NATURAL RESOURCES

The Natural Resources Element of the Comprehensive Plan is dedicated to the local landscape and the natural features that this landscape encompasses. This chapter serves to outline goals and objectives for the effective protection, preservation, conservation, and utilization of the natural environment for the future benefit of the citizens of Greenwood County.

CONTENTS

4.1. CLIMATE	3
4.2. AIR QUALITY	4
4.3. SLOPE CHARACTERISTICS	5
4.4. SOILS	5
4.5. HYDROLOGY	6
4.6. WATER QUANTITY AND WATER QUALITY	7
4.7. FLOODPLAIN AND FLOODWAY AREAS	8
4.8. FAULT LINES	10
4.9. MINING AND MINERAL DEPOSITS	10
4.10. PRIME AGRICULTURAL LANDS	11
4.11. PRIME FOREST LANDS	12
4.12. THE URBAN FOREST	15
4.13. PLANT HABITATS	16
4.14. ANIMAL HABITATS	17
4.15. PARK AREAS AND OPEN SPACES	17
4.16. UNIQUE SCENIC VIEWS AND SITES	19
4.17. CONSERVATION MEASURES	20
4.18. PUBLIC EDUCATION	21
4.19. URBAN SPRAWL	21
4.20. CONCLUSION	21
4.21. GOALS, OBJECTIVES AND STRATEGIES	22

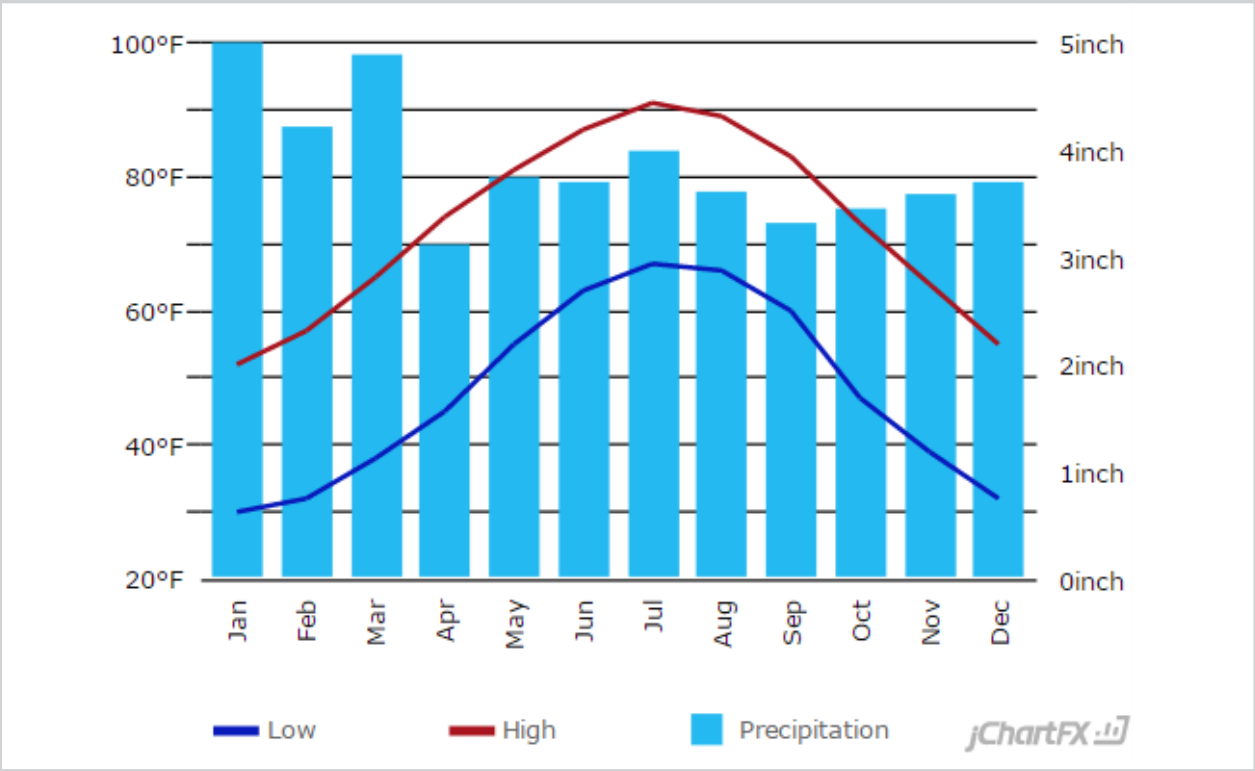
4.1. CLIMATE

A basic environmental factor is the climate. The climate of South Carolina is classified within the humid subtropical region. This climatic region is characteristic of hot, humid summers and mild winters. For Greenwood County, the average annual temperature was 61.8 degrees Fahrenheit from data collected from 1948 to 2010 by the State Climatology Office. During the same time period, the average annual high temperature was 73.4 degrees Fahrenheit, while the average annual low temperature was 50.3°F. The warmest temperatures were typically found during the month of July while the coldest temperatures were in January.

Precipitation is another important factor. The Greenwood area receives an average of 44.6 inches of annual precipitation. The months with the greatest amount of precipitation include March and February. The driest months occur during April and September.

As urbanization increases, so too does the microclimate or the climate of a particular area. An urban area, sometimes referred to as a "heat island", is typically three to ten degrees warmer than the surrounding countryside. Large expanses of concrete and asphalt have been shown to alter the local climate; asphalt and concrete absorbs the sun's light and then heats the air during the cooling periods of the evenings, making local climates warmer over a given period of time. Open burning and industrial emissions have been found to increase temperatures in the local climate. Trees are a nullifying factor to these heat islands as trees provide reduced air temperatures, reduced glare and reduced wind speeds.

FIGURE 4-1. CLIMATE CHARACTERISTICS IN GREENWOOD COUNTY, 2016



SOURCE: US CLIMATE DATA, 2016

4.2. AIR QUALITY

The Environmental Protection Agency (EPA) and the South Carolina Department of Health and Environmental Control (DHEC) regulate and protect the air quality within the state. Most of South Carolina, including Greenwood County, meets the threshold for ambient air quality standards. However, increased urbanization in the Greenville, Augusta, and Columbia metropolitan areas will have future impacts on our local air quality.

One of the main concerns with air quality is ozone. Ground-level ozone (O_3) forms when oxides of nitrogen and volatile organic compounds are heated by the sun during the spring and summer months. Ground-level ozone is a natural occurring effect that humans can exacerbate. South Carolina has seen an increase in ozone with the increase in population, increase in automobile usage, and increase in development (especially industrial development) within the last ten years. South Carolina has developed a State Implementation Plan (SIP) to show compliance with the National Ambient Air Quality Standards (NAAQS) as set forth in the Clean Air Act. Greenwood County should analyze these factors in relation to the growing ozone problem and develop local solutions that manage ozone within acceptable levels that work in-hand with the promotion of development.

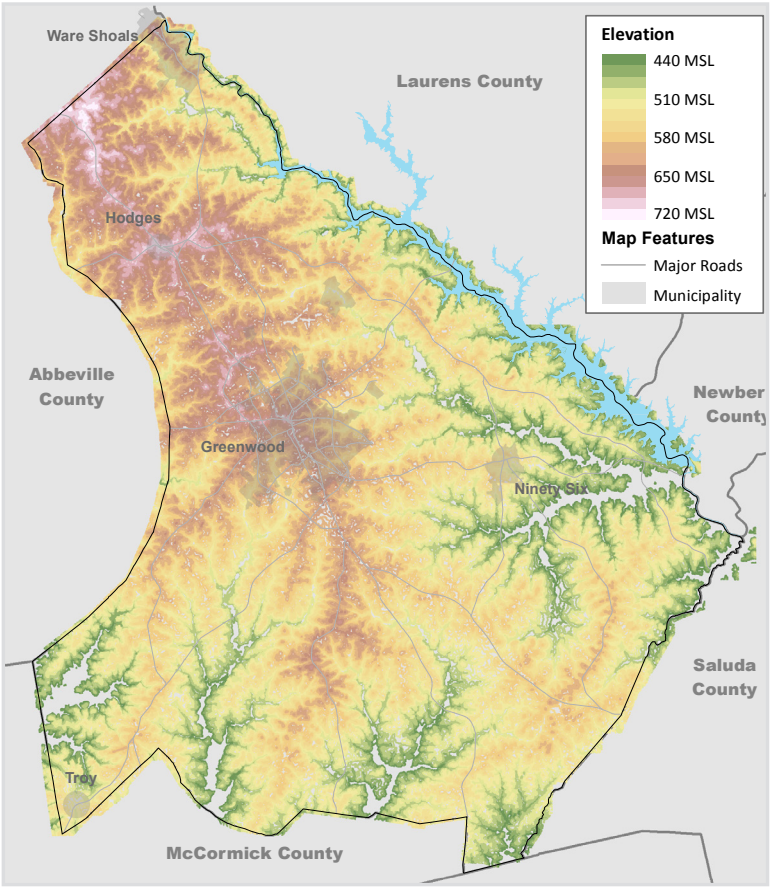
In 2014, Greenwood County was designated as an attainment area for the 2008 8-hour ozone standard established by the EPA. The only minor air quality problems found in Greenwood County can be attributed to industrial uses, automobile emissions and open burning practices.

SHOALS ON THE SALUDA RIVER

4.3. SLOPE CHARACTERISTICS

Greenwood County is located within the Piedmont region of South Carolina. This region is typified by rolling hills within an elevation range of 300 feet to 1,200 feet above mean sea level (MSL). The lowest point in Greenwood County is found on the Newberry County Line at the most eastern point of the Saluda River (370' MSL). Conversely, the highest point is found northeast of the Shoals Junction community located south of Smith Street Extension (730' MSL). The elevation difference between these points is 360 feet within a distance of 27 miles; the slope between the highest and lowest points in the County is 13.3 feet per mile. The elevation differential in Greenwood County is equivalent to the elevation differential between Greenwood County and the coast of South Carolina (Figure 4-2).

FIGURE 4-2. SLOPE CHARACTERISTICS



2015 SOURCE: GREENWOOD COUNTY GIS DEPARTMENT, 2015

Of the County's municipalities, the Town of Hodges has the highest elevation at 707 feet MSL. The Town of Troy has the lowest elevation at 517 feet MSL. The City of Greenwood is located at 660' MSL, the Town of Ware Shoals at 642' MSL and the Town of Ninety Six at 550' MSL. The elevation of Lake Greenwood is 440' MSL, therefore lower than Greenwood's municipalities.

4.4. SOILS

Soils affect the function or use of property as this is the foundation for the usage of land. Soil types determine what activities can and should be conducted in a given area. According to the General Soil Map, there are ten basic soil associations in Greenwood County with three major categories: loamy soils throughout, silty surface layer and clayey subsoil and loamy surface layer and clayey subsoil. A soil association is defined by the United States Department of Agriculture (USDA) as a grouping of soil types that has a distinctive trait related to the soil types. These soil associations are used for general planning. However, this generalization is not to be used on a parcel specific basis because on a given piece of property there are many types of soils.

In certain areas of Greenwood County, sites for dwellings with on-site sewage disposal are limited due to the permeability of the soil, depth to the water table, susceptibility to flooding, soil erosion, lateral seepage, and downslope flow of effluent. However, those areas with such problems are few or relatively small in size. Primarily, when soils are not too wet or impervious, sewage from buildings with septic tanks is properly purified. The chance of polluting groundwater or wells is minimized. Proper soils also provide stable support to structures. On moderate to minor slopes, soils erode less and thus reduce costs for foundation construction, septic or sewer system installation and roadway construction. Sandy soils, which are too permeable, allow sewage to flow too quickly, resulting in polluted groundwater and wells. Soils that are not permeable, such as clay, causes sewage to seep to the surface. Bedrock that is too close to the surface causes sewage to be deflected back to the surface.

Industrial sites are also dependent on certain soil types. Soils with large rocks or boulders increase development costs. Other economic factors include bearing strength, slope, depth to the water table, hazards of flooding and depth to rock. Improper soils may be unable to bear the weight of construction equipment, buildings, or traffic which increases the potential for settling, shifting and slipping of the structure.

4.5. HYDROLOGY

Greenwood County is located within two hydrologic areas: the Saluda Basin and the Savannah Basin. The hydrology of Greenwood County includes many factors including topography, water features, and natural drainage ways. A hydrologic line runs primarily along the ridge line. This line traverses northwest to southeast through the center of the County along the route of U.S. Highway 178. Basically, water that falls north or east of Highway 178 will eventually flow into the Saluda River while water falling south or west of Highway 178 will eventually flow into the Savannah River.

Within Greenwood County, the Saluda Basin is subdivided into three sub-basins. The first sub-basin includes the area north of SC Highway 702 where water flows into Lake Greenwood. The second sub-basin includes the Coronaca, Wilson and Ninety Six Creek watersheds where water flows into the Saluda River south of the Buzzard Roost Dam. The third sub-basin is located east of South Carolina Highway 246 including Halfway Swamp Creek.

Greenwood County has had some hydrologic problems in the past, especially in the Rock Creek section of the Saluda Basin Watershed. The Rock Creek section extends from SC Highway 72 East and Mathis Road east towards Haltiwanger Road and Wingert Road. The South Carolina Storm Water Regulations enforced by DHEC state that developers must hold water on-site in case of a 10-year, 24-hour storm event. Developments on a site less than two acres are exempt from these regulations. This loophole is detrimental since ten two-acre sites have the same effect as one twenty-acre site without retention. Flood mapping has recently been revised in 2011 to more precisely identify flood risk areas. Greenwood County should continue to monitor development within these high risk areas to minimize loss of property damage within these areas.

4.6. WATER QUANTITY AND WATER QUALITY

Water covers approximately 7,913 acres in Greenwood County or 2.7% of the County's land area (Figure 4-3). As a basic resource, water is a necessity for plants and animals. Lake Greenwood is the largest water body in Greenwood County. This lake has a surface area of 11,400 acres and a maximum and mean depth of 68.9 feet and 23.0 feet, respectively. The lake was constructed in 1940 and is used for hydroelectric power generation, recreation and as a public water supply. Greenwood County planned the Buzzard Roost project and in 1933 applied for monies from the Public Works Administration (PWA) to build it. Opposition from private power companies delayed construction until 1938 when the U.S. Supreme Court declared the project constitutional. This decision opened the way for a number of federally funded hydroelectric projects, including the Tennessee Valley Authority (TVA).

The Saluda River is the largest river flowing through Greenwood County. This river serves as the political boundary between Greenwood County and Laurens and Newberry Counties. The portion of the Saluda contained in Greenwood County is 36 miles long. The Saluda flows from the Blue Ridge Mountains through the Piedmont and into the Sandhills. This watershed is one of eight major watersheds that drain South Carolina, with the Saluda River watershed affecting the most populous areas of the state.

Both the Saluda River and Lake Greenwood serve as municipal water sources for the City of Greenwood and the Towns of Ninety Six and Ware Shoals. According to CPW, the Greenwood water system is the twelfth largest in the state. In 2012, the W.R. Wise Water Treatment Facility on Lake Greenwood achieved the highest level of plant performance by becoming the fourth water utility to receive the 'Excellence in Water Treatment' recognition from Partnership for Safe Water. Only eleven plants in the nation have achieved this recognition. Recently, the South Carolina section of the American Water Works Association recognized Greenwood CPW for having the best tasting water in the state.

The *2011 Watershed Quality Assessment for the Saluda River Basin* by DHEC detailed the water quality of the Saluda River from Big Creek to the Lake Greenwood dam and the Ninety Six Creek and its tributaries. The Saluda River water quality is affected by nonpoint source runoff. While aquatic life uses are fully or partially supported, there are increased levels of five day biochemical oxygen demand, total nitrogen concentration, and decreasing trends in oxygen concentration. Some areas experienced increased pH levels. Many sites do not support recreational use due to fecal coliform bacteria levels.

The water quality of Lake Greenwood is at a level consistent with the Saluda River section. Of the five DHEC monitoring sites on the lake, aquatic life uses are either partially or fully supported at all five sites. This was due to high levels of pH, copper in excess of the aquatic life chronic criterion, increased levels of five day biochemical oxygen demand, and decreasing trends in dissolved oxygen concentration. However, high pH levels are typical of lakes with significant amounts of phytoplankton.

Another area of analysis is Cane Creek, which fully supports aquatic life. However, there are significantly increasing levels in total phosphorous concentration and decreasing trends in dissolved oxygen concentration. The Ninety Six Creek division is divided into Ninety Six Creek, Coronaca Creek, Rocky Creek, and Wilson Creek. The Ninety Six Creek partially supports aquatic life at one monitoring site, while the other site does not support aquatic life uses due to high levels of copper, decreased levels of oxygen concentration, and increases in five day biochemical oxygen demand, total phosphorous concentration,

and total nitrogen concentration. The Rocky Creek partially supports aquatic life uses. The Coronaca Creek is able to fully support aquatic life, however there is an increasing trend in five day biochemical oxygen demand and turbidity. The Wilson Creek is able to fully support aquatic life uses at one of its monitoring sites, but only partially supports life at the other due to increasing levels of five day biochemical oxygen demand.

There are two DHEC water quality monitoring sites at the Reedy River arm of Lake Greenwood. Neither one supports aquatic life due to high levels of pH and total phosphorous concentration. However, there is evidence that conditions are improving due to decreasing levels of nitrogen, turbidity, and phosphorous.

All of the water bodies in Greenwood County are affected by two major issues: point source and nonpoint source pollution activities. Examples of point sources that affect water bodies include municipal sewage, industrial wastes, and thermal effluent. Conversely, the most serious nonpoint source pollution problems often result from persistent erosion of soil, from nitrogen fertilizers, animal wastes and biocides applied to the landscape, and from nitrogen and other nutrients and toxic substances in surface runoff and eventually stream flow. Newly tilled or logged land and construction areas are erosion prone and produce large amounts of sediment. Water pollution from nonpoint sources such as agricultural activities are difficult to identify and control. The SC Department of Natural Resources (DNR) reports that while there have been improvements in municipal waste treatment, point source pollutants add unnatural coloration and increased nutrient levels that may lead to noxious algal blooms. Algal blooms within the lake are contained through annual spraying from the Lake Management office of Greenwood County.

4.7. FLOODPLAIN AND FLOODWAY AREAS

Greenwood County contains an intricate network of floodplain areas. These areas are formed from the slope of the land and serve as the natural drainage ways that have developed over time. When an unusual amount of rain falls, these natural drainage ways fill with water. The Federal Emergency Management Agency (FEMA) promotes flood safety and designates areas within the U.S. that are flood hazard areas. Most of the flood plains within Greenwood County are designated as Zone AE by FEMA. This means that base flood elevations have been determined and that there is a potential for inundation at least once in one hundred years. In 2011, Greenwood County adopted a Flood Management Overlay District, noting that the periodic flooding in unincorporated areas of the county resulted in loss of life and property, health and safety hazards, impaired delivery of government services and private sector business, required public money to provide relief, and compromised the tax base.

The area of Greenwood County most at risk from floods is north of the City of Greenwood in the Rocky Creek stretch of the Wilson Creek watershed. This watershed drains a quarter of the City of Greenwood and the area has had a number of drainage and flooding problems within the last twenty years. This was shown during the historic flood event of October 2015 where the National Weather Service reported more than 11 inches fell during a three-day period. Areas along Haltiwanger Drive, Sample Road and Jebosha Drive were extremely hard hit.

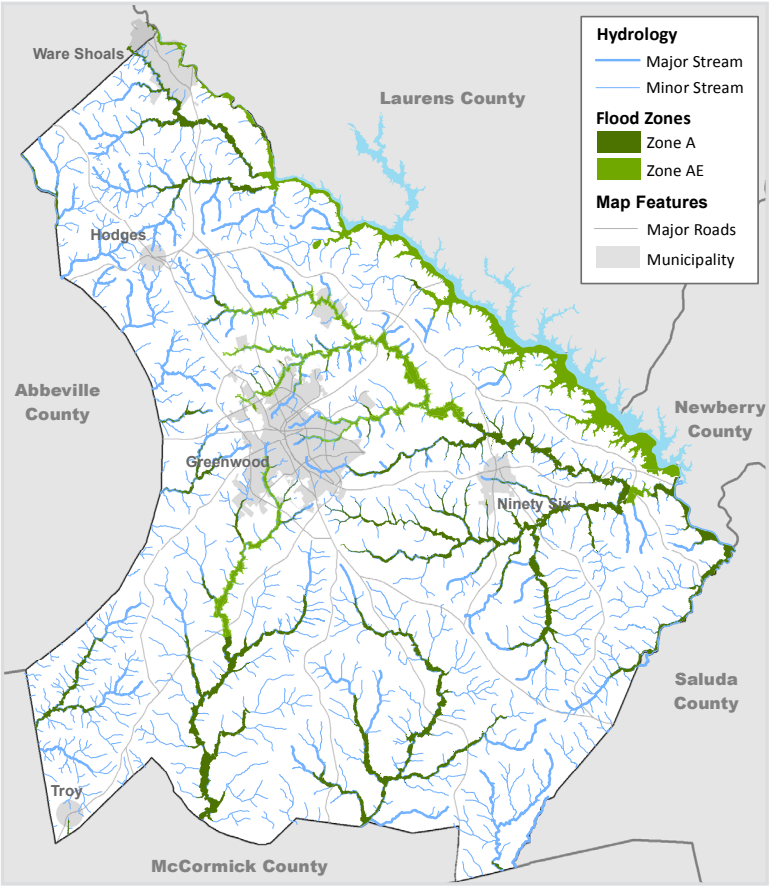
Impervious surfaces in an urban area can affect the volume of water within floodplain areas. Impervious surfaces include asphalt, concrete, buildings, or anything that does not allow storm water to absorb into

the soil. These surfaces increase both the quantity and velocity of water on a site during a rain event. Even though flooding events are relatively rare in Greenwood County, problems can be exacerbated by the development of properties without proper stormwater facilities. Current developments of less than two acres are not required by DHEC to provide stormwater facilities. Local communities can administer their own stormwater review with their own standards, called delegated review, but would be required to fund the program with local tax dollars. Many communities in SC perform delegated review through a stormwater fee that is a part of the property tax assessment which covers the cost of the program for new construction review as well as provide funding to fix flood prone areas. Currently, construction within the 100-year floodplain in Greenwood County is allowed but construction is limited to flood-proof construction measures. The City and County require a survey from a registered surveyor to identify the flood line prior to any proposed construction permitting in proximity to the floodplain.

Greenwood County is working with FEMA to provide more detailed data on Lake Greenwood in order to show that the base flood elevation on the water body should be reduced. Once this data is approved by FEMA and Greenwood County adopts this new flood elevation, Greenwood County should strongly consider to not allow new development in floodplains.

Development styles and requirements on development can greatly reduce the amount of storm water entering drainage ways. To reduce runoff, best management practices are encouraged, such as detention and retention ponds, increasing green spaces, landscaped medians and streamside buffers. Another factor contributing to storm water issues is poorly planned, low density growth or sprawl. The DHEC Bureau of Water has stated that urban sprawl and overdevelopment lead to more hard surfaces, which lead to more runoff. Such runoff typically includes nitrogen, phosphorous, oil, heavy metals, and bacteria, and these chemicals end up in the water supply.

FIGURE 4-3. HYDROLOGY AND FLOODPLAINS



SOURCE: GREENWOOD COUNTY GIS DEPARTMENT, 2015

4.8. FAULT LINES

A fault line is a break or fracture within the ground when there is a shift in the Earth's tectonic plates resulting in a release of energy that affects the potential structural integrity of buildings. Greenwood County is traversed by three fault lines within the fault system of South Carolina. Of these three, one stretches along the border between Greenwood, Laurens and Newberry Counties following the Saluda River and ending 4.5 miles north of downtown Ninety Six. This fault also lies below the Buzzard Roost dam. The second fault line is a zone that runs from Highway 185 east to Hodges and Highway 246 to Cokesbury and Coronaca just north and east toward Lake Greenwood. This is the largest fault line in Greenwood County. The third fault lies in the southeastern corner of the County. The area runs from the Buzzard Roost dam west to one mile north of Kirksey, south to Callison, north to the Phoenix area and southwest toward the Town of McCormick.

The Greenwood County area is prone to earthquakes. *The State* newspaper recently reported that in February 2014 the area was hit by the second strongest earthquake since 1950. The earthquake registered 4.1 on the Richter scale and was centered outside of Edgefield. No injuries or damages were reported even though it was felt across the state. None of the other twelve earthquakes that occurred in the thirteen months prior to February 2014 registered above a 2.5 magnitude.

4.9. MINING AND MINERAL DEPOSITS

The South Carolina Geological Survey, South Carolina Land Resources Conservation Commission and United States Bureau of Mines report the mineral commodities mined in Greenwood County include granite (crushed stone), sand, and shale. Local extraction activities are primarily crushing and loading surface deposits and strip-mining operations for subsurface deposits. DHEC regulates mining through the issuance of permits for extraction activities.

SAND MINING OPERATION

4.10. PRIME AGRICULTURAL LANDS

Greenwood County has traditionally been a rural area. However, with increased development the amount of land designated for crops and pasture is decreasing. According to the United States Department of Agriculture, there were 18,437 acres of pastureland in Greenwood County in 2012. There were 12,677 acres of cropland in 2012, a decrease from 18,022 acres in 2007.

Greenwood County is located within one of the most fertile areas in South Carolina. The US Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) has delineated three areas within South Carolina in which more than 50% of the land is prime farmland. Prime farmland is defined as land that has the best combination of physical and chemical characteristics for agricultural production. It has the soil quality, growing season, and moisture supply needed to economically sustain high crop yields when managed properly. Greenwood County is found within the largest fertile area of South Carolina, stretching from Greenwood County east through Saluda County (Figure 4-4). Approximately 32,000 acres of Greenwood County is an area of greater than 50% prime farmland identified roughly as a silty loam belt along the southeastern border of the county. Due to the relatively small area within South Carolina of fertile land, this area is extremely important to the agricultural productivity of Greenwood County and the state.

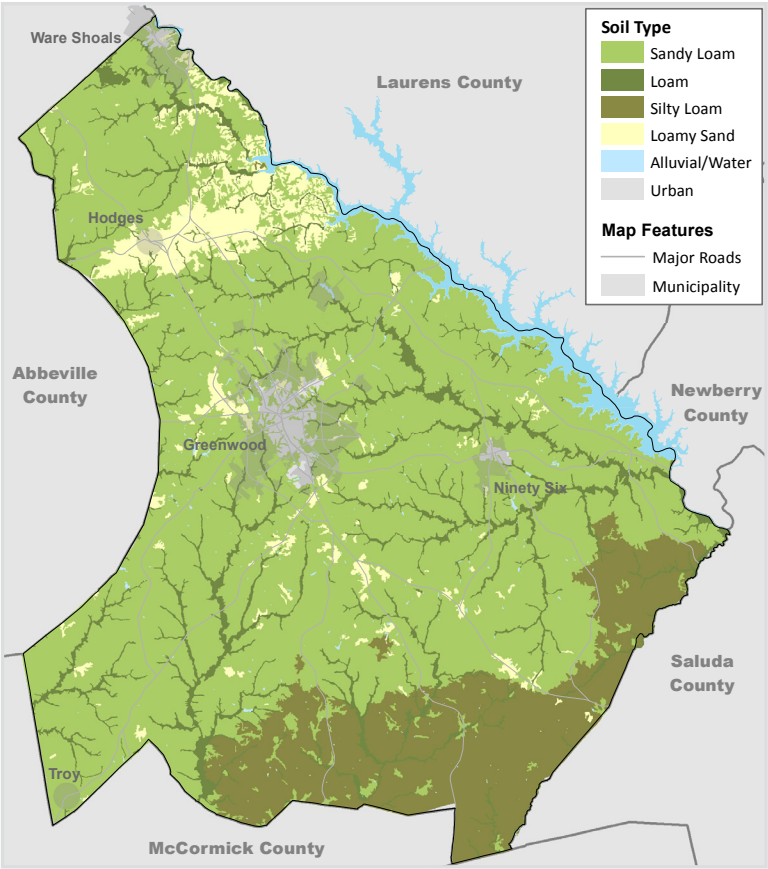
The NRCS categorizes the soil types by their value for agricultural applications. The four most valuable soil types are Cecil sandy loam, Georgeville silt loam, Herndon silt loam, and Hiwassee sandy loam (all at two to six percent slopes). These four soil types are listed as prime farmland which is defined by NCRS in the SC Soil Survey as “land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops, and ... has the soil quality, growing season, and moisture supply needed to economically produce sustained high yields of crops when treated and managed... according to acceptable farming methods.” The highest NRCS classification is “all areas are prime farmland.” Nearly 35% of Greenwood County’s total acreage is classified as such. The acreage of highest quality farmland is limited, and the USDA recognizes that government at local, state, and federal levels, as well as individuals, must encourage and facilitate the wise uses of our nation’s prime farmland. Unfortunately, most soils best suited for farm operations are also best suited for urban development. This has accounted for massive conversions of farmland to urban use. Conversely, poor soils or soils with constraints to agricultural use generally present problems to urban development. As a result, there is a pressing need for planning to help resolve these conflicts, and to better address development constraints posed by poorer soil conditions.

The US Department of Agriculture reports that between 2007 and 2012, the number of farms in Greenwood County decreased from 493 to 476, while the average size of each farm increased from 143 acres to 180 acres during the same time period. The total land in farms increased by 21% during the same time period, from 70,698 acres to 85,521 acres. This increase was much greater than the state average of 1.7%.

Greenwood County ranks high statewide in many areas of agricultural production. Greenwood County was the 7th largest in egg production behind Newberry, Kershaw, Saluda, Barnwell, Orangeburg, and Dorchester Counties in 2008 with more than 39 million eggs produced. As of January 2008, Greenwood County ranked 8th in the state for cattle that had calved, as 7,000 were estimated. In the same year the total number of cattle and calves were 11,600. In 2008, cash receipts for crops, livestock, and livestock products were valued at more than 8 million dollars. In 2008, cash receipts from timber harvest were valued at almost 22 million dollars: 16th in the state. Greenwood County also harvested almost 12 thousand tons of hay in 2007.

As development increases in Greenwood County, prime agricultural land is lost. Many areas throughout the nation employ rural zoning categories to reduce the density of residential development and the conflicts between housing and farming (i.e. sounds of heavy farm equipment, smell of manure or drifting chemical sprays, or clouds of dust). Such regulations should provide for sustainable farming and ranching best management practices that protect the environment and safeguard human health. The need for countryside preservation and small, yet dense, centers for commerce will be necessary in the future.

FIGURE 4-4. PRIME AGRICULTURAL LANDS



SOURCE: GREENWOOD COUNTY GIS DEPARTMENT, 2015

As agricultural lands are reduced, there is a need to incorporate farming techniques within communities such as urban gardens and urban agriculture. Utilization of backyards within residential areas as small-scale farms for egg production, bee-keeping and organic crops is a growing trend. Promotion of this type of accessory use should be continued within Greenwood County communities.

4.11. PRIME FOREST LANDS

A renewable resource, forests are a major component of the natural landscape. Trees provide food, clothing, building materials, fuel, and recreational opportunities while protecting and enhancing soil, water, and air quality. On another level, forests provide an aesthetic value to the community.

Greenwood County is fortunate to be one of eleven South Carolina counties that are a part of the Sumter National Forest system. The Sumter National Forest is divided into three sections. Greenwood County is located within the northeastern section of the western piedmont division. Other counties in this division include Saluda, Abbeville, McCormick and Edgefield Counties. The Sumter National Forest encompasses approximately 10,951 acres, or 3.75%, of Greenwood County. Most of this land is located along the southern and western borders of Greenwood County from south of US Highway 178 East to south of SC Highway 72 West.

Most of Greenwood County's timberland is 59% loblolly and shortleaf pines and 41% oak. In 2014, the South Carolina Forestry Commission reported that there are 210,471 acres of forestland in Greenwood County. This equates to an economic benefit to the community through jobs and timber sales. In 2011, the South Carolina Forestry Service reported almost $15 million dollars' worth of timber delivered to forest product mills. Also notable, 35% of the proceeds from annual timber sales on national forest lands state-wide are returned to counties with national forest holdings. Approximately $41,123 was paid to Greenwood County in fiscal year 2014 for roads and schools. This amounted to $2.70 per acre returned to the community. This number has decreased from $3.35 per acre since 2010.

The 2010 South Carolina Statewide Forest Resource Assessment and Strategy stated the following:

> *Urbanization is currently the primary cause of deforestation in South Carolina. Urban areas continue to expand into adjacent rural lands. In most cases, this rural land development reduces the area of economically and ecologically productive forest land.*

Prime forest areas in Greenwood County that are most pressured by development are national forest lands south of SC Highway 72 between the cities of Greenwood and Abbeville. Even though national forest lands are found throughout southern and southwestern Greenwood County, this area of the county has some of the lowest population densities, making this area a prime location for wildlife, passive recreation, and ecotourism.

The concept of sustainable forestry was first introduced by the American Forest and Paper Association. This group states that "sustainable forestry means managing our forests to meet the needs of the present without compromising the ability of future generations to meet their own needs by practicing a land stewardship ethic which integrates the growing, nurturing, and harvesting of trees for useful products with the conservation of soil, air, and water quality, and wildlife and fish habitat." The forestry industry is best poised to lead the way in forest protection, with 74% of the state's forest area owned by nonindustrial private forest landowners *(South Carolina's Statewide Forest Resource Assessment and Strategy)*. Corporations own 14% and the remaining 12% is state or federal property.

Best Management Practices are recommended forestry practices that help minimize the impact on water quality, reduce soil erosion, and protect streamside areas. According to *South Carolina's Best Management Practices for Forestry* by the South Carolina Forestry Commission, BMPs are issued as a guide for the public to follow.

> *The concept of BMPs was first introduced in response to federal legislation, the Clean Water Act, as a practical and effective means to reduce nonpoint source pollution. Compliance with BMPs is required for forestry activities which involve discharge of dredge or fill materials into jurisdictional wetlands to qualify for the silvicultural exemption under Section 404(f) of the Clean Water Act. Compliance with BMPs is recommended on all sites on which there is a potential for violating water quality criteria as defined by the South Carolina Pollution Control Act.*

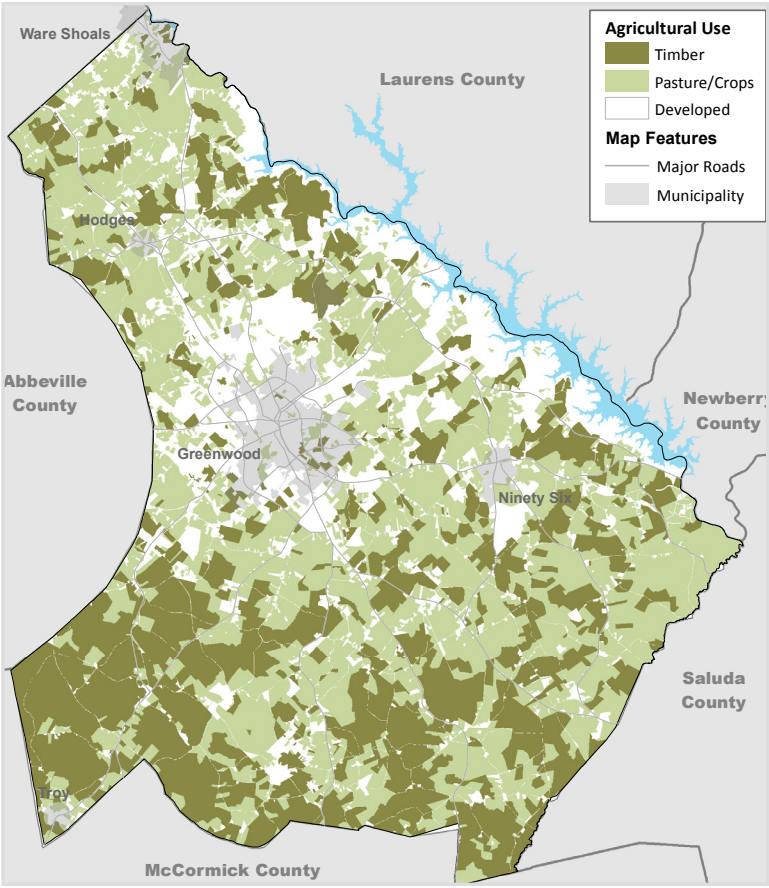
Every attempt, where possible, should be undertaken by property owners to follow the BMPs as established by the South Carolina Forestry Commission. Harvesting operations should be carefully planned and executed with the intent of protecting the site.

Streamside Management Zones (SMZs) are good ideas and are incorporated in the Forestry BMPs. SMZs are defined as land areas adjacent to natural streams, lakes, ponds, and seems. These zones are designed to prevent or minimize non-point source pollution from entering the stream system. Protecting areas along stream banks reduces erosion and sedimentation in the local waterways. SMZs also slow the rush of water in times of flooding.

Fire is a natural part of the forest environment. In order to manage forests effectively, prescribed or controlled burns are often used where fire is intentionally set in a controlled way. A benefit of prescribed burn is wildfire hazard reduction of fuel sources such as leaves, pine needles, and twigs which opens the forest floor and promotes more growth. This forest management tool is beneficial to species such as turkey and deer for production of more food sources and increase in their habitat. Forest management and aesthetic enhancement are benefits of prescribed burning to clear thick underbrush that can obstruct animal movement and "open the forest up."

Trees decrease runoff, protect fields and farmsteads, and shade homes and streets which result in decreased utility usage. Wildlife are dependent on trees for food and cover. Clean air is another important aspect of forests; trees produce oxygen and remove air pollution. Tree canopies also provide shade to structures which conversely reduces energy consumption. Greenwood County should promote the conservation of forested land while fostering the related economic and natural benefits.

FIGURE 4-5. TIMBER AND AGRICULTURAL LAND



SOURCE: GREENWOOD COUNTY TAX ASSESSOR, 2015

4.12. THE URBAN FOREST

The Urban Forest is a term used to define trees within an urban area that are used for landscaping or aesthetic appeal, soil stability, energy conservation, air and noise pollution reduction, climate modification, economic stability, or wildlife habitat. All of these benefits that trees provide are essential for a healthy community. Over the past decade, Greenwood County has experienced commercial, industrial and residential development that has transformed the natural landscape and increased the land area of our communities. As land is cleared, the need for protection of existing trees or replacement of comparable species is necessary for a healthy and stable urban forest. More importantly, the economic benefits from the urban forest strongly justify the expense, if any, for maintenance of this resource. South Carolina reported in its *Forest Resource Assessment and Strategy* that customers will pay 10% more for goods and services if they are provided by businesses located along a tree-lined street. Shopping areas with large numbers of shade trees make 30% more sales than those without trees. The benefits of trees extend to employees, with workers who have a view of trees have a 23% reduction in illness than those who don't. The Alliance for Community Trees reports that the average annual net benefit of a large tree in a public space is $113. Green streets, rain barrels, and tree planting are three times as efficient in storm water management per $1,000 spent when compared to conventional methods. On a national level, trees in the U.S. remove 711,000 metric tons of air pollution annually, generating a savings of $3.8 billion. The U.S. Department of Energy reports that three trees can save the average household $250 a year in energy costs.

Cities without trees are "heat islands" – an area that is significantly warmer in temperature than its surrounding rural area due the built environment that is typically made up of steel, asphalt and concrete. Trees included in urban developments shade concrete and other surfaces which aids in cooling the surrounding air temperature. The National Arbor Day Foundation suggests that three additional trees planted around every building in the United States would save $2 billion per year in energy costs. Windbreaks can lower heating bills up to 30%; shade trees planted east and west of residential homes can cut cooling costs by 35%. On a more local level, trees increase property values. The National Arbor Day Foundation has established a program for recognition of communities that are committed to tree planting and care: Tree City USA designation. This designation provides opportunities to promote trees in the urban environment as well as distinguish those communities who promote best management practices. The City of Greenwood would be a leader in Greenwood County toward this endeavor.

URBAN FOREST

4.13. PLANT HABITATS

Greenwood County is home to numerous species of plants. The Sumter National Forest in southern Greenwood County contains a dense population of plants in their wild and natural state. The South Carolina Department of Natural Resources and the Nature Conservancy report on rare, threatened and endangered plants throughout the state. Of those plants that are rare, threatened or endangered, five have been found in Greenwood County in recent years (Figure 4-6). Only one of those species, the Georgia Aster, is a candidate to be listed on the U.S. Endangered Species Act list.

FIGURE 4-6. ENDANGERED PLANT SPECIES IN GREENWOOD COUNTY

SOUTHEASTERN TICKSEED *(COREOPSIS GLADIATA)*
This species is a concern in South Carolina. It very rare throughout its range or found locally in a restricted range, or having factors making it vulnerable. Globally, the species is secure though it may be rare in parts its range. In South Carolina, the status of the species is unknown.
SOFT GROOVEBUR *(AGRIMONIA PUBESCENS)*
This species is a concern in South Carolina. Globally, the species is secure though it may be rare in parts of its range. In South Carolina, the status of the species is critically imperiled, meaning it may have a very restricted range, low populations, steep population decline, or severe threats.
COLUMBO *(FRASERA CAROLINIENSIS)*
Globally, this species is thought to be secure. In South Carolina, the species is considered imperiled due to low populations, steep decline, or severe threats.
CANADA MOONSEED *(MENISOERMUM CANADENSE)*
Globally, this species is thought to be secure with no risk of extermination. In South Carolina, the species is imperiled or vulnerable, with a moderate to high risk of extermination.
NESTRONIA *(NESTONIA UMBELLULE)*
This species is a concern in South Carolina. While apparently secure globally, it is vulnerable in the state. This may be due to restricted range, low population, recent decline, or severe threats.
ADDER'S TONGUE *(OPHIOGLOSSUM VULGATUM)*
This species is a concern in South Carolina. Globally, it is secure with a low risk of extermination. In South Carolina, it is imperiled due to restricted range, low population, recent decline, or severe threats.
AMERICAN GINSENG *(PANAX QUINQUEFOLIUS)*
Globally, this species ranges from vulnerable to apparently secure. In South Carolina, it is apparently secure with a fairly low risk of extermination.
OGLETHORPE'S OAK *(QUERCUS OGLETHORPENSIS)*
Globally, this species is imperiled or vulnerable. In South Carolina, the species is imperiled or vulnerable with a moderate to high risk of extermination.
STREAMBANK MOCK-ORANGE *(PHILADELPHUS HIRSUTUS)*
Globally, this species is secure. In South Carolina, the species is imperiled due to restricted range, low population, recent decline, or severe threats.
GREEN-FRINGE ORCHIS *(PLATANTHERA LACERA)*
Globally, this species is secure. In South Carolina, the species is imperiled due to restricted range, low population, recent decline, or severe threats.
GEORGIA ASTER *(SYMPHYOTRICHUM GEORGIANUM)*
Globally, this species is imperiled or vulnerable. In South Carolina, the status of the species is unknown.
SMOOTH THREE-PARTED VIOLET *(VIOLA TRIPARTITA VAR. GLABERRIMA)*
Globally, this species is secure with a low risk of extermination. However, in South Carolina, the species is critically imperiled with a low population with a very restricted range, low populations, steep population decline, or severe threats.
SMALL SKULLCAP *(SCUTELLARIA PARVULA)*
This species is a concern in South Carolina. Apparently secure globally, the species may be rare in parts of its range.

SOURCE: SC DEPARTMENT OF NATURAL RESOURCES, 2014

4.14. ANIMAL HABITATS

As a predominately rural county, Greenwood has a number of animal species that inhabit forests, fields, rivers, and lakes. Specifically, the South Carolina Department of Natural Resources (DNR) has identified 47 reptiles, 29 amphibians, 61 mammals, and 194 birds that are commonly found in the County. Of these, one is endangered and three are threatened (Figure 4-7). Endangered species are those that are near extinction, while threatened species are those animals that are near extinction and rare in certain ranges where they were once bountiful. It is important that these animals are protected in their home ranges. Many of these species are found throughout Greenwood County and are not limited to specific areas, except perhaps the Bald Eagle that is found around Lake Greenwood.

Native animals in Greenwood County provide an economic resource that is often overlooked. In a 2009 Clemson University report of Wildlife Economics, private land hunters spent $9.2 million in Allendale County and $13.9 million in Jasper County. Private land hunters in Allendale County had an economic impact of $36.2 million on the state's economy and in Jasper County $86.4 million. There have not been any definitive studies of the economic impact of hunting in Greenwood County. However, staff members of the South Carolina Department of Natural Resources estimate that the Allendale County figures are comparable for use in Greenwood County.

FIGURE 4-7. ENDANGERED AND THREATENED ANIMAL SPECIES IN GREENWOOD COUNTY

ENDANGERED
Carolina Heelsplitter [Mussel] *(Lasmigona decorata)*
Carolina Lance-Atlantic Spike [Mussel] *(Elliptio angustata-producta)*
THREATENED
Bald Eagle [Bird] *(Haliaeetus leucocephalus)*
Yellow Lance [Mussel] *(Elliptio lanceolata)*
Eastern Creekshell [Mussel] *(Villosa delumbis)*

SOURCE: SC DEPARTMENT OF NATURAL RESOURCES, 2014

In South Carolina, the South Carolina Wildlife Federation worked with several public and private partners to create a program to manage lands to enhance wildlife habitat in South Carolina. The purpose of the WAIT Program (Wildlife and Industry Together) is to encourage industries to offset habitat loss by devoting under-utilized corporate lands to wildlife through the development of habitat plans. The WAIT program offers opportunities for corporations to realize cost savings through reduced land management costs, enhanced employee enthusiasm and environmental awareness, increased partnerships with external community groups, increased benefit to the environment, and demonstrated commitment to responsible environmental stewardship. Local partners in this program include Duke Energy and Fuji Film.

4.15. PARK AREAS AND OPEN SPACES

Recreation is beneficial to the health of Greenwood County citizens. Currently, park sites in Greenwood County range from inner city parks with playgrounds to regional parks with an emphasis on ball fields. Provisions for various recreational opportunities for the public are necessary. Greenwood County's Department of Parks and Recreation monitors organized programs for citizens of all ages. Properties and staff used for these organized programs are maintained by county funding. However, before additional programs are devised there is a need to designate areas that would be beneficial for future parks and open spaces.

Lake Greenwood is a major recreation site for the county, region and state. Swimming, boating, fishing, picnicking and the like are all enjoyed by residents and visitors during the warmer seasons of the year. Lake Greenwood State Park, opened in 1940, is a natural highlight providing lake access to a multi-county area. Park amenities include 125 campsites, four picnic shelters, a nature trail, playground equipment, and fishing access. The park typically has an annual visitation of 210,000 people. The Saluda River, north of Lake Greenwood, is another scenic area that provides opportunities for canoeing, rafting, and fishing.

The Sumter National Forest provides recreation opportunities for hiking, camping, fishing, and viewing and hunting of wildlife. The forest is the largest natural recreation area in Greenwood County. Greenwood County is fortunate to have both the lake and national forest in the northern and southern portions of the County. Another point of interest is the Star Fort National Historic Site. The Revolutionary War fort serves as a site of natural and historical significance as well as a recreational venue for walking and jogging in a natural environment.

The Greater Greenwood Parks and Trails Foundation is charged with determining areas to be developed for passive recreational activities throughout the county. Passive recreational activities include hiking, biking, relaxing, picnicking or any other activity that is not intensive or organized; the antithesis would include soccer, baseball, etc. that can be incorporated into the park system.

The City of Greenwood and Greenwood County have identified abandoned rail corridors as potential linear parks in the 2015 Bike and Pedestrian Master Plan. Once transformed, abandoned rail beds offer walking, jogging, and bicycle opportunities and serve to connect neighborhoods and other regional passive recreational areas. Designated areas for trail development include the abandoned rail corridor southwest of Main Street running south to Greenwood Mills Mathews Plant, between Greenwood and Ninety Six along S.C. Highway 34, the rail line along U.S. Highway 25 between Greenwood and Hodges, a rail section within the Grendel Mill Village, and the Boy Scout Trail running parallel with Durst and Reynolds Avenues. An additional linkage includes a bike path proposed by the SCDOT along Calhoun Road that would provide a western connection between West Cambridge and loop around to Northside Drive. Future needs will necessitate incorporating outlying linkages of greenways into a comprehensive linear park system around the City of Greenwood. The objectives of this rail-to-trail conversion include reduced vehicular traffic and increased passive recreation uses.

As part of the comprehensive planning process, it is important to examine and consider the need for passive recreation in the community. Once a need for additional opportunities for passive recreation has been identified, ways to meet that demand can be considered, including incorporating the inclusion of such areas into requirements for new residential subdivisions. Residential developers are always seeking ways to enhance home or lot sales, including the addition of amenities such as passive recreation and open space. Development incentives can also be effective in encouraging developers to include community parks and open spaces. Such amenities promote active lifestyles that result in demonstrated health benefits for residents. Residential development incentives should be considered for new residential developments that provide for open space; connected network of sidewalks, trails, and paths accessible to all residents; and bicycle/pedestrian connection to nearby schools, services, and commercial areas.

4.16. UNIQUE SCENIC VIEWS AND SITES

One area of natural resource planning that is a benefit is preservation or enhancement of scenic views and sites. The views of mountains or sunsets are examples of this. In Greenwood County, there are a number of areas that are worth discussing as natural scenic sites. The main categories that were formed from these sites include rivers and water bodies, trees, agriculture, historic buildings and structures, and entranceways.

Lake Greenwood and the Saluda River shoals near Ware Shoals are two important water resources with scenic views that need to be protected from building and development that could potentially nullify the scenic beauty of these sites.

Agricultural areas and tree-lined streets are another area of scenic importance. Grace Street in the City of Greenwood is scenic because of its large trees that “grace” the street and provide a canopy over the traffic route. Trees, along with pastures, fields, and wooded areas are important to preserve from dense development. Three areas are identified for their natural beauty include properties along Ross Road, Dixie Drive and Highway 185.

Historic sites provide views that link nature with the built environment. Star Fort National Historic Site is a prime example. Located south of Ninety Six, Star Fort incorporates forested areas with an historic battlefield that would lose its charm and significance if it was located within an urban area. The downtown of Ninety Six and the communities of Bradley and Cokesbury are other examples of historic areas that are important to the area. The Grendel Mill Village and Greenwood Mill Villages are sites that have natural charm and are some of the state’s earliest contemporary residential subdivisions.

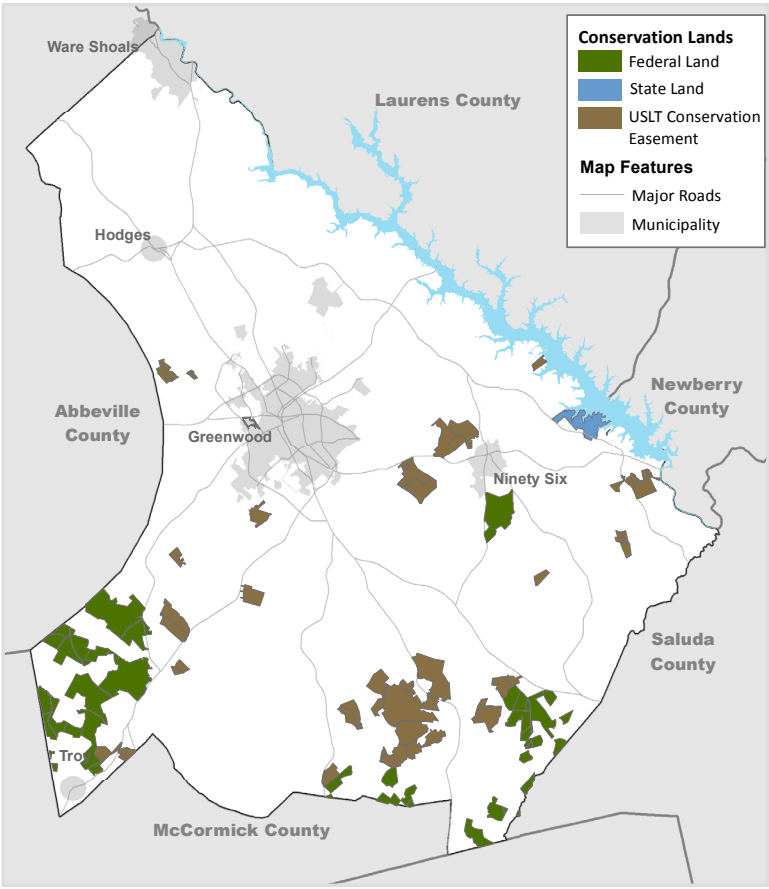
STAR FORT BATTLEFIELD

4.17. CONSERVATION MEASURES

There are many ways to ensure conservation of our natural resources. Recycling programs managed through the Greenwood County Recycling Office are examples of how a public initiative serves to protect our rivers, streams, and fields from refuse that takes years to decompose. Through recycling, the public is able to extend the life of the current landfill, therein reducing the costs to taxpayers and minimizing the need for continued landfill sites.

In addition to recycling programs, sustainable growth patterns are a conservation measure that should be researched and developed in Greenwood County. The governments of Greenwood City and County, in conjunction with local businesses, can set a precedent in South Carolina by moving toward LEED ("Leadership in Energy and Environmental Design") certification. LEED is a program that uses only certified environmentally sound building materials that not only helps to conserve the environment, but also promotes efficient energy use in the day-to-day operation of a building. In 2011 the Greenwood County Library became the first public library in the state to receive LEED certification. Encouraging the construction of more LEED buildings by both local government and private business, along with other conservation measures, will promote conservation of our natural resources for generations.

FIGURE 4-8. CONSERVATION EASEMENTS AND FEDERAL LANDS



SOURCE: UPPER SAVANNAH LAND TRUST, 2015

Another key conservation measure is the dedication of conservation easements to a land trust. A conservation easement is an instrument that allows a property to be reserved in perpetuity for agriculture, forestry, residential and recreational use. A conservation easement is typically used for the preservation of land for outdoor recreation or education, protection of important plant or animal habitat, preservation of open space that has been identified as worthy of protection, and preservation of historic property. The Upper Savannah Land Trust (USLT) was established in 2000 and currently has 33,000 acres of property identified within the eight county region. USLT currently manages 24 conservation easements totaling 9,049 acres in Greenwood County.

4.18. PUBLIC EDUCATION

Public education is essential to the achievement of long-range goals and objectives. Involving individuals and educating them in best management practices at informative meetings is necessary. Some of the groups that should be targeted in this initiative include, but are not limited to, development groups and builders associations, school groups, homeowners associations, realtors, and the general public. Education is a way to show how local actions can either harm or help their environment.

4.19. URBAN SPRAWL

One area of natural resource planning that encompasses many areas previously mentioned in this element is urban sprawl. Urban sprawl is a term used for development that is continuous and exceeds the manageable level of infrastructure needs. An example of this would be a commercial development that moves from an inner-city location to a more rural site. Taxpayers save money when growth is encouraged where infrastructure currently exists. Suburbs that spread into the countryside require new roads, sewer lines and schools. This type of development is not cost-effective as taxes and utility rates must be increased to meet the demand of development.

The antithesis of urban sprawl is sustainable growth. This concept embraces a balance of economic, environmental and social needs as a community develops. Specifically, sustainable growth establishes incentives for development to occur within areas that are currently able to accommodate the proposed land use. Policies and regulations should be implemented that prioritize infill development and redevelopment of dilapidated, poor-quality, and/or underutilized residential, commercial, and industrial developments over development on previously undeveloped land.

4.20. CONCLUSION

This element serves to inform the public on the natural resources of Greenwood County and provide the tools necessary for implementation of these objectives so that future generations may experience the natural beauty of our community.

4.21. GOALS, OBJECTIVES AND STRATEGIES

GOALS/OBJECTIVE/STRATEGIES	ACCOUNTABLE AGENCY	TIMEFRAME
GOAL 4.1. PROMOTE A CLEAN AIR PROGRAM IN GREENWOOD COUNTY		
OBJECTIVE 4.1.1. PROVIDE NATURAL DEFENSES AGAINST AIR POLLUTION		
STRATEGY 4.1.1.1.		
Encourage tree planting within urban areas.	Local Governments and SC Forestry Commission	On-going
STRATEGY 4.1.1.2.		
Discourage open residential burning.	Local Governments	On-going
STRATEGY 4.1.1.3.		
Minimize industrial emissions.	SC DHEC	On-going
OBJECTIVE 4.1.2. PROVIDE LEGISLATIVE DEFENSES AGAINST AIR POLLUTION		
STRATEGY 4.1.2.1.		
Continue to monitor air quality throughout Greenwood County.	SC DHEC	On-going
STRATEGY 4.1.2.2.		
Cooperate with neighboring counties along the Interstate 85 Corridor for air quality standards and practices.	Greenwood County	On-going
GOAL 4.2. PROTECT SOIL AND WATER RESOURCES		
OBJECTIVE 4.2.1. MAINTAIN THE INTEGRITY OF THE COUNTY'S SOIL		
STRATEGY 4.2.1.1.		
Recommend natural buffers and best management practices along drainage ways to minimize soil erosion and intercept soil movement.	Local Governments, Natural Resource Conservation Service, SC Forestry Commission	2019
STRATEGY 4.2.1.2.		
Support DHEC's monitoring of sites for percolation of on-site waste systems.	Greenwood County	On-going
OBJECTIVE 4.2.2. MAINTAIN WATER QUALITY AND QUANTITY		
STRATEGY 4.2.2.1.		
Continue to monitor existing and proposed developments for maintenance of watersheds.	Greenwood City/County Planning Department	On-going
STRATEGY 4.2.2.2.		
Recommend the reduction of the 2-acre minimum requirement for local storm water regulations to not more than a 1-acre minimum.	Greenwood City/County Engineering	2019
STRATEGY 4.2.2.3.		
Continue cooperation with DHEC on storm water review and retention for proposed developments.	Greenwood City/County Engineering	On-going
STRATEGY 4.2.2.4.		
Support Clemson University and Natural Resource Conservation Service programs to educate landowners and provide conservation measures of agricultural production.	Greenwood City/County Planning Department	On-going
STRATEGY 4.2.2.5.		
Recommend SC Forestry Commission best management practices to minimize nonpoint source pollution.	Greenwood City/County Planning Department	On-going
STRATEGY 4.2.2.6.		
Research and consider requiring buffer strips of natural vegetation along water bodies and tributary watercourses.	Greenwood City/County Planning Department	2018
STRATEGY 4.2.2.7.		
Locate heavy industry where waste discharges present the least ecological threat.	Planning Commission	On-going
STRATEGY 4.2.2.8.		
Maintain the quality, volume, and rate of flow of watershed drainage systems.	SC DHEC, Natural Resource Conservation Service	On-going

GOALS/OBJECTIVE/STRATEGIES	ACCOUNTABLE AGENCY	TIMEFRAME
STRATEGY 4.2.2.9.		
Review all residential development and construction applications for compliance with ecosystem protection requirements.	Greenwood City/County Planning Department	2017
STRATEGY 4.2.2.10.		
Establish control measures in residential developments to prevent degradation of the quality, volume, and rate of flow of the natural drainage system of the watershed.	Greenwood City/County Engineering Office	On-going
STRATEGY 4.2.2.11.		
Provide city/county best management practices and development incentives through a comprehensive development regulation for the development community.	Greenwood City/County Planning Department	On-going
OBJECTIVE 4.2.3. PROTECT FLOODPLAIN AND FLOODWAY AREAS		
STRATEGY 4.2.3.1.		
Require storm water permitting for commercial and residential developments regardless of size.	Local Governments	2018
STRATEGY 4.2.3.2.		
Encourage the use of traditional town development styles for incorporation as a viable construction alternative for developers.	Local Governments	On-going
STRATEGY 4.2.3.3.		
Design storm drainage projects to simulate the natural environment, disburse into areas of natural vegetation and detain, and disperse runoff at a flow simulating the predevelopment site.	Local Governments	On-going
STRATEGY 4.2.3.4.		
Revise the County Flood Ordinance to incorporate best management practices.	Greenwood City/County Engineering	2018
STRATEGY 4.2.3.5.		
Maintain emergency preparedness services for the threat of flooding.	Greenwood County	On-going
STRATEGY 4.2.3.6.		
Coordinate with upstream counties and local governments to provide a regional approach for water conservation and protection.	Local Governments	On-going
STRATEGY 4.2.3.7.		
Explore the potential of a localized stormwater management plan for the urban and suburban portions of Greenwood County.	Local Governments	On-going
OBJECTIVE 4.2.4. PLAN FOR GEOLOGIC HAZARDS		
STRATEGY 4.2.4.1.		
Control the location and operation of extractive industries to avoid damage to the environment, primarily drainage ways and other water bodies.	Planning Commission	On-going
STRATEGY 4.2.4.2.		
Update emergency preparedness plans to incorporate fault zones and conduct earthquake drills with emergency personnel.	Greenwood County Emergency Preparedness	On-going
GOAL 4.3. EXPAND AND SUSTAIN THE NATURAL ENVIRONMENT		
OBJECTIVE 4.3.1. PROTECT PRIME AGRICULTURAL LANDS		
STRATEGY 4.3.1.1.		
Encourage agricultural land uses in fertile areas of Greenwood County.	Planning Commission	2018
STRATEGY 4.3.1.2.		
Develop zoning districts that encourage and protect agricultural production in fertile areas of Greenwood County in cooperation with Clemson University, the Natural Resource Conservation Service and the SC Forestry Commission.	Planning Commission	2018

GOALS/OBJECTIVE/STRATEGIES	ACCOUNTABLE AGENCY	TIMEFRAME
STRATEGY 4.3.1.3.		
Reduce agricultural complaints by buffering agricultural uses from industrial and residential land uses.	Planning Commission	2018
STRATEGY 4.3.1.4.		
Encourage urban agriculture initiatives for egg, honey, vegetable and flower production.	Planning Commission	On-going
OBJECTIVE 4.3.2. PROTECT PRIME FOREST LANDS		
STRATEGY 4.3.2.1.		
Encourage the public to utilize BMPs provided by the SC Forestry Commission for forest management.	Greenwood City/County Planning Department	2017
STRATEGY 4.3.2.2.		
Develop ways to increase the incorporation of trees, especially evergreens, in developments to reduce heating costs and increase property values.	Greenwood City/County Planning Department	On-going
OBJECTIVE 4.3.3. EXPAND THE URBAN FOREST		
STRATEGY 4.3.3.1.		
Enact community-based local incentives for developments to protect or replant the urban forest.	Local Governments	2017
STRATEGY 4.3.3.2.		
Evaluate the need for local governments and utility companies to establish tree management programs through local funding sources.	Local Governments and Local Utilities	On-going
STRATEGY 4.3.3.3.		
Evaluate the need for a tree board or commission for support and guidance of local forestry programs.	Local Governments	2017
STRATEGY 4.3.3.4.		
Qualify the City of Greenwood for a Tree City USA award.	City of Greenwood	2017
STRATEGY 4.3.3.5.		
Evaluate the Tree City USA program for other Greenwood County communities.	Greenwood City/County Planning Department	2019
STRATEGY 4.3.3.6.		
Revise and improve land requirements for commercial and industrial development to increase the natural tree cover.	Greenwood City/County Planning Department	2017
OBJECTIVE 4.3.4. PROTECT PLANT AND ANIMAL HABITAT		
STRATEGY 4.3.4.1.		
Provide programs to encourage wildlife habitat on private property.	SC Department of Natural Resources	2019
GOAL 4.4. PROMOTE GROWTH MANAGEMENT PRINCIPLES		
OBJECTIVE 4.4.1. PROMOTE PARKS AND OPEN SPACES		
STRATEGY 4.4.1.1.		
Encourage agricultural land uses in fertile areas of Greenwood County.	Greenwood County, Natural Resource Conservation Service	On-going
STRATEGY 4.4.1.2.		
Develop zoning districts that encourage and protect agricultural production in fertile areas of Greenwood County in cooperation with Clemson University, the Natural Resource Conservation Service and the SC Forestry Commission.	Greenwood City/County Planning Commission	On-going
STRATEGY 4.4.1.3.		
Reduce agricultural complaints by buffering agricultural uses from industrial and residential land uses.	Greenwood City/County Planning Commission	2018
STRATEGY 4.4.1.4.		
Encourage the donation of land to the Upper Savannah Land Trust through conservation easements.	Upper Savannah Land Trust	On-going

GOALS/OBJECTIVE/STRATEGIES	ACCOUNTABLE AGENCY	TIMEFRAME
STRATEGY 4.4.1.5.		
Encourage developers, through incentives, to include recreational amenities such as sidewalks, trails and paths in residential developments.	Greenwood City/County Planning Commission	2018
STRATEGY 4.4.1.6.		
Provide protection to scenic areas in Greenwood through overlay zones or other suitable measures.	Greenwood City/County Planning Commission	On-going
STRATEGY 4.4.1.7.		
Provide additional public access points on Lake Greenwood for recreational use.	Greenwood County, SC Parks, Recreation and Tourism	2020
OBJECTIVE 4.4.2. PROMOTE SUSTAINABLE DEVELOPMENT THROUGH EFFECTIVE CONSERVATION MEASURES		
STRATEGY 4.4.2.1.		
Encourage developments to utilize or redevelop vacant sites for sustainable growth.	Local Governments	On-going
STRATEGY 4.4.2.2.		
Encourage tree replacement when development occurs to enhance the scenic beauty of a site and control heat islands.	Local Governments	2019
STRATEGY 4.4.2.3.		
Protect agricultural areas from incompatible land uses and develop incentives for agricultural production.	Planning Commission, Clemson Extension, Natural Resource Conservation Service	On-going
STRATEGY 4.4.2.4.		
Develop a web page to identify BMPs for development and construction.	Natural Resource Agencies	2018
STRATEGY 4.4.2.5.		
Produce a presentation in cooperation with natural resource agencies to describe the importance of BMPs to local groups.	Natural Resource Agencies	2018
STRATEGY 4.4.2.6.		
Develop and promote an educational program for developers, builders, utility companies, and citizens on the need to protect and preserve trees.	Natural Resource Agencies	2020
STRATEGY 4.4.2.9.		
Promote the utilization or redevelopment of existing buildings that are currently vacant.	Local Governments	On-going
STRATEGY 4.4.2.10.		
Develop sustainable growth patterns within a comprehensive land use plan.	Planning Commission	On-going
STRATEGY 4.4.2.11.		
Develop policies that prioritize infill development and redevelopment of dilapidated, poor-quality, and/or underutilized residential, commercial, and industrial developments rather than development on undeveloped land.	Planning Commission	On-going

INDEX OF FIGURES

C

Climate Characteristics in Greenwood County, 2016. Figure 4-1. 3
Conservation Easements and Federal Lands. Figure 4-8. 20

E

Endangered and Threatened Animal Species in Greenwood County. Figure 4-7. 17
Endangered Plant Species in Greenwood County. Figure 4-6. 16

H

Hydrology and Floodplains. Figure 4-3. 9

P

Prime Agricultural Lands. Figure 4-4. 12

S

Slope Characteristics. Figure 4-2. 5

T

Timber and Agricultural Land. Figure 4-5. 14