensuring that the Capital Improvements Element of the local comprehensive plan is implemented in accordance with the newer provisions of Florida Statutes 163.3164 and 163.3177, both concerned with financial



THE CAPITAL REGION COMMUNITY DEVELOPMENT DISTRICT

The Capital Region Community Development District (the District) is an independent special taxing district created in 2000 to assist with the development of SouthWood, an estimated 3,300-acre mixed-use traditional neighborhood development on the eastern edge of Tallahassee. The development is built around a 123-acre park and lake with a town center featuring shops and restaurants within walking distance or a short drive for residents. A significant portion of the site (approximately 1,000 acres, not including the golf course) is in conservation and open space uses. As a local unit of special-purpose government, the District provides an alternative means for planning, financing, constructing, operating, and maintaining various public improvements and community facilities. Examples of public infrastructure and facilities for SouthWood include offsite roadways, stormwater management facilities, open space and amenities, entrance features, landscape improvements, roadway signage, street lighting, and subdivision infrastructure improvements. The District is governed by a five-member Board of Supervisors, and its operations are administered by the District Manager, GMS (Governmental Management Services). (More information on the SouthWood community is available at www.joe. com. Information on GMS is available at www.govmgtsvc.com.)

feasibility. In 2006, the Department of Community Affairs (DCA) contracted with the University of Florida and the Tampa Bay Regional Planning Council to refine and simplify an existing fiscal impact analysis tool. That tool is a spreadsheet that incorporates current information about community expenditures, revenues (including impact fees where applicable), and population growth and estimates future budgets (as surpluses or deficits) on a per capita basis. The spreadsheet also generates summary tables that may be incorporated into a community's Capital Improvements Element. The DCA intends to make the spreadsheet and detailed instructions available through its website as well as through its program of support for Capital Improvements Element training workshops administered most recently through the various regional planning councils.

Three additional fiscal impact models are the Fiscal Impact Estimates of Land Development (FIELD) developed by Hillsborough County's City-County Planning Commission and described to the right, the Federal Reserve Bank's Fiscal Impact Tool (FedFIT), and Georgia Institute of Technology's WebLOCI[™] Local Fiscal Impact Analysis. FedFIT (www.federalreserve.gov/communityaffairs/fit/brochure.pdf) is designed to help community and economic development professionals and decision-makers, primarily in small and mid-size communities, learn about the likely general costs and benefits of proposed development projects and to assess the support a community or region might be able to afford when looking at different development possibilities. WebLOC[™] (http://innovate.gatech. edu/Portals/75/WebLOCI_2006_C.pdf) is a web-based version of the local fiscal impact tool LOCI[™]. It is designed to provide decision-makers with insight into the fiscal and economic impacts of new or expanding businesses. Uses include help-ing a community understand how far it can go in granting incentives and how a government's costs may change.

[Information on Florida fiscal impact analysis tools is available from the Florida Department of Community Affairs [www.dca.state.fl.us/fdcp/dcp]. An additional resource is the National Resource Defense Council's <u>Developments and Dollars: An Introduction to Fiscal Impact Analysis in Land Use Planning</u> [www.nrdc.org/cities/ smartGrowth/dd/ddinx.asp], a guide to tools that examine the likely impacts of development proposals on local taxes and municipal budgets.



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HILLSBOROUGH COUNTY PLANNING COMMISSION FIELD MODEL

The Hillsborough County City-County Planning Commission designed FIELD to analyze the financial feasibility of comprehensive plans across multiple jurisdictions. The fiscal analysis combines the per capita multiplier and case study approaches. By using the dynamic simulation capabilities of Powersim software, FIELD enhances local decision-making. Users can assess the fiscal impact of alternative growth scenarios and test various policy responses, including different land use plans. To date, the model has been used in Hillsborough County and Plant City, Tampa, and Temple Terrace. Its validity was tested through a peer review process. In 2007 two organizations recognized the model: The Tampa Bay Regional Planning Council gave it a first place infrastructure award and the Florida Chapter of the American Planning Association gave it an Award of Merit. (More information on the FIELD model is available from www.tpcfieldmodel.org.)

Special Districts

Traditionally used for government purposes, such as fire and flood control, roads, hospitals, and other infrastructure associated with new development, today special districts are expanding their role by providing conservation and resource management services in response to growth management and environmental concerns.

Special districts are usually established as a limited- or single-purpose governmental unit administratively separate from county, municipal, or state government to finance and maintain services or infrastructure traditionally provided by a local government when the local government is unable or unwilling to provide the service or capital improvement. They operate very much like a city or county: they provide public services, have a governing board with policy-making powers, and operate in a designated geographic area. The main difference between a special district and a local government is the purpose: a local government is charged with providing general governmental services, whereas special districts provide a specialized governmental service, which is why they are sometimes called a specialpurpose form of government. They do this by allowing services to be targeted to a specific group of consumers who pay for the services received, thereby shifting infrastructure costs from all taxpayers within a jurisdiction of a general-purpose local government to the residents or property owners who will specifically benefit from the improvements, which removes the cost from the local government. The Florida statute establishing special districts (Chapter 189) enables two types of districts: an independent special district, which is created by legislative authorization and is independent of a general purpose government, and dependent special districts, which are created by a county or municipality. Dependent districts can be temporary or long term. Common dependent special districts are Municipal Special Taxing Units and Municipal Special Benefit Units. Multi-county and multi-jurisdictional special districts can be created when an issue transcends the boundaries of an individual unit of government.

DCA's Special District Information Program provides information on establishing a special district. The program has three roles: promoting government efficiency, which includes maintaining an official list of special districts; promoting accountability, which includes helping special districts come into compliance with state requirements; and administering Chapter 189, which includes providing tele-



ACME IMPROVEMENT DISTRICT

The Acme Improvement District (AID) is a dependent district of the Village of Wellington. The district was established in 1953 as an independent special district to drain and reclaim land within its boundaries in order to make the land usable for people and agriculture. Over time, the district's role expanded, with the result that it provided a majority of the community services and facilities within its boundaries (for example, water and sewer, stormwater drainage, roadways, street lighting, and parks and recreation facilities). After the Village of Wellington was established in 1995, the village took over many of the services provided by the AID, as well as some of the services provided by Palm Beach County, and the AID became a dependent district of the village. Today it is a special taxing district of Wellington, levying non-ad valorem assessments to provide stormwater management within the district boundaries. As a dependent district, the AID is governed by the Wellington Village Council, and its operations are administered by the Village of Wellington's manager and staff within the Public Works department. (For more information on the Acme Improvement District, go to www. ci.wellington.fl.us/vdept_finance.htm.)

phone technical assistance, providing training, and producing a *Special District Handbook*. Each special district must register with and provide updates to the Special District Information Program. The Florida Association of Special Districts serves as the Department of Community Affairs' primary education and training arm to satisfy the educational requirements of Chapter 189. The Association, in conjunction with Barry University and DCA, created the Certified District Manager Program in 2004. This program not only recognizes the professional and educational accomplishments of district managers of special districts but also promote professionalism among members.

More information on special districts is available from the Florida Association of Special Districts [www.fasd.com] and the Florida Department of Community Affairs [www.floridaspecialdistricts.org].



THE INDIAN TRAIL IMPROVEMENT DISTRICT

The Indian Trail Improvement District is an independent special district created by the Florida Legislature in 1957 to reclaim land within its boundaries for water control and water supply and to protect the land from the effects of water by using the construction and maintenance of canals, ditches, levees, dikes, pumping plants, and other works and improvements. Located in Palm Beach County, the district's legislative boundaries encompass a 110+ square mile area, which includes activated areas of over 17,000 single-family lots. Governed by a fivemember Board of Supervisors, the district plans for and provides water control and drainage, road grading and improvements, recreation facilities maintenance and operations, and water and wastewater utility service. Growing from five full-time employees in the early 1990s, the district now has 65 full-time employees and serves over 40,000 residents. It carries out its work through a combination of in-house employees and local contractors. (For more information on the Indian Trail Improvement District, go to www.indiantrail.com.)

HOUSING TOOLS

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A daily scan of headlines across Florida highlights what is an increasingly common occurrence: the price of a house has far outpaced incomes and the gap between incomes and housing costs grows larger each year. In many communities, the cost of housing has become a principal issue for employers who are finding it more and more difficult to hire and keep workers because they cannot afford a home near where they work and cannot afford longer and more costly commutes to distant locations that offer more affordable homes. The problem applies to most professions needed to keep a community going, such as firefighters, law enforcement personnel, teachers, health care and emergency care workers, and government employees. The magnitude of Florida's housing problem was documented in a recent report by the Florida Housing Coalition, *Florida Priced Out Report: 2005 Findings:* since 2003, median home prices in Florida have increased by 77 percent, while incomes grew by 1.4 percent. (Information on the report is available from the Florida Housing Coalition, www.flhousing.org.) In 2006, the Florida Legislature responded to the housing affordability crisis by passing several programs (discussed below) that create incentives for producing affordable housing. Those incentives build on existing state Growth Management and Land Development Regulations that require communities to include a Housing Element in their comprehensive plans. (Florida House Bill 1375 requires that local governments adopt a workforce/affordable housing plan into local comprehensive plans by July 1, 2008.) The Housing Element must show how a community will meet the housing needs of its existing and projected population, including those with special needs and low incomes. In addition, a community is future land use map must show sites for affordable housing, and, through the Development of Regional Impact process, large commercial developments are required to provide affordable housing for the employees they generate.

Complete information on housing affordability and housing programs and requirements in Florida is available from the Florida Department of Community Affairs [www.dca.state.fl.us], 1000 Friends of Florida [1000fof.org], and the Florida Housing Coalition [www.flhousing.org]. Additional information about removing barriers to affordable housing is available from the U.S. Department of Housing and Urban Development's Office of Policy Development and Research [www.regbarriers.org], PolicyLink [www.policylink.org], the Local Initiatives Support Corporation [www.lisc.org], the Low Income Housing Coalition [www. nlihc.org], and the Urban Land Institute, which recently established the Urban Land Institute Terwillinger Center for Workforce Housing [www.uli.org]. The Center will work with public- and private-sector housing industry representatives and its district councils to create models for mixed-income workforce housing design, development, and financing. Initially the Center will focus on three market areas, one of which is Southeast Florida [www.seflorida.uli.org].

Community Land Trust (CLT)

A CLT is a community-based nonprofit organization that is designed to acquire and hold land for affordable housing. A CLT narrows the gap between the cost of housing and the ability of residents of a community to pay for housing by holding ownership of the land in perpetuity, thus removing the land cost from the price of a home. Because a CLT owns the land in perpetuity and sells a house with restrictions on the resale price, a house remains affordable for future, as well as the current, buyers. It also means that because the house is in private ownership, the local government still receives tax revenues. The housing on CLT-owned land operates on a long-term renewable lease (typically 99 years). A CLT can also prevent absentee ownership of housing because it keeps the land in community-controlled use. CLTs have been used in a variety of geographic settings: small towns, inner city neighborhoods, and rural areas. A CLT can serve a single neighborhood or a total community. Several local governments can come together to create a CLT.

The way a CLT operates varies with each community. It can, for example, acquire land and arrange for the development of affordable housing or other structures or it can acquire the land and the buildings on it, rehabilitating the housing when needed. A CLT can also build housing, as well as acquire existing housing, and it can work with different types of housing (multi- and single-family) and different ownership structures. For multifamily housing, for example, the CLT can own and manage the housing or it can arrange for the housing to be owned and managed by another nonprofit or, in the case of condominiums, a residents' cooperative. Another structure is for a CLT to take over the ownership of land created by a government-related project. A CLT in Lexington, Kentucky, for example, will be the owner of a large tract of land created through right-of-way acquisition for a road project. The land will be used to provide replacement housing within the same neighborhood for residents directly or indirectly displaced by the road. To add to its revenues, the CLT will receive lease income from a commercial development on a portion of the property. Many CLTs provide support services for homebuyers (for example, debt management training, homeownership counseling, and home maintenance assistance). Some CLTs use their land to enhance the livability of a neighborhood (for instance, for a park, community garden, or facility providing community services).

The Florida, more information on Community Land Trusts is available from the Florida Community Land Trust Institute [www.1000fof.org/housing/clt.asp], a



THE BAHAMA CONCH COMMUNITY LAND TRUST OF KEY WEST (BCCLT)

Created in 1995, the BCCLT was Florida's first land trust. Its primary purpose is to minimize displacement of residents by providing affordable housing on land it owns. When the BCCLT purchases property, the housing is rehabilitated and sold to qualified buyers or leased to low- and very low-income families. In a sale, the BCCLT holds the land in perpetuity to guarantee affordability and leases it for 99 years. The BCCLT has developed 39 affordable homeownership and rental housing units. Six of them (for the working homeless) are home to several workers who built the houses as part of a program to provide jobs that help qualified homeless and hard-to-employ people learn construction skills. Of the eight additional units underway, four are part of the Heir Program that allows the BCCLT to purchase and rehabilitate properties that families have owned for generations (but are in danger of losing) and hold them until sold back to the families. The newest project is the development of the Bahama Conch Village, made possible in 2007 when Key West voters approved giving BCCLT a 99-year, \$1.00 a year lease on 6.6 acres of waterfront property. The 60 to 70 workforce units will meet Florida Green Affordable Housing Standards and include small business retail, live/work space for artists, and a youth development/convention facility. The project will showcase Key West and Bahamian culture, colors, landscaping, and architecture. (More information on BCCLT is available from www.bahamaconchclt.org.)

collaborative organization between 1000 Friends of Florida and the Florida Housing Coalition [www.flhousing.org]. Additional information is available from the Institute for Community Economics [www.iceclt.org/clt/cltmodel.html], the Local Initiatives Support Corporation [www.lisc.org], the National Low Income Housing Coalition [www.nlihc.org], and the newly formed National Community Land Trust Network [www.cltnetwork.org/About/index.htm], which has partnered with the Lincoln Institute of Land Policy [www.lincolninst.edu] to sponsor a National Community Land Trust Academy [www.cltnetwork.org/Academy/index.htm] to provide comprehensive training on theories and practices unique to community land trusts.

Employer Assisted Housing (EAH)

In an EAH program, an employer decides to put in place programs that help employees find suitable, affordable housing in or near the community in which the employer is based. Employers with housing assistance programs are finding that employees stay longer, miss less time from work, are late less often, and are more productive. Employees also benefit from the lower costs of getting to work, in some cases saving the cost of an additional car; from having more free time for their families and community activities because of less time spent in commuting; and, for some employees, having the first-time ability to buy a house. For a community, programs that enable employees to live closer to where they work improve the jobs-housing balance, which in most communities has become out of balance, as employees are forced to commute further and further away from their jobs for affordable housing. By enabling employees to live closer to where they work, a community can reduce traffic and air pollution (as fewer people need to commute long distances from home to work), create more pedestrian activity in downtown business districts, and increase the tax base through investment in housing near business districts.

EAH programs can be used to improve the range of housing choices or help employees buy existing housing, or a combination of both. Examples of strategies used by employers include employer direct assistance with a downpayment and closing costs and an employer matching program in which the employer matches employees' savings to help them accumulate a downpayment for a house. A number of large employers can come together to create an EAH program (for example, the REACH program in Lexington, Kentucky). Some states offer tax credits and matching funds as an incentive for investing in employer-assisted housing. Another



CITY OF ORLANDO DOWNPAYMENT ASSISTANCE PROGRAM

The city of Orlando's EAH program (a part of the city's Downpayment Assistance Program) is in response to a shortage of teachers and health care professionals, which in part has been caused by the gap between salaries and the cost of housing. Moderate-income teachers and public safety employees may qualify for \$20,000 in assistance. City employees, teachers, and public safety personnel who are purchasing homes within the city limits of Orlando do not have to be first-time homebuyers. Purchasers must occupy the property as a principal residence for at least ten (10) years. The downpayment assistance becomes a grant once the period of affordability has been satisfied. (More information on the city of Orlando's EAH program is available from www.cityorlando. net/housing/default.htm, 1000 Friends of Florida [www.1000fof. org], and the Central Florida Workforce Housing Toolkit [www. orangecountyfl.net/cms/WorkforceHousing/default.htm].)

incentive is the creation of a local or regional housing fund that can be used to work with employers to match downpayment assistance (for example, the Greater Minnesota Housing Fund, created by the Minneapolis Twin Cities Council).

A number of other programs can be used to bring the jobs-housing balance back into equilibrium. One option is for a local or state government economic development program to link its incentives to employers who create jobs that are close to affordable housing. An example is the new Business Location Efficiency Act in Illinois, which links the granting of economic development subsidies to jobs that are accessible by public transit and/or close to affordable housing. Another example is Location-Efficient Mortgages (LEMs), a financing strategy to encourage people to buy homes in a central location or near transit lines. An LEM allows the savings from lowering the cost of commuting to be applied to a higher loan payment.

□ In Florida, information on EAH programs and related technical assistance is available from 1000 Friends of Florida [www.1000fof.org] and the Florida Housing Coalition [www.flhousing.org]. At the national level, information is available from the National Housing Institute [www.nhi.org/about/aboutindex.html]; the National Association of Realtors [www.realtor.org/housopp.nsf], which sponsors realtor EAH training; and the Smart Growth Network [www.smartgrowth.org].

Housing Linkage Fees

A housing linkage fee on nonresidential and market-rate residential development goes toward building affordable homes to help ensure that the number of homes in a community keeps up with the number of jobs, thereby improving the jobs-housing balance and reducing the need for long commutes. The fees collected are placed in a housing trust fund or separate housing account and are used by affordable housing providers to build lower-cost homes within the community. Enactment of a housing linkage fee recognizes that employers hire employees at various wage levels, triggering the need for housing at different price levels.

Although many housing linkage fee programs are applied at the city or county level, such a program can be applied at the regional level, as jobs-housing imbalances do not always occur only within one municipality. A regional housing linkage program evens the playing field among communities by creating an equivalent climate for



CITY OF ST. PETERSBURG A+ HOUSING PROGRAM

The A+ Program is designed to attract and retain teachers in the city's schools by providing home purchase assistance to qualified instructional personnel who are assigned to teach in a public school within the city's municipal boundaries. The housing funds may be used for a downpayment and/or for closing costs for the purchase of a new or existing home. Ten percent of the loan is forgiven each year that the teacher teaches and lives in the city of St. Petersburg. After 10 years, the loan is forgiven. The maximum loan is \$14,000, except for purchasing housing in the city's Midtown area, where the maximum loan is \$18,000. All applicants must provide two percent of the purchase price from their own funds and must participate in required courses on home buying, family budgeting, and home maintenance. (More information on the St. Petersburg A+ Housing Program is available from 1000 Friends of Florida [www.1000fof.org] and from the city of St. Petersburg [www.stpete.org/teacherhousing.htm].)
business in each community. The Chicago region is developing a regional linkage program. Fees, which will be calculated from increasing tax bases, will be paid by municipalities rather than by developers. As with the housing linkage fee paid by a developer, the concept links economic growth to a responsibility for the creation of affordable housing. The critical difference is that the Regional Jobs/Housing Fund would not collect fees from the developers, but from the municipalities that permit and benefit from the new development. That avoids legal challenges in states that require a direct link between fees to private landowners and impact. (A sample housing linkage fee ordinance is available from the Florida Housing Coalition.)

Derived More information on housing linkage fees is available from the Florida Housing Coalition [www. flhousing.org], 1000 Friends of Florida [www.1000fof.org], and PolicyLink [www.policylink.org].

Housing Trust Funds

Each year an increasing number of states and communities turn to housing trust funds to address affordable housing problems. Today there are 400-plus housing trust funds, demonstrating the importance of having affordable housing programs supported by an ongoing, predictable source of public funding to support the creation of affordable housing. The predictability of dedicated funding from a housing trust fund has a number of advantages (for example, assuring developers that financing for affordable housing will be available, reducing the need for communities to draw on general funds to support affordable housing and assuring them that their housing elements will be implemented, and increasing the ability to leverage public and private grants and other forms of financing).

A housing trust fund is funded with dedicated public revenues for the purpose of providing affordable housing. The housing can be provided through new construction or through the rehabilitation of existing housing. An important feature of a housing trust fund is that it receives an ongoing, predictable revenue source that is specifically committed to housing (for example, an increase in a tax, such as a real estate transfer tax or a hotel/motel tax). A housing trust fund can also be funded through a housing linkage fee that is placed on industrial, commercial, or market rate housing to help offset the impacts that new employment has in a community. A governmental agency or department that handles state and federal housing programs typically administers housing trust funds.



CITY OF WINTER PARK HOUSING LINKAGE FEE

The city of Winter Park has led the state with the creation of a housing linkage fee program, one of a number of strategies to discourage the loss of affordable housing and encourage the construction of new affordable housing. The fee is imposed on new development as a revenue source to fund the construction of affordable housing. The fee is reviewed at least once every year to determine if affordable housing needs and construction costs warrant an adjustment of the fee rate. Other city programs to promote affordable housing include establishing the Hannibal Square Community Land Trust, a land bank program, affordable housing loan programs, a technical assistance and referral service, and streamlined permitting. The city is also evaluating its land development regulations to identify barriers to affordable housing. Its initiatives to redevelop the West Winter Park neighborhood without displacing the existing lower-income residents recently won the 2007 American Planning Association's Neighborhood Innovations award in honor of Jane Jacobs. (More information on Winter Park's housing programs is available from www.cityofwinterpark.org/2005/depts/housingDiv.shtml.)

Florida has the largest statewide housing trust fund in the country. The fund was established in 1992 through passage of the William E. Sadowski Affordable Housing Act, which dedicates a portion of Florida's Documentary Stamp Tax (Real Estate Transfer Tax) to the trust fund. The program has provided over 150,000 units of housing. It is supported by a broad-based coalition that was first convened by 1000 Friends of Florida in 1991. In addition to 1000 Friends of Florida, the coalition includes the Florida Home Builders Association, the Florida Association of Realtors, the Florida League of Cities, Florida Association of Counties, Florida AARP, Florida United Way, Florida Chamber of Commerce, Associated Industries of Florida, Florida Bankers Association, Florida Legal Services, and the Florida Housing Coalition.

[In Florida, information on housing trust fund programs and Florida's Housing Trust Fund is available from the Florida Housing Coalition [www.flhousing.org] and 1000 Friends of Florida [www.1000fof.org]. At the national level, information is available from the Center for Community Change [www.communitychange.org/ issues/housing/trustfundproject] and the National Low Income Housing Coalition [www.nlihc.org].

Incentives for Affordable Housing

A variety of incentives can be used to create more affordable housing options. The June/July 2006 issue of *Florida Planning*, the newsletter of the Florida Chapter of the American Planning Association, outlines a number of those incentives, including new ones enacted by the 2006 Florida Legislature. Typical incentives for developments that provide affordable housing include expedited permitting; offering density bonuses that allow a developer to develop more densely in exchange for providing affordable housing; reduction or waiver of impact fees; and allowing less costly alternative building methods and materials. Other incentives include approving permit-ready housing types for use on infill sites, government assistance with land assemblage, providing government-owned land for developments that include affordable housing, and changing building codes to make it easier to rehabilitate older structures. Allowing accessory dwelling units (a high agenda item for AARP [the American Association of Retired People]), such as granny flats and livework units in residential areas, is another way to provide affordable housing.



SARASOTA COUNTY HOUSING FUND AND COMMUNITY HOUSING PROGRAM

In January 2007, the Sarasota County Board of County Commissioners approved a Housing Trust Fund to assist in the development and provision of affordable housing within the county. The fund, which receives dedicated revenues from the sale of escheated lots, public and private donations, and in-lieu payments, began with \$20 million from the sale of more than 2,000 tax-delinquent lots. The funds can be used for a variety of purposes, including acquiring developed or undeveloped land, project planning, supplementing local or state housing assistance programs, impact fees, down payment assistance, home rehabilitation, and infrastructure costs typically paid by a developer; the fund can be leveraged as a local match for other housing programs. Criteria for awarding funds emphasize projects that achieve smart growth goals (for example, providing for a variety of land uses and lifestyles, reducing automobile trips, conserving water and energy, encouraging green building and development, preserving environmental resources, and promoting redevelopment and infill). (More information on the Sarasota County Housing Fund and Community Housing Program is available from Affordable Community Housing [www.scgov.net] or the Community Housing Trust [www.mycht.org].)

Some of the specific affordable housing incentives adopted by the Florida Legislature include additional residential density in Developments of Regional Impact that dedicate a certain number of units to workforce housing and a process that allows a local government to transfer density from one parcel to another if a landowner donates land to the government for affordable housing purposes. In addition, the Florida Housing Finance Corporation will competitively award \$50 million for an affordable housing pilot program, called the Community Workforce Housing Innovation Pilot Program, in high-growth, high-housing cost areas of the state that are willing to provide incentives for affordable housing.

Discrete Supply of Workforce Housing Laws and the Southwest Florida Regional Planning Subcommittee [www.swfforce Housing Laws to Increase the Supply of Workforce Housing Subcommittee.

Inclusionary Zoning (IZ)

With inclusionary zoning, a local government uses its zoning powers to require that developers include a certain amount of affordable housing in new developments throughout the city or county. It is the opposite of exclusionary zoning ordinances that prohibit a mix of housing types (for example, requiring minimum lot or housing sizes or making it difficult or impossible to build apartments or townhouses which in turn drives up the cost of housing and precludes lower income households from living in the community).

Inclusionary zoning programs vary. They can require a developer to build the affordable units within the development, or they can allow the affordable units to be constructed in another location. Another approach is to allow a developer to contribute to an affordable housing fund in lieu of building the required units. Most programs provide non-monetary compensation for compliance (for



CITY OF ORLANDO AFFORDABLE HOUSING INCENTIVES

In 2005, the city of Orlando was awarded a Robert L. Woodson award from the U.S. Department of Housing and Urban Development for its initiatives to remove regulatory barriers to affordable housing. Under the program, an Affordable Housing Advisory Committee reviews city policies, procedures, ordinances, plans, and regulations and makes recommendations to encourage or facilitate affordable housing. The city's Housing Department offers a variety of programs to incentivize the development of affordable housing, including federal, state, and local loan funds; water, sewer, and transportation impact fee grants; alternative design standards for affordable housing (a part of the land development code); expedited permitting; and a density bonus, which allows more housing units or more commercial floor space per acre than would otherwise be permitted. (The bonus may also be awarded in exchange for an in-lieu contribution to the city's housing trust fund.) To be eligible, an applicant developer must receive an Affordable Housing Certificate, which is designed to ensure that the housing units and/or the units' occupants meet the required affordable housing definitions. (More information on the city of Orlando's affordable housing incentives is available from www.cityoforlando. net/housing/default.htm.)

example, expedited permitting that can reduce construction costs, density bonuses, and zoning variances). Inclusionary zoning can lead to a greater supply of marketsupplied affordable housing and mixed-income communities where people of all incomes are able to live near high opportunity areas (locations with jobs, good schools, and adequate support services). It is particularly successful in high-growth communities because of the amount of new housing. Some inclusionary zoning ordinances are voluntary or incentive-driven rather than mandatory. According to 1000 Friends of Florida, most IZ ordinances contain the following common elements:

- A threshold number of market-rate units that activates the inclusionary requirement
- A requirement that the affordable units are comparable in quality and aesthetics to the market-rate unit
- Incentives to the private sector providing the affordable units and/or to those buying the units
- A provision for a payment in-lieu when the type of development makes it infeasible to include affordable units
- A housing trust fund to serve as the depository for the in-lieu payments and a mechanism to use those dollars to provide affordable housing in the community

To More information on inclusionary zoning is available from 1000 Friends of Florida [www.1000fof.org], the National Association of Realtors [www.realtor.org], and PolicyLink [www.policylink.org].



THE CITY OF TALLAHASSEE INCLUSIONARY HOUSING ORDINANCE

The city of Tallahassee's 2005 Inclusionary Housing Ordinance applies to new developments of 50 or more housing units in specified locations within the city. It requires that at least 10 percent of the housing units in a development be priced at no higher than \$159,378 and sold to eligible households or that 15 percent of the housing units must be rented at workforce rates and rented to eligible households. Incentives for providing onsite affordable housing within the primary development include a 25 percent density bonus, design flexibility, and transportation concurrency exemption. Additional methods of compliance are available, including payment of an in-lieu fee into the city's inclusionary housing trust fund and providing inclusionary housing at "off-site" locations. (More information is available from www.talgov.com/planning/af_inch/af_inchouse.cfm.)

INFILL AND REDEVELOPMENT TOOLS

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Infill and redevelopment planning tools enable communities to direct more of new development and the accompanying investments into existing urban and suburban areas that already have services. They do that by developing, redeveloping, and re-using existing sites and buildings in neighborhoods and commercial corridors and centers. Communities use infill (which applies to filling in vacant parcels) and redevelopment (which applies to constructing new development on previously developed land) to make more efficient use of existing infrastructure, such as streets, water, and sewer lines, and to lower the cost of public services, such as fire, police, and emergency service providers. Infill and redevelopment are also used to provide affordable housing, reduce pressures to expand urban and suburban areas further into the countryside or nearer to environmentally sensitive lands, and reduce traffic congestion by shortening commuting distances or eliminating the need to commute by providing houses closer to jobs. Infill and redevelopment programs also help revitalize downtowns, conserve energy through more compact development patterns and the reuse of materials, and enable greater use of transit and alternative modes of transportation.

Information on infill and redevelopment tools is available from a number of organizations, including, in Florida, the Florida Redevelopment Association [www.redevelopment.net]. At the national level, information is available from the American Planning Association [www.planning.org], the Congress for the New Urbanism [www.cnu.org], the National Trust for Historic Preservation [www.nationaltrust.org], Smart Growth America [www.smartgrowthamerica. org], the Smart Growth Network [www.smartgrowth.org], and the Urban Land Institute [www.uli.org].

Arts Districts

Communities in Florida are using arts districts to energize neighborhood revitalization, stimulate economic development, and address the cultural needs of a community or neighborhood. Arts districts are designed to attract artists and artsrelated organizations, businesses, and facilities to a specific area within a community. Similar to Soho in New York City, where artists turned old warehouse loft space into studios and apartments, today's arts district strategies focus on providing opportunities for artists to live and work there. Although districts vary in size and character, a common feature is the provision of affordable space that can be used for artists' live-work space, along with support facilities such as bookstores, coffee shops, studios, art galleries, supply stores, and performing arts venues. Lively arts districts provide opportunities for a full range of artists (writers, musicians, painters, dancers, sculptors, etc.). Local government strategies used to promote arts districts include:

- Implementing zoning overlays that allow live-work units and artist-supportive uses, such as galleries, either as a part of the live-work unit or as an accessory unit; selling abandoned warehouses, lofts, or industrial buildings at discounted prices.
- Financial incentives (for example, low interest loans, expedited permitting, fee waivers, and other incentives described in the Land Use Planning and Development chapter) for property owners who provide live-work space for artists.
- Special signage, banners, street lighting, landscaping, public arts, and other street-related improvements to define the district.
- Sponsorship of festivals and art-related events like gallery walks that promote and serve as outlets for artists and draw visitors to the arts district.

In support of arts districts, a number of states have passed legislation that offers a variety of incentives (for example, income tax deductions for working artists in a district, ad valorem tax reductions for properties used for art-related uses such as galleries and artist housing, and sales tax exemptions).

Tor more information on arts districts, go to the International City/County Management Association [http://icma.org/upload/library/IQ/10000322.pdf]; Americans for the Arts [www.americansforthearts.org], which offers the <u>Cultural Districts Handbook: The</u> <u>Arts as a Strategy for Revitalizing Our Cities</u> through its on-line bookstore; Creative



CITY OF BRADENTON VILLAGE OF THE ARTS OVERLAY DISTRICT

The city of Bradenton used a Village of the Arts Overlay District to revitalize a once deteriorated single-family residential neighborhood located close to the downtown and part of a Community Redevelopment Area and the city's Enterprise Zone. The district includes traditional neighborhoods and urban village areas framed by a grid street system and filled with homes of varying character and architectural styles - many with historic value. To retain the desired residential nature of the area, district redevelopment guidelines call for traditional neighborhood design principles and practices that integrate a wide mix of residential, commercial, arts, cultural, and open space uses. The district allows live-work units for home occupations, special art-related events, accessory units that enhance the character of the village and provide additional income for artists, and artisan workshop/gallery space. In the eight years since it was established, the district has been successful in encouraging a mix of home occupation and home business uses oriented toward or supporting a visual or cultural arts theme. While maintaining the residential character of the underlying neighborhoods, the district currently has 45 galleries and arts-related businesses attracted by the ability to live, work, and display their wares in the same place. The village is one of several theme districts adjacent to the Tamiami Trail corridor. (More information on the Village of the Arts Overlay District is available from www. artistsquildofmanatee.org or www.municode.com.)

Infill and Redevelopment Tools

City [www.creativecity.ca/resources/making-the-case/urban-renewal-3.html]; the Local Government Commission [www.lgc.org/freepub/land_use/lpu/2000/05.html]; and Partners for Livable Communities [www.livable.com].

Brownfields

A brownfield is an abandoned or under-used commercial or industrial site that has, or potentially has, low concentrations of hazardous waste, pollutants, or contaminants. Brownfields are generally located in the industrial areas of a community or in areas that have older, often abandoned factories and commercial buildings. They can also be found in older residential neighborhoods (for example, the site of a former dry cleaner or gas station). The redevelopment of brownfields is used by communities to help revitalize neighborhoods, create housing, and promote development in established areas of a city that are already served by transportation and other community facilities. Redevelopment of brownfields also adds to the tax and job base by returning under-utilized property to more productive, highervalue uses and facilitating job growth. Brownfields redevelopment also opens up additional land for development, which removes the pressure to expand urban and suburban development into undeveloped rural areas to accommodate growth.

In 1995, the U.S. Environmental Protection Agency (EPA) established a brownfield program to encourage states, communities, and other stakeholders to prevent, assess, safely clean up, and reuse brownfields. To facilitate the clean-up and reuse of brownfields, EPA offers grants to both the public and private sectors. The grants can be used to fund brownfield inventories, planning, environmental assessments, and community outreach. EPA also sponsors a Brownfields Revolving Loan Fund Grant that provides funding to capitalize loans used to clean up brownfields; Brownfields Job Training Grants, which provide environmental training for residents of brownfields communities; and Brownfields Cleanup Grants, which provide direct funding for cleanup activities at certain properties with planned greenspace, recreational, or other nonprofit uses. EPA's investment in the brownfields program has resulted in many accomplishments, including leveraging more than \$6.5 billion in brownfields cleanup and redevelopment funding from the private and public sectors and creating approximately 25,000 new jobs.

In Florida, the state's Brownfield Redevelopment Act encourages, through the use of financial and regulatory incentives, the voluntary clean-up and redevelopment

THE EASTWARD HO! BROWNFIELDS PARTNERSHIP

Created in 1997, the Eastward Ho! Brownfields Partnership brings together local, state, regional, and federal agencies and private sector, non-profit and community organizations to remediate and reuse contaminated and abandoned or underused sites. The partnership is part of the larger Eastward Ho! effort that seeks to revitalize and improve the quality of life in Southeast Florida's historic urban areas. The partnership focuses on decreasing development pressure and reducing urban sprawl into environmentally sensitive lands to the west needed to restore the Everglades ecosystem and ensure future regional water supplies. The Partnership was designated a National Brownfields Showcase Community in 1998. (For more information on the Eastward Ho! Brownfields Partnership, go to www.sfrpc. com/brwnflds.htm.)



goals of existing commercial and industrial sites that are abandoned or underused because of environmental and public health hazards. The two primary brownfield resource organizations in the state are the Florida Department of Environmental Protection (FDEP) and the Florida Brownfields Association. FDEP offers comprehensive information on brownfield redevelopment. One of its services is the Brownfields GeoViewer, a mapping tool designed to identify Florida brownfield sites. The Florida Brownfields Association is a nonprofit organization that works in cooperation with EPA and FDEP to provide brownfields information and redevelopment strategies to communities and the public at large.

More information on brownfield redevelopment is available from EPA [www.epa. gov/brownfields], the Florida Department of Environmental Protection [www.dep.state. fl.us/mainpage/programs/brownfields.htm], the Florida Brownfields Association [www. floridabrownfields.org], and the U.S. Department of Housing and Urban Development [www.hud.gov/offices/cpd/economicdevelopment/programs/bedi/index.cfm].

Community Development Corporation (CDC)

CDCs, a concept that emerged in the 1960s, are non-profit, community-based organizations that revitalize low- and moderate-income neighborhoods and communities. They generally share a number of common features: serving a specific geographic location, engaging in activities that result in the development of affordable housing and jobs for residents, working to bring new public and private investments to distressed neighborhoods, and helping build local leadership capacity. CDCs are often formed by residents, small business owners, faith-based organizations, and other local stakeholders interested in revitalizing an area. Organizers must file for incorporation with their state government and apply to the U.S. Internal Revenue Service for 501 (c)(3) tax exempt status. The nonprofit designation plays an important role in securing funding from governmental, business, and foundation sources. In addition to providing affordable rental and homeownership opportunities and services (for example, first time home buyer counseling), typical activities focus on addressing social, physical, and economic problems in target areas. Such activities include rehabilitation of commercial and residential buildings, real estate development, property acquisition (to own or lease), assistance to small businesses (through loans, technical assistance, and incubator space), early childhood education, workforce training, youth leadership development, neighborhood advocacy, and community planning and organizing. A valuable financ-



MIAMI BEACH COMMUNITY DEVELOPMENT CORPORATION (MBCDC)

Since it was created in 1981, the MBCDC has been a major force in the physical, economic, and community revitalization of Miami Beach. The MBCDC works through a community development strategy that focuses on revitalizing distressed neighborhoods, creating affordable housing through the rehabilitation of historic structures, enhancing economic development opportunities, and improving the city's physical environment. Successes include:

Affordable Housing - Helped over 300 families become first-time home buyers through a Home Ownership Assistance Program, acquired and rehabilitated 10 historic buildings creating 186 affordable housing units with an additional 267 units in the pipeline, and assisted an additional 1,700 clients through a Housing Counseling Program.

Economic Development - Provided \$3 million in city and county grants to help merchants, property owners, and arts organizations rehabilitate over 500 storefronts and commercial properties throughout the Art Deco District; also provided \$1.3 million to rehabilitate several older hotels.

Physical Environment - Initiated the Our Drive, Ocean Drive campaign to make \$3 million in public improvements to Ocean Drive, started a \$20 million capital improvement program for Lincoln Road, and facilitated the implementation of the Flamingo Neighborhood Charrette through an \$8 million capital improvement program.

In addition to serving as a Community Development Corporation, the MBCDC is recognized by federal, state, and local agencies as a Community Housing Development Organization and a Housing Counseling Agency. (More information on the Miami Beach Community Development Corporation is available from www. miamibeachcdc.org.) ing and technical assistance resource used by CDCs is the Community Development Financial Institutions Fund (www.cdfifund.gov), created by the U.S. Treasury Department to promote economic revitalization and community development through investment in and assistance to community development financial institutions.

The primary resource for CDCs in Florida is the Florida Federation of Community Development Corporations (http://myffcdc.org), which provides support to local organizations engaged in community and economic development through training, direct technical assistance, public policy advocacy, research, and networking opportunities. The Florida Community Redevelopment Association (www.crafla.com) is another state resource. At the national level, the National Congress for Community Economic Development (www.ncced.org) serves as a primary source of information. Its website, My CDC (www.ncced.org/mycdc.html), which is managed by NeighborWorks® America [www.nw.org], provides a number of tools that focus on instituting and sustaining community development corporations and other community economic development entities, including information on how to form a CDC, develop marketing and business plans, and prepare financial statements. (NeighborhorWorks® America is a national network of more than 220 community development and affordable housing organizations.) In addition, the Local Initiatives Support Corporation (LISC) (www.liscnet.org) fosters the growth and development of CDCs by helping channel grants and technical support to some of the nation's most distressed areas. LISC's Online Resource Library (www.lisc.org/resources/presenters_index. shtml) provides numerous community development resources on affordable housing, land use and planning, and organizational development issues. Other sources of information include Community Wealth (www. community-wealth.org), which provides on-line resources for CDCs, and Living Cities (www.livingcities.org), which provides financial and technical support to those engaged in improving economically distressed inner city neighborhoods and creates a mechanism through which major corporations, foundations, and the federal government can invest in the revitalization of urban neighborhoods. The Urban Institute (www.urban.org), a non-partisan economic and social policy research center, has published numerous case studies and reports on CDCs and their successes.

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Community Redevelopment Agency

Many Florida communities use a Community Redevelopment Agency (CRA) to redevelop and revitalize their urban areas. Under the Florida law (Chapter 163, Part III) that enables a local government to create a CRA, certain blight conditions must exist. Examples of those conditions include substandard or inadequate buildings or infrastructure, defective or inadequate street layout and parking facilities, unsanitary or unsafe conditions, tax or special assessment delinquency, and diversity of property ownership. The activities of a CRA are administered by a board created by the local government. The board can create more than one Community Redevelopment Area in a community. The board also prepares, through the CRA staff, a Community Redevelopment Plan for each CRA area. CRA plans have been used in Florida to address a wide range of issues, including downtown, waterfront, road corridor, and neighborhood redevelopment.

A unique financing tool available to a CRA is Tax Increment Financing (TIF). TIF enables a local government, through its CRA, to leverage public funds to promote redevelopment activities in the targeted redevelopment area. A TIF captures the future tax benefits of real estate improvements in the CRA area to pay the current cost of making those improvements as part of the redevelopment plan. In a TIF project, the value of all property within the CRA area is frozen as of a fixed date. After that date, increased property tax revenues that come from an increase in the value of property within the redevelopment area that are over the amount of revenues on the fixed date (the tax increment) are deposited in the CRA Trust Fund and dedicated to the redevelopment area. The approach enables a local government to make improvements in a distressed area as an incentive for new private investments that would not have otherwise occurred. The TIF does not impact current revenues to the local government or other taxing authorities. They continue to receive property tax revenues from the frozen value.

Description on Community Redevelopment Agencies is available from the Florida Redevelopment Association [www.redevelopment.net] and from the Center for Urban and Environmental Solutions at Florida Atlantic University [www.cuesfau.org].

Development without Displacement

In a development without displacement program, a community puts in place strategies that enable redevelopment of an area to occur without displacing lowerincome residents because their home is torn down or they can no longer afford to live there. The goal of a development without displacement program is to avoid what is often an unintended consequence of redevelopment projects. As redevelopment occurs, lower-income people are driven out by a variety of forces: buildings and infrastructure are upgraded; property values increase and rents go up as an area becomes more desirable; rental property and smaller, often deteriorated homes are torn down or converted to other uses; and affordable housing becomes scarce or extinct. Other causes of displacement can include a higher cost of living in an area; stricter enforcement of codes; and loss of a support infrastructure, such as local businesses and service providers who leave because they can no longer afford the rent or their building is demolished. A number of strategies, several of which are discussed in other sections of this toolbox, can be used to avoid the displacement of low-income residents. They include requiring or providing incentives for mixedincome housing (housing designed to allow people with different incomes to live within a development), providing low-interest loans or grants for home rehabilitation, creating a community land trust, and using land assembled through a land bank for affordable housing.

Development without Displacement is available from the South Florida Regional Resource Center [www.sfrrc.org] at the Center for Urban and



CITY OF GAINESVILLE COMMUNITY REDEVELOPMENT AGENCY (CRA)

The city of Gainesville established its CRA in 1981 to develop the central city district into a dynamic mixed-use center. The CRA carries out its activities in four redevelopment districts: Downtown, Fifth Avenue/Pleasant Street, College Park University Heights, and Eastside. Redevelopment projects are implemented by a team of partners that includes the CRA, other city departments, and private citizens. Each district has its own advisory board to provide guidance on projects and plans. Activities include redeveloping outdated commercial strip centers; preserving historic homes; constructing new buildings, parking lots, garages, and sidewalks; developing neighborhood parks; providing affordable housing; and installing streetscape improvements. The CRA also offers a number of housing assistance and rehabilitation programs. One such program is the Model Block Program, which uses tax increment funds with other funds to renovate clusters of historic houses. (More information on the Gainesville CRA is available from www. redevelopgainesville.org.)

Environmental Solutions at Florida Atlantic University [www.cuesfau.org] and from the Local Initiatives Support Corporation [www.lisc.org].

Greyfield Redevelopment

Greyfield redevelopment refers to giving new life to declining, underperforming, or vacant shopping centers, malls, or big box stores or other vacant property that is mostly paved over. Typically, greyfield locations are in older suburbs that have been left behind as retailers move to newer suburbs or because a newer, larger retail center locates nearby and draws away customers. Greyfields are also created by changing retail practices and demographics. Communities promote greyfield redevelopment for a variety of reasons, including increased tax revenues from the higher property values generated by returning non-productive locations to higherdensity, higher-value mixed-use development and more efficient use of existing infrastructure and services. Greyfield redevelopment can be used to revitalize a declining neighborhood, reduce traffic by bringing jobs and stores closer to where people live, provide new housing and sites for local retail, and provide a town center for a suburban community without a downtown. The practice of redeveloping greyfields involves reincorporating the freestanding superblocks created by big malls or big box stores into the existing community by building new streets through the site that connect it to the surrounding streets. The new streets can be used to divide a super big mall site into city blocks that can be developed as a mixture of housing, retail, civic uses, and parks.

For more information on the redevelopment of greyfields, contact the Congress for the New Urbanism [www.cnu.org] and the Urban Land Institute [www.uli.org].

Historic Districts

Historic districts are used to recognize and sometimes protect a city's neighborhood or area that is recognized as having significance related to the history of the community, state, or nation. The tool can also be applied to historic natural or cultural landscapes. Historic districts are put in place for a variety of reasons: to protect an area from encroaching development or from housing and building renovations that are not consistent with the character of the surrounding area, retain an image, and maintain property values.

Two types of historic districts are most typically used. The first is a National Register historic district, which must be approved by the State Historic Preservation



DELRAY BEACH: REDEVELOPING WITHOUT DISPLACING

As a city that is approaching build-out, Delray Beach has shifted its growth management focus to renewal and redevelopment. The success of that focus is evident in reinvestment in the city's downtown and its resurgence as a place to live, shop, and work, along with rising housing values. Because a successful redevelopment program must plan for possible rises in property values that make it difficult for low and moderate income residents to afford housing in the redevelopment area, the Delray Beach CRA initiated a number of affordable housing initiatives to help ensure that residents were not displaced. The CRA acquires lots and provides downpayment subsidies to moderate income families, buys land and buildings that can be used for the development of affordable housing, and, along with the city and the Delray Beach Housing Authority, established a community land trust. It has also worked with developers to set aside units that are affordable to low- and moderate-income buyers. (More information on the Delray CRA programs to promote development without displacement is available from www.delraycra.org.)

Officer and listed by the National Park Service; the second is a locally-designated historic district established under the purview of local land use laws. In general, a National Register listing provides recognition that the area meets established criteria for significance and integrity. It does not directly limit how property owners may treat the resource. If federal funds are used in a way that may affect the resource, a consultation process with the State Historic Preservation Officer is required. A tax credit for the certified rehabilitation of eligible income-producing properties is also available for resources listed as contributors in a National Register district. To be listed, properties must meet criteria established by the Secretary of the Interior. Resources need not be of "national" significance in order to be listed in the National Register; properties of state or local significance that meet the criteria are also eligible. In a locally-designated historic district, the government may establish requirements that alterations, new construction, and other improvements be approved, and in some cases demolition may also be subject to review. Most local governments use criteria for listing that are similar to those used by the Secretary of the Interior. An area can be designated both in the National Register and also under local ordinance.

Typically, an ordinance establishing an historic district will also set forth design guidelines addressing the elements that contribute to the historic character of the district. The design guidelines, which are used when making decisions about historic buildings and structures, usually apply to both new construction and renovation. Elements of historic design guidelines can address features such as the architectural style and placement of buildings, landscaping, sidewalks, alleys, parking lots, fences, public spaces, and vistas. The intent is to prevent inappropriate changes that will alter the historic character of the district over time. Such changes can include window alterations, a change in the building set-back line, and additions or new buildings that are out-of-scale with the surrounding buildings. The design guidelines for a commercial historic district may also address issues such as street lighting, signs, and awnings. To work well, design guidelines should create a uniform standard that is easy to understand (many guidelines include illustrations to clearly communicate the desired outcome) and is fairly applied, typically by a government-appointed board or commission. Design guidelines can be prescriptive (calling for a specific design solution) or more performance-oriented (describing a desired outcome while allowing a range of alternative solutions).



MIZNER PARK GREYFIELD REDEVELOPMENT

Mizner Park was developed as a catalyst to revitalize Boca Raton's downtown in the face of competition in the western areas. A CRA project, it replaced an outdated 15-year-old enclosed mall with a downtown mixed-use development (often called the village-within-the-city) that offers shopping, dining, cultural facilities, and residences. The CRA purchased the land through a bond issue that was repaid through tax incremental financing and rent payments from the underlying leases. The CRA leases the land to the commercial developer. The 28.5-acre project area is configured as a two-city block traditional downtown with four main mixed-use buildings, four parking garages, and on-street parking. Two-thirds of the site is devoted to public areas, including an amphitheater, broad arcade walkways, and the park-like Plaza Real, which serves as a community-gathering place. The success of Mizner Park has spurred additional development in the downtown, resulting in dramatic increases in property values (from \$160.8 million taxable value in tax year 1990-1991 to almost \$1.1 billion in tax year 2006-2007). During that same time period, the taxable value of Mizner Park increased from \$26.8 million to \$152.9 million. (More information on Mizner Park is available from www.miznerpark.com and from <u>A Guidebook to New Urbanism in Florida 2005</u> [www. cnuflorida.org].)

In addition to locally-written design guidelines for historic districts, the U.S. Secretary of the Interior publishes standards and guidelines for the treatment of historic properties. These are used in consideration of federal undertakings affecting National Register districts and often are adopted by local governments to use with their locally-designated districts. Of these, the Secretary's Standards for Rehabilitation are used most frequently in local historic districts. They contain ten basic principles intended to help preserve the distinctive character of an historic building and its site, while allowing for reasonable change to meet new needs. The standards (36 CFR Part 67) apply to historic buildings of all periods, styles, types, materials, and sizes. They apply to both the exterior and the interior of historic buildings. The standards also encompass related landscape features and the building's site and environment as well as attached, adjacent, or related new construction. Rehabilitation projects that meet the standards, as interpreted by the National Park Service, may qualify as certified rehabilitations eligible for the rehabilitation tax credit.

The Florida, information on creating an Historic District is available from the Florida Trust for Historic Preservation [www.floridatrust.org], a nonprofit organization established in 1978 to promote the preservation of the architectural, historical, and archaeological heritage of Florida, and the State Historic Preservation Officer [SHPO] [www.flheritage.com], who serves as the liaison with the national historic preservation program conducted by the National Park Service [www.nps.gov]. The Florida SHPO is a part of the Division of Historical Resources [www.cr.nps. gov/hps/]. An additional Florida resource is <u>Contributions of Historic Preservation</u> to the Quality of Life in Florida, published by the University of Florida [www. flheritage.com/qualityoflife.pdf]. At the national level, in addition to the National Park Service, a principal source of information on historic districts and other preservation programs is the National Trust for Historic Preservation [www.nationaltrust.org], which provides a wide range of educational, technical assistance, and training services and is home to the National Main Street Center [www.mainstreet. org]. Information is also available from the Advisory Council on Historic Preservation [www.achp.gov], the Preservation Directory [www.preservationdirectory.com], the National Center for Preservation Technology & Training [www.ncptt.nps.gov], and the U.S. Department of Agriculture Rural Information Center [www.nal.usda. gov/ric/ricpubs/preserve.html]. For the U.S. Secretary of the Interior's Standards for Rehabilitation, go to www.cr.nps.gov/hps/TPS/tax/rhb/. Much of the information on historic districts was developed from www.winterandcompany.net.

Created by Urban Design Associates



PENSACOLA HISTORIC DISTRICTS

Settled in the 1700s, the city of Pensacola has many structures dating back to the 1800s. The city uses historic districts to maintain the historic character of its neighborhoods and downtown. The city has five historic districts, two of which are also on the National Register of Historic Places. The historic district design guidelines are tailored to maintaining the individual character of each district. The guidelines are intended to preserve the development pattern and distinctive architectural and landscape character of a specific district through the restoration or rehabilitation of existing buildings and the construction of compatible new buildings. A city-appointed Architectural Review Board (ARB) helps to preserve and protect the architectural integrity of structures in the districts. The ARB reviews and acts on any change that will affect the exterior appearance of a property, from new construction to demolition, including any repairs or renovations, and, in three of the districts, grants or denies zoning variances. (More information on the city of Pensacola's historic districts is available from www.ci.pensacola. fl.us/live/pages.asp?pageID=1648 and Section 12-2-10 of the city's municipal code [www.municode.com/resources/gateway. asp?pid=11418&sid=9].)

Incentives for Infill and Redevelopment

In Florida, cities and counties, as well as CRAs, utilize incentives to encourage infill and redevelopment. These can include permitting incentives, such as density bonuses, expedited permitting, reduction in impact fees, reducing or eliminating parking requirements, providing tax incentives, or creating an area-wide stormwater facility to minimize onsite detention and retention infrastructure. Three other redevelopment incentives include allowing the transfer of development rights, leveraging publicly-owned real estate, and land banking. In a transfer of development rights program, a landowner or developer is allowed to purchase development rights from certain properties and transfer those rights to other properties to achieve higher densities than normally allowed through zoning (for example, to build six instead of four units per acre). The higher density serves as an incentive for the developer to purchase the development rights. Government-owned real estate leveraging strategies can include the donation of property or its sale or lease at a nominal or below market rate, providing access easement or assistance with infrastructure, and selling or leasing air rights over public property. In land banking, a CRA or another governmental or non-profit entity acquires property to later sell or lease for a nominal fee or below market rate price to induce a desired type of development (for example, affordable housing or a development that facilitates the use of transit [transit-oriented development]). In some communities, a land bank authority is established to administer a land-banking program. A land bank can be used as a type of public broker to acquire property such as abandoned or tax delinquent properties or properties sold for taxes. The land bank holds the property and readies it for redevelopment (by clearing the title, for instance). A land bank can also assemble properties into larger redevelopment parcels.

Determined with the information for redevelopment incentives was provided by Real Estate Research Consultants [www.rercinc.com]. Additional information on redevelopment incentives is available from the American Planning Association [www.planning.org], Smart Growth America [www.smartgrowthamerica.org], and the Smart Growth Network [www.smartgrowth.org].

Main Street Program

The 25-year old Main Street program is used to encourage commercial revitalization or enhancement within the context of historic preservation. In addition to preserving a community's historic resources, a Main Street program revitalizes



CITY OF WEST PALM BEACH INCENTIVES FOR INFILL AND REDEVELOPMENT

The city of West Palm Beach Planning Department offers a number of special programs to encourage implementation of the city's downtown master plan and code. These include a transfer of development rights (TDR) program and a residential incentives program (RIP). The TDR program uses market forces to preserve historic buildings and create public open spaces by allowing developers the right to acquire unused development rights from properties occupied by historic buildings or public open spaces and transfer those rights to designated receiving areas. The RIP, which expired in the summer of 2006 because it had achieved its purpose, was used by the city to encourage the development of residential units in the downtown by providing additional height for residential projects and creating public open space that encouraged a pedestrian environment. The 1,200 additional residential units created as a result of the RIP also helped the city meet transportation concurrency exception area (TCEA) goals. (The city is now evaluating new district-specific incentives as part of the update of its downtown master plan.) In addition, the ad valorem tax exemption is designed to encourage restoration, renovation, and rehabilitation of historic properties and stabilize and improve property values in the city. (More information on the West Palm Beach incentives for infill and redevelopment is available from www.cityofwpb.com/plan/udspecial.htm.)

downtowns, creates jobs, and stabilizes and expands the tax base. The program also helps build a positive community image, protect community investments in downtown infrastructure, and attract new business investments through the Main Street experience. In many instances, Main Street programs are established to revitalize a traditional central business district which is suffering from abandonment and declining property values because of the movement of retail and other businesses to the suburbs. A Main Street program can be incorporated into a local economic or downtown development program, a historic preservation program, or a community planning program.

Florida's 50 active Main Street programs include cities ranging from 1,650 to over 100,000 in population, a county, and county districts. A local Main Street program is run by a downtown manager and a broad-based Main Street Board that includes representatives from the public and private sectors. The Board plays a critical role in the local program by establishing policy, determining priorities, and assisting the manager with implementation of activities in the areas of organization, promotion, design, and economic restructuring. Local Main Street programs establish committees that correspond to the four core points of the Main Street approach: organization, which involves working with public and private sector community leaders to develop consensus and coordinate resources to revitalize the downtown; promotion, which involves creating and marketing a positive downtown image; design, which encourages quality building and public improvements; and economic restructuring, which involves programs to strengthen existing businesses and attract new ones. Other special purpose committees or task forces can also be established (to address parking, for example).

Main Street programs are supported by a network of other programs that provide information and technical assistance. In Florida, the Main Street program is administered by the Bureau of Historic Preservation, a part of the Division of Historical Resources in the Florida Department of State. The bureau provides design and technical assistance, Main Street basic training, and consultant team visits to Florida Main Street communities. It also sponsors quarterly meetings and an annual statewide Main Street Conference. Main Street cities receive a one-time \$10,000 grant and up to three years of technical assistance from the bureau. At the national level, the Main Street Center (a part of the National Trust for Historic Preservation) provides information to some 1,200 active Main Street programs. It also



THE CITY OF DELAND MAIN STREET PROGRAM

The city of DeLand used its Main Street program (one of the first five Florida projects) to turn around a downtown that had begun to decline with the post-World War II movement to the suburbs. Established in 1985, the Main Street program's economic restructuring and business-recruitment plan converted a downtown that was 75 percent vacant with many buildings boarded up to a downtown where the ground-floor retail and office spaces are fully occupied and \$1.2-plus million in private investments generated some 450 jobs. The program includes a design committee, which offers a façade grant program and works on downtown aesthetic issues; an economic development committee, which seeks to improve the economic climate and assist with business recruitment; and a promotion committee, which markets the downtown through special events and advertising campaigns. In 1997, DeLand was the Great American Main Street Award[™] winner, and from 1999 through 2003, was voted as the best Main Street in Florida. The leaders of DeLand's Main Street program credit a lot of their success to the ability to create collaborative partnerships and coalitions across the public and private sectors. (More information about the DeLand Main Street program is available from http://mainstreetdeland.com.)

administers the Main Street accreditation process designed to reward organizations and help them garner attention within their communities.

Complementing the Main Street program, VISIT FLORIDA's Downtowns and Small Towns program is a multi-year tourism development and marketing initiative that promotes the local color of Florida's downtowns and small towns. The purpose of the program is to generate economic benefits through increased downtown visitation while helping to preserve and enhance a community's natural, heritage, and cultural resources. The first state tourism-related activity of its kind, the Downtowns and Small Towns program is designed to highlight the unique art, cultural heritage assets, historic districts, architectural significance, natural resources, and major festivals and events of the participating downtowns and small towns. VISIT FLORIDA is seeking communities that offer, in addition to good lodging, dining, and entertainment, distinct architecture, nationally recognized historic districts and/or a designated Main Street program, access to nature, and a walkable, pedestrian-friendly downtown. VISIT FLORIDA's goal is to connect tourism marketing to economic development efforts in order to advance the revitalization of Florida's downtowns and small towns.

For more information on Main Street programs, go to the Florida Bureau of Historic Preservation [www.flheritage.com/preservation/architecture/mainstreet/] and the Main Street Center [www.mainstreet.org]. For more information on VISIT FLORIDA's Downtowns and Small Towns program, go to www.downtowns.VISITFLORIDA. com or to www.visitflorida.org/AM/Template.cfm?Section=Education&Template=/ TaggedPage/TaggedPageDisplay.cfm&TPLID=10&ContentID=3186. 1000 Friends of Florida, which partnered with VISIT FLORIDA to design the Downtowns and Small Towns program, also offers information at www.1000fof.org//fl_panhandle_ initiative/downtowns&small%20towns/downtowns&smalltowns.asp.

Neighborhood Conservation Districts

A Neighborhood Conservation District (NCD) is used to conserve and enhance the distinctive character of a neighborhood and give residents more say in how they want their particular area to develop. It provides a planning tool for neighborhoods that might not be historic but have distinct features residents want to preserve. NCDs are being used more often in areas where growth results in new development that is replacing or altering existing homes with buildings that erode



ST. PETERSBURG NEIGHBORHOOD CHARACTER

As one of the oldest cities in Florida, St. Petersburg is home to a wide variety of older neighborhoods, each with a distinct character and unique architectural legacy. In 1991, the city adopted Neighborhood Design Review (NDR) to protect its neighborhoods from improvements that were out of place and diminished neighborhood character (achieving the goal of a Neighborhood Conservation District). In 2007, the successful elements of the NDR were incorporated in the city's new Land Development Regulations (LDR). The LDRs identify three major zoning districts - neighborhoods, corridors, and districts. Each district contains specific building and site design standards that are consistent with the district's character. To address inappropriate development issues related to demolitions, additions, and new construction, the building and design review process focuses on contextual site layout (i.e., how buildings are located on the site and whether the site features are appropriate to the existing context) and on consistent connectivity for pedestrians and vehicles. Although a particular architectural style is not specified, the design process anticipates that the chosen style and site layout will blend the new construction with, and not challenge, the existing neighborhood context and the established development pattern. To assist with the transition from development to redevelopment, the new LDRs help property owners and design professionals choose materials, proportions, location, and other organizational arrangements that strengthen the contextual setting while allowing innovation and creativity. (To review St. Petersburg's Land Development Regulations, go to www.stpete.org/development/LDRproposed2.htm.)

the traditional neighborhood character. They can be used to accomplish a variety of goals: to protect and strengthen certain physical and design characteristics of an area; to reduce conflict and, in some cases, blight and loss of property values, caused by incompatible or insensitive development; promote compatible development; and provide residents with more certainty about the future character of their neighborhood. NCDs also provide property owners with a negotiating tool in a community's planning process and help build pride and civic involvement. Important to NCDs is the fact that they are developed with the involvement of the residents of the neighborhood.

An NCD can utilize a variety of planning tools that apply design criteria: a neighborhood plan that guides development; modifying existing zoning to accurately reflect the traditional characteristics that the community seeks to protect; a zoning overlay for a neighborhood that contains specific design criteria; and a city- or county-wide design review system that can include distinctions among different neighborhoods. Whatever the planning tool used, most NCDs utilize some type of design guidelines or standards. Although the issues addressed in an NCD are neighborhood specific, they might include unwanted demolition; loss of large trees or natural vegetation; exterior building changes, including building materials; new buildings or additions that are out of scale with the neighborhood or lot; and streets that lose their appeal because new structures face inward, not to the street.

Description of the information on NCDs was provided by Nore Winter and Company [www.winterandcompany.net]. Information on Neighborhood Conservation Districts is also available from Scenic America [www.scenic.org/planning/strategies_cd]. The American Planning Association [www.planning.org] and the Congress for the New Urbanism [www.cnu.org] also offer resource information on maintaining neighborhood character.

Social Compact

Social Compact is a national not-for-profit corporation whose mission is to help strengthen neighborhoods by stimulating private market investment in underserved communities. Social Compact accomplishes this through a variety of tools developed to accurately measure community economic indicators and provides this information as a resource to community organizations, government decision makers, and the private sector. Social Compact's primary analytic tool is the Study area within the city of Jacksonville. 60.8 square miles



JACKSONVILLE NEIGHBORHOOD MARKET DRILLDOWN

In 2003, the city of Jacksonville and a business leadership team contracted with Social Compact to conduct the Jacksonville Neighborhood Market DrillDown. The purpose of the DrillDown was to provide the city, the business community, and the neighborhoods with dependable business-oriented data and market insights that could not be assessed through traditional market sources. The end-goal was to promote private investment in the city's inner city and undervalued neighborhoods. The DrillDown profile focused on the city's predominantly African-American northwest neighborhoods, known as the Northside (an area of approximately 60 square miles comprising seven percent of the city). The study identified eight distinct micro-markets. (More information on the Jacksonville Neighborhood Market DrillDown is available from Social Compact [www.socialcompact.org].) Neighborhood Market DrillDown, developed to address some of the key barriers to private investment in and around inner-city neighborhoods: a lack of dependable market information and negative stereotypes. The Neighborhood Market DrillDown uses numerous sources of market data to identify fundamental business attributes and market characteristics of urban communities. Poverty and deficiency data are replaced with business indicators of market strength by adapting some of the best private market analysis models, which are designed for the suburban market to respond to the unique characteristics of the inner city in order to capture density, hidden populations, cash economies, and micro-market development patterns that are not captured by traditional market analyses.

In addition to its Neighborhood Market DrillDown, Social Compact uses surveys, focus groups, and other forms of data collection to better understand four fundamental community development issues: retail attraction and retention, small business development, access and use of traditional financial services, and access to fresh produce. Recognizing that retail providers and small businesses are essential in underserved inner-city neighborhoods because of the investments and job opportunities they bring, the goal of the research on retail providers and small businesses is to fill the informational void regarding business performance in urban areas. Social Compact's work on inner city access to and use of traditional financial services is focused on understanding the behavior of underbanked and unbanked populations that Social Compact estimates (by using national figures) spend at least \$10.9 billion per year on generally higher-cost alternative financial transactions. Its work to provide inner-city residents access to fresh produce comes out of research that demonstrates the connection between fresh, good quality (fresh produce in particular) and fairly priced groceries and health. (Learn more about the importance of Healthy Food Access in the Education and Health chapter of the toolbox.)

In Florida, Social Compact has conducted Neighborhood Market Drill-Down projects in Jacksonville (featured here), Miami, and Tampa. The Miami 2007 DrillDown project (a collaborative project involving the Knight Foundation, the city of Miami, and local community groups) focused on developing a baseline of economic indicators and a database that the city can update with current data as needed and providing detailed business-oriented profiles of market strengths and opportunities in underserved communities. Other activities to be completed by the end of the year include a survey of the financial behavior of underbanked populations and an in-depth study of small business and grocery providers in a few underserved neighborhoods.

For more information about Social Compact, go to www.socialcompact. org.

Vacant Property Program

In a vacant property program, a local government uses a variety of tools to turn vacant property into assets. Those tools are centered around three types of strategies: prevention, fixing the problem (abatement), and acquisition for future reuse. Prevention programs can include, for example, rehabilitation loan programs, home repair programs, homeownership and foreclosure prevention programs, and adoption of property maintenance codes. Code enforcement programs that target neglected neighborhoods and vacant property registration programs are two tools to fix the problem. A land bank or a community land trust (described in the Housing chapter of this toolbox) can be used to acquire vacant property and ready it for reuse, which often includes establishing a clear title.

Derived More information on vacant property programs is available from the Local Initiatives Support Corporation [www.lisc.org], the National Vacant Property Campaign [www.vacantproperties.org/index.html], and Smart Growth America [www.smartgrowthamerica.org].

LAND USE PLANNING AND DEVELOPMENT TOOLS

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hether they are large or small or located in an urban, suburban, or rural location, Florida communities are increasingly employing a variety of land use planning and development tools to grow more efficiently and to achieve the type of communities their citizens want. Those tools, described in this section, address not only the use of land (whether for housing, shops, jobs, or open space) but also the pattern, character, and form of development – where the development is located, what it looks like, and the livability of the places it creates. They also address many of the problems resulting from the way Florida communities have grown – generally in a suburban pattern of development that separates land uses (for example, housing, employment centers, and shopping) and connects those uses with major highway arterials, which makes alternative forms of transportation, such as walking, biking, and transit, to destinations virtually impossible. Frequently mentioned impacts of the way Florida communities have grown include loss of community identity and open space, often putting at risk environmentally sensitive lands that are important to the state's water supply and wildlife habitat, and dramatic increases in the vehicle miles of travel, resulting in increased traffic congestion, more time spent in cars, and escalating CO² emissions, as residents drive from destination to destination. Other consequences include the inability of children to walk to schools and an elderly population stranded in their homes because of their inability to drive in a car-oriented community. Tools to address these problems are covered both in this chapter and in the Climate Change, Education and Health, and Transportation chapters.

A number of Florida organizations serve as a resource on land use and development planning tools. They include the Florida Chapter of the Congress for the New Urbanism [www.cnuflorida.org], the Florida Chapter of the American Planning Association [www.floridaplanning.org], the Florida Department of Community Affairs [www.dca.state.fl.us], the Florida Planning and Zoning Association [www.fpza.org], 1000 Friends of Florida [www.1000fof.

org], Florida's Regional Planning Councils [listed at www.nefrpc.org/links.htm], and the District Councils of the Urban Land Institute [www.uli.org]. At the national level, resource organizations include the American Planning Association [www.planning.org], which in 2007 published a new resource for smaller communities, <u>Small Town Design: Getting It Right</u> by Jim Segedy and Tom Daniels; the Congress for the New Urbanism [www.cnu.org]; the Lincoln Institute of Land Policy [www.lincolninst.edu]; the Local Government Commission [www.lgc.org]; the National Center for Smart Growth Research and Education [www.smartgrowth.umd.edu]; Smart Growth America [www.smartgrowthamerica.org]; and the Smart Growth Network [www. smartgrowth.org].

Compact Building Design

Compact building design encourages higher density development where buildings are more vertical and less horizontal, which means that less land is required to accommodate development needs. One method of enabling higher densities is local zoning that allows a greater variety of housing types, such as multifamily units, cottages, live-work units, townhomes, housing over retail, and singlefamily homes within the same development. For a variety of reasons, including demographic changes, rising gas prices, smaller households, and frustrations with longer and longer commutes, Florida communities are turning to compact building design as an alternative to the large lot, single-use suburban development called for in most zoning ordinances. Developers can provide a greater range of housing choice because their per-unit cost is lower and they have a greater ability to respond to changes in market demand because of the flexibility to build a variety of housing types at different prices, which benefits consumers. Because more people are located in close proximity, more compact development can support retail and other services within walking distance of residents and create more riders for transit, which means less traffic, reduced need to expand roads, less air pollution, and lower transportation costs for consumers. Compact building design also benefits the environment by reducing the footprint of buildings, thus creating more greenspace to absorb and filter rainwater and decrease flooding from stormwater. It also benefits local governments because, like developers, their per-unit cost is less, which means that it is cheaper to provide and maintain water, sewer, communication, and electrical utilities.

More information on compact development can be obtained from the Congress for the New Urbanism [www.cnu.org], the National Association of Home Builders [www.



ROSEMARY BEACH

Located near Panama City, 105-acre Rosemary Beach is a compact traditional town development that offers a wide variety of housing types within walking distance of a town center featuring a mix of shops, services, and public spaces. Contributing to the compact design, Rosemary Beach offers 12 housing types, including studio flats, lofts, live-work units over attached ground floor commercial space, carriage houses, and family cottages. In addition, residential units are offered above the retail space, typical of traditional Florida downtowns, and apartments called granny flats are over many of the garages. (*More information is available from www.rosemarybeach.com and from <u>A Guidebook to New Urbanism in Florida 2005</u>, published by the Florida Chapter of the Congress for the New Urbanism [www. cnuflorida.org].)*

nahb.org], the National Realtors' Association [www.realtors.org], Smart Growth America [www.smartgrowthamerica.org], and the Urban Land Institute, which published <u>Higher</u> <u>Density Development: Myth and Fact</u> [www.uli.org/AM/Template.cfm?Section=Resear ch&CONTENTID=41895&TEMPLATE=/CM/ContentDisplay.cfm], the sixth in a series of publications designed to dispel myths and offer good examples on issues related to growth and land use. It addresses common myths surrounding density. Two additional resources are <u>Creating Great Neighborhoods: Density in Your Community</u>, produced by the Local Government Commission (www.lgc.org) and the National Association of Realtors in cooperation with the U. S. EPA [www.epa.gov], and <u>Visualizing Density</u> [www. lincolninst.edu/pubs/PubDetail.aspx?pubid=1178], an illustrated book published by the Lincoln Institute of Land Policy in 2007 to help planners, designers, public officials, and citizens better understand, and better communicate to others, the concept of density as it applies to the residential environment. <u>Visualizing Density</u> is also available in an interactive, online format at www.lincolninst.edu/subcenters/visualizing_density/index.aspx.

Design Centers and Institutes

Design centers are a tool used by communities to enhance the quality of the built environment. Many design centers are located in a downtown location to reinforce redevelopment activities (for example, the downtown design center in Chattanooga, Tennessee). Typical functions include educational programs and forums on the role of design; events that involve the public in design initiatives; and design staff and students who serve as a resource for the community on planning and design issues and provide design assistance on civic, private, and other development projects. A design center can be a part of government, a project of a university school of architecture, or a separate nonprofit organization. Some centers charge a fee for service when working with community groups or developers.

Design institutes and design centers can serve as a source of information, technical assistance, and training on community design. A design institute offers training to public officials who are interested in promoting better design in their community. In Florida, the Florida Public Officials Design Institute at Abacoa offers elected officials in South Florida training in urban design. The officials who participate select a specific site in their community for study, and a team of special consultants is brought in to address the design and planning challenges. Each official leaves with an enhanced understanding of the urban design opportunities available and is provided with a short and long range set of actions for the design of his or her project



MIAMI-DADE COUNTY URBAN DESIGN CENTER

The Miami-Dade County Urban Design Center, which serves unincorporated areas of the county, conducts charrettes to develop future growth visions within a selected study area. After the charrette, the center's urban design staff presents a vision report that includes a prioritized set of recommendations to the Board of County Commissioners. Upon acceptance of the report, the county's Area Planning Implementation Unit works to implement the recommendations, actions which can include preparation of graphic zoning regulations that would ultimately result in the community's vision. (*More information is available from www.miamidade.gov/planzone/udc/home.asp.*)



URBAN DESIGN & TOWN PLANNING STUDIO

The Treasure Coast Regional Planning Council (TCRPC) led the state with its emphasis on urban design when, in 1989, it started providing town planning and urban design assistance to local governments. Today, design assistance is a service of the TCRPC's Urban Design & Town Planning Studio, a team of urban designers, architects, and graphic technicians who provide a variety of services, including conducting charrettes and visioning processes; preparing master plans, design guidelines, comprehensive plan amendments, and codes; and recommending transit-oriented development and traffic calming strategies and plans. The studio also conducts plan reviews, before and after imaging, and charrette training. The TCRPC's attention to urbanism and design earned it the first John Nolen medal from the Florida Chapter of the Congress for the New Urbanism. (More information on the TCRPC Design & Town Planning Studio is available from www.tcrpc.org/ departments/studio.html.)

site. Design Institute at Abacoa can host a design session in another region and can provide training on how to establish a design institute. On the national level, the National Endowment for the Arts, the American Architectural Foundation, and the United States Conference of Mayors co-sponsor the Mayors' Institute on City Design (MICD). The MICD achieves its mission by organizing sessions where mayors engage leading design experts to find solutions to the most critical urban design challenges facing their cities. Each mayor presents a problem from his or her city for the other mayors and designers to discuss. The problems relate to a range of issues, including waterfront redevelopment, downtown revitalization, transportation planning, and the design of new public buildings such as libraries and arts centers.

☐ Information on design institutes is available from the Design Institute at Abacoa [www.floridadesigninstitute.org], the MICD [www.usmayors.org/uscm], and the University of South Florida School of Architecture and Community design [www.arch.usf.edu].

Design Guidelines

Design guidelines provide communities with a way to address issues related to the visual quality of the built environment that are not covered by zoning



WATERCOLOR

Developers of WaterColor, a walkable mixed-use coastal community in Walton County, used design guidelines to create the traditional southern vernacular architecture of a small town on the water. The community's attention to design is articulated in *A Guide for the Creation of WaterColor: Patterns for Place-Making*, which outlines materials, colors, details, building techniques, and landscaping patterns. Homes, for example, draw from a regional palette of colors and are oriented toward the street, and landscaping incorporates native plants. Nearly half of WaterColor is devoted to open space and conservation areas. WaterColor's design earned an Award for Excellence from the Urban Land Institute. (*More information on WaterColor is available from www.watercolor.com and from <u>A Guidebook to New Urbanism</u> <u>in Florida 2005</u> [www.cnu.org].)* laws or building codes. Local leaders who want to influence the appearance of their community use design guidelines to reinforce and enhance (or, in some cases, regain) the character and identity of an area and improve the quality of development and ensure that it is compatible with the surrounding neighborhood. Design guidelines can be applied at the community, neighborhood, site, or individual building levels, in both historic and non-historic areas. They can also be applied to a new or existing road corridor or to a natural area that has certain visual qualities that the community wants to maintain. Design guidelines typically address site issues, such as the location, setback, and orientation of buildings; the location of parking; the transition and connectivity between land uses; and pedestrian and vehicular access and circulation. For individual buildings, design guidelines can be used to address issues such as building height, materials, scale, and color; the relationship of buildings to each other; lighting; and signage. To link them to the enforcement mechanisms of government, design guidelines are typically adopted by ordinance and referenced in a local government's zoning code.

Design guidelines achieve a number of community objectives, including protecting public investment by ensuring quality growth. In commercial areas, design guidelines enhance retail activities and promote new private investments by making an area more attractive. In residential areas, they give property owners the assurance that new development or redevelopment will be compatible with the character of their neighborhood. Design guidelines also provide a tool for planners to provide information about the desired building design at the earliest stages of planning before significant funds are invested in costly design. Successful design guideline programs involve a high level of participation among developers, residents, business owners, and the local government in the creation and application of the standards or guidelines. Successful programs also have guidelines that are clearly written and well-illustrated through easy-to-understand graphics, provide an objective basis for review, and provide enough flexibility within the overall vision to accommodate change and allow for a variety of architectural styles, an important ingredient in the success of Seaside in Walton County. (See the New Urbanism section below to learn more about Seaside.) Typically, the guidelines are articulated in a design handbook or manual.

Design guidelines are usually administered by local planning staff in cooperation with an architectural review board that provides advice on the appropriateness of a development proposal. Because of the importance of the visual quality of development in creating successful and livable communities, a growing number of plan-



THE CITY OF DELRAY BEACH DOWNTOWN DEVELOPMENT STANDARDS

The city of Delray Beach's development standards implement the objectives for its central business district (CBD) zone: to enable development that preserves the downtown's historic, moderate scale and promotes a balance of mixed-uses that will result in a self-sufficient downtown and compact, pedestrian-oriented growth that will support downtown businesses. To help create such an environment, higher residential densities are allowed in the downtown, and on Atlantic Avenue, the city's main street, ground floor uses must be pedestrian-oriented (i.e., restaurant, retail, or service use, not office uses). The downtown development standards (which are in the process of being updated) further the pedestrian environment by establishing a relationship between the width of the road and the height of the buildings (currently limited to 60 feet). Buildings must front the street, and upper floors must be set further back from the lower levels to create a vertical stepped back appearance. Open space, if required, can include courtyards, plazas, and landscaped setbacks to add interest and to provide relief from building mass. Architectural guidelines address building proportions and material configurations, rather than style. (More information on the city of Delray Beach's downtown development standards is available from www.mydelraybeach.com/ Delray/Departments/Planning+and+Zoning/Quick+Links/LDRs.htm, starting at Section 4.4.13 [F].)



DOWNTOWN KENDALL MASTER PLAN AND CODE

The Downtown Kendall Master Plan and Code are designed to guide change for a 250-acre area along Kendall Drive in Miami-Dade County. They are reshaping the current suburban form of development (a series of parking lots and nonconnected strip malls with poor pedestrian accessibility) into a mixeduse, pedestrian-friendly downtown center with an interconnected network of streets and a series of public spaces and squares. Large and small increments of development can be accommodated, which means that the market and infrastructure availability can determine the pace of development and that even a an individual property improvement can contribute to a unified whole. (Information on the Downtown Kendall Master Plan and Code is available from Dover Kohl & Partners [www.doverkohl. *com] and from A Guidebook to New* Urbanism in Florida 2005 [www. cnuflorida.org].)

ning offices in Florida have added one or more design staff members. The city of West Palm Beach was the first planning office to hire an architect trained in urban design. A more recent example is Orange County, which has an Urban Design Section within its Planning Division. Staff members, working with an Urban Design Commission, are charged with developing policies, design guidelines, and regulatory controls that will improve the aesthetic quality of the county's physical environment and create a strong sense of place and community identity.

Information on design guidelines can be obtained from the American Institute of Architects' Center on Communities by Design [www.aia.org], the Congress for the New Urbanism [www. cnu.org], the National Governor's Association [www.nga.org], the National Trust for Historic Preservation [www. nthp.org], and the National Alliance of Preservation Commissions [www.sed. uga.edu/pso/programs/napc].

Form-Based Codes

By providing a method to regulate the visual form of development through clear graphic prescriptions, form-based codes offer an alternative to conventional land use regulations that focus on controlling the use of land. The codes are used to achieve a specific urban form based on a community vision by regulating the physical form



DOWNTOWN WEST PALM BEACH URBAN CODE

The West Palm Beach Downtown Urban Code was adopted to ensure that development was consistent with the goals of the Downtown Master Plan and that building construction was predictable in order to ensure stable real estate values. The code requires that new buildings be compatible with each other and with the existing urban fabric. It also addresses building design and how buildings, including retail, front the street and relate to the pedestrian. Other provisions address how locations designated for terminating vistas and how areas marked for special landscaping are treated and encourage in-building crossblock pedestrian passages to shorten routes from street to street. *(Information on the Downtown West Palm Beach Urban Code is available from Duany Plater-Zyberk & Company [www.dpz.com].*)

(the desired physical characteristics) of what is built on the land - the buildings and how they relate to one another and to the appearance and quality of the public realm, such as streets and sidewalks. Form-based codes allow the use of a building to change over time (for example, a warehouse that becomes loft apartments), which encourages reinvestment and provides a landowner or developer greater flexibility in meeting changing real estate markets. For example, if a building's size, form, and placement conform to the community's vision, as described in the form-based code, a developer may have the flexibility to build a variety of uses. Form-based codes can replace the existing zoning for the affected area or can be established as an overlay zone that supersedes the underlying code. Form-based codes can be used to guide development in a variety of settings, including a neighborhood, downtown, or suburban area. Two early form-based codes in Florida (described on the prior page) are the Downtown Kendall Master Plan and Code, adopted to convert a suburban strip corridor to a mixed-use pedestrian-friendly downtown center, and the West Palm Beach Urban Code, adopted to encourage development that implements the goals of the Downtown West Palm Beach Master Plan.

Information for this description was largely drawn from the Form-Based Code Institute [www.formbasedcodes.org] and <u>A Guidebook to New Urbanism in Florida</u> 2005 [www.cnuflorida.org].

Incentive Zoning

Incentive zoning provides incentives that reward developments that achieve community goals (for example, providing affordable housing or other public benefits such as parks or pedestrian amenities, protecting specific natural resources, or adding certain design features). Incentive zoning can also be used to achieve a specific form of development such as transit-oriented development, mixed-use development, or the development of traditional neighborhoods. Incentive zoning is different from traditional zoning, which limits what can be done on a piece of land but does not provide rewards. Commonly used rewards are those that help improve a development's profitability. They include density bonuses, which allow developers to build more units than would normally be allowed in a zoning district; expedited permitting; tax breaks or reductions or exemptions from certain impact or other fees; reductions in parking space requirements; and public provision of infrastructure or low-interest loans. Another incentive particularly effective in downtown areas allows increases in building heights or floor-area ratio. In



CITY OF ORLANDO INCENTIVE ZONING

The Southeast Orlando Sector Plan (for a 19,300-acre greenfield area located adjacent to the Orlando International Airport) provides incentives for development that is consistent with the plan. Key plan concepts include building livable neighborhoods and mixed-use centers that are compact and walkable, accommodating all modes of travel, focusing on traditional design and civic amenities, protecting the environment, and creating a healthy jobs-housing balance. Incentives for development consistent with the plan's vision include expedited administrative and environmental review; smaller street sections, increased densities, and opportunities for mixed-use development where Traditional Design Standards are used; and reduced transportation impact fees (approximately 30 percent) where certain criteria are met. An additional incentive is fee waivers for growth management plan amendments, rezonings, master plans, and subdivision platting for five years from the initial master plan approval. (More information is available from www.cityoforlando.net/planning/deptpage/sesp/sesp.htm.)

administering incentive zoning, it is important to structure the program to ensure that the incentives achieve, and are in proportion to, the benefits of the desired planning outcomes, while at the same time adding value for a developer.

More information on incentive zoning is available from the American Planning Association [www.planning.org].

Mixed-Use Development

Mixed-use developments are becoming a common practice in Florida. A mixeduse development integrates retail and commercial uses, as well as public spaces, with residential development, suburban infill sites, and new towns or neighborhoods. Mixed-use developments can take different forms, including neighborhood commercial centers and smaller town main streets with residences above retail and offices, higher density urban mixed-use town centers, suburban infill sites, conversion of single-use malls and strip centers to create a town center where none existed before, and new towns or neighborhoods. By providing a mix of uses, such as shopping, parks, and opportunities for employment and entertainment in close proximity to where people live, traffic is reduced because many needs are within walking or bicycling distance of residences, earning mixed-use developments the title of places to live, work, shop, and play. In addition, opportunities for transit are enhanced.

Employees of businesses as well as residents in a mixed-use development benefit from close access to daily needs, such as a dry cleaner, bank, and shopping. Transportation costs are reduced, and owning a car to take care of routine needs is no longer essential, benefiting elderly residents who, in a suburban development where homes are segregated from shopping, medical services and other conveniences, lose their independence when a car is no longer practical. Local governments can take a number of steps to encourage and facilitate mixed-use developments in their community. Those steps include expressly providing for mixed-use developments in the comprehensive plan; adopting Form-Based or Traditional Neighborhood Development codes; designating mixed-use areas in single-use areas; using zoning and development regulations to enable conversion of large vacant sites or buildings to mixed-use developments (for example, Baldwin Park in Orlando); and adopting incentives, such as expedited approvals, one-stop permitting, and density bonuses.



BALDWIN PARK

Baldwin Park, a compact, mixed-use development based on the principles of the New Urbanism, is on the site of a former naval training center located near downtown Orlando. Designed in the Florida architectural style of pre-1940s era central Florida to blend into the surrounding neighborhoods, the 4,100 homes come in a variety of styles and price ranges, including singlefamily homes, town homes, live work units, condominiums, and apartments. The development is served by 950,000 square feet of commercial space, which includes neighborhood offices, livework units, and a Village Center with retail space and apartments above. Underscoring the economic value created by mixeduse developments, Baldwin Park provides \$2.0 billion-plus in property value to the community and 6,000 permanent jobs. To ensure a high level of connectivity and walkability, the roadways form an interconnected network with numerous entries and exits to disperse traffic and provide easy access to nearby developments. Development is concentrated on one-half of the 1,100-acre site, enabling 450 acres of conserved open space. (More information on Baldwin Park is available from the Baldwin Park Development Company [www.baldwinparkfl.com] and from A Guidebook to New Urbanism in Florida 2005 [www.cnuflorida.org].)

Discrete More information on mixed-use developments can be obtained from the American Planning Association [www.planning.org], the Congress for the New Urbanism [www.cnu.org], the National Association of Home Builders [www.nahb.org], the National Realtors' Association [www.realtors.org], Smart Growth America [www. smartgrowthamerica.org], and the Urban Land Institute [www.uli.org].

New Urbanism

The New Urbanism – or what is also called Traditional Neighborhood Development (TND) – has it roots in Florida's Panhandle. The country's first New Urbanist development was the now 25-year old Seaside in Walton County. Since Seaside, the number of New Urbanist developments has multiplied. Today, Florida has the most New Urbanist developments in the United States, and the principles of the New Urbanism have been used in Florida to achieve a wide variety of community and regional goals. The developments range from providing affordable housing, protecting natural systems and farmland, and redeveloping inner city areas and outdated strip malls to revitalizing downtowns, creating mixed-use town centers for single-use suburban neighborhoods, and designing new towns.

Seaside's designers based the town on a study of the planning principles that made Florida's traditional small towns – places like Apalachicola, downtown Pensacola, and DeFuniak Springs – so successful. Those planning principles form the basis of today's New Urbanism, which promotes compact mixed-use developments that begin with neighborhoods sized for walking as the basic building block. New Urbanist neighborhoods offer a variety of housing choices located within easy walking distance of most daily needs and an interconnected network of pedestrian-friendly streets and accessible public spaces, making it possible to live, work, shop, and play without getting into a car. Town and neighborhood centers, public spaces, civic uses, and other features are designed at the human scale to foster a sense of community.

The New Urbanism provides an alternative to the suburban development patterns required by most zoning ordinances that are based on a separation of land uses, large lots, deep building setbacks, and wide streets and do not permit the mix of land uses and pedestrian-oriented, more compact development called for in the New Urbanism. As a result, a change in local zoning is usually required. To solve that problem, an increasing number of Florida communities have adopted a



SEASIDE, FLORIDA

Eighty-acre Seaside is a new community designed according to the scale and character of an historic, small southern town, including the layout of streets and squares and the location of uses (a mix of single-and multi-family residential units and commercial and public space). The interconnected network of streets encourages walking, and the public realm extends throughout the neighborhoods in the form of sandy paths that provide a variety of routes for moving about the town. Retail is in the form of a civic downtown with a common green, an inn, a conference center that doubles as town hall, and other civic amenities. Small kiosks provide an inexpensive place for retailers, and a beach pavilion is one of the community's focal points. The design of public and private buildings reflects the regional vernacular architecture, and the development makes use of native landscaping. The success of Seaside is evidenced in the sale of its lots, which have increased from \$15,000 to as much as \$1 million today. (This information was taken from <u>A Guidebook</u> to New Urbanism in Florida 2005, published by the Florida Chapter of the Congress for the New Urbanism [www.cnuflorida.org]. More information on Seaside is at www.seasidefl.com and from Duany Plater-Zyberk & Company [www.dpz.com].)

Traditional Neighborhood Development code to specifically enable and promote the New Urbanism. Those codes can be voluntary or mandatory and can be applied citywide or to a specific geographic area. Another option is called a floating code – one that is authorized by law but not assigned to a specific property or geographic area. The use of a floating code is triggered by an application from a landowner to rezone a property under the zone.

 \square More information on the New Urbanism and TND codes is available from the Congress for the New Urbanism [www.cnu.org], the Florida Chapter of the Congress for the New Urbanism [www.cnuflorida.org], and the New Urbanism Division of the American Planning Association [www.planning.org]. A complete listing of Florida resources on the New Urbanism is contained in <u>A Guidebook to New Urbanism in Florida 2005</u> [www.cnuflorida.org]. The Seaside Institute [www.theseasideinstitute. org], located in Seaside, is also a full-source location for information on Seaside and the New Urbanism.

Overlay Zones

An overlay zone can be used to protect particular natural, cultural, or built features in a community that are under pressure from development. Such zones can be used to carry out a variety of community objectives: to protect the character of a neighborhood, downtown, waterfront, or road corridor; to protect a scenic view, an aquifer recharge area, natural slopes, wetlands, and watersheds; and to address safety and compatibility issues, such as airport, fire, and flood hazard areas. An overlay zone can also be used to promote a type of development in designated areas (for example, to provide affordable housing as a use by right or to promote mixeduse, transit-oriented development in certain areas). The overlay zone, which is mapped, is superimposed over the existing zoning. In that way, it establishes standards and criteria that build on the underlying zoning. Overlay zones provide a community with a flexible tool to provide a higher level of protection or quality of growth within a defined area (for example, to achieve higher densities or reduce parking requirements in downtowns or to apply design guidelines to protect the character of a neighborhood or commercial area).

The Information on Overlay Zones is available from the American Planning Association [www.planning.org].



NORTH MIAMI BEACH NEW URBANISM ZONING DISTRICT

The intent of the North Miami Beach New Urbanism Zoning District, which was enacted in 2002, is to create a traditional town center that provides a community gathering point and pedestrian environment and creates a sense of place. The creation of such a center addressed the lack of a downtown. The district, which covers 20 city blocks, requires mixed-use buildings that front sidewalks, prohibits buildings from being set back, reduces parking requirements and locates parking behind buildings, and requires a two-story minimum height, along with minimum densities. The district's zoning also addresses building form, such as massing and windows, and establishes a unique character for primary and secondary streets. The intent of each requirement is illustrated. (More information on the North Miami Beach New Urbanism Zoning District is available from www. citynmb.com, or A Guidebook to New Urbanism in Florida 2005 [www.cnuflorida.org].)



HILLSBOROUGH COUNTY THONOTOSASSA MAIN STREET OVERLAY DISTRICT

Thonotosassa is a predominantly rural community within a 20minute commute from downtown Tampa. The Main Street Overlay District (which implements the Main Street Plan element of the county's Comprehensive Plan and the Thonotosassa Community Plan) was developed in response to residents' concerns about increasing pressures from suburban-scale development. The intent is to enhance the Main Street experience by establishing buildings, signage, lighting, landscaping, and building placement requirements that will result in a rural form of development. Building entrances and fronts, such as covered walkways and porches (not parking lots), must face Main Street; service areas must be screened; and parking and loading areas must be located to the side or rear of the principal building façade. (More information on the Thonotosassa Main Street Overlay District is available from the Hillsborough County Department of Planning and Growth Management [www.hillsboroughcounty.org/pgm/].)

Sector Plans

Florida's optional sector planning process provides a way for a local government or a group of local governments to look at a large geographic area (at least 5,000 acres) and develop a balanced plan with more predictable outcomes. Created in response to the Horizon West Planning initiative in Orange County, the optional sector planning process was designed for fast growing areas to identify the regional resources they wish to protect, the areas most appropriate for development, and the form of that development. The process was established as an alternative to the Development of Regional Impact (DRI) process, pursuant to Section 163.3245 of the Florida Statutes.

The plans, which are initiated by a local government through a high level of public involvement as comprehensive plan amendments, are prepared at two levels:

Conceptual, Long-Term Build-Out Overlay

The overlay must identify public facilities and natural resources and include a conceptual framework map, principles and guidelines that address urban form, and procedures for intergovernmental coordination.



THE CITY OF GAINESVILLE COLLEGE PARK AND UNIVERSITY HEIGHTS SPECIAL AREA PLANS

In 1994, the city of Gainesville adopted an overlay set of development regulations for two older, historic neighborhoods flanking the University of Florida. The overlay was in response to problems (for example, overcrowded parking and new development inconsistent with the existing community character) associated with the growth of student rental housing in traditional single-family owner-occupied neighborhoods. To address those problems, the regulations outline and illustrate requirements for pedestrian-oriented building placement, unobtrusive parking, landscaping materials, sidewalk and sign treatment, and façade improvements. The city has subsequently adopted similar overlays on a major gateway street south of downtown and neighborhoods east of downtown. (The overlay regulations can be viewed in the Special Area Plans section of Chapter 30 of the city of Gainesville's Land Development Code [www.municode.com/Resources/gateway.asp?pid=10819&sid=9].)

Detailed Specific Area Plans

A specific area plan is for areas that are at least 1,000 acres and must identify the distribution, extent, and location of future uses; public facilities, including those outside the jurisdiction and those necessary for the short term; and natural resources in the region. As with the conceptual overlay, the specific area plan must also include guidelines and principles that address urban form and procedures for intergovernmental coordination.

A local government with an optional sector plan must submit an annual monitoring report to DCA and the affected regional planning council. At present two of Florida's counties have designated Optional Sector Plans: Bay (West Bay Area Vision) and Orange (Horizon West).

For more information about sector planning, go to www.dca.state.fl.us/fdcp/DCP/ optionalsectorplans.

SmartCode

The SmartCode is a model ordinance designed by the Miami-based architecture and design firm of Duany Plater-Zyberk & Company (DPZ). Conceived as an alternative to existing zoning ordinances that generally are based on suburban-era standards and address only land use and density, the SmartCode combines zoning, subdivision regulations, urban design, and architectural standards into one compact document. A type of form-based code, the SmartCode addresses the physical form of buildings and development. Using the code, planners can regulate appropriate density, road and block dimensions and design, the design of parks, building frontages, the mix of uses, building design, parking, and other aspects of the human environment for each area in the transect hierarchy. The SmartCode can be applied at the regional, new community, existing community, infill, and individual lot levels. It combines a means to protect the environment, open space, and water quality with methods that determine where growth should go and how it will be implemented by using a planning concept called the Transect (also designed by DPZ) as the organizing framework. The Transect divides a region into six zones that move along a continuum from the most rural areas that should be preserved in perpetuity to the urban downtown core where high densities are appropriate. Between those zones are a range of uses that increase in intensity as they move from the rural to the urban. Development is concentrated in hamlets, villages, and towns



WEST BAY SECTOR PLAN

The West Bay Sector Plan for 75,000 acres in north-central Bay County is the state's largest Optional Sector Plan. The majority of the land (owned by the St. Joe Company) was used for silviculture. The Sector Plan, developed through a series of public forums and approved by the Bay County Board of County Commissioners in 2002, established a future land use overlay zone for the long-range growth of the county for the next one hundred years. The largest single land use (53 percent) of the planning area was designated as preservation, an area that includes 62.5 square miles of West Bay shoreline and watershed, making it one of the most protected estuarine water bodies in Florida. (Overlay zones are described in the Land Use Planning and Development chapter and Estuarine Plans in the Coastal Planning chapter.) Other land uses include 4,000 acres for the relocation of the Panama City-Bay County International Airport to the north of West Bay, a 3,700-acre Regional Employment Center, an Airport Business Center, and residential uses of varying densities. A 9,608-acre tract of land owned by the St. Joe Company will serve as the mitigation site for wetlands and habitat impacts associated with the airport relocation. Long-term mitigation plans include the restoration of the site's hydrology and pine savannah that was heavily impacted by logging in the early 20th Century. (More information on the West Bay Sector Plan is available from www.bay.fl.us/bcds/planning/ index.htm. Information on the plan's consensus-building process is available from http://consensus.fsu.edu/academic_directory/ 2004casestudies/BoydWestBay.)



MIAMI-DADE COUNTY'S URBAN DEVELOPMENT BOUNDARY (UDB)

The Miami-Dade County UDB distinguishes where urban development may occur through the year 2015 and where it should not occur. Public expenditures for urban services and infrastructure improvements are focused within the UDB to accommodate the intended land uses. An Urban Expansion Area Boundary is used to delineate the area where current projections indicate that further urban development beyond the UDB is likely to be warranted sometime between the years 2015 and 2025. For designated agricultural lands outside the UDB, business and industrial uses are limited and residential development must be at a density of no more than one unit per five acres. (More information on the Miami-Dade County UDB is available from www.miamidade. gov/planzone/cdmp.asp.)

to protect open spaces and water quality. That hierarchy of rural and urban intensities allows planners and developers to determine appropriate uses and design elements for each zone.

For additional information, contact Duany Plater-Zyberk & Company [www. dpz] or the Congress for the New Urbanism [www.cnu.org]. The Smart Code can be downloaded at no charge from www. dpz.com.

Urban Growth Boundaries (UGB)

An Urban Growth Boundary (UGB), or what some call an urban development or service boundary, is a planning tool that limits land development beyond a politically-designated area. A UGB establishes a line on a map that is drawn to concentrate new development within the UGB, where there are existing urban services and facilities, and limits development in rural areas with a high natural resource or agricultural value. UGBs are established to accommodate growth over a particular period, generally 20 years. Typically, urban services are offered only within the UGB. Communities have used UGBs to curb sprawl, protect open space, encourage more compact and cost efficient development patterns, and promote redevelopment. UGBs can be effective in preventing development in rural areas, and, by encourag-



SARASOTA DOWNTOWN CODE

Sarasota's Downtown Code is based on the SmartCode, reformatted to work within the city's Zoning Code and tailored to the needs of Sarasota. The code implements the land use components of the city's Downtown Master Plan 2020, which covers an area that encompasses the downtown, two waterfront districts, and several neighborhoods. The code provides a description of the type of development that should occur in each of the Master Plan's four downtown districts in order to create urban communities that are diverse and compact and offer a high quality environment that is comfortable and an interesting place to live and work. The four downtown districts parallel the urban portion of the transect: Downtown Neighborhood, Downtown Edge, Downtown Core, and Downtown Bayfront. An important element of the code are the frontages along the street edges (the area between the facade of the building and the lot line), used to create a positive and stimulating experience for the pedestrian. (More information on the Downtown Code can be obtained from the city of Sarasota Department of Planning, www. sarasotagov.com/Planning/PlanningHome/PlanningHP.html.)

ing or requiring higher density development within the UGB, reduce the amount of land needed to accommodate future population growth. To avoid limiting the supply of land, with the resulting higher housing costs, a UGB can contain a supply of land that is greater than the market demand for housing. In Portland, Oregon, for example, which has a process for expanding its Urban Growth Boundary, studies show that housing prices are more affordable than in other west coast cities. Features of some UGB programs include delineating a permanent urban edge where it is needed to protect important natural resources and establishing clear standards for expansion through contiguous growth around existing centers to enable efficient use of urban services. Other UGB programs require minimum densities within the UGB to achieve compact development, reduce the need to consume more open space, and provide funding to assist with local public services within (but not outside) the UGB.

Differmation on UGBs can be obtained from the American Planning Association [www.planning.org], the Smart Growth Network [www.smartcommunities.ncat.org], and Smart Growth America [www.smartgrowthamerica.org].

Walkable Neighborhoods

Walkable communities are designed to make it safe, convenient, and interesting to walk from one destination to another. Benefits of establishing (or re-establishing) walkable, more pedestrian-friendly places include more social interaction and a greater sense of community among residents, who are also healthier because they can walk and exercise with greater ease; less air pollution; reduced transportation costs; and more independent seniors (and youth) who cannot operate a car. The concept of making a place more walkable and pedestrianfriendly can be applied to a full-range of places – small and large towns, neighborhoods, downtowns, suburban subdivisions, and roadway corridors – and to both new and existing development.

As with the New Urbanism, walkable communities are nothing new to Florida. Most of Florida's successful older downtowns (places like Apalachicola, Key West, St. Augustine, and Winter Park) are designed to be highly walkable and accessible to pedestrians. The trend away from creating walkable communities started with the suburban form of development adopted by most communities after World War II. In that form of development, the principal elements that



SARASOTA COUNTY URBAN SERVICES BOUNDARY (USB)

Sarasota County's USB has been in place since 1971, when the comprehensive plan recognized the proposed I-75 alignment as the boundary to contain urban sprawl, minimize the cost of community services, and maintain agricultural and conservation lands to the east. Recent plans continue to recognize I-75 as the demarcation in a transect that goes from urban coastal development to its west to rural countryside to its east, starting with semi-rural zoning immediately outside the USB and changing to rural and then large lot (160-acre agricultural zoning) further west. The Sarasota 2050 Plan Overlay requirement for higher densities is anticipated to reduce the need for future USB expansions. (More information on the Sarasota USB is available from apoxsee.co.sarasota.fl.us/chap9/ summary.asp.) make a place walkable were prohibited: a mix of land uses that make it possible to walk from home to nearby places to shop for daily conveniences (the bottle of milk or to pick up a prescription or dry cleaning), to participate in recreational activities and entertainment, to learn, or to work. As a result, residents of most communities have had no choice but to drive for even basic needs, which has led to an increase in vehicle miles of travel and wider streets designed to carry cars, not pedestrians.

To recapture the walkability of communities, many places are using strategies that put in place, or remove the obstacles to, the features that make places more inviting to pedestrians. In addition to establishing a mix of land uses that provides multiple destinations within close proximity, those features include compact development so that buildings are located closer together and pedestrian-friendly streets and public places. In a walkable community, streets are narrow and designed for slower speed, creating a safe, attractive environment for all transportation modes (pedestrians, cars, and transit). Streets are also interconnected to provide for better dispersal of traffic and have on-street parking, street trees, and other features that slow local traffic. Buildings are set close to the street, and the fronts of buildings open onto the street, creating a sense of enclosure and safety by providing eyes (doors and windows) on the street. Parking is located on the street, which helps create a buffer between pedestrians and the street, or to the rear of buildings, and street and building signage and lighting are oriented toward the pedestrian. To encourage walking, blocks are short and lined with trees and sidewalks and connect to a variety of commercial and public places that serve as community gathering places and focal points. Other elements contributing to the pedestrian experience include sidewalk benches, attractive trash receptacles, paving materials that denote pedestrian zones, and bicycle amenities.

Duch of this information was provided by the Florida-based Walkable Communities, Inc., [www.walkable.org]. Information on walkable communities can also be obtained from the Congress for the New Urbanism [www.cnu.org], the Urban Land Institute [www.uli.org], and the Smart Growth Network [www.smartgrowth.org].



HAILE VILLAGE CENTER

Located in Gainesville, Florida, the 55-acre Haile Village Center is a walkable community designed to meet the daily needs of residents. Residences are located within a five-minute walk of the village green, shops, schools, a community meeting hall, restaurants, and other services located in the heart of the development. To further the pedestrian experience, an interconnected network of curving streets is lined with brickpaved sidewalks, shade trees, and street lamps, and in the village center, buildings front the sidewalk, creating a sense of enclosure. Parking is either parallel on the street or behind the buildings. A combination of apartments, townhouses, garage apartments, residences above shops, and single-family homes creates a compact, walkable form of development. Open space in the form of small parks and squares is also located in close proximity to residences, and a network of walking and bicycle trails converge in the village center. (This information was taken from A Guidebook to New Urbanism in Florida 2005, published by the Florida Chapter of the Congress for the New Urbanism, www.cnuflorida.org. More information is available from www. hailevillagecenter.com.)

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F lorida is home to one of the nation's largest defense clusters. According to Enterprise Florida (described in the Economic Development chapter of the toolbox), in 2006, Florida companies generated nearly \$11 billion in Department of Defense Prime Contract awards, ranking it fourth in the nation. The defense cluster is composed of approximately 50 military installations, including 12 major installations and three unified command centers, as well as many of the nation's leading defense companies and a large pool of highly skilled workers and veterans. The state's aerospace and aviation industry is also significant, as indicated in the state's third place ranking for employment and its 1,800 aviation and aerospace companies. One of the installations (Eglin Air Force Base [EFB]) is the largest air force base in the world (a reservation covering 724 square miles). The Office of Economic Adjustment (OEA) is the U.S. Department of Defense's (DOD) primary source for assisting communities that are impacted by such Defense program changes. The OEA has experienced staff to help communities put together an adjustment program that can be used to plan for the growth from the expansion of a military base installation. The OEA also offers a number of planning tools and related grants to help communities work with their local military installations on compatible land uses and reduce economic dependence through diversification planning. Those tools and grants provide a way for a local government to work in partnership with a local military base installation to assess the potential impacts of growth on the community (for example, off-base community services and facilities and off-base housing); develop an adjustment strategy and plan; and implement the plan using local, state, and federal resources.

Information about Office of Economic Adjustment planning tools is available at www.oea.gov/oeaweb.nsf/Home?readform. One resource is the <u>Practical</u> <u>Guide to Compatible Civilian Development Near Military Installations</u> [www.oea.gov/OEAWeb.nsf/PG?readform]. Additional information on military base-community planning tools is available from the International City/County Management Association [http://icma.org/mps/] and Florida's Department of Community Affairs, which provides information on military base-community planning tools [www.dca.state.fl.us/fdcp/dcp/militarybase].

Comprehensive Growth Management Plan (GMP)

The GMP is a tool designed to help a community plan for military-induced growth caused by new military personnel and their dependents. The OEA offers assistance to communities to help themselves by developing a GMP developed through a partnership between the impacted communities and the local military installation. The first step in developing a GMP is to form an ad hoc organization composed of public and private community leaders to assess the likely impacts of the militaryinduced growth, plan for the community's response, and implement any identified activities. The ad hoc organization is formed under the auspices of a local or state sponsor. Local participants in the organization can include elected officials, business leaders, representatives from the school district, community facility and service providers, affected neighborhood organizations, homebuilders, local economic development organizations, the lodging industry, appropriate state officials, and representatives of the local military installation. The organization begins the process with an analysis of the amount, timing, and important demographic characteristics (for example, the number of school-age children) of direct population growth. It also analyzes the number of Department of Defense civilian jobs, support-contractor jobs, and construction jobs needed to support the growth. In addition, the organization conducts an initial assessment of the important issues that need to be addressed, such as transportation, housing availability, utilities, public services, and education, and creates working committees to address those issues.

A successful GMP planning process includes the involvement of all interests and stakeholders and decisions by consensus. The GMP process also involves the development of an implementation strategy and action plan that include identifying the sources of capital funding needed to create the capacity to accommodate future growth. Such capital funding needs might include creating additional capacity in the areas of transportation, water and sewer systems, public schools, health care, and social service systems. It can also include providing the housing and commercial developments needed to support the new population and create employment for military spouses and dependents.

Additional OEA growth management planning programs can be found at www. oea.gov/oeaweb.nsf/Growth?readform.

Image courtesy of Lockheed Martin



TRI-COUNTY COMPREHENSIVE GROWTH MANAGEMENT PLAN (GMP)

Okaloosa, Walton, and Santa Rosa counties, their 15 municipalities, and two unincorporated areas have joined together to develop a comprehensive GMP that will respond to the planned growth at Eglin AFB, an active participant in the planning process. Okaloosa County is the lead agency for the study. The GMP will assist local communities and help avoid duplicative efforts when studying the impact of Eglin's growth, primarily centered around the relocation of the U.S. Army's 7th Special Forces Group from Fort Bragg, North Carolina, and the stand-up of the Joint Strike Fighter (JSF) Integrated Training Center. To facilitate the effort, a tri-county Eglin Installation Growth Committee was formed (along with 10 separate functional subcommittees), composed of local elected officials, government agency staff, and involved community leaders. The committee is led by a 12-member executive committee chaired by the Chair of the Okaloosa County Commission. In order to address expected growth pressures in the region, the goal is to develop a transactional plan – a plan that builds the tools (including the funding and resources strategies) that will convert the plan concepts into reality. Growth pressures are projected to begin in 2010 and end around 2015 when the JSF is slated to be fully operational at Eglin. (Additional information is available from www.co.okaloosa.fl.us/eig/eig_jlus.htm.)

Conservation Partnering Authority and Integrated Natural Resources Management Plans

The U.S. Department of Defense is authorized to enter into service partnership agreements with eligible non-federal entities that share an interest in preserving and protecting land not under military control, particularly where incompatible development and/or loss of natural habitat does or would impact military base operations and readiness. Under the agreement, DOD funds can be used to acquire real estate in the vicinity of military installations to protect military training, testing operations, and readiness. Eligible entities include state and local governmental agencies and private conservation organizations, including local land trusts. The partnership agreement must provide for the acquisition of all rights, title, and interest, or any lesser interest, in real property by the eligible entity. The agreement must also provide for the sharing of acquisition costs.

Integrated Natural Resources Management Plans enable DOD installations to implement landscape-scale management by providing a framework for the use and conservation of natural resources and waters under DOD control. The plans, which balance the ecosystem-wide management of natural resources with military base mission requirements, can be used in developing military base natural resource budgets and as a principal source of information for preparing environmental assessments and impact statements. A plan must provide for a number of objectives, including the protection and enhancement of fish and wildlife habitat and wetlands; the establishment of specific natural resources management goals with related timeframes; and sustainable use by the public of natural resources to the extent that such uses are not inconsistent with the needs of fish and wildlife resources. The plans must also result in no net loss in the military mission and must be subject to requirements that ensure base safety and security.

C Additional information on DOD's Conservation Partnering Authority is available in the <u>Practical Guide to Compatible Development Near Military Installations</u> [www.oea.gov]. Information on Integrated Natural Resources Management Plans is available from http://library.fws.gov/Pubs9/es_integrated_nrplans02.pdf.



JACKSONVILLE NAVAL AIR STATION (NAS) WHITEHOUSE OUTLYING LANDING FIELD PRESERVE

In 2005, the state of Florida, the city of Jacksonville, and NAS Jacksonville joined together to acquire more than 1,650 acres of environmentally sensitive land adjacent to NAS Jacksonville Outlying Landing Field (OLF) Whitehouse. The land surrounding OLF Whitehouse provides habitat for many threatened and endangered plant and wildlife species including the gopher tortoise, Florida burrowing owl, peregrine falcon, bald eagle, and Florida black bear. Acquiring the lands limited development that could interfere with the long-term survival of those species and helped prevent encroachment on Navy operations. (Navy pilots use OLF Whitehouse for fleet carrier landing practice prior to deployment on aircraft carriers.) Upon completion of the state's acquisition of the property in 2006 using Florida Forever funds, the Navy purchased a restrictive covenant on the property for \$2 million. Restrictions were designed to prevent obstacles to lowlevel flyways (for example, barring development, setting height restrictions for trees and towers, limiting the use of motorized vehicles, and establishing lighting limitations). The initial catalyst for acquiring the buffer lands around OLF Whitehouse was the Preservation Project Jacksonville. The city of Jacksonville began buying large tracts of environmentally sensitive lands around OLF Whitehouse in 2001. In this recent partnership with NAS Jacksonville, the city committed more than \$5 million to the 1,650- acre OLF Whitehouse acquisition (the acquisition area is also referred to as Norfolk Southern). (For more information about the Whitehouse Outlying Landing Field Preserve, go to www.environavair.navy.mil/currents/winter2007/Win07_Florida_Partnerships.pdf.)
Economic Diversification Plan

For communities with a local economy dependent upon defense industries and military installations impacted by a military base realignment or closure, OEA's Defense Industry Adjustment program includes an Advanced Planning Grant that can be used to develop an Economic Diversification Plan. The Economic Diversification Plan is designed to help local governments develop a strategic plan for diversifying their economies to reduce defense dependency. The planning process includes identifying challenges and opportunities and recommending specific industries to target for business development. It also includes economic diversification strategies designed to broaden and strengthen the local tax and employment base in a community impacted by military base realignments.

Additional information can be found at www.oea.gov under the Programs tab, Defense Industry Adjustment (DIA). At the bottom of the DIA page, click on DIA Guide.

Florida Military Base-Community Coordination

In 2004, the Florida Legislature enacted SB 1604 that amended Florida's Growth Management Act to require more active communication between local governments and military bases to avoid potential conflicts between future developments and military base installations. The act requires that each county in which a military base is located and each affected municipality notify a military base's commanding officer of a proposed change to the government's comprehensive plan and land development regulations that would affect the land use adjacent to the military base. It also required that local governments amend their comprehensive plans by June 2006 to include criteria that would call for compatible uses of land adjacent or located close to lands with military installations, and created a defense infrastructure grant program coordinated by the Florida Office of Tourism, Trade, and Economic Development. The Florida Department of Community Affairs (DCA) has been assisting communities surrounding military bases and the Florida Defense Alliance with planning strategies and land acquisition to protect existing bases. (The Florida Defense Alliance is an initiative of Enterprise Florida, which was created in 1998 to ensure that Florida, along with its military bases and their host communities, is best positioned to support and enhance the transformational initiatives of the Department of Defense.)



SANTA ROSA ECONOMIC DIVERSIFICATION AND BRAND DEVELOPMENT PLAN

In preparation for the possible 2005 base realignments and closures in Florida's Panhandle, Santa Rosa County (along with Okaloosa, Walton, Escambia, and Bay counties, which also have major military installations) received an Advanced Planning Grant (APG) to prepare a Economic Diversification Plan. Santa Rosa County's plan focuses on how the county can attract and retain the businesses and labor force needed to build a strong and diversified economy, thereby becoming less dependent on military jobs. The Diversification and Brand Development Plan, (funded by the U.S. Department of Defense) allowed Santa Rosa County to develop a brand and a strategy to help increase the gross county product (GCP). One of the many steps in developing the plan was to understand the changes that took place in the local economy throughout the decades. (For more information on the Santa Rosa Economic Diversification Plan, go to www.teamsantarosa.com/SRC_grant_final.pdf.)

DCA's strategies focus on retaining Florida's military bases, developing best practices guides, sponsoring Joint Land Use Studies (described next) to identify specific actions to remedy encroachment, and coordinating land acquisition through the Florida Communities Trust and Florida Forever (described in the Natural Systems chapter of this toolbox). One of these strategies, also discussed in the Natural Systems chapter, led to the Northwest Florida Greenway, which has a major military base buffering element. DCA recommended best practices for military base-community coordination include:

- Conduct economic studies of military installations.
- Map high-noise and potential accident areas and study encroachment impacts.
- Acquire critical properties.
- Modify comprehensive plans and land development regulations to establish compatible land use near military bases.
- Adopt appropriate development standards within land development codes and establish multiple strategies in comprehensive plans to ensure compatible development near military bases.
- Notify the military of comprehensive plan or zoning changes and of proposed development in impact areas.
- Disclose and record hazards prior to the development or sale of land.
- Maintain formal and informal communication and coordination.
- Respond as a team to inappropriate development requests.

Tor more information on Florida's legislation supporting military base and community coordination, go to www.dca.state.fl.us/fdcp/dcp/militarybase/index.cfm.

Joint Land Use Study (JLUS) Program

OEA's Joint Land Use Study program is a cooperative land use planning effort between affected local governments and a military installation. The goal is to ensure that development near a military installation is compatible with the base's mission, while at the same time ensuring the public health, safety, and quality of life of the community. The JLUS program has become more important as urban development in many areas has gotten closer to a military base that was once in a remote location. Communities can receive a Community Planning Assistance Grant to



HOMESTEAD AIR RESERVE BASE JOINT LAND USE STUDY

The Homestead Air Reserve Base consists of approximately 1,900 acres in unincorporated Miami-Dade County, northeast of the cities of Homestead and Florida City. The military has been a presence in the area since 1942 when Homestead Army Airfield functioned as a World War II training site and staging area. Over the years, the Homestead Air Reserve Base had periods of contractions and growth. Today, it is the home of the 482nd Fighter Wing and other military-related tenants. Having an active military presence in a rapidly growing county raises a number of challenges that became the focus of a JLUS initiated in 2006. That study involved the public and the private and military sectors in developing a plan that would reduce potential land use conflicts between the military base and the community, accommodate future development, and sustain the regional economy. The study also sought to increase communication between the communities around the base and the military. Study tasks included evaluating the potential impacts of current and future military operations on the surrounding communities and the potential impacts of community growth on the long-term viability of the base. The study's Policy Committee consisted of elected and planning officials, base leadership, property owners, and local community and business interests. (More information on the Homestead Air Reserve JLUS is available from Liz Drake, liz.drake@edaw.com.)

support the cost of a JLUS. A JLUS study sponsor can be a local or state government, an office of planning, an airport authority, or a qualified council of governments. JLUS recommendations provide a policy framework and justification to support the adoption and implementation of compatible development measures. OEA provides the technical and financial assistance for the community to work collaboratively with its local military installation to identify existing or potential future incompatible development and to develop JLUS recommendations with the assistance of a consulting team. Each JLUS involves a Technical Advisory Committee and a Policy Committee that are composed of public officials, military base representatives, and representatives from the community. The key to a successful JLUS is keeping the public informed and involved throughout the process by using public workshops and hearings. Examples of implementation measures include changes to the local comprehensive plan and land use regulations, such as height restrictions; amending local building codes to require increased sound attenuation in existing and new buildings; land exchanges; transfer of development rights; real estate disclosure; and conservation partnering. OEA publishes two resource documents: a Joint Land Use Study Program Guidance Manual and The Practical Guide to Compatible Civilian Development Near Military Installations.

C Additional information is available at www.oea.gov/oeaweb.nsf/BND?readform.

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lorida is defined by its natural beauty and rich environmental resources. H Those resources provide the basis for the state's vitality, desirability as a place to live, and the big draw for its tourism industry. Florida has some 8,400 miles of coastline, more than 7,700 lakes and 1,700 rivers, 27 first magnitude springs, and millions of acres of open water and wetlands - valuable sources of drinking water, wildlife habitat, and recreational opportunities. The importance of the state's natural resources is underscored by the Florida Century Commission for Sustainable Growth, which highlights preserving and conserving this natural landscape as an issue of essential state interest. However, due to the rate of growth in the state, concerns are increasing about the future viability of those resources. Consequently, state, regional, and local planning organizations (governmental and nonprofit) are employing a broad range of tools to ensure that as Florida grows, a critical mass of its natural resources is protected for future generations. Many of those tools share a set of common principles, highlighted in the box to the right, that were identified through a statewide forum and subsequent regional discussions on the future of Florida's rural lands (sponsored by the Florida Earth Foundation). A number of the tools described in the toolbox focus on creating viable

COMMON PRINCIPLES IN FLORIDA RURAL LANDS PLANNING TOOLS

- Re-order how we plan The left-over approach to deciding what is rural does not work. Begin, not end, with a vision for the land that should be protected for agricultural and natural uses and how that can be achieved.
- Start with the larger, longer-term view If viable connected systems of natural lands and working agriculture are to be created, individual land use decisions need to be made within the context of their cumulative impact on the long-term (50-year) vision for the regional landscape.
- Listen to the land The unique characteristics of the land should dictate planning strategies and how they should be tailored to fit the individual profile and ownership of the land, recognizing that it often comprises the largest part of a farmer's portfolio.
- A single-solution-fits-all approach does not work State and local governments need a variety of planning tools to choose from when planning for ag land and the appropriate location and character of development.
- *Public-private partnerships are part of the future* Recognize that there will not be enough public money to protect Florida's ag lands. Land has become too valuable, and buying it all is not possible.
- No longer give away free density The day of giving away free density is over, which means that additional density should be approved only when broader benefits, such as watershed and habitat protection, accrue to the community.
- Support strong leadership and create a larger table

 Turning around how we plan for Florida's rural lands will require strong public and private leadership and a larger table set to find common ground solutions that all interests view as fair and balanced and designed to support a continuing dialogue among all concerned.

(These principles were reprinted with the permission of the Florida Earth Foundation [www.flordaearth.org].)

systems of connected natural lands. Those tools include ecoregion planning, green infrastructure planning, greenprinting, and greenway planning. Other tools address acquiring rural lands to be protected, while others explore the ongoing management, monitoring, and stewardship of rural lands and involve local residents in understanding and protecting the rural lands that define their community or region. Tools addressing public-private partnerships that utilize the development associated with growth to conserve land (for example, Florida's Rural Land Stewardship Program and the purchase and transfer of development rights) and the use of conservation easements are described in the Agricultural Land Conservation Tools chapter.

A wide variety of nonprofit organizations are involved in promoting the use of those tools across the state. Too many to name in this toolbox, among them are Audubon of Florida [www.audubonflorida.org], the Conservation Fund [www.conservationfund.org], the Nature Conservancy [www.nature. org], the Trust for Public Land [www.tpl.org], and 1000 Friends of Florida [www.1000fof.org], which in 2004 published A Citizens' Guide to Protecting Resources in Florida's Panhandle [www.1000fof.org/natural/main.asp]. At the state level, the Florida Department of Environmental Protection serves as the principal source of information on protecting the state's environment. Two additional resources are the University of Florida's GeoPlan Center's Florida Conservation Atlas [www.geoplan.ufl.edu/whatsnew.html], which contains conservation-oriented spatial datasets that can be used in different scales of conservation planning, and the Century Commission for a Sustainable Florida, which is identifying Florida's "must save" environmental treasures through a project called the Critical Lands/Waters Identification Project (CLIP) [www.centurycommission.org/current_projects.asp]). Three additional sources of information are the American Planning Association's Environmental Planning Handbook for Sustainable Communities and <u>Regions</u> by Tom Daniels and Katherine Daniels; the Defenders of Wildlife [www.defenders.org] and its report, Incentives for Biodiversity Conservation: An Ecological and Economic Assessment; and the Sonoran Institute [www.sonoran.org], which publishes a resource document on community stewardship, Landscapes, Wildlife, and People: A Community Workbook for Habitat Protection.

Community Stewardship Organizations

EXAMPLES OF CSO ROLES

- Conservation, restoration, and management of natural resources
- Protection of farmland and community-supported agriculture
- Research, monitoring, and environmental education
- Educational programs on the values of rural lands
- Outreach programs that connect people with the environment

A non-profit, tax-exempt organization established to address the specific conservation needs of a community, a Community Stewardship Organization (CSO) allows developers to integrate permanent conservation, natural systems restoration, and community-building into their developments through agreements with local stakeholders. It also allows community leaders, developers, and conservationists to work together to assure that development is environmentally sound. To fund the orga-

nization, the parties involved agree to impose revenue-generating deed restrictions, binding future homeowners and businesses to underwrite and provide revenues through the creation of long-term dedicated funding. Funding sources may include fees (real estate transfer, commercial occupancy, golf course, etc.), monthly assessments, or other recurring revenues. Because a CSO funding has an ongoing funding source tied to the development, it continues to benefit the community even after the development is completed.

This tool provides multiple developer, community, and homeowner benefits. Those benefits include higher real estate value because of the strong market for conservation-oriented communities, coupled with significant amounts of preserved open space that minimize the impacts of development on natural areas and farmland. The protected open space next to a development also provides many benefits to residents, including a greater connectivity to the protected open space, a wider variety of lifestyle opportunities, and a greater sense of place. A CSO can complement other conservation programs as well as Homeowners' Associations or Community Development District activities. Characteristics of a successful CSO include using a vision-driven, rather than entitlement-driven, planning process to identify where development should go and what lands should be protected, and designing the organization early in development conceptualization, including being very clear about what issues it will and will not address. Funding should utilize a permanent, recurring revenue source tied to the development process, not to the developer, and its mission should extend beyond the associated development to reinforce the broader public role and benefits.

Tor more information on CSOs, go to www.sonoran.org/programs/cso/si_cso_main.html.

Conservation Bank

A conservation bank is used to protect privately- or publicly-owned lands that contain endangered, threatened, or at-risk species. The land protected can be one or more parcels. The U.S. Fish and Wildlife Service compares a conservation bank, which works as an incentive-based free market enterprise, to a financial one. With a conservation bank, credits are established for the specific habitat or species that occurs on a site. In exchange for permanently protecting the banked lands, the bank sells habitat credits to developers and others who need to compensate for the environmental impacts of a project. The bank uses the funds to protect the environmental resources it holds. Conservation banks are typically used when it makes more sense for a developer to purchase conservation credits than to protect part of the area being developed (for example, when on-site conservation would result in small, isolated sites). Properly managed, a conservation bank, which must be approved by a state or federal wildlife agency (such as the U.S. Fish and Wildlife Service), can be a win-win for the landowner, developer, environment, and public:

- By having the regulatory certainty of pre-approved compensation lands, a developer who has a project with adverse environmental impacts can save time and money.
- Landowners benefit from selling habitat or species credits to a conservation bank in return for managing land for listed and at-risk species and their habitat. Landowners can generate income, keep large parcels intact, and, in some instances, reduce taxes for conserving their land. A landowner participating in a conservation bank is required to enter into an agreement with the Fish and Wildlife Service, provide funding for the perpetual management and



ABACOA PARTNERSHIP FOR COMMUNITY (APC)

The APC is a CSO affiliated with Abacoa, a mixed-use community in Jupiter, Florida, planned on the principles of the New Urbanism. A project of the Center for Urban and Environmental Solutions at Florida Atlantic University, the APC offers a variety of programs and services, including those that focus on the 260-acre greenway that weaves through the heart of the community. Activities include training residents and neighbors to participate in the stewardship of the greenway, studying residents' use of the greenways and the New Urbanist design features, offering lectures and workshops on community building, convening the Florida Public Officials Design Institute at Abacoa, and documenting and sharing the community's history, its impact on the region, and its lessons learned about building community. *(For more information on the Abacoa Partnership, go to www.cuesfau.org/Abacoa/index.asp.)* monitoring of the bank's land, and grant a conservation easement (described in this chapter) to an eligible third party. The easement precludes future development of the property and restricts certain land uses.

- The environment benefits because of the long-term protection and management of important habitat as part of a larger ecosystem conservation plan and the avoidance of piecemeal mitigation for individual project impacts that can result in little connection with the surrounding ecosystem. A larger reserve is less costly to manage per acre and more likely to ensure ecosystem functions, foster biodiversity, and provide habitat opportunities for connecting habitats, which can aid in the recovery of listed species.
- The public benefits from a healthier environment and stretching limited public funds through public-private partnerships.

A conservation bank is typically funded through an endowment created by participating landowners who deposit funds to maintain and manage the protected lands. The endowment provides a perpetual source of funding because only its interest is tapped.

The U.S. Fish and Wildlife Service [www.fws.gov/endangered/landowner] is the primary source of information about conservation banks, and its publication, <u>Conservation Banking: Incentives for Stewardship</u>, provides an overview of conservation banking. In Florida, information is available from the Fish and Wildlife Service's field offices [www.fws.gov/southeast/maps/fl.html] and from the Florida Fish and Wildlife Conservation Commission [http://myfwc.com]. Other resources are the Defenders of Wildlife [www.defenders.org/programs_and_policy/habitat_conservation/habitat_and_highways/index.php], which is working to reduce highway impacts by incorporating wildlife conservation into transportation planning, and the Biodiversity Partnership [www.biodiversitypartners.org].

Conservation Development

Conservation development (sometimes called open space development) is a residential or commercial development practice that is used when a landowner or developer wants to preserve open space and protect the natural features of the land but still retain the right to develop. In a conservation development, a significant portion (generally 50 percent or more) of a site is set aside as undivided permanently protected open space and the development is concentrated (or clustered) on



FLORIDA PANTHER CONSERVATION BANK

When approved by the U.S. Fish and Wildlife Service, the Florida Panther Conservation Bank will be one of Florida's first conservation banks and the first one approved in south Florida. Located in the heart of Florida panther habitat in Hendry County, the land is owned by brothers Les and Jim Alderman. The 1,930-acre bank site reflects how this part of Florida looked for centuries - cypress forests with wet prairies, interspersed with oak hammocks and pine flatwoods. The bank combines traditional lands uses, such as ranching, with habitat restoration and protection that will help safeguard the future of the Florida panther and other species. Private developers and local and state governments initiating projects that impact the Florida panther in southwestern Florida, south of the Caloosahatchee River can offset those effects by purchasing compensation credits at the bank. The credits must be pre-approved by the U.S. Fish and Wildlife Service, which expedites project approval and provides for land acquisition, protection, restoration, and perpetual habitat maintenance and management. Landowners maintain control and traditional use of the property but are paid for the loss of value from restricting future use. Funds are set aside to pay for perpetual land management costs, with the result that taxpayers do not pay to maintain the property. (For more information on the Florida Panther Conservation Bank, go to www.fws.gov/verobeach, the South Florida Ecological Services office of the U.S. Fish and Wildlife Service. For information on the Florida panther, go to http://myfwc.com/panther/handbook/ conserve/indexn4.html.)

a portion of the land, using smaller lots to accommodate the development on less space. For example, if current zoning allows one unit per acre, a 100-acre parcel would be permitted for 100 homes, each on oneacre lots. In a conservation development, the same number of homes would be built on half-acre or smaller lots, which would leave 50 acres or more of the land in permanent open space. By protecting the majority of a site in open space and concentrating development, conservation development brings multiple environmental and economic benefits. Environmental benefits can include better water quality, protection of wildlife habitat, and a reduction in stormwater runoff. Economic benefits include the higher price that people will pay for a house next to preserved open space and the reduced infrastructure construction and maintenance costs because of the more efficient site layout. If a community pre-plans lands that it wants to conserve, a conservation development can also be designed to provide a connection in an inter-linking greenway system, also a community benefit.

The permitting of conservation developments is regulated by local land use and zoning regulations. The regulations can specify how much of the land is to be conserved and the development practices and standards that should be used to ensure that environmental resources are protected. When designing a conservation development, the lands to be conserved are identified first to avoid the protected open space being just left over open space. The conserved lands then become the organizing framework for planning the development and ensuring that the development enhances, rather than degrading, the protected lands. Conservation development planning uses techniques that protect the natural features of the land, such as tree stands, steep slopes, wetland areas, forests and mature trees, stream corridors, wildlife habit, natural drainage ways, scenic views, or a working farm. One such technique is to place the development in a location that retains the natural features of the land. Other design techniques can include use of native landscaping; buffer zones to protect waterways, wetlands, habitat, native vegetation, and the view from the road, or to reduce conflicts with agriculture; wetland detention areas; and reduction of impervious surface. The design of a conservation development should also address the allowed uses in the conserved open space and how the



THE BABCOCK RANCH CONSERVATION DEVELOPMENT PLAN

Straddling the border between Charlotte and Lee counties, the 91,000acre Babcock Ranch is one of the largest remaining undeveloped tracts of privately-owned land in Florida. Because of responsible land management and environmental stewardship, the ranch contains a diverse stretch of habitat-friendly cypress domes, swamps, mesic flatwoods, and open pastures. When the Babcock family decided to develop part of the land, they took steps to ensure that important environmental resources were protected in perpetuity. In 2006, the family sold the land to Kitson and Partners because of their commitment to sustainable land stewardship. Kitson and Partners in turn sold 73,000 acres (80 percent) of the ranch to the state of Florida and Lee County. Those lands will be conserved as publicly-owned lands. Of the remaining 18,000 acres, 9,000 acres will be placed in conservation uses (trails, greenways, and restored wetlands), which means that only 9,000 acres (less than 10 percent) of the ranch will be developed. The habitat design approach to the development means that wildlife habitat is actively conserved and integrated within and around the human settlements, and that residents are involved in the management and maintenance of the conserved lands and in learning how to be good neighbors to plants and wildlife. They will be able to walk or bike to jobs, recreation, and nature. Another feature is the use of green building techniques. (Additional information on the Babcock Ranch is available from www.babcockranchflorida.com. Information on functional habitat design is available from http://cals.arizona.edu/pubs/adjunct/snr0704/snr070430.pdf or www.myflorida.com/fdi/fscc/news/world/breedlove.htm.)

open space will be owned and managed. The potential uses of the protected open space can vary, based on the conservation objective of the development. For example, in a conservation development designed to protect a working farm or forest, farming or, respectively, harvest forestry would be an allowed use. Other allowed uses could include passive recreation areas, trails, and greenways. The open space is usually protected through a conservation or scenic easement held by a qualified local government or land trust. It can be maintained by a CSO, a homeowners' association, a local government, or a private non-profit land trust.

Resources on conservation developments are available from the American Planning Association [www.planning.org], Nature Conservancy [www.nature.org], 1000 Friends of Florida [www.1000fof.org], and Tall Timbers Research, Inc. [www.talltimbers.org].

Ecoregion Planning

The World Wildlife Fund (WWF) defines an ecoregion as "a large area of land or water which contains a geographically distinct assemblage of natural communities that share a large majority of their species and ecological dynamics, share similar environmental conditions, and interact ecologically in ways that are critical for their long-term persistence." In short, as defined by the Nature Conservancy (TNC), an ecoregion is a large area of land and water defined by climate, geology, and species, rather than by political boundaries. Ecoregion planning focuses on understanding, conserving, and managing an ecoregion (what some call an ecosystem). Because of the interdependent nature of an ecosystem, ecoregion planning typically involves coordination among different governmental agencies, conservation organizations, and researchers from different disciplines. Since ecosystems do not recognize the artificial lines of the boundaries of different governmental jurisdictions, ecoregion planning also requires the cooperation of different levels of government.

Among the organizations providing information on ecoregion planning are the Nature Conservancy and the World Wildlife Fund. As part of its mission to preserve plants, animals, and natural communities by protecting the lands and waters they need to survive, TNC uses a systematic, science-based approach called Conservation by Design, organized by the world's ecoregions, to identify sites for protection. Under Conservation by Design, TNC identifies high priority sites that collectively capture the biological diversity of an ecoregion. TNC uses that information to develop customized conservation strategies to ensure the long-term



LAKE WALES RIDGE ECOSYSTEM PROTECTION PROGRAM

The Lake Wales Ridge, a remnant of ancient sand dunes, is one of the state's oldest and most prominent topographic features. It contains one of the country's highest concentrations of threatened and endangered plants and animals and serves as an important recharge area for the Floridan Aquifer. However, because the ridge has been attractive for development and farming, more than 85 percent of its original habitat has been lost, many species are threatened with extinction, and water resource functions are in jeopardy. To address those problems, conservation organizations are working together through the Lake Wales Ridge Ecosystem Working Group (a consortium of 12 public and private agencies) to protect the ridge:

- Public and private entities have invested more than \$75 million in land acquisition, leading to the protection of 32,000 of the 45,000 acres targeted.
- To mimic the effects of historic natural fires, land managers use prescribed fires to eliminate overgrown vegetation, restore habitat, and reduce the threat of wildfires to nearby homes.
- The Jay Watch program involves land managers and citizens in monitoring Florida scrub-jay populations.
- Agencies and landowners are working together to track the spread of an invasive fern and kill infestations.
- A multi-organization team is analyzing optimal ridge land use patterns; the results will be used to engage the surrounding communities in the development of a ridge protection plan.

(More information on the Lake Wales Ridge is available from www.nature.org/wherewework/northamerica/states/florida/preserves/art16219.html and www.archbold-station.org.)

survival of the native life and natural communities that make up the ecoregion. These strategies are combined with a detailed picture of the corresponding places that must be protected in a Conservation Blueprint. TNC uses the blueprint as a benchmark for measuring success.

Its designated large-scale conservation areas in Florida (www.nature.org/wherewe-work/northamerica/states/florida/preserves) include:

- Panhandle Longleaf Pine
- Northwest Florida Greenway
- Apalachicola River and Bay
- St. Marys River/Sea Islands
- Wekiva/Ocala
- Indian River Lagoon
- Osceola Plain
- Lake Wales Ridge
- Southwest Rivers and Flatwoods
- Everglades
- Florida Keys

TNC recently partnered with the WWF to launch the Marine Ecoregions of the World initiative, the first ever comprehensive marine classification system with clearly defined boundaries and definitions. The initiative is part of the WWF's Conservation Science Program, which takes a broad-scale vision approach to identifying priority conservation ecoregions, called landscapes or seascapes, and developing and implementing a comprehensive set of strategies to conserve the species, habitats, and ecological processes of the ecoregion. To finance the conservation of ecoregions, the WWF has developed an approach called Payment for Environmental Services (PES) that compensates landowners for the multiple benefits that people receive from nature, such as water purification and flood control by wetlands. Not unlike community-supported agriculture described in the Agricultural Land Conservation chapter, PES rewards those whose lands provide a needed service with subsidies or market payments from those who benefit (for example, when downstream water users pay those who own upstream farmland or forests that purify the water). In addition to encouraging landowners to continue



NORTHWEST FLORIDA ECOSYSTEM GREENWAY

The Northwest Florida Greenway is the result of a unique partnership of military, government, and nonprofit organizations that will conserve critical ecosystems in one of the most biologically diverse regions of the United States. The partners include the state of Florida, the U.S. Department of Defense, and the Nature Conservancy (the lead nonprofit agency), each of which signed a Memorandum of Partnership to establish a 100-mile protected corridor that connects Eglin Air Force Base and the Apalachicola National Forest. Project goals include promoting the sustainability of the military mission in Northwest Florida; protecting lands that will sustain the high biodiversity of the region, link protected natural areas, preserve water resources, and provide areas for outdoor recreation, including the Florida National Scenic Trail; and strengthening the regional economy by sustaining the mission capabilities of the military in the region and enhancing outdoor recreation and tourism. (More information on the Northwest Florida Greenway is available from the Florida Chapter of the Nature Conservancy [www.nature. org/wherewework/northamerica/states/florida/preserves/art12820. html] and 1000 Friends of Florida [www.1000fof.org/Panhandle/ Northwest%20Florida%20Greenway.asp].)

ownership of their land and practice sound environmental management practices, PES calls attention to the broader community benefits of an ecosystem.

Two additional organizations that focus on ecoregions are the Sierra Club through its Critical Ecoregions Program, which is developing plans for the 21 major land and water systems in the United States and Canada, and the U.S. Department of Agriculture Forest Service, which publishes an ecoregions map of North America that can be used to address environmental issues that transcend agency, watershed, and political boundaries and borders.

More information on ecosystem planning is available from the Florida Fish and Wildlife Commission [www.floridaconservation.org], the Nature Conservancy [www. nature.org/tncscience], the Sierra Club [www.sierraclub.org/ecoregions], the U.S. Fish and Wildlife Service [www.fws.gov], the U.S. Department of Agriculture Forest Service [www.fs.fed.us/rm/analytics/publications/ecoregionsindex.html], and the World Wildlife Fund [www.worldwildlife.org/science/ecoregions.cfm].

Green Infrastructure

Green infrastructure is defined as a strategically planned and managed network of wilderness, parks, greenways, working lands, and other open spaces that have conservation values that support native species, maintain natural ecological processes, sustain air and water resources, and contribute to the health and quality of life of people and wildlife. Like green printing (described on the next page), a green infrastructure network can be composed of a variety of landscapes that include natural areas, such as wetlands, woodlands, waterways, and wildlife habitat, and public and private conservation lands, such as nature preserves, wildlife corridors, greenways, and parks. A green infrastructure network also includes public and private working lands that have conservation value (for example, forests, farms, and ranches) and can incorporate outdoor recreation and trail networks.

Green infrastructure planning provides an alternative to what is common practice in many communities: conserving land on a piecemeal basis without the benefit of a large framework plan that allows a comprehensive approach to land conservation. It does that by placing planning for the green resources (the green infrastructure) of a community at the same level with planning for the built and social infrastructure (for example, utilities, roads, sewer, hospitals, schools, and public facilities). The



THE NORTHEAST EVERGLADES NATURAL AREA (NENA) MASTER PLAN

The NENA, which contains a unique cross-section of the natural communities found in Martin and Palm Beach counties, consists of approximately 145,000 acres of connected publicly-owned lands that extend from the Atlantic Ocean to Lake Okeechobee. What began as a study to identify needed facilities changed as participants realized that the NENA lands collectively represented an eco-destination that was comparable to a national park and, as such, should be treated as a unique place rather than a random collection of local, state, and federal conservation sites. As a result, the master plan, which established a vision that will guide decisions over time, proposed a cohesive approach to managing the NENA lands in a way that will create an interconnected series of environmental facilities and protected habitat not found in any other area of the state. Plan recommendations call for greater coordination in the acquisition of additional natural lands, environmental educational programs, and trail development and maintenance; the protection of historic landscapes; and establishment of an interpretative wayfinding system created through a public arts program. (More information on the NENA Master Plan is available from Palm Beach County's Department of Environmental Protection [www.pbcgov. com/erm/nena.asp].)

practice of green infrastructure planning is the same one communities use to plan for the rest of their infrastructure: planning in advance where it should be, designing it, and deciding how to fund it. Principles for green infrastructure planning include identifying what is to be protected in advance of development; providing for linkage between natural areas; and designing a system that operates at different functional scales, across political jurisdictions, and through diverse landscapes. Additional principles include grounding green infrastructure in sound scientific and land use planning practices, providing funding upfront as a primary public investment (for example, through a dedicated tax or other funding mechanism), emphasizing the benefits to people and nature, and using the green infrastructure as the planning framework for conservation and development.

Green infrastructure planning provides multiple benefits. A benefit to a developer is greater certainty and predictability about where development can go because the lands to be protected, how they are to be protected, and the best locations for development are laid out in advance. A developer can also benefit from developments that utilize the amenities created by protected open space. The public benefits from cleaner air and water and because highly valued natural and water resources and processes, parks, and greenways are protected. Green infrastructure can also be used to provide urban services more efficiently and at a lower cost (for example, retention and treatment of stormwater and provision of areas for recreation).

Duch of the information for the description of green infrastructure was taken from the 2006 Island Press book, <u>Green Infrastructure: Linking Landscapes and Communities</u>, by Mark A. Benedict and Edward T. McMahon, and from the Green Infrastructure website [www.greeninfrastructure.net/], sponsored by the Conservation Fund and the U.S. Department of Agriculture Forest Service [www.fs.fed.us]. Additional information on green infrastructure is available from the Conservation Fund [www. conservationfund.org], Sprawl Watch [www.sprawlwatch.org], and 1000 Friends of Florida [www.1000fof.org], which in 1995 partnered with the Conservation Fund to publish the <u>Apalachee Greenways Report</u>. The report outlines the framework for a system of green infrastructure in the Apalachee Region of North Florida.

Greenprinting

Greenprinting, which also focuses on creating connected networks of protected natural systems and open space, is a GIS spatial analysis mapping technique used



BISCAYNE NATIONAL PARK GREENPRINT

In Miami-Dade County, TPL's greenprinting model was used by the Biscayne National Park to identify the lands that should be conserved in order to protect its natural, cultural, and aquatic resources and demonstrate the impacts of proposed land use changes on the Bay, which was important because of pressure from encroaching development on the Park's marine resources. The goals of the three-phase planning process were to protect and restore water resources; repair mangrove, tidal, and freshwater wetlands; and preserve wildlife habitat. The conservation priorities highlighted in the greenprint were combined with conservation lands identified in other programs, such as the county's Environmentally Endangered Lands Program and the Biscayne Bay Coastal Wetlands footprint of the Comprehensive Everglades Restoration Program, which further refined the conservation priorities. Because the greenprint model allows the Park to identify each priority parcel and its individual score among all the goals and criteria, the model can be used to help target particular funding sources for protection and convey to the surrounding community why these lands are important to save. (More information on the Biscayne National Park Greenprint is available from Amy Condon, the Trust for Public Land, amy. condon@tpl.org.)

by the Trust for Public Land's (TPL) Conservation Visioning Service to help a community map its conservation priorities (hence the name greenprinting). A greenprint, which is based upon unique community values and on local data, can be used to identify lands to be protected and plan networks of conserved working, heritage, natural, and park lands to meet public needs for recreation, landbased economies, resource protection, and wildlife habitat. A greenprint can also be used to examine the best approach to conserving land, including determining the highest priorities for protecting watersheds, improving access to parks and recreational opportunities, reconnecting fragmented landscapes, creating trails, and forecasting development impacts on conservation lands. A greenprint plan can also be used to make more informed decisions about land conservation and growth management and to catalyze support for conservation goals. Other uses include identifying land that, when conserved, would create contiguous natural resources such as forests, wetlands, and wildlife habitat, and avoid fragmentation; finding opportunities to link or expand existing trail systems; and projecting which lands - including important conservation lands - are most likely to be developed for commercial or residential uses. Examples of greenprints in Florida include Lake County, where TPL employed the criteria established in a successful bond measure to determine land acquisition strategies that met voters' expectations; and Putnam County, where TPL is focusing on access to the St. Johns River for recreational and economic opportunities. TPL will greenprint four more Florida communities in 2007, including Martin, Sarasota, and Osceola counties and the city of Coral Gables. TPL helps communities identify and raise funds from federal, state, local, and philanthropic sources to carry out greenprinting projects.

More information on greenprinting is available from the Trust for Public Land [www.tpl.org].

Greenways and Trails Planning

A greenway is a connected corridor of undeveloped land set aside for conservation or recreation purposes. Greenways generally follow natural land features, such as streams or ridges or a manmade feature (for example, a canal or abandoned railroad). Greenways can be multi-use; they can be used for a pedestrian trail or a biological corridor to protect wildlife habitat, vegetation, and water quality. Greenways can also help protect downstream properties from erosion and flooding. A number of techniques can be used to reserve land for greenways. The land



LOXAHATCHEE GREENWAY NETWORK PROJECT

The Loxahatchee River, part of Florida's statewide system of greenways and trails, is one of the last remaining free-flowing subtropical rivers in the United States and was the first river in Florida to be designated as a National Wild and Scenic River. Because of concerns about growth, in the 1990s the Conservation Fund and 1000 Friends of Florida joined together to create a working relationship among the 18 local (Martin and Palm Beach counties), regional, state, and federal agencies with an interest in the river and its 500,000-acre watershed. The intent was to establish a consensus-based regional green infrastructure network that would protect the Loxahatchee River and its wildlife, vegetation, wetland systems, and water supply. Important to creating a consensus was the use of GIS (Geographic Information Systems) to demonstrate the greenway corridors that would connect the remaining undisturbed lands in the river's watershed. Local and regional planning agencies, businesses, and communities have incorporated the greenway plan into their planning efforts. (More information on the Loxahatchee Greenway is available from the Conservation Fund [www.conservationfund.org/pagespinner.asp?article=2288&ba ck=true] and 1000 Friends of Florida [www.1000fof.org/PUBS/ loxahatchee/DEFAULT.asp].)

can be acquired using public or private funds or through subdivision and site plan exactions. In turn, developers can use the greenway as an amenity for residents. Communities can also use public rights-of-way for greenways. Private businesses (for example, a utility company) can also provide right-of-way that can be used as a greenway. Another way to create greenways is through the conversion of railroad rights-of-way. The program for the approach is called Rails-to-Trails, a concept promoted by the Rails-to-Trails Conservancy.

A principal Florida resource on greenways and trail planning is the DEP's Office of Greenways and Trails (www.dep.state.fl.us/gwt), which works directly with local communities, developers, private landowners, and state and federal agencies to establish a statewide system of greenways and trails for recreation, conservation, and alternative transportation, and hosts an on-line guide to the state's greenways and trails. Its *Greenways and Trails Online Reference and Resources* provides information about planning, funding, designing, designating, and promoting a greenway and trails, the office has a greenways and trails acquisition program and a program to designate public and private lands and waterways into the Florida Greenways and Trails System.

An additional program, the development of an ecological and trail network, was initiated in 1995 when the Office of Greenways and Trails partnered with the University of Florida's GeoPlan Center to identify and map the best opportunities for protecting ecological and recreational connectivity statewide. The project began by identifying the state's largest areas of ecological and natural resource significance and the lands needed to connect them into a single statewide network. The network mapping was completed in 1998 and adopted by the Florida Legislature in 1999. Since then, areas of the network have been prioritized, with ten areas identified as having the most critical ecological linkages identified. (Critical linkages are those areas most important to protect because of threats from development and their potential to connect existing ecological hubs.) The most recent update and prioritization of the ecological network and areas of critical linkage took place in 2005 (www.dep.state.fl.us/gwt/network/network.htm). The ecological and trail network provides a roadmap to guide the Office of Greenways and Trails' efforts to acquire and protect the most critical components of the Florida Greenways and Trails System. The ecological and trail network maps can be viewed at the Florida Trails Network web site at http://ogt.geoplan.ufl.edu.



TALLAHASSEE BLUEPRINT 2020 AND BEYOND

Blueprint 2020 and Beyond integrates transportation, stormwater, and greenway planning into one process. The initiative was the result of a year-long planning process by the Economic and Environmental Consensus Committee (EECC). The EECC's report recommended a plan to tie gray and green infrastructure improvements together and use them to stimulate economic development in targeted areas. The initiative was funded through a one-cent sales tax to help pay for a series of critically needed community initiatives focusing on stormwater and flood control projects, greenspace acquisition and parks/ recreation improvements, and additional transportation projects. The city of Tallahassee and Leon County also have an extensive greenway program, which is designed to protect natural systems; link, like the area's roads, those systems and neighborhoods to each other; and incorporate greenways and open space into infrastructure design. (For more information on Blueprint 2020, go to www.blueprint2000.org/home.html. For more information on the greenway program, go to www.talgov.com/ *planning/environ/environ.cfm.*)

For additional information on greenways planning in Florida, go to the Florida Trail Association [www.florida-trail.org], the Florida Rails-to-Trails Conservancy [www. railtrails.org/field/florida/default.asp], and 1000 Friends of Florida [www.1000fof. org/natural/main.asp]. Resource organizations at the national level include American Trails [www.amercantrails.org], the Rails-to-Trails Conservancy [www.railtrails.org/ index.html], the Trails and Greenways Clearinghouse [www.trailsandgreenways.org], and the Trust for Public Lands [www.tpl.org].

Land Acquisition

Florida has the largest and most aggressive state land acquisition and conservation program in the country. Through December 2006, collectively the state of Florida has protected over 535,643 acres of land with \$1.8 billion in Florida Forever funds. (Florida Forever replaced the highly successful Preservation 2000 Program, which was the largest program of its kind in the United States and responsible for the public acquisition and protection of 1,781,489 acres of land.) In addition to allocating \$300 million each year to purchase environmentally sensitive lands, the Florida Forever program provides a blueprint for the conservation of the state's natural resources. It encompasses a wide range of goals, including restoration of damaged environmental systems, water resource development and supply, increased public access, public lands management and maintenance, and increased protection of land by acquisition of conservation easements. Many counties and some cities in Florida leverage and extend Florida Forever funds with locally-generated funds (for example, from local ad valorem revenues or from local option sales taxes) that are dedicated to conserving environmentally sensitive land. The Florida Community Trust (FCT) is one of the Florida Forever-funded land acquisition programs frequently used by local governments and eligible non-profit environmental organizations to acquire community-based parks, open space, and greenways that further outdoor recreation and natural resource protection needs identified in local government comprehensive plans.

The Division of State Lands within the Florida Department of Environmental Protection (DEP) has primary responsibility for the Florida Forever program. The Division is assisted by the Acquisition and Restoration Council, which reviews applications for Florida Forever funds. The Council meets twice a year to evaluate and select acquisition projects, which can be full-fee projects, less-than-fee projects, and small parcel projects. Federal, state, and local government agencies,



NOKUSE PLANTATION

Nokuse Plantation is a 50,000-acre private conservation initiative in the Florida Panhandle that is designed to be a model and catalyst for future public-private landscape level conservation projects. Conceptualized and funded privately by entrepreneurs M.C. Davis and Sam Shine, the founding premise of Nokuse is that the only way to maintain biodiversity and a healthy regional eco-system is to preserve, restore, and connect large blocks of biologically diverse lands. To accomplish this, Nokuse Plantation (a nonprofit organization) conducts research on landscape level conservation and is working to secure a conservation corridor between existing federal and state lands in the Florida Panhandle that will serve as the first link in a biodiversity chain connecting Conecuh National Forest in south Alabama, through northern Florida, and into Georgia at the Okefenokee Swamp – a connected land area of one million acres owned by a combination of governmental agencies, private corporations, and individual landowners. (Almost half of the area [460,000 acres] is owned by Eglin Air Force Base.) Nokuse has used state and federal acquisition funds, such as the FDEP Florida Forever funds and USDA Florida National Scenic Trails funds, to protect 20,580 acres out of a target 50,000 acres to be protected under conservation easements. (More information on the Nokuse Plantation is available from www.nokuse.org.)

conservation organizations, and private citizens may propose areas for conservation under the Florida Forever program. Sponsors are required to inform landowners that their property has been nominated for state acquisition. The negotiated purchase price is submitted to the Governor and Cabinet. Approval by the Governor and Cabinet is required for the purchase of lands under the Florida Forever program. Participation in the Florida Forever program is voluntary.

Tor more information on Florida's land acquisition programs, go to www.dep. state.fl.us/lands/acquisition.

Land Trusts

A land trust is a nonprofit organization that, as all or part of its mission, actively works to conserve land by undertaking or assisting in land or conservation easement acquisition or by its stewardship of such land or easements. Land trusts have been around for over 100 years and have proven to be very effective tools in conserving land. They are experts at helping interested landowners find ways to protect their land in the face of ever-growing development pressure. A land trust can be used to protect land that a community values; and the land can be farmland or scenic, recreational, or environmentally significant areas.

Typical land trust roles include working with landowners who wish to donate or sell a conservation easement; acquiring land outright to maintain working farms, forests, and wilderness, or for other conservation reasons; and working cooperatively with government agencies by acquiring or managing land, researching open space needs and priorities, or assisting in the development of open space plans. Other land trust roles can include mediating between a developer and government and helping shape development plans, providing site and land use planning assistance, conducting community outreach and education, serving as an advocate for good development, assisting with designing or managing recreation and trail systems, and marketing agricultural products. Land trusts are typically funded through endowments, fundraising, public and private grants, donations, and fees tied to development. A land trust's board is important, and board members should represent a variety of professional skills needed by the land trust (for example, lawyers, bankers, accountants, realtors), have good community contacts, and bring a commitment to the goals of the land trust.



ALACHUA COUNTY FOREVER (ACF)

ACF is a voluntary land conservation program established to acquire, manage, and improve environmentally significant lands in order to protect water resources, wildlife habitat, and natural areas suitable for resource-based recreation. The county's natural communities include 430,000 acres of pinelands, grasslands, swamp, springs and open water, hardwood hammocks, and sandhills. In 1999, 84 percent of county voters polled indicated that if the county's natural lands were not protected now, they would be lost forever. That support was maintained in 2000 when 60 percent of the voters agreed to raise \$29 million through a quarter-mill property tax to fund Alachua County Forever land acquisition. The program is administered by the county's Environmental Protection Department. A volunteer 12-member Land Conservation Board reviews and recommends lands to be acquired for conservation purposes. Once purchased, the properties are managed as preserves under a commissionapproved stewardship plan, To date, ACF has received 123 applications from private citizens and non-profits nominating over 234,000 acres for protection. Of those, 11,500 acres worth \$60 million have been conserved, using 33 percent county funds and 67 percent in matching funds. ACF uses fee-simple purchases and conservation easements (both described in the Agricultural Land Conservation chapter) to protect lands. (More information on Alachua County Forever is available from www. alachua.fl.us/government/depts/epd/land.)

For more information on creating a land trust, go to the Land Trust Alliance [www.lta.org], the Trust for Public Land [www.tpl.org], and the American Farmland Trust [www.farmland.org].

Scenic Easements and Overlay Zones

Communities that want to protect the particular character of a scenic or rural area can promote use of scenic easements or adopt a scenic overlay zone. A scenic easement is a type of conservation easement aimed at protecting a scenic resource. Scenic easements work the same as an agricultural easement (described in the Agricultural Land Conservation chapter): a deed restriction landowners voluntarily place on their property to limit land to specific uses and protect it from development. Where an agricultural easement is designed to protect farmland, a scenic easement is designed to preserve a particular scenic view and can overlap with other conservation goals such as the protection of open space, wildlife habitat, forests, or wetlands. Consequently, many conservation easements are prepared as a mixed-purpose easement. The easement can be held by a designated governmental agency (local, state, or federal) or by a qualified nonprofit organization, usually a land trust.

A scenic overlay zone is another way to maintain a highly valued scenic view. For example, a local government could use the overlay zone to restrict building heights in a scenic corridor and set criteria for how development should be set back from the road to minimize the impact on the view from the road (or from the homes of neighbors). An overlay zone can also be used to address the retention or restoration of contributing landscape features, such as stone walls, mature tree stands, or hedgerows. In a scenic viewshed protection program, the first step is to identify and map the scenic viewsheds that should be protected from development. A complementary tool used by local governments seeking to protect a scenic view shed is to withhold the extension of public infrastructure. Because a scenic viewshed can cross local government boundaries, a multi-government agreement may be involved. For example, in Lexington, Kentucky, three local governments agreed to a zoning overlay to protect the viewshed on an historic rural road through the middle of Bluegrass horse country.



TALL TIMBERS LAND CONSERVANCY (TTLC)

TTLC is the land trust for Tall Timbers Research, Inc., and is the largest regional land trust holding conservation easements in north Florida and southwest Georgia. TTLC is dedicated to conserving the ecological, scenic, and historical resources of the Red Hills Region and its traditional rural land uses. It works to conserve working forests, farms, and recreational lands in southwest Florida. Since 1990, more than 100,000 acres have been conserved by Tall Timbers, with the goal of protecting another 100,000 acres by 2020. The easements protect in perpetuity land that buffers rivers and lakes, including the Aucilla and Ochlockonee rivers; park-like pine forests that contain the last remnants of the old-growth longleaf pine forests, one of the most endangered ecosystems in the world; and scenic vistas that distinguish the Red Hills rural countryside. The easements protect the region's high water guality, clean air, wildlife, and distinctive canopy roads. The easements and management plans are tailored to the needs of the owner and the land. Goals are established based on principles of ecological forestry. ((For more information on the TTLC, go to www.talltimbers.org.)

The national and state scenic highway programs can also be used to call attention to a scenic highway. In Florida, the Florida Department of Transportation (FDOT) administers the Scenic Highway Program. The purpose of the program is to promote awareness of the state's cultural, historical, archeological, recreational, natural, and scenic views, which collectively enhance the overall traveling experience. The 11-mile Pensacola Scenic Bluffs Highway Corridor (U.S. 90, S.R. 10A) in Escambia County was the first Scenic Highway to be so designated by the FDOT. The highway offers scenic vistas of Escambia Bay and represents the highest point along the entire coastline of Florida.

For more information on scenic easements and overlay districts, go to the Land Trust Alliance [www.lta.org], the Nature Conservancy [www.nature.org], the Trust for Public Land [www.tpl.org], and Scenic America [www.scenic.org]. For more information on the Florida Scenic Highway Program, go to Scenic Florida [www.scenic. org] or to the Florida Department of Transportation Scenic Highway Program [www. dot.state.fl.us/emo/scenichwy/default.htm].



LEON COUNTY TREE CANOPY ROAD ORDINANCE

Recognizing the contribution of canopy roads to quality of life, Leon County and the city of Tallahassee have designated a 76mile tree protection zone of canopy roads (20 miles of the roads are in the city and 56 miles in the county). The zone extends 100 feet from the centerline of the designated road. In 1994 the two governments entered into an interlocal agreement that authorized the implementation of a Canopy Road Management Plan, which is jointly implemented by the city forester and the county canopy roads coordinator, a member of the Public Works Department's Canopy Road Division, which was established to create, maintain, manage, and preserve the county's canopy roads. The plan's requirements address vegetation removal, protected trees, tree removal, pre-development reviews, commercial site standards, and best management practices for conservation and preservation areas. Implementation includes the review of tree removal requests, the planning and acquisition of scenic easements, the pruning and removal of high risk trees, and the planting of trees and shrubs for canopy creation and enhancement and buffer establishment. (More information on Leon County's Canopy Road Ordinance is available from www. leoncountyfl.gov/PUBWORKS/oper/canopy/Documents.asp.)

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ommunities throughout Florida are using a wide variety of tools to encourage public involvement in public planning processes. The days of the decide-and-defend mode of planning (where a plan is developed without public input and presented as a completed product) have been replaced with publicly-owned planning processes (where a plan is based on meaningful public input from the earliest stages of planning throughout implementation). To achieve meaningful public input, the tools being used are designed to involve all (not just some) of those who are most affected by a public decision and to help the public evaluate the consequences of multiple alternatives (including a trend or do nothing alternative) before selecting a preferred alternative. To ensure that all voices are heard and that all choices are considered, today's successful public participation processes provide for inclusive stakeholder involvement, meaning that those who do not favor the idea or project under discussion are invited to the table along with those who are in favor. Successful public participation processes not only include diverse views and interests but are also designed to build consensus among those views and interests, thereby creating more enduring and widely supported public policies and plans. Successful public participants have access to the information needed to make informed decisions. One way of helping public officials and citizens make more informed decisions and understand the long-term consequence of those decisions is the use of visual tools that build a deeper understanding of planning issues and solutions.

Information on public participation processes is available from a variety of organizations, including the American Planning Association [www.planning. org], the Association for Conflict Resolution [www.acrnet.org], the International Association for Public Participation [www.iap2.org], the International Association for Facilitators [www.iaf-world.org], the International City/County Management Association [www.icma.org], the Local Government Commission [www.lgc.org/people/public.html], the Project for Public Spaces [www.pps.org], and the Urban Land Institute [www.uli.org]. In Florida, 1000 Friends of Florida [www.1000fof.org] publishes a citizen's guide to Florida's growth management processes.

Assemblies

The American Assembly is a national, non-partisan public affairs forum affiliated with Columbia University. It works to stimulate informed discussion on, and increase cross-sector communication on, important public policy topics, and to inform public and private leaders and the general public on the background of and range of policy options for a given issue. The American Assembly achieves these objectives by commissioning and issuing research and publications and sponsoring meetings that bring together a broad spectrum of interests who represent different views. The American Assembly meeting process has been adapted for local use. In Florida, the John Scott Dailey Florida Institute of Government (IOG) at Florida Atlantic University (FAU), part of a statewide consortium of university affiliates, uses a modified version of Columbia University's American Assembly process to bring together a cross-section of the key players in a community to discuss major issues of concern to public officials, establish a shared vision for the future, and develop policy recommendations for moving toward that goals of the vision. The format exposes participants to a variety of viewpoints while fostering face-to-face communication and compromise. Since 1982, the IOG, in conjunction with FAU's Center for Urban and Environmental Solutions, has coordinated or assisted with the coordination of over 40 assemblies; the most recent was a follow-up assembly for the city of Boynton Beach held in October 2006.

For additional information about the IOG's consensus-building assemblies, go to www.fau.edu/fiog; to find out about the American Assembly, go to www.americanas-sembly.org/about.dir/taa_process.php.

Charrettes

In community and regional planning, a charrette is used to bring together a group of designers, planners, public officials, and citizens to develop a design or planning solution to a problem (or to take advantage of an opportunity). The term, which applies to an intense period of design activity, draws from the design profession. It goes back to the 19th century in Paris when architecture and art students worked intensely to finish their final work product in time to put it on a cart (a charrette) that came around to collect their final drawings.

Charrettes can be used for many different types of planning projects. They can be used to develop a regional plan, rewrite development regulations and update comprehensive plans, design a new community or specific development, develop a



THE BOYNTON BEACH ASSEMBLY: COMMITTING TO OUR FUTURE

In 2006, FAU's Institute of Government coordinated the Boynton Beach Assembly: Committing to Our Future, a followup to the 1996 Boynton Vision 20/20 assembly. The assembly is a part of the city's public and civic leaders' ongoing efforts to enhance the city's quality of life and involve residents in planning for the future. Assembly participants, representing a wide variety of interests, established a shared vision for the future of Boynton Beach and policy recommendations for moving the city in the desired direction. The topics included community relations and governance, infrastructure, education and community services, and economic development and neighborhood revitalization. Economic and development recommendations called for the city to continue to attract a mix of high-value industrial, commercial, and residential development that would strengthen the tax base and generate desirable jobs for residents without adversely affecting the city's neighborhoods and community character. Follow-up procedures and implementation were also discussed. (More information is available from www.fau.edu/fiog. The assembly Policy Statement is available at www.fau.edu/fiog/documents/BOYNTON%20POLICY% 20STOct%2030.pdf.)

downtown or neighborhood plan, prepare redevelopment plans, and design affordable housing. A charrette can also be used to design an individual building. Just as a charrette can apply to many different types of planning and design projects, it can be used by many different types of organizations and disciplines. In Florida, where they have become a norm in local planning, charrettes are used by planning and design firms, local governments and public agencies, Community Redevelopment Agencies, private landowners and developers, citizen- and neighborhood-based organizations, and non-governmental organizations.

Inclusion and collaboration are a hallmark of the charrette process. They are open to all interested parties, and the planning process is designed to create a working environment that helps participants find common ground. Two other hallmarks of the charrette process are the use of visual images, which helps participants understand issues and find solutions, and the involvement of multiple disciplines (for example, an urban designer, an ecologist, an economist, and a transportation engineer) to provide a holistic view of the issues and solutions. The result is a shared vision for the project that is the subject of the charrette and an implementation plan for how to achieve that vision. A charrette will typically occur over a period of several days, ranging from a one-day to a week-long or longer workshop. The workshop can be a one-time event or involve multiple meetings over a period of time. Whatever the length of time, a successful charrette involves significant preevent homework getting to know the community and the issues and a lot of postevent attention to implementation.

Charrettes provide multiple benefits. They involve and help educate the community and public officials and agencies whose support is needed for a project or new planning approach. They promote communication and trust among participants and build an advocacy group that will support and promote the vision that results from the charrette, which makes adopting charrette-based plans easier for public officials and provides a built-in constituency group to monitor implementation. And the plan that results from a charrette is often a better and more feasible plan because of the diverse input and involvement, meaning all the relevant issues have been thought of and addressed. Charrettes also create a way to market a plan because they are highly visual and participatory.

For more information on charrettes, go to the Congress for the New Urbanism [www.cnu.org] and the National Charrette Institute [www.charretteinstitute.org].



THE TREASURE COAST REGIONAL PLANNING COUNCIL (TCRPC) CHARRETTES

Since 1989, the Urban Design Studio of the TCRPC has been providing town planning and urban design assistance upon request to local governments in the Treasure Coast region and, more recently, in other areas of the state. The charrettes have been used to develop design guidelines, comprehensive plan amendments, traffic calming measures, and land development codes. They also have been used to develop a wide variety of plans (for example, for downtowns and town centers, redevelopment areas, single- and multiple-jurisdiction road corridors, water fronts, marinas, neighborhoods, greyfields, and regions). The TCRPC provides charrette training and publishes a brochure that describes the charrette process. (For more information on the TCRPC's charrettes, go to www.tcrpc.org/ departments/studio.html.)

Consensus Solutions

Florida communities are increasingly turning to facilitated consensus-based planning processes to de-conflict the public policy decision-making process. Through processes designed to find consensus solutions, governments and civic organizations can help bring together previously conflicting parts of the community and avoid stalling a planning process through the polarization of those with different views. Consensus solutions can help bridge the gap between different perspectives within and across organizations using the different skills and knowledge of participants. Consensus solutions recognize that not all decisions will satisfy everyone and that complete unanimity is not the goal. The goal is to find a solution that members of the group can accept because all views have been heard and considered in a decision-making process that is considered fair by all participants.

Finding a consensus solution involves the use of a trained facilitator to help a group of stakeholders with diverse perspectives and personalities move past their positions, seek common ground, and agree on solutions. Important features of a consensus solution-based planning process include providing participants with a safe environment where they can build trust by having time to develop a positive relationship and create open lines of communication with other participants, and giving participants access to objective, sound information early in the process. A successful consensus building process also creates an atmosphere where participants' views can be heard, respected, and fully considered by the full group. Another important feature is the use of a skilled, neutral facilitator who is viewed as having no stake in the outcome and who can encourage participants to listen for and find common ground as stakeholders work together to assess the trade-offs of various decision alternatives and examine options.

In Florida, the Florida Conflict Resolution Consortium (FCRC) is one of the primary sources on consensus solutions. The FCRC's mission is to bring people together to facilitate consensus solutions to Florida's public problems. It provides neutral technical assistance and training to a wide range of professionals, agency staff, and citizens engaged in solving public problems throughout Florida. It also designs processes for intergovernmental collaboration, community and public problem-solving, and land use and environmental dispute resolution, and serves as a broker connecting stakeholders with dispute resolution professionals. The FCRC is based at Florida State University and has a regional office at the University of



EAST STUART REDEVELOPMENT PLAN

The East Stuart community is a 100-acre neighborhood adjacent to downtown Stuart and part of the city's Community Redevelopment Area. The neighborhood master redevelopment plan was created during a 2004 seven-day public charrette, the first under the TCRPC's Urban Design Assistance Grant Program to aid in the redevelopment and revitalization of the region's distressed communities. The objective of the charrette was to create a master framework plan to facilitate development and investment in private land and public infrastructure, preserve the community's heritage, and enhance its livability and sense of unity. Participants included property and business owners, city staff, elections officials, and over 100 residents. The intent of the plan was to enhance the neighborhood's small town attributes and good physical structure by rectifying problems related to the damaging effects of speeding traffic, drug and social problems, neglected buildings, and lack of a neighborhood retail main street center. (For more information on the East Stuart charrette and Redevelopment Plan, go to www.tcrpc.org/departments/studio/ east_stuart_charrette/e_stuart_home.htm.)

Central Florida in Orlando. Another Florida organization that provides assistance with building consensus solutions is the Institute for Community Collaboration (ICC), a nonprofit organization based at the South Florida Regional Planning Council. The ICC's mission is to help citizens, organizations, and communities reach consensus on their goals and strategies through collaboration. It provides neutral process design, facilitation, and mediation services to groups throughout Florida. The ICC also partners with other organizations to develop creative solutions to challenging issues.

For more information on consensus solutions, go to the Florida Conflict Resolution Consortium [http://consensus.fsu.edu] and the Institute for Community Collaboration [www.sfrpc.com/institute.htm]. Information is also available from the National Policy Consensus Initiative [www.policyconsensus.org].

Scenario Development

Tools to help public officials and citizens understand alternative futures are increasingly used in community and regional planning and visioning processes. These tools can be used to understand alternative scenarios at the block or neighborhood scale to the city, regional, or state scale. Most of these tools help participants in a planning process to understand the long-term aesthetic, economic, social, and environmental consequences of decisions under different assumptions or scenarios. In high-growth states like Florida, scenario tools are being used to understand alternative methods for accommodating population growth and new forms of development and redevelopment while at the same time maintaining valued community attributes. Scenario tools are also being used to help participants in a planning process understand how issues, such as transportation, land use, the environment, and public health, are interrelated and to understand, and balance, competing demands. Scenario tools can be used in the classroom and in public planning processes, and they can use simple build-it-yourself tools, board-type games, or the more sophisticated scenario analysis that GIS mapping brings.

For more information on scenario development, go to the American Planning Association [www.planning.org]; the Congress for the New Urbanism [www.cnu.org]; the Local Government Institute [www.lgi.org]; PLACEMATTERS [www.placematters.org], discussed in Technology Tools below; and the Smart Communities Network [www.smartcommunities.ncat.org].

Central Broward Transit Alternatives Analysis



CENTRAL BROWARD EAST-WEST TRANSIT ANALYSIS

As Broward County nears full-build, and traditional roadbased solutions to congestion are less and less viable, county officials have initiated a number of transit analyses along critical corridors in order to consider alternatives for improving mobility. One of these projects was the Central Broward East-West Transit Analysis, a project of District 4 of the Florida Department of Transportation (FDOT). When the Broward County Metropolitan Planning Organization's (MPO) selection of preferred light rail alignment (NW 136th Street) was met with neighborhood concerns, the MPO turned to the Institute for Community Collaboration to design and facilitate the Western Terminus Working Group (WTWG). The charge of the WTWG, composed of representatives of the affected neighborhoods and business interests, was to involve interested parties in identifying alternative routes to NW 136th Street. Project and FDOT staff provided data and analysis about the factors involved in designating a route. After several months of meetings, the WTWG reached consensus on two routing options for further detailed evaluation. Following a public workshop where the consensus options were presented for comment and evaluation, the Broward MPO accepted the WTWG's alignment as the locally preferred alternative. (More information on the WTWG and the East-West Transit Analysis is available from www. centralbrowardtransit.com.)

Box City

Box City provides a simple, low-tech technique to identify what participants value in their community and what they would like to see changed. The process uses basic art supplies (cardboard boxes, construction paper, and markers) to create a small replica of a city block or street corridor. Box City has been used by all ages, from young children to adults. It is a project of the Center for Understanding the Built Environment, which brings together educators with community partners to affect change that will lead to a quality built and natural environment. *(For more information on Box City, go to www.cubekc.org.)*

Geographic Information Systems (GIS) Mapping

GIS is used to display and analyze spatial data that are tied to databases, combining maps with computer graphics and databases. That connection is what gives GIS its power: maps can be drawn from the database and place or spatial-tied data can be referenced from the maps. When a database is updated, the associated map can be updated as well. GIS databases include a wide variety of geographic, social, political, environmental, and demographic information. The information gained from GIS mapping can be a valuable tool for public officials and citizens as they make decisions related to their community. GIS, for example, can be used to make decisions about siting new facilities, creating hiking trails, protecting wetlands, directing emergency response vehicles, designating historic neighborhoods, or redrawing legislative districts. Another use of GIS is helping citizens and decision-makers understand alternative future scenarios under different conditions (for example, under different land use patterns or different sets of economic, environmental, or climate conditions). (For more information on the use of GIS in Florida, go to the Florida Chapter of the Urban and Regional Information Systems Association [www. flurisa.org] and the Florida ERSI User Group [http://feugonline.org/joomla]. Other sources of GIS information are GeoCommunity [www.geocomm.com], the Geography Network [www.geographynetwork.com/data/index.html], and the U.S. Geological Survey [www.usgs.gov/state/state.asp?State=Fl].)

CommunityViz

CommunityViz is a GIS-based software that enables citizens to visualize, analyze, and talk about important land use decisions. Its interactive features provide users a way to create realistic 3D visual models of their world as it is and as it could be and to analyze choices about development, growth, and change over a period of time.



PALM BEACH COUNTY AIRPORT I-95 EXCHANGE

When several affected neighborhoods objected to the Florida Department of Transportation granting a variance to the South Florida Water Management District (SFWMD) for the stormwater management system for a Palm Beach County International Airport interchange from I-95, the Florida Conflict Resolution Consortium was asked to facilitate a consensus solution. (The interchange consisted of the construction of an interconnecting road system between I-95 and the airport. Several of the affected neighborhoods had petitioned for a hearing with the Division of Administrative Hearings to challenge the variance.) The FCRC, along with mediator Pat Bidol-Padva, used a combination of four settlement mediation sessions and one workshop that provided an opportunity for the neighborhood association and the agencies to jointly create an acceptable alternative that fulfilled the agencies' permitting requirements, FDOT's need to start construction, and the neighborhood's desire to eliminate an existing pond and replace it with a more acceptable stormwater management alternative. A recent (2007) national dispute resolution conference held at the Florida Atlantic University Abacoa campus in Jupiter examined the Airport I-95 Exchange project as a model for consensus building. (For more information on the Palm Beach County Airport I-95 Exchange project, go to the FCRC's website [http://consensus.fsu.edu/staffarticles/ *Transportation_DR.pdf*].)

CommunityViz was developed by the Orton Family Foundation to help people with different viewpoints and backgrounds engage in collaborative, informed, and equitable decision-making about their common future. (*More information about CommunityViz is available from www.communityviz.com and from the Orton Family Foundation, www.orton.org.*)

INDEX

INDEX is an integrated suite of interactive GIS planning support tools that can assess community conditions, design and visualize alternative planning scenarios, analyze and score their performance, and compare and rank alternatives. INDEX can also be used to monitor and evaluate the implementation of an adopted plan. INDEX can be purchased from Criterion in standard or custom versions. (Criterion, which is an urban and regional planning firm specializing in sustainable community development, developed INDEX as a part of its work to create planning support systems for communities through software tools for land use, transportation, and environmental analysis.) One form of INDEX is PlanBuilder, an interactive parcel level tool for neighborhood scenario building with a comprehensive set of evaluation indicators emphasizing urban design and multi-modal travel. Another is Paint the Region, a tool for regional growth planning and visioning that allows users to sketch and evaluate land use and transportation scenarios at the regional scale.

INDEX has been distributed by the Florida Department of Community Affairs (DCA) to eight regional planning councils, nine counties, three cities, and the Florida Departments of Transportation and Environmental Protection. *(For more information on INDEX, go to www.crit.com/index/index.html.)*

Land Use Conflict Identification Strategy (LUCIS)

The LUCIS is a goal-driven GIS model that spatially represents probable patterns of future land use (conservation lands, urban lands, and agricultural lands) and areas of probable future conflict between those land uses. The LUCIS model results can be used to identify what lands are highly appropriate for future development, what lands should be reserved for conservation, and what lands should be set aside for agricultural production, information that is useful in developing alternative future land use scenarios for a community or region. The LUCIS model was developed over a period of ten years in a University of Florida graduate design studio for



1000 FRIENDS OF FLORIDA 2060 REPORT

1000 Friends of Florida's report, Florida 2060: A Population Distribution Scenario for the State of Florida, contains a series of compelling GIS-based images that depict what the state's land use might look like in 2020, 2040, and 2060, assuming current development patterns continue. Study conclusions highlight the impacts of the way Florida is growing on the state's natural resources: by 2060 approximately seven million acres of additional land will be converted from rural to urban uses, including 2.7 million acres of existing agricultural lands and 2.7 million acres of native habitat. More than two million acres within one mile of existing conservation lands will be converted to an urban use, which, the report underscores, will complicate the management of conservation lands and isolate some in a sea of urbanization. The images for the report were developed by the University of Florida's Geo-Facilities Planning and Information Research Center (GeoPlan). The GeoPlan Center has been involved in a wide variety of local, regional, and statewide planning projects in Florida. Next steps include developing a 50-year scenario that provides an alternative to the current trend scenario and following up on the recommended state leadership and citizen actions developed at the same time as the trend analysis by the Georgia Institute of Technology's Center for Quality Growth and Regional Development. (More information about the Florida 2060 report is available from 1000 Friends of Florida [www.1000fof.org]. Information on the University of Florida's GeoPlan Center is available from www.geoplan.ufl.edu.)

students from the departments of landscape architecture and urban and regional planning. It evolved as faculty and students searched for ways to use traditional land use suitability analysis as a basis for projecting future land use alternatives. When using the LUCIS model, participants take the role of different stakeholder groups and serve as advocates for their respective classification. Each group rates all lands in a defined study area for their relative suitability to support their land use classification (e.g., urban development, conservation, or agriculture). The results of the groups' discussions are compared to identify areas of potential conflict. The LUCIS model was used in the myregion.org regional visioning process (described later in this toolbox section), which used the model to build four of the five test scenarios for allocating future population. (*For information on the LUCIS, go to the University of Florida's GeoPlan Center [www.geoplan.edu].*)

Reality Check

Reality Check is a one-day participatory regional visioning technique used by the Urban Land Institute (ULI). The workshops are designed to help participants envision where future growth in jobs and residents should be located and how that growth should occur. Participants use Lego[®] blocks to help guide their discussions. The Legos are placed on a regional map, and each Lego represents a certain number of new jobs and new residents. The findings from the day are summarized in a report and used as the foundation for future growth planning discussions and decisions. ULI offers a Reality Check guide for its District Councils. The guide provides an analysis of the importance of regional visioning and contains a step-by-step description of how to plan and carry out a Reality Check exercise. (For more information on Reality Check, go to ULI [www.uli.org/realitycheckguide] and the National Center for Smart Growth Research and Education [www.smartgrowth. umd.edu], which, along with the Urban Land Institute and the Lincoln Institute of Land Policy, is a sponsor of Imagine Maryland [www.realitycheckmaryland.org], a Reality Check project.)

Smart Growth INDEX

The Smart Growth INDEX is a planning tool offered by the U.S. Environmental Protection Agency's smart growth program. The index is a GIS sketch model that can be used to simulate alternative land use and transportation scenarios and evaluate outcomes of the alternatives using environmental and community performance indicators. It has been used in a variety of planning processes, including regional



BROWARD COUNTY INDEX PLANBUILDER

At the neighborhood level, PlanBuilder is being used by Broward County to visualize and evaluate alternative redevelopment concepts for Broward Boulevard near Fort Lauderdale. In this application, county planners are simulating land use and urban design changes to make Broward Boulevard more pedestrianfriendly and transit-oriented. As planners test new locations for higher-density, mixed-use redevelopment, they are able to quickly see changes in transportation patterns and the environmental consequences. (More information on Broward County's use of INDEX PlanBuilder is available from Vicky Morrow, GIS Manager, Broward County Urban Planning and Redevelopment Department, vmorrow@broward.org.) growth management plans; land use, transportation, and neighborhood plans; development and environmental impact reports; and special projects, such as an analysis of brownfield redevelopment or an annexation. (*For more information on the Smart Growth Index, go to www.epa.gov/smartgrowth/topics/sg_index.htm.*)

Study Circles

The Study Circles Resource Center (SCRC) is a national organization that helps local communities develop their own ability to organize large-scale and diverse participation in dialogue structured to support and strengthen measurable community change. SCRC works with neighborhoods, cities and towns, regions, and states, paying particular attention to the racial and ethnic dimensions of the problems they address. The organization has a proven track record of learning from communities to create innovative tools and processes. SCRC provides advice and training, using what is learned to benefit other communities. SCRC was created in 1989 by the Paul J. Aicher Foundation, a national, nonpartisan, nonprofit organization. Since 1989, SCRC has worked with more than 400 communities across the United States on many different public issues.

Tor more information on study circles, go to www.studycircles.org.

Technology Tools

A wide variety of technology tools is being used to help citizens become more informed about public policy issues and choices and more engaged in public planning processes. Many technology tools enable citizens to visualize alternative scenarios and, therefore, to better understand and reach consensus on their community's full potential and the trade-offs of alternative policies and planning practices. Because technology allows much broader access to planning information and decision-making processes, web-based and electronic tools are being used to enable a far greater number of citizens (and students) to be involved in planning for their communities, listen and learn from those with different views, and reach consensus on important community issues. A sampling of those tools is provided below.

A primary source of information on the wide variety of technology-based planning and decision-making tools is the Orton Family Foundation. The foundation



SUSTAINABLE EMERALD COAST INDEX PAINT THE REGION

At the regional level, INDEX Paint the Region is being used by the Committee for a Sustainable Emerald Coast to create and evaluate alternative growth scenarios for its four-county region. The future land use maps of the four Emerald Coast counties have been composited in GIS form to create a regional growth canvas. Population and job growth are painted on the canvas by clicking on areas to assign new housing and employment. The resulting scenarios will then be scored by land use, transportation, and environmental indicators in order to compare the outcomes of different growth policies. In this way the tool helps stakeholders visualize future growth and judge its effects on the region's sustainability. (More information on the Committee for a Sustainable Emerald Coast's use of INDEX Paint the Region is available from www.sustainabletc.org.) provides comprehensive information on technology planning tools, provides direct assistance to help communities assess their needs, and advises communities on the appropriate tools to use and how to use them. It also works with teams of planning innovators to conduct research on and test new technologies and tools. Another source of information is PLACEMATTERS (an independent affiliate of the Orton Family Foundation), which provides access to a wide range of technology resources and convenes technology practitioners and users to share and demonstrate information on the use of existing tools and the development of new tools. PLACEMAT-TERS, with the financial support of the Funders' Network for Smart Growth and Livable Communities, hosts a website that enables communities (their professional planners, public agencies, and concerned citizens) to identify tools and processes for better community design and decision making.

For more information on the use of technology tools, go to the Orton Family Foundation [www.orton.org] and to PLACEMATTERS [www.placematters.org] and its website with tools for community design and decision-making [www.smartgrowthtools. org]. A descriptive list of technology tools can be viewed at www.placematters.org/index. php?option=com_wrapper&Itemid=58. The Smart Growth Gateway [http://smartgrowthgateway.org/planning_computer.shtml] also has a listing of computer tools and software for interpreting land use data and evaluating planning alternatives.

AmericaSpeaks

America*Speaks* is a national non-profit organization that engages citizens in public policy decisions. It designs and facilitates deliberative methods such as the 21st Century Town Meeting[™], which can bring hundreds or thousands of participants together with decision-makers. Facilitated small roundtable discussion groups submit ideas to the whole group using wireless groupware computers. Participants hear the strongest themes generated from table discussions and then each person can vote on specific proposals using a polling keypad. Before the meeting ends, results from the meeting are compiled into a report, which is distributed to participants, the media, and decision-makers. Through its consulting services, America*Speaks* also offers citizen engagement training, conducts needs assessments, and facilitates meetings. *(For more information on AmericaSpeaks, go to www.americaspeaks.org.)*



REALITY CHECK TAMPA BAY

The Urban Land Institute Tampa Bay District Council partnered with the Tampa Bay Partnership Regional Research and Education Foundation, the Southwest Florida Water Management District, the Tampa Bay Regional Planning Council, and the Tampa Bay Estuary Program to carry out Reality Check Tampa Bay on May 18, 2007. Representatives of the organizations made up an Executive Committee responsible for guiding Reality Check Tampa Bay's implementation. Although Reality Check was a one-day exercise designed to discuss, analyze, and develop alternative growth scenarios for the rapidly growing Tampa Bay region through 2050, it offered an unprecedented opportunity for the community to move forward together. The five principal partners of Reality Check Tampa Bay have agreed to stay involved in an implementation effort known as One Bay. One Bay was created to analyze the data and scenarios resulting from the Realty Check exercise, prioritize a set of Guiding Principles developed during the exercise, and shape future scenarios through a citizen-involvement process to identify different options for how to grow the Tampa Bay region. (More information on Realty Check Tampa Bay and One Bay is available from http://tampabay.uli.org.)



GULF COAST AMERICASPEAKS

After the hurricanes of 2004, AmericaSpeaks partnered with the Federal Emergency Management Agency (FEMA) to develop and facilitate four public meetings in Charlotte, DeSoto, and Hardee counties. The meetings were designed to develop an understanding of the priorities of those most impacted by the hurricanes. A combination of gallery walks, facilitated table dialogues, and keypad polling gathered participant feedback and recommendations about revitalizing the economy, building housing, and developing downtowns and highway corridors. FEMA used these citizen priorities to strengthen its work in each county and work with its federal and state government partners, who participated in the planning process, to find dedicated funding sources for the prioritized recovery activities. (More information on the Gulf Coast town meetings is available from the AmericaSpeaks case study at www. americaspeaks.org/projects/index.htm.)

Community Planning Centers (CPC) CPCs are customized websites designed by Partners for Public Spaces (PPS) to involve local people more directly and effectively in a public space project. (PPS is a nonprofit organization founded in 1975 to focus on creating and sustaining public spaces that build communities.) Each CPC website is designed to fit the goals of the project and is linked to the resources on PPS's website. In addition to including information on the project and its sponsors, the websites provide a variety of interactive ways for people to give input and to get involved (for example, take a survey either via email or on the website itself, gather opinions and ideas from website visitors on a comment page, participate in discussion forums, view and add to the results of community workshops, or use the site to donate money or find volunteer opportunities). The intent is to give a voice to people in a community and to allow them to share information and ideas about the development or revitalization of a place. (For more information on PPS and its Community Planning Centers, go to www.pps.org.)



THE JACKSONVILLE HUMAN RIGHTS COMMISSION

The Jacksonville Human Rights Commission is using Study Circles to make a difference in race relations. Their Study Circles consist of a diverse group of 10 to 15 city residents sitting in a circle and meeting for two hours at a regular time for a period of five weeks. Two trained facilitators lead an in-depth discussion on race relations, and Study Circle participants share stories of their lives – a way to see how people from different backgrounds see the world. Action Forums provide an opportunity for participants to meet members from other Study Circles and work on recommendations about how to improve race relations within the community. Forum results include the creation of committees for Community and Police Relations, Media Relations, Corporate and Leadership Initiatives, and School- based and Faith-based Initiatives; a multicultural reading group and cookbook; a media orientation program; and the Jacksonville Leadership Forum, a diverse group of Jacksonville business leaders who meet regularly to ensure all of Jacksonville's businesses are included in the city's economic development. (More information on Jacksonville's Study Circles is available from www.coj.net/departments/human+rights+commission/default.htm.)



COOPER CITY HIGH SCHOOL URBAN PLAN

In April 2005, a class of seniors at Cooper City High School completed a final quarter Urban Plan class taught by an economics and law teacher. The class was sponsored by the ULI Southeast Florida/Caribbean District Council, with support from Bank of America. The Urban Plan program has continued to be used by Cooper City High School and is being expanded to other high schools in Miami-Dade and Broward counties. Urban Plan is also used in Orlando under the sponsorship of the Orange County ULI District Council. (More information on the Cooper City Urban Plan program is available from the Southeast Florida/Caribbean District Council of the Urban Land Institute at www.seflorida.uli.org/initiatives.htm. Information on the Orlando Urban Plan program is available from http:// orangecounty.uli.org//AM/Template. cfm?Section=Home5.)

Limehouse Software

Limehouse Software provides webbased publishing and citizen participation solutions by allowing users to automate the production of complex reports, plans, and documents. Through the Limehouse software, users can publish to a PDF, Web or CD–ROM format and instantly run online consultation, questionnaires, and public forums, which helps with meeting citizen participation requirements. (More information on Limehouse Software is available from www.limehousesoftware.com.)

Meetingworks

Meetingworks is used by governments and businesses as a real-time electronic local or remote forum for connecting teams. The technology allows participants in a room or in locations across the world to collaborate as a group. Users can use Meetingworks to brainstorm ideas; offer input and comment on different topics; organize a discussion; view electronic flip charts; and categorize, evaluate (or reevaluate), and prioritize ideas, as part of building a consensus. In addition to its electronic meeting software package, Meetingworks offers consulting and facilitating services to streamline collaboration. Public sector examples of Meetingworks include gathering public or target group input to help formulate action plans,



Web Boards An on-line public forum for commentary and review

SFWMD WEB CONFERENCING

As part of its work to restore the Everglades, the SFWMD is using the IBM-Neighborhood America Public Comment platform to enable an interactive dialogue between citizens and government agencies. Because of the ability to interact through the web, interested parties can offer observations and suggestions before plans are finalized. The SFWMD web bulletin boards enable people with a web browser to offer comments from anywhere at any time. The Public Comment technology also allows the project management team to easily collect and manage the feedback. The SFWMD's goal is to foster communication globally and locally and bring geographically dispersed people together to solve problems, pursue common interests, and provide review and comments. (More information on the SFWMD's use of web conferencing is available from www. neighborhoodamerica.com/docs/SuccessStoryEverglades.pdf and www.sfwmd.gov/site/index.php?id=734.)

prioritizing projects, and reaching consensus on goals and strategies as a part of the strategic planning process. (*For more information on Meetingworks, go to www. meetingworks.com.*)

Neighborhood America

The mission of Neighborhood America is to set technology standards for interactive content management. Its website describes Neighborhood America as a webbased platform that enables users to build communities with their audience. The platform can be used to collect and manage all forms of interaction and data and build social networks that support an organization's goals, reputation, and brand. Governments use the Neighborhood America platform to capture and manage public comments in a form that is credible, reportable, and representational, enabling them to make informed decisions based on citizen input. *(For more information on Neighborhood America, go to www.neighborhoodamerica.com.)*

Urban Plan

Urban Plan is a web-supported program used in high school classrooms to teach students about the roles, issues, trade-offs, and economics involved in urban development and to encourage them to think critically about land use issues. The program, which provides hands-on experiences with developing realistic land use solutions, was developed by the Urban Land Institute with the Fischer Center for Real Estate and Urban Economics at the University of California at Berkeley and a team of high school economics and government teachers. (*For more information about Urban Plan, go to the Urban Land Institute [www.urbanplan.org].*)

Visioning

A visioning process is a tool that brings public officials, residents, and businesses together to discuss major issues facing their community and collectively decide what that community's future should look like and the action steps needed to achieve that future. Visioning exercises usually include a representative crosssection of the key stakeholders in the area and allow participants to brainstorm and discuss options without the constraints of many kinds of planning processes. Visioning processes have been successful in exposing participants to a variety of viewpoints while fostering face-to-face communication and compromise and enabling communities to reach consensus on their desired future.



MYREGION.ORG HOW SHALL WE GROW?

Created in 1999, myregion.org is an organization of citizens and leaders from the public, private, and civic sectors working together to prepare the central Florida region to compete more effectively while enhancing the quality of life of its citizenry. In 2006, myregion.org, along with five regional and state partners, initiated a 15-month regional visioning process called How Shall We Grow? The result will be a 50-year vision that includes a set of principles to guide future growth, indicators to measure progress toward implementation of those principles, a related preferred development scenario, and a regional policy framework needed to achieve the vision. The preferred scenario will be the result of a series of community sessions and on-line surveying that enable citizens to compare alternative future scenarios to a trend scenario. Each scenario assumes the same population growth but differs in how the growth is accommodated. The visioning process will conclude with an August 2007 Community Summit that will seek agreement on a set of consensus-based actions. Project funding came from regional partners and the Florida Departments of Community Affairs and Transportation, which plan to use the visioning project as a model for other areas of the state. (More information on the How Shall We Grow? project is available from www.myregion.org.)

In Florida, visioning processes have been used in a variety of geographic areas (a small or large town, rural community, neighborhood, new community, and region) and to address one or more issues. Florida visioning processes are sponsored by a number of organizations, including governments, developers, and civic groups, and have been used to develop visions for a variety of projects, including downtown improvements, neighborhood redevelopment, new communities, road corridors, trails and greenways, waterfronts, and ports. The design of a visioning project should be tailored to the need of the individual community and the type of visioning project and desired outcomes. Important features of a visioning project include getting to know the community and issues first (the homework stage), being inclusive of all views, helping participants to first agree on the facts (the existing conditions and where the community is headed if current trends continue), and involving a lot of communication both into and out of the process. A successful visioning process also uses visual tools that quickly communicate an issue or solution and help participants understand and choose among different scenarios for the future, and enables participants to take a long-term view, thus helping communities avoid the unintended consequences of incremental decisions. A test of a successful visioning process is that it builds a constituency group that understands the issues and the vision and that will become vision-champions when it is time for implementation.

The DCA provides assistance with visioning processes. This assistance reflects the increased emphasis in Florida on visioning and the optional provisions of Chapter 163 of the Florida Statutes that provide incentives for visioning. DCA has worked with a number of pilot communities to assist them in implementing the optional provisions of Chapter 163.3177(13) and (14), thus providing local governments with the regulatory relief contemplated by the statute. The assistance includes technical support in conducting community visioning meetings and making computer-based planning tools available to assist with the visioning effort. Based on these demonstration projects, the department will develop guides to assist community visioning. DCA also has visioning how-to's on its website, including frequently asked questions, a list of visioning initiatives, visioning handouts and presentations, and links to other websites.



IMAGINE JACKSON

Imagine Jackson was a countywide visioning project in Jackson County in Florida's Panhandle. The goal was to encourage citizens from all areas of the county to come together to understand current conditions; if current trends continued, to declare what kind of county they wanted for the future; and to contribute ideas for how their desired future could be achieved. The visioning process was designed to give citizens an opportunity to contribute their ideas regardless of where they lived, what they did, or whether they could take part in the visioning events. In addition to community-based workshops and forums, visualization techniques, such as participant photographs of community likes and dislikes and a community character map, were used to help residents indicate what they liked about their community. Other tools included a widely distributed survey and an interactive website to give residents another way to contribute ideas. The result was that 1,000-plus county residents contributed ideas to the vision, which sets out a 20-year blueprint for future actions to enhance the lives of people in all areas of the county. Imagine Jackson received a Promising Practices Award from the Council for a Sustainable Florida. (For more information on Imagine *Jackson, go to www.imaginejackson.org.*)

For more information on visioning, go to the Florida Department of Community Affairs [www.dca.state.fl.us/fdcp/dcp/visioning/index.cfm], the Urban Land Institute [www.uli.org], and the American Planning Association [www.planning.org].

Visual Surveys

Visual surveys are used by communities to help decision-makers and citizens understand and address community design, land use, and transportation issues. Using a workshop format, the surveys take participants through a series of images of design characteristics selected to help them evaluate the existing environment and envision their community's future. The visual preference survey technique was developed by architect Anton Nelessen. The Local Government Commission (LGC) has built on the Nelessen model with its Community Image Survey (CIS). The survey, which is tailored to the needs of the community, typically consists of multiple slides that depict design features such as streets, parks, public spaces and buildings, houses, and office and retail buildings. Another technique to help participants identify likes and dislikes is a photo exercise. Each participant is given a disposable camera to take photographs of likes and dislikes. All the photos are combined in an annotated montage that depicts what residents like and do not like about their community.

For more information on visual preference surveys and the LGC's Community Image Survey, go to www.lgc.org/services/index.html or to www.smartcommunities. ncat.org/toolkit/TCDDM/Nelessen.htm. South Florida Regional Planning Council



SOUTH FLORIDA VISUAL SURVEY USES

Both the South Florida Regional Planning Council (SFRPC) and the TCRPC use visual surveys as a part of their planning work. The SFRPC is a licensed CIS user. It has used CIS in a variety of planning processes, including illustrating how dense, more compact development can work and introducing how good design can be used to integrate affordable housing into existing areas. The TCRPC uses visual surveys as a tool in its charrettes and workshops. Examples include helping Martin County select architectural styles and define open space and assisting participants in the nine charrettes for the SFRPC-TCRPC Broward County State Road 7 corridor master planning process select street furniture. (*More information on these uses is available from the SFRPC at www.sfrpc.org and from the TCRPC at www.tcrpc. org/departments/studio.html.*)

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Transportation planning issues are a major concern for many Florida residents and businesses. Because of growing traffic congestion within and between communities, Floridians are spending more and more time in traffic and driving greater distances to jobs, housing, and basic services. Adding to the concern is the recognition that transportation investments play a powerful role in shaping the location and character of development in a community and in determining a community's livability and economic vitality. The way communities plan for development (what land uses go where and how they connect) has a powerful influence on transportation and travel mode choices, on greenhouse gas emissions, and on equitable access to jobs, housing, and services. As a result, transportation and land use planners are increasingly coming together to incorporate land use and mode-accessibility considerations when planning transportation investments and to create new planning tools that broaden the range of transportation choices and create roads that enhance the surrounding community.

☐ Information on linking transportation and land use planning and broadening transportation choices is available from a number of organizations, including the Congress for the New Urbanism [www.cnu.org], the Federal Highway Administration [www.fhwa.dot.gov], the Institute of Traffic Engineers [www. ite.org], Smart Growth America [www.smartgrowthamerica.org], the Transportation Surface Policy Project [www.transact.org], and Walkable Communities, Inc. [www.walkable.org]. Another resource is the American Planning Association [www.planning.org], which in 2007 published <u>The Transportation/Land</u> <u>Use Connection</u> by Terry Moore, Paul Thorsnes, and Bruce Appleyard. In Florida, 1000 Friends of Florida [www.1000fof.org] provides a variety of resources on transportation and land use solutions that reduce dependence on the automobile and help create more livable communities. These resources include the 2004 report, <u>Transportation Planning in the Florida Panhandle</u>, that contains information on transportation Planning, a citizen's guide to supporting more effective transportation planning; a <u>Dictionary of Transportation Acronyms</u>; <u>Merge Lanes Ahead</u>, a series of nine fact sheets that describes the relationships between transportation, land use, and energy; and <u>Efficient Transportation Decision Making</u>, which provides information on the Florida Department of Transportation's [FDOT] new public input process. Information on FDOT's decision-making process and its transportation projects and events in each region of Florida is available from www.dot.state.fl.us/publicinformationoffice/publicinv/default.htm. The University of South Florida's Center for Transportation Research [www.cutr. usf.edu], which houses the National Center for Transit Research, is another Florida resource on transportation planning.

Complete (Walkable) Streets

A complete street policy requires that when investing in road improvements, transportation agencies should, as a matter of routine, design and operate the entire right-of-way to enable safe access for all users. Pedestrians, bicyclists, motorists, and transit riders of all ages and abilities must be able to move safely along and across a street. The techniques used to create complete streets are the same as those for walkable neighborhoods and commercial areas and include sidewalks buffered from cars; frequent, easy-to-get-across crosswalks; bus pullouts or special bus lanes; traffic calming features, such as sidewalk bulb outs and on-street parking; and the use of bike lanes, as well as storage areas for bikes and showers for the biker.

To encourage pedestrian use, complete streets have features that make people feel comfortable and safe (for example, street trees that provide shade, benches and other resting places, street art that adds interest, buildings that front the street with windows and doors, street lighting, clear directional signage, and narrow street widths, particularly at intersections where many pedestrian injuries occur). The National Complete the Streets Coalition (a diverse group of over 20 organizations working together in support of complete streets) outlines a variety of complete street benefits, including improved pedestrian, biker, and car safety; a healthier population, because of the increased ability to walk and bike for daily needs; reduced traffic, because of a greater choice of transportation mode; and the ability of children to walk or bike on a daily basis, which gives them more independence and a safe route to school. Other benefits include improved air quality, more cohesive neighborhoods because of the ability to safely walk down a street in an environment that makes a longer visit more desirable.

For more information on complete or pedestrian-bicycle-transit-friendly streets, go to the Active Living Network [www.activeliving.org], the American Planning Association [www.planning.org], the National Complete the Streets Coalition [www.completestreets. org], the Florida Department of Transportation [www.dot.state.fl.us/safety/ped_bike/ ped_bike_standards.htm], Smart Growth America [www.smartgrowthamerica.org], the Thunderhead Alliance [www.thunderheadalliance.org], and Walkable Communities, Inc. [www.walkable.org].



NAPLES FIFTH AVENUE SOUTH

Once the city's main street, in the 1970s six-block Fifth South began to lose life with the opening of a new mall. To reverse this trend, in the early 1990s a group of property owners decided to fund the development of a plan for Fifth Avenue South. Adopted in 1994, the plan was designed to reclaim the road as a place to shop, walk, and live. The building height was changed to 42 feet from the sidewalk to the roof in order to improve the building height to street width ratio and new landscaping, including street trees, lighting, and street furniture, were installed. New parking requirements call for three spaces per 1,000 square feet of commercial use, whether a retail, office, or restaurant use (outdoor dining has no required parking) and establish a parking reserve from on-street spaces that are allocated for redevelopment. The plan also calls for buildings that relate to the street and foster pedestrian activity; for example, building renovations must follow the pattern of other buildings and the third story of buildings must be for residential use only. The Fifth Avenue South Action Committee oversees changes on the street. (For more information on Fifth Avenue South, go to http://planning. naplesgov.com/fifth_avenue_story.asp, Duany Plater-Zyberk & Partners [www.dpz.com], or to A Guidebook to New Urbanism in Florida 2005 [www.cnuflorida.org]).

Context Sensitive Solutions (CSS)

One way of better linking land use to transportation is for transportation agencies and planners to evaluate the impacts of transportation investment on the broader community context (the built, natural, and social environments). In the 1990s, that broader look was called context sensitive design or thinking beyond the pavement; it is now sometimes called context sensitive or context determined solutions. In each of those approaches, the needs of the community and natural environment inform the road investment and not the reverse, where the community is reacting to a road improvement and trying to mitigate its impacts. The recognition of the importance of CSS in road design began in the 1990s as highway designers and builders learned that they must be more sensitive to the impact of highways on the environment and communities. The concept of CSS was launched in 1997 with the Federal Highway Administration's (FHWA) publication of Flexibility in Highway Design. The next year the concept took a big step forward with the national conference, Thinking Beyond the Pavement: A National Workshop on Integrating Highway Development with Communities and the Environment While Maintaining Safety and Performance.

The FHWA defines CSS as "a collaborative, interdisciplinary approach that involves all stakeholders to develop a transportation facility that fits its physical setting and preserves the scenic, aesthetic, historic, and environmental resources, while maintaining safety and mobility." CSS looks at a transportation project in the broader community context and involves citizens from the early stages of planning. The goal of CSS is to ensure that the design of a transportation project achieves the community's goals for the neighborhoods (natural or human) bordering the road (the context in which the road will exist), and that the road serves as an asset, not as a degrader, to the land beyond the pavement. CSS enables road planners to customize a road design to its surrounding context; for example, when a high-speed suburban road enters a community, a neighborhood, or some other walkable district, it can be transitioned into a more human-scaled design that causes cars to drive slower and creates a walkable, pedestrian-friendly urban environment. CSS can apply to the planning of a new road, a road widening, or rehabilitation or retrofit of an existing one. One way of ensuring CSS and the link between transportation and goals for land use and community character is to prepare a neighborhood plan (also called a corridor plan) for the area that borders a road before designing the improvements. In that approach, the plan provides the framework for planning a



NW 17TH STREET IN GAINESVILLE

Gainesville's Northwest 17th Street serves as an important neighborhood connector and provides a defined entry into the College Park neighborhood, and from the neighborhood to the University of Florida campus. In 1999, the city's Community Development and Public Works departments, its Community Redevelopment Agency (CRA), and the neighborhood advisory board initiated the NW 17th Street renovation project to convert a road designed to carry vehicles to one that would be safe and attractive to pedestrians and bicyclists and also be aesthetically attractive. Renovation improvements included the installation of a sidewalk system, bicycle facilities, landscaping, pedestrian crosswalks and corner staging areas, street lighting and signage, and benches. Funding for the renovation came from a variety of sources, including the CRA's tax increment financing program and a traffic impact mitigation development agreement between the University of Florida and the city. The renovation of NW 17th Street was called for in the College Park/University Heights Redevelopment Plan, the goal of which is to establish those areas as a thriving, mixed-use, high-density, safe, and convenient neighborhood. (More information on the NW 17th Street improvements is available from the city of Gainesville CRA [http:// cityofgainesville.org/comdev/redev/] or by emailing the Public Works Department [pubwrk@cityofgainesville.org].)


HILLSBOROUGH COUNTY LIVABLE ROADWAYS GUIDELINES

A joint Hillsborough County MPO and Planning Commission project, the Livable Roadways Guidelines promote the cohesive redevelopment of the community's roads which are characterized by strip commercial development that has eroded community character and, in older areas, has created a condition of blight and deterioration. To promote cohesive development, the guidelines provide for contextsupportive site and building design. They also recognize the importance of connecting adjacent land uses and balancing the road right-of-way to equitably accommodate uses. The guidelines are an update of two earlier documents: Livable Roadways: Proposals for Roadway Appearance and Function and Guidelines for Landscaping Hillsborough County Roadways. (For more information on the Livable Roadways Guidelines, go to www.hillsboroughmpo.org/ whatshappening/currentprojects.)

road improvement that is designed not just to move vehicles but also to meet the objectives of the neighborhood and create a place of lasting value.

Resources on CSS are available from a variety of organizations. Two of them, the Congress for the New Urbanism and the Institute of Traffic Engineers, recently joined together in cooperation with the Federal Highway Administration and the U.S. Environmental Protection Agency to publish Context Sensitive Solutions in Designing Major Urban Thoroughfares for Walkable Communities. The publication is an ITE-proposed recommended practice to advance the successful use of CSS in the planning and design of major urban thoroughfares for walkable communities. It provides guidance and demonstrates for practitioners how CSS concepts and principles may be applied in roadway improvement projects that are consistent with their physical settings. The report's chapters are focused on applying the principles of CSS in transportation planning and in the design of roadway improvement projects in places where community objectives support walkable communities-compact development, mixed land uses, and safe access for pedestrians and bicyclists. The FHWA, Context Sensitive Solutions.org, and the Florida-based Walkable Communities also provide information on CSS.

Existing Wildlife Crossing



Rendering of Proposed Wildlife Bridge



WEKIVA PARKWAY

When the Wekiva Parkway was proposed to connect State Road 429 to Interstate 4 in Seminole County, then-Governor Bush created the Wekiva Basin Area Task Force and the Wekiva River Basin Coordinating Committee to recommend a parkway location that caused the least disruption and provided the greatest protection to the Wekiva Basin ecosystem. The Guiding Principles developed by the task force provided the direction for an environmentally sensitive road design: bridges in significant wildlife corridors, appropriate fencing to direct wildlife to safe crossing points, stormwater treatment facilities to minimize habitat loss and promote restoration of previously impacted sites, safety and access design features to promote continuation of prescribed burning in the basin, and limited local access points to focus development in appropriate areas. The Wekiva River Basin Commission (created by the Governor in 2004) is building on the recommendations of the task force. (For more information on the Wekiva Parkway, go to the East Central Florida Regional Planning Council [www.ecfrpc.org] or to the Florida Turnpike Authority [http://epass.oocea.com/futureplans/projectsandstudies/ westernconnectors.shtml].)

For more information on CSS, go to the Congress for the New Urbanism [www. cnu.org], Context Sensitive Solutions.org [www.contextsensitivesolutions.org], the Federal Highway Administration [www.fhwa.dot.gov/csd/index.htm], the Institute of Traffic Engineers [www.ite.org/css], the Project for Public Places [www.pps.org/transportation], and Walkable Communities, Inc., [www.walkable.org].

Corridor Plans

A community's roadway corridors provide the social and economic connection between, and the windows to, neighborhoods and communities. The way road corridors are planned can create places that are a source of pride and offer convenient, pleasant travel or result in a place that over time becomes blighted and congested with traffic, often because of incremental road and land use decisions and investments that were not guided by an overall plan or vision for an area. Preparing a corridor plan prior to the design phase of road improvements corrects that problem by providing a vision and plan for an entire corridor (i.e., for the road, for the neighborhoods along the road, and for the area where the neighborhoods interface with the road, which is the area most visible from the road or sidewalk). The value of a corridor plan is that it provides communities with a tool that integrates and balances transportation mobility planning with local goals for land use and community character. The approach corrects past practices that typically plan a road separately from the surrounding neighborhood in which the road will be located and focus on mobility rather than community livability.

The principal elements of a corridor plan address what the land uses and the character of development should be along the road (the area beyond the pavement) and how the roadway (the pavement and the right-of-way) improvements should be designed to best support the land use and community character goals. A third corridor plan element addresses the non-roadway improvements in the right-of-way, such as bicycle lanes, sidewalks, landscaping, street lighting, drainage, signage, and utilities. Planning tools used to help achieve those three elements include roadway design guidelines, access management that identifies where the access points should be (and not be) to best serve the land uses along the road, and development guidelines and regulations. One way to implement a corridor plan is the use of a corridor overlay zone to guide the road's development (or redevelopment) and access. An overlay zone can address design features, such as how structures front the road and how far they are set back, how parking is treated, lot sizes, building densities, and



THE STATE ROAD 7/U.S. 441 COLLABORATIVE

The State Road 7/ U.S. 441 Collaborative is a partnership composed of the 16 local governments that span a 31-mile corridor in Broward County and northern Miami-Dade County. The members of the partnership came together to achieve a common goal: reverse a period of disinvestment that began in the 1980s as new commercial development bypassed the corridor for newer suburbs to the west. The goal of the collaborative, which is facilitated by the South Florida Regional Planning Council (SFRPC), is to promote the economic and aesthetic improvement of the corridor. Initiatives include a market assessment of the redevelopment potential of the corridor and the preparation of a Strategic Master Plan for the entire corridor through a series of public design charrettes. The charrettes, which were conducted by the Treasure Coast Regional Planning Council (TCRPC) in partnership with the SFRPC, helped residents of the cities along the corridor plan and articulate their visions for their communities. The State Road 7/ U.S. 441 plan is coordinated with a road widening by FDOT and the Bus Rapid Transit pilot project. (For more information on the State Road 7/U.S. 441 Collaborative, go to www.sfrpc.com/sr7.htm. For more information on the TCRPC charrettes, go to www.tcrpc. org/departments/studio/sr_7_collaborative/sr7_home.htm.)

landscaping. Because of the range of issues addressed in a comprehensive corridor plan for an area, multiple disciplines are needed (for example, a land use planner, community design expert, environmental planner, and, depending on the project, a sociologist and/or historic preservation or real estate market expert).

A corridor plan can be used for a road corridor within a single community or neighborhood, one that connects several communities, a new road facility, or for retrofitting an existing road that has become undesirable because of an unattractive street environment that works against new investments. Factors that make a street undesirable include frequent curb cuts, high speeds because of a lack of traffic calming, visual clutter from signs and overhead utilities, poor street lighting, lack of pedestrian or bicycle amenities, outdated land uses, strip development that fronts the street with parking lots, unattractive building design, and lack of a sense of place. Developing a corridor plan generally involves a six-step process. The first three include involving citizens from the earliest stages of planning and continuing through implementation, getting to know the existing corridor (the homework stage), and defining a preferred vision for the corridor. The last three steps focus on developing and agreeing on the practices and policies that will lead to the preferred vision, outlining the implementation strategies, and putting together corridor champions in and outside government who will work to ensure that the corridor plan is achieved.

Duch of the information for the description of corridor plans was taken from the <u>Bluegrass Corridor Management Planning Handbook</u>, prepared by the Florida firm Glatting Jackson Kercher Anglin Lopez Rinehart, Inc., for Bluegrass Tomorrow [www. bluegrasstomorrow.org]. Information on corridor planning is also available from the American Planning Association [www.planning.org].

Interconnected Street Network

Suburban planning practices of the past 40 years have created a road network that functions very much like plumbing in a house – smaller subdivision roads and retail and office parking lots are funneled onto the same larger collector road. With only one way for residents of a neighborhood to get to other parts of town or meet even daily needs, the result of the practice has been increased traffic congestion and continuing road widening to accommodate more cars. An alternative is to create a network of interconnected roads that improve mobility by giving



ARAGON

Aragon is a 21-acre mixed-use urban redevelopment planned as an extension of Pensacola's downtown historic district. To incorporate the best characteristics of the surrounding area, Aragon's plan features historic-style houses built on narrow lots connected by a network of pedestrian-friendly streets and public open spaces and landmarks. The street and block pattern follows downtown Pensacola's existing grid network that seamlessly mixes old with new streets and provides walkable routes to downtown amenities. Because of its location, historic design elements, and interconnected network of parks, streets, and sidewalks, Aragon links previously isolated parcels to the downtown core. Access from three sides allows the historic streets to continue their natural pattern through or alongside Aragon, while the fourth side can be connected with future development. Aragon's narrower street widths, smaller building setbacks, brick-edged sidewalks, street trees, underground utilities, and historic streetlights are designed to create a pedestrian-friendly environment and to slow traffic. Alley access to most lots also contributes to the walking environment and provides an offstreet location for trash pickup, utilities, and parking. (For more information on Aragon, go to the city of Pensacola Community Redevelopment Agency [www.ci.pensacola.fl.us/live/pages.asp?pag eID=1570&deptID=1368] or to www.cnuflorida.org for a copy of A Guidebook to New Urbanism in Florida 2005.)

more options for reaching a destination and dispersing, not concentrating, traffic, and by making walking easier because of more direct routes between destinations. Features of an interconnected network of streets include a connected system of east-west and north-south streets, shorter blocks, neighborhood-scaled streets, and more frequent intersections that also help to calm traffic.

The concept of an interconnected network is not new. It is an organizing feature of many older communities in Florida such as downtown Pensacola, DeFuniak Springs, West Palm Beach, and Key West. Because an interconnected network of streets disperses traffic more evenly by providing multiple routes, the streets can move large amounts of traffic without creating congestion and can be designed for lower neighborhood and pedestrian/bicycle-friendly speeds, which results in more mobility options for residents. Other benefits of greater street connectivity include shorter trips, which save time and money; a wider variety of travel routes to a destination; and more cost-effective public services and infrastructure because residents of a community can get to schools, shopping, and other daily needs without overburdening a major arterial road intended for through-trips. A connected street network can also save emergency workers time by providing more options to reach the scene of an emergency. An interconnected street network is particularly useful in high growth areas because it reduces traffic on major collector roads by providing residents other ways to take care of daily needs. The practice of creating an interconnected network of streets can be applied to new development or to an existing development that is based on the plumbing practice of road planning. Street interconnectivity can be augmented with an interconnected system of bike and pedestrian walkways.

Description on creating an interconnected street network is available from the Congress for the New Urbanism [www.cnu.org], Context Sensitive Solutions.org [www.contextsensitivesolutions.org], the Institute of Traffic Engineers [www.ite.org], and Walkable Communities, Inc. [www.walkable.org].

Road Diets

The term road diet applies to taming, or what Walkable Communities, Inc., calls skinnying up, fat, higher-speed multi-lane roadways that were expanded in response to growing traffic. In a road diet, the number of road lanes is reduced or reallocated. For example, a four-lane road may be changed to two lanes, with the



EDGEWATER DRIVE IN ORLANDO

Edgewater Drive is a north-south road that carries approximately 20,000 cars a day and serves as the main street for the College Park neighborhood of Orlando. It also serves some throughtraffic. In 1999, neighborhood residents participated in a series of workshops to develop a blueprint (the Neighborhood Horizon Plan) to guide future neighborhood improvements. Plan provisions included reinventing Edgewater Drive into a lively pedestrian-friendly commercial district. The first step in the process was to transfer road control from the FDOT to the city of Orlando. Since the existing four-lane road configuration did not allow room for the wide sidewalks, bicycle lanes, streetscape improvements, and on-street parallel parking recommended in the neighborhood plan to make the road more pedestrianfriendly, the decision was made to eliminate one vehicle lane for a portion of the road by re-striping it to three lanes during resurfacing. A before-and-after evaluation by the city demonstrated the benefits of the project: less speeding, reduced crash and injury rates, and increased bicycle and pedestrian activity. (More information on Edgewater Drive's road diet and the related evaluation report is available from www.cityoforlando. net/planning/Transportation/corridors.htm.)

other lane space available for on-street parking, bicycle lanes, or creating sidewalks. Putting a road on a diet also makes it possible to create landscaped boulevards, add street trees, and install wider sidewalks and other features that enhance the walking and driving experience. Because the reduced number of vehicle lanes slows traffic, the road is safer for cars (because of fewer and less severe vehicle-to-vehicle crashes) and for pedestrians (due to having fewer lanes of traffic to cross and slower moving vehicles). Businesses along a road can also benefit from a road diet because people are more apt to walk down the street and the street environment is more attractive, which can result in new business investment and a higher tax base. According to Walkable Communities, Inc., a primary resource on road diets, the ideal patient for a road diet is a four-lane road carrying at least 12,000, and not more than around 20,000, vehicles per day.

For more information on road diets or civilizing streets, go to the Congress for the New Urbanism [www.cnu.org], Context Sensitive Solutions.org [www.contextsensitivesolutions. org/content/reading/road-diets-2], and Walkable Communities, Inc. [www.walkable.org]. Another resource is the American Institute of Certified Planners' <u>Smart Growth Street Design</u>, [www.planning.org/apastore/Search/Default.aspx?p=3472&ra=1003], which discusses how slower streets improve livability and can be designed to meet traffic engineering requirements and improve safety.

Traffic Calming

Traffic calming is a street design technique frequently used in Florida communities to slow down and control the flow of traffic in neighborhoods and other special focus areas, such as a downtown or neighborhood commercial area, where the goal is to serve pedestrians and bicyclists as well as cars. Traffic calming does not limit access to an area. The intent is to make an area safe and pleasant for motorists, bicyclists, pedestrians, and residents and improve the environment and livability of streets by slowing or discouraging traffic and reducing vehicular conflicts that make a street unsafe for walkers and bikers. With traffic calming, streets can become a neighborhood and people connector, which strengthens neighborhoods, and less of a barrier, which can divide neighborhoods and neighbors. Traffic calming to fit the needs of a specific area (for example, the amount of traffic a street needs to carry, the bordering land uses, the current width of the road, and the role the road plays in the community – what it connects and how far it goes).



TOWN OF FORT MYERS BEACH ROAD DIET

Located along southwest Florida's Gulf Coast, the town of Fort Myers Beach is an historically walkable community with a mix of long-term residents and fun-loving tourists. In the early 1990s, severe traffic congestion led Lee County officials to widen many streets in order to speed up traffic. The tide turned once officials realized that getting visitors out of their cars was preferable and more practical than moving cars around more quickly. In 1996, the main tourist block at the foot of the pier was converted to a pedestrian haven lined with shops and restaurants with outdoor seating. Along adjoining streets, wide travel lanes have been narrowed so that sidewalks could be widened and shaded by trees. Zoning was changed to place new buildings right up to sidewalks rather than being separated by parking lots. On-site parking requirements were reduced or eliminated to allow pedestrian-serving businesses to reoccupy older buildings and to expand. Available waterfront parcels have been acquired so that pedestrians have even more frequent access to bay waters and the Gulf of Mexico. (Further information about planning and zoning at Fort Myers Beach is available at www.spikowski.com/beach.htm.)

Deciding on which traffic calming techniques to use relies on active citizen involvement. Most traffic calming programs involve three approaches to changing driver behavior: education, enforcement, and engineering. Engineering approaches are grouped into two main categories: those that control volume (for example, by reducing cut-through traffic in residential areas and diverting it to streets intended for more vehicles) and those that cause a driver to slow down by changing the alignment or width of a roadway. One example of a frequently used alignmentchanging traffic calming technique is to widen sidewalks on one or both sides of a street or to extend the sidewalk at intersections with curb bump outs (sometimes called bulb-outs) that project into the street. The result is to reduce vehicle speeds by constricting traffic to one or two lanes and cut down on the distance a pedestrian must travel to cross a roadway. Other alignment-changing techniques include narrowing the width of a street in sections; adding street humps or lumps; building roundabouts and traffic circles at an intersection; and creating what is called a chicane, which is a physical obstacle, such as curb extensions that alternate from one side of the road to the other to create a winding route for vehicles. An additional technique to send the message that a street is for people, not high speeds, is to build street islands and medians and to install well-marked, signalized crossings to increase pedestrian safety and slow traffic. Street trees and landscaping can also help send the same message.

Description on traffic calming is available from the Federal Highway Administration [www.fhwa.dot.gov/environment/tcalm/index.htm], Institute of Traffic Engineers [www.ite.org], Traffic Calming.org [www.trafficcalming.org], and Walkable Communities, Inc., [www.walkable.org].

Transit-Oriented Development (TOD)

TOD provides an alternative to growing traffic congestion by locating development close to public transportation (or by creating enough population and commercial activity in an area to make public transportation feasible by having more users). A TOD locates public transportation (a bus or train stop) at the center of a community within easy walking distance of houses, shops, and offices. Components of TOD are those that encourage use of public transportation. A TOD typically includes a walkable design, making it easy to walk or bike to public transportation and to take care of daily errands on the way to or from the bus. A TOD also contains a mix of uses (housing, shopping, employment, and civic) that are shaped in the form of a



TRAFFIC CALMING IN WEST PALM BEACH

The city of West Palm Beach was an early pioneer in the use of traffic calming and hiring a traffic calming engineer (a practice now repeated in many Florida communities). The city used traffic calming to revitalize its declining downtown and make its neighborhoods safe for pedestrians. Traffic calming techniques included converting the one-way downtown street system to a two-way system, using curb extensions at intersections, restoring street parking, reducing street widths in certain places, and widening sidewalks. For example, to help revitalize Clematis Street, the heart of the downtown, a one-way, four-lane street was converted to a two-way street with parking on both sides. Sidewalk bulb-outs reduce the street-crossing distance for pedestrians and give a better view of oncoming cars, and benches, landscaping, and street lights add to the pedestrian experience. In many neighborhoods, the city has reduced traffic speed to 20 miles per hour and installed different calming techniques, such as bulb-outs, modern roundabouts, and landscaped islands at intersections, designed to fit the specific need. (For more information about traffic calming in West Palm Beach, go to www.cityofwpb.com/public_works/index.htm.)

town or neighborhood center where the transit station is located. In most TODs, development is denser in the center around the transportation node and tapers off into lower densities further away from the center. Commercial and retail uses are located next to the transportation node. Another important feature of making a TOD work is a good collector system to make it easy to get to the transportation node (for example, buses or trolleys, or, in larger cities, light rail). Because of the use of transit and other forms of development, TODs also have less parking for personal vehicles (called constrained parking), and TOD-supportive employers and communities offer incentive programs that reward people for not driving.

Dore information on transit-oriented development is available from the Reconnecting America Center for Transit-Oriented Development, which in 2007 published <u>TOD 101: Why Transit-Oriented Development And Why Now?</u> [www.reconnectingamerica.org/html/TOD/index.htm], a picture book designed in an easy-to-read format that explains what TOD is, how it benefits communities, and how it can serve as a low-cost solution to problems ranging from housing affordability to traffic congestion and global warming. The American Planning Association [www.planning.org], the Congress for the New Urbanism [www.cnu.org], Smart Growth America [www. smartgrowthamerica.org], the Transportation Surface Policy Project [www.transact. org], and Transit Oriented Development [www.transitorienteddevelopment.org] also provide information on TOD benefits and strategies.



WEST PARK VILLAGE

Tampa's West Park Village was designed in the late 1990s as a 225-acre New Urbanist (described in the Land Use Planning and Development chapter) addition to a large existing and successful conventionally planned Tampa community called Westchase. A catalyst for the design was the possibility of being served in the future by a rail transit line. Transit-oriented design features include an area for a potential rail station and village green; resident-oriented commercial services in a Main Street setting; walkable neighborhoods that radiate out from the main town center and are connected by pedestrian-friendly streets with parking and wide sidewalks on both sides; and a mix of housing types, including approximately 1,500 multifamily units and 500 other units split between town homes, villas, single family homes, and condominiums. It is served by the recent addition of express bus service that extends from downtown Tampa and the Westshore employment district near the Tampa International Airport. (For more information on West Park Village, go to A Guidebook to New Urbanism in Florida 2005 [www.cnuflorida.org] or email rayc@plancom.org.)

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rotecting Florida's water resources is fundamental to planning sustainable communities. The state's water resources provide residents with a safe and adequate supply of drinking water, support economic development activities, maintain agriculture, sustain Florida's water- and ecobased tourism industries, and protect the state's rich aquatic life. With the state's high rate of population growth, Florida communities are increasingly employing a variety of planning tools to maintain an adequate and reliable supply of water and protect both ground and surface water from contamination due to the inappropriate use of land. The importance of the state's water is reflected in the number of organizations that provide information on water planning tools. Among those are the Florida Department of Environmental Protection (DEP), responsible for protecting the state's water resources, and the state's five water management districts, which were created by the Water Resources Act of 1972. The University of South Florida's Center for Community Design + Research maintains The Florida Water Resources Atlas (www.wateratlas.org) that consolidates surface water-related information from multiple agencies and disseminates it via an interactive website. The Water Atlas, which was developed jointly by Florida's five water management districts, is a comprehensive water resource manual written for lay people. It also has activities and projects, tied to state education requirements, for teachers. A specific water atlas is available for the Tampa Bay Estuary and eight counties (links at www.wateratlas. usf.edu): Hillsborough, Lake, Manatee, Orange, Pinellas, Polk, Sarasota, and Seminole, and coming soon, Leon and Volusia).



FLORIDA'S WATER MANAGEMENT DISTRICTS

- Northwest Florida Water Management District (www. nwfwmd.state.fl.us)
- South Florida Water Management District (www. sfwmd.gov)
- Southwest Florida Water Management District (www. swfwmd.state.fl.us/)
- St. Johns River Water Management District (http://sjr. state.fl.us)
- Suwannee River Water Management District (www. srwmd.state.fl.us)

Other sources of information include the U.S. Environmental Protection Agency (EPA), which offers smart growth guides and model ordinances to protect local resources, including its recent publications, *Growing Toward a More Efficient Water Use: Linking Development, Infrastructure, and Drinking Water Policies and Livable Communities and Water*, a fact sheet that explains the link between livable communities and water, and the Local Government Environmental Assistance Network (LGEAN), a partnership organization developed and managed by the International City/County Management Association. LGEAN is an online first-stop shop that provides environmental management, planning, funding, and regulatory information for local government elected and appointed officials, managers, and staff and enables them to interact with their peers. Another principal source of information used for preparing this description of tools is *The Environmental Planning Handbook for Sustainable Communities and Regions* by Tom Daniels and Katherine Daniels, published by the American Planning Association in 2003.

For more information on Florida water resource planning tools, go to the Florida Department of Environmental Protection [www.dep.state.fl.us], the Florida Water Environment Association [www.fwea.org], the U.S. Geological Survey in Florida [www.usgs.gov/state/state.asp], and 1000 Friends of Florida [www.1000fof.org]. Other resources include the American Planning Association [www.planning.org], the U.S. Environmental Protection Agency [www.epa.gov/owow], the Local Government Environmental Assistance Network [www.lgean.org], and the Water Environment Federation [www.wef.org/Home].

Aquatic Buffers

Aquatic buffers serve as natural boundaries between local waterways, including streams, wetlands, lakes, rivers, and floodplains, and existing development. Buffers provide numerous benefits because they:

- Protect water quality by filtering pollutants, sediment, and nutrients from stormwater runoff, thereby restoring and maintaining the chemical, physical, and biological integrity of the water resources.
- Reduce erosion and sediment entering the stream.
- Stabilize stream banks and reducing flooding.
- Maintain the base flow of streams and provide stream temperature control.
- Provide riparian wildlife habitat.



MARTIN COUNTY BUFFER REQUIREMENTS

The Martin County Comprehensive Growth Management Plan has required wetland buffers and shoreline protection zones since 1982, making the county an early pioneer in developing buffer requirements to protect wetlands and shoreline areas. No impacts to wetlands are permitted except in limited cases, and impacts are not allowed within the buffer to the wetland. Mitigation is allowed only in the case of an exception or waiver to a wetland impact. Current requirements provide for a 50-foot buffer to isolated wetlands and a 75-foot buffer to wetlands connected to Waters of the State. A construction setback requires buildings to be placed either five feet or ten feet from the buffer. The county also has shoreline protection requirements and a Barrier Island Ordinance. (More information on Martin County buffering requirements is available from www.martin.fl.us/portal/ page?_pageid=355,852143&_dad=portal&_schema=PORTAL, and www.municode.com/resources/gateway.asp?pid=13592&sid=9.)

- Contribute organic matter that provides a source of food and energy for the aquatic ecosystem.
- Provide a tree canopy to shade streams and promote desirable aquatic organisms.
- Furnish scenic value and recreational opportunities.

In general, a buffer ordinance provides guidelines for buffer creation and maintenance, specifying the size and management of the buffer. It should require:

- Clearly identified and marked buffer boundaries on local planning maps.
- Maintenance language that restricts vegetation and soil disturbance.
- Tables that illustrate buffer width adjustment by the percent of slope and the type of stream.
- Direction on allowable uses.

The specifications within a buffer ordinance typically differentiate between the treatment of impaired and non-impaired water bodies and isolated wetlands and that of lakes, streams, rivers, and non-isolated wetlands. Specifications also address how to maintain flexibility to meet landowners' needs and how to stay consistent with existing state law. An effective buffer ordinance is only a first step. A buffer management and enforcement program should also be in place, as should programs that educate citizens about the importance of the buffer and ways to preserve its integrity.

Department of Environmental Protection [www.dep.state.fl.us] or one of Florida's water management districts [www.dep.state.fl.us/secretary/watman]. National resource organizations include the Center for Watershed Protection [www.cwp.org]; the River Basin Center [www.rivercenter.uga.edu/publications/subject.htm#rb]; the U.S. Environmental Protection Agency [www.epa.gov/nps/ordinance/buffers.htm], which offers a model buffer ordinance; and the U.S. Fish and Wildlife Service [www.fws.gov], which offers a buffer fact sheet.

Blueway Planning

Blueway planning takes an integrated approach toward a connected system of waterbodies (for example, a system of streams, ponds, and wetlands). Typical blueway planning goals include preserving and enhancing the natural communi-



NORTHEAST FLORIDA BLUEWAY

The Northeast Florida Blueway contains a combination of private and publicly-owned lands that run along both sides of Florida's Intracoastal Waterway, two rivers, and selected tributaries that extend from the Duval County line to the southern Flagler County line and closely follow the Atlantic coastline. The blueway is composed of the rivers and tributaries in Duval, St. Johns, and Flagler counties and is a key component of the Florida Saltwater Circumnavigational Paddling Trail, a saltwater version of the Appalachian Trail. The 1,500-mile sea trail begins at Big Lagoon State Park near Pensacola, extends around the Florida peninsula and the Keys, and ends at Fort Clinch State Park near the Georgia border. The goal of the blueway is to form a conservation lands corridor along those waterways by connecting existing natural areas and greenspace. State funds are being used to acquire lands along the corridor (over half of the 28,678 acres have been acquired). The area will support primitive camping, nature study trails, and areas for archeological interpretation. The blueway is managed by Duval, St. Johns and Flagler counties, the city of Jacksonville, the Florida Division of Forestry, and DEP's Division of Recreation and Parks. (More information on the Northeast Florida Blueway is available from www.dep.state.fl.us/cmp/programs/files/ ne_fl_blueway_projec_des.pdf and www.co.st-johns.fl.us/BCC/ growth_mgmt_services/planning/Environmental/index.aspx.)

ties that contribute to the health and quality of the water bodies that compose a blueway and bringing attention and providing access to the blueway. Examples of blueway program activities include development of marked water trails through the blueway (for example, directional and interpretive signage for canoeists and kayakers), acquisition of land along the blueway, and development of recreational opportunities (for example, camping and nature study trails). The Florida Department of Environmental Protection is using blueway planning to create a policy framework that will integrate management across the state's coastal, nearshore, and marine environments. The approach, called the Florida BlueWays Project, is a multi-year marine resource management project of the Fish and Wildlife Conservation Commission's Florida Marine Research Institute in conjunction with the Florida Coastal Management Program. The long-term goal of the Florida BlueWays Project is to graphically depict the inherent spatial connectivity of Florida's marine resources, coastal activities (human use), and related stakeholders and develop innovative methods, tools, partnerships, and processes to address ecological and sociological concerns about coastal and ocean systems. The Charlotte Harbor region has been selected as a case study, and current work focuses on creating the ecological, human use, and management characterizations for this area.

Much of this information was taken from the Florida's BlueWays Project website [www.dep.state.fl.us/cmp/programs/blueways.htm]. Another resource on blueway planning is available from http://researchm.myfwc.com/features/viewi_article. asp?id=3108.

Impervious Surface Reduction

Stormwater management and water retention issues are being addressed through the reduction of impervious surfaces in development and building design. Traditionally, water resource management programs have focused on removing stormwater from a site as quickly and efficiently as possible, resulting in large volumes of polluted stormwater being discharged directly into surface waters with little or no treatment. That changes the chemistry and hydrology (or water cycle) of surface waters, causing damage to the aquatic environment which serves as a food, fresh water, and recreation source. Those damaging effects can be reduced and/or reversed by implementing responsible water resources management that includes, among other strategies, the use of pervious surfaces. Pervious surfaces mimic predevelopment conditions where the main vehicles of water movement



THE STORMWATER MANAGEMENT ACADEMY AT THE UNIVERSITY OF CENTRAL FLORIDA (UCF) GOES PERVIOUS

For a number of years, the Stormwater Management Academy at UCF has been conducting research on the benefits of both pervious concrete and green roofs. It is also putting its research into practice. A new UCF stormwater and erosion control laboratory is using pervious paving and green roofs to reduce its impact on the environment and reduce stormwater runoff. The pervious paving employs two technologies: pervious concrete and Flexi[™]-Pave, a pervious paving technique that uses recycled truck tires as its main aggregate. The laboratory has 1,500 square feet of pervious concrete and the same amount of Flexi[™]-Pave. In an effort to further reduce the impervious area on the site, the building extension is fitted with a 900-square foot green roof designed to reduce the runoff for that area by 80 percent or more. The Stormwater Management Academy is committed to furthering its research on technologies that reduce site imperviousness and educating professionals and students about the results of their research. It has also worked on other state-ofthe-art stormwater management designs in the central Florida area, including the New American Home 2007 in Orlando, which was designed to be 95 percent stormwater-efficient using green roofs and Flexi[™]-Pave, and the Conservatory at Celebration, slated to be the first LEED[™] platinum building in Florida. (More information on UCF's Stormwater Management Academy is available from www.stormwater.ucf.edu.)

and storage occur through the natural water cycle by way of evapotranspiration (the movement of water from land surfaces to the air) and infiltration (where water seeps into the ground and replenishes aquifers and surface-water bodies as groundwater discharge). The reduction in the amount of pervious surfaces and vegetation and the creation of large expanses of impervious surfaces change the natural water cycle, resulting in significantly increased stormwater runoff. Consequently, mitigation standards focus on reducing the amount of those surfaces and, therefore, helping to restore the natural water cycle.

Both transportation and site and building design can play a powerful role in reducing the amount of impervious surface.

Transportation design strategies to address impervious surface reduction focus on changing requirements for streets, parking lots, driveways, and other paved surfaces (the places dedicated to moving and storing vehicles and the areas that account for a large percentage of the impervious surface in a community). Strategies include requiring or encouraging narrower streets (discussed in the Transportation chapter) and applying what the Center on Watershed Protection calls green parking techniques. Those techniques include reducing the number of required parking spaces by using the actual average parking demand instead of the more common practice of requiring enough spaces to accommodate the highest hourly parking during the peak season or time of day, and reducing the size of parking lot spaces. Other tools include encouraging shared parking, providing incentives for structured parking, and using pervious paving technology in parking areas. The use of permeable or semi-permeable surfaces instead of asphalt or concrete reduces stormwater runoff because more water is absorbed into the ground.

Site and building design strategies to reduce the amount of impervious surface focus on the site (how development is placed on the land and the size of the development footprint) and the building (the materials used, including the composition of the roof). One technique is to reduce the building's footprint by requiring more compact, higher-density development in urban areas (discussed in the Land Use Planning and Development chapter and in the EPA report, *Protecting Water Resources with Higher-Density Development*, described in this section) and using conservation development practices (discussed in the Natural System Conservation chapter) in rural areas. Another technique is to address the impervious surface

PROTECTING WATER RESOURCES WITH HIGHER-DENSITY DEVELOPMENT

EPA's report, Protecting Water Resources with Higher-Density Development, documents that increasing development density is a strategy that communities can use to protect water resources and water quality, particularly at the lot and watershed levels. Higher-density development uses land more efficiently and protects more undisturbed natural land, which enables a community to grow while still protecting its water resources, the report concludes. To understand the impacts of development patterns on water quality, EPA examined stormwater runoff from three different development densities at three different scales (one-acre, lot, and watershed levels). The analysis demonstrated that the higher-density developments, produced less stormwater runoff per house at all scales and, for the same amount of development produced less impervious cover than lower-density development. The analysis also demonstrated that for the same amount of growth, lower-density development had more impacts on watersheds. (For more information on Protecting Water Resources with Higher-Density Development, go to www. epa.gov/smartgrowth/water_density.htm)

that makes up a significant percentage of the total site imperviousness: the building roof top, typically wasted space that creates large volumes of stormwater runoff during storm events. One option is to use green roofs (described in the Climate Change chapter) – vegetated roof covers designed to hold and attenuate stormwater while providing energy efficiency benefits and increasing the life of the roof. Incorporating green roofs into building practices can help restore the water cycle by mimicking the natural environment.

Description of the information on reducing the amount of impervious surface through site design was provided by the Stormwater Management Academy at the University of Central Florida and the website of the Center for Watershed Protection [www.cwp. org/better_site_design.htm]. More information about the Stormwater Management Academy can be found at www.stormwater.ucf.edu. Information on the EPA study is available from www.ep.gov/smartgrowth/water_density.htm.

Low-Impact Development (LID)

LID is an alternative to conventional development practices that often lead to altered hydrological systems and loss of natural areas. Instead, LID minimizes development impacts on natural systems by incorporating features that allow a developed site to mimic nature: rainwater soaks naturally into the ground, allowing it to be retained close to the source, filtered, stored for reuse, and utilized by plants. Rather than disposing of stormwater as it leaves a site, LID focuses on managing and reducing runoff where it originates. The process keeps pollutants out of natural waterways and helps prevent flooding, instead of the stormwater being retained in centralized, often high-maintenance, high-cost facilities. For example, instead of allowing rainwater from roads and curbs to be carried into stormwater management pipes and then directly into rivers or bays, LID techniques help route the stormwater through natural infiltration areas where it percolates into the soil, replenishes the aquifer, and reduces pollution and flooding. LID disperses runoff more uniformly throughout a site and slows its flow to mimic pre-development rates. In local planning, LID should be part of an overall approach that promotes infiltration, non-structural practices to help minimize or control runoff generation, and stormwater reuse.

Initial studies show that the installation costs for LID are less than those for conventional stormwater systems. LID typically reduces the amount of impervious



RIVER FOREST

River Forest is a new 26-home neighborhood located in Manatee County that incorporates Low Impact Development. Instead of separating conservation areas from the homes, the entire neighborhood is treated as a conservation area.

- A meandering road, designed around the native trees, creates a comfortable parkway feel. The narrow road, which has a recycled concrete base, minimizes the amount of impermeable surfaces.
- The homes are designed and placed to preserve trees, have a solar and breeze orientation, and maximize use of pervious surfaces to reduce run-off.
- Stormwater is collected through a series of 21 planted basins and vegetated open swales that slow down the water and allow it to be filtered through plant roots and a sand bed underdrain to a collecting system – a process that more closely matches the natural water cycles.
- Natural grade is preserved throughout the neighborhood, so that the existing pine flatwoods ecosystem continues to thrive along with the addition of homes.
- New landscaping uses native and hardy noninvasive exotic plants to augment the natural forest environment. The trees keep the neighborhood cooler, sequester carbon dioxide, and slow down the falling rain. Understory plants and roots prevent erosion.

By preserving the natural ecosystem, maintenance costs are lower because less human intervention (plant trimming, mulching, mowing, irrigation systems, and use of fertilizers) is needed. River Forest developer King Ranch Manatee received a 2006 Friendly Landscaping Award from the Florida Yards and Neighborhoods Program. (For more information on River Forest, email joe@joetking.com.) surface and storm structures needed, leading to reduced infrastructure costs. It also decreases the need for large stormwater retention areas and ponds and requires less piping, curbs and gutters, paving, and grading. LID benefits the natural environment by protecting native vegetation, including trees; reducing the amount of hard surfaces and soil compaction; treating stormwater runoff close to the source, which improves water quality by reducing nutrients, sediment, and toxic load; and reducing the impact of development on land- and aquatic-based animals and plants (typically very sensitive to changes in the volume and chemical makeup of water received in an area). Because of its small-scale solutions that can be implemented incrementally throughout a watershed, LID can be used in urban areas with high concentrations of hard surfaces (roofs, sidewalks, parking lots, streets, etc.) that prevent stormwater from soaking naturally into the ground.

LID is implemented at the local level through development codes, stormwater management ordinances, public educational programs, and innovation by the private sector. LID techniques to control stormwater runoff at the site include:

- Using green (vegetated) roofs (also described in the Climate Change chapter) to facilitate drainage, protect the roof, and promote healthy plant growth. An aesthetically pleasing form of LID, green roofs utilize otherwise wasted space to store and treat stormwater. The roofs are estimated to retain a quarter of an inch or more of water during most rain events, thereby reducing the amount and improving the quality of stormwater runoff. The runoff can be reduced further by the addition of a cistern, rain barrel, or some type of water container that can be used to irrigate the green roof and ground level landscaping.
- With conventional roofs, rain barrels and cisterns can be used to collect roof runoff, storing the water for subsequent irrigation.
- Increasing the use of pervious surfaces and reducing and disconnecting impervious surfaces (described elsewhere in this chapter). Methods include (in addition to using green roofs) reducing parking requirements, parking space size, and the width of streets, minimizing paved driveways and the size of driveways, and providing for sidewalk stormwater storage. (See the description of impervious surface reduction elsewhere in this chapter for more detailed information on strategies to increase the use of pervious surfaces and minimize the amount of impervious surfaces in development.)

A SAMPLING OF LID RESOURCE REPORTS

- Protecting Water Resources with Higher-Density Development (prepared by EPA and described in the Land Use Planning and Development chapter). [www. epa.gov/dced/water_density]
- Using Smart Growth Techniques as Stormwater Best Management Practices, which reviews nine common smart growth techniques and examines how they can be used to prevent or manage stormwater runoff (prepared by EPA). [www.epa.gov/dced/stormwater. htm]
- Protecting Water Resources with Smart Growth, which contains 75 policies that communities can use to protect their water quality as they grow (prepared by EPA). [www.epa.gov/dced/water_resource.htm]
- The Ahwahnee Water Principles: A Blueprint for Regional Sustainability (prepared by the Local Government Commission). [http://water.lgc.org/announcements/ water-guidebook]
- Catching the Rain: A Great Lakes Resource Guide for Natural Stormwater Management (prepared by American Rivers). [www.americanrivers.org/site/DocServer/ CatchingTheRain.pdf?docID=163]
- Rooftops to Rivers: Green Strategies for Controlling Stormwater and Combined Sewer Overflows (prepared by the National Resource Defense Council). [www.nrdc. org/water/pollution/rooftops/contents.asp]

- Conserving natural systems and the functions of those systems by using natural drainage courses, maintaining or planting natural vegetation and rain gardens, and incorporating and/or restoring wetlands, stream corridors, riparian buffers, forest areas, and other natural site elements.
- Allowing on-lot micro and depression storage, such as bio-retention areas (a plant and soil-based system through which stormwater is directed toward and allowed to filtrate into the ground), open vegetated swales, buffers, strips, and conservation areas.
- Facilitating and encouraging more compact, higher-density development (described in the Land Use Planning and Development chapter) that helps preserve open space and reduce the amount of land disturbed for development and use as impervious surfaces. Recent studies by EPA have demonstrated that, instead of having fewer impacts on water quality, dispersed low-density development can exacerbate nonpoint source pollution by converting absorbent open space into compacted lawns and increasing the amount of impervious surface with numerous driveways, parking lots, and roads. With more compact, higher-density development, less land is developed, thereby minimizing overall regional imperviousness.

In addition to using LID to reduce stormwater runoff at the site level, effective stormwater management must begin at the broader systems level, as part of a community's decisions about where and how it grows. Such a broader systems look involves using more land efficiently, which, as a result, reduces and better manages stormwater runoff by putting development where it is most appropriate and reducing total impervious areas. LID can be incorporated as part of a neighborhood and regional green infrastructure approach (described in the Land Use Planning and Development chapter) that supports an interconnected network of open spaces and natural areas (such as forested areas, floodplains, greenways, parks, and wetlands) that improve water quality while providing recreational opportunities and wildlife habitat. Another broader systems strategy involves redeveloping already degraded sites such as outdated or abandoned shopping centers (often called greyfields and brownfields and described in the Infill and Redevelopment chapter) or underutilized

parking lots rather than paving greenfield sites for new development. Redeveloping an underused paved and compacted site will reduce the net increase in runoff from development, depending on the on-site infiltration practices used.

Florida organizations providing information on LID include the Stormwater Management Academy at the University of Central Florida (www. stormwater.ucf.edu), which provided much of the information on LID in this chapter; Florida Yards (www.floridayards.org/professional/professionallandscape.php), which provides information about Florida-friendly landscape design; the University of Florida Program for Resource Efficient Communities (http://buildgreen.ufl.edu/program.htm); the Florida Green Building Coalition (http://floridagreenbuilding.org); and the Tampa Bay Regional Planning Council, which in 2004 hosted a regional conference on LID (www.tbrpc.org/livable/LID/Default.htm).

At the national level, the EPA is a resource on LID (www.epa.gov/owow/ nps/lid). EPA's Headquarters complex (www.epa.gov/owow/nps/lid/ stormwater_hq) demonstrates LID and other stormwater management and sustainable design techniques, highlighting the use of LID in high profile, urban sites that must pass through aesthetic design reviews. The site illustrates use of low maintenance/native plants, cisterns to collect and reuse runoff, biorentention cells, permeable pavers and concrete, and biofilters (often called rain gardens). Two other principal resource organizations on LID are the Low Impact Development Center (www. lowimpactdevelopment.org) and Builders for the Bay, one of the first LID initiatives in the country. In conjunction with the Center for Watershed Protection (www.cwp.org) and the National Association of Home Builders (www.nahb.org), Builders for the Bay developed 22 better site design principles that reduce the environmental effects of residential and commercial development. The National Homebuilders Association also publishes the Municipal Guide to Low Impact Development (www.toolbase.org/PDF/DesignGuides/Municipal_LID.pf).

C Additional information on Low Impact Design is available from American Forests [www.americanforests.org] that, through its GIS CityGreen software, demonstrates how trees reduce stormwater flow and how natural systems can play an important role in stormwater management; the Local Government Assistance Network [www.lgean.org]; the Low Impact Development Center [www.lowimpactdevelopment.org]; and the U.S. Army Corps of Engineers Jacksonville [www.saj.usace. army.mil]. City resources include the City of Emeryville's <u>Stormwater Guidelines for</u> <u>Green, Dense Redevelopment</u> published in 2006 [www.epa.gov/dced/emeryville.htm], Portland Metro's <u>Green Streets: Innovative Solutions for Stormwater and Stream Crossings</u> [www.metro-region.org/article.cfm?articleID=262]

Regional Water Supply Plans

Recognizing the importance of an adequate water supply to the state's future, the Florida Legislature established a process for water supply planning. Outlined in Florida's Growth Management Act and the Water Protection and Sustainability Program (Chapter 163, Part II, and Chapter 373, respectively, of the Florida Statutes), the state's five water management districts are required to periodically (at least every five years) evaluate whether adequate water supplies exist to meet the needs of their areas for the next 20 years. If, based on the assessment, a district determines that the water sources are not adequate to meet the future needs of an area, it must prepare a 10-year regional water supply facilities work plan for those areas. The plan must show how water supply needs can be met for the next 20 years. It also must identify alternative water supply projects (for example, increased water reuse and conservation programs) that the local government will implement to meet existing and future development needs and will incorporate into its comprehensive plan. (The Department of Community Affairs [DCA] requires that local governments submitting comprehensive plan amendments demonstrate that water supplies are sufficient to support development.) Four of Florida's five water management districts have determined that the traditional water supply sources will not be sufficient to meet the 20-year demands of a growing population and the needs of the environment, agriculture, and industry. (The Suwannee River Water Management District has decided that traditional water supplies will be sufficient.) In addition, all local governments must address water supply in their concurrency management programs. (Section 163.3180(2)(a) of the Florida Statutes requires local governments to consult with water suppliers to ensure that adequate water supplies will be in place and available to serve new development no later than when the local government issues a certificate of occupancy or its functional equivalent.) To help local governments through the process, the Florida Department of



SOUTH FLORIDA WATER MANAGEMENT DISTRICT (SFWMD) REGIONAL WATER SUPPLY PLAN

The SFWMD develops a long-term comprehensive regional water supply plan for the four planning areas (generally defined by hydrologic divides) in its 16,164-square mile service region: the Lower West Coast, Lower East Coast, Upper East Coast, and the Kissimmee Basin. The plans, which serve as a resource for local comprehensive and utility plans, are designed to ensure that adequate water facilities are available for the next 20 years. A principal plan strategy is to emphasize the development of alternative water supply projects that will enable the region to accommodate increased water supply demand while reducing the demand on surficial water supplies and water for the environment. Alternative water supply strategies focus on the use of deep aquifers, such as the Floridian Aquifer and reclaimed, treated waste water instead of relying on surficial acquifers and lakes which are easily depleted during times of drought. The result is a more reliable source of water and decreased demand on surface water systems. For example, in the highgrowth Upper East Coast Planning Area where the population is projected to increase 80 percent and water withdrawal demand 20 percent, water will primarily be developed from alternative water supplies, including brackish groundwater resources, surface water captured during wet weather, and expanded reclaimed water systems. (More information on the South Florida Water Management District's Regional Water Supply Plan is available from www.sfwmd.gov/watersupply.)

Community Affairs provides A Guide for Local Governments in Preparing Water Supply Comprehensive Plan Amendments and Water Supply Facilities Plans (www. dca.state.fl.us/fdcp/dcp/WaterSupplyPlanning/index.cfm). The guide describes the provisions of the comprehensive plan amendments required to comply with the new water supply planning requirements.

For more information on Florida's regional water supply plan requirements, go to the Florida Department of Community Affairs [www.dca.state.fl.us/fdcp/dcp/WaterSupplyPlanning], the Florida Department of Environmental Protection [www.dep.state.fl.us/ water/waterpolicy/rwsp.htm], and Florida's water management districts [www.dep.state. fl.us/secretary/watman].

Source Water Protection Overlays

Source water protection overlay zones are used to protect the current and future supply and quality of a community's water resources. The overlay zone, which overlays the existing zoning, supplements and prevails over the underlying zone. The zone is designated on a map adopted by a local government as part of its zoning and land development regulations. Two techniques to protect water resources are a Water Supply Watershed Overlay Zone, which is used to protect surface water by restricting development around a reservoir or other water body, and a Wellhead or Aquifer Protection Overlay Zone, used to protect groundwater, including aquifers, aquifer recharge areas, and wellheads. The overlay zones regulate activities, including land use and development practices, within the zone to reduce the potential for groundwater contamination and conserve natural resources. Because watersheds often cross more than one governmental jurisdiction, protection techniques may need to involve a partnership among a number of local governments and agencies.

Effective water protection overlay zones share a number of features, one of which is defining the area to be protected on a large enough scale to ensure that the entire source water recharge zone is protected. For surface water, that means the size of the area should be sufficient to protect the source water resource as well as the streams and other water sources that contribute to the resource. For groundwater, the overlay zone should be large enough to include, in the case of an aquifer, the entire aquifer recharge area. Another feature is to provide clear descriptions that specify allowable (and prohibited) land uses and activities within the zone to be protected (for example, the storage and handling of hazardous materials, the disposal of solid



SPECIAL DEVELOPMENT ZONES (SDZS)

Leon County and the city of Tallahassee use SDZs as overlays designed to regulate development that impacts designated waterbodies. The zones are determined by elevations unique to each watershed. Land disturbances are inversely proportional to proximity to the waterbody. Most waterbodies have two zones: Zone A, which typically restricts development to a maximum of 4,000 square feet of disturbance, and Zone B, which requires that 50 percent of a lot must be kept natural. The SDZs also require that shoreline vegetation be maintained in its natural state. More recently, Leon County adopted a SDZ for Lake Lafayette that addresses tributaries to the lake in addition to buffering the primary waterbody. Leon County and Tallahassee also protect Lake Jackson through a Lake Protection Zoning District, which allows passive and active recreational uses, community services, and low density residential uses (at one unit per two acres or two units per gross acre if clustered on 25 percent of the property with the balance placed under a conservation easement). Existing non-residential uses are considered conforming if they meet all applicable water quality standards. Industrial land uses are prohibited, although minor commercial and minor office may be permitted. (More information on the Leon County and Tallahassee water body protection programs is available from the Planning Department's Comprehensive Plan website [www.talgov.com/planning/pdf/ compln/conserv.pdf].)

waste, use of septic tanks, allowed land uses, and acceptable development and agricultural practices). An effective ordinance should also contain specific procedures and criteria for reviewing proposals that potentially impact water resources and for enforcing ordinance requirements.

Description was taken from the U.S. Environmental Protection Agency website [www.epa.gov/owow/nps/ordinance/sourcewater.htm]. For additional information on water protection overlay zones and plans in Florida, go to the Florida Department of Environmental Protection [www.dep.state. fl.us/mainpage/programs/water.htm].

Springs Protection Planning

Florida's springs provide multiple natural, recreational, and economic benefits for residents and visitors. Geologists estimate that there are more than 700 springs (33 first magnitude springs) in Florida, representing the largest concentration of freshwater springs on earth. The U.S. Geological Survey estimates that eight billion gallons of ground water discharge daily from Florida springs. Over 90 percent of the potable water used by Florida's residents comes from ground water sources, with the Floridan aquifer supplying over 60 percent of the state's fresh water and producing more than half the total potable supply. The quantity and quality of water discharging from Florida's springs, however, is a growing concern. The quality of spring water affects the ecological conditions present in spring-fed, riverine systems and associated nearshore waters. The quality of water entering the ground and springs is influenced by human activities on the land within a watershed and ground water recharge basin or springshed for each spring. Of particular concern statewide are increased pollutants in groundwater from wastewater, fertilizers, and stormwater runoff. Elevated concentrations of nutrients, specifically nitrates-nitrogen, in groundwater discharging from Florida's springs were first recognized in the mid-1980s through a water-quality study conducted by the U.S. Geological Survey and the Florida DEP. The major sources of nitrogen loading, the studies concluded, were septic tank systems or the disposal from municipal processing facilities and residential and agricultural use of inorganic fertilizer.

Recognizing the pressures facing Florida's springs, in 1999 the Florida DEP convened the Florida Springs Task Force to develop spring protection and restoration strategies. The resulting report, released in 2000, identified a wide variety of outreach, information, management, and funding strategies for all levels of



MARION COUNTY SPRINGS PROTECTION PROGRAM

Recognizing the decline in the quality of the water coming from their springs (the county's dominant source of portable water and a multi-million dollar tourist attraction), in 2005 the Marion County Board of County Commissioners initiated a Springs Protection Program. Initial efforts focus on the county's two largest first-magnitude springs (Silver and Rainbow) that feed the Silver and Rainbow Rivers (both designated as Outstanding Florida Waters because of their diverse ecosystems). Because of high population growth and the conversion of agricultural land to residential, commercial, and transportation uses, the waters from the springs contained increased nitrate concentrations and trace pollutants from fertilizers, domestic wastewater disposal, and stormwater runoff within the spring recharge areas. To correct those problems, the Springs Protection Program contains three major elements:

- Development of sound scientific information to define Spring Protection Zones and protection strategies.
- Establishment of a legal and administrative framework to implement Spring Protection Zones and related standards through the comprehensive plan and land development regulations. Strategies include prohibited or restricted land uses and activities and management of nutrients, domestic waste, and storm water.
- A springs protection public education and awareness program, including best management practices for farms and golf courses.

In recognition of its land use planning efforts, the Marion County Board of County Commissioners was presented with the Florida DEP's Florida Springs Protection Award. (More information on Marion County's springs protection program as part of a comprehensive growth management strategy is available from www.marioncountyfl.org/pl271/pl_wrams/pl_waterrptpublic.htm.)

spring protection. Since 2001, the Florida Legislature has provided funding to DEP for springs protection and restoration through monitoring, research, education and outreach, and restoration assistance to landowners, including work within the Florida park system. One of the funded projects was the development of the best management practices manual, Protecting Florida's Springs – Land Use Strategies and Best Management Practices, detailed below and the primary source of spring protection strategies summarized in the next paragraph. In addition to the study of the state's springs, state strategies have focused on developing best management practices to help protect water resources and supporting the acquisition of land. Successes include the conservation of almost 27,000 acres of spring recharge area, including more than 4,000 acres of land around Wakulla Springs, one of the largest and deepest artesian springs in the world. To ensure the continued health of a spring, the Springs Initiative engages the local community through local springs working groups composed of the spring basin's stakeholders, including agricultural and commercial interests, environmental organizations, citizens, landowners, and agencies having information or responsibilities related to the function of a spring recharge basin.

The key finding of the Florida Springs Task Force was that the state's springs are as healthy as their recharge basin or springshed (the land areas that provide their water) and that the activities within that springshed can adversely impact the quantity and quality of the ground water, in turn impacting the health of the spring (both the water flow and quality) and related ecosystems. As noted in *Protecting Florida's Springs – Land Use Strategies and Best Management Practices*, "the nature and magnitude of water quality threats to a spring vary according to land use practices and the geology within each springshed." Steps outlined in the manual to protect springs include the following:

- Adopt a local resolution of support for springshed protection.
- Establish a broad-based working group or technical advisory committee to help gather and analyze information and develop consensus around a springshed protection program.
- Map spring resources and collect data on spring conditions and the impacts of current and future land uses on water resources.

- Select the most acceptable and effective land use management standards to reduce nutrients and other pollutant inputs and minimize impacts from land uses.
- Use Florida's comprehensive planning process (the foundation of any city or county land management activity) to the best effect, including identifying and adopting springshed overlay protection zones as part of a community's comprehensive plan. Appropriate land uses should be designated within the zone, using a gradient approach by establishing a tier of zones (e.g., primary, secondary, and tertiary). (Overlay zones are described in the Land Use Planning and Development chapter.)
- Use other planning tools, such as the transfer of development rights (described in the Agricultural Land Conservation chapter) and conservation development (described in the Natural Systems Conservation chapter) to direct development and inappropriate land uses away from sensitive areas and toward more appropriate ones. Strategies include locating less intense, low pollutant-generating land uses (for example, conservation lands, parks and open space, and low intensity silviculture) nearer the spring in a primary zone, and siting land uses with greater potential to contribute pollutants further away from the spring in a designated secondary zone.
- Use acquisition (both fee and through the purchase of development rights) and conservation easement strategies to protect the most sensitive areas. (Acquisition, purchase of development rights, and conservation easements are described in the Agricultural Land Conservation chapter.)
- Limit development impacts through appropriate site design and sensitive landscaping and management strategies and the use of effective erosion and sediment controls. Other strategies include reducing and improving the quality of stormwater run off (for example, by using less impervious pavement, described in the Water Resource chapter, and more compact and low impact development, both described in the Land Use Planning and Development chapter).
- Establish specific planning and best management practices for uses such as golf course, public recreation, and agriculture.
- Establish a voluntary stewardship program that offers incentives for implementing springshed protection practices.

- Develop an ongoing management structure to implement and monitor the springshed protection program.
- In order to build support for springshed protection, educate landowners and the public about springsheds and their vulnerabilities.

DEP has two websites (www.dep.state.fl.us/springs and www.floridasprings.org) that offer comprehensive information about Florida's springs, including threats and what citizens can do to protect the springs. The 2000 Springs Task Force report, Florida's Springs: Strategies for Protection and Restoration, can be accessed at www.dep.state.fl.us/secretary/info/pubs/FlSprings.PDF. 1000 Friends of Florida's website includes the manual, Protecting Florida's Springs - Land Use Strategies and Best Management Practices (www.1000fof.org/emas/floridasprings.asp), prepared for the Florida Department of Community Affairs (DCA) and the Florida DEP. The manual, which received a 2007 National Planning Excellence Award for Best Practice from the American Planning Association, is designed to assist regional and local planners as they formulate approaches to protect springs from the pressures of growth and development. As most of Florida's springs are located north of the I-4 corridor of central Florida, the manual focuses on that area's springsheds. Chapters address comprehensive planning strategies, managing development impacts, golf course siting, design and management, agriculture and silviculture, and public recreation. An additional resource is Protecting Florida's Springs: An Implementation Guidebook, which will be available from DCA in the spring of 2008.

Description of the information for the description of spring protection plans and their importance was provided by the Southwest Florida Water Management District, which in 2001 published <u>The Hydrology and Water Quality of Select Springs in the Southwest Florida Water Management District</u> [www.swfwmd.state.fl.us/documents/reports/springs.pdf]. Additional information on spring protection plans is available from Florida's water management districts [www.dep.state.fl.us/secretary/watman] and Florida's Springs [www.floridasprings.com].

Watershed Management Plans

The purpose of a watershed management plan is to ensure an environmentally healthy watershed, generally defined as the land area that drains into a particular body of water (a stream, river, lake, or ocean). The approach recognizes that water quality and ecosystems are most often addressed at the watershed, rather than



THE BAY AREA RESOURCE COUNCIL (BARC)

The Pensacola Bay is a two-state (Florida and Alabama), multicounty (in Florida, Escambia, Okaloosa, Santa Rosa, and Walton counties) basin. The BARC was formed in 1987 to improve the area's quality of life and the Bay waters through an interlocal agreement that now includes Escambia and Santa Rosa counties and the cities of Pensacola, Gulf Breeze, and Milton. BARC enters into agreements with public and private organizations to assist in planning, financing, and managing the physical, chemical, biological, economic, and aesthetic aspects of the Bay system; share information for local planning purposes; and develop a Bay restoration program. A Citizens Advisory Committee discusses issues of interest to the general public and a Technical Advisory Committee (composed of scientists) gathers and evaluates trend information related to the health of the bay, develops annual goals, and identifies projects. The West Florida Regional Planning Council serves as BARC staff. (More information about the BARC is available from www.wfrpc.dst.fu.us/barc/barc.htm.)

the individual waterbody, level. Because most watersheds cross political boundaries and are made up of human, animal, and plant life, watershed planning typically involves a broad base of public and private stakeholders in a joint partnership to develop and implement a coordinated watershed planning and management framework. Typical steps involved in preparing a watershed management plan include using sound scientific practices to develop a clear understanding of the natural, social, and economic features of a watershed, prioritizing problems, and establishing a set of goals and objectives (for example, protecting or improving water quality or restoring or protecting habitat) and an agreed-upon set of regulatory and voluntary integrated management strategies that maximize the expertise and authority of participating agencies, followed by implementing the strategies and monitoring progress.

In Florida, the primary state resource on watershed management planning is DEP's Division of Water Resource Management, which is responsible for preserving and maintaining the quality of Florida's waters. The division is working on a more comprehensive approach to protecting the water quality, recognizing both the beauty of the state's rivers, streams, and lakes and their importance to supplying the water necessary for public consumption, recreation, industry, agriculture, and aquatic life and the increasing demands on those water resources caused by rapid growth and new uses. The heart of this comprehensive approach is the Total Maximum Daily Load (TMDL). Because TMDLs establish the maximum amount of a pollutant that a water body can assimilate without exceeding water quality standards, they are an important step toward restoring the state's waters to their designated uses. Additional information on the TMDL program is available from www.dep.state.fl.us/water/tmdl/index.htm. At the regional level, Florida's water management districts serve as the primary source of information on watershed management plans. One of the tools available to them is the Surface Water Improvement and Management Program (SWIM). Created by the Florida Legislature in 1987 to protect and restore the state's surface waters, SWIM grew out of the concern that, although point pollution sources (for example, from industrial wastes or sewage) were being controlled, actions based on water resource restoration and protection plans were needed to restore waterbodies and help address indirect (nonpoint) sources of pollution. SWIM plans are used to guide water protection activities and help state and local agencies make land use management and acquisition decisions.

De More information on watershed management planning is available from a number of sources, including, at the national level, the U.S. Department of Environmental Protection [www.epa.gov/owow/watershed], which publishes a watershed planning handbook and sponsors a watershed academy; the U.S. Department of Agriculture Natural Resources Conservation Service [http:// wmc.ar.nrcs.usda.gov/technical/watershed.html], which offers watershed planning assistance, consultation, and training; and the Center for Watershed Protection [www.cwp.org], which publishes a self-assessment tool that can be used to make better decisions about watershed restoration priorities and determine how a community compares to others. In Florida, watershed planning and SWIM information is available from the Florida Department of Environmental Protection [www.dep.state.fl.u/water/watersheds/index.htm] and [www.dep.state.fl.us/water/watersheds/swim.htm], respectively; Florida's water management districts [www.dep.state.fl.us/secretary/watman]; and the University of Florida Institute of Food and Agricultural Sciences [http://edis. ifas.ufl.edu/AE265].



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