



to

NORTH CAROLINA  
OUTDOOR RECREATION PLAN

NC Department of Environment, Health and Natural Resources



**NORTH CAROLINA**  
**OUTDOOR RECREATION PLAN**  
**1995 - 2000**

**September 1995**

**Division of Parks and Recreation**

**N.C. Department of Environment, Health, and Natural Resources**





STATE OF NORTH CAROLINA  
OFFICE OF THE GOVERNOR  
RALEIGH 27603-8001

JAMES B. HUNT JR.  
GOVERNOR

October 6, 1995

Mr. Robert Baker  
Regional Director  
National Park Service  
75 Spring Street, SW  
Atlanta, GA 30303

Dear Mr. Baker:

I am pleased to endorse and send to you the *North Carolina Outdoor Recreation Plan, 1995 - 2000*. The plan has been prepared to meet the requirements for continuing Land and Water Conservation Fund eligibility, improve outdoor recreation, and meet the need for meaningful evaluation of state and local government public outdoor recreation projects.

An ample amount of public involvement went into development of the plan, including numerous meetings held throughout the state, two statewide surveys, and extensive public review of the draft document.

We look forward to working with your office to improve outdoor recreation in North Carolina.

My warmest personal regards.

Sincerely,


A handwritten signature in black ink, appearing to read "Jim Hunt".

James B. Hunt Jr.

JBH:pkm

Enclosure





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# INTRODUCTION

## STATEWIDE COMPREHENSIVE OUTDOOR RECREATION PLAN LEGAL MANDATE

Since passage of the federal Land and Water Conservation Fund (LWCF) Act of 1965, preparation of a Statewide Comprehensive Outdoor Recreation Plan (SCORP) has been required in order for states to be eligible for LWCF acquisition and development assistance. Past SCORPs and this edition have provided a coordinated framework addressing the problems, needs, and opportunities related to the need for improved public outdoor recreation. The N.C. Division of Parks and Recreation, the state agency with authority to represent and act for the state for purposes of the LWCF Act, has prepared this plan.

The plan contents and format are shaped by the planning guidelines of the LWCF Act. The major requirements are comprehensiveness; an evaluation of the demand for and supply of outdoor recreation resources and facilities in the state; a wetlands priority component; a program for implementation of the plan; ample public participation in the planning process; and a description of process and methodology. The plan has been prepared to both meet requirements for continuing LWCF eligibility and meet the need for meaningful evaluation of state and local governments' public outdoor recreation projects.

Chapter I presents the issues identified for 1995-2000. The issues were developed through public meetings, outreach efforts, and a statewide issues survey sent to recreation agencies, organizations, and other interested parties.

Chapter II contains two indicators of existing and future need for outdoor recreation areas and facilities. It presents the results of a statewide survey of the general population that measures current participation levels and future demand for 43 outdoor recreation activities. It also reports the results of an inventory of public outdoor recreation areas and facilities in North Carolina and makes comparisons county by county and statewide. Detailed county profiles are provided in Appendix A. LWCF assistance will be awarded to counties showing higher relative needs using the state's Open Project Selection Process.

Chapter III describes the roles and responsibilities of federal, state, local, private, and commercial outdoor recreation providers in the state. Chapter IV identifies trends affecting outdoor recreation and the concomitant changes they will bring. Chapter V details the economic contributions of outdoor recreation, long under-recognized and under-appreciated.

Chapter VI contains an overview of the state's involvement with natural diversity identification and preservation. Chapter VII contains the federally mandated wetlands component, developed in coordination with the N.C. Wildlife Resources Commission. Chapter VIII includes actions the state will be undertaking over the next five years to address the issues and needs identified in this plan.

While the greatly reduced level of LWCF apportionments currently available to North Carolina has lessened the LWCF program's impact, LWCF funds still serve to address issues of statewide importance and to help improve outdoor recreation in North Carolina.

Ample public participation, described in the document, went into development of this plan. A final draft plan was also distributed statewide for public review and comment.

## **SETTING FOR OUTDOOR RECREATION**

### **Location and Geography**

North Carolina, located in the southeastern United States, is bounded by Virginia, Tennessee, Georgia, South Carolina, and the Atlantic Ocean. The state is divided into four natural regions: mountain, piedmont, coastal plains, and tidewater (Figure i-1).

The mountain region is located in the west and runs parallel with the Tennessee border for approximately 200 miles. The Blue Ridge Mountains contain the highest elevations and most rugged topography in the Appalachian Mountain system. Forty-three peaks have elevations above 6,000 feet. Mount Mitchell, at an elevation of 6,684 feet, is the highest peak east of the Mississippi River. The topography also includes valleys and gorges, such as the Linville Gorge.

The piedmont region, located in central North Carolina, is bounded by the Blue Ridge Mountain scarp in the west and the coastal plains fall line in the east. The region consists mainly of rolling hills. Exceptions include monadnocks, such as Pilot Mountain, which are formed by more resistant rock and rise above the normal terrain. Large rivers, such as the Yadkin and the Catawba, cross the region. Reservoirs created by impoundments on these rivers form the only lakes in the region.

The coastal plains are defined by the piedmont hills on the west and the counties affected by tidal action in the east. The region, which is almost 100 miles wide, rises less than 500 feet in elevation from east to west. The slight increase in elevation creates slow-moving rivers and some of the only natural lakes in North Carolina.

The tidewater region is formed by a large system of sounds and off-shore barrier islands. These features create over 3,000 miles of shoreline affected by tidal waters.

### **North Carolina in the 1990's**

North Carolina's population will grow from approximately 6.6 million in 1990 to over 7.4 million by the turn of the century. The state ranks as the tenth most populous in the nation and continues to grow about 1 percent annually. The source of the growth is explained equally by migration and increases in the resident population.

More significant demographic changes will be occurring, however. During the next decade, the elderly population will continue to increase and will include nearly a million people age 65 and older. Nearly 37 percent will be at least 45 years old. The increase in the aging population will have significant impacts throughout society because this group has greater disposable income and is more politically active. They will look for increased accessibility features, safety, and quality in park and recreation services.



# GEOGRAPHIC REGIONS IN NORTH CAROLINA

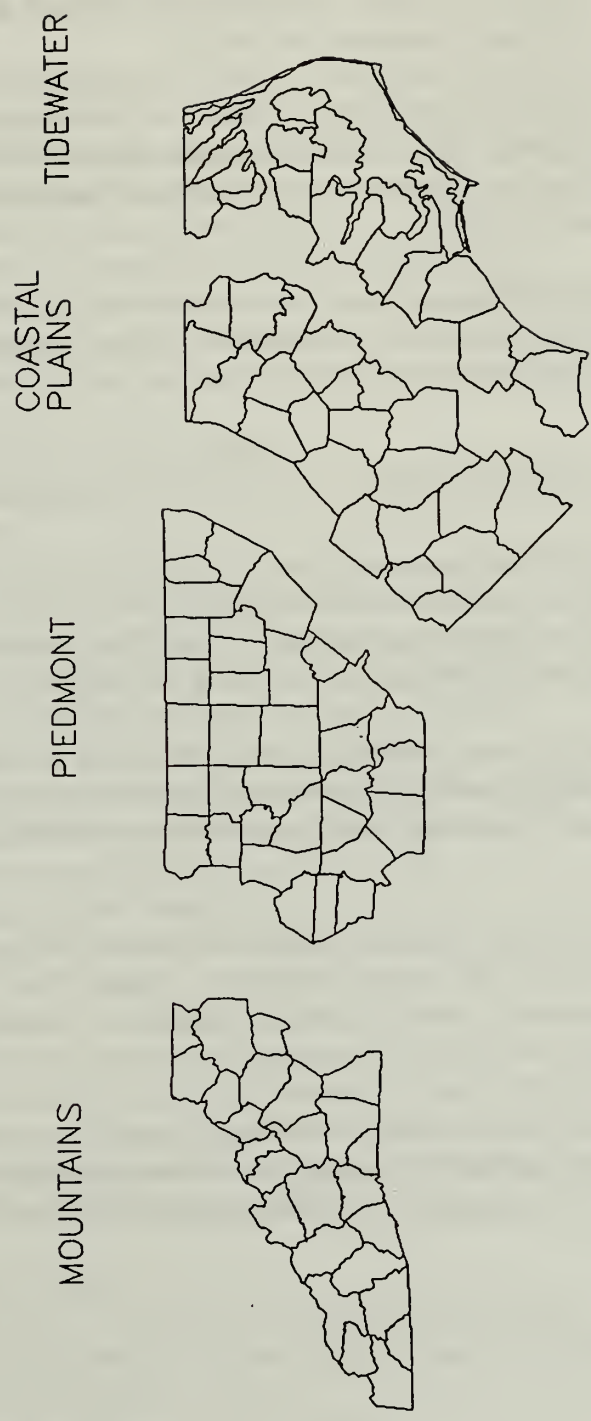


Figure i-1.

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Geographic Regions in North Carolina

At the opposite end of the age spectrum, the birth rate is increasing for the first time since the mid-1970's. The "baby-boom" generation couples who delayed having families for careers are now having children. This "echo-boom" generation will increase the population under ten years old and the demand for related programs and facilities.

The increase of high-tech industries and the growth of urban centers have created a more affluent and cosmopolitan population. North Carolina has become a predominately urban state. People migrating into North Carolina from more urban, industrial states bring higher expectations for public park and recreation services.

The percentage of poor families and single parent households is also increasing. These families will have greater needs for convenient, low-cost recreational opportunities, as well as summer programs that provide alternatives for children who are out of school.

### A COMMITMENT TO OUTDOOR RECREATION

The wide array of outdoor recreation activities creates many diverse interest groups. Natural resource conservationists, sports enthusiasts, hunters, and trailer campers all use parks and recreational resources for different and, at times, conflicting reasons. Local, state, and federal agencies have different responsibilities for providing recreation.

North Carolina is facing many challenges that will create changing demands for outdoor recreational services. Rapid population growth, increasing affluence, single-parent families, two-income households, and a growing elderly population will produce new and greater public expectations.

North Carolina must meet these challenges with fewer resources than have been available in the past. In the past 25 years, the federal government played a major role in funding outdoor recreation. But in response to concerns with the deficit, the federal government role has been shrinking.

If the state is going to effectively address its outdoor recreational needs, the commitment must come from within North Carolina. A cooperative effort is needed from all interested agencies, groups, and individuals to build support for quality recreational opportunities and natural resource conservation.

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# I. OUTDOOR RECREATION ISSUES

## INTRODUCTION

As North Carolina moves into the 21st century, its growing and changing population will be making increased demands for additional outdoor recreational services. The landscape will become more and more developed as urban areas expand to threaten or surround natural areas and open space. And with reduced federal spending to support outdoor recreation and conservation, providing adequate recreational opportunities and maintaining quality facilities will become much more formidable tasks.

The major park and recreation issues to be addressed over the next five years can be grouped into five categories:

1. Improved Outdoor Recreational Services — The need to provide improved outdoor recreational services to meet the needs of a growing and changing population.
2. Conservation of Natural Resources — The need to conserve important natural resources and open spaces in a rapidly developing state.
3. Inadequate Funding — The need to create a stable and adequate source of funding to ensure that the outdoor recreation needs of current and future generations are met.
4. Effective Partnerships — The need to create partnerships between all parties interested in outdoor recreation so they may pursue common interests more effectively.
5. The State Parks System — The need to improve the North Carolina state parks system.

These issues were identified at statewide meetings and through responses to a statewide outdoor recreation issues survey. See Appendix B for a description of how the issues were identified.

## IMPROVED OUTDOOR RECREATIONAL SERVICES

### Adequate Staffing for Park Areas

Proper operation, maintenance, and programming for parks, recreational areas, and natural areas are essential to providing quality areas, facilities, and recreational opportunities. These tasks cannot be properly performed without adequate staffing. Inadequate manpower such as exists in the state parks system prevents proper care and lessens public use and enjoyment of park areas.

Adequate training is needed to ensure that park and recreation personnel use sound administrative practices and proper technology. Additional funding is needed to provide additional personnel as well as adequate training and salaries. Unfortunately, staff positions and training

as well as funds necessary for park operations, maintenance, and programming are often the first items to be cut in times of tight budgets. Such cuts have severely affected the delivery of quality recreational services and park maintenance. This problem is experienced by all levels of public recreation providers.

Even where budget cuts have not affected staffing, rising costs of labor and other park expenses have contributed to under-staffing and deterioration of park areas as maintenance, services, and quality of recreational experiences decline. At the same time, generally heavier use of recreational facilities statewide calls for more staffing.

The fact that recreational resources exist does not necessarily mean they are satisfying the recreational needs of citizens. Proper staffing and programming is often needed to enhance the recreational experience and complement the physical resources. Constructing park facilities no more guarantees optimum recreation than building a schoolhouse guarantees quality education. Just as the complete educational system requires teachers and a curriculum, a balanced outdoor recreational program needs professional staffing and programs to complement its physical resources.

Visible, well-operated programs and special events are among the best ways recreation providers can solicit support and justify their operations. Where feasible, special events should be used to promote park support, appreciation, and use.

Active volunteer programs should be established or expanded to help address staff needs in operations, maintenance, and programming.

### Dwindling Open Space for Recreational Use

As the state's population and development expand, less open space is available for recreational use. This is particularly true in the state's more densely populated areas. Declining open space, combined with the trend of Americans to recreate closer to home, makes the setting aside of open space for close-to-home recreation a major issue. Such open space, in addition to being convenient for recreational purposes, also serves to beautify communities.

With the increasing shift of North Carolina's population to urban areas, the demand for outdoor recreational areas and facilities in and around urban areas is rising, and indications are that this trend will continue. Compounding this situation is the fact that the supply of outdoor recreational areas in many of North Carolina's urban areas is already inadequate to meet current needs.

Acquisition of open space for recreational use, always restricted by limited funds for land acquisition, has become even more difficult as land prices have continued to escalate. Urban communities are finding it increasingly difficult to acquire sufficient open space and recreational land. In some areas, even where funding exists, suitable open space areas are simply not available.

One way to make this problem more manageable is to require all subdivision developers to

provide a reasonable dedication of land for future recreational use. Land that is dedicated, however, should have recreational usefulness. Where this is not practical, a cash payment, in lieu of actual acreage, could be used for the purchase of suitable park land. North Carolina law already gives local governments the authority to operate in such a manner, and several North Carolina cities have found such dedications to be an effective tool in meeting their open-space needs.

Tax incentives exist that could encourage the gift of open space lands or lesser interests, such as conservation easements. These need to be better publicized. Property may also be donated for altruistic reasons. Indeed, many of North Carolina's state parks, as well as local parks, have been established through generous gifts by citizens. Such sources of open-space areas should not be overlooked.

One area of urban recreation in which significant strides have been made is river-front parks. Several of the state's cities located along rivers — Wilmington and New Bern, for example — have emphasized waterfront parks, and revitalization efforts have been very popular and successful. Other opportunities to create public open space along such river corridors should be seized.

The opportunity to combine recreational open space and historical resources should be explored as well. Historic sites and buildings have great recreational potential, and they appeal to residents as well as visitors.

Greenways and trail networks need to be developed to link open space areas and serve multiple uses where such opportunities exist. This should be accomplished with cooperation between all governmental levels. Greenways established along streams may protect water quality by limiting development in sensitive areas, serve as wildlife corridors, and also serve recreational purposes. Trails may also be developed along abandoned railroad right-of-ways.

### **Deteriorating Park and Recreation Facilities**

Operating and maintaining existing outdoor recreational facilities is expensive. These costs — comprised of salaries, energy and utility expenses, materials, insurance, etc. — continue to rise. Public demand for recreational services has also increased. Simultaneously, recreational facilities have been aging, thus compounding maintenance problems. Many facilities and areas are overused. In the state parks system, many older facilities, built during Depression-era public works programs, need extensive attention. Many Land and Water Conservation Fund-assisted facilities are 20 to 30 years old. Some older facilities, without adequate maintenance, are no longer able to meet former levels of recreational demand. In other cases, increasing operation and maintenance costs have reduced the funds available for other purposes, such as the acquisition of additional open space.

As maintenance levels decline, problems are compounded: Previous levels of demand may not be met; the supply of recreational facilities drops; vandalism increases; the quality of the recreational experience wanes; and park usage sometimes shifts to sites that are newer or better maintained. The resulting heavier use of such alternative sites in turn increases their

maintenance needs. Insufficient maintenance levels also increase liability concerns. Monetary awards for damages or injuries are more likely to be made where accidents were caused by neglected or poorly maintained facilities.

Alternative, steady sources of funding should be explored that would provide for routine maintenance and renovation needs. Surveys have shown that activity and entrance fees are generally acceptable to users if they are convinced that the resulting revenue is being applied to improvements in facilities and programs. As an added benefit, fees have been shown to reduce vandalism. Volunteers and community service workers have been used in some situations to help offset spiraling maintenance costs.

Recreation providers should plan, design, and construct new facilities as well as renovate deteriorating ones, with an eye towards reducing short- and long-term maintenance needs. Routine maintenance and preventative maintenance programs should be followed in order to extend the useful life of facilities and avoid problems that come with neglected maintenance.

The 1994 General Assembly established the Parks and Recreation Trust Fund (PARTF). The PARTF will provide money for capital improvements, repairs, renovations, and land acquisition in state and local parks and will be funded through the state's portion of the real-estate deed transfer tax. When fully funded, the PARTF will provide a substantial source of funds to help deteriorating park and recreation facilities.

### **Need to Keep Parks Safe and Clean**

Clean park areas and facilities enhance visitor enjoyment and help make parks safer, thus reducing liability concerns.

More and more people are visiting state parks, placing a heavier burden on both park maintenance and law enforcement staff. With increased visitation comes an increase in visitor control problems, such as alcohol use, drug abuse, vandalism, and other crime. Providing rangers with law-enforcement training and radio communications equipment has helped them to be more efficient in providing for public safety, but additional staffing is needed to minimize undesirable behavior so that it does not inhibit park use.

Littering continues to be a problem in most parks. Several states have found beverage container deposit laws helpful in reducing litter caused by glass bottles, aluminum cans, and plastic containers. With visitors more likely to keep litter-free parks tidy, it pays to keep parks clean and well lighted. Even the design of trash receptacles can make a difference, as attractive containers have proven to be more effective than 55-gallon drums.

Poor upkeep is usually not as evident as littering and vandalism, but it is also a serious problem. Unmowed grass, broken equipment, burned-out lights, deteriorated tennis courts, and broken picnic tables are but a few examples of poor upkeep. Poor upkeep often stems from insufficient operation and maintenance resources. Other factors, such as poor design, also contribute. Visitors are more likely to litter an inadequately maintained park than one that is well kept.

Some communities have met with success by enlisting users to assist in park maintenance. Softball teams and sports associations, for example, may have to commit to maintaining the ballfields. Other communities have had success with hiring neighborhood residents for park watch or maintenance assistance. In other cases, civic clubs have committed to maintaining particular park areas. Many communities have established recycling programs that help reduce littering. Such alternative maintenance techniques and safety efforts might prove equally successful if they were expanded throughout the state. Whether volunteers or sources such as community service workers are used, it is clear that resources in addition to regular maintenance staff are needed.

### **Provide Additional Recreational Programs and Facilities**

As the state's population continues to increase, demand for more outdoor recreational sites and facilities of all types increases. Also, as land, energy, transportation, and other costs rise, it will become increasingly difficult to fund the operation of new recreational areas and facilities, since funding levels for such purposes traditionally have failed to keep pace with increasing costs.

With limited funding, additional land purchases and new facilities development may not be sufficient to meet future needs. Other areas and facilities will have to be used where possible. Throughout North Carolina, schools are increasingly being used for community purposes, including the use of outdoor areas. Continued and expanded cooperation is needed where it is practical to have such multiple uses. In addition to schools, other public areas might also serve such purposes.

Planning is useful in adding new access points to public waters. For example, when bridges are replaced over rivers and lakes, access to the water can be designed and constructed at minimal additional cost. Where such opportunities are lost, many years will pass before another replacement occurs. As storms and beach erosion destroy the usefulness of certain lots for residential or commercial purposes, opportunities may arise to acquire land for public beach access areas.

The greatest difficulty facing the state parks system has been obtaining adequate and consistent funding to meet the growing public demand for outdoor recreational areas, facilities, and programs. Federal funding through the Land and Water Conservation Fund, an often-tapped source of revenue from 1968 to 1981, has been cut to minimal levels. Other federal programs, many of which aided local governments, have been reduced or eliminated. Problems of inadequate funding have been further aggravated by cost increases in construction and maintenance, insurance, operations, and other costs.

Recognizing that substantial increases in funding are usually not possible, many state and local governments have sought to establish alternative sources of funding. It is clear that in order to provide more recreational programs and facilities, additional funding is necessary. While careful evaluation of program priorities and allocation of available recreation dollars to meet the greatest needs is wise and prudent in order to extend budgets, that alone is not enough.

The Parks and Recreation Trust Fund, established by the 1994 General Assembly, provides

money for capital improvements, renovations, and land acquisition in state and local parks. Its funds come from a portion of the real-estate deed transfer tax. When fully funded beginning in FY 96\97, the PARTF will help provide more recreation sites and facilities of all types. It will serve to give the state parks system a much-needed consistent source of funds.

In November, 1993, the first state parks bond referendum was approved by North Carolina citizens, giving the state parks system its largest single appropriation ever. The \$35 million will be used to fund capital improvements and land acquisition projects across the state.

With the increasing urbanization of North Carolina's population, the demand for outdoor recreation facilities and programs in urban areas is rising. Indications are that this trend will continue. Adding to the problem of meeting such increasing needs is the fact that the supply of recreational offerings in many of North Carolina's urban areas is already inadequate. Many smaller communities throughout the state also face a shortage of recreational facilities and programs.

The fact that recreational resources exist does not necessarily mean that they are satisfying the needs of visitors. Proper staffing and programming is often needed to enhance the recreational experience and complement the physical resources. Highly visible and well-operated programs, in addition to meeting recreational needs, are among the best ways that recreation providers can garner support and justify their operations. Good programs result in customer satisfaction, and customer satisfaction translates into appreciation of recreational agencies and their programs and facilities.

### **Assess Demographics and Public Demands**

Good information continues to be essential if recreational resources are to be maximized. In planning new outdoor recreation areas or in planning the expansion or renovation of existing ones, it is essential to have a comprehensive understanding of which resources are actually available and which are needed. Such supply and demand information is needed at both state and local levels.

Supply and demand must be regularly assessed in order to determine priorities for outdoor recreation needs throughout the state. Sufficient resources need to be devoted to gathering accurate and comprehensive information on recreational need.

In order to anticipate and plan for changes in recreational demand, we must monitor recreational trends. The general aging of the population and the taking of more frequent vacations of shorter duration and closer to home are examples of such trends.

Planning for park and recreational areas must involve active public input to help ensure that development corresponds with public desires. Such public contact can also have the side benefit of informing the public and generating support so that plans ultimately become implemented.

North Carolina's coastal areas have developed at astounding rates. For example, during the past 20 years, recreational boating has experienced tremendous growth, but the number of access ramps and parking spaces have not grown to keep pace with the demand. Changing demand



such as this can and should be recognized and incorporated into planning efforts.

### **Increasing Liability Insurance Costs**

The much-publicized inability of many providers to obtain or afford adequate liability insurance coverage poses a serious threat to the existence of programs, public agencies, private businesses, and also to the professionals who operate and maintain recreational resources. Liability issues can also affect board members, volunteers, and other personnel who are indirectly involved in providing recreational services.

Some of the major factors that can contribute to the problem include poor management by insurance companies, poor risk management on the part of recreation providers, the litigiousness of today's society, lack of maintenance or renovation funds, insufficient numbers of personnel, and inadequately trained personnel. Keeping facilities in a good state of repair, designing facilities to minimize or eliminate potential problems, periodic inspection programs, and adequately trained staff all serve to lessen potential liability.

It seems unlikely that civil justice reforms, often touted by the insurance industry, are the answer. The number of large awards is not high. Large judgements, however, are certainly well publicized, and, in recent years, there have been increases in the number of law suits filed for personal injuries in all aspects of business, leisure pursuits, and government. In 1984, for example, one private civil law suit was filed in a state court for every 15 Americans, and over 150,000 suits were filed in federal courts. These numbers indicate that no facet of government or business, including recreational providers, is truly immune from potential liability issues in such a litigation-oriented society. In North Carolina, some cities and counties have joined together to purchase liability insurance. Under North Carolina law, the state and local governments are protected by the sovereign immunity doctrine, which means that no liability claim can be sustained against the state or its political subdivisions. Employees are not so protected, however. North Carolina law also allows local governments to waive their sovereign immunity to the extent of their liability insurance, and most local governments have purchased some liability insurance.

Even so, some higher-risk recreational programs have been dropped because of liability concerns. Premiums have also risen, although they generally have dropped below the levels of a few years ago, and fewer companies are seeking to write liability business.

### **Depreciative Behavior**

Depreciative behavior such as littering, vandalism, and crime continues to cost the taxpayer. For one thing, dealing with such behavior and its aftermath ties up scarce funds that could otherwise go towards meeting facility or operational needs. There is also an intangible but very real cost: the diminished recreational experience that results from visits to abused areas.

Various methods of dealing with litter have been tried, including the use of criminal statutes, signs, more trash cans, and attractive trash receptacles. Although these have helped, litter has

proven to be a stubborn problem. Solid waste laws have been effective in several states, as have recycling efforts. Education and media promotion appeal to citizens to respect and care for public lands and help address littering as well as vandalism problems.

When new facilities are planned, they should be designed to reduce depreciative behavior, and older facilities, where possible, should be renovated to minimize such effects. Techniques such as recessed lighting, hard-to-scratch surfaces, and sturdy equipment should become standard. Realistically, as long as people are visiting parks, some litter and malicious destruction of property can be expected. Nevertheless, steps should be taken to minimize such behavior.

A basic law-and-order approach, including posting signs and catching and prosecuting violators, is still appropriate. Visibility of park law enforcement or other staff is important, as is good park maintenance, since visitors tend to treat well-maintained areas with more respect.

Park-watch programs, where park neighbors or others help keep an eye on park areas and facilities, have proven successful. Recruiting citizens who live adjacent to park areas to perform maintenance or caretaker functions has also been effective. Controlling access to park areas can also reduce depreciative behavior.

Litter, vandalism, vehicle damage, property theft, assaults, drug use, and other illegal activities discourage legitimate park visitors from using parks. Parks and recreation providers must emphasize prevention of such acts in an attempt to reduce such problems.

### Greater Public Accessibility

While it is not feasible for every section of every park and recreation site or every program to be accessible to everyone, efforts are being made to provide equivalent opportunities for people with special needs to participate in the full spectrum of outdoor recreational experiences. Inadequate access to park and recreation areas and facilities and inadequate programs limit the opportunities of those persons with special needs.

People with special needs include, among others, the elderly, children, the mobility-impaired, and individuals who are visually, mentally, or hearing impaired. Agencies that receive federal funds are legally mandated to make facilities and programs accessible to persons with disabilities (i.e., Architectural Barriers Act of 1968/Section 504 of the Rehabilitation Act of 1973). Title II and III of the Americans with Disabilities Act (ADA) of 1990 requires that public services and accommodations be accessible. ADA extends the prohibition of disability discrimination to all activities of state and local governments, including those that do not receive federal financial assistance. Current estimates indicate that approximately 12 percent of the population have disabilities that significantly impact their daily lives, including their leisure lifestyle. According to North Carolina General Statutes, Chapter 168-2:

*Handicapped persons have the same right as the able-bodied to the full and free use of the streets, highways, sidewalks, walkways, public buildings, and facilities, both publicly and privately owned, which serve the public.*

Although state and federal laws (P.L. 90-480 and P.L. 101-336 [ADA]) require barrier-free design in all new public facilities, some accessibility problems remain in areas and facilities developed prior to passage of these laws. As funds are available on the local and state levels, continued modifications of existing facilities are being completed to help eliminate barriers and encourage facility use by all populations.

Since 1977, North Carolina has made giant strides toward the inclusion of persons with special needs in activities and services provided its citizens. In 1990, a cooperative program of public agencies and the private sector produced the second edition of *Access, North Carolina*, a vacation and travel guide for disabled persons. Parking, entrances, interior, exterior, restrooms, and other accessibility ratings were done for general interest sites, skiing areas, waterfalls, historic sites, outdoor dramas, recreational areas, forests, and state parks throughout North Carolina. The publication is distributed through the N.C. Division of Travel and Tourism.

When the North Carolina Parks and Recreation Trust Fund (PARTF) created by the 1994 General Assembly is fully funded, state parks and local governments will have a reliable funding source for projects such as ADA modifications to existing recreational facilities. All new and renovated facilities and areas receiving PARTF assistance must be accessible to people with special needs.

Land and Water Conservation Fund recipients in North Carolina — counties, municipalities, and state agencies with 50 or more full-time employees — have developed accessibility self-evaluations of programs, policies, and facilities in order to achieve compliance with Section 504 of the Rehabilitation Act of 1973 and ADA. Where self-evaluations determined that facility renovation or construction was required in order to achieve accessibility, a transition plan was required.

The transition plans, developed with the assistance of persons with special needs or affiliated organizations, were required to do the following:

- identify physical obstacles limiting accessibility;
- describe the methods that will be used to make facilities accessible;
- schedule the steps necessary to achieve full program accessibility;
- indicate the person responsible for plan implementation; and
- be kept on file for public inspection.

The self-evaluations and transition plans were designed to allow movement towards full accessibility in order to provide better opportunities for North Carolina's approximately one million elderly and handicapped citizens. According to ADA, any structural modifications identified in a transition plan must have been completed by January 1995. Integration of individuals with disabilities into the mainstream of society is fundamental to providing full accessibility.

While not as visible or as well-defined as architectural barriers, community attitudes are often barriers to full participation in outdoor recreation for those people with special needs. Common examples of attitude barriers are the assumptions that certain disabilities, whether physical or mental, automatically limit participation in recreational activities.

The trend towards an increasingly older population will place special demands on public recreational facilities. Traditionally, many communities have geared their parks around children and young adults. An increased emphasis on meeting the needs of older citizens may well be warranted in future years.

## CONSERVATION OF NATURAL RESOURCES

While we have made progress in conserving and protecting the state's natural resources during the past five years, that progress has been overshadowed by even more rapid destruction of North Carolina's natural landscapes and natural resources. The natural areas that received protection during the past few years are only a few of the many areas that merit attention. The protected areas are far outnumbered by others that are threatened, damaged, or destroyed. The process of urban development, forest cutting and clearing, and resource exploitation is eliminating North Carolina's natural landscapes and wildlife habitats on a broad-reaching scale.

The great majority of North Carolina's most important natural landscapes and habitats have no assurances of protection. In many cases, their owners are neither aware of the ecological resources on their properties, nor do they understand their options for protecting the land. Public funding for the inventory, protection, and management of significant natural lands and biological resources has been modest. Public and private funds are generally insufficient to purchase more than a few important natural areas even from willing sellers. Managers of parks, forests, refuges, and wildlife conservation areas usually lack the financial and personnel resources to maintain and protect the natural resources. Many natural areas are being damaged by timber cutting, off-road vehicles, vandalism, too frequent pine-straw raking, arson, littering, and other uncontrolled and inappropriate public uses.

The Natural Heritage Program in the Division of Parks and Recreation works at identifying the state's critical and sensitive natural resources. In 1989, the N.C. General Assembly provided revenues from annual automobile personalized license plate fees for the state's Natural Heritage Trust Fund, initiating a funding source for acquisition, management, and inventory of important natural lands. The Parks and Recreation Trust Fund, established in 1994, will provide an additional source of funds for both state and local government acquisition of outstanding natural resources.

Issues and proposed recommendations are addressed in further detail in Chapter VI, Natural Diversity Preservation, and Chapter VII, Wetlands Protection.

### Expand Protection of Important Natural Resources

Development of natural lands is occurring at a rapid pace and on a vast scale throughout our state. Particularly heavy destruction is occurring to those ecosystems and landscapes for which few safeguards exist: coastal maritime forests, upland hardwood forests, river bottomland forests, longleaf pine forests, Carolina bays, mountain bogs, and mountaintop grassy balds.

State and federal programs and policies for protecting and maintaining water quality in North

Carolina's streams, rivers, lakes, estuaries, and wetlands are inadequate. Nearly half the state's rare and endangered species are dependent on wetland and aquatic habitats. Further deterioration of water quality may cause the extinction of many native fish, mollusks, amphibians, and other water-dependent plants and animals. Wetlands, especially isolated freshwater types, remain vulnerable to development and drainage. The state has no freshwater wetland protection statutes and enforcement program.

We must act to save what is left of North Carolina's natural diversity. More than 160 plant and animal species in the state are considered endangered or threatened, and several hundred other species are vulnerable. Nearly half the state's natural ecosystem types are considered rare and threatened in North Carolina or worldwide, and less than a third of the state's most important natural areas are assured of protection. (See Chapter VI, Preserving Natural Diversity, for a more detailed discussion and specific recommendations.)

Recommendations for expanding the protection of important natural resources include:

- providing more public funds for acquisition and management of natural lands on a regular, sustained, and much-increased basis, especially with dedicated sources of revenue;
- developing and implementing natural resource management plans for parks and natural areas;
- conducting a comprehensive inventory of the remaining important natural lands and take actions to protect the most critical areas;
- implementing more stringent regulations and monitoring of environmental resources, with emphasis on protecting sensitive areas from development and pollution;
- encouraging private land trusts and local governments to help provide public education and natural areas identification and protection; and
- increasing the use of conservation and scenic easements to protect natural lands.

### **Deterioration of Park Resources Due to Overuse**

Pressures on public park lands and waters have become intense. High population growth rates, increasing development on the peripheries of the parks, and heavier public use of the inadequate number of parks have brought a host of threats to the natural resources of our state's parks. Heavy visitor use, pollution, and activities of adjacent land owners are just a few of the many threats facing park lands and resources.

Some progress has been made. In the late 1980s, \$15.3 million was spent to acquire critical acres at existing state parks, and other smaller appropriations followed. In November 1993, \$35 million in state park bonds were approved to fund capital improvements and land acquisition projects. The Parks and Recreation Trust Fund will also provide a much-needed source of funds

on a continuing basis.

Recommendations include:

- minimizing deterioration of natural resources in parks through management planning, directing visitor traffic away from environmentally sensitive areas, increasing natural resource management resources, and educating visitors;
- limiting visitor uses in fragile natural areas to those activities that do not degrade the environment; and
- acquiring more park lands, including sensitive natural areas and wilderness areas in which access can be limited.

### **Resource Degradation Caused by Increased Development**

North Carolina's State of the Environment Report documents the current and increasing threats to the natural resources of our state. Our forests, agricultural lands, coastal areas, marine resources, diverse natural areas, wildlife habitats, and clean air and water all contribute to the environmental quality we all enjoy and depend upon. Although important steps have been taken to protect our natural resources, much more remains to be done if we are to maintain a healthy natural environment and improve natural resource protection.

The state parks system does not contain many of the state's major natural ecosystems and critical resources, and those sensitive and outstanding natural resources that are represented in the parks system are not being adequately protected. The State Parks Systemwide Plan shows that the majority of the state's major biological, geological, recreational, archaeological, and scenic resource "themes" are inadequately represented or protected in the existing state parks. Current inventories indicate that 35,268 acres are needed to complete land acquisition at the current park units, and new park units are needed to serve our growing population and to adequately preserve our natural heritage.

Recommendations include:

- the enactment and enforcement of environmental protection laws, especially to protect sensitive natural resource areas;
- the identification and implementation of methods to reduce and eliminate damage to parks and recreation areas caused by pollution and overuse; and
- the establishment by state and local governments of policies for land use and growth control.

## **Outdoor Recreation in Appropriate Settings**

The public's interests in outdoor recreational activities are diverse and sometimes conflicting. Accommodating such diverse recreational activities in natural resource-oriented parks such as those in the N.C. state parks system will require careful planning to minimize damage to sensitive natural resources and special natural areas. It may also require increasing the number and variety of state park units to meet the public need and demand for outdoor recreation.

Providing a diverse array of parks and park facilities would serve a wider range of public recreational needs and help expand the state park system's public constituency. A broader and larger public constituency can, in turn, help build political support for substantial increases in public funding for park land acquisition and maintenance. It is possible to develop a state parks system that offers a diversity of units — some that accommodate large numbers of visitors, and others that limit use and primarily protect and preserve natural areas.

Respondents to the survey identified the following needs:

- Acquire and develop more park units to provide recreational opportunities that might be inappropriate in the existing state parks system.
- Locate recreational facilities without degrading important natural resources.
- Provide and develop recreation areas to take public-use pressures off more important natural areas.

## **More Interpretation and Education Programs**

A key element of environmental protection is the awareness and support of our state's citizens. If people are ignorant of the need for environmental protection laws and programs, they may view them as unnecessary and costly burdens. They may then oppose enactment of such laws and may, knowingly or unknowingly, violate existing laws. If people are educated about environmental processes and the adverse effects of various activities, however, they will be more likely to support and uphold laws and programs needed to protect the environment.

If we are to instill an environmental ethic in our citizens, we must begin by educating our children. Children who are taught to appreciate the sensitive and complex nature of the environment are likely to grow into responsible adults who care for the earth rather than exploit it, citizens of the earth who feel a genuine sense of stewardship for their natural heritage.

Many state agencies offer educational materials or programs to our schools and the public at large on environmental processes, natural resources, and conservation. Among them are the North Carolina Zoological Park; the Wildlife Resources Commission's educational division; the North Carolina Aquariums; the Division of Forest Resources' educational forests; the Division of Soil and Water Conservation; and the Division of Parks and Recreation. Exhibits at the State Fair and other special events also educate the public. Such efforts are coordinated by an adopted environmental education plan headed by the Office of Environmental Education.

The state parks system is uniquely qualified to promote stewardship of North Carolina's natural and cultural heritage and to serve as a model of environmental education. Its educational potential is largely unrealized, however. Most parks have only a few minimal interpretive displays, and only five — Cliffs of the Neuse, Fort Macon, Jockeys Ridge, Mount Mitchell, and Weymouth Woods State Natural Area — have museums or visitors centers that include educational displays.

Participants in the Parks and Recreation Issues Survey gave high priority to educational programs in the parks and recommended:

- increasing environmental education in the public schools;
- providing more interpretive and educational facilities in the state parks and other public recreational areas;
- seeking more funding for park interpretive centers and environmental educators; and
- combining efforts with other state agencies, especially the Department of Public Instruction, to develop an environmental education curriculum and to encourage more use of state parks by public schools.

### INADEQUATE FUNDING

Inadequate funding for parks and recreation was the highest priority issue identified by the SCORP Parks and Recreation Issues Survey. Inadequate funding is the cause of many of the other problems identified in this chapter. Low staffing levels, large backlogs of maintenance projects, threatened natural areas, and insufficient visitor facilities are all problems arising from years of inadequate funding.

North Carolina has traditionally been a fiscally conservative state, and it lags behind the national average for public park and recreation spending. According to the U.S. Census Bureau, per capita funding for parks and recreation by state and local agencies in North Carolina is well below the national average. State and local funding requests for LWCF assistance to acquire park acreage and develop recreational facilities continue to be significantly higher than available federal funds. Because of the meager level of LWCF funds currently available, many local governments do not even bother to apply for assistance.

Local governments have greatly differing abilities to finance recreation. Large metropolitan areas throughout the Piedmont offer high levels of service, while some counties in other more rural areas do not even have a publicly supported recreation department.

Funding for state agencies providing park and recreation services has traditionally been minimal. The outlook has improved recently for both state and local governments with passage of a 1993 bond referendum that will provide \$35 million for state park system land acquisition and capital improvements. When the Parks and Recreation Trust Fund, established in 1994, is fully funded, a significant boost will be provided to both state and local agencies. The state parks operating budget, however, still continues to be at or near the bottom of all states in per capita spending (Figure I-1).



# Operating Budgets Per Capita SE State Parks - FY 1991-92

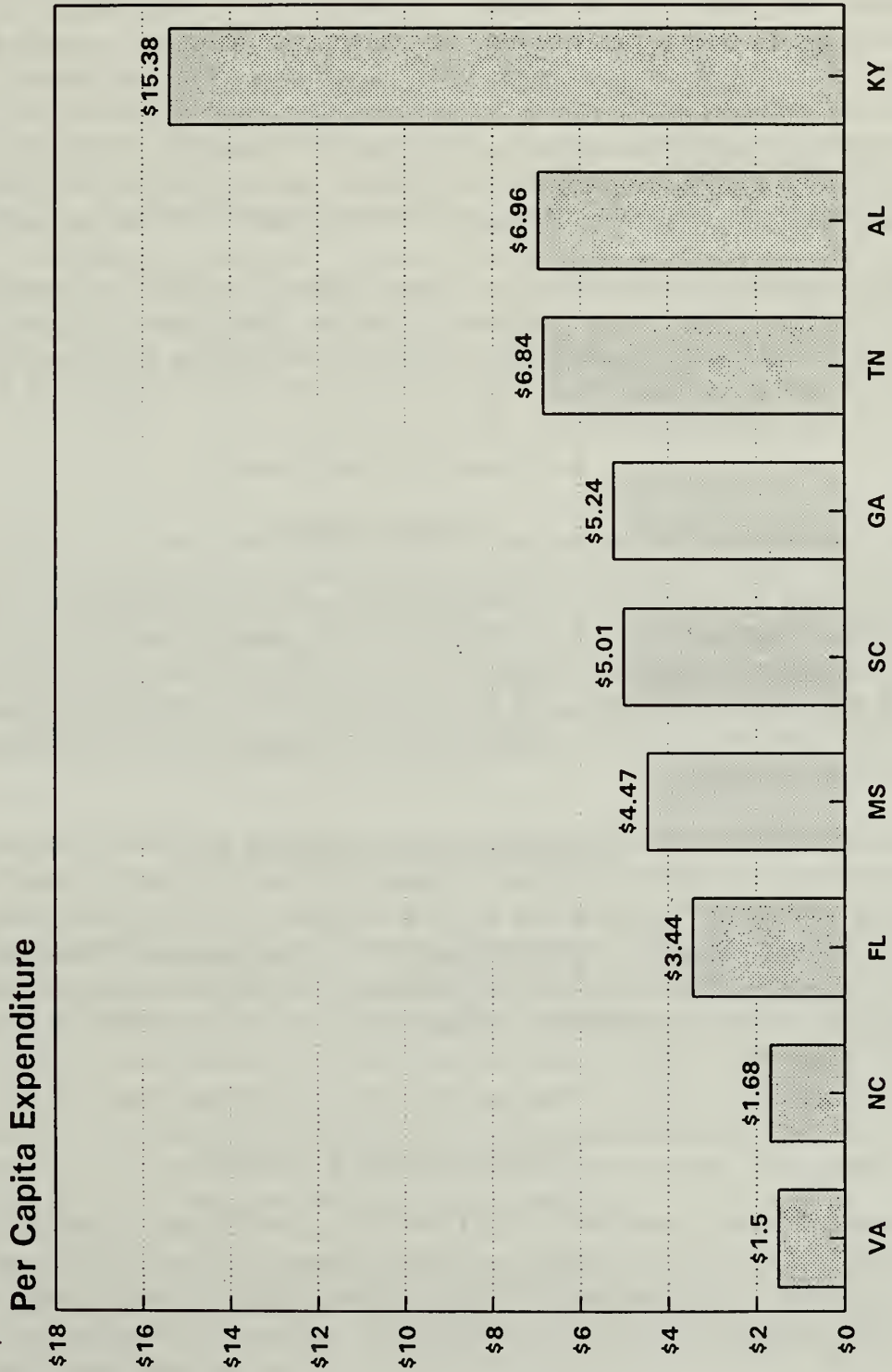


Figure I-1. SE States Per Capita Operating Budgets

## **Funding Has Not Reflected the Value of Outdoor Recreation**

Funding for parks and recreation in North Carolina has not reflected the importance of outdoor recreation to the state. Outdoor recreation and the beauty of North Carolina's natural resources contribute greatly to our quality of life. Recreation is an important component of a healthy lifestyle, and exercise promotes better physical health by increasing strength, flexibility, and endurance, and better mental health by reducing stress. Parks provide opportunities for family togetherness and individual relaxation. They also protect valuable natural resources. Many of North Carolina's most outstanding scenic features are protected in state and national parks. Critical ecosystems, such as wetlands, are protected in parks, refuges, and natural areas.

Local economies are stimulated by the presence of high-quality parks and recreational resources, which attract out-of-state visitors and new businesses. North Carolina is known for the variety of its natural landscape, which includes mountains, rolling hills, and ocean beaches. Federal, state, and local governments must increase their commitment to parks and recreation for the public to fully appreciate and enjoy these resources.

### **Future Needs**

Many changes are occurring in North Carolina, and these changes will affect parks and recreation. The population is becoming more urban, educated, and affluent. Senior citizens, a growing segment of the U.S. population, are particularly attracted to North Carolina for its climate and natural landscape. The rapid development of previously rural areas and highly visible environmental problems, such as trash washing ashore on ocean beaches, are increasing environmental concerns.

Trends indicate that citizens will expect higher quality park and recreation opportunities as well as greater natural resource protection. Adequate and stable funding is critical to the provision of quality outdoor recreation services in North Carolina. Funding is essential to develop, staff, and maintain existing parks, protect natural resources, and expand services to meet future needs. Poorly maintained facilities fall into disrepair and create health hazards. Inadequate staffing causes parks to be inappropriately used through a lack of programming and an inability to control depreciative behavior.

### **Federal Funding is Declining**

The Land and Water Conservation Fund (LWCF) has been the most significant single source of acquisition and development funds over the past 27 years. Federal LWCF grants have provided over \$60 million for projects in 94 North Carolina counties to establish state and local parks. Many local recreation agencies were established, and many communities were encouraged to provide park and recreation areas for the first time because matching grant money was available. State agencies were able to encourage significant private donations because the matching grants doubled the value of the gift.

Unfortunately, LWCF appropriations have declined dramatically since 1982. Current funding

levels are under half a million dollars annually in North Carolina, down from a high of over \$7 million in 1979 (Figure I-2). Funds are so limited that many local agencies no longer apply for the grants. Even so, requests for assistance still greatly exceed available funds.

### **Many States Have Committed to Outdoor Recreation**

In light of shrinking federal assistance, over half of all states have established dedicated funding sources for recreation from sources such as bonds, real-estate transfer taxes, user fees, state sales taxes, income tax write-offs, and mineral severance taxes. Other states have established funds dedicated to preserving open space. Several states have set aside money to acquire and convert abandoned railroad lines to long-distance trail corridors. In recent years, North Carolina has taken major steps to provide ongoing sources of park and recreation funds with the establishment of the Natural Heritage Trust Fund and the Parks and Recreation Trust Fund.

#### **Natural Heritage Trust Fund**

The Natural Heritage Trust was established in North Carolina in 1987 with minimal funding. In 1989, the Trust received dedicated funding from a \$10 increase in the motor vehicle vanity license plate fee. The funding makes approximately \$1.5 million available annually for the purchase and management of natural areas and wildlife habitats. The Natural Heritage Trust has helped the Division of Parks and Recreation acquire a significant amount of state park acreage and assisted the Wildlife Resources Commission and other state agencies in land acquisition, as well. It has also funded natural heritage inventory projects.

#### **Parks and Recreation Trust Fund**

During the past five years, the problem with stable and adequate funding for parks and recreation has received increasing attention. Various park and recreation support groups and individuals came together in support of establishing a state trust fund to address park and recreation needs. In 1994, the N.C. General Assembly established the Parks and Recreation Trust Fund. PARTF provides money for capital improvements, repairs, renovations, and land acquisition. Both state parks and local governments may use the money. The funding source is the state's portion of the real-estate deed transfer tax. Thirty percent of the funds will provide matching grants to local governments, and 65 percent will go to the state parks system. Five percent will go to the coastal beach and estuarine access program.

In 1995, the N.C. General Assembly passed legislation dedicating the state's share of the real estate deed transfer tax, \$1 per \$1,000 valuation, to the PARTF and the Natural Heritage Trust Fund. PARTF will receive 75 percent of the dedicated funds and the Natural Heritage Fund will receive 25 percent.

The transfer tax will generate an estimated \$20 million annually to be shared by the two trusts.

# LWCF FUNDING IN NORTH CAROLINA 1965 - 1995

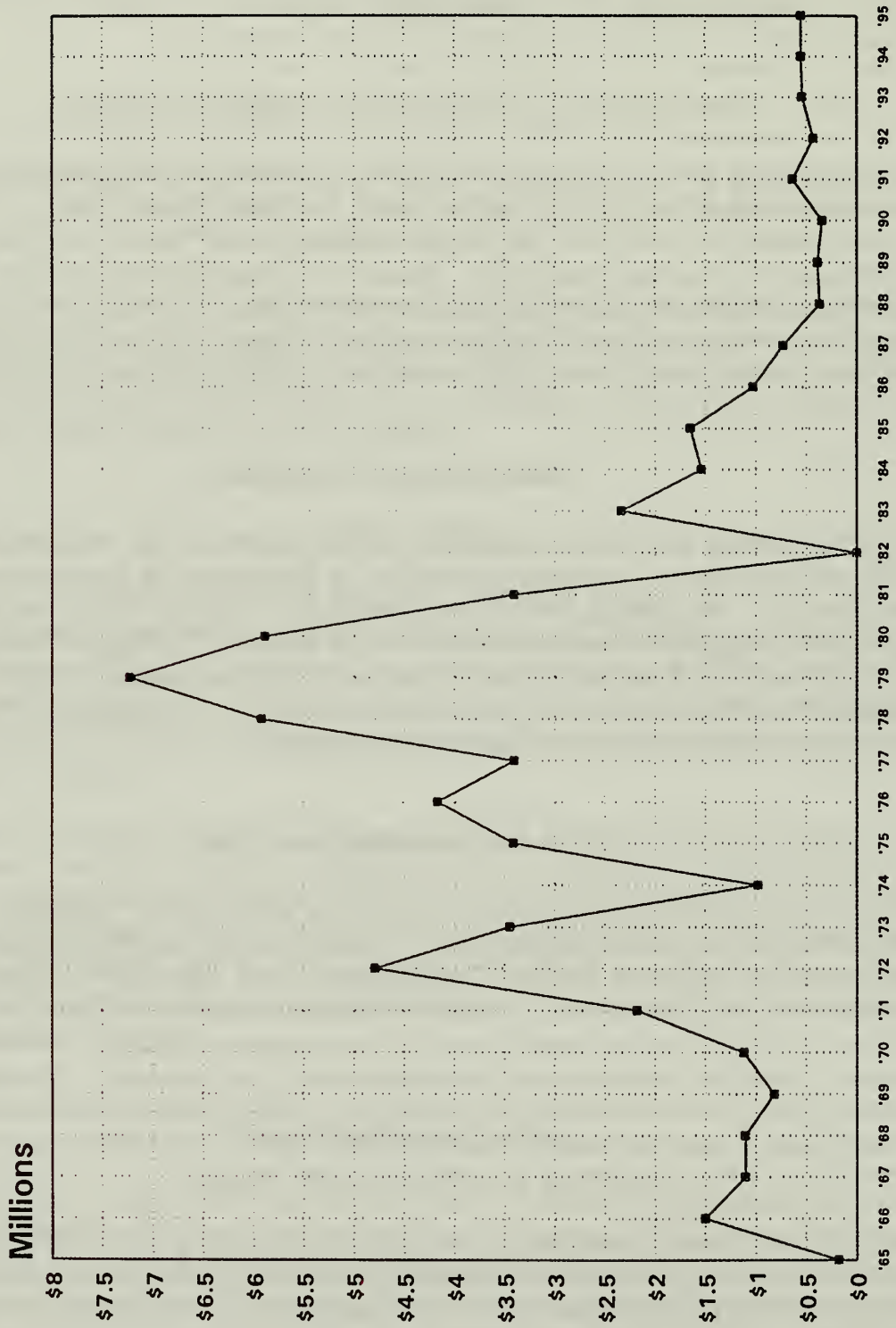


Figure I-2. Land & Water Conservation Fund Assistance Available to North Carolina

## EFFECTIVE PARTNERSHIPS

### Increasing Awareness and Appreciation

#### North Carolina's Outdoor Heritage

Americans enjoy the outdoors as a place to "get away from it all," to escape, to renew and refresh. Perhaps this is a modern way of expressing the freedom our forefathers sought in their quest for a new life. The President's Commission on Americans Outdoors alluded to these vital connections between our national spirit and the American landscape, suggesting that no mere accident of history matched a national character of independence, generosity, and ingenuity with a land of opportunity and vast abundance.

Americans have come to take the outdoors for granted, however. The expansiveness of the outdoors and of public lands reserved and protected for all time has encouraged complacency. The challenge now is not to tame the land, but to refrain from destroying it.

There is a need for an American outdoor ethic — a feeling of appreciation and responsibility for the air, land, water, and all living things of the earth. An outdoor ethic includes consideration for others using the outdoors, and stewardship — the obligation to ensure future generations' enjoyment of our natural heritage.

An outdoor ethic is essential because wildlands preserve a variety of plants and animals that may prove vital to human survival. Species as yet unknown or unresearched may one day be needed for food, medicine, or fiber. Natural areas contribute to clean air and water, preserve gene pools of species and ecosystems, and ensure the availability of wilderness recreation in the future.

#### The Benefits of Outdoor Recreation

How is the value of outdoor recreation measured? The real value of the outdoors is its enhancement of people's lives. When a sports program keeps a teenager away from drugs, when a neighborhood park offers a friendly gathering place for older people, when families learn to appreciate each other on a camping trip, when a jogger adds years to his or her life, what is the value?

The greatest values of the outdoors are intensely personal and cannot be expressed in dollars. Can a price be assigned to a beautiful sunset or a splendid scenic panorama? The value of a solitary walk along the beach or a family picnic in the woods is difficult to compare with the value of housing and commercial uses. But beach fronts, river banks, wooded areas, wetlands, and open spaces are disappearing at an accelerating rate. As North Carolina becomes more developed, the value of the natural landscape is increasingly apparent.

It is difficult to appreciate the full impact an investment in recreation has on area economies. Open space set aside for recreation enhances the appeal of community developments. Better understanding of the economic benefits encourage private enterprise and local governments to

cooperate in an effort to expand outdoor recreational opportunities. The Third Nationwide Outdoor Recreation Plan acknowledged that, "*Recreation opportunities affect choices of where people will live and work and where corporate America chooses to grow.*"

North Carolina's outdoor recreation opportunities are a significant factor in attracting business and industry to the state and are a major attraction for tourists. The state has one of the oldest state park systems, a state zoo, strong municipal and county park and recreation systems, state forests, and national parks, forests, and seashores. Private and commercial recreation providers offer diverse outdoor recreation opportunities, such as whitewater rafting, downhill skiing, and boating.

### Education

People shape and change their values based on information and experience. The public needs basic knowledge about the importance of the outdoors, and it needs to directly experience the outdoors to forge an emotional commitment to an outdoor ethic.

*An outdoor ethic is essential to ensure that our efforts to preserve and enjoy the outdoors are carried forward by future generations. We must understand that all our actions affect the outdoors and the other people we share it with, and learn to accept our responsibilities as stewards.*

— Report and Recommendations  
President's Commission on Americans Outdoors

The 1993 General Assembly enacted the North Carolina Environmental Education Act. That legislation called on DEHNR to work with the Department of Public Instruction (DPT), other government agencies, business and industry, educational institutions and citizens' groups to develop a statewide environmental education program.

The state's new environmental education plan has 14 objectives:

- Enhance environmental education for adults.
- Establish a North Carolina environmental education clearinghouse.
- Correlate environmental education with DPI's curriculum.
- Promote environmental education centers.
- Expand funding for environmental education in schools.
- Provide environmental education for government agencies.
- Integrate ecological concepts in higher education.
- Reward professional development in environmental education.
- Measure North Carolina's environmental stewardship.
- Identify model environmental education resource materials.
- Use North Carolina data to enrich environmental education.
- Build partnerships for environmental education.
- Enhance environmental education for student teachers.
- Develop media participation in environmental education.

## Role of the State Parks System

The Division of Parks and Recreation seeks to provide environmental education to school children through its interpretive and education programs. Many curriculum objectives of North Carolina's Basic Education Program relate directly to the Division's objectives of providing outdoor recreation opportunities and preserving the state's unique natural and cultural heritage. Opportunities to expand these programs should be pursued through increased funding and greater cooperation.

School children must learn about the importance of the natural world. Educating children can also be an effective method for teaching parents. All citizens should be aware of the outdoors as a source of inspiration, health, and economic security.

Public land managers have a responsibility to make park and recreation areas into outdoor learning centers — through programs, signs, brochures, guidebooks, interpretive trails, and personal example — to promote the proper use of the outdoors. Education and interpretation are important services. Many of the values of magnificent natural areas or historic sites may be lost to visitors unless they are "opened up" by a guidebook or an interpreter.

The N.C. Division of Parks and Recreation is developing an environmental education learning experience (EELE) for each state park and recreation area. Each of these activity packets is based on one of the park or recreation area's primary features or themes and is correlated to the Department of Public Instruction curriculum. Each EELE has pre-park visit, on-site, and post-park visit activities, which have measurable objectives, background information, vocabulary, references, and step-by-step instructions to the activities.

## Park Information

*North Carolina needs to develop a public relations/marketing campaign which tells the public what currently exists and what is needed. Some parks are overused while others are under-used. Many times the public response at the under-used park is, "I didn't know that park existed."*

— Municipal Park and Recreation Director

Information on the availability of outdoor recreation opportunities is necessary to promote participation. Many parks and recreation departments in other states have developed marketing strategies in conjunction with statewide tourism programs. State park systems have adopted slogans; redesigned park flyers and pamphlets; produced cassettes that are circulated widely to communities and conferences; produced an array of caps, buttons, t-shirts, and shopping bags with logos and slogans; and streamlined and modernized reservation systems with the latest electronic technology. Some park systems are hiring marketing managers (*State Parks in a New Era*, Myers).

Regardless of the administrative approach, whether by one department or by a coalition of recreation providers, effective marketing can accomplish many objectives:

- increase public awareness of outdoor recreation opportunities;
- reduce pressures on heavily used parks by providing information about lesser-known units;
- promote a regional approach to tourism; and
- help build constituencies of in-state visitors who support the parks.

The goal of increased information and awareness can also be reached by using existing media to promote outdoor opportunities. Public service announcements and feature stories in newspapers and on television are cost-effective ways to inform people of their local and regional recreational resources.

### Advocates and Partners

*"We need to take on the role of advocates in our communities to spread the good word,"* said one educator in talking about parks and recreation. We need to preserve "special places" that are important to us, and we must provide recreational programs and facilities for future generations by working together in our own communities, where we live, work and play.

"Communities" can also mean communities of interest as well as geographic communities. Associations are needed with other groups of similar interests, such as sports clubs, neighborhood associations, planners, and non-profit organizations — civic groups, garden clubs, local officials, Boy Scouts, Girl Scouts, recreational associations, and conservation organizations of a geographic community. In the words of one New Bern public workshop participant, *"We must bring together diverse recreation groups to work towards improved outdoor recreation."* A core constituency — everyone who is interested in the outdoors and recreation — would center around this common cause.

Communities must organize to invest in recreational opportunities for the future and to protect our outdoor heritage. To build a plan of action, a community must first have a vision for the future — deciding what opportunities it wants to provide, what "special places" to set aside — determine priorities, set goals, and then assess tools available and needed to reach those goals.

People are taking more control over decisions and actions that affect the quality of their lives because they know their own needs best and are often best-qualified to make decisions to meet them. As reflected by the trend towards decentralization in government, political authority is increasingly centered at the state and local levels. Often, citizen advisory boards are used in many service areas of local government.

Many communities and counties have park and recreation boards and commissions already established. The success of any park and recreation organization is largely dependent upon the effort, commitment, and competency of its citizen board members. These members often serve in key community leadership positions and are critical resources. Citizen board members must understand their responsibility to provide visionary, proactive leadership based on their knowledge of how park and recreation services improve the quality of life in their communities. Citizen board members must be well-informed advocates of outdoor recreation.



## Public/Private Cooperation to Expand Recreational Opportunities

Another priority issue is the need to expand partnerships between public agencies and the private sector in order to expand park and recreation opportunities. Non-profit organizations, private for-profit groups, public agencies, and individuals all have different roles in providing outdoor recreation. The key to successful partnerships is to match resources to achieve mutual goals.

The private sector manages recreation lands, offers services that transport people to recreation areas, conducts courses that teach recreation skills, provides comfort services on public lands, and produces equipment that allows people to enjoy all kinds of recreational activity.

Private enterprise is a major supplier of certain kinds of activities — camping, skiing, golfing, and boating through marina facilities. Other activities, such as hunting and long-distance hiking, depend on the use of private farm and forest lands.

Private, not-for-profit groups, such as youth clubs, church groups, community associations, and other independent, voluntary organizations, fill important recreational needs. Non-profit organizations, such as The Nature Conservancy and the Land Trust Exchange, have the ability to act quickly to protect important recreation and habitat lands.

### Mutually Beneficial Partnerships

Outdoor recreation opportunities are an essential component of sound community development. Public officials seek to capitalize on the increased importance of the quality of life in business, residential, and retirement decisions. Broad regional strategies attempt to lure vacationers, second-home buyers, and industries. Trails, greenways, and river conservation initiatives are publicized as quality-of-life benefits.

Economic development and tourism are increasingly linked. On the coast, for example, many special events are supported by local chambers of commerce to attract tourists. The King Mackerel Tournament, held each fall in Carteret County, attracts approximately 900 boats with an average of 2.5 people who spend four nights in the area. This influx of visitors is an obvious economic benefit to the area. In addition, Carteret, Craven, and Pamlico counties market their region to North Carolinians through the organization Coastal Carolina Pleasures. Coast Hosts, another consortium of coastal county chambers of commerce, markets North Carolina beaches outside the state.

Whitewater rafting in western North Carolina also aids tourism and economic development. The Nantahala River sports no less than 15 private outfitters, companies that provide rubber rafts, kayaks, canoes, and guides for river trips. According to statistics provided by the U.S. Forest Service, the nantahala had between 160,000 and 170,000 floaters in 1988, 70 percent of whom were taken down the river by one of the 15 commercial outfitters.

The actions outside the boundaries of a recreation area can affect the public resources or experience. The location, design, and scale of private capital investment near public resources presents opportunities to achieve mutually desirable goals — protecting resources and providing

economic benefits to the community.

The North Carolina state parks system and Carolina Power & Light Company have cooperated on a number of projects. CP&L has funded the state's production of environmental education learning experiences, and many CP&L employees have volunteered and completed park construction and maintenance projects. Duke Power funded a statewide park advisory committee meeting, and the J.W. Moore advertising firm gave the state park system free publicity work.

Some communities have added desirable support services in areas adjacent to public recreational resources, balancing conservation and economic needs. Bryson City has assessed the tourism activity from the Great Smoky Mountain Railway, a 70-mile train ride to the Nantahala Gorge, and the influx of river floaters and decided to upgrade its Island Park and river walkway to better accommodate tourists.

Communities and business leaders recognize the value of parks in revitalizing waterfronts and downtown areas. Efforts typically involve many different groups. In New Bern, a waterfront walkway connecting Union Point Park with Bicentennial Park was constructed through funding efforts of the Tourism Development Authority, downtown redevelopment organizations, and city officials. The Park and Recreation Department maintains the walkway, which is popular with both tourists and local residents.

### Funding

Partnerships with the private sector, both for-profit and nonprofit, can help to provide services and facilities despite budgetary pressures. Involvement with private business through concession agreements and co-sponsorship can generate revenues for parks or reduce operating costs.

The North Carolina Zoo is an excellent example of public/private cooperation to expand outdoor recreational opportunities. The Zoological Society, a nonprofit organization, was formed in 1968 as a volunteer effort to interest state officials and private citizens in a state zoo. Since those beginning years, private funds have purchased almost all the plant and animal populations and contributed substantially to construction efforts as well. The original 1,300 acres were donated by Randolph County, and construction costs have been primarily supported by state funding. The Zoological Society also sponsors a gift shop, the profits of which cycle back into the park's operating budget.

Co-sponsorship of special events by the public and private sectors is becoming more commonplace in North Carolina. For example, the Charlotte Park and Recreation Department reluctantly decided that it could no longer allow dogs at its outdoor special events, but wanted to offer something special to its canine friends. The result was a special event specifically for dogs and dog owners called "Bark in the Park." The event was sponsored by a dog biscuit company and featured a day-long celebration plus promotional dog biscuit giveaways.

The key to mutually beneficial co-sponsorship is to ensure that both the corporation or organization and the park and recreation department meet their objectives. Generally, the park and recreation department wants to provide more recreational opportunities, but finds it difficult

to expand services due to budgetary constraints.

Corporations are willing to donate funds for community service in exchange for publicity and an opportunity to market their products and services. When special events are co-sponsored with nonprofit organizations, it is generally to benefit the nonprofit organization. Receipts are rarely returned to the park and recreation department, primarily due to legal restrictions that require receipts to be paid into the general fund.

But public/private co-sponsored special events can directly benefit local recreation agencies using nonprofit foundations. The annual Lazy Daze Festival, a craft fair co-sponsored by the Cary Park and Recreation Department and a local bank, began 18 years ago. The first festival generated approximately a \$1,000 profit, which went into the town's general fund. The co-sponsors subsequently established Lazy Daze as a non-profit civic organization with covenants and policies for operation. This allowed any profits realized to be set aside in a separate account. Since that time, donations made from festival proceeds have benefited civic projects, such as a new playground, an amphitheater covering, and equipment for the park and recreation department.

### Services

Joint sponsorship programs take place when a parks and recreation department works cooperatively with another public, commercial, or private non-profit agency. The most popular forms of joint sponsorship are special events, youth athletic programs, adult athletics, special populations programs, senior citizens programs, and aquatics.

Providing wellness programs is another example of a joint sponsorship effort between the private and public sectors. Wellness programs promote disease prevention through positive changes in personal lifestyles, including improved diet and exercise. To reduce health costs and increase productivity, many corporations have instituted health promotion programs for employees, ranging from elaborate facilities to comprehensive wellness programs. Corporations without their own staff or facilities will often contract for on-site activities or reimburse their employees for off-site fee programs. Local park and recreation departments can work cooperatively with businesses to develop wellness programs and to make facilities available for sports and fitness. Complete wellness programs should become more prevalent in North Carolina, and local recreation departments can offer their expertise.

### Incentives Needed for Private Sector

Incentives are needed to encourage the private sector to help provide more park and recreation opportunities. Reducing disincentives such as public liability requirements on private land and short lease periods for entrepreneurial investments in public recreation areas encourage private sector partnerships.

Diverse partnership arrangements exist in the North Carolina state parks — from Boy Scout troops helping maintain trails, to concessionaires running marinas, to volunteers selling

interpretive materials. These vary from informal, ad hoc arrangements, to short-term contracts with nonprofit groups, to 30-year leases with marina concessionaires. Revenues collected from concessions reduce state appropriations to the Division; therefore, no real gain in funding is realized to meet additional needs.

In North Carolina, the state protects a landowner who allows a state trail to cross his/her property from being responsible for injuries to trail users, barring gross negligence by the landowner. This is sometimes not sufficient incentive. Some private property owners want total protection, including compensation for any property damages incurred from fire or vandalism, and enforcement of lawful use. County law officials have been reluctant to enforce trespass grievances. Also, the cost of maintaining land that is open to the public can be high, and some landowners want a financial return. The general population and recreationists, in particular, should be educated to adoption of a land ethic that promotes acceptable behavior on all private lands.

Several of the Internal Revenue Service's policies and regulations can discourage potential donors' willingness to give land or allow easements. For example, one regulation requires that the landowner pay for an appraisal of a donated easement.

Successful efforts to increase recreational access to private lands must, for the most part, originate at the state and local levels because of state liability and trespass laws and local taxing practices.

Local governments can encourage the private sector to provide outdoor recreational opportunities. Zoning can be used to trade off greater density of residential development for provision of open space and recreation amenities. In North Carolina, some communities require land set-asides or cash from builders to mitigate the effects of new development and to provide recreation areas needed as a result of the development.

The city of Jacksonville, for example, assesses proposed developments by examining the location of existing parks, the need for additional parks, and the development's density. The city then decides between three options: land donated for the city to develop; money given in lieu of land; or a recreation area developed as part of the project. Using the ordinance, the city of Jacksonville has ensured the availability of future recreational opportunities and improved the quality of life for its citizens.

### **Coordination Among Public Providers**

Another issue identified was the need for better coordination among public agencies providing recreation. In the past 25 years, state and local governments have received significant funding assistance from the federal LWCF program. When large appropriations were available in the 1970s, funding was available for both park projects and technical assistance. During the 1980s and since, budget reductions have cut these programs to minimal levels. The need for both funding and technical assistance still exists, however.

The state's role of providing leadership for local parks and recreation should be expanded.

Local department directors believe that the Division of Parks and Recreation should re-focus on the needs of city and county recreation by encouraging local government cooperation and the establishment of park and recreation departments in all counties.

Local agencies want improved technical assistance from the state. Private, municipal, and county agencies, along with their citizen advisory committees, want additional services from the Division and from Recreation Resources Service. Services desired include educational field seminars; information services; planning local projects; measuring park use; developing per capita standards to justify funding, staffing, and maintaining recreational services; facilitating technical assistance from universities; enhancing their relationships with federal agencies; and marketing techniques to increase public participation.

A county-wide or regional approach to planning and facilities would eliminate the unnecessary expense of duplicate services. Opportunities also exist for cooperation with public land-managing agencies that do not currently provide recreational services. Recreational services can be expanded by using suitable land and facilities when they are available.

### Community Schools

A good example of cooperative use of public land and facilities is the Community School Program. The North Carolina Community School Act of 1977 provided funds for community school coordinators and provided the community with the right to use the schools. North Carolina's enabling legislation permits, but does not mandate, the use of schools by other individuals and organizations.

Currently, each school system can choose to participate and administer the program, but all systems that accept the program and receive the annual appropriation are to facilitate community use. In some school systems, this money has been used to fund a public relations position or an art teacher rather than to support the community school program. Other areas of concern include questions of liability, responsibility and authority, extent of school property use, and financial arrangements for expenses. Nothing can be more basic to the success of a jointly used system than an agreement that clearly states the parameters within which the two agencies — the school and the recreation department — must operate.

Ideally, the community school concept promotes the well-planned and efficient use of public school facilities for both educational and recreational purposes. The program eliminates duplications in programming, funding for land acquisition, and construction of facilities. It can provide recreational opportunities in a city or county seeking to more fully use its buildings and grounds.

### **Use of Volunteers**

Volunteers have greatly assisted park systems. Two successful programs include the Take Pride in America (TPIA) campaign and the Adopt-a-Park program. The Take Pride in American campaign was a partnership of state and federal agencies fostering local activities that increased public awareness of the need to protect public lands. In North Carolina, it mobilized thousands

of volunteers to participate in conservation and maintenance projects that won national recognition. Volunteers were coordinated by the N.C. TPIA Task Force, composed of members from the Department of Environment, Health, and Natural Resources, the N.C. Food and Agriculture Council, and Keep North Carolina Clean and Beautiful.

Volunteers are not always a solution to every need or appropriate for every park. Although useful in a supplementary role for programming and maintenance tasks, they are of lesser value in administration. In addition, there is a dollar cost involved in using volunteers if insurance and workers compensation coverage are required and if paid staff are needed to supervise them. Volunteers often require additional management and supervision costs and cause problems that result from lack of a regular, skilled work force on payroll.

*Where volunteers become a significant presence, they often create a new management need to ensure that staff and volunteer services are integrated harmoniously.*

— Phyllis Myers  
*State Parks in a New Era*

Many potential problems can be circumvented, however, if a volunteer program is well thought out and developed. An agency must publicize the needs of a particular park, program, or project to recruit volunteers. It is beneficial to attract a wide variety of volunteers, including both individuals and organizations. Both parties should agree on clear goals and areas of responsibilities. Volunteers should be trained, if necessary, to the skill level required for particular jobs. And they should always be trained in public relations because they will be representing the park to visitors and will need a good understanding of its management philosophy. When possible, volunteers should be put to work at what they know best. Create good will by giving recognition, encouraging cooperation among groups and agencies, and publicizing accomplishments.

## IMPROVING THE STATE PARKS SYSTEM

The past five years have seen significant attention directed toward the North Carolina state parks system. Progress has been made in interpretation and education, resource protection, land acquisition, operations, capital improvements, and planning. Continued progress over the next decade will be crucial in determining whether North Carolina will commit to developing a state parks system worthy of the pride of its citizens.

Establishment of North Carolina's first state park, Mount Mitchell, came in response to threats to its natural resources. While this initial acquisition was completed with appropriated state funds, subsequent expansion in the number and size of park units was accomplished without such appropriations. For example, Fort Macon State Park was donated as federal surplus property.

Federal funding and private donations have played a major role in the expansion of the state parks system. Public works programs during the 1930s assisted in the creation of nine state parks. Donations and LWCF assistance supported major park system expansion from 1960 to 1980. LWCF assistance has declined significantly since 1982. Through reliance on donations,

federal assistance, and sporadic funding, the state has not developed the state parks system in response to priority needs (Table I-1). Rather, the development of the system has been piecemeal and reactive.

Recent state parks study commissions have been successful in gaining increased support for the state parks system. Even with increased support, however, many needs remain unmet. Studies by legislative study commissions in 1979, 1985, 1987, 1989, 1991, and 1993, as well as studies by the State Goals and Policy Board and state auditor, have consistently reported on the need for land acquisition, improvements to the physical plant, adequate staffing, and increased and steady funding.

A \$35 million state parks bond issue was approved in 1993, giving the state parks system its largest single appropriation ever. The money will fund capital improvements and land acquisition projects across North Carolina. A Parks and Recreation Trust Fund was established in 1994. When fully funded in FY 95/96, it will greatly assist the state parks system in addressing its backlog of needs.

### **Systemwide Plan for the State Parks System**

The 1987 State Parks Act requires that a systemwide plan be prepared every five years. The recently completed 1994 plan was developed with public participation that included 24 public meetings. The Systemwide Plan describes recent accomplishments, evaluates the system in all program resources, and summarizes public recreational needs. It also contains a five-year action plan for the state parks system.

The Systemwide Plan and its action plan are incorporated as a part of this SCORP. Copies of the Systemwide Plan are available at all North Carolina state parks as well as the North Carolina State Library in Raleigh and its system of depository libraries.

Table I-1. Units of the State Parks System, 1995

**STATE PARKS**

1. Bay Tree Lake (established 1939)
2. Boone's Cave (1971)
- \*3. Carolina Beach (1969)
- \*4. Cliffs of the Neuse (1945)
- \*5. Crowders Mountain (1973)
- \*6. Duke Power (1962)
- \*7. Eno River (1973)
- \*8. Fort Macon (1924)
- \*9. Goose Creek (1974)
- \*10. Hammocks Beach (1961)
- \*11. Hanging Rock (1936)
- \*12. Jockey's Ridge (1975)
- \*13. Jones Lake (1939)
- \*14. Lake James (1985)
- \*15. Lake Waccamaw (1976)
- \*16. Lumber River (1989)
- \*17. Medoc Mountain (1973)
- \*18. Merchants Millpond (1973)
- \*19. Morrow Mountain (1935)
- \*20. Mount Mitchell (1916)
- \*21. New River (1977)
- \*22. Pettigrew (1939)
- \*23. Pilot Mountain (1968)
- \*24. Raven Rock (1970)
- \*25. Singletary Lake Group Camp (1939)
- \*26. South Mountains (1976)
- \*27. Stone Mountain (1969)
- \*28. Waynesborough (1979)
- \*29. William B. Umstead (1943)

**STATE LAKES**

1. Bay Tree Lake (1939)
2. Lake Phelps (1947)
3. Lake Waccamaw (1976)
4. Jones Lake (1939)
5. Salters Lake (1939)
6. Singletary Lake (1939)
7. White Lake (1929)

**STATE RECREATION AREAS**

- \*1. Falls Lake (1982)
- \*2. Fort Fisher (1986)
- \*3. Jordan Lake (1982)
- \*4. Kerr Lake (1951)

**STATE RIVERS**

1. Horsepasture River (1986)
2. Linville River (1975)
3. Lumber River (1989)
4. New River (1975)

**STATE TRAILS**

1. Falls Lake/Wake County Trail
2. French Broad River Trail
3. Lower Lumber River Trail
4. Yadkin River Trail

**STATE NATURAL AREAS**

1. Baldhead Island (1979)
2. Bushy Lake (1970)
3. Chowan Swamp (1974)
4. Dismal Swamp (1974)
5. Hemlock Bluffs (1976)
6. Masonboro Island (1976)
7. Mitchells Mill (1976)
- \*8. Mount Jefferson (1956)
9. Theodore Roosevelt (1971)
- \*10. Weymouth Woods (1963)

**TOTALS**

29 Park Areas  
 4 Recreation Areas  
 4 State Rivers  
 4 State Trails  
 10 State Natural Areas  
7 State Lakes  
 58 Units

\* Operated Units — Units that have one or more full-time staff persons, visitor facilities, and are open to the public.



## II. SUPPLY, DEMAND, AND NEED FOR OUTDOOR RECREATION

### INTRODUCTION

The supply, demand, and need for outdoor recreation opportunities is basic information for managers of federal, state and local recreation agencies as well as private recreation ventures. Determining the adequacy of existing resources and the need for new resources should take into account the number and type of recreation facilities currently provided, the number of people who live in the market area, and public preferences.

From a statewide perspective, it is desirable for all residents to have access to high quality recreational opportunities. Thus, counties that have fewer recreation resources per capita should be given preference over counties with more resources when the counties compete for statewide funding. This chapter provides information to rank North Carolina counties according to the availability of recreational resources on a per capita basis.

Publicly funded recreational opportunities should reflect public preferences. These preferences can be determined through surveys, public meetings, or reactions to draft plans. This document contains the results of a random, statewide survey that measured what recreational activities North Carolinians are currently choosing as well as what citizens want in the future. Specifically, this chapter presents the following information.

1. **The supply of outdoor recreation opportunities:** Statewide survey results indicate the number of park acres and outdoor recreational facilities in North Carolina provided by municipal, county, state, and federal agencies as well as some commercially provided facilities.
2. **A comparison of counties based on existing recreational opportunities and county population:** North Carolina counties are ranked according to the park acres and recreational facilities available in each county and the county's population.
3. **Recreation participation rates:** Statewide survey results present how frequently North Carolina households participate in a forty-three outdoor recreation activities.
4. **Priorities for publicly funded outdoor recreation:** Results from a public preference survey forecasts the recreational activities that public agencies should provide in the future by ranking the activities according to future demand and support for public funding.

## SUPPLY OF OUTDOOR RECREATIONAL OPPORTUNITIES

### The Outdoor Recreation Spectrum

Outdoor recreation encompasses a great variety of outdoor recreational activities because people look for many different types of experiences. The desire for different experiences causes people to choose between solitude or crowds, natural surroundings or man-made facilities, and physically challenging or relaxing activities. Table II-1 summarizes the outdoor recreational spectrum by presenting its opposite ends. Urban and modern settings, activities, and experiences are contrasted with the primitive and remote end of the spectrum. These distinctions are based on the Outdoor Recreation Opportunity Spectrum developed by the U.S. Forest Service as a framework for describing outdoor recreation in terms of experience, activities, and settings.

Natural resources and man-made facilities provide the settings usually needed for outdoor recreation. As described in the outdoor recreation spectrum, natural resources vary from settings like ocean beaches and scenic mountain vistas to urban open space. A description of the SCORP park and recreation area classes is presented in Table II-2.

Outdoor recreation activities can be divided into those that depend primarily on a man-made facility and those that depend primarily on a natural resource (Table II-3). The facility-dependent activities, such as tennis courts, can be placed at many locations and still provide a similar experience. Natural resource-dependent activities, such as sailboating, must be located where suitable natural resources are available. For each activity, the appropriate facility has been identified.

Table II-1. The Spectrum of Outdoor Recreation Activities<sup>1</sup>

	MODERN/URBAN	PRIMITIVE/REMOTE
<b>SETTINGS:</b>		
<b>PROXIMITY</b>	close to home	far from home
<b>SIZE</b>	less than 100 acres	several thousand acres
<b>FACILITIES</b>	extensive facilities	limited or no facilities
<b>NATURAL RESOURCES</b>	man-made environment dominates; natural resources secondary.	natural environment dominant; little/no development.
<b>ACTIVITIES:</b>	facility dependent	natural resource dependent
<b>EXPERIENCES:</b>		
<b>LEISURE TIME</b>	Participation in short time periods possible.	Substantial blocks of time required for participation.
<b>MANAGEMENT CONTROLS</b>	Regimentation and controls obvious and numerous.	On-site regimentation low, with controls primarily off-site.
<b>SOCIAL INTERACTION</b>	Large numbers of users on-site and in nearby areas.	Few people encountered per day.
<b>CHARACTER OF EXPERIENCE</b>	Opportunities for competitive and spectator sports and for passive uses of highly developed parks are common; experiencing natural environment-related challenges and risks and using outdoor skills are relatively unimportant; contact with other people is prevalent, as is convenience of sites and opportunities.	High probability of experiencing isolation from sights and sounds of humans; independence; closeness to nature; tranquility and self-reliance through the application of primitive outdoor skills in an environment that offers challenge and risk.

<sup>1</sup> Sources: *R.O.S. Users Guide*, U.S. Forest Service, Department of Agriculture, 1982, Washington, D.C.  
*Recreation, Park and Open Space Standards and Guidelines*, National Recreation and Park Association, 1983, Alexandria, Virginia.

Table II-2. SCORP Park and Recreation Area Class Names and Descriptions

AREA NAME	DESCRIPTION
Neighborhood Park	Area for intensive recreation such as field and court games, playground equipment, picnicking and wading pools. 6-8 acres is a typical size. Examples include mini-parks serving residential areas, playgrounds, sports field complexes and combination playgrounds/sports fields/passive natural areas.
Community Park	Area providing a wide array of active recreational opportunities including a recreation center building, fields, hard surface courts, and picnicking. Natural or landscaped areas are provided for passive recreation. May include a swimming pool or be in conjunction with a school. 10-20 acres is a typical size. Examples include large park/school complexes; recreation center/pool/sports field and court complexes; and community center/park complexes.
District/Metro Area Park	Area serving one or more suburban or rural communities. Similar to the Community Park, these areas offer intensive recreation activities and natural environment areas. Typical size is 20-100 acres. Examples include intensively developed county parks, developed public recreation sites at large reservoirs, and state recreation areas.
Local Parks	Combines Neighborhood, Community, and District/Metro Area parks classes described above.
Regional Park Reserve	Area of natural quality for natural resource-based outdoor recreation. Generally, 80% of the land is reserved for conservation and natural resource management with less than 20% developed for recreation. Typical size is 3,000-5,000 acres. Examples include state parks, state natural areas, and large natural resource-based county parks. Activities include nature study, picnicking, camping, fishing, boating, swimming, and various trail uses.
Special Use Recreation Area	Area for specialized or single-purpose recreation activities. Typical size varies according to facility space requirements. Examples include golf courses, zoos, fairgrounds, ski areas, campgrounds, gun ranges, boat/ beach access areas, gardens, and developed recreation sites in national parks and national forests.
Dispersed Use/Conservancy Area	Area for protection and management of the natural environment with recreation use as a secondary objective. Certain multiple use management approaches produce natural resource outputs such as timber, agricultural produce and minerals. Examples include state gamelands, state and federal scenic rivers, multiple use areas of national and state forests, reservoir shoreline buffer lands, and Blue Ridge Parkway corridor between developed recreation sites. Typical size should be sufficient to protect and manage the primary resource while providing secondary recreational uses.
Wilderness Area	Area characterized by unmodified natural environment of fairly large size. Low interaction between users, and evidence of others is minimal. Motorized use is not permitted. Typical size is 5,000-15,000 acres. Examples are congressionally designated National Wilderness Areas.
Historic/Cultural Area	Area that preserves, maintains, and interprets buildings and places of archaeological, historical, or cultural significance. Should be of sufficient size to protect and interpret the resource while providing optimum use. Examples include local, state, and national historic sites.

Table II-3. Outdoor Recreation Activities and Related Facilities

FACILITY-DEPENDENT ACTIVITIES		NATURAL RESOURCE-DEPENDENT ACTIVITIES	
ACTIVITY	FACILITY	ACTIVITY	FACILITY
Baseball	Fields	Bicycle Touring	Rural Highways
Basketball	Courts	Camping, Tent	Sites
Bicycling	Urban Bikeways	Camping, Trailer	Sites
Football	Fields	Canoeing	Stream Access
Golf	Courses	Hiking	Trails
Playground Use	Tot Lots	Horseback Riding	Trails
Soccer	Fields	Nature Study	Interpretive Trails/ Natural Areas
Softball	Fields	Swimming, Non-pool	Designated Beaches
Swimming, Pool	Pools		
Tennis	Courts		
Volleyball	Courts		

An inventory of public recreation sites has been performed to measure the supply of the recreational resources in each county. The inventory used the area and facility classifications discussed previously to count the parks and facilities at public recreation sites in North Carolina. For example, the supply of tennis courts in a county is simply the total number of tennis courts found in all public parks. Park acreages have been classified according to the type of park areas and totaled for each county. The statewide summary for the park acreage inventory is presented in Table II-4, and the summary of recreational facilities is shown in Table II-5. County totals for both park acreages and some facilities are included in Appendix A. Approximately 9 percent of the state is recreational acreage. Most of this acreage is composed of state gamelands and federally owned forests and parklands.

Table II-4. Outdoor Recreation Acreage by Operator and Site Classification

SITE CLASSIFICATION	OPERATOR CLASSIFICATION				Total
	FEDERAL	STATE	MUNICIPAL	COUNTY	
Local	0	12	43,115	12,175	55,302
Regional Reserve	0	112,457	0	1,000	113,457
Dispersed Use	2,033,353	554,205	0	0	2,587,558
Totals:	2,033,353	666,674	43,115	13,175	2,756,317

Table II-5. Statewide Totals for Outdoor Recreation Facilities by Operator Class

ACTIVITY	FACILITY	OPERATOR CLASS					TOTAL
		FEDERAL	STATE	MUNICIPAL	COUNTY	PRIVATE	
Basketball	Courts	0	●	813	123	*	937
Football	Fields	0	0	107	74	*	181
Playground Use	Tot Lots	0	8	99	160	*	1,166
Soccer	Fields	0	0	312	235	*	547
Softball	Fields	0	●	455	235	*	701
Swimming	Pools	0	●	127	34	*	162
Tennis	Courts	0	0	1,617	369	*	1,986
Baseball	Fields	0	0	423	318	*	701
Tent/Trailer Camping	Sites	2,556	2,401	214	472	15,532	21,175
Trails (All types)	Miles	2,347	429	361	522	*	3,660
Golf	18-hole Courses	0	0	14.5	8.5	353	376

\* Not Available

## COMPARING COUNTIES BASED ON RECREATION RESOURCES AND POPULATION

In past SCORP documents, standards were used to describe adequate quantity of public recreational acreage and facilities based on population. The SCORP no longer recommends using standards based on population (such as one tennis court per 2,000 people) to express recreation needs in North Carolina, a position supported by the National Recreation and Park Association. These standards take a cookie-cutter approach that recommends the same services for all counties when in fact each county and community has unique characteristics and preferences. Some of these differences include population density, roads and transportation, geography, natural resources, state and federal land ownership, and amounts of tourism. No single standard can be accurately applied to all of North Carolina because the state includes areas as diverse as the Charlotte metropolitan area, remote areas of the Appalachian Mountains, the large rural areas in the Coastal Plain, and wide beaches of the North Carolina coast. Recreation needs should be determined by the preferences of the people in the market area, the existing recreation resources, and the characteristics that make the area unique.

Instead of prescribing an appropriate level of recreation services for each county by applying a standard, the SCORP is now comparing North Carolina counties to each other according to current recreation resources and county population. The need for recreational facilities and acreage is based on population and thus, counties with the larger populations also need more park acreage and recreational facilities. But on a per capita basis, all counties can be compared equally.

Population distribution across the state is shown on the map in Figure II-1. North Carolina's population is most concentrated in the central portion of the state, which includes the Piedmont crescent containing Mecklenburg, Guilford, Wake, Forsyth, and Durham counties.

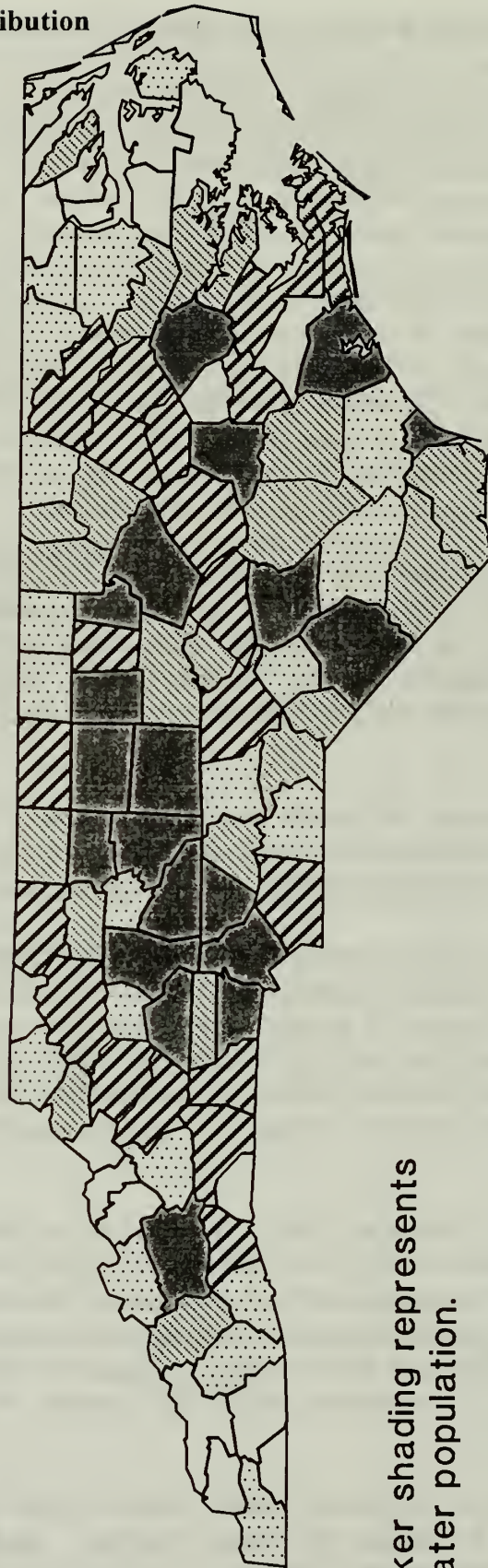
To compare counties according to recreation resources and population, each county population is divided by the park acreage and recreation facility totals for that county. The calculations indicate the number of number of county residents per park acre or recreation facility. After calculating these numbers for each North Carolina county, all 100 counties can be ranked according to residents per acre (or facility). Counties with high numbers of resident per acre rank lower than counties with fewer residents per acre because more people have to compete to use the existing land.

Figures II-2 through II-13 show all North Carolina counties shaded according to the residents per park acre for two park acreage classes (local parks and dispersed-use acreage) as well as the residents per facility for 10 recreational facilities (baseball fields, basketball courts, golf courses, playgrounds, swimming pools, tennis courts, tent and trailer campsites, trail miles, soccer fields, and softball fields). One each map, counties with darker, more solid shading have fewer residents per park acre or recreation facility and counties with lighter shading have more residents per resource.






In addition to the maps that compare all North Carolina counties according to residents per acre of facility, Appendix A contains 100 county profiles. Each profile presents the county population and the current supply of recreation facilities and park acreage. The profile also presents several calculations based on residents per acre or facility, the county's ranking in the state, and the state median.

Figure II-1. Population Distribution

# Population Distribution

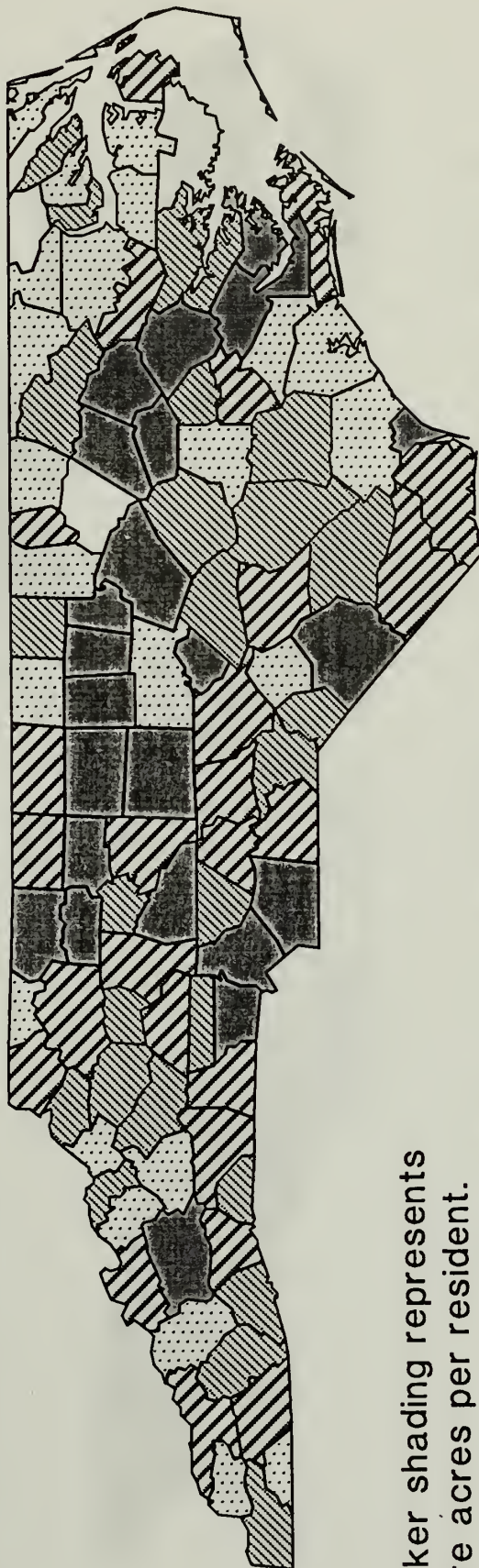


Darker shading represents greater population.






Population	
	3,765 to 17,069 residents
	17,070 to 30,280 residents
	30,281 to 52,721 residents
	52,722 to 96,302 residents
	96,303 to 524,463



# Residents Per Local Park Acre



Darker shading represents more acres per resident.

Residents per Acre	
	under 180 residents
	181 to 290 residents
	291 to 550 residents
	7,000 residents and above
	no acreage

4 counties reported no local park acres. The other counties have been sorted into four groups of approximately 24 counties each.

# Residents Per Dispersed Use Acre



Darker shading represents more acres per resident.






Residents Per Acre	
	1 resident or less
	1 to 4 residents
	5 to 21 residents
	22 residents and above
	no acreage

22 counties have no dispersed park acres. The other counties have been sorted into four groups of approximately 20 counties each.

# Residents Per Baseball Field



Darker shading represents more fields per resident.

Residents Per Field	
	6,100 residents or less
	6,101 to 10,250 residents
	10,251 to 20,575 residents
	20,576 residents and above
	no fields

15 counties reported no baseball fields. The other counties have been sorted into four groups of approximately 21 counties each.

# Residents Per Basketball Court

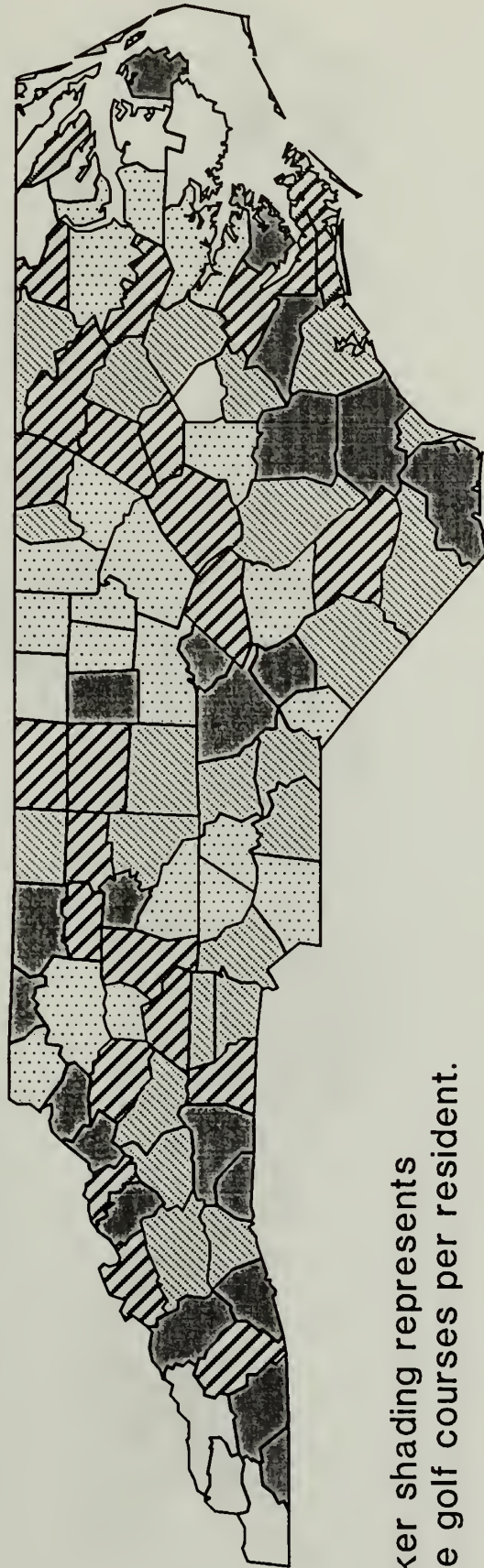


Darker shading represents more courts per resident.

Residents Per Court	
	6,250 residents or less
	6,251 to 8,500 residents
	8,501 to 14,600 residents
	14,601 residents and above
	no courts

22 counties reported no outdoor basketball courts. The other counties have been sorted into four groups of approximately 19 counties each.

# Residents Per 18-Hole Golf Course



Darker shading represents more golf courses per resident.






Residents Per Course	
	12,000 residents or less
	12,001 to 19,000 residents
	19,001 to 26,000 residents
	26,001 residents and above
	no golf courses

11 counties have no golf courses. The other counties have been sorted into four groups of approximately 22 counties each.

# Residents Per Playground

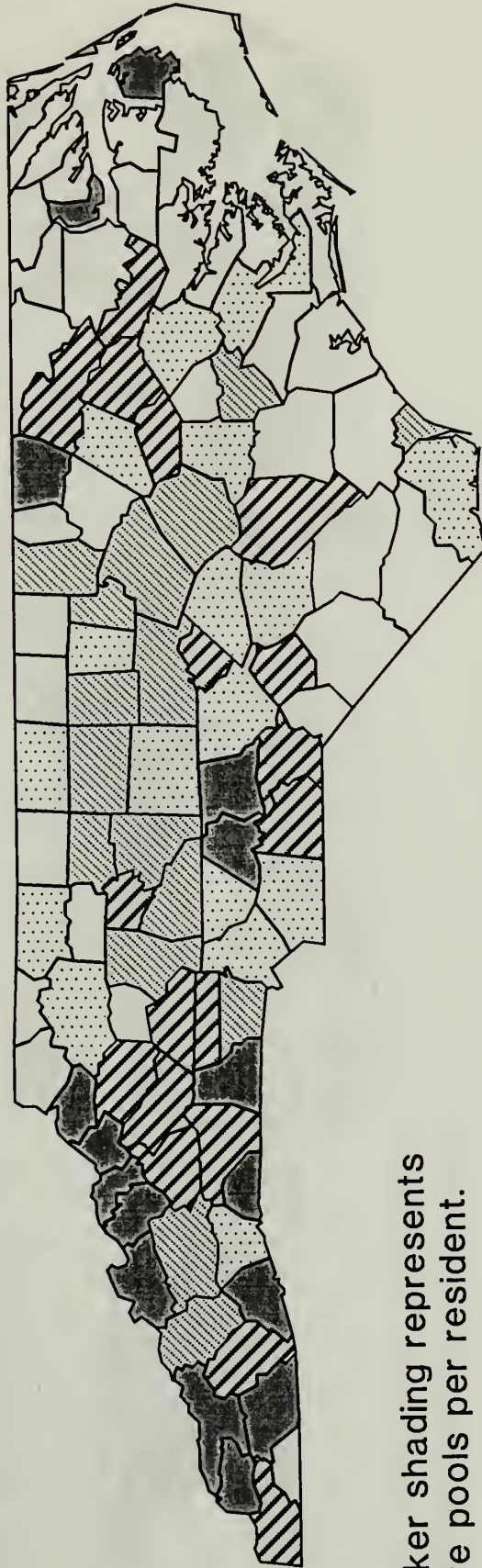


Darker shading represents more playgrounds per resident.






Residents Per Playground	
	5,300 residents or less
	5,301 to 8,650 residents
	8,651 to 13,500 residents
	13,501 residents or above
	no playgrounds

11 counties report no playgrounds.  
The other counties have been sorted into four groups of approximately 22 counties each.

# Residents Per Swimming Pool

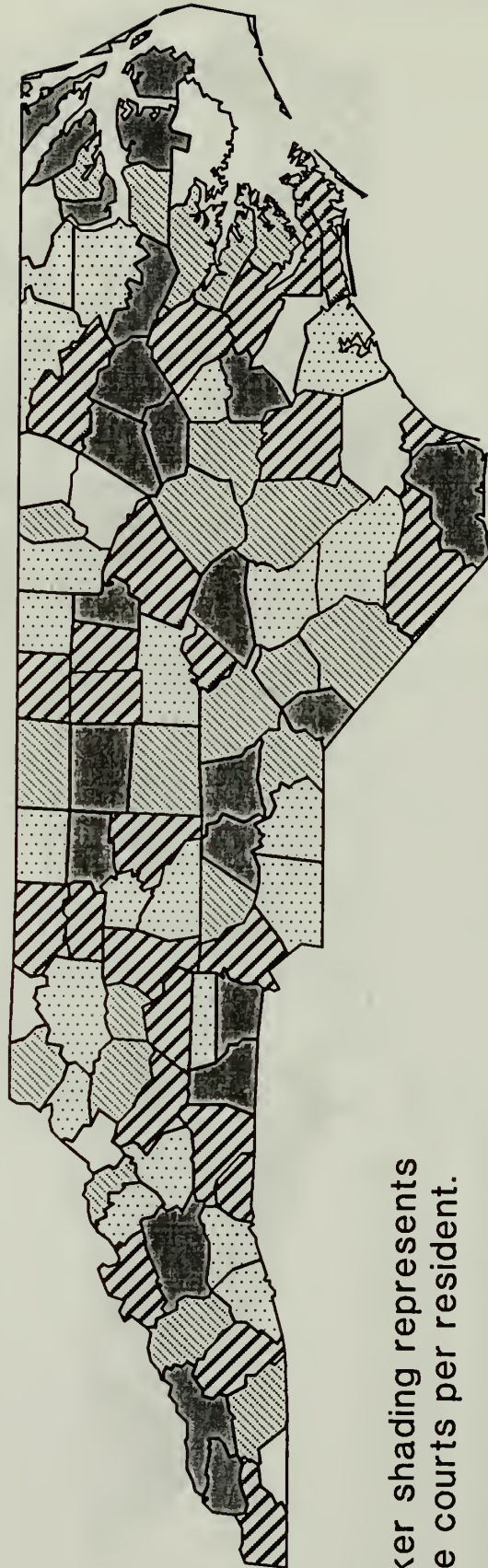


Darker shading represents more pools per resident.

Residents Per Pool	
	17,500 residents or less
	17,501 to 28,500 residents
	28,501 to 50,000 residents
	50,001 residents or above
	no swimming pools

33 counties report no public swimming pools. The other counties have been sorted into four groups of approximately 17 counties each.

# Residents Per Tennis Court



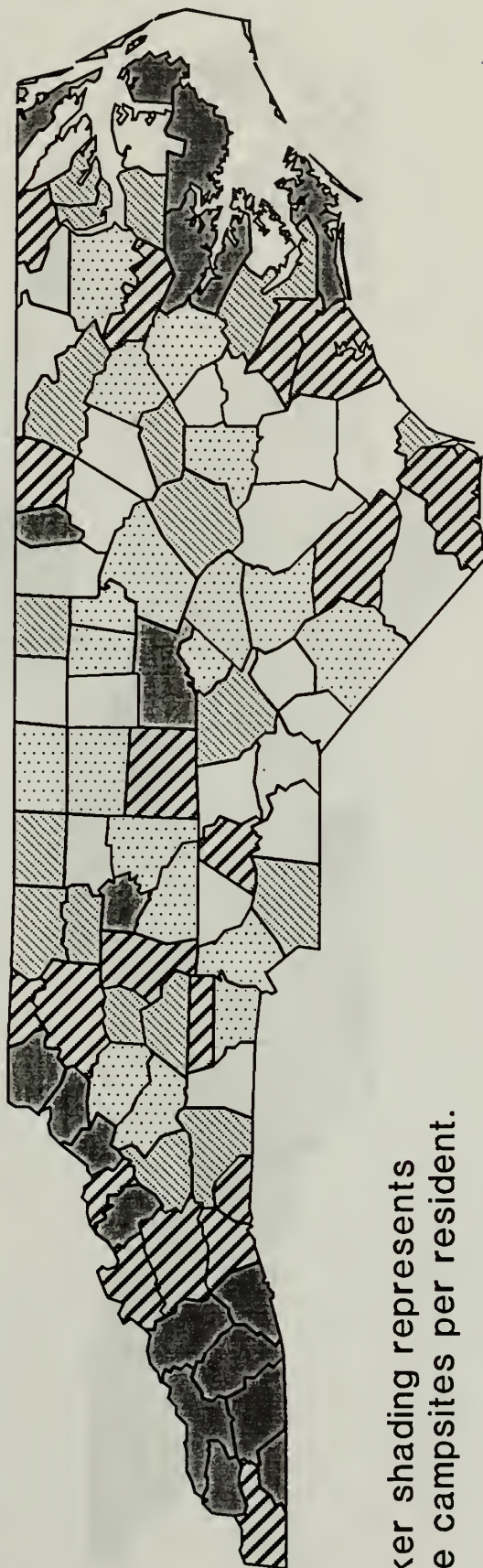
Darker shading represents more courts per resident.

Residents Per Court	
	2,600 residents or less
	2,601 to 3,900 residents
	3,901 to 5,750 residents
	5,751 residents or above
	no tennis courts

10 counties report no public tennis courts. The other counties have been sorted into four groups of approximately 23 counties each.



# Residents Per Tent and Trailer Campsite

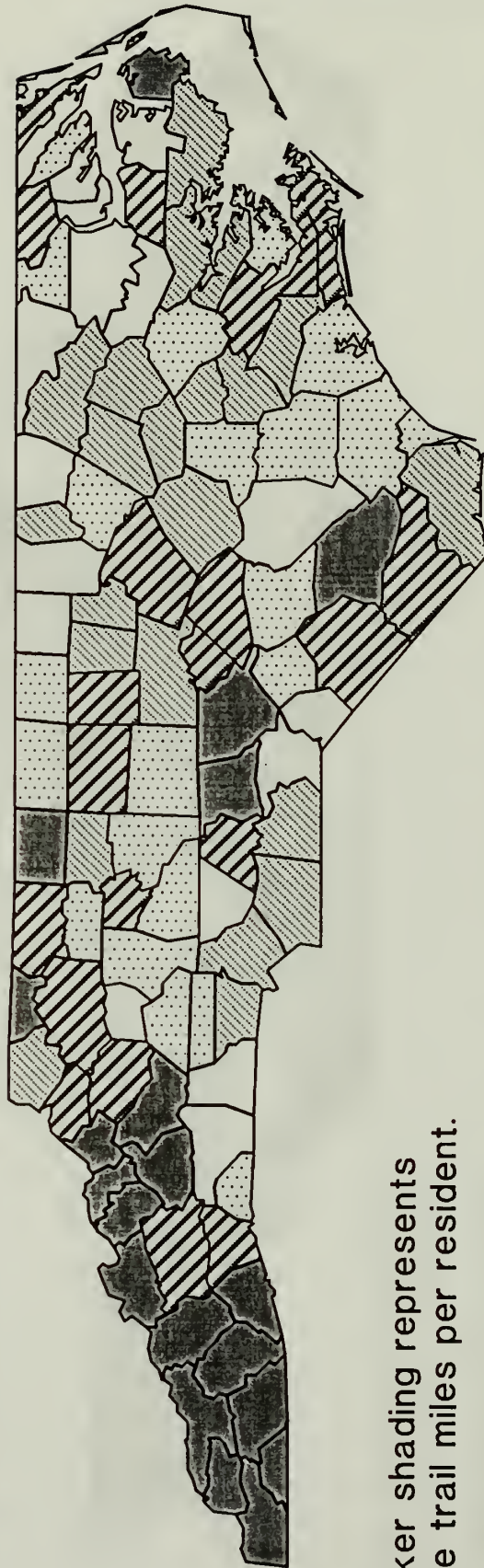


Darker shading represents more campsites per resident.






Residents Per Campsite	
	82 residents or less
	86 to 290 residents
	291 to 1,000 residents
	1,001 residents and above
	no campsites

25 counties have no tent and trailer campsites. The other counties have been sorted into four groups of approximately 19 counties each.

# Residents Per Trail Mile (All Types)

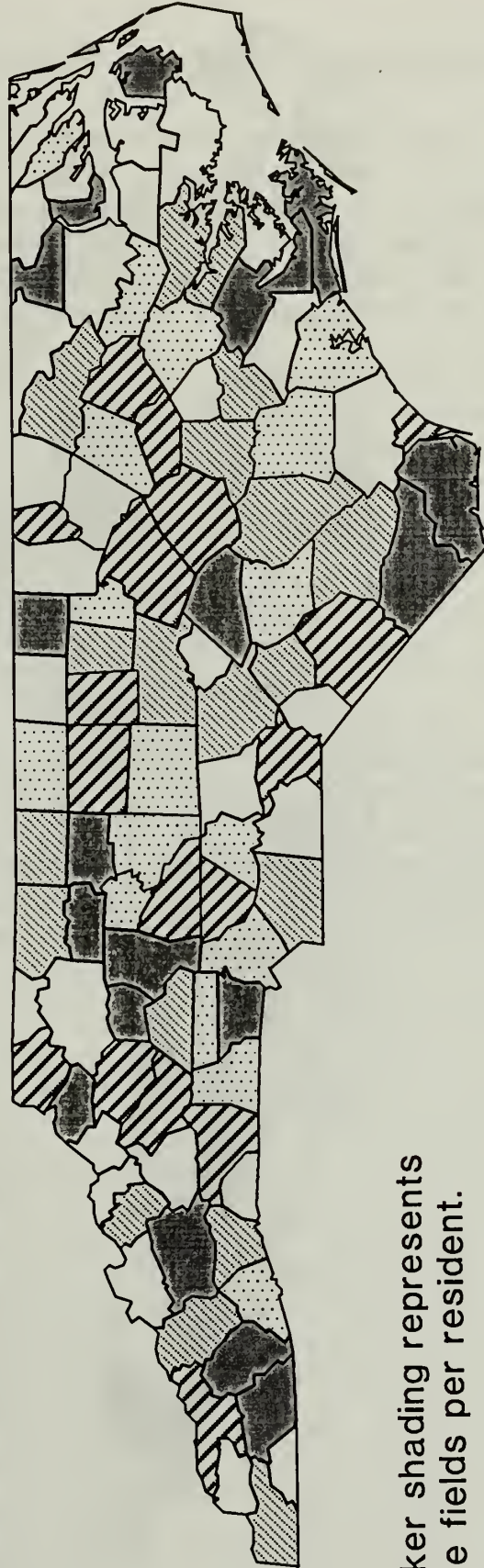


Darker shading represents more trail miles per resident.






Residents Per Trail Mile	
	700 residents or less
	701 to 4,600 residents
	4,601 to 10,501 residents
	10,501 residents or above
	no trail miles

17 counties report no trail miles.  
The other counties have been sorted into four groups of approximately 21 counties each.

# Residents Per Soccer Field

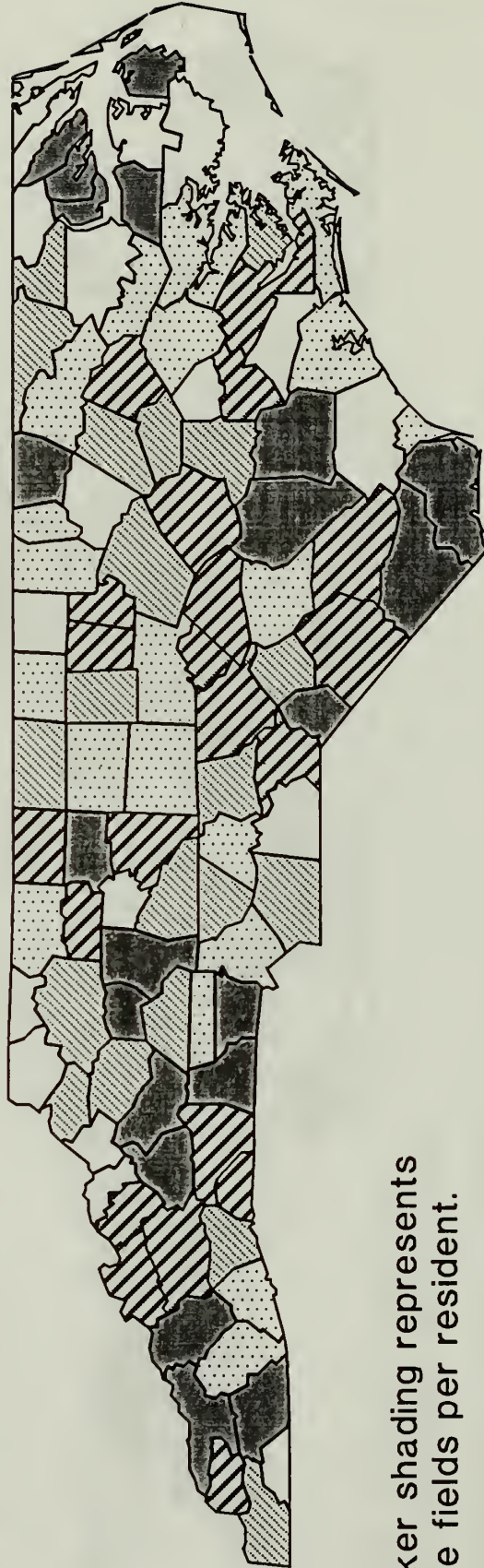


Darker shading represents more fields per resident.






Residents Per Field	
	8,000 residents or less
	8,001 to 12,000 residents
	12,001 to 25,000 residents
	25,001 residents or above
	no soccer fields

30 counties report no soccer fields. The other counties have been sorted into four groups of approximately 17 counties each.

# Residents Per Softball Field



Darker shading represents more fields per resident.

Residents Per Field	
	6,000 residents or less
	6,001 to 9,700 residents
	9,701 to 12,500 residents
	12,501 residents or above
	no softball fields

18 counties report no softball fields. The other counties have been sorted into four groups of approximately 21 counties each.

## **PARTICIPATION IN OUTDOOR RECREATION**

### **North Carolina Outdoor Recreation Survey**

The North Carolina Outdoor Recreation Participation Survey was mailed to 3,100 randomly selected residents. Forty-five percent or 1,399 people returned completed surveys. Each person receiving the survey was asked to estimate the number of times the members of his or her household had participated in each of 43 activities listed on the survey form.

The survey results provide good insight into the current participation of North Carolinians in a wide range of outdoor recreational activities. The most popular activities can be determined by identifying the activities in which the highest percentage of the population participates. The survey results also show which leisure activities are important parts of daily routine. These regular activities are ones that respondents report participating in many times during the year. Because the survey requested demographic information, recreation participation of groups with different household characteristics, such as income, can be compared.

### **Survey Results**

The five most popular outdoor recreational activities in North Carolina are walking for pleasure, driving for pleasure, viewing scenery, beach activities, and visiting historical sites. Three out of every four households participated in walking for pleasure at least once in the past 12 months (Table II-6). Over 50 percent of the households responding also participated at least once in the following activities: swimming (in lakes, rivers, or oceans), visiting natural areas, picnicking, attending sports events, visiting zoos, and freshwater fishing.

**Table II-6. Most Popular Outdoor Recreational Activities.**

Rank	Activity	Percentage of Households Participating
1.	Walking for Pleasure	75%
2.	Driving for Pleasure	72
3.	Viewing Scenery	71
4.	Beach Activities	69
5.	Visiting Historical Sites	62
6.	Swimming (in Lakes, Rivers, and Oceans)	54
7.	Visiting Natural Areas	53
8.	Picnicking	52
9.	Attending Sports Events	52
10.	Visiting Zoos	51
11.	Fishing - Freshwater	50
12.	Use of Open Areas	41
13.	Swimming (in Pools)	40
14.	Fishing - Saltwater	38
15.	Attending Outdoor Cultural Events	35
16.	Bicycling for Pleasure	32
17.	Other Winter Sports	31
18.	Camping, Tent or Vehicle	29
19.	Softball and Baseball	28
20.	Hunting	28
21.	Use of Play Equipment	28
22.	Power Boating	26
23.	Trail Hiking	26
24.	Jogging or Running	24
25.	Basketball	24
26.	Nature Study	22
27.	Golf	22
28.	Target Shooting	20
29.	Water Skiing	19
30.	Camping, Primitive	14
31.	Tennis	14
32.	Use Motorcycles, Dirt Bikes, ATV's	13
33.	Use Four Wheel Drive Vehicles	13
34.	Canoeing and Kayaking	13
35.	Horseback Riding	12
36.	Volleyball	12
37.	Downhill Skiing	12
38.	Football	11
39.	Soccer	7
40.	Sailboating	7
41.	Skateboarding	6
42.	Cross Country Skiing	2
43.	Windsurfing	1

## Participation Rates

A second measure of the current demand for outdoor recreation is the participation rate, the average number of occasions per year each household participates in the activity (Table II-7). An occasion occurs when a person spends a day or any part of a day participating in an outdoor recreation activity.

The household participation rate is useful in comparing activities. Some activities, such as picnicking, are popular with a large percentage of the population (52 percent), although the average household picnics only a few times a year (eight times). Other activities, such as using four-wheel-drive vehicles, have a relatively small group (13 percent) of avid enthusiasts who participate regularly, almost 24 occasions per year. The average participation rate among all households for these two activities is nearly equal, at between three and four occasions annually.

### Five Highest Participation Rates

The top five activities based on participation rate are walking for pleasure, driving for pleasure, viewing scenery, jogging or running, and bicycling for pleasure. The presence of three fitness-related activities — walking, jogging, and bicycling — in the top five demonstrates the degree to which North Carolinians are developing healthy lifestyles through regular exercise. Walking, the top activity, is also the activity available to the greatest percentage of the population. Barriers to participation in other activities — such as age, health, and equipment — are less significant for walking.

### Five Lowest Participation Rates

Activities with low participation rates are still important to North Carolina. The activities with the five lowest participation rates — canoeing/kayaking, downhill skiing, sailboating, windsurfing, and cross-country skiing — are significant components of the state's commercial outdoor recreation industry. This is particularly true in specific locations where the natural resource base is conducive to these activities, such as skiing in the mountains and sailing and windsurfing in the east.

### Total Participation in Outdoor Recreation

These participation rates for the average household in North Carolina present a picture of an active population. The average household reported participating in the activities on the survey almost 300 occasions per year. When participation in all the activities is totalled and multiplied by the total number of households, the result is 684.7 million annual activity occasions (Table II-7).

**Table II-7. Household Participation Rates and Total Participation by Activity**

Rank	Activity	Participation Rate	Annual Occasions
1.	Walking for Pleasure	49.97	114,627,384
2.	Driving for Pleasure	32.69	74,998,550
3.	Viewing Scenery	31.39	72,009,299
4.	Jogging or Running	14.12	32,398,844
5.	Bicycling for Pleasure	11.17	25,613,867
6.	Beach Activities	10.78	24,725,323
7.	Swimming (in Pools)	10.10	23,173,846
8.	Fishing (Freshwater)	9.97	22,875,728
9.	Nature Study	8.79	20,162,276
10.	Attending Sports Events	8.59	19,709,640
11.	Swimming (in Lakes, Rivers, Ocean)	8.31	19,069,390
12.	Use of Open Areas	7.53	17,268,402
13.	Visiting Natural Areas	6.75	15,483,265
14.	Basketball	6.68	15,334,444
15.	Golf	6.58	15,100,661
16.	Softball and Baseball	6.40	14,686,533
17.	Hunting	6.27	14,392,921
18.	Use of Play Equipment	6.09	13,969,556
19.	Power Boating	5.54	12,709,023
20.	Fishing (Saltwater)	5.28	12,104,020
21.	Picnicking	4.26	9,771,716
22.	Tennis	3.84	8,819,411
23.	Camping (Tent or Vehicle)	3.35	7,683,340
24.	Visiting Historical Sites	3.30	7,575,151
25.	Use Motorcycles, Dirt Bikes, ATV's	3.10	7,110,251
26.	Use of Four-Wheel-Drive Vehicles	2.98	6,847,565
27.	Target Shooting	2.81	6,435,032
28.	Water Skiing	2.49	5,707,906
29.	Horseback Riding	2.46	5,652,074
30.	Trail Hiking	2.46	5,650,553
31.	Football	1.96	4,507,538
32.	Attend Outdoor Cultural Events	1.82	4,164,037
33.	Soccer	1.78	4,078,952
34.	Volleyball	1.72	3,939,374
35.	Skateboarding	1.53	3,502,578
36.	Other Winter Sports	1.43	3,272,146
37.	Visiting Zoos	1.24	2,854,316
38.	Camping, Primitive	0.87	1,988,790
39.	Canoeing and Kayaking	0.66	1,520,576
40.	Downhill Skiing	0.64	1,464,744
41.	Sailboating	0.54	1,249,631
42.	Windsurfing	0.12	275,674
43.	Cross Country Skiing	0.08	175,578
	Total:	298.44	684,660,908

Annual Activity Days = the household participation rate multiplied by the 2,294,000 households in N.C.



## Activity Preferences by Social Groups

### Age

Activity preferences vary among different age groups in North Carolina. Activities requiring significant endurance or strength and team sports are usually more popular among younger age groups. The preferences of older age groups are becoming increasingly important to society as the Baby Boom generation reaches middle age and the elderly population increases.

Baby Boomer households, with a respondent in the 25-to-44-year-old age group, participate more frequently in fitness activities, activities involving small children, and water-oriented activities. Specific activities include bicycling, jogging or running, use of play equipment, and swimming in lakes, rivers, and oceans (Table II-8).

**Table II-8. Recreational Activities More Popular in Households with a Respondent in the 25-44 Year Old Age Group.\***

ACTIVITY	AGE GROUP IN YEARS					
	Under 24	25-34	35-44	45-54	55-64	Above 65
Bicycling for Pleasure	17.8	33.2	35.3	23.3	19.4	14.1
Jogging or Running	36.2	41.6	56.8	69.9	33.4	25.7
Use of Play Equipment	14.8	25.3	19.4	11.3	11.2	9.7
Use of Open Areas	24.7	20.3	16.7	11.3	12.9	14.7
Beach Activities	14.8	17.1	15.5	13.8	14.5	12.3
Swimming (Lakes, Rivers, Oceans)	12.7	15.2	15.6	14.5	14.3	7.1
Attending Sporting Events	13.4	18.4	17.8	15.9	10.5	11.1
Skateboarding	3.3	7.4	19.7	2.4	1.9	4.9

\* Popularity is measured by average number of activity days by participants in each age group.

Survey respondents 55 years old and above reported participating in physically passive activities more frequently than other age groups. These activities include walking for pleasure, tent or vehicle camping, nature study, power boating, and salt water fishing (Table II-9).

**Table II-9. Recreational Activities Popular in Households with a Respondent in the Above-55-Year-Old Age Group.\***

ACTIVITY	AGE GROUP IN YEARS					
	Under 24	25-34	35-44	45-54	55-64	Above 65
Walking for Pleasure	56.2	58.7	59.2	69.7	84.6	71.1
Camping, Tent or Vehicle	4.3	8.5	9.2	10.1	15.3	13.4
Nature Study	20.5	27.1	19.3	60.1	44.7	38.6
Tennis	9.4	14.6	15.7	22.0	24.6	19.1
Power Boating	11.3	16.5	14.7	22.1	26.4	14.9
Fishing, Saltwater	6.0	10.0	12.2	12.4	16.9	9.6

\* Popularity is measured by average number of activity days by participants in each age group.

### Households with Children

The survey presents insights on the recreational preferences of the different demographic groups in North Carolina. For example, survey respondents from households with children have different preferences than households without children. Households with children participate more frequently in activities such as tent or vehicle camping, use of play equipment, football, golf, skateboarding, beach activities, and use of motorcycles, dirt bikes, and ATV's (Table II-10).

**Table II-10. Comparison of Recreational Preferences of Households With and Without Children\***

ACTIVITY	NO CHILDREN		WITH CHILDREN	
	SINGLE	COUPLE	SINGLE	COUPLE
Camping, Tent or Vehicle	6.7	8.0	10.3	16.1
Use of Play Equipment	6.7	10.5	14.2	22.6
Football	7.3	8.0	11.9	11.7
Golf	17.5	18.3	27.3	23.9
Skateboarding	.8	.6	12.2	15.6
Beach Activities	12.9	12.1	16.3	16.1
Use of Motorcycles, Dirt Bikes, ATV's	8.2	7.8	16.7	19.5

\* Popularity is measured by average number of activity days by participants in each type of household.

## Household Income

Lower income households generally participate in outdoor recreation less frequently than those with higher incomes. This is particularly the case with activities such as soccer, tennis, water skiing, downhill skiing, and using motorcycles, dirt bikes, and ATV's, most of which require the use of expensive equipment (Table II-11).

**Table II-11. Recreational Activities More Popular Among Higher Income Households.\***

ACTIVITY	\$0- \$14,999	\$15,000- \$24,000	\$25,000- \$34,999	\$35,000- \$44,999	\$45,000- \$59,999	Above \$60,000
Soccer	3.8	6.2	19.6	19.6	11.0	26.0
Tennis	8.6	10.0	12.5	21.1	13.9	27.6
Water Skiing	8.6	8.9	5.5	9.0	8.5	13.11
Downhill Skiing	2.7	1.6	1.6	2.8	3.0	4.7
Use of Motorcycles, Dirt Bikes, & ATV's	11.2	12.8	15.2	17.3	18.7	16.3

\* Popularity is measured by average number of activity days by participants in each income group.

Lower income households do participate in some activities more frequently than other households. These activities include driving for pleasure, viewing scenery, nature study, use of open areas, and basketball (Table II-12).

**Table II-12. Recreational Activities More Popular Among Lower Income Households.\***

ACTIVITY	\$0- \$14,999	\$15,000- \$24,000	\$25,000- \$34,999	\$35,000- \$44,999	\$45,000- \$59,999	Above \$60,000
Driving for Pleasure	63.4	47.3	49.2	39.7	40.7	25.7
Viewing Scenery	46.8	52.9	46.6	38.6	37.3	34.4
Nature Study	38.7	44.7	24.0	29.7	32.9	32.9
Use of Open Areas	21.3	24.8	16.7	13.1	15.5	8.4
Use of Play Equipment	19.6	23.1	19.5	15.2	17.2	17.0
Basketball	17.4	29.4	25.0	22.8	17.2	21.9

\* Popularity is measured by average number of activity days by participants in each income group.

## **FUTURE OUTDOOR RECREATIONAL NEEDS**

Estimating outdoor recreational needs involves anticipating what North Carolinians will want in the future. As the state's population changes, so do public needs and preferences for outdoor recreation. Given the limited public funding for recreation, it is important to efficiently spend the money that is available.

The North Carolina Outdoor Recreation Survey asked residents to identify and rank their future public outdoor recreational needs. This is in contrast to current participation rates that reflect the park and recreation opportunities available today.

### **Future Demand**

Asking about future needs was a two-step process on the survey. First, respondents were asked to review a list of activities (Appendix B) and identify up to 10 in which their households would probably have participated more often, or at least tried, if good programs and facilities had been available. From this list of 10 activities, the respondents were asked to select the five activities most important to them and list them in priority order. These five choices were assigned scores described in Appendix B, and an average score was calculated for all the survey respondents.

The future demand for each activity was rated as high, moderate, or low based on the average score it received. High future demand was assigned to activities that were ranked at least fifth by at least one half of the respondents. An activity with moderate future demand was ranked at least fifth by at least one quarter of the respondents. All other activities were assigned low future demand. Eight activities were rated as having high future demand: walking for pleasure, freshwater fishing, beach activities, tent or vehicle camping, bicycling for pleasure, picnicking, swimming in pools, and attending outdoor cultural events (Table II-13).

### **Public Funding Priorities**

Public priorities for funding future outdoor recreational facilities and programs were measured in much the same way as future demand. Respondents were asked to review the same list of activities and identify up to 10 that state and local government should do the most to provide and improve. From this list of 10 activities, the respondents were asked to list the five activities they considered most important, in priority order. These five choices were assigned scores described in Appendix B, and an average score was calculated for all the survey respondents.

The support for public funding of each activity was rated as high, moderate, or low based on the average score it received. High, moderate and low support were assigned using the same method as with the demand calculations. Ten activities were rated as having high support for public funding: walking for pleasure, tent and vehicle camping, picnicking, visiting historical sites, freshwater fishing, visiting natural areas, beach activities, visiting zoos, using play equipment, and attending outdoor cultural events (Table II-14).

Table II-13. Future Demand for Outdoor Recreational Activities.

Activity	Average Score	Future Demand
Walking for Pleasure	23.8	High
Fishing - Freshwater	15.5	High
Beach Activities	13.8	High
Camping, Tent or Vehicle	11.5	High
Bicycling for Pleasure	10.8	High
Picnicking	10.7	High
Swimming (in Pools)	10.6	High
Attend Outdoor Cultural Events	10.1	High
Hunting	9.1	Moderate
Visiting Natural Areas	8.6	Moderate
Fishing - Saltwater	8.6	Moderate
Driving for Pleasure	8.3	Moderate
Visiting Historical Sites	8.2	Moderate
Viewing Scenery	8.1	Moderate
Trail Hiking	7.6	Moderate
Swimming (Lakes, Rivers, Ocean)	7.2	Moderate
Use of Play Equipment	7.0	Moderate
Horseback Riding	7.0	Moderate
Golf	6.8	Moderate
Visiting Zoos	6.3	Moderate
Attending Sports Events	6.3	Moderate
Target Shooting	6.1	Moderate
Use of Open Areas	5.0	Moderate
Power Boating	4.6	Low
Jogging or Running	4.5	Low
Softball and Baseball	4.4	Low
Camping, Primitive	4.0	Low
Canoeing and Kayaking	3.5	Low
Tennis	3.2	Low
Nature Study	3.2	Low
Basketball	3.0	Low
Use Motorcycles, Dirt Bikes, ATV's	2.7	Low
Water Skiing	2.6	Low
Downhill Skiing	2.1	Low
Volleyball	1.5	Low
Use 4-Wheel-Drive Vehicles	1.4	Low
Sailboating	1.3	Low
Other Winter Sports	1.0	Low
Soccer	0.9	Low
Cross Country Skiing	0.7	Low
Football	0.7	Low
Skateboarding	0.5	Low
Windsurfing	0.4	Low

High = Ranked at least fifth by at least one half of the respondents.  
Moderate = Ranked at least fifth by at least one quarter of the respondents.  
Low = Did not rank at least fifth by at least one quarter of the respondents.

Table II-14. Support for Public Funding of Outdoor Recreational Activities.

Activity	Average Score	Future Demand
Walking for Pleasure	20.1	High
Camping, Tent or Vehicle	15.1	High
Picnicking	14.1	High
Visiting Historical Sites	14.0	High
Fishing - Freshwater	13.3	High
Visiting Natural Areas	13.0	High
Beach Activities	12.1	High
Visiting Zoos	12.0	High
Use of Play Equipment	10.5	High
Attend Outdoor Cultural Events	10.5	High
Bicycling for Pleasure	9.5	Moderate
Swimming (Lakes, Rivers, Ocean)	9.4	Moderate
Swimming (in Pools)	8.7	Moderate
Hunting	8.6	Moderate
Trail Hiking	8.5	Moderate
Use of Open Areas	7.6	Moderate
Viewing Scenery	7.6	Moderate
Fishing - Saltwater	7.0	Moderate
Camping, Primitive	5.5	Moderate
Target Shooting	5.0	Moderate
Driving for Pleasure	4.8	Low
Golf	4.1	Low
Attending Sports Events	4.1	Low
Horseback Riding	4.1	Low
Softball and Baseball	4.1	Low
Jogging or Running	3.9	Low
Nature Study	3.9	Low
Power Boating	3.4	Low
Basketball	2.7	Low
Tennis	2.5	Low
Canoeing and Kayaking	2.4	Low
Use Motorcycles, Dirt Bikes, ATV's	2.3	Low
Soccer	1.3	Low
Water Skiing	1.2	Low
Volleyball	1.1	Low
Downhill Skiing	1.1	Low
Use 4-Wheel-Drive Vehicles	1.1	Low
Other Winter Sports	1.0	Low
Sailboating	0.7	Low
Football	0.7	Low
Skateboarding	0.5	Low
Cross Country Skiing	0.4	Low
Windsurfing	0.2	Low

High = Ranked at least fifth by at least one half of the respondents.

Moderate = Ranked at least fifth by at least one quarter of the respondents.

Low = Did not rank at least fifth by at least one quarter of the respondents.

### Priorities of Public Outdoor Recreation Funding

Priorities for publicly funded outdoor recreation can be measured by combining ratings for future demand and public funding priorities. Each activity received a rating of high, moderate, or low for both future demand and support for public funding. These ratings were combined to produce a score from 1 to 9 reflecting an overall priority for which 1 is the highest priority and 9 is the lowest. The combined rating is produced using a matrix that assigns a higher priority to support for public funding than future demand for the outdoor recreational activity (Table II-15).

**Table II-15. Scoring Matrix for Ranking Future Recreation Priorities**

FUTURE DEMAND	PUBLIC SUPPORT		
	High	Moderate	Low
High	1	3	6
Moderate	2	4	8
Low	5	7	9

Based on this analysis, the activities rated as the highest priorities are walking for pleasure, tent or vehicle camping, picnicking, beach activities, freshwater fishing, and attending outdoor cultural events (Table II-16).

Table II-16. Priorities for Public Outdoor Recreation Funding

Activity	Future Demand	Support for Public Funding	Combined Ranking
Walking for Pleasure	High	High	1
Camping, Tent or Vehicle	High	High	1
Picnicking	High	High	1
Beach Activities	High	High	1
Fishing - Freshwater	High	High	1
Attend Outdoor Cultural Events	High	High	1
Visiting Natural Areas	Moderate	High	2
Use of Play Equipment	Moderate	High	2
Visiting Zoos	Moderate	High	2
Visiting Historical Sites	Moderate	High	2
Bicycling for Pleasure	High	Moderate	3
Swimming (in Pools)	High	Moderate	3
Viewing Scenery	Moderate	Moderate	4
Hunting	Moderate	Moderate	4
Trail Hiking	Moderate	Moderate	4
Use of Open Areas	Moderate	Moderate	4
Target Shooting	Moderate	Moderate	4
Swimming (Lakes, Rivers, Ocean)	Moderate	Moderate	4
Fishing - Saltwater	Moderate	Moderate	4
Camping, Primitive	Low	Moderate	7
Driving for Pleasure	Moderate	Low	8
Horseback Riding	Moderate	Low	8
Golf	Moderate	Low	8
Attending Sports Events	Moderate	Low	8
Jogging or Running	Low	Low	9
Nature Study	Low	Low	9
Softball and Baseball	Low	Low	9
Basketball	Low	Low	9
Football	Low	Low	9
Soccer	Low	Low	9
Tennis	Low	Low	9
Volleyball	Low	Low	9
Skateboarding	Low	Low	9
Sailboarding	Low	Low	9
Windsurfing	Low	Low	9
Canoeing and Kayaking	Low	Low	9
Power Boating	Low	Low	9
Water Skiing	Low	Low	9
Downhill Skiing	Low	Low	9
Cross Country Skiing	Low	Low	9
Other Winter Sports	Low	Low	9
Use Motorcycles, Dirt Bikes, ATV	Low	Low	9
Use Four-Wheel-Drive Vehicles	Low	Low	9



## III. ROLES AND RESPONSIBILITIES

### STATE PROGRAMS

#### N.C. State Parks System

The North Carolina State Parks System was created in 1916 when Mount Mitchell became the first state park. Since then, the system has grown through gifts from private sources, transfers of publicly owned lands, and legislative appropriations to buy land. It now encompasses approximately 135,000 acres of land and water organized into 32 park units that are staffed and open to the public and 26 other management areas (Figure III-1).

The Division of Parks and Recreation, within the Department of Environment, Health, and Natural Resources, manages the state parks system. Division responsibilities include:

- developing and implementing master plans for state park units;
- developing and maintaining park facilities;
- acquiring and managing park lands; and
- operating the current state parks system.

The state parks system contains some of the nation's outstanding natural features and provides family-oriented recreational opportunities, including:

- natural and scenic rivers, such as the New River in Ashe and Alleghany counties;
- state lakes, such as Lake Waccamaw in Columbus County;
- state natural areas, such as Theodore Roosevelt State Natural Area in Carteret County;
- state recreation areas, such as Kerr Lake in Vance and Warren counties; and
- state trails, such as the Lumber River Trail.

These open spaces and natural settings continue to grow in importance in an increasingly urban environment. Common recreational activities at the developed parks include hiking, tent and trailer camping, swimming, all types of boating, salt and fresh water fishing, and family and group picnicking.

The state parks system has adopted the following mission statement:

*The North Carolina state parks system exists for the enjoyment, education, health, and inspiration of all our citizens and visitors. The mission of the state parks system is to conserve and protect representative examples of the natural beauty, ecological features, and recreation resources of statewide significance; to provide outdoor recreation opportunities in a safe and healthy environment; and to provide education opportunities that promote stewardship of the state's natural heritage.*

# North Carolina State Parks System

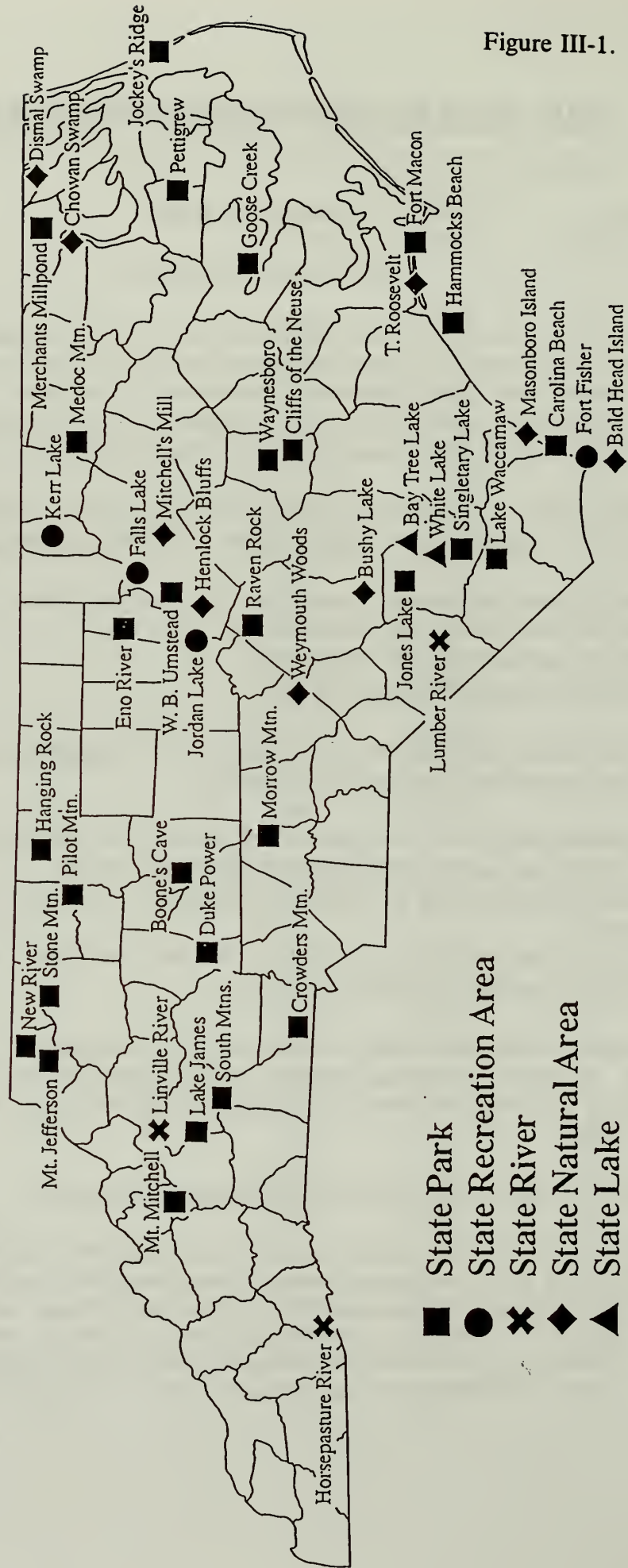


Figure III-1.

## The N.C. Natural and Scenic Rivers System

### N.C. Natural and Scenic Rivers Act

The N.C. Natural and Scenic Rivers Act was passed by the 1971 General Assembly to preserve and protect outstanding free-flowing rivers, their water quality, and their adjacent lands for the benefit of present and future generations. The Act seeks to protect rivers with outstanding natural, scenic, educational, geological, recreational, historic, fish and wildlife, scientific, and cultural values.

In passing the Act, the General Assembly recognized the "*necessity for a rational balance between the conduct of man and the preservation of the natural beauty along the many rivers of the state.*"

#### Types of Rivers

The Natural and Scenic Rivers Act defines three types of rivers as being eligible for inclusion in the Natural and Scenic Rivers System: natural river areas, scenic river areas, and recreational river areas. They are defined as follows:

*Natural river areas — Those free-flowing rivers or segments of rivers and adjacent lands existing in a natural condition. Those rivers or segments of rivers that are free of man-made impoundments and generally inaccessible except by trail, with the lands within the boundaries essentially primitive and the waters essentially unpolluted. These represent vestiges of primitive America.*

*Scenic river areas — Those rivers or segments of rivers that are largely free of impoundments, with the lands within the boundaries largely primitive and largely undeveloped, but accessible in places by roads.*

*Recreational river areas — Those rivers or segments of rivers that offer outstanding recreation and scenic values and that are largely free of impoundments. They may have some development along their shorelines and have more extensive public access than natural or scenic river segments. Recreational river segments may also link two or more natural and/or scenic river segments to provide a contiguous designated river area.*

#### Criteria for Designation

To be designated as either a natural river or a scenic river, the following criteria must be present:

1. River segment length must be no less than one mile.
2. Boundaries of the system shall be the visual horizon or such distance from each shoreline as may be determined to be necessary, but no less than 20 feet.
3. Water quality shall be at least class "C".
4. Water flow shall be continuous and not subjected to withdrawal or regulation to the extent of substantially altering the natural ecology of the stream.
5. Public access shall be limited.

### Protection Provided by Designation

The Natural and Scenic Rivers Act offers protection for designated river segments in three ways:

1. Project works — such as dams, reservoirs, water conduits, transmission lines, and water resources projects that would have direct and adverse effects — are restricted (G.S.113A-44).
2. Acquisition of riparian lands in either fee simple or lesser interests, such as conservation easements, is permitted (G.S.113A-38).
3. Management activities may be instituted by the Department of Environment, Health, and Natural Resources in performing its duties and responsibilities (G.S.113A-36).

Of three types of protection authorized by the Natural and Scenic Rivers Act, only the first automatically occurs upon designation. Riparian lands are not affected until acquisition of land or interests in land takes place by the state. For land acquisition (other than by donation), development and operations to take place, legislative appropriations are necessary. Since establishment of the Natural and Scenic Rivers System in 1971, however, legislative appropriations for acquisition, development, and operations of designated river corridors have been almost nonexistent. A report — *An Assessment of the N.C. Natural and Scenic Rivers System* — has been prepared. It offers a detailed critical review of the rivers system and makes recommendations for strengthening the system.

### Components of the Natural and Scenic Rivers System

Since 1971, four rivers have become components of the Natural and Scenic Rivers System. These are the New River, the Linville River, the Horsepasture River, and the Lumber River.

### **North Carolina Trails System**

In 1973, the North Carolina General Assembly ratified the North Carolina Trails System Act, codified in the General Statutes as Chapter 113A, Article 6. The act introduced the following mandate and purpose:

*...in order to provide for the ever increasing outdoor recreation needs of an expanded population and in order to promote public access to, travel within, and enjoyment and appreciation of the outdoor, natural remote areas of the state, trails should be established in natural, scenic areas of the state, and in and near urban areas.*

*...the purpose of this article is to provide the means for attaining these objectives by instituting a state system of scenic and recreation trails, coordinated with and complemented by existing and future local trail segments or systems, and by prescribing the methods by which, and standards according to which, components may be added to the State Trails System.*

The North Carolina Trails System Act authorized the secretary of the Department of Environment, Health, and Natural Resources to implement the provisions of the Act. The secretary delegated this responsibility to the Division of Parks and Recreation. The Division of

Parks and Recreation created the State Trails Program to implement the provisions of the North Carolina Trails System Act.

### North Carolina Trails Committee

The Act also established the seven-member North Carolina Trails Committee to advise the Secretary of the Department of Environment, Health, and Natural Resources on all trails related activities. The Committee represents the different trail user groups and three geographic regions of the state.

### Implementation of the North Carolina Trails System Act

The Division of Parks and Recreation created and staffed the State Trails Program to implement the provisions of the North Carolina Trails System Act statewide. Because the North Carolina Trails System Act mandates the establishment of trails statewide, and because the Act specifically includes existing and future state and local trails, and because no one agency or organization is financially capable of supporting the planning, construction, maintenance and management of a State Trails System, the staff of the State Trails Program are responsible for promoting and coordinating statewide trail planning and development activities among the following government agencies and organizations:

- Local Government Agencies
- State Government Agencies
- Regional Government (and Quasi-Government) Agencies
- Federal Government Agencies
- Non-Profit Organizations
- Volunteer Trail Organizations

In order to promote and coordinate the development of trails for foot travel, horseback, bicycles, non-motorized water vehicles, two-wheel drive motorized vehicles, and multiple use trails, the State Trails Program is responsible for working primarily with five trail movements in North Carolina. These movements are:

- State Trails
- Greenways/Open Space Preservation
- Rails-to-Trails
- River Trails
- State Park System Trails

In order for the State Trails Program to administer, promote, and coordinate the five trail movements among the agencies and organizations, the State Trails Program is responsible for providing the following services:

- Provide professional comprehensive statewide trail planning.
- Provide professional consultation to the agencies and organizations to institutionalize the concept of professional trail planning, development and management throughout North Carolina.

- Provide technical assistance and support for agencies and organizations in the areas of specific trail corridor planning, design, construction, maintenance, management and funding of trails.

### Accomplishments

Accomplishments of the State Trails Program include:

- The completion of and designation of over 330 miles of the Mountains-to-Sea Trail, a conceptually planned trail that could connect Clingman's Dome in the Great Smoky Mountains National Park with Jockey's Ridge State Park on North Carolina's barrier islands.
- The completion of and designation of over 393 miles of river/canoe trails on the Lumber River, French Broad River, Yadkin River and the Dan River.
- The designation of over 8 miles of greenways in the City of Wilmington and the City of Greensboro.
- The designation of over 188 miles of trails within the State Parks System.

Other accomplishments of the State Trails Program include: new trails-related legislation; trail promotional activities; educational workshops; the quarterly newsletter *Tarheel Trails*; and systemwide programs, policies, and guidelines. In addition, the staff of the State Trails Program continue to support the efforts of numerous federal, state, and local governments and volunteer trail organizations, which continue to develop trails for the citizens of North Carolina.

### Types of Trails

The State Trails System is composed of the following types of trails:

State Recreation Trails - Trails that provide for a variety of outdoor recreation uses in or near the urban areas of North Carolina. They may include trails for hiker travel, horseback riding, non-motorized bicycles, non-motorized watercraft, and two-wheel and four-wheel drive motorized vehicles (off-road vehicles)

State Scenic Trails - Trails that are longer in distance and located to provide maximum potential for the appreciation of natural areas and for the appreciation and enjoyment of significant scenic, historic, ecological, geologic or cultural areas through which such trails may pass.

Connecting/Side Trails - Trails that provide additional points of public access to State Recreation or State Scenic Trails or provide connections between these trails.

## North Carolina Natural Heritage Program

The goal of the Natural Heritage Program of the Division of Parks and Recreation is the preservation of the natural diversity of North Carolina. The Natural Heritage Program is the first comprehensive attempt to determine, through an intensive state-wide inventory, the state's most significant natural areas. Through the inventory, areas of prime ecological significance can be identified and recommendations for protection of these areas can be made.

Using the information from the Heritage inventory, the state can identify areas that best represent its natural heritage and determine if these areas are being adequately safeguarded. A state register recognizes important natural areas, public and private, in conservation management. Long-term results of the program can mean that the state's resources will remain for the benefit and enjoyment of future generations.

The Natural Heritage Program was established in 1976 with the assistance of The Nature Conservancy. The Nature Conservancy is a national nonprofit organization dedicated to the preservation of ecologically significant land. It has assisted the state in the acquisition of many outstanding natural areas.

The program's statement of goals and objectives is as follows:

Goal: Preserve the natural diversity of North Carolina.

Objectives:

1. Identify through a systematic inventory and assessment the special natural resources and natural areas that best exemplify North Carolina's natural heritage.
2. Provide inventory information for use in resource management and development decisions.
3. Establish a statewide system of protected natural areas in public and private ownership.
4. Provide management advice to owners of natural area and assist in the protection of those areas.
5. Involve citizens and landowners in preserving North Carolina's natural heritage.
6. Increase public awareness and appreciation of our natural environment.
7. Coordinate with other public agencies, scientists, and citizen organizations to protect our natural environment.
8. Promote establishment of local land conservancies, and provide technical assistance to them for acquisition, management, and inventory.

### The Natural Heritage Inventory

The inventory focuses on the elements, or components, of natural diversity, including those that are exemplary or rare on a statewide or national basis. A classification of element types has been developed so researchers can catalog the state's vulnerable plant and animal species, natural communities, and significant natural areas. Information on the existence, number, condition, status, and location of all significant examples is collected. Detailed information on all these resources is invaluable in setting protection priorities.

The Heritage inventory is a cumulative process. As information is updated and refined, the ability of experts to identify, evaluate, and protect the natural areas within the state improves.

Many valuable natural areas have been destroyed from a lack of awareness and understanding of their biological significance. Planners, developers, and government officials use Heritage inventory information to avoid the inadvertent destruction of significant natural areas and prevent unnecessary conflicts.

### Protection of Natural Lands

The Registry of Natural Heritage Areas encourages conservation of outstanding natural areas. The registry honors the owners and administrators of recognized natural areas committed to the protection of the natural qualities of the land. This non-binding, non-regulatory program recognizes landowners for being good conservationists. An eligible natural area is entered on the registry only after the owner voluntarily agrees to its designation.

Land acquisition may be advisable to ensure protection of highly critical areas and may be achieved by several means. Many valuable natural areas can be preserved through donations of land by private individuals or corporations. Gifts of land to public agencies or non-profit preservation organizations are tax-deductible. In some cases, landowners who donate their land for preservation purposes can obtain significant financial advantages while also having the satisfaction of knowing the land will be preserved according to their wishes.

If a private landowner wishes to retain ownership and still ensure that the land will remain in a natural condition, conservation easements may be considered. Easements can protect the land from being used for purposes that would destroy its natural quality. The value of the easement can be considered a charitable contribution for tax purposes.

Natural areas already in public ownership can be protected from misuse or damaging changes by dedicating them as part of the nature preserves system.

Dedication gives an area permanent protection and recognition. The North Carolina Department of Environment, Health, and Natural Resources can facilitate protection of natural areas.



## Recreation Resources Service

Recreation Resources Service, operated for the School of Forest Resources at N.C. State University, began operations in July of 1987 as a clearinghouse and resource center. RRS provided technical materials, information, networking, continuing education, and research to all park and recreation providers in North Carolina, both public and private. Its services are available free of charge to municipal, county, state, and federal governments and public and private agencies or individuals engaged in or contemplating activity in parks and recreation-oriented programs in North Carolina. To date, a high percentage of its requests for service have come from county and municipal governments. Recreation Resources Service is funded through a contract the N.C. Department of Environment, Health, and Natural Resources.

Recreation Resources Service has produced many publications, such as *"The Annual Municipal and County Park and Recreation Services Study," "Guidelines for the Design and Construction of Baseball and Softball Facilities," "Fitness Standards," "Directory of Resident Camps in North Carolina," "Revenue Pricing and Policy Manual,"* and others. It has also awarded grants to municipalities and universities for a variety of purposes, such as computer application in parks and recreation, an aging management institute, greenways and open space, and economic impacts of parks and recreation. Numerous conferences and workshops have also been sponsored or conducted by Recreation Resources Service.

## Public Beach Access Program

In 1974, the General Assembly passed the Coastal Area Management Act to protect and manage coastal resources. This legislation promotes the wise use of coastal resources through the Division of Coastal Management of the Department of Environment, Health, and Natural Resources.

The Beach Access Program within the Division, created in 1981 by the N.C. General Assembly, works extensively with local governments to identify, improve, and acquire land for the purpose of providing access to the ocean and sounds. The program relies on the cooperation, coordination, and contributions from federal, state, and local governments, and from private individuals.

The Beach Access Program originally focused on beach access, but it has been expanded to include North Carolina's vast network of sounds and tidal creeks.

There are over 350 access sites in communities along the coast where the public is provided access to the water without having to cross private property. These sites are marked with easily identified signs. Facilities vary from site to site, but generally fall into three categories:

1. Regional facilities provide parking, restroom facilities, outdoor showers, dune crossovers, and litter receptacles. Many of these facilities provide water fountains, seating areas, and life guards. All are accessible to the handicapped.
2. Neighborhood facilities provide limited parking, dune crossovers, and litter receptacles.

Many of these facilities are accessible to the handicapped.

3. Local facilities typically provide dune crossovers and litter receptacles. Many of these facilities are accessible to the handicapped.

### **North Carolina National Estuarine Research Reserve**

The North Carolina National Estuarine Research Reserve is a natural outdoor laboratory where scientists, students, and the public can study estuarine dynamics and learn about coastal natural areas. Established in 1982, the reserve is a collection of four representative estuarine ecosystems along North Carolina's coast. The sites contain 12,000 acres of barrier islands, salt marshes, and tidal waters, habitat for hundreds of species of fish, bird, and other wildlife.

The reserve is a part of the National Estuarine Reserve Research System that was created by Congress in the 1970's as rapid development along the nation's coasts was reducing the number of undisturbed estuaries. The national program provides states with matching funds to set up reserves that will ensure that natural estuarine areas are available for scientific research and public education.

The specific goals of the N.C. National Estuarine Research Reserve are:

1. To preserve estuarine areas characteristic of North Carolina's coast and make them available for study of the processes, functions, and influences that shape and sustain estuaries.
2. To provide new information on estuarine ecosystem processes and influences to decision-makers as a basis for the sound management of coastal resources.
3. To increase public awareness and understanding of estuarine ecosystems by providing areas where people can directly observe the importance of estuaries to the state and county and how they are affected by human activities.
4. To provide for traditional uses of estuarine areas, such as hunting and fishing, which will not disturb the reserve environment and are compatible with the research and educational activities taking place there.

#### Reserve Sites

North Carolina's estuarine system — the third largest in the nation and the fourth most productive — is exceptionally diverse. It lies within two biogeographic regions, the Virginian and the Carolinian, and has many different salinity regimes, basin types, and tidal patterns.

The multiple-site reserve reflects North Carolina's estuarine complexity. Each of the sites within the reserve is described below.

**Currituck Banks** in northeastern North Carolina is an excellent example of an undisturbed barrier island/low salinity estuarine complex of the Virginian Biogeographic Region. It lies within the transition zone between northern and southern species associations where the climate is created by the mixing of the Gulf Stream and cooler northern currents. As a result, plant communities at the site are a combination of those found in the North and the South.

**Rachel Carson**, located at the confluence of the Newport and North rivers, represents a sheltered coast/tidal river estuarine system within the Carolinian Biogeographic Region, North Carolinas Subregion. This estuarine system is generally shallow, well mixed, and strongly influenced by the river and inlet processes and tides. As a result of its proximity to Beaufort Inlet, the western section of the complex — Carrot Island, Bird Shoal, and Town Marsh — maintains a salinity close to that of the Atlantic Ocean. Middle Marsh, located to the east of Carrot Island, at the mouth of the North River, has less predictable salinity patterns.

**Masonboro Island** near Wilmington is an entire undisturbed barrier island complex on a pristine, non-drowned river mouth estuary. It is within the Carolinian Biogeographic Region, North Carolinas Subregion. Due to the influence of Masonboro and Carolina Beach inlets, the salinity varies, but is generally high to moderate.

**Zeke's Island** south of Wilmington is typical of a barbound lagoonal estuarine system within the Carolinian Biogeographic Region, North Carolinas Subregion. The site's physical environment is dominated by ocean and inlet processes. Its salinity is high because a rock jetty built around the west side of the site prevents the Cape Fear River from flushing through New Inlet.

Detailed information on the reserve's habitats and species lists, as well as site maps and access information, is available from the Division of Coastal Management of the Department of Environment, Health, and Natural Resources.

### **Educational State Forests**

The N.C. Division of Forest Resources has developed a series of educational state forests for use as living environmental centers. These multiple-use managed forests are designed to facilitate a better understanding of the value of forests. Approximately 60 percent of the state is covered with commercial forests, with 83 percent of the 20 million acres in private holdings.

Educational state forests vary from 142 to 890 acres. These unique forest environments are located from the far west to the lower coastal plain forests. The widely varied terrain offers a rich mixture of pine and hardwood forests. Features are made accessible by a series of well-marked trails accented by exhibits and displays depicting the ecology of a managed forest.

Close to 100,000 people per year visit the forests to walk the "talking tree" trails and listen to the trees. The forest demonstration trails illustrate the forestry practices mentioned by the talking trees. The forestry centers and their audio-visual exhibits offer a good introduction to visitors hiking the trails. Picnic and camping facilities further enhance the forests.

## Operational Forests:

Clemmons (Johnston County)	314 acres
Turnbull Creek (Bladen County)	890 acres
Holmes (Henderson County)	234 acres
Rendezvous Mt. (Wilkes County)	142 acres
Tuttle (Caldwell County)	172 acres
Jordan Lake (Chatham County)	420 acres

**N.C. Department of Transportation  
Office of Bicycle and Pedestrian Transportation**

The Bicycle Program was established in December 1973 and was formally mandated by the Bicycle and Bikeway Act of 1974 with the following duties:

1. assisting local governments with the development of bicycle programs and the construction of bicycle facilities;
2. developing policies, procedures, and standards for planning, designing, constructing, maintaining, marking, and operating bicycle facilities and providing for the safety of bicyclists and motorists;
3. developing demonstration projects and safety training programs; and
4. developing and constructing a state bikeway system.

Working within these parameters, the Bicycle Program has developed a comprehensive approach to improving the bicycling environment in North Carolina. Efforts that have begun to make an impact are as follows:

1. Bicycle Transportation Improvement Program — Starting in 1987, Federal Highway Administration funds were made available for a variety of state and local bicycle projects. These range from greenway bicycle paths and on-road bicycle improvements to mapping and signing projects and safety education programs.
2. Development of Standards, Guidelines, and Procedures — Because bicycle programming is a relatively new field, accepted standards for planning and construction bicycle facilities are still evolving. The Bicycle Program is actively involved in developing and testing innovative approaches to improving bicycle transportation alternatives.
3. Technical Assistance to Localities — Since its inception, the Bicycle Program has worked closely with communities throughout the state to help them develop and refine their local bicycle programs. Planning assistance, technical expertise, and program materials for all phases of local bicycle programming, from construction projects enforcement and educational programs, are provided.

4. Bicycling Highways System — Initiated in 1975, this project entails the designation, mapping, and signing of bicycle touring routes, which direct bicyclists away from more heavily travelled roads to safer alternate routes. To date, seven routes covering 2,000 miles of roads have been developed. Approximately 10,000 maps are distributed each year.

In April 1992, responsibility for pedestrian transportation was added to the Bicycle Program, and the name changed to the Office of Bicycle and Pedestrian Transportation.

### **N.C. Wildlife Resources Commission**

North Carolina state law established the Wildlife Resources Commission to manage and regulate the state's wildlife resources and to enforce those regulations. The agency is responsible for enforcing boating laws on inland waters. It sells hunting, fishing, and trapping licenses and registers boats owned by North Carolina residents. The agency also provides wildlife-related outdoor recreational opportunities.

The Commission manages approximately two million acres of state-owned, federally owned, and privately owned gamelands on which the public may fish and hunt with a special permit. These areas are scattered across the state. The Commission also maintains 174 boating access areas across the state.

The Commission manages and regulates fishing in the inland waters of North Carolina. Emphasis is placed on the conservation of wild, naturally reproducing fish populations and communities. The Commission operates five fish hatcheries to produce and rear fish, which are stocked into public waters where habitat limits natural reproduction.

Through the N.C. WILD and N.C. CATCH environmental education programs, the Commission provides workshops to approximately 4,000 adult educators annually. These educators then use program materials to supplement school youth organization curricula and also teach ecological concepts and outdoor skills.

### **N.C. Zoological Park**

The N.C. Zoological Park, located on 1,448 acres six miles southeast of Asheboro, is among the world's largest land area zoos and was the first one planned from its inception around the natural habitat concept of zoological exhibits. The purposes of the zoo are education, entertainment, recreation, research, and the conservation, preservation, and propagation of plant and animal life.

The zoo receives approximately 800,000 visitors a year. The indoor exhibits include the Forest Aviary, the African Pavilion, and the Sonora Desert. Outdoors, the zoo offers a 300-acre African World, which exhibits African animals in a variety of natural habitats, and the recently opened North American region. Six other regions representing Asia, Europe, South American, Australia, and the World of Seas are in the planning stages.

## FEDERAL PROGRAMS

Federal roles in outdoor recreation include the management of federally owned properties such as parks, forests, wildlife preserves, and reservoir areas, and the administration of financial and technical assistance programs to aid state and local governments and private citizens. In North Carolina, three federal departments directly provide outdoor recreational opportunities: the Department of the Interior, the Department of Agriculture, and the Department of Defense.

### U.S. Department of the Interior

The Department of the Interior was created by Congress in 1849. The Department's recreational responsibilities include administering the nation's scenic and historic areas; conserving, developing, and utilizing fish and wildlife resources; and coordinating federal and state recreational programs. Within the Department, two agencies provide outdoor recreation resources and programs in North Carolina: the National Park Service and the U.S. Fish and Wildlife Service.

#### The National Park Service

The National Park Service, created by Congress in 1916, is charged with conserving scenery, wildlife, and natural and historical objects, and administering the nation's parks, recreational areas, and historical areas. Acquisition and development of these resources for such purposes as providing camping, boating, swimming, hiking, and historical interpretation are governed by NPS's determination of public need and demand for such facilities.

Besides being directly responsible for providing outdoor recreation resources, NPS took on a number of other recreational responsibilities upon its consolidation with the Heritage Conservation and Recreation Service in 1981. These include planning, coordinating, and developing national recreation policy; conducting surveys of recreational resources and needs in the United States; and developing a plan to meet these needs. The NPS also provides financial and technical assistance for state recreational planning and land acquisition and development.

In North Carolina, the NPS administers 10 areas that are set aside for their natural, recreational, and historical interest. These include the Blue Ridge Parkway, the Great Smoky Mountains National Park, Cape Hatteras National Seashore, Cape Lookout National Seashore, Moores Creek National Battleground, the Wright Brothers Memorial, the Carl Sandburg Home, Fort Raleigh National Historic Site, and Guilford Courthouse National Military Park. These areas offer a wide range of public outdoor recreational activities such as camping, swimming, boating, fishing, nature study, hiking, and picnicking.

Land and Water Conservation Fund — The National Park Service administers the federal Land and Water Conservation Fund (LWCF). An annual apportionment from the Fund is made available to the state for distribution to state agencies and local government entities for approved, high-quality outdoor recreational projects meeting needs identified in the Statewide Comprehensive Outdoor Recreation

Plan. These funds are administered at the state level by the Division of Parks and Recreation of the Department of Environment, Health, and Natural Resources.

### U.S. Fish and Wildlife Service

The U.S. Fish and Wildlife Service's goals for public use of its areas and facilities are to expand man's understanding of his environment and his appreciation of fish and wildlife ecology. The Service provides visitors to its sites with high quality, safe, and enjoyable recreational experiences oriented towards wildlife and wildlife habitat appreciation. The Service manages 10 areas in North Carolina comprising approximately 375,000 acres. They include the Alligator River, Cedar Island, Currituck, the Great Dismal Swamp, Mackay Island, Mattamuskeet Lake, Pea Island, Pee Dee, Pocosin Lakes, Roanoke River National Wildlife Refuge, and Swanquarter. Most of these are limited-purpose outdoor recreation areas, provided primarily for wildlife habitat; but they also provide opportunities for hunting, fishing, and photography.

### Pittman-Robertson Federal Aid Program

The Pittman-Robertson Federal Aid Program (16 United States Code 669), created by the Federal Aid in Wildlife Restoration Act of 1937, derives its revenue from federal excise taxes on sporting firearms and ammunition. The U.S. Fish and Wildlife Service apportions these revenues to each state on the basis of the number of hunting licenses sold and the geographical areas of the state. These monies are designed for programs to restore and preserve wildlife, especially game and nongame birds and animals, and to conduct hunter safety programs. Pittman-Robertson funds are administered in North Carolina by the Wildlife Resources Commission.

### Dingell-Johnson/Wallop-Breaux Federal Aid Program

The Dingell-Johnson portion of this program was created by the Federal Aid in Sport Fish Restoration Act of 1950. It accrues funds through federal tax levies on fishing tackle and equipment sales. The amount the USFWS makes available to North Carolina through the Game and Fresh Water Fish Commission is determined by the geographical area of the state in ratio to the number of fishing licenses sold each year. The monies are designated for the promotion of sport fishing and management of sport fishing areas. The Dingell-Johnson program was expanded by amendments to the federal Budget Deficit Reduction Act of 1984 (16 U.S. Code 777-777K). These funds in North Carolina are administered by the Wildlife Resources Commission.

## U.S. Department of Agriculture

The Department of Agriculture has four agencies that administer programs affecting the supply of outdoor recreational resources in North Carolina: the U.S. Forest Service, the Soil Conservation Service, the Agricultural Stabilization and Conservation Service, and the Farmers Home Administration.

### U.S. Forest Service

The U.S. Forest Service (and the national forest system) was created by Congress in 1905. The responsibility of the Forest Service in the field of outdoor recreation is to develop the recreational potential of national forests in conjunction with other multiple uses. The Forest Service also cooperates with other federal, state, and local agencies in planning and developing recreational resources on other federal, state, local, and private lands.

In North Carolina, the Forest Service administers four areas: the Croatan National Forest (157,829 acres), Nantahala National Forest (525,086 acres), Pisgah National Forest (499,816 acres), and the Uwharrie National Forest (46,977 acres). The areas, which comprise over 1.23 million acres, are a significant component of North Carolina's recreational resources (Figure III-2). They contain some of the state's most pristine lands, including extensive woodlands, springs, streams, and mountains. Within these four national forests, the Forest Service manages many developed public recreation sites.

### Soil Conservation Service

The Soil Conservation Service has responsibility within the U.S. Department of Agriculture for providing leadership in the planning of income-producing recreational enterprises on private land and for liaison with other federal, state, and local agencies, assisting them with recreational development. Technical assistance is provided through local soil and water conservation districts. The Soil Conservation Service has traditionally provided financial and technical assistance for recreation projects through the Small Watershed Program and the Resource Conservation and Development projects. The primary emphasis in these programs is on erosion control and water conservation; therefore, limited technical and financial resources are available for recreation-related projects.

### Agricultural Stabilization and Conservation Service

Through the Agricultural Conservation Program, this agency provides research and planning assistance to states and funding assistance to local governments. The agency also administers the Rural Clean Water Program under authorization of the Rural Development and Related Agencies Act of 1980. The program provides financial assistance (30 to 75 percent of project cost) and technical assistance to private landowners and operators of approved Clean Water Project Areas to reduce agricultural non-point source water pollution. Projects funded under this program should enhance water-based recreation in the affected areas.



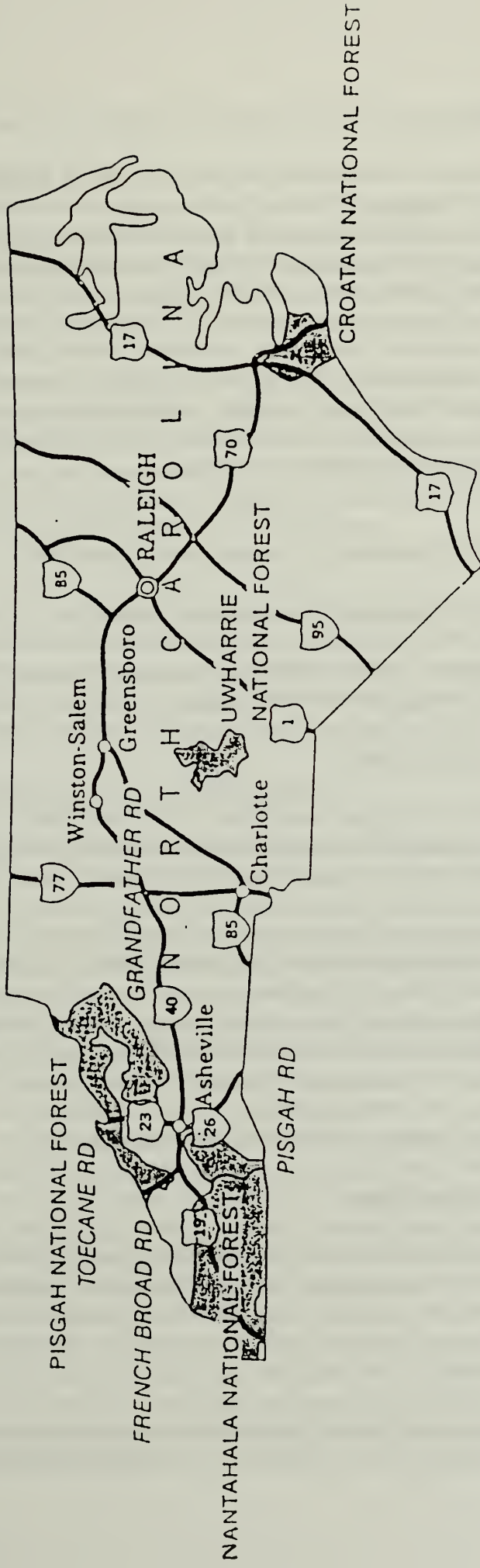


Figure III-2. National Forests in North Carolina

### Farmers Home Administration

The Farmers Home Administration assists farm and ranch owners by providing recreation loans of up to \$206,000 for the development of income-producing outdoor recreation enterprises. The facilities provided by farmers and ranchers may include freshwater ponds and facilities for horseback riding and camping. Loans can also be obtained for improving recreation enterprises. Under rules developed by the agency to implement the Food Security Act of 1985 (P.L. 99-198), beginning in 1987 farmers and ranchers were permitted to retire part of their government-insured debt by donating 50-year conservation easements on portions of their lands. Agreements must be developed with public land management agencies or private organizations to manage the easements for public benefit for fish and wildlife, conservation, or recreation. The soil Conservation Service will be responsible for selecting a land manager for each particular donation and for developing the management agreements.

### **U.S. Departments of Interior and Agriculture**

In addition to their responsibilities noted above, the Department of the Interior and the Department of Agriculture are co-authorized to execute other outdoor recreational and natural resource preservation programs. In North Carolina, two such programs have been implemented by these agencies, primarily through independent action.

### National Wilderness Preservation System

The Wilderness Act of 1964 (16 United States Code 1131) established a National Wilderness Preservation System. management of areas in the system is the responsibility of the agency (or agencies) having jurisdiction over the areas prior to their inclusion in the system.

There are currently 12 designated wilderness areas in North Carolina, consisting of 112,689 acres. Eleven of these are administered by the U.S. Forest Service. They are: Ellcott Rock, Joyce Kilmer Slickrock, and Southern Nantahala, located in the Nantahala National Forest; Linville Gorge, Middle Prong, and Shining Rock, located in the Pisgah National Forest; Birkhead Mountains, located in the Uwharrie National Forest; and Catfish Lake South, Pocosin, Pond Pine, and Sheep Ridge, located in the Croatan National Forest. The U.S. Fish and Wildlife Service administers the remaining wilderness area, Swanquarter. The U.S. Forest Service is studying five other areas for possible wilderness designation.

### National Wild and Scenic Rivers System

The National Wild and Scenic Rivers Act of 1968 (16 United States Code 1271) states that Wild or Scenic rivers must *"possess outstandingly remarkable scenic, cultural, or other similar values."* Further, the Act requires that they *"shall be preserved in a free-flowing condition, and that they and their immediate environments shall be protected for the benefit and enjoyment of present and future generations."*

Two rivers in North Carolina have been designated into the national system, the New River (26½ miles) and the Horsepasture River (4½ miles). The segments with federal designation are

also components of the N.C. Natural and Scenic Rivers System.

### National Trails System

The National Trails System Act of 1968 (16 United States Code 1241) provides the framework for establishing a nationwide system of scenic, recreational, and historical trails. The Secretary of the Interior and the Secretary of Agriculture are both authorized to administer trails in the System under the Act.

National recreational trails also play an important role in the National Trails System. As declared in the Act, national recreational trails are intended to be established near urban areas and in established scenic areas to serve the constantly increasing outdoor recreational needs of an expanding population and to promote close-to-home recreational opportunities. Administrative responsibility for designating and managing recreational trails was assigned to both the Secretary of the Interior and the Secretary of Agriculture.

### **U.S. Department of Defense**

The Department of Defense, established in 1949, includes the Department of the Army, the Department of the Navy, and the Department of the Air Force. Each of these military services is involved in providing outdoor recreational opportunities in North Carolina.

### U.S. Department of the Army, Corps of Engineers

Along with its primary responsibility for navigation, flood control, beach erosion control, and river basin studies, the Corps of Engineers has devoted considerable attention to the establishment of recreational facilities. It is the policy of the Corps to plan for and provide outdoor recreational resources and facilities at all of its water resources projects. The Corps' general authority for recreational development stems from the Flood Control Act of 1944, which was later expanded by the Federal Water Project Recreation Act of 1965 (16 United States Code 460). The latter act directs that full consideration be given in each project to opportunities for outdoor recreation and fish and wildlife enhancement, and it established outdoor recreation and preservation of wildlife and fish as a full project purpose.

In North Carolina, the Corps has developed four water resource projects that have recreational facilities: John H. Kerr Reservoir, B. Everett Jordan Reservoir, Falls Lake, and W. Kerr Scott Reservoir. Resources and facilities are available at these areas for a wide variety of activities, including freshwater swimming, boating, fishing, camping, field sports, picnicking, hiking, and hunting. The Corps leases many of these facilities to the N.C. Division of Parks and Recreation for operation. The Corps also operates recreational facilities — boat launching and picnicking — at the three locks and dams on the Cape Fear River.

In addition to its public works development programs, the Corps participates with the state and other public bodies in making recreational opportunities available adjacent to Corps projects. This participation takes the form of cost-sharing, assistance in planning and design, and the direct development of facilities.

### Military Installations

The Department of Defense provides land at North Carolina military installations for recreational purposes. Although public outdoor recreation is not a major function of the Department of Defense, its contributions in this regard are, nevertheless, important to North Carolina's overall outdoor recreation program. Generally, all military installations offer some degree of outdoor recreation programs for military personnel, dependents, and their guests. Access to their resources for recreational use by the general public, however, is usually limited. But Departmental policy provides that when a military installation's mission does allow public access, formal agreements may be reached with appropriate state or local agencies to provide opportunities for a wide variety of outdoor recreational activities.

### **U.S. Department of Housing and Urban Development**

The Department of Housing and Urban Development (HUD) administers two programs that, in the past, have had a significant impact upon outdoor recreation in urban areas. Since 1981, however, funding for these programs has been reduced substantially.

#### Community Development Block Grants Program

HUD provides Community Development Block Grant funds to local governments through its Entitled Grant Program and Small Cities Program. These programs were established as a result of Title I of the Housing and Community Development Act of 1974, as amended through the Housing and Community Development Amendments of 1981 (42 United States Code 5301). The Entitled Grants Program serves entitlement communities (municipalities of 50,000 or more, urban counties of 200,000 or more, and central cities under 50,000 located in Metropolitan Statistical Areas). The Small Cities Program serves non-entitlement municipalities and counties. Both programs authorize a 100 percent level of funding to public agencies for the preservation or provision of urban open space lands that have park, recreational, or historical value. In addition, the programs provide for the acquisition, construction, reconstruction, or installation of parks, playgrounds, and recreational facilities where assistance for such facilities is unavailable from other federal programs.

### **U.S. Department of Transportation**

The U.S. Department of Transportation, established in 1968, includes the Federal Highway Administration. This agency administers the Federal Aid Highway Program, which provides grants to states and local governments for use in developing bicycle and pedestrian facilities.

#### Federal Aid Highway Program

This program was established by Title 23 United States Code, as revised by the Surface Transportation Assistance Acts and various other amendments. The program provides annual discretionary grants to qualifying governments for use in the acquisition of rights-of-way and the planning, construction, improvement, and rehabilitation of interstate, primary, secondary, and

urban roads and highways. Funds may be used for capital improvements such as bicycle and pedestrian facilities within highway rights-of-way.

### **National Oceanic and Atmospheric Administration**

The National Oceanic and Atmospheric Administration supports public and private program affecting outdoor recreation in North Carolina's coastal areas. The Office of Ocean and Coastal Resources Management is responsible for providing federal leadership in the management of the nation's coastal and marine resources. This is accomplished by providing management, research, and technical assistance to federal, state, and local governments and the private sector through the agency's Coastal Zone Management Program and National Marine Sanctuaries and Estuarine Research Reserves Program.

#### **Coastal Zone Management Program**

The Federal Coastal Zone Management Act of 1972 (16 United States Code 1451), as amended, provides for grants-in-aid to coastal states with federally approved coastal zone management programs.

#### **National Marine Sanctuaries and Estuarine Research Reserves Program**

This program provides financial assistance to eligible public and private entities for the acquisition, development, and administration of land and water resources within areas designated by the Secretary of Commerce as marine sanctuaries or estuarine research reserves. These areas are set aside as laboratories for educational, recreational, and research purposes. The program also makes financial assistance available to universities and private organizations for independent research projects, such as the study of water quality, water current modeling, and the impacts of mosquito spraying and similar activities on aquatic life in sanctuaries and reserves. In North Carolina there are four such reserves, administered by the Division of Coastal Management, N.C. Department of Environment, Health, and Natural Resources.

## **LOCAL AGENCIES AND PROGRAMS**

### **County Roles and Responsibilities**

North Carolina has 100 counties, varying in character from the densely populated metropolitan counties such as Mecklenburg and Wake, to sparsely populated rural counties such as Jones and Gates. The counties have varying outdoor recreational needs that have prompted the establishment of different recreational programs.

Forty-two of North Carolina's counties do not have officially established outdoor recreational programs. For these jurisdictions, provision of resource-based activities is often limited to maintenance of picnic areas or boat ramps. User-oriented facilities are normally available only at public schools and municipal parks, state parks, and federal areas. Fourteen counties have no county or municipal recreation department: Alleghany, Bertie, Caswell, Clay, Currituck, Franklin, Gates, Hyde, Jones, Madison, Montgomery, Northampton, Tyrrell, and Washington.

Fifty-eight of North Carolina's counties do have established recreational programs with parks, facilities, and program activities. The larger land area of counties, as compared to municipalities, provides for a wider range of resources and makes available a greater variety of outdoor recreation possibilities. As a result, a county outdoor recreational program may offer a combination of resource-based and user-oriented activities to the public. Beaches, swimming sites, boat access sites, picnic areas, scenic areas, and, occasionally, campgrounds are among the types of resource-based areas and facilities provided through county programs. Counties often provide facilities such as playgrounds, sports fields, tennis courts, and other active outdoor recreation facilities as well.

Counties generally provide the resource-based and locally oriented outdoor recreational areas that are not large enough to be managed feasibly at the state or federal levels, or which do not have resources of statewide or national significance. Such areas constitute an invaluable part of the overall outdoor recreational effort in North Carolina and are indispensable to well-balanced statewide outdoor recreation.

### **Municipal Roles and Responsibilities**

One hundred and twenty-eight municipalities have recreational programs and facilities of some type, with trained staff involved in the administration of parks, facilities, and activities. These programs and facilities vary greatly, depending mainly on the population of the municipality. Generally, the smaller the town, the more limited the facilities. Smaller towns are more likely to rely on counties, local school systems, or private organizations and groups to administer recreational activities.

Because of population densities and the lack of large open-space areas, most municipal recreation systems tend to concentrate their efforts on providing services involving more intensive user-oriented facilities that require relatively little space in proportion to the use accommodated. Typical municipal outdoor recreational facilities include playgrounds, swimming pools, ball fields, tennis courts, and picnic areas. A few municipalities even provide golf courses.

Because municipal programs typically provide recreational facilities and programs in urban areas, they have only a limited bearing on statewide natural resource-based outdoor recreation. There are some exceptions, however, especially in the cases of parks located on bodies of water or coastal municipalities that provide public beach access.

Although most municipal programs do not provide resource-based outdoor recreational facilities, municipalities do play a vital role in providing facility-dependent recreational opportunities in North Carolina. The role of municipal programs will likely grow in importance as increased public emphasis is placed on recreation closer to home. Since municipal recreation agencies are closest to the populace, they are usually the first to feel the pressures to establish programs that meet the demands of residents.

### **PRIVATE AGENCIES/PROGRAMS**

In addition to publicly provided outdoor recreation, a wide array of recreational opportunities are offered by the private sector. Many private agencies whose primary mission is not land management use recreation to achieve their objectives or create recreational opportunities as a consequence of their activities. In addition, many other recreational opportunities are provided by diverse sources such as churches, businesses, and private swimming, tennis, fitness, and country clubs.

#### **Young Men's Christian Association**

The YMCA, founded in 1944, has as its mission to put Christian principles into practice through programs that build healthy body, mind, and spirit for all. Although each YMCA is associated with the national organization, programs, staffing, and style of operation are set locally, run by volunteer boards. YMCA services are tailored to the community in this way. For example, the YMCA has a campus operation at Guilford College in Greensboro. The Rocky Mount YMCA centers around the railroad, as does the city. Programs vary from those for older adults to pre-school ages. Sixty-three YMCA's in North Carolina serve over 325,000 members and regular participants. Total operating revenue is approximately \$40 million.

#### **Young Women's Christian Association**

The YWCA has nine clubs in North Carolina. The organization's focus in the community is to provide programs and services to women and their families. It specializes in developing social skills and motor skills through enjoyable learning experiences. To a large extent, the YWCA achieves its objectives through providing recreational opportunities and sponsoring special events.

#### **Boys Clubs and Boys and Girls Clubs**

The 38 North Carolina Boys Clubs and Boys and Girls Clubs are nonprofit corporations that serve youngsters, age 6 to 18, with after-school, weekend, and evening activities and programs. Nationwide, over half the young people in these clubs are from minority families, families with annual incomes under \$12,000, and families with four or more children; almost half are from

households headed by single parents. Volunteers, career professionals, and staff attempt to build the self-esteem and motivation of participating youngsters through club health programs, physical education, and environmental education programs, all of which incorporate outdoor recreational activities.

### **Boy Scouts and Girl Scouts of America**

The Boy Scouts and Girl Scouts each have seven councils in North Carolina. Camping, environmental education, swimming, and canoeing are emphasized by both scout groups. Most of these activities are centered in primitive to semi-developed camps either leased or owned by the councils. Outdoor activities are offered throughout the year.

### **4-H Clubs**

4-H, a program of the Agriculture Extension Service, is jointly funded by the federal state, and county governments. Its mission is to provide youth and adults with opportunities to develop decision-making, problem-solving, and leadership skills through experience. In all 100 counties, each 4-H program is determined by a local advisory board.

North Carolina 4-H clubs had over 200,000 members 6 to 19 years old in 1994. Twenty-six thousand volunteers, supervised by professional staff, operate the 4-H program as group leaders, instructors, donors, and advisory board members. Although it was once considered a program for agricultural communities, urban counties such as Wake and Guilford have strong 4-H programs.

Outdoor education emphasizes natural resource conservation. Youngsters participate in outdoor recreational activities in the community, including camping. The North Carolina organization operates five camps with approximately 1,400 acres. All of these are operated on the traditional summer camp model except for one camp, Betsy Jeff Penn, which functions as an outdoor education center during the school year. Children in the third through eight grades have the option of staying onsite two or four nights. The environmental education program includes studies on weather, ecology, wildlife, and outdoor activities such as orienteering.

## **COMMERCIAL PROVIDERS**

Commercial providers of outdoor recreation satisfy significant public needs in North Carolina. Commercial firms can finance projects requiring large capital investments and react more quickly to changes in public demands. Specialized needs of relatively small groups of participants can also be addressed by commercial recreation providers. Although commercial providers are distributed across North Carolina, they are concentrated around vacation destinations.

Whitewater rafting outfitters in western North Carolina serve thousands of floaters each year. On the Nantahala River alone, approximately 175,000 people floated down the river in 1994. Seventy percent of these floaters were taken by one of the 15 commercial outfitters on the river. Six outfitters floated 5,000 people up the Nolichucky River to Tennessee. The French Broad River has three outfitters that served 4,700. The Tuskasegee River has one outfitter for rafting.



Another major recreation industry in western North Carolina is snow skiing. Nine major ski areas are located in the western part of the state. The average skier is 19 years old, has completed some college, and traveled 156 miles to the slope, according to ski industry statistics. While total annual participation varies considerably depending on snowfall, between 450,000 and 735,000 skiers participate annually.

Golf is another activity that is provided primarily by the commercial sector. In North Carolina, there were 499 golf courses in 1993 compared to 369 in 1980. Most are private and daily fee courses. Twenty-six are public. More courses are in the planning or construction stage. Golf is a popular pastime of both North Carolinians and out-of-state visitors.

Most of North Carolina's campgrounds are privately owned. More than 300 are dispersed throughout the state, offering over 15,000 campsites. This represents the vast majority of the total 19,000 public and private campsites in North Carolina.

Private, for-profit recreational enterprises offer a variety of other outdoor opportunities in North Carolina. Because of its size, complexity, and frequent rapid changes, however, private outdoor recreation is extremely difficult to inventory in a comprehensive manner.



## **IV. TRENDS AFFECTING PUBLIC RECREATION AREAS**

### **INTRODUCTION**

Accurate predictions of North Carolina's future outdoor recreational needs are important if the state is to meet those needs. The rise in the state's population over time will result in increasing pressures on natural resources and dwindling rural landscapes. Much of what citizens can do today about the future quality of life is dependent upon anticipating future trends.

### **CHANGING SOCIAL AND DEMOGRAPHIC CONDITIONS**

The North Carolina populace is becoming more cosmopolitan. It is older, more urbane, better educated, more technologically astute, and characterized by two-wage-earner families and single parent families. The proportion of young children and older adults is increasing.

#### **Population**

At the turn of the next century, 7.3 million North Carolinians will be seeking outdoor recreational opportunities in the Tarheel state. By the year 2020, at the current rate of growth, the number will have reached 8.6 million. In each instance, the active outdoor recreation participant will represent a smaller proportion of the overall population as the state's citizens age, travel less, seek fewer athletic opportunities, and recreate closer to home.

#### **Demographics**

In 1990, 19.8 percent of North Carolina's citizens were younger than 14 years of age. By the year 2000, this percentage will have dropped to 18.6 percent. The number of children between five and 14 years of age, however, will have increased from 1990 levels by slightly more than 6 percent, (Figure IV-1). This trend reflects the decision of many "baby-boom" couples to begin families after delaying having children in favor of careers and signals the reversal of a 14-year downward trend. The percentage of college graduates in the year 2000 will have declined in size, down 9 percent from 1987 levels, thus reversing a steady growth that has existed since 1970.

At the turn of the next century, almost 37 percent of North Carolina's population will be 45 years of age or older. Slightly less than a million North Carolinians will be of retirement age by the year 2000. Consequently, the median age of the state's citizens will have risen from 29.6 in 1980 to 36.5 in the year 2000. The aging trend will continue to increase, with the median reaching 39.4 in the year 2010.

# AGE GROUP TRENDS 1980 - 2000

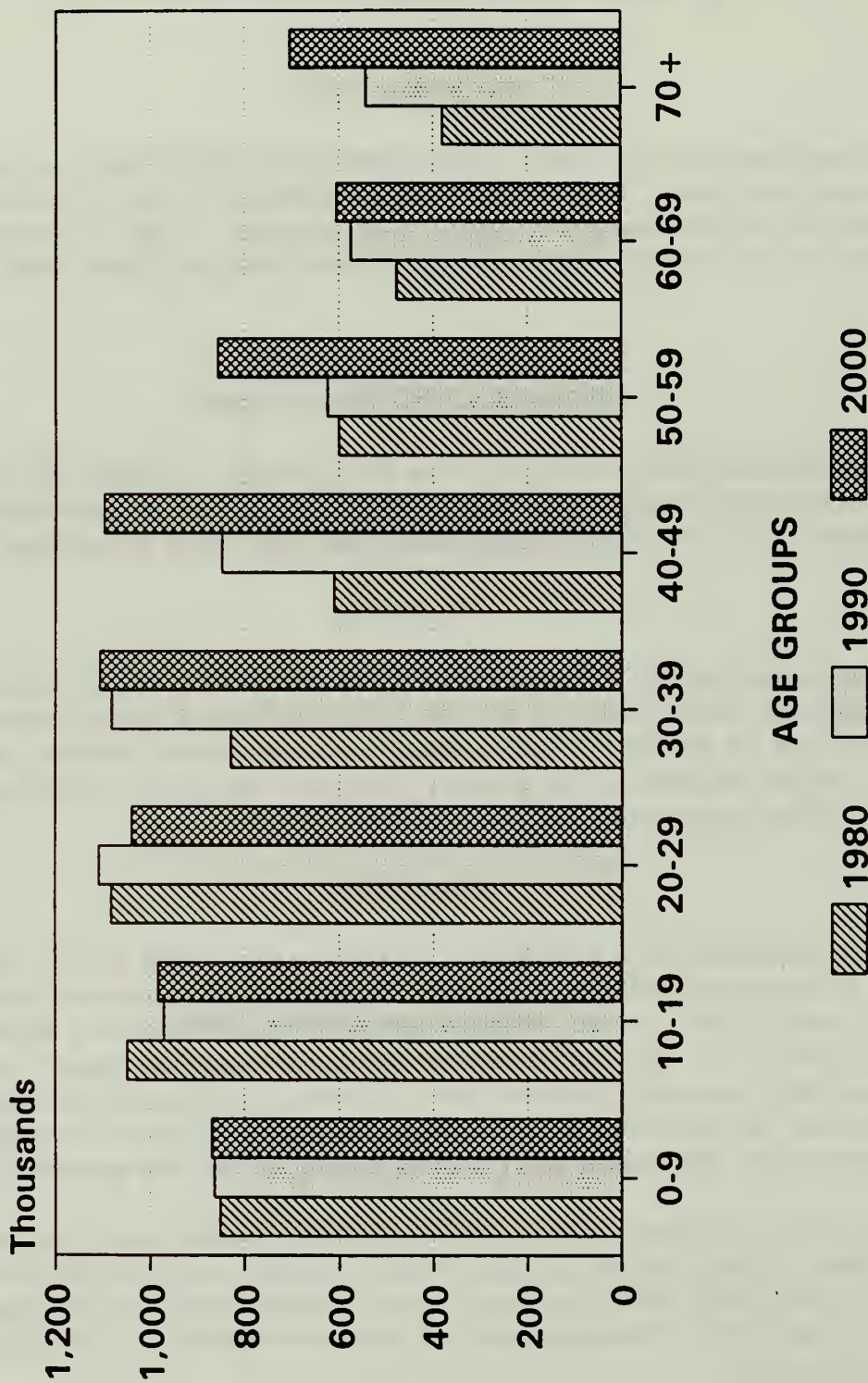


Figure IV-1

Nowhere is this trend more significant than in the Mountain Region of the Tarheel state. Already known as a retirement haven, North Carolina's mountain counties will continue to have the highest median ages in the state through the year 2000 (Figure IV-2). For instance, by the turn of the century, 25 percent of Polk County's population will be 65 years old or older. In contrast, the percentage of the population of retirement age in Wake County will only be nine and seven tenths, 4 percent less than that for the entire state (Figure IV-3). In addition, the state's racial composition will be essentially unchanged, and the proportion of males in the year 2000 will have declined slightly from 1987 levels, down from 47.9 percent to 47.3 percent.

The character of North Carolina households is changing rapidly as the number of two-wage-earner and single-parent families rise. An urban lifestyle is increasingly common. Residents migrating from other parts of the country continue to bring new lifestyles to the state, significantly impacting traditional southern values. Twenty percent of all households consist of people who live alone, and the number of single-parent households has risen dramatically. Twelve-and-a-half percent of all families with children under 18 years of age were single-parent families in 1970. This proportion has increased to approximately 20 percent of all families in 1990.

The state's population will continue to grow slightly faster from migrating populations than from natural increases (i.e., births minus deaths). This trend began in the 1970's as new industries moved from the North into urban areas in North Carolina. These new light industries, (high technology computer, electronic equipment assembly plants, etc.) are gradually replacing some of the state's more traditional industries (textiles, furniture manufacturing, etc.). The influx of new urban jobs accelerated the movement of the state's population from farms and agricultural employment into North Carolina's cities. In fact, the distribution of North Carolina's population is now 51 percent urban and 49 percent rural.

The need for both specialized training and academic preparation also increased. Because of the competitiveness of the rapidly expanding technological vocational arena, the percentage of North Carolinians with a college degree more than doubled between 1960 and 1980, with a 57 percent increase occurring from 1970 to 1980.

### **Social Changes**

With less time to devote to leisure activities, North Carolinians in the 90's still want quality recreational experiences, whether in search of personal excellence through physical fitness or the adrenal high of adventure sports. The home has become the source of many leisure activities for today's busy people wishing to reduce the stress and pressures of high technology and a fast-paced existence. The growth of the environmental movement and the increasingly strong commitment to ecological values have had an enormous impact on outdoor recreation in North Carolina and the nation.

## MEAN AGE OF THE MOUNTAIN REGION 1980 - 2000

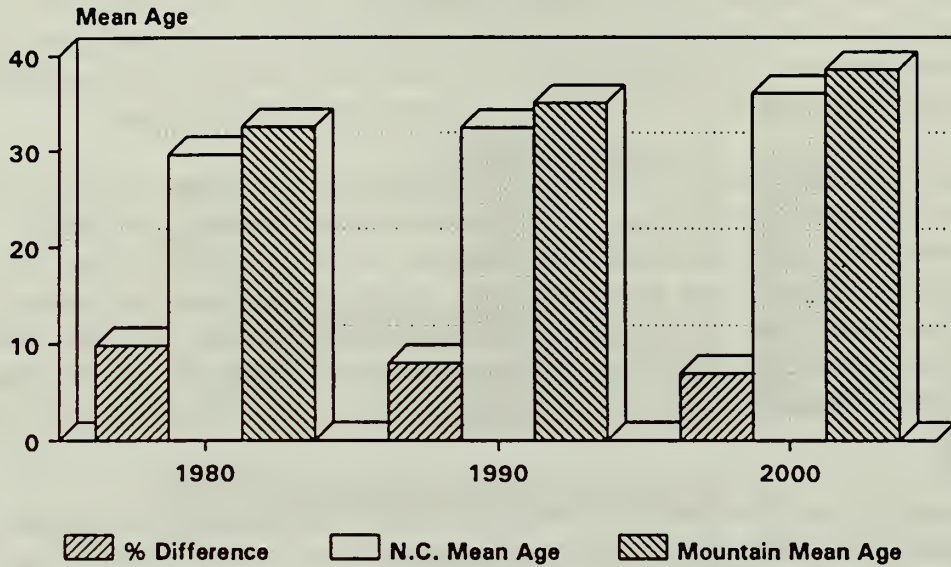


Figure IV-2. Mean Age of the Mountain Region

## AGING IN NORTH CAROLINA 1990 - 2000

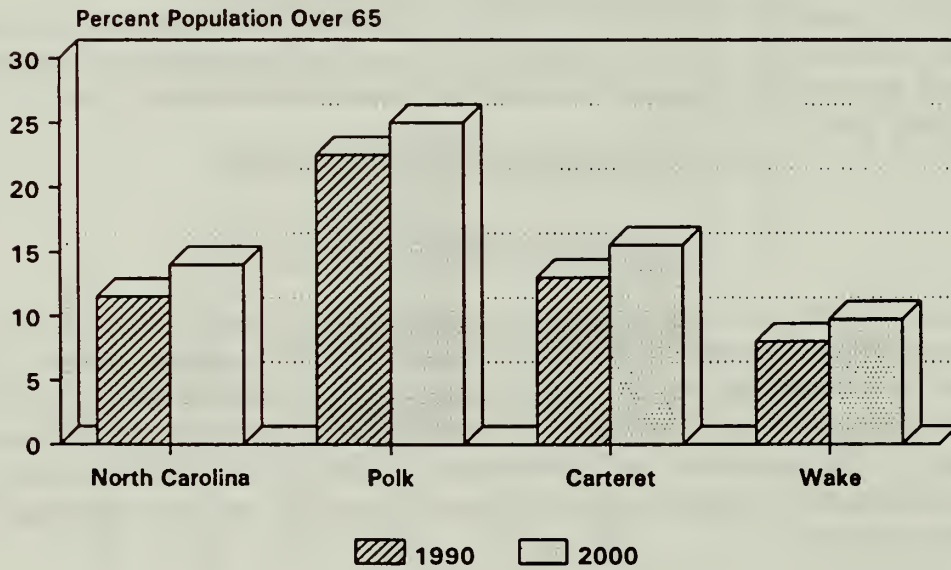


Figure IV-3. Aging in North Carolina 1990 - 2000

## Technological Changes

As industries strive to remain competitive in global markets, innovation in the laboratory has produced a wide range of new products and materials. Fiberglass-laminated skis, snowmobiles, reflective clothing, fabrics that efficiently whisk away moisture, alloy-framed bicycles, ripstop nylon tents, freeze-dried food, full-time four-wheel drive vehicles, wedge-soled running shoes, and portable electric generators all have changed the way Americans recreate.

What role will the personal computer and the modem play in future outdoor recreational opportunities? Will North Carolinians be able to reserve a tennis court, select a tee-off time, order tickets to the symphony or the neighborhood cinema, and select a favorite entree for dinner at a nearby restaurant by telephone days, even weeks, in advance? What changes will computer networks bring?

Changes in technology and consumer preferences are making the home an increasingly important source of leisure activities. Active and passive recreation can now be supported by home gyms, hot tubs, video exercise programs, computers, audio/video centers, and other high-tech toys.

## Activity Trends

The President's Commission on Americans Outdoors reported that the outdoor recreational activities that grew the most in popularity nationwide, based upon the percentage of increased participation, were:

1. canoeing
2. bicycling
3. attending outdoor cultural events
4. all types of camping
5. sailing
6. hiking and backpacking
7. attending outdoor sporting events
8. walking for pleasure
9. water skiing

The nature of recreational trips and vacations has changed in the last 20 years. National trends indicate that more people are choosing to recreate closer to home and more frequently. The two-week summer vacation to a distant location has been replaced by a number of weekend trips to primarily day-use areas.

## Management Implications

North Carolina's recreational opportunities are not adequate to meet public demand for many popular activities. Without additional recreational opportunities, unmet demand will only increase. Therefore, recreational opportunities should be expanded to meet increasing demand.

According to population projections, the birth rate will continue to increase through the end of the century, increasing demand for children's programs and facilities. Facilities and programs for children will therefore need to be increased. Recreational areas that can accommodate large number of people should be acquired and developed near urban centers. As the number of children in the state continues to grow, we will need more interpretative centers and opportunities for environmental education if we are going to instill an environmental ethic in the new generation.

The growing population of senior citizens has more leisure time but participates in active leisure activities less frequently than do younger age groups. Declining health is the most frequent reason cited for giving up an activity. The elderly are therefore more concerned with the safety, quality, and accessibility of park facilities. Bus tours, which provide increased mobility and opportunities for socializing to the elderly, are becoming increasingly popular. Popular parks should be capable of accommodating bus tours and large school groups with adequate facilities, appropriate information, and educational programs. The safety, quality, and accessibility of recreational resources should be increased to serve the aging population.

The cosmopolitan and educated portion of the North Carolina population participates in outdoor recreation more frequently, usually on weekends and close to home. The growth in this portion of the population has created a greater demand for higher quality leisure delivery systems near population centers. College graduates participate in the following activities at a rate double that of non-graduates: golf, tennis, canoeing/kayaking, sailing, backpacking, day hiking, and cross-country skiing.

As two-wage-earner families become more common and urban lifestyles predominate, families will have less time to plan leisure outings. If we provide the public with better information about public recreation areas, their awareness of available outdoor recreational opportunities will increase and frustration in accessing those resources will decrease.

The increase in spending on leisure activities at a time when less leisure time is available indicates demand for quality experiences and opportunities to use recreation equipment. Park attendance, particularly at attractive recreational sites near large urban areas, will continue to grow because of the trend toward frequent trips to nearby outdoor recreation areas for one-day or weekend visits. Water-based recreational areas, which support a broad spectrum of outdoor recreational activities, should be provided in proximity to major metropolitan areas.

Greater attendance at popular outdoor recreational areas will bring an increase inappropriate behavior and require greater management resources. More staff are needed to accommodate increasing use. In addition, all natural resource management field staff should receive adequate training in visitor management and safety, including law enforcement, emergency response, and search-and-rescue.

Technological changes in recreational equipment occur quickly and could create fads in recreational site use. Large capital improvements should be able to support a variety of activities.

Natural resource-based recreation sites, which are threatened by greater visitation, encroaching development, and environmental degradation, should continue to be in demand for dispersed use



activities. Increasing visitor use should be accommodated in a manner that does not degrade significant natural resource values or compromise the quality of visitor experiences. All natural resource-based recreational sites should continue to provide opportunities for primitive and unconfined activities that offer an opportunity for solitude and are dominated by the forces of nature.

## **ECONOMIC CHANGES**

North Carolina's employment is shifting away from traditional light manufacturing industries such as textiles and furniture manufacturing to high technology and service-oriented employers. While annual real personal income is predicted to increase at a rate of 2.1 percent through the year 2000, farm-generated income will not keep pace with inflation.

North Carolina's economy will have undergone tremendous changes by the year 2000. Industrial output will grow an average of 2 percent per year to the end of the century. The textile, apparel, lumber, and tobacco industries will show slowing or declining growth rates, while machinery, rubber, plastics, instruments, printing, and publishing will grow an average of 4 percent per year. The state's non-manufacturing sector will be the principal source of new jobs, accounting for 75.2 percent of all non-farm jobs by the year 2000. Of these non-farm jobs, trades and services will produce the most new employment opportunities.

After adjusting for inflation, the state's average manufacturing wage will increase only one percent annually through the turn of the century. North Carolina's real personal income should rise at an annual rate of approximately 2.1 percent during the same period. This is down from a 3.3 percent annual growth rate, which occurred in the period between 1973 and 1987. In addition, the agricultural sector is not expected to improve in its economic health; the projected annual increase through the year 2000 in farm income is 4.7 percent, 0.3 percent less than the 5 percent projected annual inflation rate for the same period.

This decline in real income and the projected slow-down in the economy will affect the projections for housing starts as well. Housing will drop from 88,500 starts in 1988 to between 75,000 and 80,000 by the end of the century. The overall cost of housing is not expected to decline, however, since competition for urban housing will increase. In 1980, the median value of a private home in North Carolina was \$36,000, with values in the larger cities ranging from \$50,400 in the Raleigh-Durham-Research Triangle area to \$39,600 in the Greensboro-Winston-Salem area. It is projected that by the year 2000, those values will be \$127,260, \$178,164 and \$139,986, respectively.

### **Management Implications**

The increase in relatively low-paying service sector jobs will create an economic class limited in its ability to afford private and commercial recreational opportunities. Public parks will play an increasingly important role in providing inexpensive recreational opportunities.

Although higher-income, two-wage-earner families have more disposable income to spend on recreation, they tend to have leisure interests not found in public parks. Country clubs, fitness

centers, and vacation resorts offer the amenities this group desires. Families with annual incomes above \$50,000 do participate in nearly all types of boating, nature study, and day hiking with more frequency than do lower-income groups.

"Baby-boomers," born between 1946 and 1964, spend 25 percent above the average on recreation and leisure, 35 percent above average on dining out, and 55 percent above average on cars, boats, and recreational vehicles. Recreational vehicles are being designed and marketed to appeal to this group. Increasing recreational vehicle sales should translate into greater demand for campsites and dump stations to accommodate RV's and opportunities to use specialized vehicles (such as four wheel drives) on public resources.

### CHANGES IN TRANSPORTATION SYSTEMS

With the exception of North Carolina's rail system, the statewide transportation network is expected to expand to meet the needs of the population in the next century. The regions expected to benefit the greatest from this expansion are the Tidewater and Mountain.

Through the late 1990's, the North Carolina Department of Transportation intends to focus its highway development program on 19 strategic corridors that crisscross the state (Figure IV-4).

Because North Carolina's transportation infra-structure is multifaceted, a number of other developments will facilitate the state's passage into the next century. The location of two commercial aviation hubs in North Carolina, U.S. Air's in Charlotte and Midway's in Raleigh-Durham, has increased the number of domestic and international flights available to North Carolina's citizens.

An annual commitment through 1996 of \$2.5 million in state and federal funds for public transportation should help reduce the current problems of traffic congestion in North Carolina's metropolitan areas. Also, a commitment to alternative forms of transportation should alleviate some of the urban traffic problems.

Of all the transportation infra-structures in the state, only the railroad system appears to be facing a downward trend, with railway corridors continuing to be abandoned. These abandonments, however, may produce an expansion of the state's outdoor recreational opportunities in the near future as government agencies and concerned citizens take advantage of a new federal program, the National Rails-to-Trails Program, to convert these abandoned railroads into expansive recreation trails.

Figure IV-4. Interstate &amp; Strategic Corridors: N.C. Transportation Improvement Program 1988-1996

HIGHWAY	REGION	LOCATION
US 23-441	Mountain	Tennessee Line to Georgia Line
US 19 & 64	Mountain	Tennessee Line to I-40 in Haywood Co.
US 23	Mountain	Asheville to Tennessee Line
US 421	Mountain	Winston-Salem to Tennessee
US 74 & I-85	Piedmont	Charlotte to I-26 in Polk Co.
US 74	Piedmont/Coastal Plain/Tidewater	Charlotte to Wilmington
US 321 & NC 16	Piedmont/Mountain	Gastonia & Charlotte to Boone
US 52	Piedmont	Mount Airy to Lexington
US 220 & 74	Piedmont	US 74 in Richmond Co. to Virginia
US 64	Piedmont	Lexington to Raleigh
I-40 & I-85	Piedmont	Winston-Salem to Raleigh
US 421 & NC 87	Piedmont/Coastal Plain/Tidewater	Greensboro to Wilmington
US 1	Piedmont	Raleigh to Henderson
I-40	Piedmont/Coastal Plain/Tidewater	Raleigh to Wilmington
US 70	Piedmont/Coastal Plain/Tidewater	Raleigh to Morehead City
US 264	Piedmont/Coastal Plain/Tidewater	Raleigh to Washington
US 64 & US 17	Piedmont/Coastal Plain	Raleigh to Plymouth, Plymouth to VA Line
US 17	Tidewater	Williamston to S.C.
US 158 & NC 168	Tidewater	Virginia Line to Roanoke Island

## **Management Implications**

Day trips to coastal beaches will continue to increase in popularity as roads improve to Morehead City and now that I-40 to Wilmington has been completed.

Bicycling is the second-fastest-growing recreational activity in the United States, and more park visitors will be bringing bicycles to the parks. Parks are logical camping areas and attractions along the tour biking routes identified by the Department of Transportation Bicycling Highways Program. Bike parking and storage facilities will make parks more attractive. The increasing use of off-road bikes will create a demand for suitable trails that do not conflict with other trail users or damage the natural resource base.

Rail abandonment is a major source of recreational trails in states with trail acquisition funding and the proper legal authority. The long-distance trails in North Carolina would benefit greatly if abandoned rail corridors could serve as trail segments. Funds to convert rails to trails are needed.

The expanding road system will bring many more out of state visitors to the mountains and beaches of North Carolina. These visitors will look to public parks to provide primary and ancillary recreational opportunities.

## **POLITICAL TRENDS**

The number, organization, and lobbying abilities of interest groups will continue to increase. Groups representing park users, environmentalists, and the elderly are likely to have well-defined and sometimes conflicting demands on park and recreation resources. Responding to them will be difficult due to reduced federal funding and greater reliance on state resources.

### **Organized User Groups**

People are participating in fewer activities but with increasing frequency. User groups in large urban centers are growing in both membership and sophistication. These groups can become effective proponents of opportunities that satisfy their demands. For example, trails, windsurfing, rock climbing, and hang gliding all have growing constituencies.

### **Environmental Change**

The North Carolina landscape continues to change rapidly as urban centers expand to encompass surrounding rural areas. Condominiums, second homes, hotels, and resorts turn natural vacation areas into bustling communities. Private lands are closing to public use because of liability concerns. Water shortages have become an annual summer concern, triggering conservation measures in some cities. Collectively, these growth-related pressures create a greater awareness of natural resource protection needs.

Although membership in environmental organizations in the state has dropped from the highs recorded during the Reagan/Bush administrations, the combined influence of these organizations was effective in promoting the recently approved state parks bond issue.

### **Senior Citizens**

The elderly are becoming a more influential group as they increase in numbers, affluence, and education. North Carolina is one of 11 states where the population above age 65 increased by more than 20% from 1980 to 1986. The increase is the result of migration to North Carolina by retirees as well as longer life spans, which have increased by 2.5 years since 1960. The elderly population is not only growing, it is more affluent than younger age groups. The national median for household net worth (assets minus liabilities) was \$32,700 in 1984. By contrast, median household net worth for senior citizens (age 65 and above) was \$60,300, nearly double that amount. The formal education of the elderly population has increased from 8.7 years to 11.8 years since 1970. Almost 10 percent are now college educated.

The largest organization of Americans age 50 and above is the American Association of Retired Persons (AARP). With over 27 million members, AARP represents the interests of the elderly in federal and state legislatures. It promotes educational and community service programs as well as direct membership benefits. The organization's success in obtaining benefits for its membership can be attributed to the elderly's voting and purchasing power.

The trend toward a larger, more affluent and more educated elderly population will increase in the 21st Century as baby boomers move toward retirement. Their expectations and demand for quality services are greater than previous generations. This new generation of retirees will have more education and affluence to use in communicating their demands. These trends indicate that the influence of the elderly in society will continue to increase.

### **Federal Government's Role**

A significant decrease has occurred in federal funding support of outdoor recreation with the assumption that states will take greater responsibility. The decrease in the Land and Water Conservation Fund (LWCF), which funds parks and recreation acquisition and development, reflects this trend. Through the 1970's, LWCF appropriations grew steadily and peaked at \$805 million nationally. Reduced appropriations in the 1980s and 1990s have averaged less than \$200 million annually. North Carolina received an average of \$5.32 million per year for fiscal years 1976-80. In recent years the funding has averaged approximately \$350,000.

### **Management Implications**

More citizens groups with increasing influence will advocate an expansion of specific recreation opportunities. New activity-specific groups will be established and become active in the future. For example, the North Carolina Trail Association has provided the momentum for the Mountains-to-Sea Trail. Wind surfing organizations have already requested improved and

expanded facilities at the state recreation areas.

Environmental lobbying will increase as a result of increased public attention focused on problems such as air pollution, acid rain, devastating droughts, hazardous waste disposal, and accelerating development. Environmental problems do not have short-term solutions and will continue to generate public concern and support for government action. Public park lands should serve as examples of environmental quality and governmental integrity in protecting valuable natural resources.

The elderly, because of their growing numbers, education, organization, and voting and spending power, will potentially be the most influential interest group in the 21st century. Their needs and wishes will be dominant factors in public decision-making. The expectations for park and recreation areas and facilities will be for improved quality, accessibility, and safety. Responding to these expectations and developing an elderly constituency will be advantageous. The safety, quality, and accessibility of recreational resources should be increased to serve the aging population, and more information and educational programs should be developed and offered.

# V. ECONOMIC CONTRIBUTIONS OF OUTDOOR RECREATION

## INTRODUCTION

Outdoor recreation areas and facilities have traditionally been valued for the recreational opportunities they provide and the natural resources they protect. They also have social benefits, such as providing settings for the positive use of leisure time, physical fitness and mental health, and for family activities and environmental education.

These values alone have not always been sufficient to justify investment in outdoor recreational areas and facilities, however. Dollar values for such benefits are difficult, if not impossible, to calculate, and the lack of documented values has weakened the case for outdoor recreation investment. Potential recreational lands often have alternative uses, such as timber production, agriculture, subdivision development, energy production, and water supplies, each of which may offer desirable results. The economics of various alternatives therefore become important in determining resource allocation.

In times of tight budgets, park and recreation programs are often among the first to be cut. In competition with schools, roads, water and sewer projects, and other public services, outdoor recreation needs are often left unfunded or under-funded.

With tighter budgets and the many competing interests for funding, public agencies at all levels are turning increasingly to more quantitative or objective analyses of the consequences of alternative policies, projects, and programs (McKean, 1984). Values of outdoor recreation, long acknowledged but largely undocumented, are beginning to be measured. Resource managers, public officials, and others are often faced with evaluating various alternatives before making important decisions. Information — such as the benefits, costs, and social, environmental, and economic effects of alternative actions — is needed in order to adequately perform such evaluations.

It is not surprising that research into the economic contributions of outdoor recreation has been slow to develop. In addition to a focus on social or personal values, public outdoor recreation has largely developed as a non-market good. Prices, when they have been charged, are seldom levied to an extent that reflects the value to the user or users. Outdoor recreation, centered largely on publicly owned and controlled areas, has developed somewhat outside the normal competitive market (Clawson and Knetsch, 1966).

Research has also been slow to develop because of the diverse and complicated nature of outdoor recreation. Certain recreation-related services — such as food, lodging, and transportation — are needed regardless of the activity being pursued. Sometimes only the point of consumption may change with an activity, while other times consumption is entirely dependent upon the outdoor recreation resource (Merrill Lynch, 1968).

Outdoor recreation is not neatly packaged. It sprawls across retail, wholesale, transportation,

restaurants, motels, entertainment, and other segments of the economy, making it difficult to measure. Society tends to measure value by how much or how many, and attention is often focused on events more easily measured, such as a factory relocation with 300 jobs.

Increasingly, it is being recognized that focus on traditional recreation, preservation, and social or personal values of outdoor recreation — while important — will never be enough to justify adequate funding for outdoor recreation. In a world where monetary costs and benefits often receive primary consideration in decision making, monetary costs and benefits of outdoor recreation must be considered as well.

This realization has resulted in increased attention being paid and new research being conducted on the economic effects and economic values of outdoor recreation. While this research is still in its infancy, and there is much more to be learned, it is becoming obvious that one of the most important aspects of outdoor recreation — economic — has been overlooked and underappreciated for years.

*The Wall Street Journal*, in a special April 21, 1986 supplement called "The Business of Leisure," reported on leisure activities and gave statistics regarding participation in recreational pursuits and recreational expenditures. That the nation's foremost business newspaper would publish a special supplement on leisure is in itself impressive. No doubt many people were surprised, for recreation and leisure are not usually thought of as business. What makes recreation business? Why did *The Wall Street Journal* publish its supplement?

### National Outdoor Recreation Participation

First, recreation and leisure-time activities touch all Americans. Of Americans 18 years old and older, 41 percent participate in swimming, 32 percent fish, 31 percent bicycle, 23 percent run or jog, 22 percent camp, 15 percent boat, 13 percent hunt, and 12 percent golf (*The Wall Street Journal*, 1986). Nearly half the U.S. population watches, feeds, or photographs birds and other wildlife, according to the 1980 National Survey of Fishing and Hunting. Of course, the list of recreational activities and percentage participation rates could go on and on.

Three fourths of all American adults travel outside their communities annually to parks and recreation areas on all-day trips, and over one fourth of these adults visited such parks and recreation areas 10 or more times a year (Market Opinion Research Survey, 1986). Closer to home, Americans participate in a myriad of recreational activities, as any parent who drives children to their outings can attest.

Annually, over 175 million Americans over 12 years of age participate in outdoor recreation, and 47 percent of Americans engage in some kind of physical exercise every day. Not only do Americans participate, but they also participate more frequently than in the past, with growth in recreational activity far outpacing population growth (A.C. Nielsen, 1982).

Explosive growth has been witnessed in some recreational activities. The number of Americans that ran at least once a month topped 12,178,000 in 1984, with 4,365,000 running at least weekly (Peterson, 1987). Twenty years ago, almost no stores carried running shoes; today, choices



abound. Canoeing, bicycling, camping, sailing, hiking, and backpacking are among the recreational activities that have shown the greatest percentage of participation growth from 1960 to 1982.

Due to the aging of our population and a decreasing rate of population growth, the rate of growth in overall participation in outdoor recreation has decreased (Americans Outdoors). Increases in recreational participation are projected to continue to increase, although at a slower rate, for the next 20 years. The amount of increase, however, will no doubt be strongly influenced by the availability of additional recreational facilities (Hof et. al., 1982).

### **National Outdoor Recreation Expenditures**

Although high participation rates are interesting, *The Wall Street Journal* would not have published its special supplement unless there was something more — and there is. Along with recreational participation comes recreational spending, and high participation rates result in large amounts of recreational expenditures.

In 1982, Americans spent an estimated \$262 billion — 9 percent of the net national product — on recreation and leisure (*U.S. News and World Report*, 1982). Outdoor recreation alone accounted for more than \$100 billion of these consumer expenditures (Cordell et.al., 1982). Money is spent for travel, licenses, fees, sporting equipment, boats, clothing, and a host of related items that touch almost every aspect of the nation's economy and make pleasure, in a literal sense, business (*U.S. News and World Report*, 1969).

The growth in recreational and leisure expenditures has been phenomenal, having been only \$58 billion in 1965. Today it is the nation's largest industry, as measured by consumer spending, and it exceeds the national expenditures for defense by over \$100 billion (Epperson).

Let's take a look at some components of total outdoor recreation expenditures. Nine million bicycles with a total cost of \$1.2 billion were sold in 1983. \$975 million was spent on bathing suits (U.S. Department of Commerce). In 1980, 2,353,800,000 recreation days were used for fishing, hunting or non-consumptive wildlife use nationally. At an estimated value per day of \$22, \$51,748,000,000 in value resulted (Walsh and Loomis, 1986). Retail sales of boating equipment, accessories, services, and facilities totaled over \$13 billion in 1985.

The National Sporting Goods Association reports that sales of athletic clothing and footwear exceeded \$5.7 billion in 1984 (Crandall, 1986). Recreational vehicle sales total \$6 billion annually, and fishermen spent \$17.3 billion in 1980 (Americans Outdoors). The effects of these direct purchases filter through the economic system, paying salaries, taxes, rents, and so forth, and contributing to the economic vitality of national, state, and local economies. The high level of such expenditures is an indication of the number of businesses affected, number of people employed, and level of taxes collected.

## ECONOMIC CONTRIBUTIONS OF OUTDOOR RECREATION

There are many beneficial consequences of outdoor recreation, some which can be measured in economic terms. Of primary importance are economic benefits from the expenditures made by recreationists for recreational goods and services and the associated expenditures that are made in order to participate in outdoor recreation. From these expenditures business revenues and income are derived, jobs are created, and taxes are paid. Other economic benefits of outdoor recreation exist as well.

Summaries of the primary economic contributions of outdoor recreation follow.

### Direct Outdoor Recreation Expenditures

Outdoor recreation is important to national, state, and local economies because of the direct expenditures people make in the pursuit of outdoor recreational activities. These expenditures consist of more than on-site expenditures. They may be made in preparation or anticipation of an outing, in traveling to the site, at the site, on the return, or after returning.

Expenditures are made for a variety of purposes. Sporting equipment, food, fees, licenses, accommodations, transportation, and many other expenses can be incurred. Earlier in the chapter, some impressive national totals were given for various categories of spending. Let's break these large numbers into smaller components that can be more easily understood.

Surveys performed in 13 states as a part of the Outdoor Recreation Resources Review Committee found that visitor expenditures on trips were divided in the following manner: 31.6 percent for food, 22.9 percent for lodging, 22.8 percent for transportation, and 22.7 percent for other expenses (Clawson, 1962). These percentages are similar to those obtained by the Park Area Recreation Visitors Survey (PARVS) performed for the North Carolina Division of Parks and Recreation. Visitor expenditures to the North Carolina state parks system in 1986 were distributed as follows:

**Table V-1. Average Dollars Spent Per 12 Hours of On-Site Recreational Activity**

CATEGORY	DOLLARS	% OF TOTAL
Food and Drink	\$ 9.54	36%
Lodging	\$ 4.92	19%
Transportation	\$ 4.92	16%
Activities	\$ 4.08	16%
Miscellaneous	\$ 3.44	13%
Total Expenditures	\$26.28	100%

A leading source of visitor expenditure information is the U.S. Travel Data Center. The Center, a private firm, uses a nationwide household survey, which it correlates with data from the Bureau of the Census' National Travel Survey. The study estimated that all outdoor recreationists spent an average of over \$26 per person per day on journeys of 100 miles or more in 1976 (Bever, 1978). Allowing for some inflation, such statistics make the PARVS estimates of average expenditures per 12 hours of on-site recreational activity seem reasonable. PARVS estimated a figure of \$26.28 per person, broken among categories of spending as shown above.

The above expenditure data illustrate two important points that need to be emphasized when discussing outdoor recreational expenditures. First, such expenditures are diverse and fragmented. They affect all types of businesses: hotels, motels, campgrounds, airlines, rental cars, restaurants, gift shops, service stations, amusements, and grocery stores. Second, expenditures by people participating in outdoor recreation are, on average, relatively modest. It is only when these reasonable individual expenditure figures are multiplied by millions of people on a recurring basis that total expenditure figures become so awesome.

Related to these two points is the fact that the economic value of the outdoor recreation industry, because of its diverse nature and the relatively small individual expenditures, is not fully recognized or appreciated. Its economic effects tend to become hidden because of its very nature. The outdoor recreation industry is not neatly packaged. It spans economic sectors and includes wholesale and retail trades. It largely affects businesses that also serve local residents or others — such as restaurants, gas stations and hotels.

In addition, such spending is usually spread out over large areas. The PARVS results show that 47 percent of state park visitor expenditures took place at home prior to or after the outdoor recreational outing, 19 percent were spent en route, and 34 percent were spent in the area of the visit (PARVS, 1986). Such diffusion hides the full extent of outdoor recreational expenditures.

In addition to money spent by visitors to outdoor recreation areas, a considerable amount of expenditures are also made by public agencies, private organizations, and private non-profit organizations in the provision of outdoor recreational opportunities. In addition to financing relatively well-known outdoor recreational programs such as the National Park Service and Fish and Wildlife Service, the federal government also makes grants for planning, managing, and financing outdoor recreation. State and local government spending on outdoor recreation provides jobs and programs as well as acquiring, constructing and maintaining outdoor recreational areas. In 1981, federal, state, and local governments together spent over \$5 billion for outdoor recreational facilities and services (National Recreation and Park Association), under \$100 per household. Colleges and universities, conservation organizations, tourist bureaus, and volunteer organizations such as the Appalachian Trail Conference make expenditures for outdoor recreation as well.

## Secondary Outdoor Recreation Expenditures

Money spent by providers of outdoor recreational opportunities and by visitors to outdoor recreational areas is only part what's being spent on outdoor recreation. In addition to these direct or initial expenditures, subsequent rounds of expenditures take place as a result of the initial spending. These subsequent rounds of spending are sometimes referred to as secondary or indirect spending.

The concept of secondary spending is shown in the following illustration. Suppose a family just spent a week vacationing in North Carolina. A review of their expenditures might show purchases for food, meals in restaurants, gifts, and lodging. From the \$300 spent on lodging, the lodge owner pays the maid and some other operating expenses and retains some money as income. The maid might buy gas and groceries. The grocer might use a portion of the grocery money to pay his staff, the rent on the building, or for the produce he bought that morning.

In this manner, the initial spending made as a part of visiting outdoor recreational sites is recirculated in the economy in subsequent rounds of spending. Such secondary spending has given rise to the concept of a multiplier. The multiplier represents, in a summary number, the total magnitude of activities that arise from the initial spending. The multiplier captures the effects by allowing for the additional rounds of spending and re-spending that result from the initial expenditures (Rulison, 1987).

Typically, the total economic impact for outdoor recreation is between one and a half to two times more than the amount that recreationists originally spend in the local or state economy (Outdoor Wilderness Assessment Group et.al., 1988). The size of the multiplier depends upon the sophistication of the economy where the spending takes place and that area's self-sufficiency in providing goods and services. Fewer dollars will leak out of a larger and more sophisticated economy (Bever, 1978).

Different types of recreational expenditures may also have varying effects on local economies. For example, in North Carolina, \$20 spent for gasoline is likely to leak out of state quickly to producers, refiners, and wholesalers in other states. Twenty dollars spent on locally owned lodging, however, would likely be circulated to others within the state in the form of wages for labor and other services supplied locally.

## Employment

The private sector and federal, state, and local governments provide the bulk of outdoor recreation-related jobs. Public sector jobs include natural resource managers, planners, park managers, park rangers, grounds and facilities maintenance personnel, foresters, landscape architects, engineers, architects, secretaries, receptionists, conservationists, interpreters, and more. Local government outdoor recreation positions, generally related more to recreational program services, might also include physical education instructors, playground directors, camp counselors, and lifeguards.

Approximately 90,000 full-time professional park and recreation staff are employed by over 2,000

municipal agencies, 1211 counties, 345 special districts, and the 50 state park systems (Henkel and Godbey, 1986). Over 218,000 individuals are employed in total in parks and recreation by local governments. While this total employment figure for public agencies is impressive, it is dwarfed by the recreation-related private sector employment - over 5 million. It is estimated that private sector outdoor recreation-related employment exceeds by 13.7 times that of the public sector (Bever, 1978).

From the expenditures made by consumers on recreational goods and services come business revenues that allow for employment and payrolls. Public sector expenditures also contribute to jobs in the private sector as public funds are expended to private businesses for items such as materials, supplies, and equipment. The private leisure and recreation industry creates the equivalent of 9 million full-time jobs annually, representing approximately 9 percent of total U.S. employment (American Recreation Coalition, 1983).

Although recreation employment is, for the most part, relatively low-paying due to lower skill requirements, such employment helps fill a void by employing persons with less developed skills. The wages also contribute to the recreation industry's high proportion of women, ethnic minorities, and first-time job seekers.

The recreation industry also makes an important contribution to the economy by employing seasonal workers, many of whom are students. This employment pattern of adding seasonal and peak-time employment is concomitant with increased recreation visitation. Most outdoor recreation trips occur in the summer months, with approximately 38.6 percent of such trips occurring from July to September (U.S. Bureau of Census, 1979). By employing seasonal workers, including many students, the recreation industry helps fill a need for short-term employment.

### **Tax Revenues**

Outdoor recreation also makes an economic impact by contributing to the revenues of all levels of government. Many tax dollars are generated by business firms operating in the industry as well as by individuals through expenditures related to their participation in recreational activities.

For example, sales taxes are generated every time recreational goods are purchased. Gasoline taxes are collected every time a motorist purchases gasoline on his way to or from recreational activities. Personal income taxes are collected from the many people who are self-employed in the industry or who are employed in public or private recreation. Firms that produce, manufacture, and distribute recreational goods and services generate business and corporate taxes. In addition, local taxes are generated when real estate used for recreation is transferred.

While outdoor recreation expenditures, employment, and tax revenues comprise the three major contributions made by outdoor recreation to the national, state, and local economies, there are other economic values of outdoor recreation as well.

## Preservation Values

The advantages of development or other uses of land can often be expressed in economic terms. Use of land for outdoor recreation and its economic effects, the subject of this chapter, are receiving increasing attention. Economic advantages of natural resource protection, conservation, and preservation also exist.

There is in the mind of many people a distinct intrinsic value in undeveloped resources. That value is referred to as preservation value (Clonts and Malone). Although preservation value remains largely unmeasured, there is little doubt, according to studies, that it exists. The public is willing to pay for more than just recreational use of natural resources. Both the preservation of various ecosystems and the knowledge that future generations will have resources available are of value (Randal et. al. 1974).

A survey of Colorado residents indicated a willingness to pay for preservation of free-flowing rivers in that state. The study was conducted to determine the maximum willingness of residents to pay for river preservation over and above the expected benefits they would receive if they used the resource. The results indicated a willingness to pay for preservation of river resources so that future generations might enjoy their recreational use, to pay to ensure the continued existence of habitat ecosystems, and to pay for future generations to have access to the resources. The study also found that preservation values tend to be higher for areas that are in a natural, less developed condition, due to the increasing scarcity of such resources (Walsh, et.al., 1985).

In another study, participants in a national survey were willing to pay \$1.24 each, annually, to support the Arkansas National Wildlife Refuge in Texas, the wintering grounds for over half of the world's population of whooping cranes. Obviously, most of those surveyed never intended to visit the area (Americans Outdoors). These and other studies indicate that the American public values free-flowing rivers, wildlife, and other natural resources for their own intrinsic value.

Preservation values of wetlands are receiving increased attention in North Carolina and nationwide. Prior to the mid 1970's, wetlands were generally considered wastelands, and conversion to other uses was actively encouraged. Consequently, wetlands have been altered or destroyed at an alarming rate. Various sources estimate that between 33 and 60 percent of the wetlands in the conterminous 48 states have been destroyed since European settlement (Wetlands Addendum). Today, wetlands are recognized as precious ecological resources that nurture wildlife, assist ground water recharge, purify polluted waters, check the destructive power of floods and storms, provide food supply, and provide varied recreational activities. Clearly, even though dollar figures are lacking, each of these functions contributes economically.

U.S. policy has historically favored development of resources over preservation. But as the adverse effects of development become evident and more widely known, concern for the quality and quantity of the remaining natural resources grows, and preservation values receive additional attention.

## Effect on Land Values

Property adjacent or close to outdoor recreational areas is often increased in value. This is particularly true of beach-front property and property adjacent to lakes, golf courses, and less intensively used recreational areas. Land on lakeshores shows an approximate 50 percent premium, while golf course lots show about 85 percent (Colwell, 1986).

On the negative side, heavy recreational use of a park might actually depress land values if excessive noise or traffic, parking problems, or other aspects of visitation, such as night lighting, interferes with local residents (Clawson and Knetsch). Studies of reservoirs and urban water parks generally indicate that as distance from the outdoor recreational area increases, the value decreases. Houses facing a park have been found to have a 23 percent greater value than houses one block away. Houses that backed onto parks, however, have been found to sell for seven percent less than those one block away; and houses facing heavily used recreation areas — like basketball courts or softball fields — sell for less than properties one block away (Colwell, 1986). In a study of the TVA system in 1964, the value of the land immediately surrounding a proposed reservoir was found to increase about 87 percent upon completion of the project, and the increase was due almost entirely to the recreational opportunities afforded by the project (Knetsch, 1964).

Although studies are not always conclusive in establishing a positive relationship between parks and surrounding land values, they do generally show an increase in prices derived from locational advantage near parks, particularly more scenic, less intensively used and developed ones. Such effects on real estate are a consideration and a consequence of park development, however, and are not meant to justify additional park development.

## Quality of Life

Outdoor recreation contributes in an abundance of ways to "quality of life." This rather ambiguous term includes physical and mental health; reduced illness and stress; preservation of cultural and historic sites; conservation of natural resources; open space; scenic values; family togetherness; environmental compatibility; constructive use of leisure time; and environmental education.

The value of such quality-of-life issues and their economic impact is difficult to measure. Just because value cannot be measured in monetary terms does not mean it lacks economic value, however. Improved physical and mental fitness of employees results in increased productivity, fewer sick days taken, lower medical costs, reduced insurance expenses for both employees and employers, fewer on-the-job accidents, better job performance, and improved attitudes towards work (Gregory et.al.; Kleine).

The President's Commission on Americans Outdoors reported that health is the primary reason that American adults say they engage in outdoor recreation. Exercise has been shown to reduce health costs. The Public Health Service's 1986 report, "Annual Review of Public Health," cites 42 studies finding positive links between regular physical activity and the prevention of heart disease. Various clinical studies have also demonstrated that physical fitness activities are effective in controlling depression, anxiety, and other psychiatric ailments (Americans Outdoors;

Kleine). More research, however, is needed to quantify these benefits and to translate them into economic values.

Stress relief is important to good health. Stress has been shown to be a forerunner of many illnesses, including cancer and cardiovascular disease. A frequently expressed motivation in outdoor recreation is the chance to get away, to relax, to find a change of pace and routine. Outdoor recreational settings provide contrast to everyday life. These settings are often more open, quieter, less demanding, and more natural. They offer time for personal reflection, stimulate introspection, allow personal control, and provide temporary escape from the needs and demands of others. By providing such settings for exercise and relaxation, outdoor recreational areas contribute to physical and mental health.

Outdoor recreational areas also contribute to quality of life by the learning environment they provide. Providing chances to experience nature and the interpretive programs that are offered promotes conservation and environmental awareness. Teaching people about the outdoors is a solid long-term investment in the future quality of the environment. Outdoor education can help create an active and informed citizenry, which can then be more effective at preserving environmental quality and protecting natural resources, resulting in reduced costs of problems such as litter, stream pollution, vandalism, and illness.

Outdoor recreation helps benefit society by providing settings and activities for positive uses of leisure time, and economic benefits accrue as a result. Society faces many problems, such as drugs, poverty, poor physical fitness, and family instability. Outdoor recreation offers safe, available, and affordable places for families, groups, and individuals to roam, explore, play together, and learn. The PARVS results, for example, showed that 64 percent of visitors to the state parks system were in family groups, 5 percent in multiple family groups, and 10 percent with family and friends, a total family-oriented visitation of over 79 percent (PARVS).

Businesses that provide services for outdoor recreation participants do not generally require heavy industrial operations and therefore do not contribute heavy industrial wastes or have other major negative environmental impacts. The businesses are therefore generally compatible with the resources on which many of the outdoor recreational areas are based.

Quality-of-life elements, the things that make a place special, are quietly contributing to economic growth to an extent that is generally underestimated. Increasingly, businesses and individuals are citing quality of life factors as major contributors to their decisions to relocate or expand in certain localities. Recreational opportunities — along with housing, schools, roads, climate, education, and other considerations — affect choices of where people will live and work and where corporate America chooses to grow.

Personal preferences of company executives and style of living for employees, both influenced by the availability of amenities, are important factors in determining corporate moves and expansions. In 1984, 70 firms relocated or expanded their businesses in Arizona, resulting in 27,800 jobs and \$970 million in indirect salaries and wages. When surveyed, chief executives of these firms said they chose Arizona for its "outdoor lifestyle and recreation opportunities" (Americans Outdoors).



A nationwide survey of the 1,000 largest U.S. corporations by *Fortune* magazine found that "style of living for employees" was the most important factor for 46 percent of firms already relocated and for 43 percent of firms planning to relocate within the next five years. Additionally, among the amenities that attract employees to cities, the most important were found to be the physical condition of neighborhoods and the availability of cultural and recreational facilities (Berry). By affecting choices of where people live and work and where corporations locate, outdoor recreational opportunities affect the economy.

It is impossible to put a price on the value of the outdoors and its contributions to quality of life. The extent to which the outdoors enhances our lives is a measure of intensely personal values. Again, just because adequate measures cannot be devised to accurately quantify such values does not mean that they are lacking, only that they remain unmeasured.

## ECONOMIC STUDIES OF OUTDOOR RECREATION

Outdoor Recreation as an industry is comprised of many types of businesses that reach across the economy. It often becomes difficult to separate, for example, travel, tourism, and outdoor recreation expenditures when trying to analyze outdoor recreation's economic impact. In addition, outdoor recreation includes a number of public agencies and non-profit organizations. The varying delivery systems, especially in the public sector, have created problems with measuring the economic impact of outdoor recreation.

No one, established definition of recreation or outdoor recreation is used or recognized by the different public agencies, individuals, and institutions that gather statistics. Thus, when one looks at any study data, the definitions, methodologies, and type of organization used must always be examined.

For example, the federal government may use "outdoor recreation" to categorize expenditures; some state governments may use "forestry and parks," while others use "parks and cultural resources"; and local governments may use "parks and recreation." In some states, recreation is combined with travel and tourism, resulting in dramatically higher estimates of economic impacts. Such figures, however, are not very useful for focusing on recreational issues. Many other categories exist as well. The organizational variety makes analyzing expenditure levels difficult, for no standard national, state, or local economic statistics directly relate to outdoor recreation, nor are they regularly compiled as they sometimes are for other areas, such as employment or agriculture.

Research efforts have also been hampered by a lack of agreement on the measurement of meaningful values that might be attributed to resources used for recreational purposes. Progress on this and other research problems pertaining to the economic impact assessment of recreation is being made (Propst). Many recommendations to expand existing data collection and improve the accuracy and consistency of economic studies have been made, including the establishment of a national interagency center (Walsh and Loomis).

States have become increasingly involved in conducting economic studies in recent years in order

to obtain estimates of the economic benefits of outdoor recreation. This section summarizes several state studies, the various study methods used, and the findings. Most of the studies attempt to quantify the economic contribution of outdoor recreation by analyzing the expenditures generated. Others measure the economic value in other ways.

Some of these studies are based on sophisticated computer models and public surveys, and detailed calculations have been produced of economic benefits generated, jobs created, and tax revenues produced. Such information has been useful in measuring the importance of outdoor recreation to state economies and in heightening the realization that outdoor recreation is indeed an industry.

While studies vary considerably in their methods and scope, they are useful in showing that outdoor recreation is a major contributor to state economies and to economic vitality. The following study results are indicative of some of the findings of economic studies related to outdoor recreation:

- The preservation value and recreational-use value of 16 rivers in Alabama totaled over \$64 million per year (Clonts and Malone, 1988).
- California found that 11.5 percent of total personal consumption expenditures were spent on recreation and leisure, making recreation and leisure the third largest category of personal spending; recreation and leisure employment accounted for one of every 15 jobs, most of which (94 percent) were in the private sector; recreation and leisure businesses grossed 6 percent of all California business receipts; state taxes generated by recreation and leisure expenditures were 6 percent of California's revenue and 12.6 percent of all local government revenue; 64 percent of all recreation and leisure expenditures by Californians were spent in pursuit of outdoor recreation away from home; and 40 percent of all recreation and leisure spending related to the use of government land and facilities (*The Recreation and Leisure Industry's Contribution to California's Economy, 1984*).
- Delaware found that recreation had considerable economic impact, generating 15,931 jobs, wages of \$186 million, and output of \$943.5 million annually; that total employment from private and public sector recreation accounted for 7.1 percent of all Delaware's employment; and that recreational activity resulted in total government revenues of \$12.4 million to the state and \$10.3 million to local governments, exceeding annual government expenditures on recreation by \$3.8 million (Lathan et. al., 1984).
- Utah found that public outdoor recreation expenditures were 9.4 times larger than public sector appropriations for outdoor recreation, that non-resident expenditures were almost four times larger, and that state taxes collected on outdoor recreation expenditures (over \$42 million) far exceeded state expenditures on outdoor recreation (\$6.2 million) (Dalton, 1982).
- Pennsylvania estimated that recreation and leisure jobs accounted for 8.4 percent of the state's employment, with private sector employment (397,338 persons) dwarfing public sector employment (18,607); that \$2.4 billion or 43 percent of the state's outdoor recreation expenditures were generated through participation at public facilities, and 57

percent through private facilities; that 58 percent of activity days were at public facilities versus 42 percent at private; and that Pennsylvania received over \$1 billion annually in recreation and leisure-related taxes and another \$300 million in non-tax licenses and fees (*The Economic Significance of Recreation in Pennsylvania*, 1982).

- In 1985, there were 9.32 million visitors to the Great Smoky Mountains National Park. An average of \$101.75 was spent in the region per day by the average non-local group. Thirty-two percent was for hotels and motels, 23 percent for gifts and souvenirs, 22 percent for restaurants, 6 percent for gas and oil, 6 percent for fuel, 5 percent for administrative fees, 3 percent for campsites, and 2 percent for recreation fees. A conservative 1.5 multiplier puts the impact of the park on the regional economy at \$334 million annually (*Visitor Use Patterns at Great Smoky Mountains National Park*, 1988).
- A 50-state survey that ranked 40 key economic and environmental health indicators showed a clear correlation between the two. It concluded that the states that do the most to protect their natural resources also wind up with the strongest economies and best jobs for their citizens. Measured indices included business start-ups, annual pay, toxic emissions, pesticide use, and spending for natural resource protection (Hall, 1984).

While such studies have varied in their methodologies, definitions, and scope, study results consistently find that contributions are made to local and state economies by the outdoor recreation industry.

## **ECONOMIC IMPACT OF OUTDOOR RECREATION IN NORTH CAROLINA**

While no full study of the economic impact of outdoor recreation in North Carolina has been undertaken, there have been studies of various parts of the industry. The following sections will discuss those studies and thereby provide a glimpse into the effects outdoor recreation has on the North Carolina economy.

### **State Parks System**

The value of the state parks system is often considered only in terms of its contributions to preserving and protecting unique natural resources while providing recreational opportunities for North Carolina citizens and visitors to the state. The system does protect natural resources, and it does provide many social benefits, such as settings for positive use of leisure time, for physical fitness and mental health, for family and group activities, and for environmental education. Although state parks and recreation areas are considered important for providing such social payoffs, all too often the state parks system is thought of as a loss in economic terms, a write-off from productive use, and a locking-up of land that could otherwise be productive.

Nothing could be further from the truth. The state parks system makes a real contribution to the state and local economies in terms of income, jobs, tax revenues, and expenditures.

The park system's economic impact, because of its diversity and fragmentation, is not easily measured. Many businesses that serve the park user — whether a traveler, tourist, or a local resident — are affected by people using parks. Such businesses include hotels, motels, campgrounds, and other lodging facilities; airlines, bus lines, and railroads; restaurants, gift shops, and service stations; amusements, golf courses, and other recreation facilities; and a host of other businesses. Since most of these businesses also serve local area residents, the impact of spending by park users can easily be overlooked or underestimated.

### Public Area Recreation Visitors Survey

In order to obtain the data needed to develop credible and comparable estimates of the economic impact of the state parks system, the Public Area Recreation Visitors Survey (PARVS) was undertaken. The survey, conducted under contract with the Southeastern Forest Experiment Station of the U.S. Forest Service, permitted development of detailed information about recreational patterns in North Carolina state park units. It also provides estimates of the direct monetary value derived from public area users.

The PARVS study, based upon on-site surveys conducted and mail-back questionnaires received in 1986 and 1987, represented the Division of Parks and Recreation's first attempt to study the economic impact of state park visitor expenditures on the North Carolina economy. The study collected expenditure, activity, travel, and demographic information from randomly selected visitors at eight representative park units of the state parks system.

The PARVS produced some interesting information. For example, 85.6 percent of groups surveyed by the PARVS indicated that the park area they were visiting was the sole destination of their trip, and 78 percent of the groups were return visitors. Out-of-state visitors traveled an average of 8.09 hours to reach the park, while in-state visitors took 2.15 hours. Approximately three quarters of visitation originated in-state, and one quarter came from out-of-state. The state park units were obviously a major draw for these travelers, as 93 percent of these groups indicated they started from home.

In order to determine the economic effect of visitation to state parks, information collected by the PARVS was subsequently analyzed using the IMPLAN model.

### IMPLAN Model

The IMPLAN-PARVS data combination is the most credible system currently available for analyzing the economic interdependence and impact of outdoor recreation (Outdoor Recreation and Wilderness Assessment Group). The computer-based economic impact model IMPLAN was developed by the U.S. Forest Service to assist in its land management planning efforts.

From the IMPLAN analysis, a snapshot of the economic impact of recreational expenditures associated with the state parks system can be obtained. Economic impact mostly concerns the distribution of spending and production that results as a by-product of recreational visits. It is the magnitude of gains or losses that occur among industries within an area where a recreational site is located that results from a change in recreational visitation.

The IMPLAN model examines the direct, indirect, and induced effects of such recreational spending. "Direct effects" are simply the value of the increased purchase of inputs used to manufacture or produce the final goods and services purchased by state park visitors and state parks system. "Indirect effects" refer to the value of the inputs used by additional firms that are called upon to produce goods and services for those firms first impacted directly by consumer spending. "Induced effects" are caused by or result from the direct and indirect effects of recreational spending. Induced effects are the flows of income to persons and businesses that may be neither directly or indirectly involved in the sale of recreational products and services, but who receive income as a result of local spending by employees and managers of the firms and plants that were impacted by direct and indirect effects.

The total economic impact of expenditures related to recreational visits is the sum of direct, indirect, and induced effects. Typically, the total effects are between one and one half to two times more than the amount the recreationists originally spent in the local or state economy.

In summary, the IMPLAN analysis measured the total economic impact of state parks system visitation on the state economy. This total economic impact is composed of the direct, indirect, and induced effects of the change in consumer demand. The direct effects are the "first round" purchases on inputs from the firms experiencing the increase in demand. The indirect effects are purchases made in the "second round," "third round," "fourth round," and so forth in order to support the production of inputs purchased in the "first round." The induced effects are increased purchases of goods and services in the region that result from increased income to households and owners of firms.

The IMPLAN analysis was performed in two ways. First, analysis was performed to determine the interdependence of state park recreation within the state economy. This interdependence analysis indicates the effects of spending stimulated by park units on the magnitude and distribution of economic activity among businesses, industry, and workers in the state. It is not a true measure of economic growth because resident spending is included in the analysis. Expenditures by residents of the region are not new dollars, and if a recreation site did not exist, the assumption usually adopted is that residents would spend their dollars on other goods and services within the state economy.

Secondly, the classic economic impact analysis is also performed. This simply means that only nonresident expenditures are allocated to IMPLAN sectors, and so a measure of the effects of external dollars coming into the state economy is obtained.

#### Economic Effects of Recreational Expenditures by State Parks System Visitors

The economic effects of recreational expenditures by resident and non-resident visitors to the North Carolina state parks system are shown in Table V-2. The table shows figures for the 29 state park units, for the three reservoirs (Kerr Lake, Jordan Lake, and Falls Lake), and totals that include reservoirs and park units.

**Table V-2. Economic Effects of Recreational Expenditures - State Parks System\***

	TOTAL GROSS OUTPUT	TOTAL INCOME	EMPLOYMENT (NUMBER OF JOBS)
29 Parks	\$190,582,984	\$ 77,421,560	5,989
3 Reservoirs	\$270,035,295	\$105,627,611	7,244
Systemwide Totals:	\$460,618,279	\$183,049,171	13,233

\*IMPLAN analysis was performed for two representative park units, Hanging Rock State Park and Kerr Lake State Recreation Area. Table data was developed from the individual park analysis using annual attendance figures.

Table V-2 considers three major economic activities: total gross output, total income, and employment. They are defined as follows:

**Total Gross Output:** The annual value of outputs produced by all sectors of the economy that results from state park visitor expenditures. For example, when a visitor purchases a lunch, the expenditure would have ripple effects on agriculture, packing plants, wholesalers, retailers, bottlers, and so on. The effects of such expenditures are allocated to various sectors of the economy using Bureau of Economic Analysis production function relationships.

**Total Income:** The sum of employee compensation (wages and salaries) that results from expenditures made by state parks system visitors. It includes all firms affected by visitor expenditures. It also includes profits, rents, royalties, interests, etc. that are accruing to the owners of the affected property and firms.

**Employment:** The number of jobs required to produce the output for all the firms affected by state parks system visitor expenditures.

The overall economic effect of resident plus non-resident recreational expenditures by visitors to the state parks system is summarized in Table V-2. Because the effects of resident expenditures are included, the totals do not represent new economic growth resulting from recreational expenditures. These figures do, however, indicate the interdependence of state-park-related expenditures within the North Carolina economy.

This interdependence means that expenditures stimulated by state parks system units contribute to the support of many firms and industries throughout North Carolina. As shown in Table V-2, 13,233 jobs throughout the state are related to expenditures stimulated by the state parks system. The figures also indicate that total income payments of \$183,049,171 result. In general, these figures suggest that expenditures stimulated by state parks are an interdependent and important component of the state economy.

Table V-3 focuses on new dollars that induce economic growth. The table again summarizes three major economic activities: total gross output, total income, and employment. Table V-3,

however, only contains the impacts of non-resident expenditures on the economic growth of the state economy.

When non-residents travel to a unit of the state parks system, new dollars are brought into the state economy. Another way of expressing this is to say that the state economy "exports" recreational opportunities. These new dollars induce economic growth. For example, 3,054 jobs in the state economy result from non-resident state parks-visitor expenditures.

**Table V-3. Statewide Economic Effects of Non-resident Recreation Expenditures - State Parks System.\***

	TOTAL GROSS OUTPUT	TOTAL INCOME	EMPLOYMENT (NUMBER OF JOBS)
29 Parks	\$ 43,949,387	\$ 18,181,049	1,427
3 Reservoirs	\$ 51,806,667	\$ 21,117,029	1,627
Systemwide Totals:	\$ 95,756,054	\$ 39,298,078	3,054

\*IMPLAN analysis was performed for two representative park units, Hanging Rock State Park and Kerr Lake State Recreation Area. Table data was developed from this individual park analysis using annual attendance figures.

Table V-3 provides measures of the economic activity in the state economy that can be directly attributed to out-of-state visitation to the state parks system. If the park system were to cease to exist, this economic activity would be completely lost, since non-residents would most likely reallocate expenditures to other parks outside of the state economy.

Similarly, if park management or changes in visitation patterns result in non-residents reallocating their trips away from state park units, then the resulting decrease in economic activity would represent a net economic loss to the state economy. Alternatively, if park management or changes in visitation patterns resulted in increased trips from non-residents to parks within the state, the resulting increase in economic activity would represent a net economic gain to local economies and the state economy.

As shown in Table V-2 and Table V-3, the three reservoirs contribute more to the state's economy than all the other state park units. In light of the recreational focus, more intensive development, and water sport orientation, this is not surprising. High attendance is also a major factor, with the three recreation areas accounting for 30 percent of the systemwide visitation.

The number of jobs created as a result of out-of-state visitation to the North Carolina state parks system — 3,054 — although large, is only a small portion of total statewide employment. Out-of-state visitation accounted for 0.001 percent of the total 1984 statewide employment of 2,826,000.

When the 3,054 jobs created by the expenditures of out-of-state visitors is compared with the

state's investment in staffing for the state parks system, a quite different picture emerges. There are currently only 215 permanent full-time administrative and field staff, so a 14-to-1 ratio of jobs created to staff positions exists. Likewise, when the total income resulting from expenditures by out-of-state visitors is compared with the annual operating budget for the state parks system, a similar result is found. Approximately \$4.50 in income is generated for each state dollar invested in the system's annual operating budget.

It is interesting to look at the sectors most affected by visitor expenditures. The food and drink sector of the economy is most effected, capturing 36.3 percent of expenditures. Lodging, transportation, activities, and miscellaneous expenditures are grouped closely together with 18.7 percent, 16.3 percent, 15.6 percent, and 13.1 percent of visitor expenditures.

### State Parks System Summary

The value of the state parks system is evident in the many benefits it provides. The system makes important contributions in preserving and protecting natural resources for present and future generations. It offers settings and facilities that provide for a wide variety of both active and passive recreational uses. Its social benefits include promoting physical and mental health, providing educational opportunities and opportunities for family recreation, and providing settings for positive uses of leisure time.

These benefits are usually recognized, but their value is often overlooked. Although the value of preserving a rare plant species or taking a walk on an undeveloped beach is impossible to calculate in dollars and cents, lack of quantitative figures does not lessen their value.

Recent economic data obtained through visitor surveys and analysis of those surveys reveal that the state parks system makes a significant contribution to the state's economy. Total resident and non-resident recreational expenditures generate \$460,618,279 in total gross output, \$183,049,171 in total income, and 13,233 jobs throughout the state.

It is estimated that expenditures by out-of-state visitors to 29 parks and three recreation areas generate annually \$95.756 million in total gross output and \$39.298 million in total income, which induces economic growth in the state. These expenditures provide jobs for 3,054 citizens of North Carolina, jobs that would not otherwise exist. The economic benefits provided by expenditures made by out-of-state visitors to the state parks system far outweigh the state's investment in the system.

The state parks system also contributes to the economy by providing 293 full-time jobs and 435 part-time jobs. In addition, state parks system expenditures for land acquisition, capital improvements, and operations circulate through the economy, providing jobs and income to citizens of the state.

### Case Study: Economic Effects of a New State Park

The economic data generated from the PARVS-IMPLAN model will allow economic estimates to be made regarding the addition of new state park units. Once developed, what economic effects might such a new state park have on North Carolina? Assuming that the park would have an attendance that would approximate the median state park attendance, 113,225 visitors



per year, the following economic effects could be expected from non-resident (out-of-state) expenditures:

Total Annual Gross Output: \$ 938,836

Total Annual Income: \$ 388,400

Employment (Number of Jobs): 30.48

The above numbers exclude any economic effect from the expenditures of North Carolina residents. They are based upon only one quarter of the anticipated annual visitation, the amount of visitation that typically originates from outside the state. Thus, the figures represent the effects of external dollars that would be coming into the state economy, dollars that induce economic growth.

Development of a state park may also serve to redistribute dollars from one region of the state to another. While much state park visitation (75 percent) originates in-state, in-state visitation often comes from outside of the local economic area. Spending by in-state visitors would greatly benefit the local economy; therefore, the economic effects of such a state park on the local economy would be greater than the effects shown above.

### **Fishing, Hunting, and Non-consumptive Wildlife-Associated Recreation**

Nationally, wildlife-associated recreation is one of the United States' most popular forms of outdoor recreation. In 1985, 77 percent of the U.S. population aged 16 and older enjoyed some form of wildlife-related recreation (U.S. Fish and Wildlife Service, 1985). Wildlife-associated outdoor recreation is equally popular in North Carolina.

There have been more studies of the economic benefits of fishing and hunting than of any other outdoor recreational activities. The U.S. Fish and Wildlife Service has also added another category, non-consumptive wildlife recreation, to its last two national studies. Non-consumptive wildlife recreation includes observing, photographing, and feeding wildlife. Each of these areas of wildlife-associated outdoor recreation benefits the North Carolina economy.

#### Fishing

In 1980, over \$266 million dollars were spent on fishing in North Carolina by 1,126,300 fisherpersons. The expenditures included 70 percent for food, lodging, and transportation, and 30 percent for fees and equipment. Approximately \$157 million of the \$266 total was for freshwater fishing, while the balance went towards saltwater fishing. No multiplier effect of the spending has been calculated. Non-resident spending for fishing was \$49,077,300 in 1980 (U.S. Fish and Wildlife Service, 1980).

#### Hunting

In 1980, 409,900 hunters spent almost \$167 million in North Carolina; half was spent on food, lodging, and transportation, and the rest on fees and equipment. Thirty percent of the hunters hunt on public lands. \$81 million went towards hunting big game and \$80 million on small game and birds. Non-resident spending on hunting in 1980 was \$5,875,600 (U.S. Fish and Wildlife Service, 1980).

Hunters and fishermen spent \$125 million for large items such as boats, trailers, campers, and four-wheel drives, while other dollars went to feed thousands of hunting dogs, pay vet bills, insurance for boats, funds, vehicles, and a host of other expenses (N.C. Wildlife Resources Commission).

### Non-consumptive Wildlife Recreation

Less celebrated than the more familiar hunting and fishing categories, non-consumptive wildlife recreation has only recently been receiving the attention it deserves. Observing, feeding, and photographing wildlife is growing in popularity as an outdoor recreational activity, with approximately \$147 million in expenditures in 1980.

### Total Economic Impact Of Wildlife-Associated Recreation

Together, an estimated \$580 million dollars is spent annually in North Carolina for hunting, fishing, and other wildlife-based recreation. This figure is for direct expenditures only, and subsequent rounds of spending would greatly multiply the economic impact.

The \$580 million spent annually also generates about \$23 million in state and local government taxes. This represents a return of approximately \$50 annually for each dollar spent by the Wildlife Resources Commission. It should also be noted that, to a considerable extent, fishermen and hunters pay their own way by financing fish and wildlife programs through fees for licenses and tags and through excise taxes on equipment purchased. Ninety percent of the funds spent by the Wildlife Resources Commission come from license and permit fees and excise taxes paid by sportsmen (N.C. Wildlife Resources Commission).

### **Outdoor Recreation-Related Travel**

The North Carolina Division of Travel and Tourism completes an annual report on travel in North Carolina. Although the report does not look at outdoor recreation-related travel and tourism alone, it is useful to examine it with outdoor recreation in mind.

The travel study includes all kinds of travel, including business travel. But even business travel is sometimes influenced by outdoor recreational opportunities. For example, business conventions might choose Asheville because of the mountain scenery or Wilmington because of the coastal recreational opportunities.

According to a 1983-84 survey of North Carolina Welcome Center visitors, the activities visitors participated in most frequently were visiting natural, scenic, historic, and cultural attractions and going to the mountains or beach, activities focusing on outdoor recreation. Approximately 60 percent of those who stayed overnight used hotels or motels, while 28 percent stayed in private homes. According to a 1994 study, over 40 percent of the state's travelers come from neighboring states and Florida. Slightly more than 25 percent say they're just passing through.

Travel and tourism, the state's second largest industry, is big business in North Carolina. It generated between seven and eight billion dollars in 1994. In 1987, 282,200 jobs were estimated

to be travel related, approximately 10.1 percent of state-insured private sector employment. Over \$10.2 billion in primary and secondary expenditures results from travel spending from almost 59 million person trips annually. Approximately 8.7 million people were greeted at the state's welcome centers in 1993, 1.29 million at state aquariums, and 839,757 at historic sites.

Travel groups with North Carolina as a destination spend an estimated \$464 per group during their stay in the state. The money goes towards lodging (19 percent or \$88), food (30 percent or \$140), transportation (32 percent or \$148), entertainment/recreation (9 percent or \$42), and miscellaneous (10 percent or \$46) (Rulison, 1987).

Unfortunately, the North Carolina Division of Travel and Tourism's data is not collected with outdoor recreation in mind. The 1976 National Travel Expenditure Study, however, estimates that approximately 11 percent of the passengers' travel expenditures in the United States are for the primary purpose of outdoor recreation. Applying this 11 percent figure to the North Carolina net gas tax collections of \$586 million in 1987, \$64.46 million could be said to have been collected due to outdoor recreation travel. Likewise, 11 percent applied to state income tax related to travel (\$72.8 million) would yield over \$8 million. Eleven percent of North Carolina's sales and use tax collections for hotels and motels, restaurants, and gasoline stations in 1987 was \$15,873,000. These numbers far exceed the state's annual budget for all outdoor recreation areas and programs.

The Division of Travel and Tourism did look at the degree to which the economy of a county concentrates on certain economic activities by using the ratio of travel sector employment to total county employment, comparing counties to the state as a whole, and using Employment Security Commission data.

The counties that are most concentrated in travel-related economic sectors are Dare, Swain, Watauga, Avery, Cartaret, and Onslow, all with over twice the state average (Rulison, 1987). As the top few counties have small total employment, the importance of outdoor recreation to these local economics is relatively more important. The top fifteen counties in proportion of travel-related employees all have state park units, national parks, national forests, national seashores, or national wildlife refuges. While other factors contribute to such high proportions of travel-related employment, the presence of public areas and recreational opportunities is, no doubt, a major influence.

### **Federal Outdoor Recreation Areas**

As Table V-4 shows, there were a large number of visits to federal sites in North Carolina in 1987. The largest number, by far, was to the Blue Ridge Parkway, followed by the Great Smoky Mountains National Park. Unfortunately, figures from both areas include visitation for Tennessee and Virginia (National Park Service Statistical Abstract, 1993).

**Table V-4. Visitation at Selected Federal Sites in North Carolina**

Federal Site	Recreational Visits
Blue Ridge Parkway	17,889,300
Cape Hatteras National Seashore	2,259,900
Cape Lookout National Seashore	294,100
Great Smoky Mountains National Park	9,283,800
Moores Creek National Battleground	58,200
Wright Brothers Memorial	477,400

There were many overnight stops at some of the areas. At the Great Smoky Mountains, 460,191 people stayed overnight, 189,941 camping in tents and 140,896 with recreational vehicles. The Blue Ridge Parkway reported 244,836 overnight stays, Cape Hatteras 119,794, and Cape Lookout 29,698 (National Park Service Statistical Abstract, 1993).

Information on the economic contribution of the federal areas to the state and local economies is lacking. A study completed for the Great Smoky Mountains National Park does not divide its results between North Carolina and Tennessee, the two states in which it is located. The Great Smoky Mountains study found that four of every five visitors have been to the park previously. In 1985, 9.3 million visits were made by 1.7 million individuals or approximately 500,000 groups. The average expenditure per group was approximately \$100 per day. The study estimated, using a conservative multiplier of 1.5, that the overall impact of visitor expenditures in the region exceeded \$345 million annually.

The National Wildlife Refuge System in North Carolina recorded 317,500 visitor-use days in 1980 (Clawson and Van Doran, 1984). While this use has not been converted to economic effects, such use is obviously of substantial benefit to the state's economy. Economic data for use of U.S. Forest Service areas in North Carolina is also lacking, although economic impacts from recreational and other uses must be substantial. In the 1985 annual report to the chief of the Forest Service, the recreational benefits from lands managed by the Forest Service were said to equal the total management budget of the agency (1.8 billion). It was estimated that the Chatahoochee National Forest in northern Georgia will produce \$108 million in timber and \$637 million from recreation over the next 50 years (Americans Outdoors).

### **Local Governments**

State studies indicate that outdoor recreation associated with local governments has a far greater economic impact than do state recreation programs. Although no such studies were found for North Carolina, there is no doubt that local governments have an impact far greater than that of other government levels.

A good illustration of the sheer size of local government systems versus the state is found in the area of employment (Table V-5).

**Table V-5. State and Local Recreation Employment in North Carolina**

	COUNTY	MUNICIPAL	STATE
Full Time	394	1,999	215
Part Time	1,896	4,232	427

Another measure for comparison is budgets. Fifty-eight county departments and 128 municipal departments throughout the state have budgets that total over \$140,000,000. By comparison, the state parks system's total operating budget is about \$8,000,000.

Local government park and recreation programs sponsor many special events that boost the state economy. The Eno River Festival attracts thousands each year over the July Fourth weekend; the Apple Chill Fair in Chapel Hill, the Piney Woods Festival and Riverfest in Wilmington, and many other events are held throughout the state. Fishing tournaments, boating regattas, softball and soccer tournaments, and an almost endless number of regular games and events take place year round, all offering a substantial boost to area economies.

An example of what a special event can mean is offered by a National Park Service-sponsored study of a tournament in Atlanta. A 47-team tournament, including 38 teams and 413 players from out of state, resulted in direct expenditures of \$85,480. Typical expenditures were \$193.43 per out-of-state player and \$43.70 for in-state players (Broyles et. al.).

Regular scheduled leagues in softball, little league baseball, soccer, and other sports mean equipment purchases, dining out, concession expenditures, travel expenses, uniforms, and other expenditures. In the Raleigh area, approximately 6,000 individuals and 463 teams participate in league soccer. If each participant buys a \$35 pair of soccer shoes annually, \$210,000 would be expended. And this sum would pale beside the cost of transporting players to and from practices and games. Such outdoor recreational programs generate millions of dollars in expenditures, contributing in a substantial way to the state's economic vitality.

### **Canoeing and Rafting**

Although canoeing is a popular activity in all regions of the state, it is most popular in the mountains of western North Carolina, where the many swift whitewater streams provide thrills and exciting challenges to even the most experienced canoers.

Popular mountain streams include the French Broad River, Nantahala, South Fork of the New River, and Nolichucky. In the Piedmont, a number of streams are also popular with river users, including the Haw, Catawba, and Yadkin. Eastern North Carolina has its share of popular rivers and streams, although these slower moving, flatter waters are attractive for different reasons.

North Carolina has approximately 13 whitewater outfitters. Raft and canoe rentals, clinics, and guide trips are provided by most of them (N.C. Camping and Outdoors Directory). Other types of expenditures — for transportation, food, and lodging — provide the bulk of the economic impact of river-associated outdoor recreation.

No attempt has been made to measure the total economic impact of North Carolina's rivers and streams on the state and local economies; but we can get some idea by looking at a study of the local economic impact of the Nantahala River Gorge.

### Economic Impact of the Nantahala River Gorge

The North Carolina Division of Community Assistance in 1982 conducted an economic study on the impact of the whitewater resource of the Nantahala River on Swain County and the surrounding region. The economic data was compiled primarily from surveys of local businesses dependent upon the river. Because not all such businesses responded to the survey, the study's results portrayed a minimum economic impact.

The study concluded that the river businesses make a substantial and favorable economic impact on the region. Highlights of the study follow:

- 295 persons were employed by the eight businesses at one time or another during 1981, 44 permanent year-round, 38 from November through April only, and 213 from May through October only.
- During July, the employment of roughly 4.8 percent of the total number of persons employed in Swain County was attributable to the eight businesses surveyed.
- 175 of the 295 persons employed by the eight businesses were permanent residents of Swain County, approximately 4.2 percent of the county's total resident employment.
- The annual payroll of the six businesses reporting this statistic represented over 3 percent of the total county payroll for the year.
- Of the total sales of \$1,882,465 generated from April to October of 1981, 57.8 percent was attributable to "river use sales" (i.e., outfitter sales, equipment rental, guide services), while 42.2 percent was attributable to all other categories (such as hotels, restaurants, camping).
- From April through September of 1981, the eight businesses contributed 8 percent of the total sales tax proceeds received by Swain County and the town of Bryson City.

The study noted that the above economic impact facts pertain to most, but not all, of the river outfitters and businesses of the Nantahala Gorge and do not account for business generated elsewhere in the county or region as a result of visitation to the Nantahala Gorge. For instance, visitors to the Nantahala Gorge are likely to spend money somewhere in the regional economy on their way to and from the Gorge. Likewise, people using the river often stay in motels and patronize restaurants and other businesses beyond the confines of the Nantahala Gorge.

The study did not attempt to measure the multiplier effect of river-related expenditures, although it acknowledged that they are substantial. It also noted that the majority of sales that result from the river are "exported," meaning they are made to users who reside outside of Swain County. Consequently, these users bring outside money into the local economy of Swain County (N.C. Department of Natural Resources and Community Development, 1982).

### Snow Skiing

A study of the economic impact of the ski industry in North Carolina for the 1988-89 season was conducted for the North Carolina Ski Areas Association. The study is the first such comprehensive study performed.

The 1988-89 ski season was hurt by a poor snowfall, and ski visits recorded at North Carolina's nine major ski resorts dropped by 224,200 to 468,800. Even with this reduced visitation, snow skiing contributed substantially to the North Carolina economy.

The study examined skier expenditures by surveying 272 randomly selected skiers. The average visit was 1.8 days; nearly 54 percent of visits were day trips; average expenditure per skier visit was \$28; and 34 percent of skiers had lodging expenses averaging \$27 per skier visit.

In total, skiers spent an estimated \$29.2 million within 25 miles of the resorts and \$2.1 million further away but within North Carolina. Ski resorts received the largest share of these expenditures, an estimated \$13.2 million. \$4.3 million went towards lodging, \$3.8 million to ski equipment and clothing outlets, \$2.3 million to restaurants, \$1.7 million to night clubs and bars, \$1.3 million to food and beverage outlets, and \$1.2 million for automotive services.

The study also estimated the indirect impact of these direct expenditures as the spending was recirculated in the state's economy in further rounds of spending. The multiplier was estimated to be 1.77. Accordingly, the total impact of skiing on the North Carolina economy in the 1988-89 season, which was severely hurt by lack of snow, was estimated at \$55.4 million. Applying the same survey results to the better 1987-88 season would have shown \$40.3 million in direct and \$31 million in indirect expenditures (Kirkpatrick and Shogren, 1989).

### CONCLUSION

Further studies of the economic significance of outdoor recreation are needed in order to understand the impact that the industry has on the North Carolina and local economies. It is evident, however, from existing participation rates, expenditures made, and other information available that the economic contributions are very substantial.

Summaries of state studies on the economic effects of outdoor recreation — while they vary considerably in their methodologies, scope, definitions, and other ways — all show great economic impacts. Due to such variations in what is measured and how, quantitative results of the various state studies cannot be compared fairly. Useful generalizations can be made, however.

State studies of outdoor recreation's economic significance are becoming more common, with almost all the state studies taking place since 1976. This shows increasing awareness of the economic importance of outdoor recreation. New research on recreation should be reviewed periodically to document the economic significance of outdoor recreation and natural resource preservation.

The state studies determine the economic contribution of outdoor recreation by focusing on the expenditures generated by recreational visits. The amounts that users of parks and recreation sites spend on items such as travel, food, equipment, and services comprise a large portion of that economic contribution. Some of the studies simply total these expenditures and use the large dollar amounts to illustrate the impact on their economies. Other studies attempt to measure the effects of this initial or direct spending as it recirculates in the economy.

It should be noted that even in state studies that measure only direct expenditures, the states usually acknowledge the omission of the secondary economic impacts and state that these secondary economic impacts are significant. The multipliers calculated in the state studies that were reviewed varied from a low of approximately 1.3 to a high of approximately 2.0. Regardless of what definitions were used, how comprehensive the studies were, or whether multipliers were used, outdoor recreation was found to be an obviously important component of the economy as a whole.

State studies also routinely acknowledged that additional "unquantifiable" benefits of outdoor recreation exist. Examples of benefits that were mentioned are lower incidence of illness, enhanced mental health, lower stress and anxiety, reduced absenteeism, constructive use of leisure time, better physical health, and environmental education. While the state studies did not attempt any direct measure of the economic values of such benefits, other studies have attempted to document these values. More research is needed to document these benefits, however, and, if possible, to translate them into economic values.

Government expenditures, only a small portion of the money spent on outdoor recreation, are extremely important in supporting the multi-billion-dollar private market. If a \$10,000 boat is purchased to operate on a government lake or a tennis racket is bought to play on municipal courts, these private expenditures — which create business and tax revenues and jobs — are incurred due to the relatively small level of public expenditures.

Thirty percent of hunters in North Carolina hunt on public lands (N.C. Wildlife Resources Commission). California found that 40 percent of all recreation and leisure spending in 1982 related to the use of government lands and facilities, even though 94.5 percent of recreation and leisure jobs were private sector jobs (*The Recreation and Leisure Industry's Contribution to California's Economy*, 1984). A Delaware study also recognized and emphasized that the public sector manages, maintains, and regulates the majority of the natural resources and the infrastructure required by most private sector activities (Lathan et. al., 1984). Clearly, public recreation supports substantial numbers of jobs in the private sector.

An example of a tie between public lands and private enterprise can be seen in the number of private campgrounds in North Carolina. The N.C. Camping and Outdoors Directory, published by the Division of Travel and Tourism, lists more than 300 private campgrounds, containing more



than 15,000 campsites. These campgrounds are rarely destinations in themselves, but are often used by people enjoying public outdoor recreation areas.

Analysis of outdoor recreation expenditures shows a broad array of categories of spending. Although the percentages vary with various state or other studies, it is evident that food and beverages, accommodations, transportation costs, and activities comprise the bulk of expenditures. Outdoor recreation spending is therefore spread across many segments of the economy.

Although a major contributor to North Carolina's economy, outdoor recreation lacks the recognition it deserves due to its diverse and scattered nature. More emphasis is needed to raise this level of awareness.

Delaware found that recreation provides the fifth largest grouping of jobs in that state (Latham et. al., 1984). The Illinois recreation industry employed 148,100 residents, 3.2 percent of the state's work force. North Carolina's recreation employment may be similarly important.

Outdoor recreation is an important component of tourism. Missouri found natural beauty was one of the three top reasons for visiting the state (Martindale, 1982). Colorado's research revealed that the number-one reason people visit Colorado is to view the scenery (Americans Outdoors). The survey of visitors to North Carolina visitor centers found similar results.

Substantial tax revenues are generated to the state of North Carolina and to local governments by the outdoor recreation industry. Figures have not been documented, but other state studies give some idea of the extent of the revenue contribution. California estimated that 6 percent of its state revenue and 12.6 percent of local government revenue come from recreation and leisure (*The Recreation and Leisure Industry's Contribution to California's Economy*, 1984). Delaware estimated that total state and local government revenues exceeded annual government expenditures on recreation by \$3.8 million (Lathan et. al, 1984). Illinois estimated that government revenues from recreation exceeded public agency expenditures by \$575 million annually.

Outdoor recreation is important to North Carolina's economy through preservation of natural resources, though expenditures related to the pursuit of outdoor recreation activities, through the sizable amount of taxes and other revenues that are returned to the state and local governments, and for many other "unmeasurable" reasons. These, along with employment generated and general business activity created, make outdoor recreation a vital part of North Carolina's economy.



## VI. NATURAL DIVERSITY PRESERVATION

### PRESERVING NATURAL DIVERSITY

We are fortunate in North Carolina to enjoy a unique natural heritage composed of an extraordinary variety of natural ecosystems and native plants and animals. Today, our landscape is very different from the vast wilderness that the first European settlers found in North Carolina. Three hundred years of human settlement, agriculture, urbanization, and resource use have changed our state's landscape. Only remnants survive of the natural ecosystems that once blended into one another in astounding variety from the highest mountains in eastern America to the long stretches of beaches and barrier islands and vast estuaries. North Carolina still has a profusion of native animal and plant species and a range of natural communities. These resources are our natural heritage.

Action must be taken to save what is left of North Carolina's natural diversity. As thorough as the changes in our natural landscapes have been, North Carolina still possesses a wide range of examples of its original ecological resources. But man-caused alterations continue to degrade and destroy our natural areas at an alarming rate. Many of our state's outstanding natural lands and native plants and animals are imperiled. In the wake of burgeoning development, natural resources are being consumed and natural habitats destroyed with unprecedented speed. With the loss of habitat, many native plant and animal species could be eliminated. More than 205 plant and animals species in North Carolina are considered endangered or threatened, and the survival of several hundred other species is at risk. Also, about half of the state's major natural community types are considered rare and threatened in North Carolina or worldwide.

Concern for preserving natural areas and ecological resources derives from the understanding that there are basic relationships between people and the other living things that share our earth. Natural areas are living laboratories and outdoor classrooms where we can study and enjoy natural environments. They provide controls for comparison against managed or exploited resources. Natural areas are havens for animal and plant species, often dependent upon specific habitats for their survival. Many discoveries of practical medical, agricultural, and scientific value to modern society have resulted from the study of seemingly inconspicuous and insignificant species. Natural areas also provide for enjoyment, recreation, and renewal of the human spirit. And they preserve examples of some of North Carolina's rarest and most unique resources.

Recognizing the need to ensure the survival of North Carolina's natural diversity, the Department of Environment, Health, and Natural Resources in 1976 established the Natural Heritage Program. The program is a unit of the Division of Parks and Recreation. It was established with technical assistance from The Nature Conservancy, a nonprofit conservation organization that has led the development of an international network of 85 natural heritage programs.

The Nature Preserves Act of 1985 stated the need for natural diversity preservation in its policy declaration.

The continued population growth and land development in North Carolina have made it necessary and desirable that areas of natural significance be identified and preserved before they

are destroyed. These natural areas are irreplaceable as laboratories for scientific research, as reservoirs of natural materials for uses that may not now be known, as habitats for plant and animal species and biotic communities, as living museums where people may observe natural biotic and environmental systems and the interdependence of all forms of life, and as reminders of the vital dependence of the health of the human community on the health of the other natural communities.

It is important to the people of North Carolina that they retain the opportunity to maintain contact with these natural communities and environmental systems of the earth and to benefit from scientific, aesthetic, cultural, and spiritual values they possess.

Natural areas are generally considered to be areas of land or water that (1) retain or have reestablished natural character, (2) provide habitat for rare or endangered species of animals or plants, or (3) have natural features of special scientific or educational value.

## **SUMMARY OF NATURAL HERITAGE INVENTORY DATABASE**

Efforts to protect our natural heritage are based on a comprehensive inventory of a state's most important natural areas. The Natural Heritage Program's first purpose is to assemble and maintain a statewide inventory of exceptional and rare natural habitats and biotic communities, locations of rare or endangered animal and plant species, other special wildlife habitats, and exemplary geologic landmarks. The inventory records the status, distribution, and ecology of the state's natural communities and rare or endangered species.

North Carolina's natural diversity consists of thousands of plant and animal species, all interacting with each other and their physical environment. The Natural Heritage Program has classified special "elements" of the state's natural diversity and applies a systematic approach to inventory and protect this diversity. The Natural Heritage Inventory is explained in more detail in the Natural Heritage Biennial Report for 1993.

At a broad level, an element may be an entire ecological system such as a natural community (terrestrial or aquatic), including the plants and animals of that system and the associated soils, geology, and hydrologic features. At a species-specific level, an element would be a species of plant or animal considered rare or endangered in North Carolina. Therefore, the elements of natural diversity on which the Natural Heritage inventory is based can be a rare plant or animal or a natural community.

Of the total biological diversity of North Carolina, the Natural Heritage Program monitors 176 vertebrate animals, 543 vascular plants, and 198 nonvascular plants. In addition, 262 species of invertebrate animals are monitored, a tiny but indeterminable percentage of the invertebrate fauna of the state. The monitoring of natural communities is different than that of species, since prioritization depends primarily on quality or condition rather than on rarity. The database includes high quality examples of terrestrial natural community types recognized in the state. Other categories of elements monitored by the program but given less emphasis include special wildlife habitats (such as nesting concentrations for shorebirds, other bird rookeries, and colonies of bats) and exceptional examples of geomorphic landforms.

The elements are the focus of the program's inventory and protection efforts. The program monitors a total of 1,400 "elements of natural diversity," which represent the rarest, most significant, and most threatened remnants of our natural heritage. Data are gathered on the locations of special elements as well as their rarity and threats to them. All elements are given global and state rankings, based on rarity and threat, according to a system developed by The Nature Conservancy. These rankings are periodically updated as new information becomes available. The data are used to determine priorities for future field investigations and for protection efforts. Elements that are the rarest and in most danger on a nationwide or statewide basis receive the highest priorities for these efforts. Elements that are more common, in less danger, or are adequately protected are given a lower priority or may be dropped from further consideration.

As of December, 1994, the inventory contained 14,543 records on locations of elements of natural diversity. Each year the program normally adds more than 1,500 new occurrence records and updates, edits, or deletes several thousand records. The inventory currently includes the following sums of element occurrence records:

- 6,361 occurrences of special vascular plants (state endangered or threatened species, and "significantly rare" species);
- 497 occurrences of rare nonvascular plants;
- 3,598 occurrences of special vertebrate animals (state endangered or threatened species, and significantly rare species);
- 1,003 occurrences of rare invertebrate animals;
- 184 special wildlife habitats (including nesting colonies of coastal waterbirds, rookeries of egrets and herons, roosting sites for eagles and other raptors, and bat colonies);
- 144 locations of exemplary geomorphic landforms; and
- 2,756 exemplary and unique natural community occurrences.

The Natural Heritage Program can compare sites containing the same element. The comparison, based on quality and representation of the element, identifies the most important sites for protection. This element-based approach ensures that biologically important, but little known or less scenic, sites are considered along with better known sites of greater size and beauty.

Adequate surveys have been done for only a fraction of the state's landscape. The program has compiled inventory data on special ecological resources in all 100 counties, but has conducted systematic surveys in only 40 of the counties. The program has supplemented its regular state funding with other sources — including occasional federal grants, private grants, special project appropriations, and local government projects — to finance public information projects and county-wide or regional surveys of natural areas.

Based on the program's inventory, it has identified more than 1,576 natural areas throughout the state that have exceptional importance for the survival of North Carolina's natural heritage. Nearly half possess natural resources that are the best examples of their kind or are the most critical habitats for endangered species in the state or nation. Only a third of these most important natural areas now have any assurance of protection. Many of the "protected" areas are actually vulnerable to external threats, and in many cases only a fraction of the total natural area is assured of protection.

## THREATS TO NATURAL AREAS AND PRESERVATION EFFORTS

Approximately 1,576 natural areas in North Carolina have thus far been identified by the Natural Heritage Program as possessing ecological resources of national, statewide, or regional significance. As the inventory of special natural areas and rare species habitats continues to progress, many other important sites will likely be identified and added to the natural areas priority list. The Natural Heritage Protection Plan, which is required on a biennial basis by the N.C. Nature Preserves Act (G.S. 113A-164.4) provides direction for the addition of new areas to the State Registry of Natural Heritage Areas and to the Dedicated Nature Preserves System. The plan also recommends natural areas that may best be protected by acquisition by public or private conservation agencies.

## PROTECTION ALTERNATIVES

Once a site is selected as a priority natural area on the basis of the importance of its natural elements, protection efforts can proceed. Following identification of ownership, the landowner should be informed of the ecological significance of the property and offered a range of options for ensuring protection of the site.

Natural Heritage inventory data help other public agencies and private organizations safeguard important ecological resources as they plan development projects and make regulatory and land management decisions. Natural Heritage Program staff respond to more than 500 requests for information each year. Information is provided, for example, for location of highways, electrical transmission lines, wastewater treatment and hazardous wastes facilities, industrial sites, and airports. Knowing about the presence of special natural resources in the early planning stages of a project allows development agencies to choose alternative designs for construction projects that will not harm natural areas or rare species.

Natural Heritage inventory information has helped build awareness and concern for natural areas in many governmental agencies. Besides providing data for specific sites and planning decisions, the Natural Heritage Program has built cooperative relationships and regular communication with many public agencies involved in the management and protection of natural resources. Among them are the U.S. Forest Service, National Park Service, U.S. Fish and Wildlife Service, Soil Conservation Service, U.S. Army Corps of Engineers, and many state agencies. The program helps other public agencies design resource management plans for their landholdings. It provides inventory services through formal agreements with the U.S. Fish and Wildlife Service, N.C. Wildlife Resources Commission, and N.C. Department of Agriculture for endangered species inventory, management, and recovery programs.

Protection planning is a major component of the Natural Heritage Program's functions. The program continuously updates its rankings for monitored natural elements, site scorecards and tracking records, and its statewide natural areas priority list. This process is described in detail in the 1995 Natural Heritage Protection Plan. The program recommends protection strategies for each of the priority natural areas identified in the plan.

The methods of protection most often recommended are registration, dedication, or acquisition (by gift or sale). The state's Registry of Natural Heritage Areas and Dedicated Nature Preserves System are described in greater detail in the Natural Heritage Program's Biennial Report. Both are means to protect a natural area by voluntary agreement of the private or public owner. The N.C. Nature Preserves Act provides the statutory basis for both. No area is registered or dedicated without the voluntary consent of the landowner. Landowner participation in the registry is voluntary. Dedication is also voluntary but is legally binding thereafter.

### **Registration**

The Registry of Natural Heritage Areas has proven to be a successful way of arranging protection agreements with landowners. An owner is recognized by the award of a certificate of registration. The landowner's cooperation may be publicized, but only if the landowner so desires. Registration does not give right of access to the public, and directions to a registered site are not published. Management of a registered site is the responsibility of the landowner, although the owner may voluntarily accept a management agreement. Certain public lands that are registered are further protected by legal or administrative designations.

By informing the owners of the statewide importance of the land, the Registry reduces the chance that natural elements on these properties might be inadvertently destroyed. This method of protection can quickly reach owners of important sites at minimal cost to the state. Because the owner has no legal obligation to protect the outstanding natural element(s), protection through registration relies heavily on maintaining cooperative relationships and regular communication with landowners.

### **Dedication**

Dedication secures a much stronger degree of protection for natural heritage resources. A private landowner may voluntarily cede to the state of North Carolina a legal interest in the land (usually a conservation easement) for preservation purposes. The instrument of dedication ("articles of dedication") specifies the less-than-fee real property interest that is transferred to the state, and may provide for additional provisions such as management, custody, access, use, or rights and privileges retained by the owner. Land owned by the state of North Carolina or local government agencies may also be dedicated as nature preserves. For public lands, the dedication requires a commitment by the managing agency to protect the natural element(s) on the site. The managing agency is not required to surrender any real property interests or management authority. Dedication agreements must be approved by the Governor and Council of State on behalf of the state of North Carolina. Likewise, the Governor and Council of State must approve any amendment or termination of preserve dedication or any land use contradictory to the protection of the natural heritage resources in the future.

## **Acquiring Land for Natural Area Preserves**

The present owners of some important natural areas may wish to sell the land; thus, acquisition may provide the optimal long-term protection for certain natural areas. Public agencies or private, non-profit conservation organizations may purchase, lease, or receive by gift important natural areas. The natural areas on the acquired lands can then be designated for protection by registration or dedication or other administrative action. Lands acquired by the state of North Carolina must be accepted by the Governor and Council of State, and, on recommendation by the Office of State Property, are usually allocated to a specific agency for management.

The Natural Heritage Program works with a variety of private land conservancies, which acquire land from willing sellers or donors. State laws encourage the protection of natural lands by statewide and local land conservancies, which are incorporated for conservation purposes as non-profit, charitable organizations serving in the public interest.

## **Managing Natural Areas**

Management of natural areas is needed to protect the ecological processes and elements for which the preserve was established. Management of natural areas is also necessary to ensure protection of their scientific, educational, and other public values. Management will often be passive, allowing natural processes to operate unimpeded; but active management may be employed in some cases where it simulates or restores the natural ecological processes.

All management decisions are the responsibility of the managing agency, as determined by agency policies, guidelines, and regulations. The Natural Heritage Program may provide information to a managing agency or assist in making management decisions for the benefit of the natural resources. Registration agreements contain a statement of management objectives for a voluntarily protected natural area. Articles of dedication declare the management principles for a preserve and assign management responsibilities.

Stewardship concerns have become an increasingly major component of the program's activities. The program provides management assistance and advice in order to perpetuate the important features and conditions of special natural areas. Protection planning and stewardship must be coordinated with many other private and public agencies using a multi-faceted conservation strategy; in this way, an appropriate level of protection may be designed for each significant natural area identified by the Natural Heritage inventory.



## **PROTECTION AND ACQUISITION PRIORITIES**

The 1995 Natural Heritage Protection Plan contains the current Natural Heritage Priority List of 1,576 sites considered to possess ecological resources of national, statewide, or regional importance. Protection strategies are recommended for each site on the list. A subset of the total Natural Heritage Priority List has been selected by the Natural Heritage Program to be of highest priority for protection. All of these areas contain ecological resources considered to be of greatest significance on a national or statewide perspective. All contain natural diversity elements that have high global and state rankings. Other natural areas of equal ecological importance are not listed when they currently have the maximum assurance of protection (for example, dedicated nature preserves where no more acquisitions are needed, national wilderness areas, federal research natural areas, and most registered park, refuge, or forest natural areas where acquisitions are complete). The listed sites are not sufficiently assured of protection, and actions are recommended to provide greater protection (for example, by registry agreement, easement, acquisition, dedication, etc.). Like the total priority list, these "highest protection priority lists" are dynamic and will be revised as changes occur in resource information, ranking evaluations, land uses and threats, and protection statuses.

### **RECOMMENDATIONS FOR ACTIONS IN THE NEXT FIVE YEARS**

Actions are needed immediately to strengthen North Carolina's program to identify and protect our natural heritage. These actions are needed in order to protect our state's natural diversity.

#### **Organizational Needs**

The Natural Heritage Program is a unit of the Division of Parks and Recreation and, like the whole Division, the Natural Heritage Program has suffered a history of inadequate funding and staffing. Since 1984, the program has operated with an annual base budget of approximately \$165,000 and staff of four full-time and two half-time professionals. That has been supplemented by occasional grants and contracts for special projects. Additional full-time personnel are needed to administer the natural heritage inventory and protection programs: two zoologists, an information services coordinator, a data manager, and four regional protection specialists.

#### **Natural Heritage Resource Inventory**

The Natural Heritage Program's inventory of the state's natural areas and ecological resources has been incremental in manner. Because of insufficient funding, adequate surveys of natural areas and ecological resources have been accomplished in only a few sections of the state, and the inventory management system has not kept up with updated information. Although comprehensive surveys have been conducted in only a few counties, incomplete information has been compiled on natural heritage resources in all 100 counties. The Natural Heritage Program has maximized its limited resources by obtaining special grants to contract with other biologists for low-cost surveys of natural areas. The Nature Conservancy — the private conservation organization that originally helped the state establish the Natural Heritage Program — has

continued to help the program upgrade its computer and data management system.

The Natural Heritage inventory functions for compiling and analyzing ecological resource data, identifying high-priority natural areas, and providing information services to other agencies need to be maintained and expanded. This will require additional staff to coordinate county inventories and to compile and maintain site ownership and management information. The state's registry of voluntarily protected natural areas also needs expanding. Voluntary conservation agreements should be arranged with more natural area landowners. The Natural Heritage Program should maintain regular communication with and provide management advice to the owners of these registered natural areas.

The systems of state parks, gameland refuges, forests, and estuarine sanctuaries should be expanded to include outstanding natural areas. Many of our most important natural areas can be best protected by federal, state, and local government agencies, sometimes working in partnership with private land trusts. Many of the 100 areas recommended by the Natural Heritage Program for acquisition may be protected in public ownership. Once acquired, these natural areas should be formally protected through dedication or registration agreements.

Owners of all high-priority natural areas in North Carolina should be contacted and informed of the ecological significance of their properties and the options and incentives available to owners willing to conserve natural areas. The addition of a natural areas protection specialist would enable the Natural Heritage Program to identify, contact, and inform most owners of important natural areas.

Public support for natural areas protection can be built by distributing the Natural Heritage Program's newsletter, guidebooks on preservation methods, slide programs, display panels, and accessible natural areas directory. Natural areas protection can also be advocated in presentations before meetings of professional organizations and citizen groups. Contributions to other environmental education programs may also be made as staff resources are available. Expanded education programs should include provision of on-site interpretive displays in protected nature preserves, instructional materials for public schools, and production of publications, films, and slide programs.

Local governments need to be taught how to recognize unique natural areas in land use plans and how to protect environmentally significant sites. Local governments should be encouraged to use natural heritage inventory data for identification of fragile and endangered natural resources and unique natural areas. Local governments can protect natural areas through land use planning, development standards, environmental impact assessment requirements, and other resource management decisions.

The Natural Heritage Program will continue to provide assistance and encouragement to local governments in acquiring and managing certain natural areas. A state fund for natural lands preservation may provide grants to local governments for purchase and management of natural areas. Also, agreements may be arranged for management of some state-owned natural areas by local governments or local land conservancies.

Other state agencies need to be assisted in developing standards and regulations for the protection

of environmentally sensitive wetlands, streams and aquatic ecosystems, and other fragile natural environments. The Natural Heritage Program will continue to contribute information and recommendations to regulatory agencies, including the Environmental Management Commission, Mining Commission, and Coastal Area Management Commission, which can protect wetlands and aquatic habitats by adopting stringent pollution control and land conversion standards. State funds and permits should be denied to development projects that would harm outstanding natural areas and endangered species habitats when feasible alternatives exist.

### **Natural Areas Management**

Many natural areas — including those in public ownership — are declining in quality because they are not adequately managed. In the absence of proper management, the acquisition or dedication of a natural area reserve does not ensure long-term preservation of the important natural features and native species, nor does it provide for public enjoyment and education in ways compatible with the preservation of the natural resources. Management plans for all dedicated nature preserves in public ownership need to be developed and implemented. Standards for the dedication of preserves require the establishment of management plans. The Natural Heritage Program should help develop these plans and subsequently monitor their implementation.

Management advice should be provided to owners of voluntarily registered natural areas. The Natural Heritage Program should provide owners of registered natural areas with general management recommendations and subsequently monitor the condition of the sites.

Funding for the management of nature preserves needs to be provided at the time of acquisition. The costs of management should be provided for in the design of a state fund for a preserve system (up to 20 percent of the purchase value of a site). Preserve management may be accomplished with a system of regional preserve managers, management agreements with local agencies and conservation groups, small grants to volunteer management committees, summer student interns, and part-time caretakers. Research projects on public lands should be encouraged to study the maintenance and restoration of natural communities and the ecology and biological requirements of rare and endangered species. Universities, local governments, and other public agencies should be encouraged to carry out management plans for designated natural areas in their ownership.

Public good will and community assistance need to be developed and maintained to help protect natural areas. Establishing public oversight of preserves can result in "neighborhood watch" groups and "adopt-a-preserve" groups, which are especially needed for publicly owned preserves where full-time management personnel cannot be assigned. The funds available through the Natural Heritage Trust Fund for the acquisition and management of important natural areas need to be increased.

There are a number of additional steps that can be taken to help protect natural areas. Local governments can be encouraged to protect natural resources without fee-simple acquisition by using local zoning regulations and conservation easements. The effects of recreational use of public parks can be measured and management practices implemented to correct unacceptable impacts. When needed, new recreation areas should be opened to divert the public away from

overused parks.

Environmental education in public elementary and secondary schools should be improved by increasing teacher training, providing educational materials, offering hands-on experiences outdoors, and cooperating with natural resource management agencies. The number and quality of interpretation and education facilities in public park and recreation areas also needs to be increased.

By implementing these recommendations, we can build a natural heritage and preserves program in North Carolina worthy of our state's magnificent natural diversity. These actions must be taken by the state of North Carolina if we are to save our natural heritage.

## VII. WETLANDS PROTECTION PLAN

### PURPOSE AND AUTHORITY

In January 1988, the N.C. Division of Parks and Recreation produced the Wetlands Addendum to the Statewide Comprehensive Outdoor Recreation Plan (SCORP) for 1984-89, entitled *Outdoors North Carolina*. That document identified and described federal and state programs related to wetlands protection and assessed the effectiveness of existing wetland protection efforts. It also reported on wetland trends, protection alternatives, and protection priorities. This chapter, developed in cooperation with the N.C. Wildlife Resources Commission, updates those subjects and the ongoing planning activities by state agencies to protect wetland resources in North Carolina.

It is the purpose of the Wetlands Protection Plan to provide an assessment of wetlands issues and opportunities. This is in accord with the 1986 federal Emergency Wetlands Resources Act (P.L. 99-645) and with the SCORP planning practice of focusing on critical natural resource/outdoor recreational issues.

Section 303 of the Emergency Wetlands Resources Act calls for each state to prepare an addendum to its SCORP. State plans are to be consistent with the National Wetlands Priority Conservation Plan prepared by the U.S. Fish and Wildlife Service. The National Plan acknowledges that individual state plans need not be identical to the federal model, but state proposals for Land and Water Conservation Fund grants *"must be consistent with the Plan regarding wetlands loss, threat, and functions and value criteria."* North Carolina's 1988 Wetlands Addendum and subsequent SCORP updates meet these requirements.

### Wetlands Protection Goals and Criteria

The basic goals for wetlands protection in North Carolina are to ensure that all remaining high quality wetlands are protected in perpetuity and that no further "net loss" of wetlands acreage is allowed to occur on a statewide basis. The concept of "high quality" is subjective, but includes such considerations as:

- retention of generally natural and undisturbed conditions;
- exemplary and special biotic communities;
- endangered and rare species of plants and animals;
- wildlife and fishery resources and benefits;
- recreational and educational benefits;
- degree of permanence and potentials for preservation; and
- importance to water quality protection.

Federal Criteria Section 301 of the Emergency Wetlands Resources Act specifies three broad criteria to be used in evaluating wetlands for protection:

- historic wetland losses;
- threat of future wetland losses; and
- wetland functions and values.

The criteria for establishing wetland protection priorities in North Carolina relate both to rarity/uniqueness of particular types of wetlands and their biotic resources and to public benefits and resource manageability. Criteria used to establish wetland protection priorities in North Carolina include:

- relative rarity of natural communities;
- relative rarity of individual plant and animal species;
- threat of conversion or loss;
- quality (representativeness);
- condition (damage or alteration from optimal);
- viability (long-term prospects for continued existence);
- defensibility (protected from extrinsic human factors that might otherwise degrade or destroy);
- public use potential;
- educational and scientific values;
- long-term management implications;
- geographic distribution; and
- importance to water quality protection.

### **Objectives of the N.C. Wetlands Protection Plan**

This wetlands protection plan, including its subsequent revisions and supplements, is intended to:

- help North Carolina comply with Section 303 of the federal Emergency Wetlands Resources Act (P.L. 99-645);
- address important wetlands protection and acquisition considerations;
- establish assessment criteria concerning wetland functions and values, historic wetland losses, and threat of future wetland losses; and
- develop a list of the wetlands with the highest priority for federal and state acquisition in North Carolina.

## **CURRENT TRENDS AND INITIATIVES FOR WETLANDS PROTECTION**

### **Status of Wetland Resources**

A wide diversity of wetlands occurs throughout all of North Carolina from the edges of salt or fresh water bodies to isolated bogs and riverine bottomlands. Wetlands are characterized by their soil types, are saturated by water part of the growing season, and support types of vegetation dependent upon or tolerant of the wet soil conditions.

Less than half of the state's original wetlands survive. The *Wetlands Addendum* in 1988 reviewed the status of wetland resources in North Carolina, including trends in conversions of wetlands and development of public policies for their protection. A preliminary estimate by the U.S. Fish and Wildlife Service (FWS) calculated that North Carolina had 5.7 million acres of wetlands covering 17 percent of the state's land area. This rough estimate is based on high-altitude

photography taken in the mid-1970s. The FWS estimate of wetlands acreage is comprehensive, including all types of wetlands under the National Wetlands Inventory definition; it therefore cannot be compared with earlier estimates by other agencies whose estimates included only certain types of wetland habitats, mainly those suitable for waterfowl, and did not include wetlands less than about 40 acres in size. The current wetland acreage is likely less, due to an unknown number of acres converted since the time of that photograph.

Wetlands provide a variety of benefits, uses, and functions, including: abatement of water pollution; storage and conveyance of floodwaters; augmentation of surface water flow during drought; shoreline stabilization; habitat for fish, wildlife, and plants, including many rare and endangered species; natural laboratories for scientific research and environmental education; recreational and aesthetic resources; reserves for forests; and enhancement of the overall quality of life.

Wetlands are an important part of North Carolina's natural heritage. Over half the state's threatened biotic community types are wetlands. About 70 percent of the plants and animals listed as rare or endangered species are dependent upon wetlands. The wetlands ecosystems in the mountain region contain an estimated 40 percent of the state's rare and endangered plant species, while coastal wetlands host as many as 70 percent of such species. Of 203 animal species monitored by the Natural Heritage Program as rare or endangered organisms, 152 are wetland dependent or aquatic.

North Carolina has the fifth largest amount of wetlands area of the 50 states. It also has the largest estuarine system on the east coast of the United States, estimated at 2,223,900 acres in extent (Owens, 1981). The Coastal Plain region of the state (comprising about 45 percent of the state's area) contains 95 percent of the state's wetlands, both saltwater and freshwater types. Among the coastal wetlands are those known as pocosins. Approximately 70 percent of the nation's pocosins are in North Carolina. Pocosins are freshwater wetlands covered by evergreen forests and shrubs. Typically pocosins cover thousands of acres and occur on broad, flat plains away from existing large rivers and streams. They are characterized by peat accumulations and are subject to periodic burning. These wetlands have been converted on a large scale for agriculture and forestry and on a smaller scale for other development. Large-scale peat mining projects have also been proposed, but none have been carried out.

Other freshwater wetlands occur throughout the Piedmont and Mountain regions as well. Many small isolated wetlands harbor an extraordinary diversity of plants and animals. For example, more than 80 species of plants considered rare or endangered are known to occur in the few remaining mountain bogs, fens, and swamps.

Until recent decades, wetlands were not generally recognized for their productive values and, in fact, were largely thought of as wastelands. Projects to "improve" the land by draining, filling, or clearing wetlands were carried out by private and public agencies for mosquito control, development, agriculture, and silviculture. Approximately half the wetlands in existence in all the United States and more than half the wetlands present in North Carolina before European settlement have been destroyed, and losses of wetlands are continuing at a disturbing rate.

Most imperiled are the freshwater wetlands, which continue to be lost across the state. Several

wetland types are thought to be in most immediate need of protection due to imminent conversion pressures. These are freshwater marshes, bogs, and fens, bottomland hardwoods, and isolated swamp forests. Efforts to protect and preserve these wetlands carry a special urgency because their total acreage is limited and their extent has already been vastly reduced.

### **State Wetland Agencies and Their Roles**

A complex array of federal and state programs relate to the management or protection of wetlands in North Carolina. On the federal side, the main programs are authorized by the Clean Water Act Section 404, the National Environmental Policy Act, the Wetlands Reserve Program, the Emergency Wetlands Restoration Act, the Fish and Wildlife Coordination Act, and the Food Securities Act. These programs were previously described in the SCORP *Wetlands Addendum*.

Several state agencies are involved with wetland issues. Most are units of the Department of Environment, Health, and Natural Resources. Agency concerns for wetlands protection are most often associated with other primary program concerns for natural resource protection and management.

The North Carolina Constitution clearly states that wetlands are to be protected.

*It shall be the policy of this State to conserve and protect its lands and waters for the benefit of all its citizenry, and to this end it shall be a proper function of the State of North Carolina and its political subdivisions . . . to preserve as a part of the common heritage of this State its forests, wetlands, estuaries, beaches, historical sites, openlands, and places of beauty.*

(Art. XIV, Sec. 5; adopted by vote of the people in 1972)

The state programs currently affecting wetlands through regulation, land acquisition, and general policies are shown in Table VII-1.

### **National Goal of No-Net-Loss of Wetlands**

The report released late in 1988 by the National Wetlands Policy Forum (NWPF), which was composed of representatives of many interest groups convened by The Conservation Foundation at the request of the U.S. Environmental Protection Agency, recommended:

*...the nation establish a national wetlands protection policy to achieve no overall net loss of the nation's remaining wetlands base, as defined by acreage and function, and to restore and create wetlands, where feasible, to increase the quality and quantity of the nation's wetlands resource base...*



Table VII-1. Major State Programs Affecting the Use of Wetlands in North Carolina.

AGENCY	PROGRAM OR ACT
<b>N.C. Department of Environment, Health, and Natural Resources:</b>	
Division of Coastal Management	<ul style="list-style-type: none"> <li>• Coastal Area Management Act (1974)</li> <li>• Dredge and Fill Act (1969)</li> <li>• Consistency Review for Federal Permits</li> <li>• Coordination of state review for proposed Section 404 projects</li> <li>• Coastal Reserve Program and National Estuarine Reserve System</li> </ul>
Division of Environmental Management	<ul style="list-style-type: none"> <li>• NPDES permits and non-discharge permits</li> <li>• 401 water quality certification permit program in oversight of 404 regulation of discharge of pollutants into waters (including wetlands)</li> <li>• 201 Plans and Grants and Loans for Wastewater Treatment Facilities</li> <li>• Nonpoint source water pollution management plan</li> </ul>
Division of Soil and Water Conservation	<ul style="list-style-type: none"> <li>• Quality control and review of Fish and Wildlife Service's National Wetlands Inventory mapping project in North Carolina.</li> <li>• Public information materials on wetlands.</li> <li>• Agriculture Cost-share Program for Best Management Practices</li> <li>• Small Watershed Act (1959)</li> </ul>
Division of Forest Resources	<ul style="list-style-type: none"> <li>• Development of Forestry Best Management Practices Guidelines for wetlands.</li> <li>• Cost-sharing grants to reduce runoff in nutrient-sensitive areas.</li> </ul>
Division of Marine Resources	<ul style="list-style-type: none"> <li>• Management, research, enforcement, and enhancement of estuarine and marine fisheries.</li> </ul>
Division of Parks and Recreation	<ul style="list-style-type: none"> <li>• Natural Heritage Inventory and Protection Plan.</li> <li>• Natural Heritage Program review of 404 and CAMA permit applications in wetlands.</li> <li>• Acquisition and maintenance of the state parks system, including wetland areas.</li> <li>• Systemwide Plan for the State Parks System.</li> <li>• Statewide Comprehensive Outdoor Recreation Plan, including the Wetlands Protection Plan.</li> </ul>
Division of Land Resources	<ul style="list-style-type: none"> <li>• Dam Safety Act (1967)</li> <li>• Sedimentation Pollution Control Act (1973)</li> <li>• Mining Act (1971)</li> </ul>
Division of Environmental Health	<ul style="list-style-type: none"> <li>• Rules for location of septic tanks in wetlands.</li> </ul>
Division of Water Resources	<ul style="list-style-type: none"> <li>• Instream Flow Need Determination</li> <li>• Aquatic Weed Control</li> <li>• Water Resources Development Project Grants</li> <li>• Stream Watch</li> </ul>
Division of Budget, Planning & Analysis	<ul style="list-style-type: none"> <li>• Coordinated DEHNR review of environmental impact statements and environmental assessments under federal and state Environmental Policy acts.</li> </ul>
Wildlife Resources Commission	<ul style="list-style-type: none"> <li>• Review of federal Clean Water Act 404 permit applications; adopted Policies and Guidelines for Conservation of Wetlands and Aquatic Habitats in 1988.</li> <li>• Acquisition and management of the state gamelands system, including wetland areas.</li> </ul>
Dept. of Crime Control and Public Safety	<ul style="list-style-type: none"> <li>• National Flood Insurance Program</li> </ul>

## Current Effectiveness of Wetlands Protection

North Carolina's Coastal Area Management Act (CAMA) and Dredge-and-Fill permit programs have helped curtail losses of salt marsh and brackish water wetlands that lie within designated "areas of environmental concern" along coastal rivers, estuaries, and the ocean.

While existing protection mechanisms have been valuable in slowing the wholesale destruction and alteration of wetlands that once existed, wetlands protection is not uniform throughout the state. Existing laws and regulations have been most effectively applied to protection of marshes in the coastal region. But only the Section 404 permit program of the federal Clean Water Act, administered by the U.S. Army Corps of Engineers, applies to other wetlands throughout North Carolina. The major existing regulatory tool at the state's disposal for wetlands protection is the 401 Water Quality Certification, which is required for all federal Section 404 permits for the discharge of dredged or fill material in wetlands. The U.S. Environmental Protection Agency is encouraging states to use 401 Water Quality Certification to the greatest extent possible for wetlands protection.

There are no state laws to protect wetlands outside the coastal region. The U.S. Army Corps of Engineers has increased its actions to stop wetlands damage and has assigned enforcement staff to locations in all regions of the state. Nevertheless, freshwater wetlands, Carolina bays, pocosins, riverine bottomlands, and bogs in North Carolina's inner Coastal Plain, Piedmont, and Mountain regions remain vulnerable and should therefore receive priority for acquisition and protection efforts.

The federal 404 permit program has been an imperfect tool for protecting wetlands from conversion to other uses. Projects up to 10 acres in size in many areas are generally exempt from the 404 permit program, which has led to cumulative losses of wetlands. The federal wetland program exempts the forest-related activities most destructive of wetlands from regulation. 404 permits are rarely issued for forestry-related activities, even though that industry converts natural wetlands to pine plantations at high rates. Exempt agricultural and forestry activities contribute to continued losses of wetlands. Due to limited funds and staff resources, monitoring and enforcement efforts have been inadequate to ensure compliance with even the existing wetlands protection laws.

Historically, conversion of wetlands for agricultural uses through drainage and clearing has caused significant losses of wetlands. The "Swampbuster" provision of the federal Food Security Act of 1985 helps discourage conversion of wetlands to farmlands. This provision denies farm program benefits on all acres operated by a landowner who converts wetlands to crop production. This change should help to slow the conversion of wetlands to agriculture.

## Wetlands Trends

Wetlands protection continues to be a growing public policy issue in North Carolina. Public awareness of the consequences of wetlands destruction has increased, due in part to major public information efforts initiated in 1988 and 1989 by a combination of citizen conservation organizations (including the N.C. Coastal Federation, Environmental Defense Fund, and N.C.

Wildlife Federation) as well as the N.C. Wildlife Resources Commission. The local news media have devoted special attention to the issue as well (the WRAL-TV "Save Our Coast" feature programs and public exhibitions is a prime example) in an effort to heighten public awareness of urgent wetlands issues.

A key element in wetlands protection is the location and inventory of existing wetlands. The U.S. Fish and Wildlife Service (FWS) is working to map all wetlands in the nation through its National Wetlands Inventory (NWI). That project is the first attempt to systematically and comprehensively map all North Carolina's wetlands. To date, of the 955 NWI maps, all but 13 maps covering areas along the North Carolina/South Carolina state line are completed or in final draft.

Completion of the NWI in North Carolina will provide an accurate estimate of the state's wetlands acreage and will show in detail where the wetlands are located. Updating the inventory will provide information on wetlands losses and status in the future.

The Center for Geographical Information and Analysis (CGIA) is currently under contract to digitize state wetlands. Most of the state east of Interstate 95 has been completed. The CGIA land use maps should give a better picture of the state's wetlands. The maps will include Wet Pine Flats, a type of wetland community not included in the National Wetlands Inventory.

Currently, the Department of Environment, Health, and Natural Resources has no policy to guide its divisions in carrying out their responsibilities for wetlands protection under existing statutory authority. The Division of Environmental Management uses the "Interim Guidance for Wetlands Protection" to work toward the goal of "no net loss" of wetlands by acreage and function within the purview of existing state law. It is also the purpose of the guidance to provide permit applicants with a timely, coordinated, and consistent agency response when wetlands are involved.

The Environmental Management Commission to date has designated seven sections of estuarine water bodies as Outstanding Resource Waters, for which anti-degradation water quality standards and regulations have been adopted. Although not directly tied to wetlands management, the regulations will have the effect of restricting development in the vicinity of those sounds.

Wetlands inventory and protection planning was a major component of the Albemarle-Pamlico Estuarine Study, a five-year project sponsored by many state and federal agencies and funded mainly by the U.S. Environmental Protection Agency. The study (APES) was designed to restore and protect the natural resources and water quality of the Tidewater region of northeastern North Carolina (a 32 county area). Considerable attention is directed to wetlands-related topics and protection plans for the estuaries and associated wetlands. Recommendations from this study have been made.

In 1988 the N.C. Wildlife Resources Commission adopted and implemented *Policies and Guidelines for Conservation of Wetlands and Aquatic Habitats*, which established consistency in standards and review procedures throughout the agency. The guidelines broadened use of field personnel throughout the state, allowing many more projects to receive adequate review for wetlands habitat protection needs.

The N.C. Division of Forest Resources, in cooperation with the N.C. State University Extension Service, the forestry industry, and private landowners, is researching the problem of maintaining forested wetlands for silvicultural uses without seriously impairing the other functions and benefits of wetlands. North Carolina's forested wetlands account for about 2.7 million acres or 15 percent of the total forested land in the state. Guidelines are being developed for Forestry Best Management Practices, which can allow silviculture and logging to continue with minimum impairment of the hydrologic functioning of forested wetlands. Proper harvesting procedures, construction and maintenance of forest roads, and forest regeneration techniques are vital if forested wetlands are to continue providing their many benefits in addition to timber resources.

A variety of actions by other state and federal agencies are likely to occur as agencies review their programs to determine how to implement the goals and recommendations of the National Wetlands Policy Forum. As one example, in 1989 four federal agencies with jurisdiction over various aspects of wetlands protection — the Corps of Engineers, the Environmental Protection Agency, the Fish and Wildlife Service, and the Soil Conservation Service — agreed to use the same wetlands delineation methods, which removes the confusion over jurisdictional boundaries for the various wetlands regulatory programs that previously used differing wetlands delineation methods.

The federal Emergency Wetlands Act of 1986 and the Wetland Reserve Program promote the conservation of wetlands through state and federal cooperation. The Act provides for federal wetland acquisition and promotes the use of Land and Water Conservation Fund monies for acquisition of wetlands for public outdoor recreation. The Department of Environment, Health, and Natural Resources has been working with the FWS to establish priorities for wetlands conservation in North Carolina. Those priorities will be presented in a following section of this report.

### Issues of National Concern

There are opportunities to do more to protect wetlands at both the state and national levels. The following issues of national concern have been identified:

1. Completion of the National Wetlands Inventory should be expedited, including completion of wetlands maps, analyses, and summary of findings for all states.
2. Federal legislation for permitting programs for alteration or construction in or near wetlands do not adequately protect wetlands. Activities currently exempt from federal permit programs, such as agriculture and forestry, may disturb some wetland functions. A process oriented to protect wetlands, not to permit activities in wetlands, is needed if the nation's wetlands are to be protected.
3. State and federal agencies should place a high priority on identifying, describing, acquiring, and protecting the most important and threatened remaining wetlands in the nation and in each state.
4. Evaluation and protection of wetlands on existing public lands is needed. Many

freshwater wetland sites on federal lands in North Carolina are currently subject to destruction by the management agencies. Agency policies should stress wetlands and riparian areas protection.

5. Wetlands need to be monitored. Monitoring should include the identification of non-point source pollution.
6. Measures to channel and guide growth should be used wherever possible to halt further wetlands destruction. Existing tax or other subsidies and incentives contributing to wetlands conversion should be removed.
7. Provide the Corps of Engineers with clear jurisdictional directive to clarify which wetlands are covered by the 404 permitting program. A clear definition of normal agriculture and silviculture is needed.
8. Extend federal regulatory authority to freshwater wetlands not now regulated by Section 404.
9. Increase federal support and direction for research to establish the values, effects, and costs of wetlands actions and to aid policy development and management decisions.
10. Amend the National Flood Insurance Act of 1968 to discourage rebuilding of structures substantially damaged by floods and to prohibit filling of fringe areas of flood areas.
11. Increase federal support to state wetlands protection programs through financial and technical assistance, oversight, centralized data base, research, and acquisition funds.
12. Establish a consistent wetlands mitigation policy. Projects involving unavoidable wetlands modification should have appropriate mitigation measures developed and implemented to ensure that no net loss of wetlands occurs.
13. Funding is necessary for all the above-mentioned inventories, mapping, research, regulation, and acquisition; sources must be identified and developed.

Similar recommendations were made late in 1988 by the National Wetlands Policy Forum (NWPF), the body representing a broad range of public and private sectors, convened by The Conservation Foundation at the request of EPA to review existing federal policies, laws, and programs and major policy options for protecting and managing the nation's wetlands. The centerpiece of its recommendations was the need to establish a national wetlands protection goal to guide all government programs affecting wetlands. As previously stated, the NWPF recommended:

*...the nation establish a national wetlands protection policy to achieve no overall net loss of the nation's remaining wetlands base, as defined by acreage and function, and to restore and create wetlands, where feasible, to increase the quality and quantity of the nation's wetlands resource base.*

The NWPF report explained:

*Although calling for a stable and eventually increasing inventory of wetlands, the goal does not imply that individual wetlands will in every case be untouchable or that the no-net-loss standard should be applied on an individual permit basis — only that the nation's overall wetlands base reach equilibrium between losses and gains in the short run and increase in the long run.*

To achieve this goal, a number of recommendations were made:

- institute a more effective wetlands regulatory program;
- provide private wetland owners with better incentives to protect wetlands;
- expand public and private wetlands acquisition and preservation programs; and
- reduce wetlands losses resulting from government programs that either affect wetlands directly or encourage private landowners to alter them.

Also recommended are:

- increased research efforts on the functions, uses, and benefits provided by wetlands, and management techniques to support these;
- measures to effectively restore and create viable wetlands; and
- adequate public education to disseminate information on wetlands values and protection measures.

Preparation of a state wetlands conservation plan by each state is recommended as a foundation for its wetlands protection and management activities.

### Wetlands Protection Alternatives

A variety of approaches could be combined more effectively to ensure protection for wetlands. Those alternatives were described in the SCORP Wetlands Addendum (1988) and may be summarized to include:

- Establishment of comprehensive wetlands protection policies and programs.
- Wetlands acquisition by federal, state, and local government agencies or private conservation organizations.
- Increased public education.
- Expansion of land use and wetlands conversion regulations.
- Improved standards and policies for agricultural and silvicultural practices.
- Completion of wetlands and critical natural areas inventories.
- Guided investments in public works projects.
- Greater involvement of local governments.
- Establishment of mitigation policies and requirements.
- Financial (tax) incentives for wetlands protection and financial disincentives for wetlands destruction.

A number of protection efforts related to wetlands protection were identified in *The Report of the President's Commission on Americans Outdoors, the Legacy, the Challenge* (1987), which should be incorporated in the National Wetlands Conservation Plan.

- *Remove incentives, such as direct subsidies and tax code provisions, that promote alteration or destruction of wetlands. The Coastal Barrier Resources Act and the Food Security Act of 1985 represent positive approaches to removal of incentives to wetlands destruction.*
- *Develop a national program of wetlands conservation to assist the Department of the Interior in achieving the goals of the North American Waterfowl Management Plan.*
- *Require federal land and water development and permitting and licensing agencies (e.g., Bureau of Reclamation, Corps of Engineers, and Soil Conservation Service) to develop specific wetlands conservation measures in all subsequent project planning, permitting, licensing, and authorization reports.*
- *Require existing water resource development projects to have wetlands conservation measures incorporated into their operation and maintenance programs.*
- *Establish a consistent wetlands mitigation policy. Projects involving unavoidable wetlands modification should have appropriate mitigation measures developed and implemented to ensure that no net loss of wetlands occurs.*

### **Priorities for Wetlands Acquisition**

Section 301 of the Emergency Wetlands Resources Act (P.L. 99-645) directs the U.S. Department of the Interior to develop and periodically review and revise a National Wetlands Priority Conservation Plan. The purpose of this plan is to identify important wetlands that warrant consideration for federal or state acquisition under the Land and Water Conservation Fund and as a guide for the federal appropriations process.

Accordingly, the individual field offices of the U.S. Fish and Wildlife Service (FWS) were directed to compile lists of wetlands deserving acquisition priorities within each state. Sites on the list were required to meet three threshold criteria identified by Congress:

1. wetland types that have declined within an ecoregion;
2. wetland sites subject to identifiable threat of loss or destruction; and
3. wetland sites with diverse functions and values and/or especially high or special values for specific wetlands functions.

In 1988, the FWS Raleigh field office compiled a preliminary nomination list of priority wetlands in North Carolina that totalled 353 sites. Most were nominated by the N.C. Department of Environment, Health, and Natural Resources, coordinating responses from several state agencies. Late in 1988, the FWS convened an advisory panel composed state and federal agency representatives and academic researchers. The panel was asked to review the entire preliminary nomination list and select the highest priority wetlands sites to recommend for protection. The FWS then compiled criteria forms for the highest priority wetland sites.

For a listing of the highest priority wetland sites in the FWS Wetlands Conservation Plan for North Carolina, consult the U.S. Fish and Wildlife Service.

## RECOMMENDED ACTIONS FOR WETLANDS PROTECTION

A comprehensive program of state actions for wetlands protection may be a product of several current initiatives in North Carolina. The Department of Environment, Health, and Natural Resources is reviewing existing wetlands programs, regulations, and policies, making recommendations for improvement, and drafting interim Departmental policies and guidelines. The N.C. General Assembly in its 1989 session established a legislative study commission to evaluate state wetlands protection programs and to develop legislative proposals.

In the meantime, a number of interim protection strategies may be considered. The Environmental Defense Fund report recommends that those actions include the following:

- Denial of 401 water quality certification for proposed projects that would result in wetland destruction, unless the 404(b)(1) guidelines are met. Wetland destruction would be permitted only for those activities that are unavoidable.
- EMC classification of wetlands as special waters of the state, with associated standards to protect their uses.
- State decertification of general 404 permits causing significant adverse impacts.
- Complete the National Wetlands Inventory for North Carolina as soon as possible.
- Establish mitigation policies for unavoidable wetlands loss, with up-front, value-for-value replacement.
- Designate functional primary nursery areas, including those in inland waters.
- Develop economic incentives to reduce rates of wetlands loss.
- Implement a campaign to educate the public on the values and vulnerability of wetlands.



## VIII. 1995 - 2000 ACTION PLAN

### INTRODUCTION

The Action Plan identifies specific actions the state will take during 1995-2000 to improve the state's outdoor recreational resources. State agencies involved will include the Division of Coastal Management, Division of Environmental Management, Division of Parks and Recreation, Division of Forest Resources, and the Wildlife Resources Commission. Because of the changing priorities and limited resources available to many public recreation agencies, the completion dates presented herein are, by necessity, approximations.

The actions presented in this chapter are organized according to the five issue categories discussed in Chapter I: improving outdoor recreational resources and services; conserving natural resources; inadequate funding; effective partnerships; and the status of the state parks system.

### IMPROVED OUTDOOR RECREATION RESOURCES AND SERVICES

Goal: Provide improved outdoor recreation resources and services to meet the needs of a growing and changing population.

#### Actions

- The Division of Parks and Recreation will set priorities for funding acquisition and development of LWCF outdoor recreation projects based on how projects address issues and needs identified in the SCORP.
- DPR will use the Open Project Selection Process as a formal and objective method of selecting acquisition and development projects to be funded by LWCF.
- DPR will continue to promote and hold special events in state parks such as Civilian Conservation Corps Day at Hanging Rock and Civil War re-enactments at Fort Macon.
- Local governments and the N.C. Division of Travel and Tourism will continue to hold and promote special events such as Riverfest in Wilmington, Lazy Daze in Cary, and Artspllosure in Raleigh.
- DPR will continue to administer Adopt-a-Park grants, encourage individuals and groups to volunteer, and recognize volunteers for their contributions.
- The Wildlife Resources Commission will construct one to four new boating and fishing access areas per year and renovate three to six ramps per year.
- The WRC will conduct Carolina Anglers Teach Children How (CATCH) clinics annually throughout the state.

- The WRC will hold annual youth hunts.
- The N.C. DOT's Bicycle Program will undertake state bikeway system improvement projects such as signs, maps, and road improvements.
- Recreation Resources Services will publish an annual study of municipal and county park and recreation services and other studies as resources allow.
- RRS and the N.C. Recreation and Park Society will share information and provide training through workshops dealing with topics such as low maintenance and vandal-resistant facility design, swimming pool maintenance, and grant applications.
- The DPR will continue to offer interpretation and education programs at staffed state parks and recreation areas.
- The WRC will complete and begin holding programs at its Pisgah Environmental Education Center near Brevard.
- Consulting services will be offered to the public and private sectors through Recreation Resources Services, contingent upon renewal of the contract and availability of funds.
- The DPR will provide technical assistance to agencies and organizations in the areas of trail corridor planning, design, construction, maintenance, management, and funding.
- The DPR will conduct educational workshops on trails and public quarterly *Tarheel Trails*.

## CONSERVING NATURAL RESOURCES

Goal: Preserve, maintain, and promote the wise use of North Carolina's unique natural and scientific environment for the benefit of present and future generations.

### Actions

- The Division of Environmental Management will prepare 15 basin-wide management plans in order to communicate to policy makers, the regulated community, and the general public the state's rationale, approaches, and long-term strategies for its river basins.
- The DEM will continue to administer the Water Supply Watershed Protection Program so as to prevent pollutants from entering drinking water supplies.
- The Natural Heritage Program will continue to collect information about the occurrences and distribution of the rarest plants and animals and the highest quality natural communities of the state.
- The NHP will continue to provide landowners, agencies, corporations, scientists and others with information needed for effective planning, research, and protection efforts.

- The NHP will continue to seek grants and contracts to undertake field studies, particularly for ongoing county inventories.
- The NHP will compile information collected in the Biological and Conservation Database and continue to update existing information.
- The NHP will review plans for roads and bridges, airports, wastewater treatment plants, sewer lines, timber sales, dredging, and many other public and private construction and development projects to identify rare species and priority natural areas that might be affected by proposed projects so negative effects can be reduced or eliminated.
- The NHP will continue to assist landowners with appropriate protection measures through informing the landowners of the high ecological value of the site, providing useful information on protection and management needs, and discussing protection options.
- The NHP will continue to encourage landowners to dedicate property as a state nature preserve so as to preserve its natural values permanently.
- The NHP will continue to provide landowners with management advice and assistance to ensure that natural areas are successfully managed.
- The NHP will prepare a Biennial Protection Plan every two years to inform the governor, the General Assembly, and the public of program activities planned.
- The N.C. Division of Water Resources will continue the Stream Watch Program, including publication of a quarterly newsletter, to promote protection and enhancement of water quality and streamside habitat.
- The Natural Heritage Program, Wildlife Resources Commission, and Division of Forest Resources will organize a training workshop in prescribed burning methods for fire-dependent ecosystems.
- The Wildlife Resources Commission will train 4,000 educators annually through NC WILD and NC CATCH environmental education workshops.
- The WRC will continue to produce *Wildlife in North Carolina*, an educational magazine that promotes boating and hunting safety and the conservation of wildlife resources.
- The WRC will continue to incorporate agency environmental education programs into existing youth programs of other organizations.
- The WRC will continue to incorporate its NC CATCH and NC WILD programs into the school system and youth group curricula.
- The Division of Coastal Management will continue to manage estuarine research reserve sites for preservation, research, education, and recreation.

- The Division of Forest Resources will manage six educational state forests to promote a better understanding of the value of forests.

### **INADEQUATE FUNDING**

Goal: Sufficient funds to adequately meet the demand for quality recreational opportunities.

#### **Actions**

- The Division of Parks and Recreation will continue to request funding of positions needed to establish adequate staffing levels at state park units.
- The DPR will seek continued funding of the Parks and Recreation Trust Fund.
- The DPR will make new Land and Water Conservation Fund grants to local governments and state parks to address SCORP needs and continue to monitor post-completion responsibilities on old grants. Grant proposals directed toward SCORP needs will have a high priority for funding through the OPSP process.
- The DPR will make grants to local governments from the Parks and Recreation Trust Fund, supplementing local dollars to provide additional public recreational opportunities.
- The Department of Environment, Health, and Natural Resources will seek continued funding of the Parks and Recreation Trust Fund and the Natural Heritage Trust Fund to promote a stable funding source.

### **EFFECTIVE PARTNERSHIPS**

Goal: Develop a unified constituency that will work to improve outdoor recreational resources in the future.

#### **Actions**

- The N.C. Department of Environment, Health, and Natural Resources will cooperate with seven states, several federal agencies, industry, environmental organizations, academia, and other interested parties in the Southern Appalachian Mountains Initiative. The SAMI will deal with regional issues of air quality and its effects on resources in the Southern Appalachians.
- The N.C. Wildlife Resources Commission will continue efforts to expand Commission-managed acreage through cooperative efforts with Ducks Unlimited, the Natural Heritage Trust Fund, the Nature Conservancy, and other private and government agencies.
- The DEHNR will organize and promote Big Sweep annually, a day in which volunteers are mobilized to collect refuse at state parks, lakes, and trails.

- The DEHNR will cooperate with the Corps of Engineers during the revising of the reservoir master plans.
- The Division of Parks and Recreation will encourage state and federal agencies to consider SCORP-identified needs when planning for additional recreational facilities and areas.
- The DPR will continue to inspect LWCF projects to ensure local government compliance with federal regulations.
- The Natural Heritage Program will cooperate with academicians and private and agency biologists in the collection and sharing of information.
- The NHP will continue to cooperate with the Wildlife Resources Commission, U.S. Fish and Wildlife Service, Department of Agriculture, and other agencies to assist in the protection of endangered species.
- The NHP will continue to maintain the N.C. Registry of Natural Heritage Areas to encourage landowners to make voluntary, non-binding commitments to preserve their ecologically significant sites.
- The Division of Water Resources will coordinate a statewide conference on rivers in 1995 to discuss development of a statewide rivers assessment. Conference participants will include many state and federal agencies and others with interests in rivers.
- The Division of Water Resources will work with TVA and the USFS concerning lake level management and in stream flows needed to enhance recreational opportunities.
- The Division of Coastal Management will continue to encourage and assist local governments in the establishment of public accesses to beaches, sounds, and tidal creeks.
- The DOT Bicycle Program will assist local governments with the development of bicycle programs and the construction of bicycle facilities.
- The Division of Parks and Recreation will continue to cooperate with and support efforts of numerous federal, state, and local governments and volunteer trail organizations as they develop trails.
- The DPR, through Recreation Resources Service, will provide LWCF workshops for local governments interested in seeking funding assistance.
- RRS will continue to conduct monthly statewide training sessions via UNC's concert system.

## STATUS OF THE STATE PARKS SYSTEM

Goal: Address needs identified in the systemwide plan's evaluation of the North Carolina state parks system.

### Actions

The actions for improving the state parks system are based on an evaluation of the current system, trends affecting the system, an evaluation of the significant natural resources in North Carolina, and the public's need for recreational resources as described in the *Systemwide Plan of the North Carolina State Parks System*.

The actions are grouped as follows: interpretation and education; natural and cultural resource protection; park operations; capital improvements; planning; community outreach and public support; and system expansion.

#### Interpretation and Education

- The Division of Parks and Recreation will expand environmental education programs by completing 30 Environmental Education Learning Experiences (EELEs) and providing a minimum of two educator workshops per EELE.
- DPR will expand facilities by developing the environmental education center at Goose Creek and the visitor centers, trails, and outdoor shelters as proposed in the bond package.
- DPR will increase the quality and diversity of programming by having each park develop a minimum of two new programs per year. This would require an increase in training opportunities as well as supplies and equipment available to staff.
- DPR will provide a minimum of one training program per year to every staff person who has regular public contact.
- DPR will complete the development of park general information brochures and reprint all that have been previously printed.
- DPR will improve the quality and increase the diversity of exhibits and museums by developing exhibits in all recently built visitor centers and in those projected through this five-year cycle.

#### Natural and Cultural Resource Protection — Systemwide

- DPR will review all park construction projects and recommend changes, if needed, to ensure minimal environmental impact and compliance with applicable environmental laws and regulations.
- DPR will conduct at least one comprehensive resource management training program for

all park superintendents.

- DPR will continue to expand and update natural resource inventories of all parks, with the highest priorities at Lake Waccamaw, Hanging Rock, South Mountains, Mount Mitchell, Jones Lake, Bushy Lake, Dismal Swamp, New River, and Lumber River.
- DPR will continue to expand and update cultural resource inventories at individual parks and on a systemwide level.
- DPR will collect information needed to develop fire management programs in the Piedmont and Mountain parks.
- DPR will seek funding or volunteer assistance to address the parks system's most pressing research needs: hydrology of the sinkponds at Carolina Beach; potential effects of gypsy moth infestations and alternative control methods; dune migration rates and patterns at Jockeys Ridge; forest decline and long-term effects on natural communities at Mount Mitchell; impacts of non-native fish on aquatic communities at South Mountains and Stone Mountain; and deer populations levels and ecological effects.
- DPR will continue to develop resource management guidelines for the parks system.
- DPR will provide additional resource management assistance at the district and park levels.

#### Natural and Cultural Resource Protection — Park Specific

- DPR will work with upstream water users and regulatory agencies to protect water quality and quantity in the Eno River.
- DPR will resolve the problem of sand encroachment onto adjacent private properties at Jockeys Ridge.
- DPR will develop a comprehensive water-management plan for Lake Waccamaw to provide long-term protection of lake levels and water quality.
- DPR will request the Department of Transportation close SR 1332 at Medoc Mountain, after the bridge replacement on SR 1332.
- DPR will explore alternative means of protecting the working landscape at New River, coordinating with other agencies with regulatory or management authority.
- DPR will monitor the impacts of hiking and climbing activities at Crowders Mountain and recommend management actions needed to reduce impacts.
- DPR will continue prescribed burning in fire-adapted communities within the parks and accelerate the implementation of prescribed burning programs at Singletary Lake and Carolina Beach.

- DPR will monitor visitor impacts on nesting colonial waterbirds and sea turtles at Fort Macon, Hammocks Beach and Fort Fisher, and recommend management actions needed to reduce impacts.
- DPR will monitor aquatic vegetation type and amount at Merchants Millpond and develop a water-quality management plan for the millpond and its watershed.
- DPR will resolve the outstanding "wind easements" at Pettigrew.

#### Land Acquisition

- DPR will use LWCF assistance to acquire additional high priority state park lands.
- DPR will address 30 percent of the identified land acquisition needs.
- DPR will establish a continuous source of funding for land acquisition.
- DPR will continue to expand and update park boundary surveys and to locate and mark boundary lines.
- DPR will convert all park boundary maps and most resource management maps to GIS.
- DPR will resolve the outstanding mineral reservation at Stone Mountain.

#### Park Operations

- DPR will improve visitor services by allocating sufficient professional staff to be available to park visitors during all operating hours.
- DPR will maintain park facilities by providing annual force account maintenance funds that are a percentage of the physical plant value.
- DPR will increase staff training to improve productivity and safety in the workplace.
- DPR will evaluate using cooperating associations to increase park programs and revenues.
- DPR will develop and implement disaster preparedness guidelines and implement improved search and rescue procedures.
- DPR will increase district operations and technical support staff to improve the following services: field staff training, organizing multiple-site project assistance, and technical expertise.

#### Capital Improvements

- DPR will establish a consistent source of capital improvement funding.



- DPR will reduce the capital improvement project needs list by 30 percent.
- DPR will expand handicap accessibility to state park facilities. All new projects will provide maximum accessibility in accordance with the standards of the American Disabilities Act. Every funding opportunity will be pursued for modifications to existing facilities.
- DPR will implement standard designs. Develop standardized designs for washhouses.
- DPR will complete Falls and Jordan lakes projects.
- DPR will develop trail construction standards in greater detail.
- DPR will pursue new technologies appropriate for state parks; explore using recycled materials, low waste systems, renewable energy and energy savings; and use environmentally friendly materials.
- DPR will pursue alternative sources of construction assistance, including, but not limited to, prisoners, youth development programs, and private sector volunteers.
- DPR will explore state/federal partnership to address the needs at Kerr Lake State Recreation Area.

### Planning

- DPR will initiate general management plans for state park system units that do not have general management plans, five per year.
- DPR will revise the Dismal Swamp Master Plan by 1995.
- DPR will initiate automated mapping of state parks system units using a geographic information system (GIS) to locate buildings, roads, and trails in half the park system units.
- DPR will adopt the Lumber River State Park Master Plan.
- DPR will update the Systemwide Plan for the State Parks System.

### Community Outreach and Public Support

- DPR will keep the list of volunteer opportunities updated.
- DPR will hold training workshops on volunteer program management for the volunteer coordinators in individual state park units.
- DPR will support the state park advisory committees by holding an annual conference

to provide information on state parks system objectives and related issues.

- DPR will have regular park advisory committee meetings to keep members informed of actions and decisions affecting the parks.
- DPR will develop and fund public awareness and recruitment efforts.
- DPR will recruit corporate support and funding of Division needs.
- DPR will find local businesses and organizations to sponsor each park unit.

#### System Expansion

- DPR will expand the state parks system according to the priorities identified in Chapter IV of the systemwide plan.
- DPR will support the expansion of long-distance trails in North Carolina according to the priorities identified in Chapter II of the systemwide plan.
- To improve the state parks system, new units must contain biological, geological, scenic, recreational, or archaeological resources of statewide significance.

**APPENDIX A**

**COUNTY PROFILES**

Appendix A consists of county profiles for each North Carolina county. Each profile provides county level information on public outdoor recreation supply and needs relative to other counties and to the statewide median. Outdoor recreation facilities operated exclusively by public school systems are not included in the profiles.

### DATA SOURCES

The operating budget and facility data were extracted from the *Municipal and County Park and Recreation Study*, prepared by NCSU's Recreation Resources Service, and from personal communications. The response rate to the 1990-91 NCSU study was 79.7 percent, with 149 of 187 park and recreation departments responding. Additional responses to inquiries made by the Division of Parks and Recreation resulted in an overall response rate of 95.7 percent (178 of 187 departments responding). Six departments provided incomplete information, and three did not respond.

The following municipalities provided partial responses: Aberdeen, Ahoskie, Andrews, Gibsonville, and Lillington. Cherryville, Marshville, and Wilkesboro did not respond at all and are not represented in this report. Likewise, Avery County is also not represented.

County population estimates were provided by the N.C. Office of State Planning in cooperation with the U.S. Bureau of the Census. Natural heritage information was provided by the Natural Heritage Program within the N.C. Division of Parks and Recreation.

# ALAMANCE COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Alamance County	109,119	\$622,505	\$5.70
Burlington	39,739	\$1,912,735	\$48.13
Haw River	1,921	\$78,282	\$40.75
Mebane	4,314	\$159,677	\$37.01
Graham	10,457	\$292,700	\$27.99
County Total	109,119	\$3,065,899	\$28.67

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	2,421	44	309	2
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	0	n/a	8	79
Baseball Fields	15	7,130	11,370	29
Basketball Courts	13	8,227	11,499	36
Campsites, Tent & Trailer	0	n/a	513	76
Football Fields	3	35,652	54,337	36
Golf Courses	9.0	11,884	20,934	21
Playgrounds/Totlots	21	5,093	9,752	19
Soccer Fields	12	8,913	22,076	23
Softball Fields	11	9,723	11,260	43
Swimming Pools	3	35,652	52,943	38
Tennis Courts	36	2,971	3,996	30
Trail Miles (All Types)	28.6	3,745	7,823	36

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
None	16	0	None

# ALEXANDER COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Alexander County	28,035	\$186,280	\$6.64

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	69	412	309	64
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	1,000	28	8	63
Baseball Fields	1	28,434	11,370	78
Basketball Courts	4	7,109	11,499	24
Campsites, Tent & Trailer	55	517	513	51
Football Fields	4	7,109	54,337	4
Golf Courses	1.0	28,434	20,934	75
Playgrounds/Totlots	3	9,478	9,752	49
Soccer Fields	5	5,687	22,076	11
Softball Fields	7	4,062	11,260	7
Swimming Pools	0	n/a	52,943	67
Tennis Courts	7	4,062	3,996	52
Trail Miles (All Types)	0.0	n/a	7,823	84

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Rocky Face Mountain	52	0	None

# ALLEGHANY COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Alleghany County	9,749	\$0	\$0.00

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	4	2,566	309	91
Regional Park Acres	4,025	2	0	3
Dispersed Use Acres	5,688	2	8	35
Baseball Fields	0	n/a	11,370	86
Basketball Courts	1	9,749	11,499	42
Campsites, Tent & Trailer	96	102	513	23
Football Fields	0	n/a	54,337	63
Golf Courses	2.5	3,900	20,934	4
Playgrounds/Totlots	1	9,749	9,752	50
Soccer Fields	0	n/a	22,076	71
Softball Fields	0	n/a	11,260	83
Swimming Pools	0	n/a	52,943	67
Tennis Courts	0	n/a	3,996	91
Trail Miles (All Types)	30.9	316	7,823	13

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
	166	0	None
Laurel Branch Bog			
Laurel Fork Robin Runaway Site			
Susan's Bog			
Stone Mountain State Park			
Stone Mountain State Park/ Wolf/Cedar Rock			
Stone Mountain State Park/ Garden Creek			
Doughton Park			

# ANSON COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Anson County	26,221	\$192,034	\$7.32

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	100	231	309	39
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	10,400	2	8	36
Baseball Fields	2	11,572	11,370	52
Basketball Courts	4	5,786	11,499	17
Campsites, Tent & Trailer	0	n/a	513	76
Football Fields	0	n/a	54,337	63
Golf Courses	1.0	23,144	20,934	58
Playgrounds/Totlots	0	n/a	9,752	85
Soccer Fields	0	n/a	22,076	71
Softball Fields	0	n/a	11,260	83
Swimming Pools	1	23,144	52,943	26
Tennis Courts	1	23,144	3,996	89
Trail Miles (All Types)	2.5	9,258	7,823	56

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Millseat Outcrop Pee Dee National Wildlife Refuge	50	2	None



# ASHE COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Ashe County	23,486	\$131,144	\$5.58

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	87	270	309	45
Regional Park Acres	1,522	15	0	12
Dispersed Use Acres	5,141	5	8	45
Baseball Fields	2	11,743	11,370	53
Basketball Courts	4	5,872	11,499	18
Campsites, Tent & Trailer	295	80	513	18
Football Fields	0	n/a	54,337	63
Golf Courses	0.5	46,972	20,934	87
Playgrounds/Totlots	2	11,743	9,752	63
Soccer Fields	2	11,743	22,076	34
Softball Fields	0	n/a	11,260	83
Swimming Pools	0	n/a	52,943	67
Tennis Courts	6	3,914	3,996	48
Trail Miles (All Types)	5.1	4,651	7,823	41

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Bluff Mountain Preserve Mount Jefferson State Park	281	3	None

# AVERY COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Avery County	14,946	Not Reported	\$0.00

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	14	1,091	309	79
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	35,151	0.4	8	15
Baseball Fields	0	n/a	11,370	86
Basketball Courts	0	n/a	11,499	80
Campsites, Tent & Trailer	503	30	513	5
Football Fields	0	n/a	54,337	63
Golf Courses	8.0	1,868	20,934	1
Playgrounds/Totlots	1	14,946	9,752	70
Soccer Fields	0	n/a	22,076	71
Softball Fields	0	n/a	11,260	83
Swimming Pools	1	14,946	52,943	12
Tennis Courts	0	n/a	3,996	91
Trail Miles (All Types)	88.3	169	7,823	8

## Natural Heritage Inventory Information: See Appendix C for Details

<i>Dedicated Natural Heritage Areas</i> Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
	327	6	None
<i>Big Yellow Mountain Preserve</i>			
Flat Rock Mountain			
Grandfather Mountain Corridor			
High Haven			
Pineola Bog			
Roan Mountain Massif (US Forest Service)			
Grandfather Mountain (Morton)			
Hanging Rock Ridge Preserve			
Roan Mountain Massif (Southern Appalachian Highlands Conservancy)			

# BEAUFORT COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Washington	9,139	\$479,934	\$52.51

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	104	408	309	63
Regional Park Acres	1,596	27	0	17
Dispersed Use Acres	3,000	14	8	54
Baseball Fields	2	21,221	11,370	68
Basketball Courts	5	8,488	11,499	38
Campsites, Tent & Trailer	587	72	513	15
Football Fields	0	n/a	54,337	63
Golf Courses	1.0	42,441	20,934	86
Playgrounds/Totlots	4	10,610	9,752	60
Soccer Fields	2	21,221	22,076	49
Softball Fields	3	14,147	11,260	70
Swimming Pools	0	n/a	52,943	67
Tennis Courts	8	5,305	3,996	64
Trail Miles (All Types)	6.8	6,288	7,823	46

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Goose Creek State Park	90	5	Completed 1992

# BERTIE COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Bertie County	20,154	\$0	\$0

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	22	924	309	79
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	25,446	0.8	8	24
Baseball Fields	1	20,154	11,370	67
Basketball Courts	1	20,154	11,499	66
Campsites, Tent & Trailer	10	2,015	513	64
Football Fields	0	n/a	54,337	63
Golf Courses	0.5	40,308	20,934	85
Playgrounds/Totlots	1	20,154	9,752	76
Soccer Fields	0	n/a	22,076	71
Softball Fields	0	n/a	11,260	83
Swimming Pools	0	n/a	52,943	67
Tennis Courts	2	10,077	3,996	83
Trail Miles (All Types)	0.0	n/a	7,823	84

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
None	62	1	Completed 1990

# BLADEN COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Bladen County	29,065	\$71,750	\$2.47

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	78	372	309	60
Regional Park Acres	4,038	7	0	6
Dispersed Use Acres	32,030	0.9	8	26
Baseball Fields	7	4,152	11,370	12
Basketball Courts	2	14,533	11,499	58
Campsites, Tent & Trailer	297	98	513	22
Football Fields	1	29,065	54,337	31
Golf Courses	2.0	14,533	20,934	30
Playgrounds/Totlots	2	14,533	9,752	70
Soccer Fields	2	14,533	22,076	42
Softball Fields	3	9,688	11,260	42
Swimming Pools	0	n/a	52,943	67
Tennis Courts	4	7,266	3,996	76
Trail Miles (All Types)	79.0	368	7,823	15

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
	248	4	None
Bladen Lakes State Forest Carolina Bays			
Cedar Swamp Seep Preserve			
Jones Lake State Park			
Salters Lake			
Turkey Oak (Bladen Lakes State Forest)			
Turkey Oak (Singletary Lake State Park)			
Walkers Bluff			

# BRUNSWICK COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Brunswick County	52,721	\$878,608	\$16.67
Long Beach	3,985	\$167,236	\$41.97
Southport	2,363	\$140,858	\$59.61
County Total	52,721	\$1,186,702	\$22.51

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	285	185	309	26
Regional Park Acres	1,249	42	0	21
Dispersed Use Acres	14,295	4	8	41
Baseball Fields	19	2,775	11,370	4
Basketball Courts	20	2,636	11,499	2
Campsites, Tent & Trailer	375	141	513	26
Football Fields	10	5,272	54,337	3
Golf Courses	8.0	6,590	20,934	7
Playgrounds/Totlots	11	4,793	9,752	17
Soccer Fields	10	5,272	22,076	8
Softball Fields	10	5,272	11,260	15
Swimming Pools	1	52,721	52,943	50
Tennis Courts	31	1,701	3,996	4
Trail Miles (All Types)	11.3	4,686	7,823	42

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
	716	15	In Progress
Bald Head State Natural Area:			
Battery Island			
Bluff Island			
East Bay and Beaches			
Boiling Spring Lake Powerline Savanna			
Green Swamp Preserve			
Lower Cape Fear River Islands			
Military Ocean Terminal Sunny Point			

# BUNCOMBE COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Buncombe County	176,714	\$646,638	\$3.66
Asheville	63,326	\$4,055,987	\$64.05
Black Mountain	7,069	\$733,515	\$103.77
County Total	176,714	\$5,436,140	\$30.76

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	1,341	132	309	14
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	37,647	5	8	46
Baseball Fields	26	6,797	11,370	25
Basketball Courts	25	7,069	11,499	22
Campsites, Tent & Trailer	656	269	513	36
Football Fields	4	44,179	54,337	46
Golf Courses	7.5	23,562	20,934	60
Playgrounds/Totlots	41	4,310	9,752	14
Soccer Fields	50	3,534	22,076	2
Softball Fields	23	7,683	11,260	26
Swimming Pools	6	29,452	52,943	35
Tennis Courts	77	2,295	3,996	16
Trail Miles (All Types)	98.2	1,800	7,823	31

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
	314	8	In Progress
Bent Creek Heartleaf			
Broad River			
High Swan			
Montreat Watershed:			
Montreat Cottagers			
Mountain Retreat			
North Fork Watershed			
Sandy Bottom (Long Branch)			
The Craggies (Blue Ridge Parkway)			
The Craggies (US Forest Service)			
Walker Cove			
Mount Pisgah (Blue Ridge Parkway)			

# BURKE COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Burke County	76,793	\$80,080	\$1.04
Morganton	15,332	\$753,932	\$49.17
Valdese	3,958	\$387,442	\$97.89
County Total	76,793	\$1,221,454	\$15.91

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	223	344	309	55
Regional Park Acres	7,329	10	0	9
Dispersed Use Acres	57,712	1	8	31
Baseball Fields	17	4,517	11,370	15
Basketball Courts	15	5,120	11,499	15
Campsites, Tent & Trailer	37	2,075	513	66
Football Fields	10	7,679	54,337	6
Golf Courses	3.0	25,598	20,934	68
Playgrounds/Totlots	7	10,970	9,752	61
Soccer Fields	8	9,599	22,076	26
Softball Fields	23	3,339	11,260	3
Swimming Pools	3	25,598	52,943	30
Tennis Courts	22	3,491	3,996	43
Trail Miles (All Types)	150.4	511	7,823	18

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
	128	6	None
Linville Falls			
Linville Gorge			
South Mountains State Park:			
Bear Oak			
High Shoals Falls			



# CABARRUS COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Cabarrus County	100,878	\$729,949	\$7.24
Concord	29,884	\$1,000,435	\$33.48
County Total	100,878	\$1,730,384	\$17.15

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	328	308	362	45
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	0	n/a	7	79
Baseball Fields	19	5,309	12,056	16
Basketball Courts	4	25,220	15,576	62
Campsites, Tent & Trailer	0	n/a	505	74
Football Fields	4	25,220	77,344	20
Golf Courses	3.0	33,626	20,934	78
Playgrounds/Totlots	5	20,176	11,727	64
Soccer Fields	12	8,407	22,056	19
Softball Fields	9	11,209	12,478	42
Swimming Pools	1	100,878	58,097	60
Tennis Courts	21	4,804	4,994	48
Trail Miles (All Types)	0.0	n/a	7,660	82

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Concord Ring Dike	48	1	None

# CALDWELL COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Hudson	2,806	\$77,915	\$27.77
Lenoir	15,542	\$1,138,652	\$73.26
Granite Falls	3,281	\$90,000	\$27.43
County Total	70,941	\$1,306,567	\$18.42

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	195	363	309	58
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	53,158	1	8	32
Baseball Fields	3	23,647	11,370	72
Basketball Courts	10	7,094	11,499	23
Campsites, Tent & Trailer	47	1,509	513	61
Football Fields	0	n/a	54,337	63
Golf Courses	5.0	14,188	20,934	28
Playgrounds/Totlots	9	7,882	9,752	38
Soccer Fields	7	10,134	22,076	28
Softball Fields	7	10,134	11,260	44
Swimming Pools	4	17,735	52,943	16
Tennis Courts	18	3,941	3,996	49
Trail Miles (All Types)	48.3	1,469	7,823	27

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Grandfather Mountain (Morton)	29	1	None

# CAMDEN COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Camden County	5,987	\$0	\$0.00

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	0	n/a	309	95
Regional Park Acres	14,344	0	0	1
Dispersed Use Acres	9,099	0.7	8	21
Baseball Fields	0	n/a	11,370	86
Basketball Courts	0	n/a	11,499	80
Campsites, Tent & Trailer	0	n/a	513	76
Football Fields	0	n/a	54,337	63
Golf Courses	0.0	n/a	20,934	90
Playgrounds/Totlots	0	n/a	9,752	85
Soccer Fields	0	n/a	22,076	71
Softball Fields	0	n/a	11,260	83
Swimming Pools	0	n/a	52,943	67
Tennis Courts	0	n/a	3,996	91
Trail Miles (All Types)	0.0	n/a	7,823	84

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Dismal Swamp State Natural Area:	36	2	Completed 1990
White Cedar			
Pocosin			
Fern Habitat			
Great Dismal Swamp National Wildlife Refuge			

# CARTERET COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Carteret County	53,721	\$405,000	\$7.54
Morehead City	6,095	\$168,000	\$27.56
Emerald Isle	2,538	\$148,746	\$58.61
County Total	53,721	\$721,746	\$13.44

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	262	205	309	33
Regional Park Acres	668	80	0	30
Dispersed Use Acres	103,756	0.5	8	18
Baseball Fields	6	8,954	11,370	41
Basketball Courts	10	5,372	11,499	16
Campsites, Tent & Trailer	1,133	47	513	10
Football Fields	1	53,721	54,337	50
Golf Courses	4.0	13,430	20,934	26
Playgrounds/Totlots	17	3,160	9,752	4
Soccer Fields	10	5,372	22,076	10
Softball Fields	4	13,430	11,260	66
Swimming Pools	0	n/a	52,943	67
Tennis Courts	14	3,837	3,996	45
Trail Miles (All Types)	75.8	709	7,823	21

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas <i>Dedicated Natural Heritage Areas</i>	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Brant Island	562	10	Completed 1992
Cape Lookout National Seashore			
Cedar Island Nat'l Wildlife Refuge			
Cedar Point/White Oak River Marshes			
Fort Macon State Park			
Hadnot Creek			
Lake Ellis Simon			
Millis Road Savanna			
New Dump Island			
North River Marshlands			
Patsy Pond			
<i>Rachel Carson Estuarine Reserve</i>			
Salter Path Dunes			
Sandbag Island			
Theodore Roosevelt State Natural Area			
Walkers Mill Pond (Chester & Epperly)			
Walkers Mill Pond (Houston)			
Wildberry Woods			
Bogue Inlet Outcrop			
Masonboro Outcrop			
New River Inlet Outcrop			
Topsail Outcrop			

# CASWELL COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Caswell County	20,829	\$0	\$0

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	15	1,389	309	85
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	16,010	1	8	30
Baseball Fields	0	n/a	11,370	86
Basketball Courts	2	10,415	11,499	47
Campsites, Tent & Trailer	0	n/a	513	76
Football Fields	0	n/a	54,337	63
Golf Courses	0.0	n/a	20,934	90
Playgrounds/Totlots	1	20,829	9,752	80
Soccer Fields	0	n/a	22,076	71
Softball Fields	1	20,829	11,260	76
Swimming Pools	0	n/a	52,943	67
Tennis Courts	6	3,472	3,996	41
Trail Miles (All Types)	1.0	20,829	7,823	72

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Caswell Upland Hardwoods Forest	32	0	None

# CATAWBA COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Catawba County	119,837	\$0	\$0.00
Hickory	28,464	\$1,549,792	\$54.45
Maiden	2,716	\$245,510	\$90.39
Newton	9,366	\$733,000	\$78.26
County Total	119,837	\$2,528,302	\$21.10

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	651	184	309	25
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	1,853	65	8	69
Baseball Fields	8	14,980	11,370	59
Basketball Courts	9	13,315	11,499	54
Campsites, Tent & Trailer	300	399	513	43
Football Fields	1	119,837	54,337	60
Golf Courses	6.5	18,436	20,934	45
Playgrounds/Totlots	7	17,120	9,752	73
Soccer Fields	9	13,315	22,076	38
Softball Fields	11	10,894	11,260	48
Swimming Pools	6	19,973	52,943	20
Tennis Courts	31	3,866	3,996	47
Trail Miles (All Types)	3.3	36,873	7,823	78

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Catawba County Wildlife Club	21	1	None

# CHATHAM COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Chatham County	39,358	\$82,656	\$2.10
Siler City	4,836	\$97,650	\$20.19
Pittsboro	1,628	\$40,403	\$24.82
County Total	39,358	\$220,709	\$5.61

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	30	1,312	309	84
Regional Park Acres	3,916	10	0	8
Dispersed Use Acres	39,835	1.0	8	27
Baseball Fields	5	7,872	11,370	34
Basketball Courts	5	7,872	11,499	32
Campsites, Tent & Trailer	1,000	39	513	7
Football Fields	1	39,358	54,337	42
Golf Courses	0.5	78,716	20,934	89
Playgrounds/Totlots	9	4,373	9,752	16
Soccer Fields	2	19,679	22,076	46
Softball Fields	2	19,679	11,260	74
Swimming Pools	1	39,358	52,943	41
Tennis Courts	5	7,872	3,996	79
Trail Miles (All Types)	5.0	7,872	7,823	51

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas <i>Dedicated Natural Heritage Areas</i>	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
	87	4	Completed 1992
White Pines (Camp)			
White Pines (Grizzle)			
<i>White Pines</i>			
Poes Ridge			
Big Woods — Old Quarry Creek			
New Hope Creek Bottomland Forest			
Robeson Creek			
Weaver Creek Pine Forest			
Windfall Branch White Oak Slopes			

# CHEROKEE COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Cherokee/Murphy	20,629	\$69,521	\$3.37

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	42	491	309	68
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	93,163	0.2	8	9
Baseball Fields	6	3,438	11,370	8
Basketball Courts	2	10,315	11,499	45
Campsites, Tent & Trailer	244	85	513	20
Football Fields	0	n/a	54,337	63
Golf Courses	0.0	n/a	20,934	90
Playgrounds/Totlots	2	10,315	9,752	57
Soccer Fields	1	20,629	22,076	48
Softball Fields	2	10,315	11,260	46
Swimming Pools	1	20,629	52,943	22
Tennis Courts	6	3,438	3,996	39
Trail Miles (All Types)	63.8	324	7,823	14

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
None	84	1	None



# CHOWAN COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Chowan/Edenton	13,846	\$222,778	\$16.09

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	44	317	309	52
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	2,823	5	8	47
Baseball Fields	2	6,923	11,370	27
Basketball Courts	4	3,462	11,499	4
Campsites, Tent & Trailer	42	330	513	41
Football Fields	1	13,846	54,337	12
Golf Courses	0.5	27,692	20,934	72
Playgrounds/Totlots	0	n/a	9,752	85
Soccer Fields	2	6,923	22,076	13
Softball Fields	3	4,615	11,260	11
Swimming Pools	1	13,846	52,943	10
Tennis Courts	8	1,731	3,996	6
Trail Miles (All Types)	0.0	n/a	7,823	84

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
None	26	1	Completed 1990

# CLAY COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Clay County	7,295	\$0	\$0.00

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	12	608	309	75
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	65,790	0.1	8	6
Baseball Fields	0	n/a	11,370	86
Basketball Courts	0	n/a	11,499	80
Campsites, Tent & Trailer	109	67	513	13
Football Fields	0	n/a	54,337	63
Golf Courses	1.0	7,295	20,934	8
Playgrounds/Totlots	0	n/a	9,752	85
Soccer Fields	0	n/a	22,076	71
Softball Fields	0	n/a	11,260	83
Swimming Pools	0	n/a	52,943	67
Tennis Courts	0	n/a	3,996	91
Trail Miles (All Types)	85.0	86	7,823	3

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Buck Creek Serpentinized Olivine Barrens Chunky Gal/Riley Knob White Oak Stamp	98	1	None

# CLEVELAND COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Cleveland County	85,304	\$0	\$0.00
Kings Mountain	8,043	\$365,458	\$45.44
Shelby	14,748	\$1,054,800	\$71.52
County Total	85,304	\$1,420,258	\$16.65

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	325	262	309	43
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	4,054	21	8	60
Baseball Fields	3	28,435	11,370	79
Basketball Courts	20	4,265	11,499	9
Campsites, Tent & Trailer	0	n/a	513	76
Football Fields	9	9,478	54,337	10
Golf Courses	6.5	13,124	20,934	25
Playgrounds/Totlots	16	5,332	9,752	22
Soccer Fields	3	28,435	22,076	61
Softball Fields	19	4,490	11,260	9
Swimming Pools	6	14,217	52,943	11
Tennis Courts	33	2,585	3,996	22
Trail Miles (All Types)	0.0	n/a	7,823	84

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
None	35	1	None

# COLUMBUS COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Columbus County	49,904	\$225,162	\$4.51
Whiteville	5,054	\$95,814	\$18.96
County Total	49,904	\$320,976	\$6.43

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	276	181	309	24
Regional Park Acres	1,733	29	0	18
Dispersed Use Acres	0	n/a	8	79
Baseball Fields	41	1,217	11,370	1
Basketball Courts	11	4,537	11,499	11
Campsites, Tent & Trailer	0	n/a	513	76
Football Fields	15	3,327	54,337	1
Golf Courses	2.0	24,952	20,934	64
Playgrounds/Totlots	3	16,635	9,752	72
Soccer Fields	14	3,565	22,076	3
Softball Fields	27	1,848	11,260	1
Swimming Pools	0	n/a	52,943	67
Tennis Courts	13	3,839	3,996	46
Trail Miles (All Types)	67.0	745	7,823	22

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
	204	4	In Progress
Cypress Creek Savanna			
Lake Waccamaw Marl Outcrop			
Lake Waccamaw State Park			
Mark Pine Bay Cooleys Meadowrue Site			
Schulkens Savanna			

# CRAVEN COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Craven County	82,489	\$358,288	\$4.34
New Bern	20,645	\$425,843	\$20.63
Havelock	20,045	\$237,985	\$11.87
County Total	82,489	\$1,022,116	\$12.39

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	554	149	309	18
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	64,189	1	8	29
Baseball Fields	16	5,156	11,370	16
Basketball Courts	10	8,249	11,499	37
Campsites, Tent & Trailer	88	937	513	56
Football Fields	2	41,245	54,337	43
Golf Courses	5.0	16,498	20,934	36
Playgrounds/Totlots	20	4,124	9,752	12
Soccer Fields	19	4,342	22,076	7
Softball Fields	10	8,249	11,260	32
Swimming Pools	1	82,489	52,943	60
Tennis Courts	24	3,437	3,996	38
Trail Miles (All Types)	20.5	4,024	7,823	38

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
	195	4	Completed 1992
Cool Springs			
Croatan Pocosins			
Flanner Beach			
Gum Swamp Bottomland Hardwood Forest			
Little Lake Rd Longleaf Savannas: (CP&L) (US Forest Service)			
Shell Landing			
Lake Ellis Simon			

# CUMBERLAND COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Cumberland County	279,995	\$895,194	\$3.20
Fayetteville	76,752	\$3,132,142	\$40.81
Hope Mills	8,536	\$143,274	\$16.78
Spring Lake	7,744	\$221,655	\$28.62
County Total	279,995	\$4,392,265	\$15.69

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	1,113	252	309	42
Regional Park Acres	2,572	109	0	32
Dispersed Use Acres	0	n/a	8	79
Baseball Fields	27	10,370	11,370	48
Basketball Courts	31	9,032	11,499	40
Campsites, Tent & Trailer	171	1,637	513	62
Football Fields	6	46,666	54,337	47
Golf Courses	8.0	34,999	20,934	81
Playgrounds/Totlots	34	8,235	9,752	41
Soccer Fields	2	139,998	22,076	70
Softball Fields	18	15,555	11,260	72
Swimming Pools	1	279,995	52,943	66
Tennis Courts	35	8,000	3,996	80
Trail Miles (All Types)	16.5	16,969	7,823	70

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
	470	6	None
Big Pond Bay (Simpson)			
Big Pond Bay (Vinson)			
Big Pond Bay (Williamette)			
Bonnie Doone Watershed:			
City of Fayetteville			
Keith			
Shaw			
Bushy Lake State Natural Area			
Cape Fear River Bluff			
Carvers Falls			
Clark Park			
Gordon Butler — Hope Mills Preserve			

# CURRITUCK COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Currituck County	13,844	\$0	\$0.00

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	2	6,922	309	94
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	19,923	0.7	8	23
Baseball Fields	0	n/a	11,370	86
Basketball Courts	0	n/a	11,499	80
Campsites, Tent & Trailer	344	40	513	9
Football Fields	0	n/a	54,337	63
Golf Courses	0.0	n/a	20,934	90
Playgrounds/Totlots	0	n/a	9,752	85
Soccer Fields	0	n/a	22,076	71
Softball Fields	0	n/a	11,260	83
Swimming Pools	0	n/a	52,943	67
Tennis Courts	6	2,307	3,996	17
Trail Miles (All Types)	7.0	1,978	7,823	32

## Natural Heritage Inventory Information: See Appendix C for Details

<i>Dedicated Natural Heritage Areas</i>	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Registered Natural Heritage Areas	117	5	Completed 1990
<i>Currituck Banks Estuarine Reserve</i> <i>Mackay Island National Wildlife Refuge</i> <i>Monkey Island</i> <i>North River/Deep Creek</i>			

# DARE COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Dare County	22,994	\$445,600	\$19.38

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	117	197	309	30
Regional Park Acres	417	55	0	23
Dispersed Use Acres	223,023	0.1	8	5
Baseball Fields	13	1,769	11,370	2
Basketball Courts	5	4,599	11,499	12
Campsites, Tent & Trailer	1,271	18	513	2
Football Fields	3	7,665	54,337	5
Golf Courses	3.0	7,665	20,934	9
Playgrounds/Totlots	1	22,994	9,752	81
Soccer Fields	11	2,090	22,076	1
Softball Fields	6	3,832	11,260	4
Swimming Pools	5	4,599	52,943	1
Tennis Courts	9	2,555	3,996	21
Trail Miles (All Types)	79.1	291	7,823	11

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas <i>Dedicated Natural Heritage Areas</i>	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
	223	9	Completed 1992
Alligator River Swamp Forest			
Buxton Woods Coastal Reserve			
Buxton Woods			
Faircloth Road Pond Pine Pocosin			
Hatteras Inlet Island			
Jockey's Ridge State Park			
<i>Kitty Hawk Woods</i>			
Nags Head Woods (Kelly)			
Nags Head Woods (Town of Nags Head)			
<i>Nags Head Woods Preserve</i>			
Oregon Inlet — Roanoke Sound Islands			
Pea Island National Wildlife Refuge			
<i>Roanoke Island Marshlands</i>			
Southern Shores Cypress Pond Preserve			
US 264 Low Pocosin (Floating Peat Bog)			
Bodie Island Lighthouse Pond			
Bodie Island Roadside Ponds and Marshes			
Cape Hatteras Point			
Hatteras Sand Flats			
Ocracoke Island:			
Central Section			
Eastern End			
Western End (Sand Flats)			
Turtle Pond and (Cape Hatteras)			
Lighthouse Pond			



# DAVIDSON COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Davidson County	129,631	\$282,028	\$2.18
Lexington	16,803	\$463,539	\$27.59
Thomasville	16,143	\$509,748	\$31.58
County Total	129,631	\$1,255,315	\$9.68

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	612	212	309	35
Regional Park Acres	110	1,178	0	38
Dispersed Use Acres	2,901	45	8	66
Baseball Fields	19	6,823	11,370	26
Basketball Courts	3	43,210	11,499	77
Campsites, Tent & Trailer	86	1,507	513	60
Football Fields	8	16,204	54,337	16
Golf Courses	6.0	21,605	20,934	52
Playgrounds/Totlots	10	12,963	9,752	67
Soccer Fields	1	129,631	22,076	69
Softball Fields	16	8,102	11,260	29
Swimming Pools	3	43,210	52,943	44
Tennis Courts	35	3,704	3,996	44
Trail Miles (All Types)	0.5	259,262	7,823	83

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Beaverdam Creek Preserve Boone's Cave State Park	30	1	None

# DAVIE COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Davie/Mocksville	28,396	\$336,015	\$11.83

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	66	430	309	66
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	1,409	20	8	59
Baseball Fields	1	28,396	11,370	77
Basketball Courts	1	28,396	11,499	74
Campsites, Tent & Trailer	400	71	513	14
Football Fields	0	n/a	54,337	63
Golf Courses	3.0	9,465	20,934	13
Playgrounds/Totlots	2	14,198	9,752	69
Soccer Fields	1	28,396	22,076	60
Softball Fields	0	n/a	11,260	83
Swimming Pools	1	28,396	52,943	33
Tennis Courts	2	14,198	3,996	86
Trail Miles (All Types)	20.0	1,420	7,823	26

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Cooleemee Plantation	11	1	None

# DUPLIN COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Duplin County	39,930	\$0	\$0
Warsaw	2,859	\$90,000	\$31.02
Wallace	3,098	\$105,000	\$33.89
County Total	39,930	\$195,000	\$4.80

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	84	484	309	67
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	9,134	4	8	43
Baseball Fields	5	8,123	11,370	36
Basketball Courts	5	8,123	11,499	34
Campsites, Tent & Trailer	0	n/a	513	76
Football Fields	2	20,308	54,337	22
Golf Courses	3.5	11,605	20,934	20
Playgrounds/Totlots	4	10,154	9,752	56
Soccer Fields	1	40,616	22,076	65
Softball Fields	7	5,802	11,260	19
Swimming Pools	0	n/a	52,943	67
Tennis Courts	13	3,124	3,996	32
Trail Miles (All Types)	1.3	32,493	7,823	77

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
None	22	1	None

# DURHAM COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Durham County	186,540	\$0	\$0.00
Durham	140,224	\$8,307,305	\$59.24
County Total	186,540	\$8,307,305	\$44.53

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	2,497	75	309	10
Regional Park Acres	1,555	120	0	35
Dispersed Use Acres	22,400	8	8	51
Baseball Fields	2	93,270	11,370	85
Basketball Courts	47	3,969	11,499	7
Campsites, Tent & Trailer	6	31,090	513	71
Football Fields	5	37,308	54,337	38
Golf Courses	6.5	28,698	20,934	76
Playgrounds/Totlots	77	2,423	9,752	1
Soccer Fields	6	31,090	22,076	62
Softball Fields	22	8,479	11,260	35
Swimming Pools	4	46,635	52,943	46
Tennis Courts	72	2,591	3,996	23
Trail Miles (All Types)	31.4	5,950	7,823	45

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas <i>Dedicated Natural Heritage Areas</i>	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Bennett Place Forest	155	3	In Progress
Eno River Blue Wild Indigo Slopes			
Eno River Diabase Sill			
Flat River Bend Forest			
Hill Forest:			
Chestnut Oak/Shortleaf Pine Forest			
Dial Creek Hardwood Forest			
Slocum Camp Hardwood Forest			
<i>Hill Forest Flat River</i>			
Big Woods — Old Quarry Creek			
New Hope Creek Bottomland Forest			
Robeson Creek			
Weaver Creek Pine Forest			
Windfall Branch White Oak Slopes			
Eno River State Park/The Cabellands			
Eno River State Park/Pump Station			
Eno River State Park/Cabes Ford			
Adam Mountain			
B.W.Wells Interpretive			
Beaverdam Lake Swamps & Arkose			
Outcrops			
Cabin Branch Creek Bottomland Swamp			
Catsburg			
Knap of Reeds Creek Diabase -			
Levee and Slopes			
Lick Creek Bottomland Forest			
Northside Diabase			
Old Still Creek Forest			
Penny Bend/Eno River Bluffs			
Upper Barton Creek Bluffs and Ravine			

# EDGECOMBE COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Edgecombe County	57,180	\$0	\$0.00
Rocky Mount	17,291	\$860,137	\$49.74
Tarboro	11,142	\$860,729	\$77.25
County Total	57,180	\$1,720,866	\$30.10

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	812	70	309	9
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	0	n/a	8	79
Baseball Fields	9	6,353	11,370	24
Basketball Courts	9	6,353	11,499	20
Campsites, Tent & Trailer	1	57,180	513	73
Football Fields	2	28,590	54,337	30
Golf Courses	2.5	22,872	20,934	56
Playgrounds/Totlots	17	3,364	9,752	6
Soccer Fields	5	11,436	22,076	31
Softball Fields	7	8,169	11,260	30
Swimming Pools	3	19,060	52,943	18
Tennis Courts	27	2,118	3,996	11
Trail Miles (All Types)	8.0	7,148	7,823	47

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Edgecombe	39	2	Completed 1993

# FORSYTH COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Forsyth County	267,237	\$1,046,620	\$3.92
Winston Salem	150,215	\$8,717,610	\$58.03
Kernersville	11,754	\$275,668	\$23.45
County Total	267,237	\$10,039,898	\$37.57

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	5,456	49	309	4
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	0	n/a	8	79
Baseball Fields	5	53,447	11,370	84
Basketball Courts	36	7,423	11,499	26
Campsites, Tent & Trailer	0	n/a	513	76
Football Fields	1	267,237	54,337	62
Golf Courses	15.5	17,241	20,934	42
Playgrounds/Totlots	65	4,111	9,752	11
Soccer Fields	34	7,860	22,076	18
Softball Fields	50	5,345	11,260	16
Swimming Pools	9	29,693	52,943	36
Tennis Courts	134	1,994	3,996	10
Trail Miles (All Types)	35.8	7,458	7,823	49

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Yadkin River Bluffs	32	2	None

# FRANKLIN COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Franklin County	37,738	\$0	\$0.00

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	0	n/a	309	95
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	250	151	8	73
Baseball Fields	0	n/a	11,370	86
Basketball Courts	0	n/a	11,499	80
Campsites, Tent & Trailer	0	n/a	513	76
Football Fields	0	n/a	54,337	63
Golf Courses	0.5	75,476	20,934	88
Playgrounds/Totlots	0	n/a	9,752	85
Soccer Fields	0	n/a	22,076	71
Softball Fields	0	n/a	11,260	83
Swimming Pools	0	n/a	52,943	67
Tennis Courts	0	n/a	3,996	91
Trail Miles (All Types)	2.0	18,869	7,823	71

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Norris Creek Sumac Site (CP&L) Norris Creek Sumac Site (Rogers) Overton Rock	82	3	Completed 1993

# GASTON COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Gaston County	176,828	\$613,499	\$3.47
Gastonia	55,332	\$2,245,805	\$40.59
Belmont	8,337	\$216,310	\$25.95
Bessemer City	4,698	\$175,491	\$37.35
Mount Holly	7,843	\$96,500	\$12.30
Stanley	2,890	\$108,000	\$37.37
Cramerton	2,411	\$110,000	\$45.62
County Total	176,828	\$3,565,605	\$20.16

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	1,622	109	309	11
Regional Park Acres	2,712	65	0	27
Dispersed Use Acres	0	n/a	8	79
Baseball Fields	22	8,038	11,370	35
Basketball Courts	24	7,368	11,499	25
Campsites, Tent & Trailer	5	35,366	513	72
Football Fields	7	25,261	54,337	28
Golf Courses	8.5	20,803	20,934	48
Playgrounds/Totlots	44	4,019	9,752	10
Soccer Fields	41	4,313	22,076	5
Softball Fields	39	4,534	11,260	10
Swimming Pools	5	35,366	52,943	37
Tennis Courts	90	1,965	3,996	9
Trail Miles (All Types)	20.3	8,732	7,823	54

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Crowders Mountain State Park	50	0	None



# GATES COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Gates County	9,395	\$0	\$0.00

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	0	n/a	309	95
Regional Park Acres	9,031	1	0	2
Dispersed Use Acres	11,841	0.8	8	25
Baseball Fields	0	n/a	11,370	86
Basketball Courts	0	n/a	11,499	80
Campsites, Tent & Trailer	34	276	513	37
Football Fields	0	n/a	54,337	63
Golf Courses	0.0	n/a	20,934	90
Playgrounds/Totlots	0	n/a	9,752	85
Soccer Fields	0	n/a	22,076	71
Softball Fields	0	n/a	11,260	83
Swimming Pools	0	n/a	52,943	67
Tennis Courts	0	n/a	3,996	91
Trail Miles (All Types)	6.0	1,566	7,823	28

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Merchants Millpond State Park Great Dismal Swamp National Wildlife Refuge	48	2	Completed 1990

# GRAHAM COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Graham County	7,241	\$61,244	\$8.46

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	5	1,448	309	86
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	113,157	0.1	8	3
Baseball Fields	2	3,621	11,370	9
Basketball Courts	0	n/a	11,499	80
Campsites, Tent & Trailer	183	40	513	8
Football Fields	0	n/a	54,337	63
Golf Courses	0.0	n/a	20,934	90
Playgrounds/Totlots	0	n/a	9,752	85
Soccer Fields	0	n/a	22,076	71
Softball Fields	1	7,241	11,260	23
Swimming Pools	1	7,241	52,943	3
Tennis Courts	3	2,414	3,996	19
Trail Miles (All Types)	206.0	35	7,823	2

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Joyce Kilmer Wilderness Santeetlah Bluff	100	2	None

# GRANVILLE COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Granville County	39,202	\$0	\$0.00
Oxford	8,197	\$193,407	\$23.59
County Total	39,202	\$193,407	\$4.93

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	33	1,199	309	80
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	13,554	3	8	39
Baseball Fields	5	7,840	11,370	33
Basketball Courts	5	7,840	11,499	31
Campsites, Tent & Trailer	0	n/a	513	76
Football Fields	1	39,202	54,337	41
Golf Courses	1.0	39,202	20,934	83
Playgrounds/Totlots	4	9,801	9,752	52
Soccer Fields	0	n/a	22,076	71
Softball Fields	1	39,202	11,260	81
Swimming Pools	1	39,202	52,943	40
Tennis Courts	2	19,601	3,996	87
Trail Miles (All Types)	0.0	n/a	7,823	84

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Picture Creek Diabase Barrens	192	3	None
South Butner Cedar Glades			
Adam Mountain			
B.W.Wells Interpretive			
Beaverdam Lake Swamps & Arkose Outcrops			
Cabin Branch Creek Bottomland Swamp			
Catsburg			
Knap of Reeds Creek Diabase - Levee and Slopes			
Lick Creek Bottomland Forest			
Northside Diabase			
Old Still Creek Forest			
Penny Bend/Eno River Bluffs			
Upper Barton Creek Bluffs and Ravine			

# GREENE COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Greene County	15,546	\$90,000	\$5.79

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	29	536	309	71
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	0	n/a	8	79
Baseball Fields	3	5,182	11,370	17
Basketball Courts	2	7,773	11,499	28
Campsites, Tent & Trailer	0	n/a	513	76
Football Fields	1	15,546	54,337	15
Golf Courses	0.0	n/a	20,934	90
Playgrounds/Totlots	1	15,546	9,752	71
Soccer Fields	0	n/a	22,076	71
Softball Fields	0	n/a	11,260	83
Swimming Pools	0	n/a	52,943	67
Tennis Courts	2	7,773	3,996	78
Trail Miles (All Types)	2.0	7,773	7,823	50

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
None	0	4	Completed 1993

# GUILFORD COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Guilford County	349,764	\$0	\$0.00
Greensboro	183,497	\$13,613,160	\$74.19
High Point	68,899	\$6,114,640	\$88.75
Gibsonville	2,007	Not Reported	Not Reported
County Total	349,764	\$19,727,800	\$56.40

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	8,374	42	309	1
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	756	463	8	77
Baseball Fields	18	19,431	11,370	65
Basketball Courts	15	23,318	11,499	70
Campsites, Tent & Trailer	326	1,073	513	57
Football Fields	14	24,983	54,337	26
Golf Courses	20.5	17,062	20,934	39
Playgrounds/Totlots	143	2,446	9,752	2
Soccer Fields	39	8,968	22,076	24
Softball Fields	27	12,954	11,260	64
Swimming Pools	8	43,721	52,943	45
Tennis Courts	154	2,271	3,996	14
Trail Miles (All Types)	89.0	3,930	7,823	37

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
None	26	1	In Progress

# HALIFAX COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Halifax County	56,154	\$0	\$0.00
Roanoke Rapids	15,939	\$777,230	\$48.76
County Total	56,154	\$777,230	\$13.84

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	135	415	309	65
Regional Park Acres	2,287	25	0	16
Dispersed Use Acres	2,000	28	8	62
Baseball Fields	4	14,039	11,370	57
Basketball Courts	0	n/a	11,499	80
Campsites, Tent & Trailer	112	501	513	49
Football Fields	2	28,077	54,337	29
Golf Courses	3.5	16,044	20,934	34
Playgrounds/Totlots	8	7,019	9,752	33
Soccer Fields	4	14,039	22,076	39
Softball Fields	4	14,039	11,260	69
Swimming Pools	2	28,077	52,943	32
Tennis Courts	17	3,303	3,996	34
Trail Miles (All Types)	10.0	5,615	7,823	43

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Larkspur Ridge Preserve Medoc Mountain State Park Medoc Mountain State Park/Little Fishing Creek Bluffs Phlox Woods Roanoke Big Oak Woods Ventosa Plantation	77	2	Completed 1993

# HARNETT COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Harnett County	68,278	\$152,459	\$2.23
Angier	2,260	\$37,000	\$16.37
Dunn	8,577	\$241,838	\$28.20
Erwin	4,099	\$179,695	\$43.84
Lillington	2,201	Not Reported	Not Reported
County Total	68,278	\$610,992	\$8.95

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	206	331	309	53
Regional Park Acres	3,064	22	0	15
Dispersed Use Acres	0	n/a	8	79
Baseball Fields	16	4,267	11,370	14
Basketball Courts	7	9,754	11,499	43
Campsites, Tent & Trailer	5	13,656	513	70
Football Fields	4	17,070	54,337	18
Golf Courses	4.0	17,070	20,934	41
Playgrounds/Totlots	7	9,754	9,752	51
Soccer Fields	9	7,586	22,076	16
Softball Fields	8	8,535	11,260	37
Swimming Pools	1	68,278	52,943	57
Tennis Courts	30	2,276	3,996	15
Trail Miles (All Types)	22.4	3,048	7,823	35

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Raven Rock State Park	174	4	None

# HAYWOOD COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Haywood County	47,775	\$0	\$0.00
Canton	3,787	\$108,989	\$28.78
Waynesville	7,467	\$276,488	\$37.03
County Total	47,775	\$385,477	\$8.07

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	79	608	309	74
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	131,032	0.4	8	13
Baseball Fields	2	23,888	11,370	73
Basketball Courts	3	15,925	11,499	62
Campsites, Tent & Trailer	909	53	513	11
Football Fields	1	47,775	54,337	48
Golf Courses	4.0	11,944	20,934	22
Playgrounds/Totlots	6	7,963	9,752	39
Soccer Fields	2	23,888	22,076	52
Softball Fields	8	5,972	11,260	21
Swimming Pools	1	47,775	52,943	47
Tennis Courts	12	3,981	3,996	50
Trail Miles (All Types)	195.0	245	7,823	9

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Flat Laurel Gap Bog	264	4	None
Fork Ridge — Mount Hardy: (Blue Ridge Parkway) (US Forest Service)			
Redbank Cove			
Steestachee & Wesner Balds - Boulderfields			
Mount Pisgah (Blue Ridge Parkway)			
Mount Pisgah (US Forest Service)			
Balsam Gap			
Waterrock Knob			
Great Smoky Mountains			



# HENDERSON COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Henderson County	71,185	\$567,953	\$7.98
Hendersonville	7,387	\$409,850	\$55.48
County Total	71,185	\$977,803	\$13.74

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	322	221	309	37
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	27,051	3	8	38
Baseball Fields	4	17,796	11,370	64
Basketball Courts	7	10,169	11,499	44
Campsites, Tent & Trailer	754	94	513	21
Football Fields	0	n/a	54,337	63
Golf Courses	3.5	20,339	20,934	47
Playgrounds/Totlots	10	7,119	9,752	35
Soccer Fields	4	17,796	22,076	44
Softball Fields	7	10,169	11,260	45
Swimming Pools	1	71,185	52,943	58
Tennis Courts	10	7,119	3,996	74
Trail Miles (All Types)	61.5	1,157	7,823	25

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
	161	5	Completed 1993
Franklin Bog (Franklin)			
Jackson Park			
Kanuga Conference Center Rare Plant Site			
McClure's Bog Preserve			
Memmingers Woods			
Mud Creek Wetlands			
Mount Pisgah (US Forest Service)			
Ochlawaha Bog Preserve			
South Mills River Scarlet Oak			

# HERTFORD COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Hertford County	22,620	\$0	\$0.00
Ahoskie	4,562	Not Reported	Not Reported
County Total	22,620	\$0	\$0.00

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	4	6,463	309	93
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	0	n/a	8	79
Baseball Fields	1	22,620	11,370	70
Basketball Courts	2	11,310	11,499	49
Campsites, Tent & Trailer	0	n/a	513	76
Football Fields	1	22,620	54,337	23
Golf Courses	1.5	15,080	20,934	31
Playgrounds/Totlots	5	4,524	9,752	16
Soccer Fields	3	7,540	22,076	15
Softball Fields	2	11,310	11,260	51
Swimming Pools	0	n/a	52,943	67
Tennis Courts	1	22,620	3,996	88
Trail Miles (All Types)	0.5	45,240	7,823	79

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Chowan Big Woods Chowan Heronry Chowan Swamp Forest	28	1	Completed 1990

# HOKE COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Hoke County	22,886	\$165,400	\$7.23

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	15	1,526	309	87
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	0	n/a	8	79
Baseball Fields	4	5,722	11,370	21
Basketball Courts	0	n/a	11,499	80
Campsites, Tent & Trailer	0	n/a	513	76
Football Fields	2	11,443	54,337	11
Golf Courses	2.0	11,443	20,934	18
Playgrounds/Totlots	2	11,443	9,752	62
Soccer Fields	1	22,886	22,076	51
Softball Fields	2	11,443	11,260	53
Swimming Pools	1	22,886	52,943	25
Tennis Courts	4	5,722	3,996	67
Trail Miles (All Types)	1.0	22,886	7,823	74

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Antioch Bay Preserve Fort Bragg Nicholson Creek Savanna	832	4	None

# HYDE COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Hyde County	5,535	\$0	\$0.00

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	0	n/a	309	95
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	140,717	0.04	8	1
Baseball Fields	0	n/a	11,370	86
Basketball Courts	0	n/a	11,499	80
Campsites, Tent & Trailer	191	29	513	4
Football Fields	0	n/a	54,337	63
Golf Courses	0.0	n/a	20,934	90
Playgrounds/Totlots	0	n/a	9,752	85
Soccer Fields	0	n/a	22,076	71
Softball Fields	0	n/a	11,260	83
Swimming Pools	0	n/a	52,943	67
Tennis Courts	0	n/a	3,996	91
Trail Miles (All Types)	0.7	7,907	7,823	52

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Beacon-North Rock-Shell Castle Islands	163	7	Completed 1992
Mattamuskeet National Wildlife Refuge			
Swanquarter National Wildlife Refuge			
Bodie Island Lighthouse Pond			
Bodie Island Roadside Ponds and Marshes			
Cape Hatteras Point			
Hatteras Sand Flats			
Ocracoke Island:			
Central Section			
Eastern End			
Western End (Sand Flats)			
Turtle Pond and (Cape Hatteras) Lighthouse Pond			
Pungo National Wildlife Refuge			

# IREDELL COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Iredell County	96,384	\$354,528	\$3.68
Mooresville	9,798	\$366,504	\$37.41
Statesville	21,193	\$1,209,367	\$57.06
County Total	96,384	\$1,930,399	\$20.03

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	365	264	309	44
Regional Park Acres	1,456	66	0	28
Dispersed Use Acres	500	193	8	74
Baseball Fields	11	8,762	11,370	40
Basketball Courts	1	96,384	11,499	79
Campsites, Tent & Trailer	459	210	513	31
Football Fields	1	96,384	54,337	59
Golf Courses	6.0	16,064	20,934	35
Playgrounds/Totlots	11	8,762	9,752	45
Soccer Fields	18	5,355	22,076	9
Softball Fields	23	4,191	11,260	8
Swimming Pools	2	48,192	52,943	48
Tennis Courts	30	3,213	3,996	33
Trail Miles (All Types)	9.0	10,709	7,823	62

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
None	36	0	None

# JACKSON COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Jackson County	27,404	\$327,754	\$11.96

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	94	292	309	49
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	89,884	0.3	8	11
Baseball Fields	3	9,135	11,370	42
Basketball Courts	0	n/a	11,499	80
Campsites, Tent & Trailer	1,279	21	513	3
Football Fields	0	n/a	54,337	63
Golf Courses	1.5	18,269	20,934	44
Playgrounds/Totlots	1	27,404	9,752	83
Soccer Fields	4	6,851	22,076	12
Softball Fields	2	13,702	11,260	67
Swimming Pools	1	27,404	52,943	31
Tennis Courts	8	3,426	3,996	36
Trail Miles (All Types)	90.3	303	7,823	12

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Balsam Gap	436	5	Completed 1994
Big Sheep Cliff Ridge Preserve			
Bonas Defeat/Tuckasegee Gorge			
Dulany Bog			
Richland Balsam			
Waterrock Knob			
Whiteside Mountain			
Whitewater River Falls and Gorge			
Wolf Creek Watershed			

# JOHNSTON COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Johnston County	83,977	\$0	\$0.00
Clayton	4,881	\$108,910	\$22.31
Selma	4,678	\$163,325	\$34.91
Smithfield	7,710	\$370,433	\$48.05
Benson	3,105	\$102,566	\$33.03
County Total	83,977	\$745,234	\$8.87

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	156	540	309	72
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	221	381	8	75
Baseball Fields	7	11,997	11,370	54
Basketball Courts	6	13,996	11,499	55
Campsites, Tent & Trailer	196	428	513	45
Football Fields	2	41,989	54,337	45
Golf Courses	5.0	16,795	20,934	37
Playgrounds/Totlots	8	10,497	9,752	59
Soccer Fields	7	11,997	22,076	35
Softball Fields	10	8,398	11,260	34
Swimming Pools	2	41,989	52,943	43
Tennis Courts	15	5,598	3,996	66
Trail Miles (All Types)	8.5	9,880	7,823	61

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Flower Hill/Moccasin Creek Stancils Chapel	73	3	Completed 1993

# JONES COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Jones County	9,347	\$0	\$0.00

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	5	2,063	309	89
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	49,989	0.2	8	8
Baseball Fields	1	9,347	11,370	44
Basketball Courts	1	9,347	11,499	41
Campsites, Tent & Trailer	40	234	513	32
Football Fields	1	9,347	54,337	9
Golf Courses	1.0	9,347	20,934	12
Playgrounds/Totlots	1	9,347	9,752	48
Soccer Fields	0	n/a	22,076	71
Softball Fields	0	n/a	11,260	83
Swimming Pools	0	n/a	52,943	67
Tennis Courts	0	n/a	3,996	91
Trail Miles (All Types)	1.0	9,347	7,823	57

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Hunters Creek Island Creek	88	1	Completed 1992



# LEE COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Lee County	41,845	\$900,000	\$21.51

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	235	178	309	23
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	2,421	17	8	55
Baseball Fields	8	5,231	11,370	18
Basketball Courts	2	20,923	11,499	67
Campsites, Tent & Trailer	20	2,092	513	68
Football Fields	1	41,845	54,337	44
Golf Courses	4.5	9,299	20,934	11
Playgrounds/Totlots	10	4,185	9,752	13
Soccer Fields	0	n/a	22,076	71
Softball Fields	5	8,369	11,260	33
Swimming Pools	2	20,923	52,943	23
Tennis Courts	12	3,487	3,996	42
Trail Miles (All Types)	10.0	4,185	7,823	39

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Juniper Springs Church	24	3	In Progress

# LENOIR COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Lenoir/Kinston	57,697	\$1,937,150	\$33.57

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	306	189	309	28
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	550	105	8	72
Baseball Fields	24	2,404	11,370	3
Basketball Courts	5	11,539	11,499	51
Campsites, Tent & Trailer	0	n/a	513	76
Football Fields	3	19,232	54,337	20
Golf Courses	2.5	23,079	20,934	57
Playgrounds/Totlots	11	5,245	9,752	21
Soccer Fields	4	14,424	22,076	41
Softball Fields	7	8,242	11,260	31
Swimming Pools	2	28,849	52,943	34
Tennis Courts	23	2,509	3,996	20
Trail Miles (All Types)	6.0	9,616	7,823	58

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
None	17	2	Completed 1993

# LINCOLN COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Lincoln County	50,966	\$266,548	\$5.23
Lincolnton	7,021	\$224,293	\$31.95
County Total	50,966	\$490,841	\$9.63

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	110	463	309	67
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	0	n/a	8	79
Baseball Fields	2	25,483	11,370	75
Basketball Courts	2	25,483	11,499	73
Campsites, Tent & Trailer	350	146	513	28
Football Fields	0	n/a	54,337	63
Golf Courses	2.0	25,483	20,934	67
Playgrounds/Totlots	6	8,494	9,752	42
Soccer Fields	2	25,483	22,076	56
Softball Fields	3	16,989	11,260	73
Swimming Pools	2	25,483	52,943	29
Tennis Courts	5	10,193	3,996	84
Trail Miles (All Types)	3.5	14,562	7,823	68

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
None	13	2	None

# MACON COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Macon County	24,062	\$240,000	\$9.97
Highlands	964	\$243,000	\$252.07
County Total	24,062	\$483,000	\$20.07

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	107	225	309	38
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	152,407	0.2	8	7
Baseball Fields	4	6,016	11,370	23
Basketball Courts	4	6,016	11,499	19
Campsites, Tent & Trailer	710	34	513	6
Football Fields	1	24,062	54,337	25
Golf Courses	4.5	5,347	20,934	6
Playgrounds/Totlots	3	8,021	9,752	40
Soccer Fields	6	4,010	22,076	4
Softball Fields	6	4,010	11,260	6
Swimming Pools	2	12,031	52,943	7
Tennis Courts	6	4,010	3,996	51
Trail Miles (All Types)	223.0	108	7,823	4

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
	426	3	None
Bryson Branch Falls and Cove			
Camp Branch Falls			
Chattooga River Gorge/Ellicott Rock			
Cole Mountain/Shortoff Mountain			
Cullasaja Gorge			
Kelsey			
Nantahala River Bogs			
Olive			
Piney Knob Fork			
Pinky Falls			
Runaway Knob			
Satulah Mountain Summit			
Scaly Mountain			
Slick Rock			
Standing Indian Mountain			
Walking Fern Cove			
Wildes Cove			

# MADISON COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Madison County	17,069	\$0	\$0.00

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	86	199	309	32
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	54,493	0.3	8	12
Baseball Fields	5	3,414	11,370	7
Basketball Courts	0	n/a	11,499	80
Campsites, Tent & Trailer	60	284	513	38
Football Fields	1	17,069	54,337	17
Golf Courses	1.0	17,069	20,934	40
Playgrounds/Totlots	2	8,535	9,752	43
Soccer Fields	0	n/a	22,076	71
Softball Fields	2	8,535	11,260	36
Swimming Pools	1	17,069	52,943	13
Tennis Courts	6	2,845	3,996	25
Trail Miles (All Types)	126.0	135	7,823	6

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Big Laurel Creek Gorge Paint Rock Road	122	2	Completed 1992

# MARTIN COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Martin County	25,231	\$0	\$0.00
Williamston	5,863	\$142,520	\$24.31
Robersonville	1,954	\$42,000	\$21.49
County Total	25,231	\$184,520	\$7.31

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	92	274	309	46
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	1,459	17	8	56
Baseball Fields	8	3,154	11,370	6
Basketball Courts	2	12,616	11,499	53
Campsites, Tent & Trailer	175	144	513	27
Football Fields	3	8,410	54,337	7
Golf Courses	1.5	16,821	20,934	38
Playgrounds/Totlots	5	5,046	9,752	18
Soccer Fields	1	25,231	22,076	54
Softball Fields	2	12,616	11,260	63
Swimming Pools	1	25,231	52,943	28
Tennis Courts	20	1,262	3,996	1
Trail Miles (All Types)	0.0	n/a	7,823	84

## Natural Heritage Inventory Information: See Appendix C for Details

<i>Dedicated Natural Heritage Areas</i>	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
<i>Devils Gut Preserve</i> <i>Henry M. Wright Preserve</i> <i>Roanoke River Gameland</i>	37	0	Completed 1990

# MCDOWELL COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
McDowell/Marion	35,751	\$269,970	\$7.55

## Public Recreation Acreage and Facility Needs

Type of Acreage or Facility	Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	42	851	309	77
Regional Park Acres	566	63	0	25
Dispersed Use Acres	73,614	0.5	8	16
Baseball Fields	0	n/a	11,370	86
Basketball Courts	0	n/a	11,499	80
Campsites, Tent & Trailer	85	421	513	44
Football Fields	0	n/a	54,337	63
Golf Courses	1.5	23,834	20,934	61
Playgrounds/Totlots	2	17,876	9,752	74
Soccer Fields	0	n/a	22,076	71
Softball Fields	6	5,959	11,260	20
Swimming Pools	2	17,876	52,943	17
Tennis Courts	5	7,150	3,996	75
Trail Miles (All Types)	57.7	620	7,823	20

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Johns Creek Shortia Habitat Linville Caverns Laurel Ridges	97	1	None

# MECKLENBURG COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Mecklenburg County	524,463	\$3,674,435	\$7.01
Charlotte	422,410	\$12,980,918	\$30.73
Davidson	4,213	\$89,924	\$21.34
Pineville	3,069	\$123,935	\$40.38
County Total	524,463	\$16,869,912	\$32.16

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	3,590	146	309	16
Regional Park Acres	1,000	524	0	37
Dispersed Use Acres	0	n/a	8	79
Baseball Fields	14	37,462	11,370	83
Basketball Courts	254	2,065	11,499	1
Campsites, Tent & Trailer	259	2,025	513	65
Football Fields	0	n/a	54,337	63
Golf Courses	23.0	22,803	20,934	55
Playgrounds/Totlots	135	3,885	9,752	9
Soccer Fields	7	74,923	22,076	67
Softball Fields	7	74,923	11,260	82
Swimming Pools	5	104,893	52,943	65
Tennis Courts	153	3,428	3,996	37
Trail Miles (All Types)	57.1	9,185	7,823	55

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
None	76	3	In Progress



# MITCHELL COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Mitchell County	14,236	\$0	\$0.00
Spruce Pine	1,907	\$58,020	\$30.42
County Total	14,236	\$58,020	\$4.08

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	27	527	309	70
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	21,063	0.7	8	22
Baseball Fields	0	n/a	11,370	86
Basketball Courts	1	14,236	11,499	57
Campsites, Tent & Trailer	85	167	513	29
Football Fields	0	n/a	54,337	63
Golf Courses	1.0	14,236	20,934	29
Playgrounds/Totlots	2	7,118	9,752	34
Soccer Fields	0	n/a	22,076	71
Softball Fields	0	n/a	11,260	83
Swimming Pools	1	14,236	52,943	12
Tennis Courts	3	4,745	3,996	60
Trail Miles (All Types)	50.3	283	7,823	10

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Roan Mountain Massif (Southern Appalachian Highlands Conservancy)	165	6	None

# MONTGOMERY COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Montgomery County	23,474	\$0	\$0.00

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	83	283	309	48
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	41,081	0.6	8	19
Baseball Fields	1	23,474	11,370	71
Basketball Courts	3	7,825	11,499	30
Campsites, Tent & Trailer	0	n/a	513	76
Football Fields	0	n/a	54,337	63
Golf Courses	1.0	23,474	20,934	59
Playgrounds/Totlots	4	5,869	9,752	27
Soccer Fields	0	n/a	22,076	71
Softball Fields	2	11,737	11,260	55
Swimming Pools	2	11,737	52,943	6
Tennis Courts	14	1,677	3,996	3
Trail Miles (All Types)	60.3	389	7,823	16

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
	109	5	None
Abner Bog			
Badin Upland Depression Swamps			
Gold Mine Branch Longleaf Pine Slope			
Pleasant Grove Bog			
Roberdo Bog			
Uwharrie River Slopes			

# MOORE COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Moore County	60,083	\$267,550	\$4.45
Southern Pines	9,496	\$846,850	\$89.18
Aberdeen	2,857	Not Reported	Not Reported
County Total	60,083	\$1,114,400	\$18.55

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	321	187	309	27
Regional Park Acres	778	77	0	29
Dispersed Use Acres	3,372	18	8	57
Baseball Fields	15	4,006	11,370	11
Basketball Courts	5	12,017	11,499	52
Campsites, Tent & Trailer	100	601	513	54
Football Fields	2	30,042	54,337	32
Golf Courses	22.0	2,731	20,934	2
Playgrounds/Totlots	9	6,676	9,752	32
Soccer Fields	3	20,028	22,076	47
Softball Fields	7	8,583	11,260	38
Swimming Pools	1	60,083	52,943	54
Tennis Courts	14	4,292	3,996	54
Trail Miles (All Types)	118.0	509	7,823	17

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
NC 73 Powerline Savanna	342	4	Completed 1989
Paint Hill (Drexel)			
Paint Hill (McDonald)			
Weymouth Woods (CP&L)			
Weymouth Woods State Nature Preserve			
Whitehall			
Beaver Dam Creek Shrub Community			
Beaver Dam Creek-Little Muddy Creek			
Bog Hole			
Bones Fork Pine & Shrub Community			
Creek & Corridor Below Kinney			
Cameron Lake			
Jordan Creek			
Lumber River-Drowning Creek			
Flatwoods & Swamp			
Millstone Creek			
Naked Creek Atlantic White Cedar Stand			
Rocky Ford Creek Mountain Laurel Bluff			
Scotland Lane Annual Burn			
Still Lane Seepage Slopes			
Strausburg Road Old Growth Longleaf Stand			
White Cedar Branch Head			

# NASH COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Nash County	77,668	\$0	\$0.00
Rocky Mount	32,661	\$1,625,807	\$49.78
Nashville	3,681	\$109,108	\$29.64
County Total	77,668	\$1,734,915	\$22.34

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	1,208	64	309	7
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	45	1,726	8	78
Baseball Fields	10	7,767	11,370	32
Basketball Courts	18	4,315	11,499	10
Campsites, Tent & Trailer	0	n/a	513	76
Football Fields	2	38,834	54,337	40
Golf Courses	5.5	14,121	20,934	27
Playgrounds/Totlots	24	3,236	9,752	5
Soccer Fields	2	38,834	22,076	64
Softball Fields	7	11,095	11,260	49
Swimming Pools	1	77,668	52,943	59
Tennis Courts	33	2,354	3,996	18
Trail Miles (All Types)	8.0	9,709	7,823	59

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Turtle Creek Preserve (CP&L)	59	3	Completed 1993

# NEW HANOVER COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
New Hanover County	123,309	\$712,386	\$5.78
Carolina Beach	3,792	\$49,861	\$13.15
Wilmington	56,624	\$2,934,120	\$51.82
Wrightsville Beach	2,970	\$277,525	\$93.44
County Total	123,309	\$3,973,892	\$32.23

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	753	164	309	20
Regional Park Acres	1,101	112	0	33
Dispersed Use Acres	6,787	18	8	58
Baseball Fields	31	3,978	11,370	10
Basketball Courts	40	3,083	11,499	3
Campsites, Tent & Trailer	265	465	513	47
Football Fields	2	61,655	54,337	55
Golf Courses	5.0	24,662	20,934	63
Playgrounds/Totlots	28	4,404	9,752	15
Soccer Fields	14	8,808	22,076	22
Softball Fields	8	15,414	11,260	71
Swimming Pools	3	41,103	52,943	42
Tennis Courts	41	3,008	3,996	31
Trail Miles (All Types)	9.0	13,701	7,823	67

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas <i>Dedicated Natural Heritage Areas</i>	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Carolina Beach State Park	225	8	None
Fort Fisher Coquina Outcrop			
<i>Masonboro Island Estuarine Reserve</i>			
<i>State Natural Area</i>			
<i>Zeke's Island Estuarine Reserve</i>			
Lower Cape Fear River Islands			
Bogue Inlet Outcrop			
Masonboro Outcrop			
New River Inlet Outcrop			
Topsail Outcrop			

# NORTHAMPTON COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Northampton County	20,818	\$0	\$0.00

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	17	1,225	309	82
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	0	n/a	8	79
Baseball Fields	0	n/a	11,370	86
Basketball Courts	2	10,409	11,499	46
Campsites, Tent & Trailer	0	n/a	513	76
Football Fields	0	n/a	54,337	63
Golf Courses	1.0	20,818	20,934	49
Playgrounds/Totlots	1	20,818	9,752	79
Soccer Fields	0	n/a	22,076	71
Softball Fields	2	10,409	11,260	47
Swimming Pools	0	n/a	52,943	67
Tennis Courts	2	10,409	3,996	85
Trail Miles (All Types)	0.0	n/a	7,823	84

## Natural Heritage Inventory Information: See Appendix C for Details

Dedicated Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Registered Natural Heritage Areas	27	1	Completed 1993
<i>Camassia Slopes Preserve</i>			
<i>Camassia Slopes II</i>			

# ONSIOW COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Onslow County	152,865	\$458,579	\$3.00
Jacksonville	78,797	\$661,320	\$8.39
County Total	152,865	\$1,119,899	\$7.33

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	270	567	309	73
Regional Park Acres	736	208	0	36
Dispersed Use Acres	15,674	10	8	52
Baseball Fields	21	7,279	11,370	30
Basketball Courts	9	16,985	11,499	63
Campsites, Tent & Trailer	897	170	513	30
Football Fields	2	76,433	54,337	57
Golf Courses	6.0	25,478	20,934	66
Playgrounds/Totlots	12	12,739	9,752	66
Soccer Fields	6	25,478	22,076	55
Softball Fields	4	38,216	11,260	79
Swimming Pools	0	n/a	52,943	67
Tennis Courts	25	6,115	3,996	72
Trail Miles (All Types)	7.3	21,085	7,823	73

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
	472	8	None
Camp LeJeune Longleaf Pine			
Camp LeJeune Wallace Creek			
Cooleys Meadowrue Powerline			
Hammocks Beach State Park			
Hofmann Forest Cypress			
Hofmann Forest Pond Pine			
New River Inlet Island			
Sandy Run Swamp Powerline			

# ORANGE COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Orange County	96,302	\$512,247	\$5.32
Carrboro	12,525	\$333,936	\$26.66
Chapel Hill	38,286	\$1,927,372	\$50.34
County Total	96,302	\$2,773,555	\$28.80

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	566	170	309	22
Regional Park Acres	1,488	65	0	26
Dispersed Use Acres	0	n/a	8	79
Baseball Fields	8	12,038	11,370	55
Basketball Courts	4	24,076	11,499	71
Campsites, Tent & Trailer	1	96,302	513	74
Football Fields	1	96,302	54,337	58
Golf Courses	2.5	38,521	20,934	82
Playgrounds/Totlots	16	6,019	9,752	28
Soccer Fields	5	19,260	22,076	45
Softball Fields	15	6,420	11,260	22
Swimming Pools	1	96,302	52,943	63
Tennis Courts	33	2,918	3,996	26
Trail Miles (All Types)	12.0	8,025	7,823	53

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Cedar Grove Lewis Heartleaf Preserve	172	3	Completed 1988
Big Woods — Old Quarry Creek			
New Hope Creek Bottomland Forest			
Robeson Creek			
Weaver Creek Pine Forest			
Windfall Branch White Oak Slopes			
Eno River State Park/The Cabellands			
Eno River State Park/Pump Station			
Eno River State Park/Cabes Ford			



# PAMLICO COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Pamlico County	11,458	\$106,900	\$9.33

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	101	114	309	12
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	4,599	2	8	37
Baseball Fields	1	11,458	11,370	51
Basketball Courts	1	11,458	11,499	50
Campsites, Tent & Trailer	0	n/a	513	76
Football Fields	0	n/a	54,337	63
Golf Courses	1.0	11,458	20,934	19
Playgrounds/Totlots	2	5,729	9,752	23
Soccer Fields	0	n/a	22,076	71
Softball Fields	1	11,458	11,260	54
Swimming Pools	0	n/a	52,943	67
Tennis Courts	2	5,729	3,996	68
Trail Miles (All Types)	1.0	11,458	7,823	65

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
None	50	2	Completed 1992

# PASQUOTANK COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Pasquotank County	31,212	\$0	\$0.00
Elizabeth City	14,219	\$627,116	\$44.10
County Total	31,212	\$627,116	\$20.09

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	93	335	309	54
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	3,872	8	8	50
Baseball Fields	1	31,212	11,370	82
Basketball Courts	4	7,803	11,499	29
Campsites, Tent & Trailer	0	n/a	513	76
Football Fields	0	n/a	54,337	63
Golf Courses	2.0	15,606	20,934	33
Playgrounds/Totlots	6	5,202	9,752	20
Soccer Fields	1	31,212	22,076	63
Softball Fields	6	5,202	11,260	14
Swimming Pools	0	n/a	52,943	67
Tennis Courts	20	1,561	3,996	2
Trail Miles (All Types)	1.3	24,970	7,823	75

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Great Dismal Swamp National Wildlife Refuge	15	1	Completed 1990

# PENDER COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Pender County	30,218	\$10,000	\$0.33

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	15	2,015	309	88
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	60,881	0.5	8	17
Baseball Fields	1	30,218	11,370	80
Basketball Courts	0	n/a	11,499	80
Campsites, Tent & Trailer	0	n/a	513	76
Football Fields	0	n/a	54,337	63
Golf Courses	3.5	8,634	20,934	10
Playgrounds/Totlots	0	n/a	9,752	85
Soccer Fields	0	n/a	22,076	71
Softball Fields	0	n/a	11,260	83
Swimming Pools	0	n/a	52,943	67
Tennis Courts	0	n/a	3,996	91
Trail Miles (All Types)	2.3	13,430	7,823	66

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Lanier Quarry Savanna Preserve	295	8	None
Moore's Creek National Battlefield			
Southwest Ridge Preserve			
Bogue Inlet Outcrop			
Masonboro Outcrop			
New River Inlet Outcrop			
Topsail Outcrop			

# PERQUIMANS COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Perquimans County	10,327	\$70,747	\$6.85

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	8	1,291	309	83
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	0	n/a	8	79
Baseball Fields	0	n/a	11,370	86
Basketball Courts	0	n/a	11,499	80
Campsites, Tent & Trailer	35	295	513	39
Football Fields	0	n/a	54,337	63
Golf Courses	0.0	n/a	20,934	90
Playgrounds/Totlots	0	n/a	9,752	85
Soccer Fields	0	n/a	22,076	71
Softball Fields	2	5,164	11,260	13
Swimming Pools	0	n/a	52,943	67
Tennis Courts	2	5,164	3,996	63
Trail Miles (All Types)	0.0	n/a	7,823	84

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
None	16	1	Completed 1990

# PERSON COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Person County	30,280	\$354,226	\$11.70

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	59	513	309	69
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	8,003	4	8	42
Baseball Fields	2	15,140	11,370	60
Basketball Courts	0	n/a	11,499	80
Campsites, Tent & Trailer	70	433	513	46
Football Fields	1	30,280	54,337	33
Golf Courses	1.0	30,280	20,934	77
Playgrounds/Totlots	3	10,093	9,752	55
Soccer Fields	7	4,326	22,076	6
Softball Fields	0	n/a	11,260	83
Swimming Pools	0	n/a	52,943	67
Tennis Courts	5	6,056	3,996	71
Trail Miles (All Types)	0.0	n/a	7,823	84

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
None	36	0	Completed 1993

# PITT COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Pitt County	109,904	\$0	\$0.00
Ayden	4,942	\$113,770	\$23.02
Farmville	4,451	\$202,800	\$45.56
Greenville	47,400	\$2,686,093	\$56.67
County Total	109,904	\$3,002,663	\$27.32

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	932	118	309	13
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	0	n/a	8	79
Baseball Fields	15	7,327	11,370	31
Basketball Courts	5	21,981	11,499	69
Campsites, Tent & Trailer	1	109,904	513	75
Football Fields	2	54,952	54,337	51
Golf Courses	5.0	21,981	20,934	53
Playgrounds/Totlots	9	12,212	9,752	65
Soccer Fields	4	27,476	22,076	59
Softball Fields	8	13,738	11,260	68
Swimming Pools	2	54,952	52,943	53
Tennis Courts	37	2,970	3,996	28
Trail Miles (All Types)	2.3	48,846	7,823	80

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Otter Creek	50	2	Completed 1992

# POLK COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Polk County	14,706	\$66,000	\$4.49

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	40	368	309	59
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	9,000	2	8	34
Baseball Fields	1	14,706	11,370	58
Basketball Courts	1	14,706	11,499	59
Campsites, Tent & Trailer	119	124	513	24
Football Fields	1	14,706	54,337	13
Golf Courses	1.5	9,804	20,934	15
Playgrounds/Totlots	0	n/a	9,752	85
Soccer Fields	0	n/a	22,076	71
Softball Fields	2	7,353	11,260	24
Swimming Pools	2	7,353	52,943	4
Tennis Courts	5	2,941	3,996	27
Trail Miles (All Types)	0.3	49,020	7,823	81

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas <i>Dedicated Natural Heritage Areas</i>	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
World's Edge Cove Creek Little Warrior Mountain Cave Pearsons Falls Glen	154	1	In Progress

# RANDOLPH COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Randolph County	107,946	\$0	\$0.00
Archdale	6,817	\$51,380	\$7.54
Asheboro	16,480	\$775,443	\$47.05
Liberty	2,069	\$55,391	\$26.77
Randleman	2,733	\$1,210,590	\$442.95
County Total	107,946	\$2,092,804	\$19.39

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	1,802	60	309	6
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	10,613	10	8	53
Baseball Fields	11	9,813	11,370	46
Basketball Courts	12	8,996	11,499	39
Campsites, Tent & Trailer	420	257	513	35
Football Fields	0	n/a	54,337	63
Golf Courses	5.0	21,589	20,934	51
Playgrounds/Totlots	11	9,813	9,752	53
Soccer Fields	4	26,987	22,076	58
Softball Fields	4	26,987	11,260	78
Swimming Pools	2	53,973	52,943	52
Tennis Courts	23	4,693	3,996	59
Trail Miles (All Types)	10.0	10,795	7,823	64

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Birkhead Upland Forest	36	2	None



# RICHMOND COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Richmond County	44,839	\$37,500	\$0.84
Hamlet	6,301	\$68,000	\$10.79
Rockingham	9,444	\$202,209	\$21.41
County Total	44,839	\$307,709	\$6.86

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	145	310	309	51
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	29,929	1	8	33
Baseball Fields	8	5,605	11,370	20
Basketball Courts	3	14,946	11,499	60
Campsites, Tent & Trailer	0	n/a	513	76
Football Fields	3	14,946	54,337	14
Golf Courses	2.0	22,420	20,934	54
Playgrounds/Totlots	5	8,968	9,752	46
Soccer Fields	4	11,210	22,076	30
Softball Fields	6	7,473	11,260	25
Swimming Pools	2	22,420	52,943	24
Tennis Courts	11	4,076	3,996	53
Trail Miles (All Types)	0.0	n/a	7,823	84

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Pee Dee River Gabbro Slopes	271	4	None
Beaver Dam Creek Shrub Community			
Beaver Dam Creek-Little Muddy Creek			
Bog Hole			
Bones Fork Pine & Shrub Community			
Creek & Corridor Below Kinney			
Cameron Lake			
Jordan Creek			
Lumber River-Drowning Creek			
Flatwoods & Swamp			
Millstone Creek			
Naked Creek Atlantic White Cedar Stand			
Rocky Ford Creek Mountain Laurel Bluff			
Scotland Lane Annual Burn			
Still Lane Seepage Slopes			
Strausburg Road Old Growth Longleaf Stand			
White Cedar Branch Head			

# ROBESON COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Robeson County	105,257	\$346,847	\$3.30
Lumberton	18,775	\$711,025	\$37.87
Red Springs	3,762	\$58,954	\$15.67
County Total	105,257	\$1,116,826	\$10.61

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	627	168	309	21
Regional Park Acres	2,103	50	0	22
Dispersed Use Acres	231	456	8	76
Baseball Fields	18	5,848	11,370	22
Basketball Courts	25	4,210	11,499	8
Campsites, Tent & Trailer	82	1,284	513	58
Football Fields	0	n/a	54,337	63
Golf Courses	5.0	21,051	20,934	50
Playgrounds/Totlots	18	5,848	9,752	26
Soccer Fields	11	9,569	22,076	25
Softball Fields	12	8,771	11,260	39
Swimming Pools	0	n/a	52,943	67
Tennis Courts	23	4,576	3,996	56
Trail Miles (All Types)	93.5	1,126	7,823	24

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Dunahoe Bay Preserve Goose Pond Bay Preserve Oak Savanna Bay Preserve Pretty Pond Bay Preserve	123	2	None

# ROCKINGHAM COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Rockingham County	86,152	\$0	\$0.00
Eden	15,218	\$430,587	\$28.29
Madison/Mayodan	4,805	\$253,003	\$52.65
Reidsville	13,956	\$556,235	\$39.86
County Total	86,152	\$1,239,825	\$14.39

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	437	197	309	29
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	0	n/a	8	79
Baseball Fields	5	17,230	11,370	62
Basketball Courts	13	6,627	11,499	21
Campsites, Tent & Trailer	47	1,833	513	63
Football Fields	0	n/a	54,337	63
Golf Courses	7.0	12,307	20,934	24
Playgrounds/Totlots	13	6,627	9,752	30
Soccer Fields	1	86,152	22,076	68
Softball Fields	7	12,307	11,260	59
Swimming Pools	1	86,152	52,943	61
Tennis Courts	18	4,786	3,996	61
Trail Miles (All Types)	8.0	10,769	7,823	63

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Bear Slide Dan River Triassic Basin Conglomerate Exposures	50	1	In Progress

# ROWAN COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Rowan County	112,223	\$1,030,471	\$9.18
Landis	2,355	\$83,860	\$35.61
Salisbury	23,770	\$825,596	\$34.73
County Total	112,223	\$1,939,927	\$17.29

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	744	151	309	19
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	2,800	40	8	65
Baseball Fields	12	9,352	11,370	45
Basketball Courts	8	14,028	11,499	56
Campsites, Tent & Trailer	78	1,439	513	59
Football Fields	2	56,112	54,337	52
Golf Courses	4.0	28,056	20,934	74
Playgrounds/Totlots	8	14,028	9,752	68
Soccer Fields	14	8,016	22,076	19
Softball Fields	9	12,469	11,260	62
Swimming Pools	3	37,408	52,943	39
Tennis Courts	19	5,906	3,996	70
Trail Miles (All Types)	4.0	28,056	7,823	76

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Salisbury Nature Study	62	1	In Progress

# RUTHERFORD COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Rutherford County	57,325	\$262,410	\$4.58
Forest City	7,485	\$412,276	\$55.08
Spindale	4,042	\$195,000	\$48.24
Rutherfordton	3,662	\$141,155	\$38.55
County Total	57,325	\$1,010,841	\$17.63

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	267	215	309	36
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	12,549	5	8	44
Baseball Fields	20	2,866	11,370	5
Basketball Courts	7	8,189	11,499	35
Campsites, Tent & Trailer	193	297	513	40
Football Fields	1	57,325	54,337	53
Golf Courses	6.0	9,554	20,934	14
Playgrounds/Totlots	9	6,369	9,752	29
Soccer Fields	5	11,465	22,076	32
Softball Fields	6	9,554	11,260	41
Swimming Pools	3	19,108	52,943	19
Tennis Courts	21	2,730	3,996	24
Trail Miles (All Types)	0.0	n/a	7,823	84

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Bat Cave Preserve Bottomless Pools Chimney Rock Park Hensons Creek Ravine Worlds Edge	128	4	None

# SAMPSON COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Sampson County	47,962	\$548,428	\$11.43

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	136	353	309	57
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	0	n/a	8	79
Baseball Fields	2	23,981	11,370	74
Basketball Courts	1	47,962	11,499	78
Campsites, Tent & Trailer	0	n/a	513	76
Football Fields	2	23,981	54,337	24
Golf Courses	2.0	23,981	20,934	62
Playgrounds/Totlots	2	23,981	9,752	82
Soccer Fields	2	23,981	22,076	53
Softball Fields	12	3,997	11,260	5
Swimming Pools	2	23,981	52,943	27
Tennis Courts	9	5,329	3,996	65
Trail Miles (All Types)	0.0	n/a	7,823	84

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Cutgrass Bay	58	2	None

# SCOTLAND COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Scotland County	34,211	\$377,038	\$11.02

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	99	346	309	56
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	29,000	1	8	28
Baseball Fields	0	n/a	11,370	86
Basketball Courts	1	34,211	11,499	76
Campsites, Tent & Trailer	0	n/a	513	76
Football Fields	1	34,211	54,337	35
Golf Courses	1.0	34,211	20,934	79
Playgrounds/Totlots	0	n/a	9,752	85
Soccer Fields	0	n/a	22,076	71
Softball Fields	12	2,851	11,260	2
Swimming Pools	0	n/a	52,943	67
Tennis Courts	20	1,711	3,996	5
Trail Miles (All Types)	0.0	n/a	7,823	84

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Beaver Dam Creek Shrub Community	348	5	None
Beaver Dam Creek-Little Muddy Creek Bog Hole			
Bones Fork Pine & Shrub Community Creek & Corridor Below Kinney			
Cameron Lake			
Jordan Creek			
Lumber River-Drowning Creek Flatwoods & Swamp			
Millstone Creek			
Naked Creek Atlantic White Cedar Stand			
Rocky Ford Creek Mountain Laurel Bluff			
Scotland Lane Annual Burn			
Still Lane Seepage Slopes			
Strausburg Road Old Growth Longleaf Stand			
White Cedar Branch Head			
Laurinburg Carolina Bay Pond			
Mcintosh Bay Preserve			
Stateline Prairie Bay Preserve			

# STANLY COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Stanly County	52,342	\$0	\$0.00
Albemarle	15,047	\$683,650	\$45.43
County Total	52,342	\$683,650	\$13.06

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	264	198	309	31
Regional Park Acres	4,447	12	0	10
Dispersed Use Acres	1,000	52	8	68
Baseball Fields	6	8,724	11,370	39
Basketball Courts	7	7,477	11,499	27
Campsites, Tent & Trailer	216	242	513	34
Football Fields	3	17,447	54,337	19
Golf Courses	2.0	26,171	20,934	69
Playgrounds/Totlots	9	5,816	9,752	24
Soccer Fields	1	52,342	22,076	66
Softball Fields	4	13,086	11,260	65
Swimming Pools	4	13,086	52,943	9
Tennis Courts	24	2,181	3,996	12
Trail Miles (All Types)	31.0	1,688	7,823	30

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Morrow Mountain State Park Rocky River/Morgan's Bluff	83	2	None



# STOKES COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Stokes County	37,881	\$148,070	\$3.91

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	138	275	309	47
Regional Park Acres	6,340	6	0	5
Dispersed Use Acres	6,282	6	8	49
Baseball Fields	9	4,209	11,370	13
Basketball Courts	0	n/a	11,499	80
Campsites, Tent & Trailer	73	519	513	52
Football Fields	1	37,881	54,337	39
Golf Courses	1.5	25,254	20,934	65
Playgrounds/Totlots	2	18,941	9,752	75
Soccer Fields	3	12,627	22,076	37
Softball Fields	4	9,470	11,260	40
Swimming Pools	0	n/a	52,943	67
Tennis Courts	1	37,881	3,996	90
Trail Miles (All Types)	68.5	553	7,823	19

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Hanging Rock State Park Moore's Knob/Cooks Wall Cascade Creek Little Peter's Creek Bluffs	106	2	None

# SURRY COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Surry County	62,387	\$70,388	\$1.13
Elkin	3,719	\$479,490	\$128.93
Mount Airy	7,265	\$108,500	\$14.93
Pilot Mountain	1,188	\$84,807	\$71.39
County Total	62,387	\$743,185	\$11.91

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	452	138	309	15
Regional Park Acres	3,281	19	0	14
Dispersed Use Acres	921	68	8	70
Baseball Fields	6	10,398	11,370	49
Basketball Courts	4	15,597	11,499	61
Campsites, Tent & Trailer	110	567	513	53
Football Fields	1	62,387	54,337	56
Golf Courses	6.0	10,398	20,934	16
Playgrounds/Totlots	3	20,796	9,752	78
Soccer Fields	5	12,477	22,076	36
Softball Fields	3	20,796	11,260	75
Swimming Pools	1	62,387	52,943	56
Tennis Courts	21	2,971	3,996	29
Trail Miles (All Types)	29.6	2,108	7,823	33

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Pilot Mountain Pilot Mountain State Park - Yadkin River Section	38	2	In Progress

# SWAIN COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Swain/Bryson City	11,191	\$211,003	\$18.85
Cherokee	5,893	\$129,942	\$22.05
County Total	11,191	\$340,945	\$30.47

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	45	249	309	41
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	238,813	0.05	8	2
Baseball Fields	1	11,191	11,370	50
Basketball Courts	0	n/a	11,499	80
Campsites, Tent & Trailer	1,356	8	513	1
Football Fields	0	n/a	54,337	63
Golf Courses	0.0	n/a	20,934	90
Playgrounds/Totlots	3	3,730	9,752	7
Soccer Fields	1	11,191	22,076	29
Softball Fields	2	5,596	11,260	17
Swimming Pools	2	5,596	52,943	2
Tennis Courts	5	2,238	3,996	13
Trail Miles (All Types)	343.0	33	7,823	1

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Nantahala Gorge/Blowing Spring Great Smoky Mountains	251	6	None

# TRANSYLVANIA COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Transylvania County	25,940	\$324,254	\$12.50

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	65	399	309	62
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	92,438	0.3	8	10
Baseball Fields	1	25,940	11,370	76
Basketball Courts	0	n/a	11,499	80
Campsites, Tent & Trailer	337	77	513	17
Football Fields	0	n/a	54,337	63
Golf Courses	7.0	3,706	20,934	3
Playgrounds/Totlots	3	8,647	9,752	44
Soccer Fields	1	25,940	22,076	57
Softball Fields	1	25,940	11,260	77
Swimming Pools	2	12,970	52,943	9
Tennis Courts	3	8,647	3,996	81
Trail Miles (All Types)	207.0	125	7,823	5

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
	344	5	None
Chestnut Bald/Silvermine Bald			
Dismal Falls			
Frying Pan Gap			
Horsepasture River/Windy Falls			
John Rock			
Little River-Cedar Mountain			
Looking Glass Rock			
The Pink Beds			
Toxaway Creek/Rock Creek			

# TYRRELL COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Tyrrell County	3,765	\$0	\$0.00

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	2	2,510	309	90
Regional Park Acres	122	31	0	19
Dispersed Use Acres	57,870	0.1	8	4
Baseball Fields	0	n/a	11,370	86
Basketball Courts	1	3,765	11,499	5
Campsites, Tent & Trailer	0	n/a	513	76
Football Fields	0	n/a	54,337	63
Golf Courses	0.0	n/a	20,934	90
Playgrounds/Totlots	1	3,765	9,752	8
Soccer Fields	0	n/a	22,076	71
Softball Fields	0	n/a	11,260	83
Swimming Pools	0	n/a	52,943	67
Tennis Courts	2	1,883	3,996	7
Trail Miles (All Types)	0.0	n/a	7,823	84

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Pettigrew State Park Scuppernong River (Weyerhaeuser) Scuppernong River Preserve	29	1	Completed 1992

# UNION COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Union County	86,398	\$513,944	\$5.95
Monroe	19,155	\$1,000,000	\$52.21
County Total	86,398	\$1,513,944	\$17.52

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	1,915	45	309	3
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	0	n/a	8	79
Baseball Fields	5	17,280	11,370	63
Basketball Courts	4	21,600	11,499	68
Campsites, Tent & Trailer	170	508	513	50
Football Fields	0	n/a	54,337	63
Golf Courses	2.5	34,559	20,934	80
Playgrounds/Totlots	11	7,854	9,752	37
Soccer Fields	6	14,400	22,076	40
Softball Fields	7	12,343	11,260	60
Swimming Pools	1	86,398	52,943	62
Tennis Courts	15	5,760	3,996	69
Trail Miles (All Types)	15.0	5,760	7,823	44

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Mineral Springs Barrens Preserve	83	2	None

# VANCE COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Vance/Henderson	39,905	\$496,230	\$12.44

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	164	238	309	40
Regional Park Acres	2,695	15	0	11
Dispersed Use Acres	841	46	8	67
Baseball Fields	2	19,548	11,370	66
Basketball Courts	8	4,887	11,499	14
Campsites, Tent & Trailer	520	75	513	16
Football Fields	0	n/a	54,337	63
Golf Courses	2.0	19,548	20,934	46
Playgrounds/Totlots	1	39,095	9,752	84
Soccer Fields	4	9,774	22,076	27
Softball Fields	1	39,095	11,260	80
Swimming Pools	0	n/a	52,943	67
Tennis Courts	9	4,344	3,996	55
Trail Miles (All Types)	4.0	9,774	7,823	60

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
None	23	2	Completed 1993

# WAKE COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Wake County	442,803	\$1,021,998	\$2.31
Apex	5,331	\$261,798	\$49.11
Cary	45,568	\$1,823,615	\$40.02
Fuquay-Varina	4,700	\$222,479	\$47.34
Garner	15,613	\$680,408	\$43.58
Knightdale	2,084	\$110,870	\$53.20
Morrisville	1,570	\$64,349	\$40.99
Raleigh	220518	\$14,075,669	\$63.83
Wake Forest	5948	\$339,566	\$57.09
Wendell	2979	\$97,870	\$32.85
Zebulon	3173	\$204,977	\$64.60
Total:	442,803	\$18,903,599	\$42.69

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	7,543	59	309	5
Regional Park Acres	10,511	42	0	20
Dispersed Use Acres	20,030	22	8	61
Baseball Fields	52	8,515	11,370	37
Basketball Courts	56	7,907	11,499	33
Campsites, Tent & Trailer	213	2,079	513	67
Football Fields	2	221,402	54,337	61
Golf Courses	16.5	26,837	20,934	71
Playgrounds/Totlots	79	5,605	9,752	21
Soccer Fields	38	11,653	22,076	33
Softball Fields	39	11,354	11,260	52
Swimming Pools	9	49,200	52,943	49
Tennis Courts	131	3,380	3,996	35
Trail Miles (All Types)	106.6	4,154	7,823	39



**Natural Heritage Inventory Information: See Appendix C for Details**

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Hemlock Bluffs State Natural Area	155	4	Completed 1993
Mitchells Millpond State Natural Area			
Robertson Millpond			
Shearon Harris RCW Colony			
Temple Rock			
The Rocks			
Walnut Creek Sumac Site			
Wild Cat Hollow (McAdams)			
Wild Cat Hollow (Perry)			
William B. Umstead State Park			
Wm. B. Umstead State Park/Crabtree Creek Shrub			
Adam Mountain			
B.W.Wells Interpretive			
Beaverdam Lake Swamps & Arkose Outcrops			
Cabin Branch Creek Bottomland Swamp			
Catsburg			
Knap of Reeds Creek Diabase - Levee and Slopes			
Lick Creek Bottomland Forest			
Northside Diabase			
Old Still Creek Forest			
Penny Bend/Eno River Bluffs			
Upper Barton Creek Bluffs and Ravine			

# WARREN COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Warren County	17,329	\$116,562	\$6.73

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	20	866	309	78
Regional Park Acres	305	57	0	24
Dispersed Use Acres	0	n/a	8	79
Baseball Fields	2	8,665	11,370	38
Basketball Courts	0	n/a	11,499	80
Campsites, Tent & Trailer	124	140	513	25
Football Fields	2	8,665	54,337	8
Golf Courses	1.0	17,329	20,934	43
Playgrounds/Totlots	0	n/a	9,752	85
Soccer Fields	0	n/a	22,076	71
Softball Fields	3	5,776	11,260	18
Swimming Pools	1	17,329	52,943	14
Tennis Courts	0	n/a	3,996	91
Trail Miles (All Types)	0.0	n/a	7,823	84

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
None	32	1	Completed 1993

# WASHINGTON COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Washington County	13,874	\$26,221	\$1.89

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	11	1,212	309	81
Regional Park Acres	896	15	0	13
Dispersed Use Acres	22,349	0.6	8	20
Baseball Fields	2	6,937	11,370	28
Basketball Courts	0	n/a	11,499	80
Campsites, Tent & Trailer	15	925	513	55
Football Fields	0	n/a	54,337	63
Golf Courses	0.5	27,748	20,934	73
Playgrounds/Totlots	0	n/a	9,752	85
Soccer Fields	0	n/a	22,076	71
Softball Fields	3	4,625	11,260	12
Swimming Pools	0	n/a	52,943	67
Tennis Courts	3	4,625	3,996	58
Trail Miles (All Types)	6.0	2,312	7,823	34

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Conaby Swamp Pungo National Wildlife Refuge Pettigrew State Park Scuppernong River (Weyerhaeuser) Scuppernong River Preserve	36	1	Completed 1990

# WATAUGA COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Watauga/Boone	37,907	\$646,387	\$17.05
Blowing Rock	1,212	\$125,698	\$103.71
County Total	37,907	\$772,085	\$20.81

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	99	375	309	61
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	11,891	3	8	40
Baseball Fields	4	9,274	11,370	43
Basketball Courts	2	18,549	11,499	64
Campsites, Tent & Trailer	643	58	513	12
Football Fields	1	37,097	54,337	37
Golf Courses	3.5	10,599	20,934	17
Playgrounds/Totlots	4	9,274	9,752	47
Soccer Fields	5	7,419	22,076	14
Softball Fields	3	12,366	11,260	61
Swimming Pools	3	12,366	52,943	8
Tennis Courts	6	6,183	3,996	73
Trail Miles (All Types)	38.3	970	7,823	23

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Julian Price Park Wetlands Grandfather Mountain (Morton) Hanging Rock Ridge Preserve	224	3	None

# WAYNE COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Wayne County	106,330	\$0	\$0.00
Goldsboro	43,477	\$1,405,182	\$32.32
Mount Olive	4,588	\$51,638	\$11.26
County Total	106,330	\$1,456,820	\$13.70

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	158	673	309	76
Regional Park Acres	892	119	0	34
Dispersed Use Acres	1,400	76	8	71
Baseball Fields	5	21,266	11,370	69
Basketball Courts	10	10,633	11,499	48
Campsites, Tent & Trailer	37	2,874	513	69
Football Fields	2	53,165	54,337	49
Golf Courses	4.0	26,583	20,934	70
Playgrounds/Totlots	16	6,646	9,752	31
Soccer Fields	5	21,266	22,076	50
Softball Fields	9	11,814	11,260	56
Swimming Pools	2	53,165	52,943	51
Tennis Courts	23	4,623	3,996	57
Trail Miles (All Types)	7.0	15,190	7,823	69

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Cliffs of the Neuse State Park	38	1	Completed 1993

# WILKES COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Wilkes County	60,738	\$128,555	\$2.12
N. Wilkesboro	3,550	\$195,000	\$54.93
County Total	60,738	\$323,555	\$5.36

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	293	206	309	34
Regional Park Acres	10,597	6	0	4
Dispersed Use Acres	12,304	5	8	48
Baseball Fields	5	12,076	11,370	56
Basketball Courts	3	20,126	11,499	65
Campsites, Tent & Trailer	253	239	513	33
Football Fields	1	60,378	54,337	54
Golf Courses	1.5	40,252	20,934	84
Playgrounds/Totlots	5	12,076	9,752	64
Soccer Fields	0	n/a	22,076	71
Softball Fields	5	12,076	11,260	57
Swimming Pools	1	60,378	52,943	55
Tennis Courts	6	10,063	3,996	82
Trail Miles (All Types)	37.6	1,606	7,823	29

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Rendezvous Mountain	43	1	None
Stone Mountain State Park			
Stone Mountain State Park/ Wolf/Cedar Rock			
Stone Mountain State Park/ Garden Creek			
Doughton Park			

# WILSON COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Wilson County	60,378	\$1,644,580	\$27.24

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	922	65	309	8
Regional Park Acres	0	n/a	0	39
Dispersed Use Acres	0	n/a	8	79
Baseball Fields	6	10,063	11,370	47
Basketball Courts	13	4,644	11,499	13
Campsites, Tent & Trailer	158	382	513	42
Football Fields	3	20,126	54,337	21
Golf Courses	4.0	15,095	20,934	23
Playgrounds/Totlots	24	2,516	9,752	3
Soccer Fields	7	8,625	22,076	21
Softball Fields	5	12,076	11,260	58
Swimming Pools	3	20,126	52,943	21
Tennis Courts	31	1,948	3,996	8
Trail Miles (All Types)	8.4	7,188	7,823	48

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
None	19	3	Completed 1993

# YADKIN COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Yadkin County	31,018	\$75,500	\$2.43

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	212	147	309	17
Regional Park Acres	298	104	0	31
Dispersed Use Acres	844	37	8	64
Baseball Fields	1	31,018	11,370	81
Basketball Courts	1	31,018	11,499	75
Campsites, Tent & Trailer	62	500	513	48
Football Fields	1	31,018	54,337	34
Golf Courses	2.0	15,509	20,934	32
Playgrounds/Totlots	3	10,339	9,752	58
Soccer Fields	4	7,755	22,076	17
Softball Fields	4	7,755	11,260	28
Swimming Pools	0	n/a	52,943	67
Tennis Courts	9	3,446	3,996	40
Trail Miles (All Types)	0.5	62,036	7,823	82

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
None	4	0	None



# YANCEY COUNTY

## Local Recreation Department Expenditures

Agency	Population	Operating Budget	Per Capita Operating Budget
Yancey County	15,438	\$65,000	\$4.21

## Public Recreation Acreage and Facility Needs Assessment

Type of Acreage or Facility	Total Supply	Residents Per Unit		
		County	State Median	State Rank
Local Park Acres	6	2,572	309	92
Regional Park Acres	1,677	9	0	7
Dispersed Use Acres	39,150	0.4	8	14
Baseball Fields	1	15,430	11,370	61
Basketball Courts	4	3,858	11,499	6
Campsites, Tent & Trailer	190	81	513	19
Football Fields	3	5,143	54,337	2
Golf Courses	3.0	5,143	20,934	5
Playgrounds/Totlots	2	7,715	9,752	36
Soccer Fields	1	15,430	22,076	43
Softball Fields	2	7,715	11,260	27
Swimming Pools	2	7,715	52,943	5
Tennis Courts	2	7,715	3,996	77
Trail Miles (All Types)	104.0	148	7,823	7

## Natural Heritage Inventory Information: See Appendix C for Details

Registered Natural Heritage Areas	# of Element Occurrences	# of Listed Species	Status of Countywide Natural Area Inventory
Laurel Ridges Big Bald Mountain Black Mountain Celo Community Mount Mitchell State Park	226	6	Completed 1992



## **APPENDIX B**

### **PARK AND RECREATION ISSUES**

#### **SURVEY METHODOLOGY**



## **PARK AND RECREATION ISSUES SURVEY**

### **Identifying Critical Outdoor Recreation Issues**

In 1985, former President Ronald Reagan issued an Executive Order creating an advisory commission to review outdoor recreation. The President's Commission on Americans Outdoors was charged by the President with reviewing public and private outdoor recreational opportunities, policies, and programs, and with making recommendations to ensure the future availability of outdoor recreation to the American people. The Commission called on states to establish outdoor commissions that would examine outdoor recreational needs, opportunities, and problems. North Carolina was one of 32 states that responded by establishing commissions or holding governor's forums and conferences.

The Governor's Conference on Americans Outdoors focused on two basic questions: What will the next generation of Americans want to do outdoors? And how can we be sure they have appropriate opportunities? In addition, the Conference identified trends and issues in parks and recreation in North Carolina and ways to address these issues.

Speakers from the public, private nonprofit, and commercial sectors approached the issues from their individual and collective perspectives. In addition to holding panel discussions on the current and future status of parks and recreation in North Carolina, the 150 conference participants broke into six groups to discuss the following topics:

1. legislative initiatives;
2. the state's two-year action plan;
3. new ideas and strategies;
4. citizen involvement — volunteers and constituencies;
5. outdoor recreation for everyone; and
6. financing for the future.

In discussing the recreational needs of future generations, the Governor's Conference identified several issues of concern:

- the need for permanent and stable funding sources for the total spectrum of parks and recreation in North Carolina and the nation;
- making leisure services and facilities available to all North Carolinians and visitors, including the aging and physically handicapped;
- preserving our dwindling and non-replaceable natural and cultural resources;
- enhancing and maintaining the quality of life;
- encouraging more cooperation between all providers of parks and recreation leisure services across North Carolina;
- establishing a concerted partnership among the commercial, private nonprofit, and public

providers in cooperation with university system educators and research facilities;

- marketing the services and benefits of parks and recreation statewide;
- ensuring a continuing assessment of the leisure services, both natural and cultural, by creating an officially recognized body to carry out and advise the state regarding that assessment; and
- increasing the use of volunteer programs to offset personnel shortages.

Major interest groups were also consulted for their perspectives on providing outdoor recreational opportunities. The Office for Independent Living emphasized accessibility issues that need to be addressed in order to eliminate physical and architectural barriers. The Commission on Indian Affairs focused on eliminating attitudinal barriers in providing greater public access to recreation areas and programs. The Division of Aging provided data on the immigration of retirees into North Carolina and pinpointed the need for continual assessment of demographic changes to meet public demand.

Discussions with conservationists in the Friends of State Parks organization centered around the need for the state to not only expand its protection of important natural resources from degradation and overuse, but also to provide for an increasing diversity of outdoor recreational uses in appropriate settings. Friends of State Parks thought that more interpretation and education programs would inspire appreciation of our natural heritage and lessen depreciative behavior occurring in parks. Conservationists and recreationists alike expressed concern over dwindling open space for recreational use.

Recreation professionals from the North Carolina Recreation and Parks Society concurred with conservationists that more recreation programs and facilities are needed. In addition, deterioration of recreational parks and facilities, often impractical to renovate and impossible to replace due to lack of available funds, restricts full use because of safety and liability concerns. To make strides in providing services to meet public demand in this period of retrenchment, recreationists focused on greater coordination among public agencies providing recreation and cooperation with private sector enterprise to expand park and recreation opportunities.

From these varied sources and also from staff within the Division of Parks and Recreation, an outdoor recreational issues survey was compiled and sent out to individuals representing the spectrum of outdoor recreationists. The survey contained 19 issue statements for respondents to rank in order of importance. To broaden the opportunity for public input, the survey also asked for written opinions of the most critical outdoor park and recreation issues as well as recommendations for actions needed to address these issues. Survey respondents' recommendations were discussed in Chapter I.

## DEVELOPMENT AND DISTRIBUTION

The project began with an assessment of the type of information that would be of value to the profession, as well as being useful in the division's current update of the Statewide Comprehensive Outdoor Recreation Plan.

The goal was to develop a questionnaire that was comprehensive in its consideration of issues affecting outdoor recreation, yet brief and easy to complete, to elicit compliance from the recipients. The format of California's 1987 Survey of Local Park and Recreation Agencies provided the best example of focusing on critical issues and was used in the design of the North Carolina survey instrument.

Initial determination of the issues was shaped by the Governor's Conference on Americans Outdoors and California's 1987 Survey of Local Park and Recreation Agencies. Participation in defining the issues by the N. C. Recreation and Park Society, the Friends of State Parks, the N. C. Division of Aging, the Commission on Indian Affairs, and the Office For Independent Living, assured that the issues were relevant to the spectrum of recreation agencies or providers and to recreationists themselves.

The questionnaire encompassed these two areas of inquiry:

1. The respondent's judgment as to the most critical outdoor park and recreation issues over the next five years.
2. The respondent's recommendations for the most important actions needed to resolve the problems represented by these issues.

Questionnaires were sent to 360 individuals representing the spectrum of outdoor recreation planners, providers, and participants: local recreation and park directors; recreation user groups; conservation organizations; business and tourism leaders; state and federal agencies providing recreation services; Council of Government planners; county managers; citizen advisory boards for the Department of Environment, Health and Natural Resources; special interest groups for the aging and the physically challenged; and colleges and universities with recreation curriculums.

## SURVEY RESPONSE

The initial mailing of questionnaires was made on May 3, 1989. A follow-up letter, thanking those who responded and requesting a response from all others along with a second copy of the questionnaire was sent on May 30, 1989. A final reminder letter and questionnaire was mailed to non-respondents on June 26, 1989. Follow-up phone calls were made in mid-July. July 31, 1989 was the final day of the survey period.

Approximately 65 percent of the original sample of 360 or 233 persons responded. Local and county government officials represented the great majority of respondents, providing 61 percent of the total input. citizen advisory boards, special population interest groups, academia, and

regional planners comprised the second highest category with 14 percent of the respondents. State and federal officials, recreation user groups, conservation organizations, and business and tourism leaders follow respectively in percentage of respondents. Table C-1 reflects the breakdown of survey respondents by category.

## DATA ANALYSIS

Each respondent identified the ten most important park and recreation issues facing North Carolina in the next five years in priority order (1-10). To calculate the final rank order of the issues for all respondents, a three-step process was used.

1. For each issue, the total of first place, second place....tenth place votes were summed for all respondents.
2. For each issue, the total number of responses at each priority level (e.g. 1st, 4th) was multiplied by a point value that reflected its relative importance. As indicated below, each level of priority was weighted as two-thirds that of the preceding one.

1st priority - 100.0 points	6th priority - 13.2 points
2nd priority - 66.7 points	7th priority - 8.8 points
3rd priority - 44.5 points	8th priority - 5.9 points
4th priority - 29.6 points	9th priority - 3.9 points
5th priority - 19.8 points	10th priority - 2.6 points

The total point score for each issue was calculated by summing all individual scores for each issue.

3. The total point score for each issue was divided by the total number of respondents to obtain its average score. See the Average Score column in Table C-2.
4. To present the relative importance of each issue, the average point score was converted to a 100 point index scale. The issue with the most points was given an index score of 100 points. Each issue scoring fewer total points scored proportionately lower on the 100 point scale. See the Index Score column in Table C-2. This final index scoring allowed a direct comparison of the relative intensity of support for all issues, or their priority. For example, it enables an equitable comparison between an issue about which a few felt keenly and a second one about which a larger number felt less intensely.



**Table B-1. Percentage of Respondent Groups**

GROUP	PERCENTAGE
Local & County Recreation Departments	60.7
Citizen Boards, Special Interest Groups, Planners, Academia	13.7
State and Federal Officials	7.7
Recreation Groups	7.3
Conservation Organizations	5.5
Business and Tourism Leaders	4.7

### Ranking Issues

How the Park and Recreation Issues Survey respondents ranked the SCORP issues is presented in Table B-2. The top concerns of survey respondents were:

- funding and staffing for parks and recreation;
- natural resource protection;
- public awareness of outdoor recreation's benefits; and
- the need for more recreational programs and facilities.

To briefly summarize the scoring procedure, each of the 233 respondents voted for the 10 most pressing issues in priority order. Each vote was awarded points based on a system described later. The Index Score reflects the importance of issues in relation to one another by assigning 100 points to the issue with the highest average score and then presenting all other scores in proportion to the high score. Greater detail on the computation of scores is explained later under Parks and Recreation Issues Survey Methodology.

The survey respondents represented the spectrum of outdoor recreation planners, providers, and participants. They included directors of local recreation and park departments; members of recreational user groups and conservation organizations; business and tourism leaders; employees of state and federal agencies providing recreational services; Council of Government planners; county managers; members of citizen advisory boards and special interest groups; and faculty and students from colleges and universities with recreation curricula.

Approximately 65 percent of the original sample of 360, or 233 persons, responded. The majority of respondents (61 percent) were local recreation officials. Citizen advisory boards, special interest groups, academia, and regional planners comprised the second highest category, with 14 percent of the respondents. State and federal officials, recreational user groups, conservation organizations, and business and tourism leaders, respectively, followed in percentage of respondents.

Table B-2. Park and Recreation Survey/Priority Ranking of Issues

RANK	ISSUE	INDEX SCORE
1	Inadequate public funding for parks, facilities, & recreation programs.	100
2	Need to ensure adequate staffing at parks & recreation facilities.	53
3	Need to expand protection of important natural resources.	51
4	Deterioration of natural resources in public parks due to overuse.	36
5	Improve public understanding of individual & economic benefits of parks & recreation.	31
6	Dwindling open space for recreational use.	30
7	Deteriorating recreational & park facilities (e.g., playground equipment, community centers, restrooms, etc).	30
8	Need to keep parks safe and clean for public use.	29
9	Natural resource degradation in an increasingly urbanized & developed state.	28
10	Need to provide more recreational programs and facilities for recreational uses.	24
11	Need to keep pace with changing demographics & changing public demands.	21
12	Provide for the increasing diversity of outdoor recreation uses in appropriate settings.	20
13	Increasing insurance liability costs, with pressure to limit or shut down recreational activities & facilities.	19
14	Encourage cooperation with private enterprise to expand park & rec. opportunities.	18
15	Establish greater coordination among public agencies providing recreation.	17
16	Vandalism and other undesirable activities occurring at parks.	16
17	Expand public access to recreation areas & programs by eliminating physical, architectural, & attitudinal barriers.	12
18	Provide interpretation/education programs.	9
19	Increasing reliance upon volunteers & community groups to operate recreation facilities/programs.	7

## **APPENDIX C**

### **NATURAL HERITAGE GLOSSARY**

## NATURAL HERITAGE GLOSSARY

### **Natural Heritage Inventory Information**

The North Carolina Natural Heritage Program of the Division of Parks and Recreation inventories, catalogues, and facilitates protection of the rarest and the most outstanding elements of the natural diversity of our state. These elements of natural diversity include those plants and animals which are so rare or natural areas which are so significant that they merit special consideration as land-use decisions are made.

### **Registered Natural Heritage Area**

A Registered Natural Heritage Area is a natural area of special ecological significance which is protected through a voluntary agreement between a landowner and the Department of Environment, Health, and Natural Resources. These areas may contain one or more occurrences of rare species or may contain an outstanding examples example of a natural community. Registry of a natural area does not create a right of public access.

### **Dedicated Natural Heritage Area**

A *Dedicated Natural Heritage Area* is a natural area of special ecological significance which is protected through a voluntary agreement between a landowner and the Department of Environment, Health, and Natural Resources. These areas may contain one or more occurrences of rare species or may contain an outstanding example of a natural community. Dedication of a natural area is legally binding; it does not create a right of public access.

### **# of Element Occurrences**

Information about the occurrences of North Carolina's elements of natural diversity is compiled by the Natural Heritage Program. These elements of diversity may be rare species or exemplary examples of North Carolina's natural community types. Lists of the elements of diversity known from each county are available from the Natural Heritage Program.

### **# of Listed Species**

Listed species are those rare species which have been identified as being endangered or threatened with extinction by the US Fish and Wildlife Service, the Plant Conservation Program of the North Carolina Department of Agriculture, or the North Carolina Wildlife Resources Commission. In 1995, 205 species in North Carolina were listed as endangered or threatened.

### **Status of County-wide Natural Area Inventory**

The Natural Heritage Program conducts county-wide inventories for significant natural areas. These inventories are usually conducted in cooperation with local citizen organizations and/or local governments. In 1995, 55 inventories were either completed or underway. Information about the county natural area inventories can be obtained from the Natural Heritage Program.

## **APPENDIX D**

### **SCORP PUBLIC WORKSHOP RESULTS**



## INTRODUCTION

To gather views and suggestions from the public, the Division conducted four workshops in July, 1989, to identify actions that should be taken to address outdoor recreation issues. A secondary goal of these public meetings was to bring together diverse recreational interest groups and focus on the commonality of their goals — the allocation of natural resources and funding for outdoor recreation.

These public workshops were held across the state in Raleigh, Winston-Salem, New Bern, and Asheville. Attendance at the workshops was promoted by a 1,800 piece mailing to recreation professionals, conservation and recreation groups, university faculty, private commercial recreation providers, and federal, state, and local government officials.

Statewide press releases as well as articles and notices in different recreation, conservation, and state publications were also used to publicize the public workshops. Articles about the new SCORP initiative were published in the spring 1989 edition of the *NC Recreation and Park Society Review* and the N.C. Division of Parks and Recreation newsletter, *The Courier*.

Workshop notices appeared in the following publications: *NCRPS Review Newsletter*, June, 1989; *Tarheel Trails*, Vol. 1, No. 3; *Natural Resource and Community Development Calendar*, July, 1989; *Recreation Resource Services Jobs Bulletin*, June, 1989; and the *NCDPR Courier*, June, 1989. Public workshop notices were sent for inclusion in the following organizations' newsletters: Carolina Jaybirds; Good Sams Club; Friends of State Parks; Audubon Society; and the Carolina Paddlers.

## MEETING FORMAT

Following a brief introduction about the wide spectrum of outdoor recreation activities and interests, a slide presentation offered an overview of outdoor recreation issues. The broad issue categories, which had been determined by a statewide survey, included inadequate funding, the need for improved park and recreation services, and the need to improve natural resource conservation.

After the slide presentation, participants divided into small groups varying in size from five to nine persons where suggestions were obtained in a nominal group process. This process enabled each participant to fully express his or her ideas.

Participants were asked to respond to the question, "Recognizing that there are diverse recreation/conservation interests, how can we work together to improve outdoor recreation services in the future?"

At the end of each nominal group meeting, individuals were asked to review the entire list of recommendations and to rank their three most important ideas. Each first place vote scored three points; each second place vote scored two points; and each third place vote scored one point.

Table D-1 includes a summary of 197 suggestions made at the four workshops. Suggestions

have been grouped into five general topic areas, and arranged in descending order according to total score (column 3). The five topic areas are secure funding, effective partnerships, improve outdoor recreation services, better state parks, and conserve natural resources. The scores reflect the importance of a particular topic to meeting participants. The weights (column 4) were obtained by dividing the sum of each topic area by the total sum of all rankings.

Table D-1 also includes the number of suggestions obtained in each topic area (column 1), the percentage of total suggestions in each topic area (column 2), and points per suggestion (column 5). Points per suggestion were calculated by dividing the score for each topic area by the number of suggestions for each topic area.

## **ANALYSIS OF RECOMMENDED ACTIONS**

Recommended actions focused on five general issues or topic areas: adequate funding; effective partnerships; improved outdoor recreation services; better state parks; and conserving natural resources.

### **NEED FOR ADEQUATE FUNDING**

A stable, consistent source of funding is viewed as the most pressing issue. Promoting public and legislative awareness of outdoor recreation needs and benefits was seen as the first step to increase funding by meeting participants. The greatest number of recommendations in the state and local funding category were suggestions on how to raise money and facilitate its allocation from the state to local governments. Workshop participants look to North Carolina to provide the ways and means to fund recreation services - through the establishment of a state trust fund endowed by new taxes. This may reflect a growing expectation that North Carolina should fill the gap in funding caused by cutbacks in LWCF although participants still desired to see federal funding programs expanded.

### **EFFECTIVE PARTNERSHIPS**

Perhaps in response to the workshops' discussion focus of cooperation to provide better outdoor recreation services, meeting participants deemed that effective partnerships among all recreation providers and users are necessary in a period of increasing demand and fewer resources. In order to effectively meet public demand, all recreation providers must coordinate their planning and programming efforts, "localizing" administration on a county basis by sharing facilities and not duplicating services. Local governments want clearly defined program and facility standards to be developed for use as state funding criteria and more technical advice from the state. The use of volunteers and private groups for management and operations, as well as bringing together these support groups as a constituent political action lobby for outdoor recreation, was recommended.



## **IMPROVE OUTDOOR RECREATION SERVICES**

The highest ranking recommendation in this topic area was to encourage the dedication of more open space for recreation through tax incentives for private land owners and requiring dedicated land or cash from developers. Local governments need enabling legislation and local ordinances for these initiatives to acquire more open space for recreation. The development and/or expansion of all kinds of trails — bike, greenway, hiking, river — was also considered very important. Participants stated that planning based on trends, needs assessment, user demographics, and growth management should progress through a county, regional, and, then, statewide effort. Maintenance of deteriorating facilities and better staffing also ranked high in improving outdoor recreation services.

## **STATE PARKS**

Many meeting participants had particular suggestions for state parks. These recommendations corresponded with the topic areas and categories made for outdoor recreation issues in general. Increased funding and promoting awareness of this need was the top ranking recommendation. Participants felt that the State Park System should improve its services by focusing on staffing, planning, and facilities. It was noted as important to: "complete the State Park System as to natural features and geographic representation"; expand the natural and scenic river system; classify state park units to determine appropriate uses; and establish interpretive facilities in the parks. "The primary role of state parks is conservation and education," stated one workshop participant. The state park system "should develop a critical issues forum to educate the public on environmental issues" and extend its interpretation/education programs for children into formal educational curricula.

## **CONSERVE NATURAL RESOURCES**

Identification and acquisition of natural areas were determined to be the most important tasks in conserving natural resources. Meeting participants supported the stricter enforcement of resource protection from degradation and overuse. Appreciation of our natural heritage will come through environmental education of the public - children and adults - in schools, on public television and by a statewide public awareness campaign. Providing opportunities for less traditional forms of recreation in appropriate natural settings , such as bicycling or for better public access to water resources, were also considered wise use of our natural resources.

## **CONCLUSIONS**

In the four public workshops, the meeting participants were primarily local recreation providers, conservation and recreation interest groups, citizen advisory board members, and government officials. These individuals have a realistic sense of what is needed to improve outdoor recreation services in North Carolina. Despite active promotion, the workshops were attended by only 56 persons, perhaps reflecting the much diminished role of the Land and Water Conservation Fund in providing outdoor recreation opportunities.

Local governments desire the establishment of a state trust fund for outdoor recreation. Participants generally acknowledge that adequate funding will occur only if the public support is heard by the legislature. As one Raleigh workshop participant stated, "Voters have impact; we need to increase awareness of the plight of parks." Developing a constituent advocacy lobby is necessary to encourage the allocation of natural resources and funding for outdoor recreation. We need to "bring together diverse recreation groups — locals, state, trails, etc. — to work together towards improved recreation services," said one New Bern participant. This will be the natural process as both the public and legislature become aware of the benefits and needs of park and recreation systems through a series of educational public service announcements to media statewide and effective environmental education efforts by state parks, public schools, and recreation providers. Cooperative planning efforts among all recreation providers - public and private - is necessary in this period of retrenchment to try to meet public demand for services.

True conservation, or wise use, of natural resources is more likely if the public is educated to appreciate our natural heritage. A Winston-Salem workshop participant stated, "We must educate government officials, children, developers, and the public about recreation needs and values." Again, funding for outdoor recreation services, better state parks, acquisition of natural areas, and for the protection of our natural resources, is contingent upon public awareness of the need and the benefits of doing so.

Good stewardship of our natural resources will ensure that each recreationist will be able to pursue his favorite outdoor activities — whether it be observing wildflowers in their natural habitat, waterskiing, or playing softball. We all have a vested interest in helping determine the quality of life in North Carolina.

Table D-1. Public Meeting Results: Topic Areas and Scoring.

	Number of Suggestions	% of Total Suggestions	Score: Number of Points	Weight: % of Total Points	Points Per Suggestion
<b>I. ADEQUATE FUNDING</b>	<b>33</b>	<b>16.7</b>	<b>166</b>	<b>28.6</b>	<b>5</b>
Promote Public & Legislative Awareness of Park & Recreation Needs & Benefits	9	4.5	51	8.8	5.6
Dedicated Funding Sources	17	8.6	48	8.3	2.8
Adequate Funding	5	2.5	43	7.4	8.6
Increase Federal Funding	2	1	24	4.1	12
<b>II. EFFECTIVE PARTNERSHIPS</b>	<b>59</b>	<b>29.9</b>	<b>138</b>	<b>23.8</b>	<b>2.3</b>
Coordination Among Public Agencies	27	13.7	78	13.4	2.9
Volunteer Support Groups	11	5.5	21	3.6	1.9
Political Action	5	2.5	14	2.4	2.8
Public/Private Cooperation	7	3.5	13	2.2	1.9
Improved Technical Assistance to Local Agencies	9	4.5	12	2.1	1.3
<b>III. IMPROVE OUTDOOR RECREATION SERVICES</b>	<b>39</b>	<b>19.8</b>	<b>119</b>	<b>20.4</b>	<b>3.1</b>
Reserve Open Space	5	2.5	34	5.9	6.8
More Trails	9	4.5	25	4.3	2.8
Improved Planning	6	3	21	3.6	3.5
Maintain Facilities	4	2	15	2.6	3.7
Adequate Staffing	4	2	10	1.7	2.5
Limit Liability	3	1.5	5	.8	1.6
Improve Access	4	2	5	.8	1.3
More Programs & Facilities	4	2	4	.7	1
<b>IV. BETTER STATE PARKS</b>	<b>38</b>	<b>19.3</b>	<b>98</b>	<b>16.9</b>	<b>3.9</b>
Funding	12	6	53	9.1	4.4
Increase Funding	9	4	44	7.6	4.9
Promote Awareness of Need & Benefits	3	1.5	9	1.5	3
Improve Services	9	4.5	21	3.6	2.3
Adequate Staffing & Facilities	6	3	11	1.9	1.8
Improve Planning	3	1.5	10	1.7	3.3
Conserve Natural Resources	9	4.5	15	2.6	1.7
Acquire Natural Areas	3	1.5	7	1.2	2.3
Interpretation & Education	4	2	6	1	1.5
Classify Parks by Use	2	1	2	.3	1
New Initiatives	8	4	9	1.5	1.1

Table D-1. Public Meeting Results: Topic Areas and Scoring.

	Number of Suggestions	% of Total Suggestions	Score: Number of Points	Weight: % of Total Points	Points Per Suggestion
<b>V. CONSERVE NATURAL RESOURCES</b>	<b>28</b>	<b>14.2</b>	<b>60</b>	<b>10.3</b>	<b>2.1</b>
Acquire Natural Areas	8	4	20	3.4	2.5
Expand Protection	4	2	7	1.2	1.8
Restore Water Resources	2	1	7	1.2	3.5
Appropriate Public Use	5	2.5	12	2.1	2.4
Interpretation & Education	8	4	11	1.9	1.4
Protect from Overuse	1	.5	3	.5	3
<b>TOTALS/AVERAGE</b>	<b>197</b>	<b>100.0</b>	<b>581</b>	<b>100.0</b>	<b>2.95</b>

## **APPENDIX E**

### **OPEN PROJECT SELECTION PROCESS**



**STATE OF  
NORTH CAROLINA  
OPEN PROJECT SELECTION PROCESS  
FOR  
LOCAL GOVERNMENT APPLICANTS**

### 660.4.3 Requirements for an Open Project Selection Process

#### A. Priority Rating System

North Carolina's priority rating system allows consideration of the quality of the grant proposal during each funding cycle. The priority rating system is based on specified evaluation criteria. The criteria include minimum requirements (see Local Government Criteria) and cover five subject areas:

- I. Project Need, SCORP Goal Attainment, Public Priority
- II. Site Considerations
- III. Program - Planning Considerations
- IV. Administrative Considerations
- V. General Evaluation

(1) Places strong emphasis on project's conformance with priority needs identified in the SCORP. Each project is reviewed and given a score (up to 30 points) for degree of need, SCORP goal attainment, and public priority. (See Local Government Criteria.)

(2) Public Participation

Each project is reviewed by a regional park-recreation consultant and given a score (up to 10 points) for the degree of citizen involvement. In addition, the project applicant must submit evidence of citizen involvement, such as minutes from town council meetings, county commission meetings, and public hearings. Furthermore, citizen involvement is part of the minimum criteria of the Grant Evaluation Criteria.

(3) Accessibility

Each project is evaluated by a regional park-recreation consultant on the basis of clientele to be served.

Potential applicants must provide assurances that their project will be accessible to all segments of the public as part of the minimum criteria.

It is a policy of North Carolina's LWCF Program that projects must provide new recreation opportunities, not renovation of existing facilities.

(4) Conformance of project with criteria outlined in Chapters 640 and 660 of the LWCF Manual.

The standard requirements and guidelines contained in Chapters



640 and 660 of the LWCF Manual are incorporated in North Carolina's evaluation criteria and are checked by the regional park-recreation consultants and LWCF Program staffs in their review of LWCF grant applications.

**B. Project Selection Process**

North Carolina's evaluation criteria are the basis of its selection system. They ensure that all projects are evaluated and selected on the basis of quality and conformance with federal and state guidelines. The system for using the criteria is as follows:

- (1) Local and state projects are reviewed and scored by regional park-recreation consultants, based on criteria and on-site inspections.
- (2) The recommendations/scores are submitted to the Raleigh LWCF staff and SCORP policy staff. Project data sheets with scores are developed for all projects for use by the LWCF Review Committee. Packets with project data sheets and rating information are sent to LWCF Review Committee members.
- (3) Projects are selected by LWCF Review Committee, and recommendations are submitted to the state liaison officer.
- (4) SLO/ASLO submits projects to the National Park Service.

North Carolina's procedures under the Administrative Procedures Act (N.C.A.C. 12/12/84; T15:12J.01 - 12J.03) further explain the review, evaluation, and project-selection process for the Land and Water Conservation Program.

**C. Recurring Funding Cycle**

North Carolina's LWCF funding cycle is held every two years.

**D. Public Notification**

To provide all eligible entities an equal opportunity to participate in the LWCF Program, the state notifies potential applicants that Land and Water Conservation Funds are available.

- A letter is mailed to all mayors, chairmen of county commissions, and recreation directors in the state and to heads of state agencies explaining the LWCF grants program, criteria used in rating grant applications, procedures for applying for assistance, funding schedule, dates of LWCF workshops, and the sources of the technical assistance that is available to help with the grant preparation.

- Funding schedule is distributed at the annual N.C. Recreation and Parks Society conference.
- Regional newsletters publicize LWCF grant availability.

In addition, formal application workshops are held for potential applicants.

E. Program Assistance

Outreach and technical assistance is provided through regional park/recreation consultants. Technical assistance is provided by the consultants to anyone requesting or needing assistance. This assistance includes help with formulation of project proposals, preparation of applications, site planning, facilities standards, public participation methods, planning requirements and procedures, etc. In addition, application workshops that are held prior to each funding cycle provide information on application procedures, forms, and whom to contact for additional information or assistance.

Written information is also provided to potential applicants in the form of an application manual that describes and defines procedures for participation. This manual has been revised and expanded to incorporate the major aspects of the LWCF Program.

F. Affirmative Action

The state makes every effort to ensure that minority populations have equal access to participation in the LWCF Program. With the mass mail-out each year to all local units of government, everyone is provided an equal opportunity to apply for a LWCF grant.

G. Advisory Boards

North Carolina uses an advisory board known as the Land and Water Conservation Fund Committee in selecting LWCF projects to be funded. The committee receives recommendations from the LWCF Program staff for projects to be funded and subsequently recommends projects to the state liaison officer.

The committee is composed of nine members representing various organizations and includes minority representation. The members of the committee are chosen by the state liaison officer.

## LOCAL GOVERNMENT LWCF GRANT EVALUATION CRITERIA

### Minimum Criteria

An applicant must have met the following minimum criteria by the application due date in order for a grant to be considered for funding:

- Application must be postmarked no later than the due date.
- Applicant must be a municipal or county government or a combination thereof.
- Applicant must assure it has the required matching funds.
- Applicant must hold fee simple title to property for all development projects.
- Adequate citizen involvement in the project formulation must be obtained and documented.
- Applicant must provide assurances of compliance with Section 504 of the Rehabilitation Act of 1973, Civil Rights Act of 1964, and the Americans with Disabilities Act of 1990.
- Applicant must agree to comply with all applicable federal, state and local laws, and regulations.
- Cost of support facilities (restrooms, roads, utilities and parking areas) can not exceed 25% of total project cost.
- Applicant must assure that any existing LWCF-assisted project(s) is/are properly maintained and supervised and any newly approved project(s) will also be properly maintained and supervised.

LOCAL GOVERNMENT LWCF GRANT EVALUATION CRITERIA

<u>Score</u>	<u>Possible Points</u>	
_____	of 30	I. PROJECT NEED, SCORP GOAL ATTAINMENT, PUBLIC PRIORITY
_____	of 46	II. SITE CONSIDERATION
_____	of 64	III. PROGRAM-PLANNING CONSIDERATIONS
_____	of 20/40/50	IV. ADMINISTRATIVE CONSIDERATIONS
_____	of ± 30	V. MISCELLANEOUS (Sum Total)
_____	=	SCORE

$$\frac{\text{Score}}{\text{Possible Points}} = \frac{\text{_____}}{160/180/190} = \text{_____} \%$$

Score

I. DEGREE OF PROJECT NEED, SCORP GOAL ATTAINMENT, PUBLIC PRIORITY (30 Possible Points)

\_\_\_\_\_

A. Degree of Need (10 Points)

Low

1, 2, 3

Medium

4, 5, 6, 7

High

8, 9, 10

Remarks:

\_\_\_\_\_

B. Contribution to achieving SCORP goals (10 Points)

Low - 1, 2, 3

Addresses 0-1 Goals

Medium - 4, 5, 6, 7

Addresses 2-3 Goals

High - 8, 9, 10

Addresses 4 or more Goals

Remarks:

\_\_\_\_\_

C. Priority of public funding according to demand (10 Points)

Activity Code \_\_\_\_\_ Converted Score \_\_\_\_\_

Remarks:

I. \_\_\_\_\_ of 30 Possible Points

**I. DEGREE OF PROJECT NEED, SCORP GOAL ATTAINMENT, AND PUBLIC PRIORITIES FOR FUTURE OUTDOOR RECREATIONAL RESOURCES**

**A. DEGREE OF PROJECT NEED**

Projects are awarded 1 to 10 points based on the degree of need as determined by county rankings. County rankings are made according to population per facility or population per acre. All counties have been evaluated according to their supply of recreational acreage and facilities. These results are contained in Appendix A. Counties with the greatest recreational needs are awarded more points on the 10-point scale.

To calculate the number of points awarded on the 10-point scale, the degree of need is converted using the county facility and acreage rankings. The conversion is as follows:

<u>State Ranking</u> <u>Based on Population Per Facility or Acre</u>	<u>Points</u> <u>Awarded</u>
91 - 100 (Highest Need)	10
81 - 90	9
71 - 80	8
61 - 70	7
51 - 60	6
41 - 50	5
31 - 40	4
21 - 30	3
11 - 20	2
1 - 10 (Lowest Need)	1

If a county is providing a type of area or facility for the first time, 10 points are awarded. Multiple types of facilities will be averaged.

**B. SCORP GOAL ATTAINMENT**

Projects are awarded from 1-10 points based on the contribution to achieving SCORP goals. Points are awarded using the following scale.

<u>Goals Addressed</u>	<u>Points Awarded</u>
1	1 - 2
2 - 3	3 - 6
4 - 5	7 - 10

### Scorp Goal Statements

**GOAL #1:** Provide improved outdoor recreation resources and services to meet the needs of a growing and changing population.

**GOAL #2:** Preserve, maintain, and promote the wise use of North Carolina's unique natural and scenic environment for the benefit of present and future generations.

**GOAL #3:** Sufficient funds to adequately meet the demand of the state's citizens for quality recreational opportunities.

**GOAL #4:** Develop a unified constituency that will work together to improve outdoor recreation resources in the future.

**GOAL #5:** Address needs identified by the Systemwide Plan's evaluation of the North Carolina state parks system.

#### C. PUBLIC PRIORITIES

Public priorities for future outdoor recreational resources were calculated from the results of the North Carolina Outdoor Recreation Survey conducted in the spring of 1989. The priorities were determined by combining ratings for future demand and public funding priorities for 43 outdoor recreational activities. Each activity received a rating of high, moderate, or low for both future demand and support for public funding. These ratings were combined to produce a score from 1 to 9 reflecting an overall priority in which 1 is the highest priority and 9 is the lowest. The combined score is produced using a matrix that assigns a higher priority to support for public funding than future demand for the outdoor recreation activity (Table F-1). See Chapter II for a complete discussion of this analysis process. Based on this analysis, the activities are assigned a code that converts to a 10-point scale for scoring purposes (Table F-2).

**Table F-1. Scoring Matrix for Future Recreation Priorities**

FUTURE DEMAND	PUBLIC SUPPORT		
	High	Moderate	Low
High	1	3	6
Moderate	2	4	8
Low	5	7	9

Table F-2. Priorities for Future Public Outdoor Recreation Activities

Activity	Future Demand	Support for Public Funding	Combined Ranking	Points Awarded
Walking for Pleasure	High	High	1	10
Camping, Tent or Vehicle	High	High	1	10
Picnicking	High	High	1	10
Beach Activities	High	High	1	10
Fishing - Freshwater	High	High	1	10
Attend Outdoor Cultural Events	High	High	1	10
Visiting Natural Areas	Moderate	High	2	9
Use of Play Equipment	Moderate	High	2	9
Visiting Zoos	Moderate	High	2	9
Visiting Historical Sites	Moderate	High	2	9
Bicycling for Pleasure	High	Moderate	3	8
Swimming (in Pools)	High	Moderate	3	8
Viewing Scenery	Moderate	Moderate	4	7
Hunting	Moderate	Moderate	4	7
Trail Hiking	Moderate	Moderate	4	7
Use of Open Areas	Moderate	Moderate	4	7
Target Shooting	Moderate	Moderate	4	7
Swimming (Lakes, Rivers, Ocean)	Moderate	Moderate	4	7
Fishing - Saltwater	Moderate	Moderate	4	7
Camping, Primitive	Low	Moderate	7	4
Driving for Pleasure	Moderate	Low	8	3
Horseback Riding	Moderate	Low	8	3
Golf	Moderate	Low	8	3
Attending Sports Events	Moderate	Low	8	3
Jogging or Running	Low	Low	9	2
Nature Study	Low	Low	9	2
Softball and Baseball	Low	Low	9	2
Basketball	Low	Low	9	2
Football	Low	Low	9	2
Soccer	Low	Low	9	2
Tennis	Low	Low	9	2
Volleyball	Low	Low	9	2
Skateboarding	Low	Low	9	2
Sailboarding	Low	Low	9	2
Windsurfing	Low	Low	9	2
Canoeing and Kayaking	Low	Low	9	2
Power Boating	Low	Low	9	2
Water Skiing	Low	Low	9	2
Downhill Skiing	Low	Low	9	2
Cross Country Skiing	Low	Low	9	2
Other Winter Sports	Low	Low	9	2
Use Motorcycles, Dirt Bikes, ATV	Low	Low	9	2
Use Four-Wheel-Drive Vehicles	Low	Low	9	2
Other Activities				1



Score

## II. SITE CONSIDERATIONS (46 Possible Points)

\_\_\_\_\_ of 10 A. Potential for Construction of Facilities (10 points maximum)

To what extent is the site suitable for the intended development without special and costly construction methods? Topography, ground water levels, soil conditions, woodland vegetation and potential for flood occurrence are important factors to be considered.

7 - 10 points - Site is well suited for proposed development, and development will involve minimal site preparation and/or modification.

3 - 6 points - Site will permit all proposed development with moderate site preparation or modification costs.

1 - 2 points - Site will permit all proposed development, but with expensive site modification costs.

0 points - Site is poorly suited for proposed development; site preparation and modification costs are excessive.

Remarks:

\_\_\_\_\_ of 6 B. Access to Site (6 points maximum)

To what extent is access provided to the site? Consider safety, convenience to the population to be served and legal access.

4 - 6 points - Access is excellent and exceeds state/federal minimum guidelines.

1 - 3 points - Access is adequate and meets state/federal minimum guidelines.

0 points - Access is poor and problems exist.

Explain:

\_\_\_\_\_ of 4 C. Surrounding Area (4 points maximum)

To what extent is the site enhanced or hindered by its location and by the effects of adjacent properties?

3 - 4 points - Site is enhanced by location and adjacent properties. (Describe)

1 - 2 points - Location and adjacent properties have minimal positive effect (Describe).

0 points - Location and adjacent properties negatively affect the park. (Describe)

Describe:

\_\_\_\_\_ of 8 D. Internal Site Continuity (8 points maximum)

To what extent is the site free of overhead powerlines, roadways, railroads, water-sewer lines, storm sewers and other intrusions or easements?

6 - 8 points - Site is totally free of power lines, roads, water lines, sewer lines and other intrusions. Note: If there are pre-existing conditions on a site, then the site is not totally free and clear.

3 - 5 points - Site intrusion(s) are on the periphery of the park and should not affect the park.

1 - 2 points - Site intrusions should have minimal adverse effects. Note: This refers to pre-existing conditions.

0 points - Site has one or more intrusions that adversely affect the park.

Remarks:

\_\_\_\_\_ of 10 E. Physical Planning (10 points maximum)

To what extent has the project been thoughtfully/professionally planned? The more complex the project, the more professional expertise that should be involved.

7 - 10 points - Excellent design/planning using detailed or schematic drawings.

5 - 6 points - Good design/planning using detailed or schematic drawings.

3 - 4 points - Average design/planning using detailed or schematic drawings.

1 - 2 points - Fair design/planning using schematic drawings and conceptual plans.

0 points - Poor design/planning using rough drawings and conceptual plans. Or design is not legible.

Remarks:

\_\_\_\_\_ of 8 F. Acreage Adequacy (8 points maximum)

To what extent is the site adequate in size and configuration for the type of park development which is proposed (based on minimum standards)?

6 - 8 points - More than adequate to accommodate the proposed development. Also, site will accommodate future development.

3 - 5 points - Adequate.

2 points - Minimal, but additional contiguous land may be available for future development.

1 point - Minimal, and no additional undeveloped land is available contiguous to the park site.

0 points - Size or configuration is not adequate for the intended use.

Remarks:

**III. PROGRAM-PLANNING CONSIDERATIONS (64 Possible Points)**

\_\_\_\_\_ of 6 **A. Recreation Planning Considerations (6 points maximum)**

To what extent has the applicant planned for parks and recreation? An increased degree of planning complexity should be expected as applicant's population size and complexity of project increases.

5 - 6 points - A study has been made which assesses existing facilities and then determines park and recreational needs and assigns priority to those needs. This master plan has been adopted by the governing body.

3 - 4 points - Applicant has completed a needs assessment and study adopted by local advisory body.

1 - 2 points - Some local planning has been completed, and additional planning is scheduled in the near future.

0 points - No planning has been done.

Remarks:

\_\_\_\_\_ of 4 **B. Conformity of Proposed Project to Local Planning Efforts (4 points maximum)**

To what extent does the proposed project conform with local park and recreational planning?

2 - 4 points - Project conforms well with local planning efforts which have been adopted.

1 point - Project has a small relation to planning efforts, or little planning is in existence.

0 points - No planning efforts exist or project is in conflict with local planning efforts.

Remarks:

\_\_\_\_\_ of 10 C. Citizen Involvement (10 points maximum)

To what extent have citizens been involved in program and site development? Consider public meetings, questionnaires, civic groups, involvement by advisory committees and handicapped citizens.

9 - 10 points - Citizens have had optimum involvement through several methods in the planning of this project and other program and site development (if any). Strong public support for project exists as evidenced by public hearings or meetings.

6 - 8 points - Citizens have had adequate involvement in the planning of this project and other program and site development (if any). Firm public support for project exists as evidenced by advisory committee meetings or civic group meetings.

3 - 5 points - Citizens have had some involvement in the development of this project and other program and site development (if any). Involvement includes but is not limited to questionnaires, surveys, etc.

1 - 2 points - Citizen involvement in this project has been minimal, and involvement in other program and site development (if any) has been minimal. Town council or county officials decided what kind of project was needed.

0 point - No public involvement is evident.

Remarks:

\_\_\_\_\_ of 10 D. Level of Local LWCF Spending Per Capita by County (10 points maximum)

10 points - County ranking from 81 to 100. (Lowest per capita)

8 points - County ranking from 61 to 80.

6 points - County ranking from 41 to 60.

4 points - County ranking from 21 to 40.

2 points - County ranking from 1 to 20. (Highest per capita)

Remarks:

E. Clientele Served (14 points maximum)

To what extent are the following clients served by the proposed project?

\_\_\_\_\_ of 6

1. Designed for use by special populations (6 points)

4 - 6 points - Project is well designed for use by special populations according to state/federal standards.

2 - 4 points - Project is adequately designed for use by special populations.

1 points - Projects meet minimal criteria for use by special populations.

Explain:

\_\_\_\_\_ of 6

2. Special Identifiable Community Service Needs (6 points maximum)

To what extent will the project serve groups not previously served or groups that have special identified needs?

5 - 6 points - Great extent.

3 - 4 points - Some extent.

0 points - No special needs identified.

Explain:

\_\_\_\_\_ of 4

3. Socio-economic Levels to be Served (4 points maximum)

3 - 4 points - All levels: lower and middle income levels; middle; middle and upper income and upper income levels.

1 - 2 points - Middle; middle and upper income; or upper income levels.

Remarks:

\_\_\_\_\_ of 10 F. Appropriate Staffing (10 points maximum)

To what extent has the applicant secured appropriate qualified staff to operate programs and services? For larger applicants, a full-time professional staff with varied programs exists. For a small applicant, appropriate qualified staff might be only one person.

8 - 10 points - Excellent to exceptional staffing exists.

5 - 7 points - Good staffing exists.

3 - 4 points - Average staffing exists.

1 - 2 points - Below average staffing, or applicant plans to employ qualified staff.

0 points - Staff is inadequate.

Remarks:

\_\_\_\_\_ of 8 G. Support Services (8 points maximum)

To what extent has the applicant provided or demonstrated the ability to provide adequate maintenance staff and equipment in order to insure the preservation of quality outdoor recreation facilities. If no recreation areas exist by which to judge, address the applicant's potential as good, average, etc., and explain response.

7 - 8 points - Demonstrated ability to maintain excellent public facilities.

5 - 6 points - Demonstrated ability to maintain good facility.

3 - 4 points - Demonstrated ability to maintain average facility.

0 points - Below average or poor maintenance.

Remarks:

**IV. ADMINISTRATIVE CONSIDERATIONS (20, 40 or 50 Possible Points)**

\_\_\_\_\_ of 10 **A. Relationship to Competing Recreation Opportunities (10 points maximum)**

To what extent does the proposed project compete with private non-profit and commercial recreation enterprises.

8 - 10 points - No competing opportunities.

5 - 7 points - Few competing opportunities.

2 - 4 points - Some competing opportunities, but foresee no conflicts.

1 point - Competing opportunities may conflict.

0 points - Conflict with competing opportunities

Remarks:

\_\_\_\_\_ of 10 **B. Relationship to Complementary Recreation Opportunities (10 points maximum)**

To what extent does the proposed project complement existing or planned public recreational facilities?

7 - 10 points - Complements to a great extent.

4 - 6 points - Above average complement, existing or planned.

1 - 3 points - Average complement.

0 points - Below average or does not complement.

Explain:



\_\_\_\_\_ of 10 C. Quality of Previous Projects (10 points/maximum)

To what extent has the applicant developed quality outdoor recreation facilities?

9 - 10 points - Highest quality.

6 - 8 points - Above average.

3 - 5 points - Average

1 - 2 points - Below average.

0 points - Poor quality and/or substandard operation and maintenance.

\_\_\_\_\_ N/A for applicant with no previous LWCF projects. (Check)

Remarks:

\_\_\_\_\_ of 10 D. Success of Past Federal Acquisition or Development Grants (10 points maximum)

To what extent has the applicant shown an ability to undertake and complete a quality recreation project? Consider fiscal records/billings, length of time needed to start and complete project, use of funds, compliance with guidelines, time extensions, changes in project scope, etc.

9 - 10 points - Excellent record.

6 - 8 points - Above average record.

3 - 5 points - Average record, or no projects by which to judge.

1 - 2 points - Below average.

0 points - Currently outstanding problems with existing grant due to lack of adequate performance by applicant.

\_\_\_\_\_ N/A for applicant with no previous LWCF projects. (Check)

Remarks:

\_\_\_\_\_ of 10 E. Critical Acquisition (Apply only to acquisition projects (10 points maximum)

9 - 10 points - Highly threatened. If not purchased at this time, a quality recreation site will be lost.

7 - 8 points - The site is an excellent recreation resource and should be acquired.

5 - 6 points - The site is an above average recreation resource and should be acquired.

1 - 4 points - The site will make a good outdoor recreation resource, but comparable sites are available.

0 point - The site is below average or offers little as a recreation resource. Better sites are available.

Remarks:

IV. \_\_\_\_\_ of 20/40/50 Possible Points. (Circle)

## V. MISCELLANEOUS

This section gives an opportunity to award additional points for positive aspects or to deduct points for negative features of the project that are not addressed through the other sections of the rating system. A project starts with zero points. No points may be added or deducted without explanation.

### Potential Negative Features:

#### Value (-30 points possible)

- 2 Absence of effort to develop self-evaluation and transition plans.
- 2 Applicant has active grant. (Consider applicant size and grant progress.)
- 2 High dollar request for number of users.
- 2 School use conflict or other conflicts (lack of total sponsor control of facilities).
- 2 Cost estimates are unrealistic.
- 4 Project documentation (poor maps/site plans or inadequate environmental assessment, missing documentation, instructions not followed, inconsistencies, etc.)
- 4 Unresolved audit findings.
- 4 Greater percentage of project cost towards support facilities (examples, landscaping, dredging, roads).
- 4 Local government, which has applied on behalf of a citizens group, etc., has not upheld its operation and maintenance responsibilities.
- 2 Representative did not attend the formal application workshop.
- 2 Others (see remarks)

\_\_\_\_\_ TOTAL NEGATIVE POINTS

Remarks:

Potential Positive Features

Value (+30 points possible)

- +2 Excellent project documentation/application organization and presentation.
- +3 Project has innovative/unique features.
- +4 Applicant has never had a previous grant.
- +2 Project will develop an area previously acquired with LWCF assistance (list previous project number).
- +1 Seasonal demand increases need.
- +3 Project offers new opportunity for passive access to public waters.
- +3 Project offers new opportunity for access to wetlands.
- +2 Critical need (special circumstance which makes the need for the proposed project especially eminent).
- +2 Project will serve the needs of a high number of users and/or a larger geographic area than that of the local unit of government without duplicating services. List proposed service population: \_\_\_\_\_  
\_\_\_\_\_
- +2 Project offers one or more new outdoor recreational opportunities.
- +4 Local sponsor has current self-evaluation and transition plans.
- +2 Others (see remarks)

\_\_\_\_\_ TOTAL POSITIVE POINTS

Remarks:

V. \_\_\_\_\_ of  $\pm$  30 Possible Points

**STATE OF  
NORTH CAROLINA  
OPEN PROJECT SELECTION PROCESS  
FOR  
STATE GOVERNMENT APPLICANTS**

### 660.4.3 Requirements for an Open Project Selection Process

#### A. Priority Rating System

North Carolina's priority rating system allows consideration of the quality of the grant proposal during each funding cycle. The priority rating system is based on specified evaluation criteria. The criteria (see State Agency Evaluation Criteria) are divided into three sections:

- I. Minimum Criteria
- II. Basic Criteria
- III. Bonus Criteria

(1) Places strong emphasis on project's conformance with priority needs identified in the SCORP. Each project is reviewed by the SCORP policy staff and given a score for degree of need and attainment of SCORP goals. (See State Agency Evaluation Criteria.)

(2) Public Participation

Citizen involvement is required as part of the minimum criteria of the Grant Evaluation Criteria (see State Agency Evaluation Criteria). In addition, the project applicant must submit evidence of citizen involvement in the formulation of the project proposal (see State Agency Evaluation Criteria).

(3) Accessibility

Potential applicants must provide assurances that their project will be accessible to all segments of the public as part of the minimum criteria. (See State Agency Evaluation Criteria.)

(4) Conformance of project with criteria outlined in Chapters 640 and 660 of the LWCF Manual.

The standard requirements and guidelines contained in Chapters 640 and 660 of the LWCF Manual are incorporated in North Carolina's evaluation criteria and are checked by LWCF Program staff in their review of LWCF grant applications.

#### B. Project Selection Process

North Carolina's evaluation criteria are the basis of its selection system. They ensure that all projects are evaluated and selected on the basis of quality and conformance with federal and state guidelines. The system for using the criteria is as follows:

- (1) Local and state projects are reviewed and scored by regional park-recreation consultants, based on criteria and on-site inspections.
- (2) The recommendations/scores are submitted to the Raleigh LWCF staff and SCORP policy staff. Project data sheets with scores are developed for all projects for use by the LWCF Review Committee. Packets with project data sheets and rating information are sent to LWCF Review Committee members.
- (3) Projects are selected by LWCF Review Committee, and recommendations are submitted to the state liaison officer and Secretary of the Department of Environment, Health, and Natural Resources.
- (4) SLO/ASLO submits projects to the National Park Service.

North Carolina's procedures under the Administrative Procedures Act (N.C.A.C. 12/12/84; T15:12J.01 - 12J.03) further explain the review, evaluation, and project-selection process for the Land and Water Conservation Program.

#### C. Recurring Funding Cycle

North Carolina's LWCF funding cycle is held every two years.

#### D. Public Notification

To provide all eligible entities an equal opportunity to participate in the LWCF Program, the state notifies potential applicants that Land and Water Conservation Funds are available.

- A letter is mailed to all mayors, chairmen of county commissions, and recreation directors in the state and to heads of state agencies explaining the LWCF grants program, criteria used in rating grant applications, procedures for applying for assistance, funding schedule, dates of LWCF workshops, and the sources of the technical assistance that is available to help with the grant preparation.
- Regional newsletters publicize LWCF grant availability.

In addition, formal application workshops are held for potential applicants.

#### E. Program Assistance

Outreach and technical assistance is provided through regional park/recreation consultants. Technical assistance is provided by the consultants to anyone requesting or needing assistance. This assistance includes help with formulation of project proposals, preparation of applications, site planning, facilities standards, public participation methods, planning requirements and procedures, etc. In addition, application workshops provide information on application procedures, forms, and whom

to contact for additional information or assistance.

Written information is also provided to potential applicants in the form of an application manual that describes and defines procedures for participation. This manual has been revised and expanded to incorporate the major aspects of the LWCF Program.

#### F. Affirmative Action

The state makes every effort to ensure that minority populations have equal access to participation in the LWCF Program. Representative public input is required in planning each project, as specified by item one of the Minimum Criteria. Compliance with Title VI of the Civil Rights Act of 1964 and construction of accessible facilities are also requirements of the Minimum Criteria (see State Agency Evaluation Criteria).

#### G. Advisory Boards

Capital development projects are reviewed by the Advisory Budget Commission. All land acquisition projects are reviewed by the Council of State.

North Carolina uses an advisory board known as the Land and Water Conservation Fund Review Committee in selecting LWCF projects to be funded. The committee receives recommendations from the LWCF Program staff for projects to be funded and subsequently recommends projects to the state liaison officer.

The committee is composed of nine members representing various organizations and includes minority representation. The members of the committee are chosen by the state liaison officer.

#### Exemptions

The priority rating system establishes funding priorities based on the SCORP and action program. Deviation from the OPSP will be granted to projects in the following situations only:

1. Acquisition of lands to eliminate a private inholding within the state parks system.
2. Acquisition of lands that contribute to the entirety of an area's primary natural, biological, scenic, geological, archaeological, or recreational resources being publicly owned and protected.
3. Acquisition of lands containing wetlands.
4. Acquisition of lands that provide the base necessary for planned recreational facility development.



The above criteria address two important goals outlined in the SCORP — provision of a land base in which the resources of a park area are completely protected, and a land base that is adequate to allow the development of recreational facilities compatible with the resources. The acquisition criteria have been recommended by the State Park Legislative Study Commissions.

## STATE AGENCY EVALUATION CRITERIA

### Minimum Criteria

These are criteria that must be met by an applicant's project proposal in order to be eligible for consideration for an LWCF grant. There are no points attached to these criteria; a project proposal either (a) meets the minimum requirement and is therefore eligible for further consideration or (b) it does not meet the minimum requirements and is therefore ineligible for further consideration.

1. The project preparation must include a representative public involvement program soliciting input from different age groups, ethnic groups, races, sexes, and special populations. News releases announcing public meetings, attendance figures, agenda, and minutes are appropriate documentation.
2. Applicant must comply with Title VI of the 1964 Civil Rights Act and all other applicable federal and state laws and regulations.
3. Applicant must provide assurances that project will be accessible to all segments of the public, including minority populations, the elderly, and disabled.
4. Applicant must provide assurances of compliance with Section 504 of the Rehabilitation Act of 1973.
5. A project receiving less than 15 points on the basic and bonus criteria will not be funded.

## BASIC CRITERIA

These are criteria to which a variable number of points are attached. The range will be from zero to five. All of the measured criteria will be applied to every applicant's proposal.

Because not all criteria are equally important, the criteria are weighted. If, for example, Criterion 8 is considered to be twice as important as Criterion 9, it would receive twice the weight. Whatever score was given to an applicant on Criterion 8, therefore, that score would be multiplied by twice the weight as Criterion 9.

1. **Access:** To what extent does the project open the area to the general public for the first time with development of the most appropriate access (trails, roads, water, etc.)?

**Score:**

- 0 - not applicable
- 1 - minimal (provides interim access or parking)
- 3 - adequate (provides improved access or parking)
- 5 - more than adequate (provides primary, final access or parking)

2. **Basic Facilities:** To what extent does this project provide the basic complement of facilities necessary for the public enjoyment of the recreational resources?

**Score:**

- 0 - not applicable
- 1 - completes at least one facility in the basic complement
- 2 - completes at least 25% of the facilities in the basic complement
- 3 - completes at least 50% of the facilities in the basic complement
- 4 - completes at least 75% of the facilities in the basic complement
- 5 - begins or completes the basic complement

3. **Expansion of Facilities:** To what extent does this project expand recreational facilities and/or support facilities where necessary to accommodate increased use within the capacity of the area?

**Score:**

- 0 - not applicable
- 1 - increases facilities by up to 20% of total planned
- 2 - increases facilities by more than 20% but less than 40% of total planned
- 3 - increases facilities by more than 40% but less than 60% of total planned
- 4 - increases facilities by more than 60% but less than 80% of total planned
- 5 - increases facilities by more than 80% but less than 100% of total planned

4. **Facility Diversity:** To what extent does this project expand the diversity of recreational opportunities?

- Score:**
- 0 - not applicable
  - 1 - provides for one activity
  - 2 - provides for two activities
  - 3 - provides for three activities
  - 4 - provides for four activities
  - 5 - provides for five or more activities

5. **Facility Renovation:** To what extent does the project protect the public investment by renovating existing facilities to ensure continued and safe public use?

- Score:**
- 0 - not applicable
  - 1 - renovates facility(s) supporting 25% or less of total site facilities
  - 3 - renovates facility(s) supporting more than 25% but less than 50% of total site facilities
  - 5 - renovates facility(s) supporting more than 50% of total site facilities

6. **Natural Resources Protection:** To what extent will the project protect important natural heritage resources — including such resources as a state endangered or threatened species habitat, exemplary natural community or geological landmark, wetlands, or resources of scientific and environmental educational value?

**Standards:**

A. What is the degree of endangerment and rarity for the natural resources present (species, habitat type, ecosystem, or landform)?

- Score:**
- 0 - not applicable
  - 1 - common in the state and throughout its range
  - 2 - secure in the state and throughout its range
  - 3 - threatened in North Carolina
  - 4 - endangered in North Carolina
  - 5 - endangered/imperiled throughout its range

B. Is the site a part of an area designated (classified) as a State Natural Heritage Area?

- Score:**
- 0 - not applicable
  - 1 - little interest as a natural area
  - 2 - considered to be a natural area of local interest
  - 3 - considered to be a regionally significant natural area
  - 4 - considered to be a state significant natural area
  - 5 - considered to be a nationally significant natural area

C. Are the natural resources present on the site adequately protected elsewhere in the state?

- Score:
- 0 - not applicable
  - 2 - widespread representation in other protected locations
  - 3 - protected in 4 to 6 other locations in the state
  - 4 - protected only in 1 to 3 other locations in the state
  - 5 - not assured of protection elsewhere in the state

D. Will acquisition of the site enhance the values and protection of the natural area?

- Score:
- 0 - not applicable
  - 1 - the site is part of a buffer zone or supplement to the natural area and will contribute to the management and protection of the natural area
  - 3 - the site is a secondary portion of the natural area
  - 5 - the site is part of the central core of the natural area (within the sector of primary natural values)

7. Cultural Resources Protection: To what extent will the project protect important cultural resources, including prehistoric and historic archaeological sites, architecturally or historically significant structures, or other cultural resources of scientific, educational, or interpretive value?

Standards:

A. Does the project area contain any cultural resources (such as archaeological sites, historic structures or districts) listed in or potentially eligible for inclusion in the National Register of Historic Places?

- Score:
- 0 - not applicable
  - 1 - low potential for significant cultural resources
  - 2 - moderate potential for significant cultural resources
  - 3 - high potential for significant cultural resources
  - 4 - potentially significant cultural resources known to occur within project area
  - 5 - project area contains cultural resources listed in the National Register of Historic Places

B. To what extent does the project provide for the protection of known or anticipated significant cultural resources?

- Score:
- 0 - not applicable
  - 3 - provides for identification and impact mitigation through data recovery for significant cultural resources encountered in project area
  - 5 - provides for flexibility in project design to allow identification and preservation of significant cultural resources within the project area

8. Recreation Resources Protection: To what extent does the project protect the natural resource that supports active/passive outdoor recreational opportunities?

Score:

- 0 - not applicable
- 1 - creates a buffer to retain the natural setting around the area
- 2 - creates a buffer around the outdoor recreational use areas
- 3 - protects lands essential for expanded recreational use areas
- 4 - protects lands essential to the basic complement of facilities and/or access
- 5 - protects the primary recreation resource (for example, a mountain, a lake, or a beach access area)

9. Statewide Needs: To what extent does the project provide for an equitable distribution of recreational opportunities for the state population? According to SCORP recreation needs, the planning region in which the project is located ranks:

Score:

- 0 - not applicable
- 1 - in the top 20% of all regions statewide
- 2 - in the 2nd 20% of all regions statewide
- 3 - in the 3rd 20% of all regions statewide
- 4 - in the 4th 20% of all regions statewide
- 5 - in the bottom 20% of all regions

10. SCORP Goal Attainment: To what extent does the project support the attainment of the SCORP goals and objectives?

Score:

- 0 - not applicable
- 1 - low support for the attainment of SCORP goals
- 3 - medium support for the attainment of SCORP goals
- 5 - high support for the attainment of SCORP goals

## BONUS CRITERIA

These are criteria that may give an applicant bonus points for pursuing certain goals the state deems noteworthy. Once again, each of the criteria are weighted. If an applicant qualifies for points on a bonus criterion, the applicant will receive up to five points multiplied by the weight of the criterion.

1. Statewide Trail System: To what extent does the project support a statewide trail system?

Score:

- 0 - not applicable
- 1 - renovates an existing trail
- 2 - adds to an existing trail segment
- 3 - connects two existing trail segments
- 4 - establishes a new trail segment
- 5 - establishes a segment of the Mountains-to-Sea Trail

2. Public Waters Access/Protection: To what extent does the project protect **and/or** promote the use of public waters?

Score:

- 0 - not applicable
- 1 - provides access
- 2 - provides multiple access points
- 3 - provides scenic protection
- 4 - provides shoreline use
- 5 - protects watershed

## SCORE SHEET

<u>Basic Criteria</u>	<u>Score X Weight = Weighted Score</u>
1. Access	_____ X 3.5 = _____
2. Basic Facilities	_____ X 3 = _____
3. Expansion of Facilities	_____ X 2 = _____
4. Facility Diversity	_____ X 2.5 = _____
5. Facility Renovation	_____ X 3.5 = _____
6. Natural Resource Impacts:	
Total Score = A + B + C + D = Total Score	
_____ + _____ + _____ + _____ = _____	
Average Score (Total score/#measures): _____ \ 4 = _____	
Weighted Score (Average score X 2.5): _____ X 2.5 = _____	
7. Cultural Resource Impacts:	
A. National Register of Historic Places	_____ X 2.5 = _____
B. Protection of significant cultural resources	_____ X 2.5 = _____
8. Recreational Resources Protection	_____ X 4 = _____
9. Statewide Recreation Needs	_____ X 4 = _____
10. SCORP Goal Attainment	_____ X 4 = _____
 <u>Bonus Criteria</u>	
1. Statewide Trail System	_____ X 1 = _____
2. Public Water Access/Protection	_____ X 1 = _____
<b>TOTAL WEIGHTED SCORE</b>	<b>= _____</b>

(Note: A project receiving less than 15 points on the Basic and Bonus Criteria will not be funded.)



**APPENDIX F**

**BIBLIOGRAPHY FOR**

**THE ECONOMIC IMPACT OF**

**OUTDOOR RECREATION**

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## **APPENDIX G**

# **OUTDOOR RECREATION PARTICIPATION SURVEY METHODOLOGY**





## DEVELOPMENT

The North Carolina Outdoor Recreation Participation Survey was based on portions of the report **Public Opinions and Attitudes on Outdoor Recreation in California (1987)** and the **Tennessee Statewide Recreational Survey (1983)**.

Objectives were to measure current participation and future preferences for outdoor recreation opportunities.

The survey asked household participation patterns to gather information on a broader range of people than would normally be available through a mail survey in which information came from the addressee only. Requesting household information also introduces a degree of error because a respondent may have difficulty estimating the participation of other household members.

The activities included on the survey covered most all the ones included on the **National Travel Survey**.

A copy of the survey instrument follows.

## DISTRIBUTION

The survey was mailed to 3,100 randomly selected North Carolinians. The name and address information was taken from the motor vehicle registration data base maintained by the Division of Motor Vehicles. A random number generator was used to insure that each of the 11.5 million names in the file had an equal chance of being selected.

The motor vehicle registration data base was chosen because it is an economic and highly reliable source of name and address information with statewide coverage. Because the motor vehicle registration file contains only motor vehicle owners and not all North Carolina residents, the characteristics of people in the file may be different than the general population.

The survey was mailed initially to all 3,100 people in the sample. A cover letter explaining the survey and stamped return envelope were mailed with the survey instrument. A reminder letter, survey instrument, and return envelope was mailed to non-respondents after two weeks. A second reminder was mailed two weeks after the first reminder.

The survey was returned by 1,399 people or 45 percent of the sample. Coding and data entry was performed at North Carolina State University. Analysis was performed using the SAS System at the state government computer center. Results are presented in Chapter II.



NORTH CAROLINA  
OUTDOOR RECREATION SURVEY



Division of Parks and Recreation  
NC Department of Natural Resources and Community Development  
P.O. Box 27687  
Raleigh, NC 27611-7687

James G. Martin  
Governor

William W. Cobey, Jr.  
Secretary

---

The preparation of this survey was financed in part through a Planning Grant from the National Park Service under the provisions of the Land and Water Conservation Fund Act of 1965 (Public Law 88-578).

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Listed below are outdoor recreation activities that are most commonly enjoyed by North Carolinians. We need you to do three things with this list.

A. For each activity, please give us your best estimate of the total number of days during which your household participated in that activity during 1988.

Include even those days when you did the activity for only a short period of time. If you did not do an activity at all, leave the line blank.

Activity Number	Number of Days	Activity Number	Number of Days
<u>OPEN AREAS &amp; UNDEVELOPED PARKS</u>		<u>WATER ORIENTED ACTIVITIES</u>	
01 Walking for pleasure (excluding trail hiking)	_____	26 Beach activities, including sunning and games, excluding fishing	_____
02 Bicycling for pleasure	_____	27 Swimming lakes, rivers, and the ocean (not in swimming pools)	_____
03 Jogging and running	_____	28 Sailboating	_____
04 Driving for pleasure	_____	29 Windsurfing	_____
05 Viewing scenery	_____	30 Canoeing, kayaking, rafting,	_____
<u>BACKCOUNTRY AND NATURAL AREA ACTIVITIES</u>		31 Powerboating	_____
06 Horseback riding	_____	32 Water skiing	_____
07 Hunting	_____	33 Fishing - saltwater	_____
08 Camping in developed sites with tent or vehicle	_____	34 Fishing - freshwater	_____
09 Camping in primitive areas and backpacking	_____	<u>WINTER ACTIVITIES</u>	
10 Trail hiking	_____	35 Downhill skiing	_____
11 Nature study (Birdwatching, etc.)	_____	36 Cross-country skiing	_____
12 Visiting natural areas	_____	37 Other winter sports activities - sledding, snow play, ice skating	_____
<u>DEVELOPED RECREATION AREAS &amp; FACILITIES</u>		<u>OFF HIGHWAY VEHICLE RECREATION</u>	
13 Use of open turf areas for casual and unstructured activities, like games, sitting, and sunning	_____	38 Motorcycles, dirt bikes, ATV's	_____
14 Use of play equipment and tot lots	_____	39 Four-wheel drive vehicles	_____
15 Picnicking in developed sites	_____	<u>CULTURAL AND SPECTATOR EVENTS</u>	
16 Softball and baseball	_____	40 Attending sports or athletic events	_____
17 Basketball	_____	41 Attending outdoor cultural events, like concerts, theater, etc.	_____
18 Football	_____	42 Visiting zoos	_____
19 Soccer	_____	43 Visiting historic sites	_____
20 Golf	_____		
21 Tennis	_____		
22 Volleyball	_____		
23 Swimming (in pools)	_____		
24 Skateboarding	_____		
25 Target shooting, (including pistol and skeet)	_____		

B. From the above list of activities, please select up to 10 of them which your household probably would have done more often, or at least tried, if good facilities and programs had been available. Place the activity numbers for up to 10 of these activities in the spaces below. The activity number is printed beside each activity name.

TOP TEN \_\_\_\_\_

From the activities you have just selected, pick the 5 which are the most important and rank them. Indicate your ranking below using the activity numbers.

The most important is number \_\_\_\_\_ The 4th most important is # \_\_\_\_\_

The 2nd most important is # \_\_\_\_\_ The 5th most important is # \_\_\_\_\_

The 3rd most important is # \_\_\_\_\_

C. It would help us to plan for your outdoor recreation needs if we knew how you thought government agencies should spend public money to improve recreation opportunities. Please review once again the activities listed in item A. Then, in the spaces below, place the activity numbers of up to ten activities which you think state and local government should do the most to provide and to improve.

TOP TEN \_\_\_\_\_

From the activities you have just selected, pick the 5 which you think state and local government should give the highest priority when spending money. Indicate your ranking below using the activity numbers.

The highest priority is number \_\_\_\_\_ The 4th highest priority is # \_\_\_\_\_  
 The 2nd highest priority is # \_\_\_\_\_ The 5th highest priority is # \_\_\_\_\_  
 The 3rd highest priority is # \_\_\_\_\_

D. Please complete the information about your household listed below. The information will be kept completely confidential. It will help describe who completed this survey.

City where you live: \_\_\_\_\_ County: \_\_\_\_\_

Type of Household: \_\_\_\_\_ Single, no children \_\_\_\_\_ Single with children  
 \_\_\_\_\_ Couple, no children \_\_\_\_\_ Couple with children

Household income before taxes:

_____ less than \$9,999	_____ \$40,000 - \$44,999
_____ \$10,000 - \$14,999	_____ \$45,000 - \$49,999
_____ \$15,000 - \$19,999	_____ \$50,000 - \$54,999
_____ \$20,000 - \$24,999	_____ \$55,000 - \$59,999
_____ \$25,000 - \$29,999	_____ \$60,000 - \$69,999
_____ \$30,000 - \$34,999	_____ \$70,000 - \$79,000
_____ \$35,000 - \$39,999	_____ \$80,000 and above

E. Please complete the following information about the person who completed this survey.

Sex: \_\_\_\_\_ Male \_\_\_\_\_ Female

Age: \_\_\_\_\_ Years

Race: \_\_\_\_\_ White \_\_\_\_\_ Hispanic  
 \_\_\_\_\_ Black \_\_\_\_\_ Asian  
 \_\_\_\_\_ Native American \_\_\_\_\_ Other

Education Completed:

_____ 8th grade or less	_____ 13 - 15 years
_____ 9th - 11th grade	_____ 16 years (college graduate)
_____ 12th grade	_____ 17 years or more (grad school)





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