Long Range Plan

South Carolina Forestry Commission

STATE FORESTS

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The mission of the Forestry Commission is to protect, promote, enhance, and nurture the forestlands of South Carolina in a manner consistent with achieving the greatest good for its citizens.

Foreword

This planning document will guide the direction of the South Carolina Forestry Commission's state forests into the 21st century. It was developed by professional staff and approved as policy by the agency's nine-member Commission. This level of commitment will help ensure that those primary uses of present and future state forests are compatible with the overall mission of the agency.

The state forests are integral parts of the Forestry Commission. Each is unique, due mostly to physiographic location and accessibility, but all are managed as multiple-use forests. For each forest the mix of uses is different. For example, Harbison State Forest, located within the Columbia city limits, serves primarily as an environmental education resource. But, like Sand Hills and Manchester State Forests, Harbison also generates operating revenue from forest product sales, provides wildlife habitat and recreation for the public, contributes to clean air and water and is an active demonstration area for forest management techniques.

The Forestry Commission is charged with the task of fulfilling our mission while balancing the many uses of the forest. Although South Carolina is still a rural state, population growth has put unprecedented demands on public lands. Non-traditional recreational uses such as mountain biking now vie for space with such traditional recreational uses as horseback riding and hunting. All recreational uses challenge forest managers as they plan and carry out silvicultural practices.

In addressing competing uses the Forestry Commission will, first and foremost, look toward our mission and our legal mandates for owning and managing these lands. We will also look to ensure that the inherent productive capacity of the land is maintained or improved along with its associated environmental functions.

My goal is for the state forests to be viewed as models for balanced operations. We have the opportunity to demonstrate that public lands can provide a variety of benefits to the public while at the same time generating a positive financial return. Internally the state forests can enhance the training of our young foresters, helping to establish a firm knowledge base for their careers in public land management.

This long-range plan outlines how we plan to achieve these lofty goals on a statewide basis. Specific plans will be developed for each state forest following the concepts laid out here while recognizing the unique character of each site. Management tools described will apply to other tracts of Forestry Commission land too small to be managed as forests.

Bob Schoulter

State Forester

Vision Statement

The State Forests will be healthy, productive, forested ecosystems, improving the quality of life of South Carolina's citizens through the environmental, educational, economic, and recreational benefits of active forest management.

Environment

The State Forests will be leaders in environmental protection by implementing science-based, multiple-use forest management practices. Conservation of biological diversity will be a high priority. Protection of soil, water, and air resources will be an integral part of all forest management activities.

Education

The State Forests will be outdoor classrooms, providing the necessary educational resources and opportunities to raise the awareness of the benefits of forest resource management. We will strengthen our association with colleges and universities to promote forestry-related research and outreach to forest landowners and forestry professionals. State Forests will be used as training centers for agency personnel to meet job demands.

Economy

The State Forests will contribute to local and state economies through the sustainable production and sale of forest products. Comprehensive planning, using the latest technology, will be employed to determine sustainable harvest levels. Revenue will be utilized to further the mission of the agency.

Recreation

The State Forests will provide outdoor recreation, compatible with forest management activities. Through statewide and local planning efforts and on-site monitoring, we will involve technical experts and user groups in determining the optimal levels of recreational opportunities at each State Forest.

A HISTORY of South Carolina's State Forest System

South Carolina's two largest state forests originated from the Federal Resettlement Administration of the 1930s. This government program sought to purchase worn-out farmland and relocate struggling families on more productive farms.

Many families were willing to sell their impoverished farms, so the government ended up with thousands of acres of eroded, fire-swept, cut-over, and abused land. Of this land, 46,000 acres became Sand Hills State Forest, and 26,000 acres became Manchester State Forest.

In the late 1800s and early 1900s, the Presbyterian Church acquired several thousand acres on what is now Harbison State Forest. The land was offered for resale on easy terms in an effort to help African-American families become landowners. The experiment was unsuccessful and the Forestry Commission eventually purchased the land.

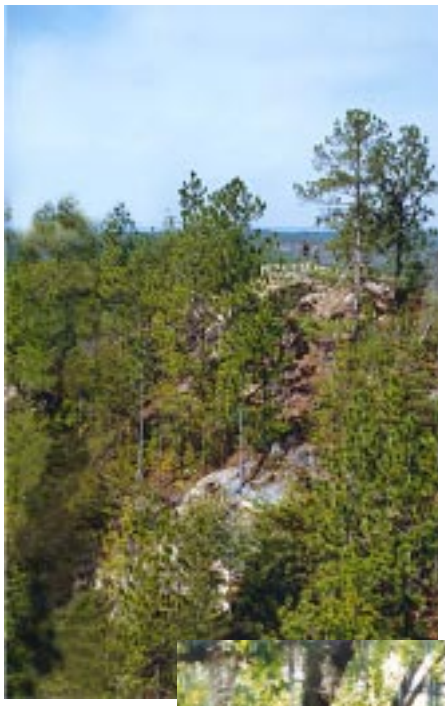
While some of the original goals for these properties went unrealized, the success of the state forest system is unquestioned. Where once there were thousands of acres of cutover lands and barren fields, there are now vigorous forests—forests that provide a wide variety of multiple-use benefits. Perhaps these are the ultimate benefits after all: local jobs, raw materials for industry, public recreation, and education.

Sand Hills State Forest

Located in Chesterfield and Darlington Counties, this forest is characterized by generally arid, infertile sandy soils. Ninety-two thousand acres were purchased by the Federal government in the 1930s for less than $5 per acre. Half became the Carolina Sandhills National Wildlife Refuge, and half was leased to the state for use as a state forest.

Between 1939 and 1991, the Forestry Commission managed the 46,000-acre state forest and handled timber practices on the adjacent Wildlife Refuge as well. Through the early 1940s, the Civilian Conservation Corps contributed manpower and expertise to the developing property. In 1991, the Forestry Commission was granted fee simple title to the State Forest.

From the outset, the Forestry Commission agreed to operate the property as "a demonstration conservation area, embodying the



principles and objectives of multiple-use management." Part of the long-range goal was to provide local jobs and stimulate local industry through forest production.

Throughout the years, traditional forest products like sawlogs, poles, and pulpwood have been harvested from the forest. Other products, including pine tar, turpentine, fence posts and pine straw, have played important economic roles at various times since 1939.

Sand Hills State Forest has been totally self-supporting since 1967. As is the case with all South Carolina state forests, 25% of the income generated from Sand Hills is paid to the county school system in lieu of property taxes.

Manchester State Forest

This 26,000-acre property, also acquired by the Resettlement Administration, was operated by the federal government as Poinsett Project during 1935-39. The Forestry Commission assumed operation in 1939, changing the name to Poinsett State Forest. The name was finally established as Manchester State Forest in 1949.

Like Sand Hills, Manchester State Forest was operated under a 50-year lease from the federal government. During the early years, the Civilian Conservation Corps and the Works Progress Administration were active partners in developing the property. Even Manchester's mission, as expressed in the lease agreement, was similar to that of Sand Hills: develop as a demonstration conservation area, utilizing the principles of multiple-use management.

Early on, Manchester posed a significant challenge to managers. Much of the property was infertile, cutover, and subject to destructive wildfires; about 75% of the land was considered too poor to produce any kind of crop except trees. Reforestation was a primary concern, but early records show that game management and recreation have been prominent parts of Manchester's management since 1939.

The state forest property includes a number of historical sites, including "Bellefield", the home of South Carolina's World War I governor, Richard I. Manning.

The Forestry Commission obtained title to the property in 1955. Except for salaries of forest workers, Manchester is completely self-supporting.

Harbison State Forest

At 2,177 acres, Harbison may be the largest state forest wholly within corporate limits of any town in the United States. When the Presbyterian Church abandoned its plans to develop an African-American community on the site, the Forestry Commission purchased the land for about $10 per acre in 1951.

For the first 30 years of its ownership, the Forestry Commission practiced non-intensive forest management limited to periodic improvement harvests or insect salvage. Beginning in the 1980s, various grants were obtained to begin developing the property as an educational forest. Volunteer groups have provided enthusiastic assistance in building and maintaining hiking and cycling trails.

Because Harbison's mission is primarily one of education, forest management is practiced in small-scale demonstration areas throughout the property. Harvesting, planting, natural regeneration, insect and disease treatment, and prescribed burning are among the practices conducted on the state forest.

Artifacts of South Carolina forest history are on display in and around Harbison headquarters. Among the exhibits are a working sawmill, a fire tower, a steam-powered log skidder, and a display of tools from the turpentine industry.

Conclusion

Today's state forests are products of their histories. As steward of these important resources, the Forestry Commission strives to draw lessons from the past as it plans for the future.

Land Management Strategies

Introduction

This chapter will explain the processes the South Carolina Forestry Commission will put in place to ensure that the state forests are managed for forest products in a sustainable manner. Explanations will underscore the need for funding sources to operate each forest unit and the need to sustain these revenues well into the future.

The overriding concern of the Forestry Commission in carrying out these processes will be the protection and enhancement of the environment. We will also strive to accommodate the groups that enjoy our forests in a wide range of outdoor recreational activities (see chapter on recreation for further details). However, sustainability of forest products will always take priority. Any recreational activities must be compatible with forest management practices and will have to be designed in such a way as to protect the environment.

The state forests encompass a diversity of forest types and represent a cross-section of the forest stand types found throughout the state. Open land areas contain cultivated fields, wildlife plantings, ponds, creeks, roads, and office-shop complexes.

Fifty-four percent of state
forests are natural stands. Thirty-seven percent are in plantation management and 9% are non-forested. Broad age classes are all well represented. Recent conversion of off-site slash pine acreage has resulted in 23% of existing state forest stands in the 0-15 age class.

Harvest Projections

Harvest scheduling will provide predictable harvest volumes and will have long-range implications for the structure and condition of our state forests. It is essential to have systems in place that will accurately model forest change, especially in light of the many recreational and environmental restrictions that affect timber management.

Obtaining adequate data will be imperative. Employment of all available modern technology will be essential in making these projections. Our goal on state forests is to completely inventory all forest stands within the next five years, and to re-inventory 20% of all stands annually.

Geographic Information System (GIS)

- Establish a GIS inventory program covering all state forest lands.
- Include the following layers utilizing GPS technologies:
  - Property boundaries
  - Stand lines
  - Buildings
  - Roads
  - Soil types
  - Topography
  - Hydrology (ponds, perennial, intermittent, and ephemeral streams)
  - Special places
  - Threatened and endangered species – i.e., red-cockaded woodpecker (RCW) colonies
  - Special uses (recreational areas)
- Include the following stand information (minimum):
  - Stand origin
  - Species
  - Year of establishment
  - Method of site preparation
  - Volume estimates/acre
  - Cruise re-inventory date
  - Prescribed interim stand treatments
- Remap stands after final harvest to update boundaries.

Forest Inventory and Modeling

- Volumes will be estimated initially from existing stand-level cruise information and other available data. A stand-based inventory system with measurement interval and sampling intensity based on age, timber type, and merchantability will be developed to provide regular updates of information.
- Timber growth models will be used to accurately predict total timber volumes as inventory takes place. Models must permit the input of management restrictions for recreation uses and for management strategies for threatened and endangered species.
- Existing Continuous Forest Inventory plots should be used to provide growth and mortality data. Remeasurement schedule should be based on modeling needs.

Administration

- Fund a full-time analyst/forest modeler to develop, design, maintain and manage the GIS and inventory databases for harvest scheduling. This analyst will have statewide responsibility on all state forests.
- Establish a central location for compilation and storage of data.

Forest Product Sales

The goal in state forest product sales will be to completely utilize all available products and to obtain the best possible price for those products.

Utilization

- State Forests will manage primarily for sawtimber with periodic interim thinnings.
- Timber sales will be cruised prior to advertising the sale to identify timber volume by product type, including saw-timber, veneer, poles, & pulpwood. The timber sales will be advertised to maximize utilization of all available products.
- Markets should be developed for the sale of other forest products, including pinestraw, firewood, seed, pine cones, etc.
- State forests will conduct timber sales as needed to salvage timber damaged by insects, disease, or weather-related mortality.

Limitations

- Final harvest size will be limited to a maximum of 100 acres excluding salvage sales. Adjoining stands must be 15-feet tall or 5-years old before a clearcut can occur.
- Streamside Management Zones (SMZs) will be established as called for in *SC Best Management Practices for Forestry* (BMPs).
- Roadside buffers, 2 chains wide, will be established for aesthetic values on all state-and county-maintained roads. These roadside buffers will be actively managed, and they can be harvested when the adjoining stand is 15-feet tall or 5-years old.
- A requirement to follow BMPs will be included in each forest product sale. A sale administrator will be assigned to each transaction to ensure compliance with all requirements.
- A pre-harvest conference between the sale administrator and a representative of the buyer must be held before the harvest begins. The conference must be documented with an approved pre-harvest checklist.
- Threatened and endangered species (i.e., red cockaded woodpeckers) will dictate type, size and frequency of cuts.

Reforestation

Reforestation decisions can have long-term consequences and should be made in light of local site conditions, larger-scale watershed biological diversity, and legal ramifications. Prompt reforestation is critical in reducing the amount of land that is non-productive at any point in time. The potential for environmental

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impacts can be higher during this stage in the life of a forest than at any other time. Our overall goal on state forests is to successfully establish a new forest stand within two years of final harvest.

Planning

- Reforestation plans will be in place prior to final harvest. A reforestation plan sheet will be developed for use by all state forests.
- Site preparation recommendations will meet or exceed BMPs.
- Sites best suited for natural regeneration will be identified prior to final harvest and managed accordingly.
- Site preparation and planting will be completed by the 2nd dormant season following final harvest, unless extenuating conditions (such as drought) occur.

Site Preparation

- All site preparation practices must follow BMPs.
- Site preparation and planting contractors will receive training in BMPs.
- Site preparation prescriptions will be based on local site conditions. Lower intensity methods (such as the use of herbicides) will generally be recommended on steep, erodible slopes.
- Where necessary, mechanical site preparation will be performed on the contour on slopes and parallel to streams on low, flat areas.
- Herbicide usage will be confined to those chemicals approved for the treatment prescribed, and be applied at recommended rates and times of the year.

Planting

- Species selection for reforestation will give priority to native species best adapted to local site conditions.
- Genetically improved planting stock will be utilized when available. Custom client seedling production agreements with SCFC Nursery & Tree Improvement Section should be completed as soon as quotas and prices are set for the following season.
- Regeneration records will be kept on file at each state forest office.
- Only approved tree planting vendors will be used on state forests.
- State forest personnel will actively monitor planting crew operations for quality assurance.
- Regeneration success will be evaluated sufficiently to allow for additional site preparation and replanting the following planting season where necessary.

Interim Stand Treatments

Interim stand treatments can be used to affect site productivity, annual growth, and mortality; as well as management of wildlife and threatened and endangered (T&E) species. The individual treatment, or combination of treatments, should be incorporated in stand management prescriptions. A GIS database will be utilized to schedule interim stand treatments. The goal on state forests is to routinely make stand-level reviews, identify the need for interim stand treatments, and prescribe and implement interim stand treatments in a timely manner.

Herbicide Use

- Develop a vegetation management strategy at each state forest for control of competition and/or exotic nuisance plant species.
- Incorporate acreage scheduled for herbicide application into a GIS database.
- Utilize herbicide application to supplement prescribed burning in longleaf pine stands to benefit both the T&E species (RCW) and provide clean pinestraw for sale.
- Utilize herbicide application for timber stand improvement (TSI) to release desirable species.
- Apply in old fields to control vegetative competition – especially when planting longleaf pine or hardwoods.
- Employ certified herbicide applicators only.

Fertilization

- Identify stands and soil types most responsive to fertilization for pine straw and timber production.
- Incorporate acreage scheduled for fertilization into a GIS data.
- Base all fertilizer applications on soil and foliage analysis.
- Encourage land application of organic waste material through joint agreements with municipal, industrial, and other government agencies. Any application of organic waste material will be subject to appropriate environmental regulations.
- Maintain demonstration and research areas already established on state forest lands.

Prescribed Burning

- Incorporate acreage scheduled for prescribed burning into a GIS database.
- Re-inspect all stands scheduled for prescribed burning prior to developing a burning plan.

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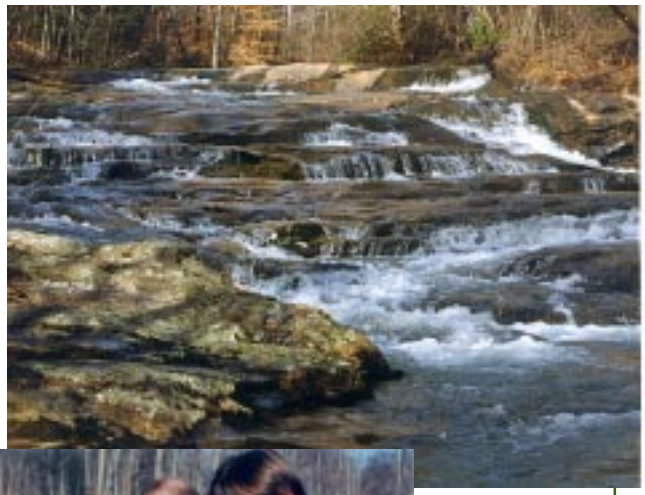
- Carefully adhere to all state laws and smoke management guidelines.
- Use prescribed burning for hazard reduction and hardwood control in pine stands.
- Use prescribed burning as a tool for enhancement of areas used by T&E Species (RCW), wildlife habitat, and in pinestraw stands.

Thinnings

- Manage most stands for sawtimber with several intermediate thinnings. Periodic thinnings should be used to maintain growth and vigor of the remaining stems.
- Use thinnings to enhance habitat for T&E species (RCW primarily). Develop target habitat goals for T&E species.
- Provide areas for demonstrating thinning in both pine and hardwood stands.
- Utilize precommercial thinning only when necessary. In general, stands should be managed to prevent the need for precommercial thinning.



Water Quality

The South Carolina Forestry Commission is the lead agency in South Carolina in designing, interpreting, monitoring, and updating forestry best management practices (BMPs) that protect water quality and conserve site productivity[1]. Best Management Practices are science-based forest management practices, developed pursuant to federal water quality legislation, that minimize or prevent nonpoint source water pollution from forestry operations and give forest landowners and the forestry community guidelines to follow in practicing good stewardship on our valuable forestland. BMP implementation protects the quality of our drinking water and helps sustain the productivity of our forests for future use.

As part of the South Carolina Forestry Commission, the state forests should be models for BMP implementation. They should meet or exceed all established BMPs, all applicable state water quality laws, and the requirements of the Clean Water Act for forestland. State forests will make all efforts necessary to ensure that there are no negative impacts to water quality or site productivity from forestry operations (i.e., forest road construction, timber harvesting, site preparation, reforestation, prescribed burning, pesticide application, fertilization, or minor drainage) on their lands.

BMP Education

- All state forest employees involved in the supervision of forestry operations will be required to have appropriate BMP training (i.e. Timber Operations Professional or equivalent).

- All contractors operating on state forests will be required to have appropriate BMP training (i.e. Timber Operations Professional or equivalent) and will be responsible for BMP compliance on their work site. State forests will include this requirement in all bid invitations and contracts.

BMP Implementation

- State forest employees will complete pre-operation planning and post-operation compliance checks on 100 percent of forestry activities on their lands. Any area of noncompliance will be mitigated within a reasonable time period.

- A form documenting the pre-operation planning and post-operation compliance check will be kept on file for every forestry operation completed on a state forest during that fiscal year. A committee consisting of key personnel from the state forests and the South Carolina Forestry Commission's Environmental Management Program will develop this form.

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- Prior to the start of a forestry operation a conference will be held with all contractors to cover the operational plan and all applicable BMPs.
- Contractors will notify state forests before beginning any operation and a performance bond will be collected to ensure BMP compliance.
- Riparian protection measures will be established by state forest employees and implemented for all streams, lakes and ponds per current BMPs.
- The state forest employee supervising the forestry operation will be required to approve the location of all stream crossings and logging decks.

BMP Monitoring

- South Carolina Forestry Commission BMP Foresters will conduct BMP Compliance Monitoring on state forests at the end of each fiscal year.
- Monitoring sites will be chosen randomly with an emphasis placed on sites with risk to water quality or site productivity. A minimum of 10 percent of the forestry operations completed during that fiscal year will be evaluated. Sites that have received a BMP Courtesy Exam will not be excluded.
- A South Carolina Forestry Commission BMP Forester will conduct site inspections.
- Sites will be evaluated for BMP compliance in road construction, road stream crossings, streamside management zones, harvesting operations, site preparation, and minor drainage. Sites will also be rated as adequate or inadequate for pre-operation planning.
- Results will be published in the South Carolina Forestry Commission's Annual Report.

Impacts to water quality and site productivity from recreational activities should be addressed with guidance from the State Forests Recreation Advisory Council.

[1]. *South Carolina's Best Management Practices for Forestry. 1994.*

Forest Recreation

The goal of the South Carolina Forestry Commission is to provide outdoor recreational opportunities on the state forests that are compatible with forest management activities. The SCFC will strive to accommodate the needs of the various recreational user groups that enjoy the state forests. However, as is the case for forest management activities, management of recreational activities will not take precedence over the protection and enhancement of the environment. In addition, management for the sustainability of forest products will always take priority over recreation and other forest management activities.

There are a variety of recreational opportunities in South Carolina's state forests. In fact, the opportunities are as diverse as the forests themselves. There are equestrian, mountain biking, hiking and OHV (off highway vehicle) trails, and a rifle and pistol range. Other activities include camping, picnicking, bird watching, and canoeing. Not all of these activities are available on every state forest but all are available on at least one. Manchester and Sand Hills State Forests have historically been enrolled in the Wildlife Management Area (WMA) program, which is regulated by the Department of Natural Resources. Hunting and fishing on these two State Forests require applicable licenses and a WMA permit and are allowed only in designated areas during the appropriate seasons.

It is through sound multiple-use forest management that the Forestry Commission plans to maintain the integrity of and enhance the state forest environment while providing for future natural resource uses, including recreation.

Recreational Opportunities

- To ensure fair allocation of resources to recreational user groups the SCFC established a State Forests Recreation Advisory Council (RAC) comprised of representatives of the major recreational user groups. The purpose of the RAC was to develop overarching guidelines for future recreational use on the state forests, with an emphasis on minimizing adverse ecological impacts. The guideline are included herein.
- The RAC will convene periodically to review recreational issues.
- Local working committees will be formed to assist forest directors in creating and implementing specific recreation plans for each state forest based on the guidelines.
- The SCFC will establish a system (e.g., surveys, comment cards, etc.) to regularly assess user satisfaction and address concerns.

Protection of the Environment

- The SCFC will develop a monitoring system, with assistance from other agencies, to assess the impacts of recreational activities on water quality and site productivity.
- Forest directors and local committees will work toward ensuring that trails are properly designed, constructed and maintained to minimize the impact to the forest environment.
- Forest directors will cancel special events when necessary, due to inclement weather or other considerations, to avoid negative impacts to the forest environment.

Administration

- The Forestry Commission will report and analyze state forest recreation revenues and expenditures annually and adjust fee rates accordingly.
- The Forestry Commission will work toward finding funding to hire a trained recreation specialist to assist with recreational management on all state forests.

Guidelines for Recreation on South Carolina State Forests

The following guidelines were formulated by the South Carolina State Forests Recreation Advisory Council, a formal partnership of citizens representing major recreational users of State Forests, including equestrians, cyclists, hikers, off-highway vehicle riders, hunters, and naturalists. The Recreation Advisory Council will continue to meet at least once a year or on an as-needed basis.

The guidelines address broad areas common to recreational use of all State Forest lands, with an emphasis on minimizing adverse ecological impacts of these uses. The guidelines are flexible enough to accommodate the differences among State Forests, such as differences in size, terrain, ecology, location, and mission, and to allow for future, unforeseen recreational uses with the understanding that all current and future recreational uses of State Forests must be compatible with forest ecosystems.

By law the South Carolina Forestry Commission has the ultimate responsibility for decisions that affect management of the State Forests. Therefore, these guidelines were crafted to be compatible with Forestry Commission established policy and procedure and with the Commission's long-range plans for management of its forests.

Implementation of recommendations made herein should not unduly expose a State Forest to liability, fail to comply with SC's Best Management Practices for Forestry as well as any laws and regulations enforced by SC DHEC, the Corps of Engineers, or any other regulatory agency, or unduly tax the resources of a State Forest, including its personnel and financial as well as natural resources.

Section 1: Trails

The demand for trails on public lands is great. Therefore, each State Forest will strive to provide quality recreational opportunities for trail users. Employing principles of collaborative adaptive management, the Forestry Commission will strive to harmoniously integrate design, construction, and maintenance of State Forest trails with the multiple uses inherent to the agency's mission.

Trail System Objectives

Compatibility

Trail systems will be compatible with site ecology and other forest uses, taking into consideration existing recreation and adjacent land use.

Safety

In all aspects of trail system management safety will be the Forestry Commission's first priority.

- Information will be provided at trailheads about safety issues, rules and regulations, and emergency contacts.
- Trails will be signed with location and direction information at appropriate intervals.
- Each State Forest will have an emergency response plan that is eriodically reviewed and updated by state forest staff.
- All users will be advised to wear orange or bright colored clothing during hunting season.

Design and Maintenance

State Forest trails will not degrade the forest's environment at large or its special features. They will be operated with the goal of generating sufficient income so as not to tax the financial and personnel resources of the Forestry Commission.

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- Trails will be built to standards that require low maintenance while providing for optimum use.
- For management purposes, each State Forest will implement monitoring systems to assess not only the impacts of trail use but also the impacts of trails on the forest.
- Volunteerism, for trail construction and maintenance, will be encouraged as it fits within Forestry Commission guidelines.

Adaptability

Over time, recreational demands on public lands, knowledge of the resource, and the ecosystem itself will change. The State Forests will use collaborative adaptive management techniques to adapt to these changes.

Availability

Trail systems will be designed to be available, accessible, and provide varied experiences.

- Access to trails will be from appropriately designed trailheads or staging areas.
- Information will be provided at trailheads and staging areas so recreational users will know what to expect and be able to make their own decisions on the level of trail difficulty.
- The Forestry Commission will comply with ADA requirements as they apply to trail access.

Education

The State Forest Trails System provides the Forestry Commission an opportunity to educate a largely urban population about forest ecosystems, the management of those systems to produce commodity and non-commodity resources, and the historical and cultural changes that have occurred to the landscape over time.

In addition to trail information, State Forests will provide information about user ethics, forest management, history, natural history, and volunteerism.

Educational information will be made available at trailhead kiosks, websites, and other appropriate locations.

Guidelines for Implementation

Resource Limitations:

The following must be considered if the trail system is to be sustainable.

- Forest type
- Management objectives
- Abiotic factors such as soils and topography, streams and other bodies of water
- Biotic factors such as wildlife and plants
- Adjacent land use
- Personnel, volunteers, and equipment available for trail construction and maintenance
- Available funding and funding constraints
- Impact data obtained from trail monitoring

Design:

The following elements will be considered in the design / redesign of new and existing trails.

- Published trail design and construction guidelines
- Forestry Best Management Practices (BMPs)
- Educational opportunities
- Aesthetics
- Cultural values
- Historical sites
- User group needs
- Installation cost
- Maintenance cost
- Facilities
- Utilities
- Shared use
- Existing facilities, trails, roads, railroad rights-of-way
- Existing openings

Section 2: Impact Monitoring

For management purposes, each State Forest will implement monitoring systems to assess the impacts of recreation on the Forest.

Monitoring of wildlife populations and quality of habitat is addressed in the chapter entitled "Wildlife" in the State Forests Long-Range Plan.

Section 3: Forest Recreation Regulations

(Individual state forests may have additional regulations)

- All non-foot traffic is restricted to designated routes, which may include trails, forest roads and woods roads (see Definitions).
- Users with valid permits may ride at night on designated night routes.
- The Forestry Commission has the right to close roads or trails for public safety or the protection of the resource.
- State Forests will alert users during hunting season by posting signs at trailheads and access points. Season dates will be posted on the Forestry Commission's website and other information outlets. Users will be advised to wear safety clothing and observe off-limits areas. Certain areas may be closed to recreational use during hunting season.
- Camping is by reservation only.
- Camping and campfires must be confined to designated sites.
- No unauthorized removal of (or damage to) plants or forest products.
- No alcoholic beverages except in designated areas.
- Lanterns must not be hung in trees or bushes.
- Any defacing of state property including littering is subject to fine or incarceration.
- All pets must be on leash in camping and parking areas. On Harbison State Forest, which is within Columbia City limits, pets must be on leash at all times.
- Horses and dogs must not be tied directly to trees or bushes.
- Swimming is not permitted in State Forest streams and ponds.
- A current, negative Coggins Test certificate is required for each equine.

Section 4: Recreation Permits

All recreational users impact State Forest ecosystems. Therefore, all users should contribute to the financing of necessary repair and recommended improvements. Requiring user fees or permits is a way to ensure that users contribute.

Additional reasons to require recreational fees:

- To develop a data base on user demographics
- To ensure uniform distribution of regulations
- To familiarize users with trail systems, picnic and other recreation areas, and placement of structures
- To update users about improvements on the forests, scheduled events, etc.

Individual Permits

- South Carolina's State Forests differ in size and accessibility to the extent that recreational use will necessarily vary from one to another. Each forest will require permits for those activities that involve heavy use (e.g. horseback riding, cycling, and off-highway vehicles) and others as administratively feasible.
- All State Forests will issue daily permits or annual permits for individual use only.
- There will be no courtesy or free permits.
- Children under 16 need not purchase a permit but must be accompanied by a permit holder.
- An information packet will be distributed with each annual permit sold.
- Parking permits will be required in popular public access areas and/or those areas where they are deemed cost-effective. Annual parking permits will be issued as part of the annual permit packet.
- As a component of its trails use plan, the Forestry Commis sion will begin a systematic study of recreational use impacts on the forest. Assessment of these impacts will guide future recreational guidelines, regulations, and policy on the State Forests.
- Fees will be in line with other state/federal land fee structures.

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Individual Permits

- The Forestry Commission will periodically review permit fee structures.
- The Forestry Commission will provide permit holders with regular/periodic information and updates about State Forest activities and regulations.
- The Forestry Commission will publish an accounting of permit receipts and expenditures related to recreation at the end of each fiscal year.
- The Forestry Commission will develop a periodic survey, with assistance from a qualified research organization, to measure recreational users' satisfaction with programs.

Special Use Permits

All events held within a State Forest require the issuance of a Special Use Permit from the Forest Director's Office.

For this purpose, an event is defined as, but not limited to, any activity, not already governed by existing forest rules and regulations, that meets any one of the following characteristics:

1 - Participants are required to register prior to the event in writing.
2 - A payment is required to participate.
3 -The activity is organized and promoted to the general public.

Each State Forest will use the same procedure for permitting special events. A Special Use Permit was drafted by the Recreation Advisory Council as the form to be used in contracting with state forests for special events. A non-refundable deposit will be required in advance of the event. A security deposit may also be required.

Section 5: State Forest Local Working Groups

Function

An ongoing advisory council/working group will be formed by the Forestry Commission, for each State Forest, to provide input on State Forest activities and assist with projects on the Forest within the context of the published statewide recreation guidelines and the SC Forestry Commission's State Forests Long Range Plan.

Formation

Each forest will hold a public meeting, publicly advertised, with special invitations extended to all stakeholders, to explain State Forest recreation guidelines and recruit members for the working group.

Membership

Each local working group will include: the Forest Director; at least one member of the statewide Recreation Advisory Council (who will represent not only the interests of his or her individual user group but the Council as a whole); recreational users of the forest; representatives of local government; neighbors; local homeowners/landowners; and interested volunteers.

Representation of interest groups must be balanced. Interest groups may be limited to two members each.

Because these are defined as ongoing working groups, membership will necessarily be fluid.

Meetings

Meetings will be informal working sessions to discuss implementation of published guidelines and plan trails or other recreation-related projects in accordance with those guidelines. Working group meetings will be chaired by the Forest Director and held at convenient times for group members. Meetings will be scheduled in advance and will occur at least annually.

Definitions

ADA – Americans with Disabilities Act

BMPs – Forestry Best Management Practices

Coggins Test – A standardized blood test that is drawn by a licensed veterinarian to determine the presence of antibodies to Equine Infectious Anemia. The law requires that any animal transported across a state line or to any place where there is a public gathering of horses must have documentation of a negative Coggins Test within the previous 12 months.

Collaborative Adaptive Management – A management system that seeks input from all interested parties while recognizing that ecological conditions, scientific knowledge, social values, and economic conditions are constantly changing.

Designated routes – Trails or roads that are marked or indicated on maps provided to Forest users

Firebreak – A furrow created by disking, blading, or plowing to interrupt forest fuels

Forest road – Graded dirt road maintained by the forest

OHV – Off-highway vehicle

Woods road – Unmaintained road built to access stands of timber within the forest

Wildlife Management

South Carolina's state forests are located in every physiographic region of the state. They contain a wide range of habitats including diversity within stands and across the landscape. This mix of forest types provides excellent habitat for many wildlife species, both game and non-game.

Many forest management activities are beneficial to game species of wildlife. Practices such as thinning, prescribed burning, planting beneficial tree species, and supplemental wildlife food plots encourage a variety of game species. White-tailed deer, bobwhite quail, mourning dove, and eastern wild turkey are the most prevalent game species in our forests. Other species, including rabbit, gray squirrel, fox squirrel, black bear, and waterfowl are also present. The streams and managed ponds on state forests contain fishing opportunities for sunfish, largemouth bass, and trout.

Since hunting is one of the multiple-use goals of state forest lands, game management should be aggressively pursued. Most state forest lands are enrolled in the South Carolina Department of Natural Resources Wildlife Management Area program, which allows public hunting opportunities. Through this cooperative agreement, DNR monitors the health of game species and provides recommendations and funding to maintain and increase populations. Forest management activities should be planned to maximize the benefits to game species by considering appropriate timing of an activity, size of the affected area, and spatial arrangement.

Non-game wildlife species play an important role in management planning and prescriptions on state forests. Threatened and endangered wildlife species and species of concern, including the red-cockaded woodpecker, Pine Barrens treefrog, green salamander, and neo-tropical migratory birds should be considered when forest management activities take place. Endangered species populations should be managed with input from DNR and the US Fish & Wildlife Service, utilizing appropriate habitat management measures to increase and maintain populations. Where sensitive species are known to occur, particular concern should be given to reducing fragmentation of habitat, maintaining and creating additional high-quality habitat, and complying with the Endangered Species Act.

Identify Habitats

- In cooperation with the DNR Stewardship Biologist, identify key habitat types for game and non-game wildlife species on each state forest.
- Include identified key habitats in the GIS database.
- Create a GIS layer that contains wildlife management information.

Develop Guidelines for Wildlife Management

- Develop general wildlife management guidelines that fit within the forest management goals for each Forest.
- To document that wildlife benefits are considered when planning forest management activities, include a checklist of wild life management guidelines in the pre-operation planning form.
- Conduct pre-harvest surveys of forest product sale areas to ensure that forest management activities do not adversely affect threatened and endangered species.
- In cooperation with DNR, monitor harvest rates for game species on the state forests.

Provide Wildlife Benefits

- Plan and conduct forest management activities on state forests to provide benefits for both game and non-game species.
- Pursue cooperative agreements with other agencies and interest groups to obtain the necessary expertise. Endangered species populations will be managed with input from the DNR and US Fish & Wildlife Service.

Special Places

State forest sites with ecological, geological, and historical significance should be identified and managed to protect these unique values. Special places can occur on every state forest. Examples of special places are:

- Historic home sites
- Cemeteries
- Unique landforms
- Rare plant locations
- Archeological sites
- Former town sites
- Unique habitats
- Educational areas
- Recreation areas
- Other historically significant sites

Special areas should be identified on all state forests. Agreements with other agencies will help identify significant special areas and prescribe guidelines for their management. For each special site, protective buffers, visual buffers, access, and the appropriate level of public access and involvement should be identified.

All management within identified special sites should be planned to maintain the integrity of the site long-term. Individual special sites will need different levels of management to sustain their unique qualities, ranging from preserving the area to special management of the area to enhance the site. Some areas may require active management, including timber harvests, to maintain the special qualities of the site. The Forestry Commission should involve other agencies if necessary to obtain expertise for the appropriate management of some sites.

Legacy Sites

- Each state forest will compile a list of proposed special places.
- The State Forester will appoint a review team to evaluate each proposed site for designation as a legacy site. The team will develop specific criteria for designating legacy sites.
- Forest directors will prepare management guidelines for designated legacy sites in order to maintain the integrity of the site.
- A GIS layer will be created to document the location of and management restrictions for each legacy site.
- Periodic reviews of each legacy site will be conducted to document the effectiveness of the prescribed management guidelines.

Research and Education

Research

South Carolina's state forests are logical places for research projects, whether those projects are conducted by the Forestry Commission, technical schools, universities, or other organizations. Because they are state-owned, they are open to the public and are designed for multiple use. Thus, in addition to traditional uses such as timber, recreation, wildlife habitat, and aesthetics, state forests are well suited for use as research sites. Research results will improve forest management efforts and provide a broader range of options for use on private lands as well as state forests.

Implementation

- Forest directors will seek partnerships with educational institutions and forest industry to create projects demonstrating the latest forest management techniques.
- Requests for the use of state forest property as research sites will be accommodated when possible.
- Creative solutions will be sought for the opportunity costs of research conducted on state forests. (These costs may include delay of harvest, loss of productivity, and/or exclusion of other uses.)
- Research results will be shared with Forestry Commission foresters and cooperators by the organization conducting the research.
- Where appropriate, research plots will be identified with signage explaining the methodology and outcome of each project.

Education

The Forestry Commission's Strategic Plan gives the agency the responsibility to "develop and promote environmental education programs for all audiences." For several reasons, state forests are suitable for conducting these programs. Each state forest has personnel knowledgeable in forestry and forest management issues. State forests are excellent "outdoor classrooms," allowing students to see first hand what the instructor is explaining. State forests are open to the public and are visited by thousands of citizens each year, providing an opportunity to convey information even if a visitor is using the forest mainly for recreation.

Implementation

- Continue to develop Harbison State Forest as an environ mental education facility and expand programs to selected field locations. Utilize lesson plans developed at Harbison on other state forests.
- Conduct educational programs for all ages.
- Accommodate requests for school group outings.
- Advertise forest walks/talks as practical.
- Utilize passive exhibits and signs to raise public awareness. Construct signs explaining forestry practices as completed or during operation. Build displays about unique features and/or forest ecology. Develop explanatory signs/brochures about research projects.
- Establish demonstration sites, where practical, to show various forest practices.
- Make state forest facilities available for programs like Project Learning Tree, Teaching KATE, Wood Magic. Train state forest staff as instructors.

Public Relations

Public relations is the art of establishing and promoting a favorable relationship with the public (customers), the methods and activities used to establish and promote such a relationship, and the degree of success obtained in achieving such a relationship.

State forest customers include, but are not limited to, forest product buyers, forest-based recreational users, educational institutions, other state and federal agencies, and adjacent landowners. All these groups are important and can assist the state forests in successfully accomplishing our mission.

State forest employees should treat every customer, particularly the recreational user, as an invited guest. The citizens of South Carolina own the state forests and state forest employees must treat everyone with respect. Special training should be provided to state forest employees to improve service to the public, especially in responding to reservation and permit requests.

Each state forest should be involved in the communities around it. State forest resources may be used to assist local organizations with minor work projects.

With assistance from a qualified research organization, appropriate feedback mechanisms should be set up to evaluate our success in the area of public relations. This would give us the information we need to make adjustments to the system to better serve the public. From time to time complaints come in. These complaints should be handled as specified in the SCFC policy and procedures manual.

Information about the state forest and events taking place on the state forest should be made available to the public using all forms of communications. Brochures should be well written, attractive, informative, and accessible. Each state forest should make information of interest to the public available online. Local print media should be used to inform the public of events on the forests and to explain why work is done the way it is.

Law enforcement is critical in public relations efforts. The public feels safer, is more relaxed, and enjoys the state forests more when laws, rules, and regulations are enforced. Law enforcement officers should be trained and instructed to look at all aspects of a violation before issuing a summons or asking for a warrant.

Establishing and Promoting Public Relations

- State forest directors will be encouraged to join and be active in local civic organizations.
- State forest personnel will be required to take customer relations training to include: good telephone answering techniques, voice control, emotions control, how to handle irate customers, etc.
- Answering machines will be used judiciously during working hours. Prompt response to inquiries is essential.
- State Forest employees will have a working knowledge of the Forestry Commission.
- State Forest employees will have a working knowledge of all state forests.
- Each state forest will accept credit cards as a means of payment.
- Each state forest will utilize signage, where educational opportunities present themselves, to inform the public concerning forest management activities.
- Each state forest will use directional signage to make it easier for customers to move around the forest.
- Each state forest will promote the use of its facilities in print and broadcast media when possible, by producing brochures, and using the internet.

Determining the Degree of Success:

Each state forest will periodically survey its customers to determine the effects of public relations efforts. Surveys will be done on a schedule and in a manner recommended by a qualified research organization.

Infrastructure and Equipment

Buildings, road systems, and equipment play a key role in forest operations. While providing a convenient, comfortable and cost-efficient work environment, a state forest's infrastructure can also serve as a model for forest landowners and the public in general. Also, state forest infrastructure can support Forestry Commission field operations, providing office space, equipment maintenance, and wildfire control.

Therefore, guidelines for the location, layout, design, and maintenance of these amenities should be coordinated with the Forestry Commission's BMPs and procedures, and should conform with other state or federal agency mandates. Consistent monitoring and maintenance is vital to ensure proper function and trigger the need for change if necessary.

Buildings

- Justification for new construction or major remodeling should consider functional obsolescence, adaptability of building space for multiple tasks, adequacy of work or living space, accessibility to the public, and conformity with ADA and barrier-free design, as well as the expense of construction.

- Any demolition, moving or sale of inventoried buildings will be coordinated with the Forestry Commission's Construction and Real Property Section.

- Regular maintenance of buildings will be performed in coordination with the SC State Engineer's Office. Minor maintenance may be performed by state forest personnel. Cost, complexity, and urgency of repair will be determinants when soliciting assistance from private contractors. Solicitations will be in the form of an "invitation to bid".

- Every effort should be made to preserve buildings on a state forest that have historical significance. Partnerships with local, state or federal historical societies as well the use of available grant capital will ensure the accuracy of any needed restoration.

- As existing buildings need replacement, and as new buildings are added, emphasis will be on standardizing designs, each structure according to its function. New buildings should be designed to accommodate additions and changes.

Forest Roads

- State forest roads will be assessed annually by a designated, TOP-trained individual. The assessment will target erosion problems, improper location, BMP non-compliance, and will address the need for surfacing material, entrenchment, general maintenance, and requirements for the installation of structures or technology to minimize traffic impact. The monitoring process may result in a determination to limit or restrict forest traffic to control recurring maintenance problems.

- Documentation of annual forest road assessments will be held on file at each state forest office. Documentation will include, at a minimum, dated maps with identified road problem areas highlighted and the prescribed corrective actions indicated.

- New road construction or major roadwork will be recommended by the forest director. New road design should comply with all applicable BMPs and should consider location, width, slope, purpose, adaptability to alternate use, and functional life. Cost, urgency, and complexity of construction will be determining factors in a decision to solicit contractors.

- Installation of structures such as bridges, culverts, water bars, ditches, etc. will be in compliance with current BMPs and regulations as may be mandated by other agencies.

Equipment

- Cost and maintenance records will be kept on equipment according to Forestry Commission policy and procedure and fleet management guidelines if applicable.

- Equipment that is identified as usable for fire suppression will be kept in a ready status, exercised and inspected on a periodic basis according to Fire Management Policy and Procedure. This equipment will be available to aid the statewide fire suppression effort on an "as needed" basis as well as assist in fulfilling obligations under the Southeastern Compact.

- Need for additional equipment or disposal of existing equipment will be justified according to maintenance cost and use records.