

Natural Resources Element

Overview

The natural resources of the Summerville Planning Area continue to be a vital asset to residents and visitors to the area. Tourists continue to be attracted to lands along the Ashley River and to the tree-lined areas of the Old and New Town areas within the Town limits. The Town of Summerville, in conjunction with various government agencies and private landowners, continues to work to protect and enhance these natural resources. By doing so, this will help to improve the quality of the resources and the quality of life for the residents of the Planning Area. In the period since the 1999 Comprehensive Plan was approved, there have been some changes to the Town's relationship to its natural resources, both within the Town limits and inside of the Planning Area. These changes are described in this element.

The Land

Since 1999, the Town has added approximately 4 square miles of land. The soil types present on these lands are similar to the lands that were in the Town at the time of the 1999 Comprehensive Plan adoption.

The Water

Ashley River Watershed

In 1998, the State General Assembly designated 22 miles of the Ashley River, extending from Route 17A near Summerville to the Mark Clark Expressway (Interstate 526) in Charleston County, as a State Scenic River. As a result of this designation, in conjunction with the South Carolina Department of Natural Resources, the Ashley Scenic River Advisory Council was formed in 1999, and began a nearly three year planning process for the *Ashley Scenic River Management Plan*, approved in 2003.

The completed plan detailed four major goals and gives a number of recommendations for the management of the Ashley River Scenic Corridor, including sections of the Planning Area along the Ashley River. These recommendations address water quality, recreational use and access, preservation and conservation, and land management and development. The Town of Summerville has worked closely with the Advisory Council to implement the recommendations included in the *Ashley Scenic River Management Plan*. The Town also worked closely with Dorchester County in creation of the Ashley River Historic Overlay District in 2007.

Water Quality

Because of the presence of the Ashley River, a designated State Scenic River, at the western end of the Summerville Planning Area, water quality is an important factor for Summerville and its residents. Water quality in a community is impacted by the creation of impervious surfaces, such as asphalt, concrete, and man-made structures that prevent the percolation of rainwater into the soil. These surfaces divert

subsurface flow to surface runoff, resulting in soil erosion, flooding, and an overall decrease in water quality. Water becomes polluted as it moves across impervious surfaces, picking up oils, debris, and other residues along its way, polluting the water body that it runs into.

There are several techniques that communities can use to improve water quality along watershed areas. These options range from policy options that limit development near key water bodies, allowing development to be shifted on a property by allowing denser development on a section of a property in exchange for protecting vulnerable watershed areas to mechanisms that permanently protect the land. Additionally, numerous site design mechanisms can be utilized to limit potential impacts to a watershed area, several of which have been recommended as strategies in the Future Land Use and Priority Investment Areas Elements. These items are indicated in Table NR1 on this page.

Table NR1: Techniques to Improve Water Quality	
Financing Techniques	
Impact Fees	Development impact fees can be imposed and applied toward provision of public facilities, including common stormwater facilities
Tax Increment Financing	TIF funding can be used by communities and developments to fund localized stormwater management improvements.
Compact Development and Land Preservation Techniques	
Conservation Easements	Conservation Easements ensure that a property is maintained in its natural state or present use
Purchase of Development Rights	The purchase of development rights on key parcels allows the individual landowner to sell their development rights to a local government. This allows the landowner to continue to use the land, while eliminating the potential for future development and at the same time keeps the property on the local tax rolls.
Transfer of Development Rights	The transfer of development rights allows an owner of real property to sell or exchange the development rights associated with a property in an identified conservation or "sending" area to another owner of a property in a "receiving area" slated for future development. Summerville has previously identified the implementation of a TDR program as Strategy Three in the Priority Investment Area Element.
Compact Development	A town's zoning and land use regulations should provide the flexibility to permit a reduction in the otherwise applicable lot size requirements to preserve substantial open space on the remainder of a property
Urban Growth Boundary	Urban Growth Boundaries are officially adopted and clearly mapped lines around urban areas that divide land uses into areas to be developed and areas to be protected for rural areas. This has been utilized by Charleston County in the metro Charleston region.

Zoning Techniques	
Land Use	Compatible and functionally related land uses may reduce dependence on automobiles and the impervious cover they require.
Density Bonuses	Development that voluntarily meets certain performance standards above and beyond the minimum standards set forth in a community's zoning and land use regulations may be allowed to build at a greater density within the project area than otherwise allowed.
Density Zoning	Density Zoning Regulations are land use regulations that look at the development intensity on the site as a whole, rather than the minimum lot size requirements, allowing for compact development while protecting key natural features on a site.
Infill Zoning	Infill Zoning promotes dense development of various land uses in and adjacent to existing development where infrastructure already is in place. The Future Land Use Element recommends strategies related to infill zoning in several sections of the Summerville Planning Area.
Overlay Zoning	Overlay zones are zoning districts that impose or relax an additional set of requirements on an underlying zoning district to address localized needs. Overlay zones have been recommended as part of the developing a master plan for the five Priority Investment Areas identified in the Priority Investment Areas Element
Watershed Based Zoning	Watershed based zoning uses use subwatershed boundaries for future land use decisions.

Sources: Taming Stormwater Toolbook, BCDCOG

Floodplains

The Berkeley Dorchester Hazard Mitigation Plan, originally passed in 2004 and updated in 2010, shows that due to the setting of much of the Planning Area on sand hills at a higher elevation than in most of the metro Charleston region; most of Planning Area is not located in the 100-year floodplain. However, a portion of the Summerville Planning Area located near the Ashley River is located within the floodplain area. More importantly, due to the large amount of development that has taken place in within the Summerville Planning Area over the last 40 or so years and the subsequent amount of impervious surfaces that have been created by the development, a number of sections of the Planning Area are susceptible to flash flooding.

In order to limit the impact of development to floodplain areas and watersheds, property owners and residents can utilize several methods of mitigation. Some of these are:

Rain gardens are designed to limit storm water impacts to the regional system at the local level through garden design and the utilization of plants that can withstand a variety of water conditions. In concert with this, property owners can also utilize rain barrels or cisterns to collect rain water for use at a later time. An example of a rain garden is seen in Figure NR1.

WOODLAND RAIN GARDEN

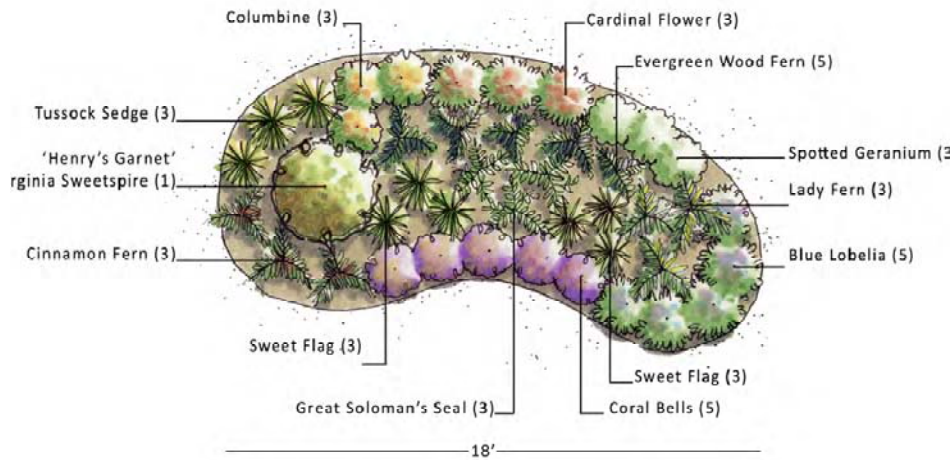


Figure NR1: An Example of a Rain Garden.

Source: Rain Gardens, a Rain Garden Manual for South Carolina, Clemson Cooperative Extension

Green Roofs



Figure NR2: Furman Office Building, Greenville SC.

Photo Courtesy: Greenroofs.com; **Source:** Ralph P. Velasquez

Another method that can be used to mitigate storm water impacts are so-called green roofs. These roofs utilize plantings and soil to both limit the effects of heating and cooling on a building and to help mitigate the storm water impacts of an otherwise impervious surface. Depending on the type and depth of a green roof and the design of the roof structure, this area can also be used for recreational and functional uses as well. An example of a green roof is shown in Figure NR2.

The Air

Air Quality

Since the approval of the Town's Comprehensive Plan in 1999, growth and development both within the Summerville Planning Area and within the metro Charleston region has continued to have an impact on air quality. As of September 2010, the metro Charleston region, including Dorchester County, is

considered to be in compliance under the current federal air quality regulations. However, if stricter standards for air quality were passed in the near future, the region's compliance would be imperiled.

South Carolina and Charleston continue to enjoy some of the best air quality in the US. This is due, in part, to the ocean breezes that help to sweep away ozone, particulate matter, and carbon monoxide. Updated air quality standards are currently being proposed at the federal level that would lower the maximum amounts of ozone in the air. If this occurs, the new regulations may require mitigation measures to take place across the metro Charleston region. Local governments are currently considering a number of mitigation measures related to transportation and industrial impacts to the region's air quality to achieve this objective.

All three counties in the metro Charleston region are participating in a voluntary Early Action Compact program administered by the US Environmental Protection Agency. In this program, participating areas help to determine what actions can be taken at the state and local levels to ensure compliance with federal ozone standards before the federal deadline to do so.

The Living Environment

Wildlife, Habitat, and Vegetation

Table NR2 is an updated list of the federal and state endangered and threatened species of wildlife and vegetation that are present in the Summerville Planning Area.

Invasive Species

While many plant species that are non-native to the Lowcountry have benefitted Summerville over the years, including the azaleas that decorate many of the streets and parks within Summerville, other plant and animal species have become a concern to residents of the metro Charleston region. While many of these species were introduced accidentally into the local ecosystem through shipping activities at the Port of Charleston and other US ports, others were intentionally introduced to the area. Some invasive plant species were introduced for ornamental use in area gardens, while other (mostly animal) species were introduced in order to control the population of so-called nuisance pests. Because of a variety of factors, including a lack of natural local predators and the ability to of these species thrive in the conditions present in Summerville and other areas of South Carolina, many invasive species have become a threat to the natural ecosystem of the Lowcountry. Invasive plant and animal species have damaged local ecosystems, eliminating key habitat areas for native animals and starving native vegetation of resources, including water and sunlight. Every effort should be made for residents and businesses to continue to eradicate these species. A listing of invasive plant and animal species that may be present in the Summerville Planning Area is included as Table NR3.

**Table NR2 : Endangered Plant and Animal Species
in the Summerville Planning Area**

Species Name	Common Name
Agalinis tenella	
Asplenium resiliens	Black-stem spleenwort
Carex basiantha	
Carex cherokeensis	Cherokee sedge
Carex granularis	Meadow sedge
Carex oligocarpa	Eastern few-fruit sedge
	Carolina bay
	Colonial waterbird
Coreopsis gladiata	Southeastern tickseed
Corynorhinus rafinesquii	Rafinesque's big-eared bat
Elanoides forficatus	American swallow-tailed kite
Eleocharis vivipara	Viviparous spike-rush
Epidendrum conopseum	Green-fly orchid
Gopherus polyphemus	Gopher tortoise
Haliaeetus leucocephalus	Bald eagle
Heterodon simus	Southern hognose snake
Ilex amelanchier	Sarvis holly
Limnothlypis swainsonii	Swainson's warbler

Species Name	Common Name
Listera australis	Southern twayblade
Magnolia macrophylla	Bigleaf magnolia
Menispermum canadense	Canada moonseed
Myotis austroriparius	Southeastern myotis
Neotoma floridana	Eastern woodrat
Picoides borealis	Red-cockaded woodpecker
Pilea fontana	Springs clearweed
Plantago sparsiflora	Pineland plantain
Ponthieva racemosa	Shadow-witch orchid
Pseudacris triseriata	Western chorus frog
Pteroglossaspis ecristata	Crestless plume orchid
Rana capito	Gopher frog
Trillium pusillum var pusillum	Least trillium
Xyris stricta	Pineland yellow-eyed grass
Source: USDA National Agricultural Library	

Table NR3: Partial Listing of Invasive Species Reported in the Summerville Planning Area

Animal Species	
Name of Species	Invasive Because?
Asian Citrus Psyllid	Damages citrus plants by feeding on sap; serves as a vector for citrus greening disease, which causes a decline in citrus production.
Asian Tiger Mosquito	Can transmit viruses such as Eastern equine encephalitis and West Nile virus
European Gypsy Moth	Defoliates trees
Formosan Subterranean Termite	Competes with native species; causes structural damage to buildings
Glassy Winged Sharpshooter	Vector of Pierce's disease (lethal disease of grapevines)
Red Imported Fire Ant	Can attack and cause painful stings on humans, pets, and livestock
Silverleaf or Sweet Potato Whitefly	Damages crops by feeding on them and transmitting viruses
Soybean Cyst Nematode	Causes stunted growth and reduced yields of soybean crops
European Starling	Competes with native species; destroys crops
Wild Boar	Damages native plants and crops
Plant Species	
Name of Species	Invasive Because?
Chinese Tallow Tree	Hinders the establishment of natural plant species and forest regeneration
Autumn Olive	Scattered trees in forest openings eventually form dense stands that grow at the expense of other species
Chinese Privet	Prevents growth of other plant species
Multiflora Rose	Thickets exclude other desirable plant species and hinder site management.
Japanese Honeysuckle	Overwhelming thickets replace native species on forest margins and rights-of-way. Shade tolerant and can be a problem in understories.
Kudzu	Rapid and dense growth completely overwhelms all other plant species including large trees. Must have direct sunlight for rapid growth
Wisteria	Forms dense growth capable of killing trees and excluding other plant species

Plant Species	
Name of Species	Invasive Because?
English Ivy	Amasses on infested trees, decreasing vigor and increasing chance of windthrow. Serves as a reservoir for bacterial leaf scorch that infects oaks, elms, and maples. Inhibits regeneration of native wildflowers, trees, and shrubs forming a monoculture.
Cogongrass	Cogongrass can spread by rhizomes and stands become extremely dense, excluding native plants. Can withstand drought. Leaves that die out in the winter create a substantial fire hazard.
Japanese Siltgrass	Will overtake and dominate sites on floodplains, streamsides, forest edges, roadsides, ditchbanks, trails, damp fields, swamps and lawns.
Chinese Silvergrass	Forms extensive infestations by escaping older ornamental plantings to roadsides, forest margins, and disturbed sites, especially after burning. Shade tolerant, highly flammable and a fire hazard
Common Reed	May threaten wildlife because they alter the structure and function of relatively diverse Spartina marshes
Wart Removing Herb	Has an aggressive ability to establish and take over wetlands and marshes at the exclusion of native plants.

Source: Clemson Cooperative Extension, USDA Invasive Species Information Center

Enhancement Projects

Since the passage of the Comprehensive Plan in 1999, Summerville and its residents have undertaken a number of projects to enhance open spaces and corridor areas. One such project was the Trolley Road Enhancement Effort, or TREE, resulting in the creation of a Master Plan for Trolley Road in 2001 that has been implemented along the right of way of Trolley Road and has encouraged numerous property owners to upgrade the existing landscaping or to take the effort to landscape their property. These property owners have also been encouraged by the local Rotary Club, who has presented beautification awards to property owners who have updated the landscaping on their properties. This landscaping has improved the appearance of properties along the corridor; attracting customers to local businesses while improving the property values along the corridor. This provides a template for additional enhancement projects that would be undertaken as part of the redevelopment of Priority Investment Areas identified elsewhere in the Comprehensive Plan.

Farm and Forestry

Because of the largely built out nature of much of the Summerville Planning Area, there are few large-scale farms or forest areas remaining in or near Summerville. There are two key areas that may be

considered for protection, either through annexation or via an extraterritorial jurisdiction arrangement with adjacent counties. If the latter were to occur, the land use regulations present in the Town would extend into the adjacent areas that, at some future date, would be annexed into the Town. One area, comprising of mainly forestlands, is parts of the Planning Area located near the Ashley River, while the other area, currently an existing farm, is located adjacent to Interstate 26 on the southeastern side of the Town. Because of the lack of services required for farms or forest lands, a farm or forest area requires approximately 37 cents worth of service for every tax dollar collected by a community, according to a 2007 study by the American Farmland Trust. By having a plan in place for annexation, the Town can better help to protect these sensitive areas.

Conclusion

The existing natural resources of Summerville continue to be of great importance and enhance the quality of life for residents. It is imperative for the Town to continue to protect these resources, both within its borders and inside the limits of the Summerville Planning Area, while leveraging these assets to attract new opportunities and to continue to benefit the residents of Summerville.

NATURAL RESOURCES GOALS, OBJECTIVES, AND STRATEGIES

Summerville is located in a beautiful area under a canopy of large trees. Its natural resources are a real benefit to its residents. Summerville has historically been successful in balancing economic and residential development with preservation of natural resources. As the area continues to develop, Summerville and its residents need to continue to strive for this balance.

The Land

The suitability of different uses depends on various factors that allow the land to support development. These factors include providing a stable base for buildings, amount of risk for flooding, or adequate slope for stormwater runoff. Whether a land owner or land manager is planning to build homes, roads, an industrial site, manage land for forestry, or agriculture, matching land use to land suitability saves money, time, and prevents future problems. Improper land uses can damage the natural resources and reduce the land’s value for more suitable uses.

Goal: Match development with land suitability.

Objective: Encourage the redevelopment of areas that are currently developed before allowing development in greenfield areas.

STRATEGY	PARTNERS	IMPLEMENTATION			
		TOOLS	FUNDING	PRIORITY	TIMEFRAME
Review and revise, if necessary, the land development ordinance to encourage uses other than structures on poor soils. Require soil surveys before any large-scale development is undertaken.	Planning Commission, Town Engineer’s Office	Land Development Ordinance, Updated Soil Survey	General Fund	Low to Medium	Short-term

STRATEGY	PARTNERS	IMPLEMENTATION			
		TOOLS	FUNDING	PRIORITY	TIMEFRAME
Review and revise, if necessary, stormwater regulations to reduce the potential of erosion and flooding.	Planning Commission, Town Staff	Stormwater Regulations	General Fund	Medium	Short-term
Implement the utilization of a TDR (Transfer of Development Rights) program to assist in the preservation of open space.	Planning Commission, Town Staff, Property Owners	Comprehensive Plan, Land Development Ordinance, Development Agreement, Planned Unit Development	General Fund, Private Property Owners Fees	Low	Long-term

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Goal: Plan and build new development in a manner that reduces the effects of a natural disaster.

STRATEGY	PARTNERS	IMPLEMENTATION			
		TOOLS	FUNDING	PRIORITY	TIMELINE
Revise and update emergency plans and earthquake building and structure codes (limitations on building heights, structural standards, etc.) as conditions warrant, based on a thorough analysis of various seismic data and an understanding of community concern.	Planning Commission, Town Council, Town Staff, Dorchester County Hazard Mitigation Committee	Land Development Ordinance, Building Code, Hazard Mitigation Plan	General Fund	Medium	On-going
Continue debris removal contract for removal of debris after a natural disaster.	Town Council, Town Staff	Contract with debris removal provider	General Fund	Medium-High	On-going
Continue to enforce building codes related to hazard mitigation.	Town Staff, Town Council	Building Code, Hazard Mitigation Plan	General Fund	High	On-going

The Water

Rivers and their adjacent lands provide multiple uses to their communities. Watersheds and river corridors represent complex, interactive systems, and their management needs to be considered during the development process.

Goal: Recognize the need to plan projects to reduce the impact within the watershed system.

STRATEGY	PARTNERS	IMPLEMENTATION			
		TOOLS	FUNDING	PRIORITY	TIMELINE
Review site plans based on the location and impact to the watershed within which it is located.	Planning Commission, Town Staff	Subdivision Regulations, Watershed Regulations	General Fund	High	On-going
Review site plans for storm water impacts in accordance with regulations set forth by the South Carolina Office of Coastal Resources Management.	Planning Commission, Town Staff, SC Office of Coastal Resources Management	Stormwater Regulations, Site Plan Review, Subdivision Regulations	General Fund	High	On-going

Goal: Recognize the importance of ensuring the quality of surface and groundwater systems.

STRATEGY	PARTNERS	IMPLEMENTATION			
		TOOLS	FUNDING	PRIORITY	TIMELINE
Research implementation of buffers along watercourses to protect water quality in accordance with requirements set forth by the South Carolina Department of Coastal Resources Management. These buffers should be different sizes depending on the size of the waterway.	Planning Commission, Town Staff, South Carolina Department of Coastal Resources Management	State Coastal Management Requirements	General Fund	High	On-going
Research the use of alternative surfacing materials that are pervious for driveways, parking lots, and some roadways to reduce the amount of impervious surfaces. Review and revise stormwater and land development regulations to encourage use of these materials.	Planning Commission, Town Staff	Comprehensive Plan, Stormwater Ordinance	General Fund	Medium	On-going
Encourage residents to construct rain gardens using native plantings, and to utilize rain barrels as a watering tool as a means to assist in mitigating stormwater impacts.	Town Council, Town Staff, Planning Commission	Commercial Design Review Board, Zoning Ordinance, Stormwater Ordinance	General Fund	Medium	On-going

STRATEGY	PARTNERS	IMPLEMENTATION			
		TOOLS	FUNDING	PRIORITY	TIMELINE
Review and revise, if necessary, drainage and stormwater requirements. Encourage the use of landscaped areas in a site drainage plan.	Planning Commission, Town Staff	Stormwater Ordinance	General Fund	High	On-going
Research the use of green roofs as a means of storm water mitigation for new structures constructed in the Planning Area and for retrofitting onto existing structures. Review and revise storm water, land development, and building regulations to encourage their construction.	Planning Commission, Town Staff, Town Council	Commercial Design Review Board, Building Code, Zoning Ordinance, Stormwater Ordinance	General Fund	Medium	On-going

Goal: Ensure that the Town’s Stormwater Management program continues to be implemented.

STRATEGY	PARTNERS	IMPLEMENTATION			
		TOOLS	FUNDING	PRIORITY	TIMELINE
Continue to implement the Town’s Stormwater Management Program and review and update drainage ordinances as appropriate to ensure that these provide an adequate level of standards.	Town Staff, Town Council, Developers	Stormwater Ordinance	General Fund, Development Fees	High	On-going

The Air

Air quality in Summerville is affected by many natural and man-made factors that cannot be contained at the boundaries of the Planning Area. Moderate temperatures, clean air, and generally good weather characterize the metro Charleston region. The creation of public awareness of the need to maintain current air quality standards may be necessary.

Goal: Maintain healthy and safe air quality.

Objective: Working with other communities in the metro Charleston region, ensure that compliance is met with the air quality standards set forth by the US Environmental Protection Agency.

STRATEGY	PARTNERS	IMPLEMENTATION			
		TOOLS	FUNDING	PRIORITY	TIMELINE
Guide land use policies that achieve a more efficient use of the existing infrastructure and minimize emissions by reducing per capita motorized vehicular travel consumption.	Planning Commission, Town Staff, Developers, Bike Ped Advisory Committee	Comprehensive Plan, Traffic Studies	General Fund, Private Funding	High	On-going
Support a variety of measures to reduce the number of vehicle miles traveled. Why wouldn't you say such as?	Town Staff, Town Council, BPAC, Tri-County Link, CHATS, BCDCOG, Local Colleges and Universities, Joint Base Charleston	Carter and Burgess Transportation Plan, Comprehensive Plan, Traffic Studies	General Fund, Grants, CHATS Funding, Tax Increment Financing	High	On-going
STRATEGY	PARTNERS	IMPLEMENTATION			
		TOOLS	FUNDING	PRIORITY	TIMELINE
Continue to require the maintaining and planting of trees and landscaping for all development in the Planning Area, especially in urbanized and high growth areas for climate	Town Staff, Developers, Commercial Design Review Board	Comprehensive Plan, Zoning Ordinance, Land Development Regulations,	General Funds, Grants	High	On-going

control and to help in maintaining high air quality.		Tree Ordinance			
Continue to pursue enhancement grant funding to assist with the implementation of the above strategies.	Town Staff, Town Council	Comprehensive Plans, Grant writer	General Fund, Grants	Medium	On-going

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The Living Environment

Perhaps no component of the landscape is more directly related to land use and environmental change than the living environment. Besides being the most visible part of most landscapes, it is also a sensitive “thermometer” of conditions and trends in parts of the landscape that are otherwise not apparent without the aid of detailed observation and measurement. In order to conserve and protect what it has, Summerville needs to continue to work towards protecting and enhancing the living environment in Town.

Goal: Preserve and protect scenic sites throughout the Summerville Planning Area to enhance the natural landscape.

Objective: Through developer agreements, purchases of open space land, and via conservation easement, continue to protect additional scenic sites in Summerville

STRATEGY	PARTNERS	IMPLEMENTATION			
		TOOLS	FUNDING	PRIORITY	TIMELINE
Work to gain an understanding of vacant lands that should be purchased or encouraged for placement in conservation easements/trusts for use as green areas.	Planning Commission, Town Staff, Town Council, Developers	Development Agreements, Comprehensive Plan	General Funds, Grants	Low	Long-term
Work with Dorchester, Charleston, and Berkeley counties in development of an overlay district for pockets of land around Summerville that would be compatible with Summerville’s policies and landscaping regulations. This would be in accordance with Strategy One of the Priority Investment Areas Element.	Planning Commission, Town Staff, Town Council in coordination with County Commissioners and Staff	Zoning Ordinance, Intergovernmental Agreements, Comprehensive Plan	General Fund	High	Short term

STRATEGY	PARTNERS	IMPLEMENTATION			
		TOOLS	FUNDING	PRIORITY	TIMELINE
Encourage/require new developments to identify and preserve and/or set aside natural and scenic areas of a site. In larger developments, encourage/require developers to provide walking trails and other passive recreation opportunities.	Planning Commission, Town Staff, Town Council, Developers	Development Agreements, Planned Unit Developments	General Fund	High	On-going

Goal: Preserve and protect the resources necessary to maintain and enhance the vitality of wildlife habitats.

STRATEGY	PARTNERS	IMPLEMENTATION			
		TOOLS	FUNDING	PRIORITY	TIMELINE
Through land use regulations, encourage development to occur in already developed areas that are already degraded to wildlife before developing in areas utilized by wildlife.	Planning Commission, Town Staff, Town Council, Developers	Zoning Regulations, Land Use Regulations Comprehensive Plans, Tax Increment Financing	General Fund, Tax Increment Financing	High	On-going
Gain an understanding of sensitive and valuable habitat areas and establish standards and guidelines for their protection and preservation.	Town Council and Town Staff with assistance of SC Dept. of Natural Resources	Land Development Regulations, Planned Unit Developments	General Funds	High	On-going

STRATEGY	PARTNERS	IMPLEMENTATION			
		TOOLS	FUNDING	PRIORITY	TIMELINE
In accordance with the 2009 Comprehensive Plan Update recommendations, Encourage government agencies and utility companies to adhere to best management practices that avoid further habitat fragmentation by consolidating transportation and utility corridors that avoid transecting undeveloped land.	Town Staff, Town Council, Local Utilities, SCDOT, BCDCOG/CHATS, Counties	LRTP, Comprehensive Plan	Private Funds	High	On-going

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Tree Protection

Vegetation plays a functional role in the landscape since it is an important control on runoff, soil erosion, slope stability, microclimate, air pollution, and noise. Trees and natural vegetation also provide habitat, food, and shelter for wildlife. In site planning, plants are used not only for environmental control, but also to improve aesthetics, frame spaces, influence pedestrian behavior, and control boundaries. Tree protection has a long history in Summerville. The Town is credited for implementing the first tree protection ordinance. This protection should be continued and enhanced.

Goal: Preserve and protect important trees in the Summerville Planning Area.

Objective: Enhance the Town’s Tree Ordinance in order to ensure the future protection of Summerville’s tree canopy.

STRATEGY	PARTNERS	IMPLEMENTATION			
		TOOLS	FUNDING	PRIORITY	TIMELINE
<p>Review and revise, if necessary, tree protection regulations to ensure adequate protection of existing trees. Provisions should include:</p> <ul style="list-style-type: none"> • Identification of important trees; • Specification of best management practices during construction to protect trees; and • Specifications for tree replacement or a fee paid to the Town for a tree fund when tree replacement requirements cannot be satisfied. 	<p>Tree Advisory Protection Committee, Planning Commission, Town Staff, Town Council</p>	<p>Zoning Ordinance</p>	<p>General Fund</p>	<p>High</p>	<p>Short-term</p>
<p>Review standards for tree removal listed in the tree protection regulations and investigate whether feasible alternatives to removal are currently available and are in use in other areas.</p>	<p>Tree Advisory Protection Committee, Planning Commission, Town Staff, Town Council</p>	<p>Zoning Ordinance</p>	<p>General Fund</p>	<p>High</p>	<p>Short-term</p>

Goal: Promote the retention of existing and native vegetation and removal of invasive species.

STRATEGY	PARTNERS	IMPLEMENTATION			
		TOOLS	FUNDING	PRIORITY	TIMELINE
Identify specific areas in which SCDOT and the Town can develop a program for planting trees, shrubs, or wildflowers on rights-of-way of major thoroughfares and highways and at key gateways. Some of these would include the intersection of Bacon's Bridge Road and East Carolina Avenue.	Town Staff, Planning Commission, SCDOT, Garden Clubs, Chamber of Commerce	Maintenance Agreement	Grants, General Fund	High	On-going
Encourage the use of native plantings for rights of way and gateway areas.	Town Staff, Planning Commission, Garden Clubs	Zoning Ordinance	General Fund	High	On-going
Encourage the removal of existing Invasive Species that are listed in the Town's Comprehensive Plan.	Town Staff, Garden Clubs, Parks and Recreation Department, TAP	Zoning Ordinance, Comprehensive Plan	Grants, General Funds	High	On-going

FARM AND FORESTRY

Farm and forest areas have always existed on the periphery of the Summerville Planning Area. As the population and development have occurred, many of these farming areas have been developed as commercial and residential uses. There has been a previous desire to preserve a few of the remaining farms as reminders of how the edge of the developed area used to look.

Goal: Encourage the preservation or recognition of the remaining farms and forest areas in Summerville.

Objective: Ensure that a plan is in place to protect any remaining farm areas within the Summerville Planning Area

STRATEGY	PARTNERS	IMPLEMENTATION			
		TOOLS	FUNDING	PRIORITY	TIMELINE
Identify and investigate ways of preserving the remaining agricultural areas in the Summerville Planning Area. This could be done either through purchase, long term leasing, or working with the property owner to place the property in a conservation easement or trust.	Planning Commission, Town Staff, Town Council.	Zoning Ordinance, Comprehensive Plan	General Fund, Grants	Low	Long-term