Trees & Plants:
Actions and Resources

Trees and plants on private and public land provide the entire community with benefits. Many towns and counties have taken steps to both protect and increase their tree canopy and other greenscapes within and around their jurisdictions.

Avenues for Action

Local governments can consider the following steps to maintain or increase the benefits they receive from plants in their communities:

- Protect forests.
- Take inventory of natural resources and develop a conservation plan and actions.
- Require or encourage stormwater ponds to have wetland features.
- Adopt a tree ordinance.
- Limit development in riparian areas.

- Establish open or green space requirements in new development.
- Require or encourage low impact development and conservation subdivisions.
- Conduct environmental reviews and require impact minimization for new developments.
- Promote and provide incentives for voluntary planting of trees and shrubs.
- Green the streets by adding trees and shrubs.
- Encourage green roofs on new and existing buildings.

As seen below, Currituck County is taking steps to increase vegetation around stormwater ponds. Planted in July 2010, and after only three months of growth, a new wetland feature, buffer and small garden area at the Currituck County Cooperative Extension center have improved stormwater treatment and turned the previous eyesore into an amenity for the site. (Photos: Gloria Putnam/North Carolina Sea Grant)

Communities in Action

Hilton Head Island, S.C., has a Land Management Ordinance that includes provisions for saving and re-establishing native vegetation. It includes standards for open space, wetland buffers and buffers between adjacent land use. The ordinance also specifies requirements for tree and native vegetation removal and replacement, and establishes a tree-mitigation fund.
http://library.municode.com/index.aspx?clientId=14271&stateId=40&stateName=South%20Carolina

The **City of Raleigh, N.C.**, has a tree-planting program for residential neighborhoods. All trees are purchased with donations and must be planted in the right-of-way as a street tree. Residents must agree to water and mulch them for two years.
www.raleighnc.gov/government/content/PRecParks/Articles/NeighborWoodsProgram.html

Chatham County, N.C., created an Environmental Board and a review process for new development to minimize impacts to natural resources through site design. The board establishes minimum triggers for environmental impact assessments for proposed residential subdivisions and commercial and industrial developments.
www.chathamnc.org/index.aspx?page=379

Communities in southern **Beaufort County, S.C.**, developed a Natural Resources Element for the County's Comprehensive Plan. It provides recommendations for baseline standards for protecting critical natural resources, including forests and wetlands.
www.co.beaufort.sc.us/ **(Search for "Comprehensive Plan")**

Tree ordinances can go a long way to preserve existing vegetation in new development. The two nearly identical retail buildings pictured below were built in different communities in South Carolina. The building's parking lot on the left was developed under Hilton Head Island's Tree Ordinance which resulted in significant retention of trees. The one on the right was first clearcut. (From a presentation by Sally Krebs, Natural Resources Administration, Hilton Head Island, S.C., Feb. 23, 2010. Images from Google Earth, retrieved Dec. 14, 2010.)

Resources

The following resources provide information, tools and training for local governments seeking to use vegetation to enhance their community:

CITYgreen
American Forests
www.americanforests.org/
productsandpubs/citygreen

CITYgreen is a geographic information system (GIS) application produced by the nonprofit organization American Forests and is used to calculate dollar benefits of ecosystem services provided by a community's forests. Designed for local government staff and citizens groups, it can be purchased from American Forests. The tool calculates dollar benefits of services for stormwater runoff, air quality, summer energy savings, carbon storage, sequestration and voided emissions.

Forest Legacy Program
**N.C. Department of Environment
and Natural Resources
Division of Forest Resources**
www.dfr.state.nc.us/fsandfl/what_is_
forest_legacy.htm

Created by Congress in the 1990 Farm Bill, the Forest Legacy Program helps landowners, state and local government, and private land trusts identify and protect environmentally important forestlands that are threatened by present and future conversion to nonforest uses. The program has been used in North Carolina to purchase development rights to environmentally important working forests to protect them in perpetuity. To be considered for the program, properties must be within designated Forest Legacy Areas, which include the Lower Cape Fear and Lower Lumber regions; the New, White Oak and Lower Neuse complex; and the Tar and Lower Roanoke rivers region.

Forestry Extension Community Forestry Program
North Carolina State University
Department of
Forestry and Environmental Resources
www.ces.ncsu.edu/forestry/programs/community_
forestry.php

The Community Forestry program, part of the Forestry Extension Program in North Carolina State University's Department of Forestry and Environmental Resources, provides free educational opportunities and information to communities about local tree regulations including construction and tree protection, tree ordinances, zoning and landscaping ordinances, and environmental provisions that impact trees.

Green Growth Toolbox
N.C. Wildlife Resources Commission
www.ncwildlife.org/greengrowth/

This toolbox was created through a cooperative, non-regulatory effort led by the Wildlife Diversity program of the N.C. Wildlife Resources Commission to help communities protect their natural resources. The toolbox consists of a handbook and a GIS data package. Local governments can enroll in day-long training workshops and receive follow-up technical guidance.

Growing Greener, Putting Conservation into Local Codes
Pennsylvania Department of Conservation and Natural Resources
www.dcnr.state.pa.us/growinggreener/
growinggreener.htm

This document, prepared by several organizations in Pennsylvania, shows local governments how they can use the development process to protect green infrastructure, especially through conservation zoning and conservation subdivision design.

i-Tree
U.S. Department of Agriculture
Forest Service
www.itreetools.org

i-Tree is a state-of-the-art, peer-reviewed software suite from the U.S. Department of Agriculture (USDA) Forest Service that provides urban and community forestry analysis and benefits assessment tools. i-Tree can be used by communities of all sizes to strengthen their urban and community forest management efforts.

North Carolina Coastal Land Trust
www.coastallandtrust.org/index.jsp

This nonprofit organization was formed in 1992 to help protect locally and regionally valuable natural areas and waters through the acquisition of open space and natural areas, conservation education and the promotion of good land stewardship. The Trust is active throughout the Coastal plain of North Carolina, along beaches, river corridors, farms, forests and marshes, sandhills, savannas, and public parks and greenways.

Recreation Resources Service
North Carolina State University
College of Natural Resources
www.cnr.ncsu.edu/rrs/

This technical assistance program is offered through a cooperative partnership between the N.C. Division of Parks and Recreation and the North Carolina State University Department of Parks, Recreation and Tourism Management. Support activities include assisting with the establishment of new parks and recreation departments, organizing and training new parks and recreation advisory boards, developing grant applications, and conducting workshops. The Service may be available to assist in conducting special studies for communities.

Talking Trees –
An Urban Forestry Toolkit for Local Governments
International Council for
Local Environmental Initiatives
www.urbanforestrysouth.org/resources/library/
talking-trees

Produced by the International Council for Local Environmental Initiatives, this toolkit communicates the benefits of the urban forest. It also provides a policy guide, an assessment of software tools, and a protocol to illustrate how cities can achieve healthy urban forests.

The Nature Conservancy
www.nature.org/wherewework/
northamerica/states/northcarolina/

The Nature Conservancy strives to preserve plants, animals and natural communities. It can work with stakeholders to encourage stewardship through land acquisition.

TREECity USA®
Arbor Day Foundation
www.arborday.org/programs/
treeCityUSA/index.cfm

The Tree City USA® program, sponsored by the Arbor Day Foundation, provides direction, technical assistance, public attention and national recognition for urban and community forestry programs. It promotes land acquisition, fee-simple acquisition, conservation easements, regulatory approaches, zoning, and conservation and mitigation banking. It also encourages use of voluntary mechanisms and financing tools — such as notification and recognition, tax incentives and tax credits — and provides technical assistance and management agreements and leases.

Urban and Community Forestry Program
N.C. Department of Environment & Natural
Resources, Division of Forest Resources
www.dfr.state.nc.us/Urban/Urban_Forestry.htm

This program provides technical and educational assistance regarding community forest inventories and management plans; community and county tree ordinances; grant project implementation; becoming a Tree City

USA®; and proper tree selection, installation, care and maintenance. The program also distributes educational information and conducts training workshops on these issues. The primary focus is to assist towns, cities or counties. To qualify for technical assistance, municipalities must be incorporated with a population of fewer than 50,000.

This group also administers the Urban Forestry Grant Program. Awarded annually through the USDA Forest Service, funds can be used for activities such as establishing demonstration projects that illustrate the benefits of forest cover and trees; solving a specifically described problem; and enhancing technical skills of individuals involved in the planning, development and maintenance of urban and community forests. First-time municipal applicants and municipalities seeking Tree City USA® status are given funding priority.

Your link to
research and resources
for a healthier coast

North Carolina Sea Grant
NC State University
1575 Varsity Dr., Varsity Research Bldg., Module 1
Campus Box 8605, Raleigh, NC 27695 - 8605
Phone: 919/515-2454

Other pieces in the Sustainability Series *are available at* www.ncseagrant.org. *For more information on specific topics, coastal communities should contact Gloria Putnam of North Carolina Sea Grant at* gloria_putnam@ncsu.edu *or 919/513-0117.*

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