

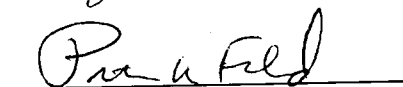
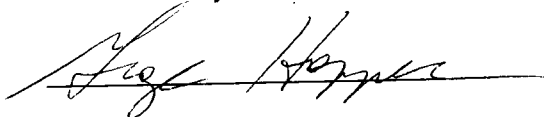
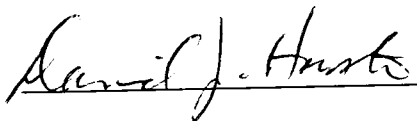
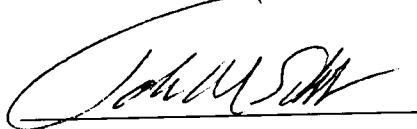
To the Graduate Council:

I am submitting herewith a dissertation written by Michael S. Heard entitled "Attitudes and Perceptions of Forest Stakeholders Regarding Land Management Planning on U.S. Forest Service Lands in Alabama." I have examined the final copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Political Science.



David Welborn, Major Professor

We have read this dissertation  
and recommend its acceptance



Accepted for the Council:



Associated Vice Chancellor and  
Dean of the Graduate School

**ATTITUDES AND PERCEPTIONS OF FOREST STAKEHOLDERS  
REGARDING LAND MANAGEMENT PLANNING ON U.S. FOREST  
SERVICE LANDS IN ALABAMA**

A Dissertation  
Presented for the  
Doctor of Philosophy  
Degree  
The University of Tennessee, Knoxville

Michael S. Heard  
December 1998

## DEDICATION

This dissertation is dedicated to my late parents

Mr. James W. Heard

and

Mrs. Mabel W. Heard

who gave me invaluable spiritual and moral support.

Additionally, I wish to dedicate this dissertation to Dr. G. Wells,

a friend and committee member, whose untimely passing during

the completion of this dissertation made this a bitter sweet event.

## ACKNOWLEDGMENTS

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Lastly, the greatest debt is owed to my family and friends. Without their prayers, help, and encouragement, this work would not have been possible.

## Abstract

In this study the attitudes, desires, perceptions, and suggestions of individuals participating in the USDA Forest Service public participation process in Alabama were examined. A survey instrument mailed throughout the state was used to solicit respondent answers. It was found that the majority of respondents were preservationists in the attitudinal orientation and desires. The majority of respondents perceived the Forest Service as moderately utilitarian in its management philosophy. The attitudinal orientation of the respondents was closely related to the geographical intensity of the forest products industry within the state. The higher the concentration of the forest products industry within the state the more likely the respondent to maintain a utilitarian orientation. Almost half of the respondents indicated membership in a national environmental or professional forestry related organization. This suggests that the National Forests in Alabama are receiving input relating to local and national agendas. Public input is still dominated by a small majority of identifiable groups which may not reflect the desires and perceptions of the majority of forest stakeholders. Regardless of their perceptions, a majority of respondents indicated that the Forest Service should continue to enhance efforts regarding public participation. Respondents were mixed in their perceptions regarding a closed or opened public participation process. Overall, public perceptions of Forest Service management in Alabama are positive.

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## Chapter One

### Introduction

Much of our environmental and natural resource policy is implemented through governmental agencies. Public ownership and management implies that resources associated with public lands will be allocated for the most part through political processes, not private markets.

Public forest lands provide a variety of tangible, intangible, market and nonmarket goods. First, they produce goods such as timber or minerals that can be distributed through the market system. Second, they can produce goods, such as wildlife management areas or national parks, that individual hunters or recreationists may use jointly, and where exclusion is possible. Forest lands produce common-pool goods such as trout, deer, range, or wilderness areas that are hard to exclude from individual use. Forest lands also contribute to collective goods, such as water, air, aesthetics and pollution control.

Public ownership in the United States accounts for 36 percent of the nation's land. The federal government holds 29 percent of which 190.8 million acres are managed by the United States Department of Agriculture Forest Service (Statistical Abstract of the United States 1989, U.S. General Services Administration 1989). The management of these federal forest lands and the goods provided by them are points of continuing controversy as are the laws and policies that govern them.

These laws and policies express views of the public; however, the public interest cannot always be definitely determined. Nonetheless, policy makers and forest managers try to balance the many products and values associated with public lands with what they perceive to be the public interest. This is often a complex and complicated task because public lands provide a variety of resources for a variety of stakeholders. Each American

has a stake in natural resource management. Finding the most acceptable solutions in light of economic, social, biological, ecological, and political constraints is often difficult. Federal lands belong to all. Tax dollars are used to manage the land for multiple benefit, but also for the future. Management of these forest lands often produces impassioned conflicts and require solutions through the public policy and public participation processes. Much of the federal forest land was originally reserved for the production of natural resources, but in recent decades the battles to diversify these purposes have forced many within the federal forest management realms to consider a larger variety of purposes.

The Forest and Rangeland Renewable Resources Planning Act of 1974 mandated public input in the management of federally-owned land. With the passage of the National Forest Management Act of 1976, certain demands on forest planners were elaborated, as was a procedure for ensuring public input for the legally mandated forest plans. This emphasis on the "public" in public management means that citizens play key roles in the policy formulation and implementation process.

Forest resource managers are becoming more aware of the need to solicit and utilize public opinion as one of the components in decision making. In light of the need to solicit public opinion there is need to accurately and objectively record and analyze who is participating, their attitudinal orientations, their desires, their perceptions of Forest Service management objectives, and their perceptions of current participation efforts. This research addresses specifically these issues as they relate to public participation regarding national forests in Alabama.

To provide a conceptual basis for the analysis to follow, we will address several salient points in the remainder of this chapter. The initial section of this chapter looks at

early land management policy and its development in the United States. The following section looks at the development of utilitarian and preservationist attitudes surrounding the management of federal lands, especially Forest Service management. This is followed by a look at the development of contemporary forest management policy, specifically as it relates to public involvement and interest groups.

### Early Land Management Policy and Development

Early land management policy and development in the United States had its roots in both Native American and European cultures. The Native Americans generally used the land as a commons, revering commons as part of their spiritual beliefs. Native Americans practiced a nomadic type of sustained yield, often based on hunting, not farming. The Europeans generally practiced a feudal tradition where only a few aristocratic families had control of how the land was to be used and managed. Contrary to these types of land management and philosophies, the colonists freely exploited the abundant natural resources they encountered, clearing the forest for farms, producing timber, and harvesting fish, furs and other resources associated with the forest. At that time the resources seemed limitless, and a settler could always move to another area when the land became unproductive or game became scarce. (Dana and Fairfax 1980; Nash 1990).

Land ownership and control were two of the reasons why colonists went to war with England. Because of their importance, property rights are clearly protected in the U.S. Constitution. Land ownership and control played a significant role in uniting the original thirteen colonies. Six of the smaller colonies refused to ratify the Articles of

Confederation until Massachusetts, Virginia, and five other colonies yielded their extensive and overlapping western land claims to the new nation.

Forests from the late 1700s through the early 1890s were viewed as a national treasure to be used in building a nation. Natural resources of all types, including forests, were considered inexhaustible and were for the most part available for the taking. Especially noticeable at this time was a rush to dispose of the public domain and its timber resources. The Timber Culture Act of 1873 and the Timber and Stone Act of 1878 were important in the public land disposal.

#### Enlarging and Disposing of the Public Domain

The public domain enlarged considerably after the cession of the original states. Through various means such as purchases, wars, and treaties, in the United States the public domain grew from 237 million acres in 1781 to over 1463 million by 1802 (Waggoner 1984; Statistical Abstract of the United States 1989). Although the federal government was eager to acquire all lands within its borders, it was just as eager to sell or give those lands to private landowners or firms in order to support development and generate revenues for the federal government. At one time or another the federal government has held title to as much as 82.5 percent of the land in the United States. Today only 29 percent of the nation's land remains under federal control (Statistical Abstract of the United States 1989; U.S. General Services Administration 1989).

The Homestead Act, federal land grants to the states, grants to the railroads, the Timber Culture Act, and the Timber and Stone Act are all part of the vast federal divestiture of public lands. Lawlessness prevailed as the public domain was transferred

to private hands. As chronicled by Puter (1908/1972) in his classic, Looters of the Public Domain, land frauds were common and widely known.

After a century of land sales and giveaways and substantial demands for change in and out of government, Congress began to pass legislation to reverse federal land policies. In the 1870s a small movement was started to protect some forest lands in the West from land sales. Carl Schurz, Secretary of the Department of the Interior from 1877 to 1881, became a leading proponent of protection of forest lands via government control. Free market advocates criticized Schurz, calling him a German-influenced socialist (Dowdle 1984, Hanke 1984).

In the late 1880's numerous individuals with considerable political influence began to voice their disagreement with federal land management policies. This led Congress to enact the General Revision Act of 1891 in an effort to reverse the massive land disposal programs. Section 24 of the act authorized the president to "set apart and reserve, in any State or Territory having public lands wholly or in part covered with timber or undergrowth, {such lands} as forest reserves." By the end of 1893, Presidents Harrison and Cleveland had set aside about 17.5 million acres. The majority of these forest reserves established between 1891 and 1897 were the result of local citizens' petitions to have these lands set aside. Due to the lack of provisions for the protection and management of these federal reserves, President Cleveland took little action after 1893 to expand the forest reserves.

However, in 1897, just before leaving office, President Cleveland issued a proclamation creating thirteen new federal reserves with a gross area of 21.3 million acres. This angered many members in Congress to the point that they debated revoking presidential authority to set aside reserves. Instead, Congress passed an amendment to

the appropriations bill giving the president authority to modify the reserve boundaries. However, President Cleveland used a pocket veto on the entire appropriations bill, causing the amendment not to pass (Dana and Fairfax 1980).

President McKinley, who succeeded President Cleveland in 1897, placed a moratorium on creating new forest reserves. Also in that year, Congress provided authority for managing the forest reserves in the Forest Service Organic Act of 1897. This defined the purposes of the forest reserves and authorized the Secretary of the Interior to establish rules for their utilization. The lands were to be used for (1) forest preservation and protection, (2) securing favorable conditions of water flows, and (3) furnishing a continuous supply of timber for the use and necessities of the people of the United States. After the Organic Act, more reserves were established.

#### Further Expansion of the Forest Reserves

Theodore Roosevelt became president when McKinley was assassinated in 1901, and the conservation of federal land was one of the top priorities for his administration. Gifford Pinchot, who is recognized as the father of forestry in the United States, became a friend and confidante of President Roosevelt and a leading force of the progressive conservation movement. Without a doubt, Roosevelt made the most significant contributions of any president to forest conservation by exercising his presidential powers. His impressive accomplishments and his agency appointees permanently changed the direction of natural resource policy in the United States. The public agenda shifted from one favoring disposal of public lands to one favoring protection of public rights and retention of land in government ownership. Pinchot and Roosevelt collaborated to establish many more forest reserves in the West. Despite vocal opposition

to his actions, Roosevelt set aside 95 million acres of reserves from 1901 to 1907. By 1907, he had increased the area in national forests from 38.8 to 140 million acres. He also worked with Pinchot to gain congressional passage of the Transfer Act of 1905 which authorized transfer of the forest reserves from the Department of the Interior to the Department of Agriculture. The reserves were renamed national forests in 1907, and the policy regarding their management shifted more toward "wise, scientific use" than one of preservation. The move to the Department Agriculture was prompted by desires that the forest reserves be less politicized, as was common in the Department of the Interior, and managed more by professionally trained individuals within the forestry profession.

Pinchot was the primary architect of the transfer of the forest reserves from the Land Office in the Department of the Interior, where they were managed by political appointees, to the Bureau of Forestry in the Department of Agriculture, where they would be managed by foresters.

In 1905, Secretary of Agriculture James Wilson signed a letter of instructions for Pinchot, which is documented to have been drafted by Pinchot himself, stating the principles to be followed in the management of the forest reserves (Pinchot 1947). The instructions stressed that the forests were to be used for the good of all people (multiple use), not for the temporary benefit of individual companies, and that all the resources were for use and were to be administered in an efficient and business like manner. The letter also authorized the agency to regulate use of the reserves and to favor local input and considerations in making resource decisions. And where conflicting interests must be reconciled, the letter indicated that the decision should be based from the standpoint of the greatest good for the greatest number in the long run (Pinchot 1947).

Roosevelt was not only concerned about the forest reserves, he was interested in many other aspects of land and resource management. He promoted the use and development of water resources for drinking, navigation, and power. Roosevelt also used his presidential powers of reservation to establish national parks and the first wildlife refuges in the United States. These policies and actions worked well during Roosevelt's tenure as president, but they were not reflective of President Taft's administration.

President Taft, who succeeded Roosevelt, did not share the same activist inclination for government in the management and ownership of federal lands as did his predecessor. This was reflective in his firing of Pinchot and many other members of Roosevelt's conservationist cabinet.

In summary, toward the end of the nineteenth century, prevailing laissez-faire (non-interference) attitudes toward natural resources began to be seriously challenged, especially by persons such as John Muir and Frederick Olmsted. These challenges helped to nourish the establishment of the nation's first national park, the Yellowstone National Park, in 1872. The myth of inexhaustible resources was eroding throughout the late 1800s. Countrysides denuded of forests, especially in the East, made it obvious that something had to be done. Thus began the period of awakening as epitomized by creation of federal forest reserves.

The period 1891 to 1911 was one of the most colorful eras in American forest history. Legal authority to reserve forest land in the public domain was combined with the vision of leaders such as Theodore Roosevelt and Gifford Pinchot. The results were the creation of the Forest Service within the Department of Agriculture, the establishment of the National Forest System composed of federal forest reserves, and the crystallization of a wise-use conservation philosophy: Natural resources were to be managed and used, not preserved in a "pure" state.

### Utilitarianism Versus Preservation

Much of America's public policy rests on a value system developed throughout our history. Everyone agrees that public policies should be good, just, and proper. But the meaning of these terms varies from one group to another. Most industrial foresters do not share the same values regarding land use as do members of the Wilderness Society. Both might agree that some type of land ethics is appropriate, yet industrial foresters are apt to translate this idea into land use for commodity production, whereas Wilderness Society members tend to favor intentionally leaving land in its natural state. Quite clearly, their different value orientations lead to different conclusions regarding appropriate forest management.

When Pinchot became chief of the Division of Forestry in 1898, he made it clear that the purpose of forests are to serve people, not trees. (Zivnуска 1971). This utilitarian view of natural resource management that forests were to be used to benefit human economic welfare drove a wedge into the conservation movement, causing a split that persists today.

John Muir, a founding member of the Sierra Club who worked side by side with Pinchot in the early phases of the conservation movement, split from Pinchot because of Pinchot's utilitarian views. Muir's preservationists views promoted the use of public lands for recreation in a primeval setting of scenic beauty, with objectives stressing aesthetics, not use for economic development. It was this differences in philosophies that caused Muir and Pinchot to part ways. Muir fought against Pinchot's desire to control and "properly utilize" the resources of the national parks.

The conflict between the two erupted in 1913 over the construction of a water supply reservoir in the Hetch Valley in Yosemite National Park. This was a classic

conflict over preservation versus use. Pinchot supported building the dam; Muir opposed it. Utilization of natural resources is recognized by some as desirable and by others as a waste of natural resources. At the heart of the issues in federal resource management is whether federal forest lands should be actively managed for commodities, or whether they should be left for non-commodity purposes. Contemporary policies on the use and management of forests in the United States are the products of gradually evolving attitudes toward forests and the practice of forestry in general which has its nexus in the utilitarian/preservationist attitudes towards forest management. They reflect the nation's response to major forest resource issues of the times and represent a willingness of individuals and institutions to negotiate their interests in solutions needed to address such issues. Forestry issues requiring policy responses have not occurred in isolation; more often they have been thrust on the national scene as part of broader national events, including economic depressions, armed conflicts, political turbulence, and energy crises. It is in the context of these varied circumstances that we now approach the forest policy process.

Current debates and conflicts in forest management within the state of Alabama appear to reflect competing perspectives of two distinct camps of forest stakeholders: proponents of "forest utilization" are those individuals and organizations that believe humans should utilize forest resources, primarily timber, to maximize human well-being; and proponents of "forest preservation" are those individuals and organizations that believe human societies should give a priority to the natural environment. Some would argue that members of these two camps adhere to fundamentally divergent paradigms of forest management and thus, literally, see the world quite differently.

Forest preservationists have been critical of conventional forest practices for many decades and have coalesced into an "environmental preservationist movement" to push their ideas. Despite public support for limited forest management and environmentalism, many people have criticized the approach of forest preservationists who tend to be educated, middle class, who seek to prevent additional economic growth, thus protecting a comfortable quality of life and their aesthetic sensibilities (Arnold 1982, Popovich 1983, Tucker 1982). Utilitarians have often ridiculed this movement, accusing its members of being radicals who know little about the "real world" (Krakauer 1991). Many utilitarians believe the problems with forest management can be easily traced to a few misguided extremists who do not know what the public really wants and do not speak for the majority of diverse forest stakeholders.

The selection of appropriate forest management activities is often perceived by forest stakeholders from a utilitarian/preservationists perspective. National forests managers in Alabama are often viewed as having to make decision within this attitudinal arena. In light of this, it is important that forest managers better understand the beliefs underlying these two different concepts of forest management, as well as the ethical implications. The perceived differences lies partly in differing views of the relationship of society and nature (Schwartz 1982).

### Contemporary Forest Management Policy

There are numerous laws that affect the contemporary management of federal forest lands, but for the purposes of this research we focus primarily on four: the Multiple-Use Sustained-Yield Act (MUSYA) of 1960, the National Environmental Policy Act (NEPA) of 1969, the Forest and Rangeland Renewable Resources Planning Act

(RPA) of 1974, and the National Forest Management Act (NFMA) of 1976.

The Multiple-Use Sustained-Yield Act of 1960 placed range, wildlife, fish, and outdoor recreation on equal statutory footing with timber and watershed uses in the management of national forests. However, MUSYA only requires equal consideration for all resources, beginning with the question of how to administer such resources equally. MUSYA also reserved discretionary authority in the hands of Forest Service technical experts who many feel have been indoctrinated with the utilitarian concept of conservation defined by Gifford Pinchot. Little guidance for setting priorities was given in the law.

In implementing the MUSYA, the courts and the Forest Service agree that the MUSYA gives broad discretion to the Forest Service. It is this discretionary authority given to the Forest Service, based on professional expertise, that most courts are not willing to second guess. The statute says that, "In the administration of the national forest, due consideration shall be given to the relative values of the various resources in particular areas" (16 U.S.C. 529 [1985]).

The Forest and Rangeland Renewable Resources Planning Act (RPA) of 1974 has three major procedural requirements that the Forest Service must follow. The first two are the responsibility of the Forest Service as the lead agency: (1) an assessment which includes an inventory of all resources every ten years; (2) a program proposing resource goals, every five years; and (3) a presidential statement of policy to be used in framing budget requests, also every five years. In the name of multiple use, the Forest Service formulates extensive plans to manage every use at a high level. When Congress failed to fund the entire proposed program and instead chose to keep the Forest Service budget at a

level "within reason," the lack of implementation of these proposed plans could not be blamed on the Forest Service.

However, RPA could not help the Forest Service divert all criticisms. Many forest stakeholders still felt the Forest Service formulated plans with a utilitarian emphasis at the expense of minimal revenue-generating, preservationist-oriented management activities.

The National Forest Management Act of 1976 provided some general principles under which national forests were to be managed, but it avoided specific prescriptive language regarding silvicultural methods. NFMA mandated that national forest plans that integrated all multiple uses be developed for each forest. The plans must be prepared by interdisciplinary teams of specialists in forestry, wildlife, recreation, social sciences, and other relevant disciplines. NFMA also initiated procedures and rules for widespread public input, public review, and appeal of plans. It provided requirements for public participation in planning for and management of the National Forest System. The Secretary of Agriculture, by regulation, must develop procedures to allow all levels of government and the public adequate notice and opportunity to comment on the formulation of standards, criteria, and guidelines applicable to Forest Service programs. NFMA greatly reduced the Forest Service's established autonomy and tampered with agency discretion in ways that MUSYA and RPA did not.

The National Environmental Policy Act of 1969 imposed numerous legal requirements on the Forest Service regarding forest management planning. The one requirement important for this study is that federal agencies "affirmatively solicit comments from those persons or organizations who may be interested or affected by agency actions" (42 U.S.C. 1503.1.a.4).

The period from the late 1960s to the present has resulted in numerous policy responses to important concerns about environmental quality and the management of our public lands. Such concerns have in large measure been fostered by often extraordinary citizen activism and by the involvement of important institutions which heretofore had been only modestly involved in the development of forest resource policies, especially courts and interest groups. More users competing for additional benefits from a limited forest resource base led to a passage of a plethora of environmental quality laws that were not specifically focused on forestry but did have an often dominant influence on the use and management of forests. Examples are the National Environmental Policy Act of 1970 and the 1972 amendments to the Federal Water Pollution Control Act. In many cases, programmatic efforts to attain environmental quality goals led to the establishment of complex and detailed federal and state processes and resulted in the exercising of greater state and federal government powers over private forestry matters.

The political prominence of forests is reflected by the willingness of state and national legislatures to address important issues concerning their use and management. The U.S. Congress, for example, often brings forests to public attention. Its committees do so by sponsoring public hearings on such topics as increased public-land wilderness areas and clearcutting on national timberlands. It also enacts far-reaching laws such as the public input requirement for managing national forest lands.

In response to public concerns about natural resource management, Congress enacted numerous laws regulating environmental quality and public land management. The first congressional act specifically addressing public involvement in forest management decision making is the Forest and Rangeland Renewable Resources Planning Act of 1974 which requires the Forest Service to involve the public in resource

decision making. With this legislation and the surge of public interest that followed, the challenge to professional authority has compelled foresters to reconsider their roles. Foresters must now consider the management practices that the public feels are important.

Public participation in forest policy and administration is primarily concerned with human desires and attitudes. "Governmental policy and administration essentially involve the management of people and environmental relationships, not just management of the environment. As a result, decision making becomes a highly political process, with much attention being given to stakeholder attitudes and attitudinal conflicts. This is especially true in light of the changing political and institutional cultures" (Henning 1974). These changing cultures have resulted in increased membership in, and number of, organized interest groups with an interest in forestry, especially public forestry. Intense political battles over the use of public forest, especially efforts to formally designate wilderness areas and reduce timber harvests, have been the hallmarks of the current era.

The prevalence of interest groups and their influential role in the process by which forest resources are established and implemented is legendary. By implementing various strategies and tactics on behalf of the constituents they represent, interest groups are often in a position to influence the direction, magnitude, and timing of virtually all aspects of forestry. No one can deny that interest groups have not been important in the formulation, implementation, and evaluation for federal forest policy and that they are active participants in the public participation process. Many policy analysts view group activity as a desirable way for individuals to exert influence in the policy process. They assume that no clearly defined and agreed-upon conception of the public interest exists on most issues. Furthermore, they suggest that the public interest emerges from the input of

and struggle among many self-interested groups. The eventual consensus and compromises among these groups are enacted by legislatures and then implemented by government agencies (Hayes 1986).

### Conclusion

Forests are associated with a wide variety of human needs and desires. But not every forest can serve every need or every desire that a particular forest stakeholder may have. Public policy is a means stakeholders use to decide how forests will be used and who will benefit from their use. Public forest policies serve numerous purposes and have different effects on different groups of people.

For our purposes, a survey of individuals on the Environmental Impact Statement list maintained at the USDA Forest Service headquarters for national forests in Alabama was used to determine, (1) who is participating in public participation efforts, (2) what organizations are participating in those efforts, (3) their attitudinal orientation, (4) their desired forest management objectives, (5) their perceptions of desired Forest Service management objectives, and (6) their perceptions of current public participation efforts as implemented by the Forest Service in Alabama.

## Chapter Two

### The Analytical Plan

The analytical framework and methods used to determine and measure the various attitudes, desires, and perceptions of those involved in the USDA Forest Service public participation process in Alabama are presented in this chapter.

### The Setting

Alabama's forest industry was the state's largest industry from 1978 through 1995. In 1995 it produced approximately \$13.2 billion in products, including \$8.5 billion in pulp and paper, \$3.6 billion in lumber and wood and \$1.1 billion in furniture and fixtures. The forest industry directly employs approximately 70,000 Alabamians with an annual payroll in 1995 of \$1.9 billion. This is the largest payroll of any manufacturing industry in the state. The forest industry is also the largest exporter. The value of forest products shipped abroad in 1995 was \$1.25 billion, 23 percent of all Alabama exports (Alabama Forestry Association 1995). The importance of forest and forestry within the state of Alabama cannot be over estimated. Alabama's "world class" forest industry is built on the nation's second largest commercial woodland.

United States Forest Service lands cover over 680,000 acres in Alabama, with each of the four national forests within the state sitting near four points on a compass. Many goods are derived from the management of these forests, from clean water and clean air to timber products and wildlife. Because of the diverse resources derived from these forests, so are the desires of its clientele diverse. Some people want timber products, some want to hike, yet others want to camp and hunt. Deciding which activity takes priority usually includes intense contests between advocates of competing attitudes

and interests. Often involved are unending struggles between individuals and organizations whose perceptions of the use and management of forests are at odds. At issue are beliefs and attitudes that certain conditions are inherently good while others are inherently bad. In light of these diverse desires, how should the national forest system in Alabama best manage these lands to satisfy not only local constituents but national agendas?

In light of the national debates regarding the desires of those who want to increase the preservation of trees versus those who want to maintain timber harvesting versus those who want to increase wildlife habitat and wilderness areas, where do Alabamians stand? In light of national mandates to provide effective public participation and multiple-use of our national forest, where do Alabamians stand? In light of the efforts of national environmental and forestry professional organizations to influence forest management, how involved are these organizations in the decision-making process in Alabama?

### Perspectives on Public Participation

There have been a number of studies dealing with public participation in land management planning (Force and Williams 1989; Shindler, List, and Steel 1993; Bliss and Larsen 1994; Magill 1994), but most have focused on individuals and self-classification. Few have attempted to examine stakeholder and group values regarding forest management practices. These studies, therefore, have provided only limited insight into the basic beliefs and values of public participants and even less insight into the belief and value differences between utilitarians and preservationists.

Force and Williams (1989) do identify specific groups of participants for public participation officers involved in national forest issues, and they set forth activities that can be planned to see that these groups are involved. These target groups can be identified by socio-demographic characteristics, participation behavior, and preferred method of participation. This study was limited to general socio-demographic characteristics. More recently, Shlinder, List, and Steel (1993) conducted a study to examine forest values, policy preferences, and citizen involvement from national and regional perspectives. Although their comparative survey of forest stakeholders in Oregon and nationwide does include a few items designed to measure respondents' attitudes toward selected federal forest management practices, the study focuses primarily on the two groups' preferences for various forest management policies. Additionally, their study does not include any known groups of utilitarians or preservationists to contrast with the general public. While helpful in shedding light on how the general public perceives forest management and public participation, these types of studies provide limited insight into the values and fundamental nature of utilitarians, preservationists, and the various interest groups directly involved in the forest management debate.

More recent studies regarding public views and comparative analysis (Bliss and Larsen 1994; Magill 1994) found that personal concerns temper views toward forestry practices, private property rights, forest-based economic development, and interpretations of various forest landscapes. However, the degree to which these studies represent those actively and voluntarily involved in public participation, the non-systematic manner in classifying degrees and adherents, and the lack of a variety of comparison groups limit the utility of these studies for clarifying current forest management debates, specifically in Alabama. Clearly then, there is a need for research that explicitly examines the degree

to which proponents of the utilitarian and preservationist perspectives hold differing beliefs and values, or adhere to differing forest management paradigms. This type research is necessary if we are to develop a better understanding of the origins, nature, and possible resolution of forest management debates.

For public participation in Alabama to be effective, the Forest Service must first know what the various forest stakeholders (the public) want, and which stakeholders desire what. The Forest Service needs to know and understand the attitudes and perceptions of the various stakeholders primarily involved in public participation efforts. There is evidence that agencies, with varying degrees of discretion to permit opportunities for public participation, are generally either not doing so effectively, or not doing so at all. In particular, participation has been extremely limited at the important issue formulation stage of agency decision processes to the extent that citizens are only permitted opportunities for participation that are narrow, formal, and largely ineffective (Natural Resource Journal 1977).

In light of this evidence and the social and political nature of public involvement, how can the Forest Service make optimum use of public participation in their decision making? The answer depends on information about the attitudes, desires, and perceptions of various forest stakeholders and the effectiveness of current public participation efforts. After almost thirty years of mandated public involvement in Forest Service decision making, how effective have participation efforts in Alabama been? How are public participation efforts perceived by those actively involved?

The USDA Forest Service and the Conservation Foundation created a film entitled "Common Ground" (1978), which illustrated the different and often conflicting interests of agency clientele groups and the national forest uses sponsored by the Forest

Service. Land use consensus (shared values), or finding common ground, presumably became a major purpose of the agency's public involvement effort even though this was not identified as such in the published regulations. Indeed, throughout the public administration literature, citizen participation in various forms often has been recommended as a way of finding mutual goals, reducing conflict, and generating the trust and legitimation necessary for agency survival and growth (Pfeiffer 1981; Irland 1975; Thompson 1967). In light of this, how close has the USDA Forest Service in Alabama come to finding common ground?

#### Purposes of the Study

The purposes of this research are to assess the beliefs, attitudes, desires, and perceptions of those involved in the U.S. Forest Service public participation efforts in Alabama. This study also aims to shed light on the attitudes and perceptions of Alabamians by examining the degree of divergence and adherence, from a utilitarian/preservationist perspective, between and among those individuals and organizations presently involved in public participation as it relates to the management of national forests in Alabama. It will identify elements of debate over which there is the greatest and least agreement or divergence. This study will also shed light on the degree to which each camp holds consistent positions across the various potential points of difference. Results of this research will contribute to a better understanding of the nature and sources of conflict between preservationists and utilitarians within the state of Alabama. In short, the aim is to determine how adherents of these two camps see forest management and in the process, shed light on the roots of the forest management policy debate.

The primary purposes of this research are to, (1) measure the basic beliefs and attitudes of individuals who participate in the National Forests in Alabama's USDA Forest Service public participation process within the framework of the preservationist and utilitarian attitudinal orientations, (2) determine if demographic correlates in prior studies hold true in this study on Alabama participants, (3) determine the degree of agreement and disagreement between and among competing groups of forest stakeholders, (4) identify differences between stakeholders' desires and their perceptions of Forest Service priorities, (5) evaluate stakeholders' perceptions of public participation, and (6) identify public participation preferences.

#### Importance of the Study

This study will assist policy makers in the formulation, implementation, and evaluation of forest management practices and policies. Successful formulation of public forest management policies requires input from interested parties outside government. Successful policy formulation and adoption consists of developing and choosing among alternatives to resolve policy issues. Policy formulation is facilitated by clear definition and careful description of issues. The formulating and legitimizing of forest resource policies are necessary for the accomplishment of agreed-to-ends. They are not, however, processes to be viewed as sufficient in and of themselves. If forest policies and programs are to create lasting fundamental changes in the use and management of forests, they must be successfully implemented.

Once forest policies and programs are implemented, they begin to generate tangible and discernable results that may be evaluated. Forest land is allocated to specific uses such as timber production, wildlife management, recreation, watershed management,

and the like. Policy makers, important program clients, and interest groups watch the implementation process to see how a policy and its implemented programs are progressing. Are the selected policies that were diligently legitimized and carefully implemented actually accomplishing what was intended? Is the public exerting influence through legislatively-mandated public participation?

Why is the evaluation of perceptions of the public involvement process so important? It is undertaken for numerous reasons. Perhaps the most obvious reason is that evaluation of the public participation process is the means by which the Forest Service is held accountable for its actions. Evaluations are vital elements in the search for forest resource policies that will have favorable outcomes for all involved, and they are also valuable in fostering change. Program evaluations are made to determine if agencies and regulations are accomplishing their legislatively-mandated missions. They are made to reevaluate objectives and provide feedback for development of new policies. Evaluations are also a part of monitoring (tracking success over a period of time). Are things improving? If so, the policy is probably working. If not, the policy needs modification.

Public agencies have changed how decisions are made regarding the use of natural resources. The stress now is on incorporating public input. The basic concept is that agencies serve the people—what do the people want? The major objective of public resource management is to provide people with a sustained flow of the benefits. Some of these benefits are material, such as low-cost lumber for housing and adequate quantity and quality of water. Others are less tangible, such as people's happiness by virtue of the recreational opportunities and environmental quality.

Public sentiment, expressed and gathered as citizens participate in decision-making processes, is a particularly important input because it helps identify attitudes that

people attach to the alternative goods and services that national forests might provide. Public sentiment serves as a necessary guide to achieving more acceptable resource decisions. In addition, public participation in decision making is a source of satisfaction, meaning, and identity for the citizens involved. The overriding objective of public involvement must be to arrive at more acceptable resource management decisions. Public input is not an end in itself but a means to better decisions.

Results of this study should help the Forest Service in developing better policy and information and communication systems as they relate to public involvement. This study will provide a more comprehensive understanding of Alabama's forest stakeholders' characteristics, motivations, attitudes, perceptions, and desires.

## The Data and Their Collection

### *The Questionnaire*

Gathering information of this nature can be extremely difficult when considering respondent time in completing a survey instrument of this nature. Therefore, it was imperative that the survey be limited without compromising research integrity. Initially the survey was divided into eight parts but was later cut down to five.

The survey instrument was divided into five major parts. Part one of the survey instrument was designed to measure the attitudinal orientation (preservationist, utilitarian, or neutral) of the various participants. Part two of the survey instrument was designed to measure the importance of various forest uses to the respondents. Part three of the survey instrument was designed to measure the respondent's perceptions of the importance of various forest uses to the Forest Service. Part four of the survey instrument was designed to measure the respondents perceptions of the Forest Service in Alabama's

public participation efforts, how the respondents have participated in the process, and their views on how to improve the public participation process. Part six of the survey instrument asked the respondents to provide various demographic data such as age, education, and gender.

There are three distinct advantages for a research questionnaire of the type used here as opposed to other methods that might have been chosen. First, it provides an efficient means for evaluating responses and incorporating responses into the decision-making process. Rather than dealing with intuitive impressions of what people said, there is available a fairly objective quantitative expression of attitudes and opinions. Second, it allows for the sorting, cross-tabulating and analysis in terms of various variables. Third, it allows for identifying areas of agreement and disagreement with agency policies and plans. This is not to indicate that public opinion should or could serve as the sole judge of an agency's management program. Rather, it simply means that an effective program of management solicits and weighs public attitudes as one component of the decision-making process. Public disagreement with plans might indicate a basic revamping of the plan is needed or it may suggest the need for the agency to undertake some type of education program to make the public aware of important political, economic or ecological constraints that affect a decision.

The questionnaire provides data that are used to measure basic beliefs and attitudes assumed to constitute the two competing perspectives in forest management. Group affiliation and attitudinal ratings allow internal consistency and ideological coherence of persons and/or groups regarding preferred and varied forest uses to be measured. These ratings also allow for determining if the basic beliefs and values that are assumed to underlie the two competing positions in forest management do, in fact, differentiate between adherents of the utilitarian and preservationist perspectives.

Responses of both attitudinal groups are analyzed to see if their forest management beliefs and values are organized in an internally consistent manner as one would expect if the responses reflect logically coherent paradigms. The relative levels of consistency across the attitudinal groups are examined, since research on social movement participants and interest group members has found that activists tend to have more consistent belief systems than do non-activists.

Part one of the questionnaire was designed to assess the degree to which the respondent adheres to either the preservationist or utilitarian orientation. The construction is a modified version of the Cotgrove (1982) and Milbrath (1984) uses of bipolar items. Unlike Cotgrove and Milbrath who used bipolar items that portrayed opposing views as anchor points on a multipoint scale, alternative views in this study were placed as independent questions throughout this part of the survey. Each question describes either a utilitarian or preservationist view. Some items present completely opposite positions, while the positions in other items are not totally opposite but are designed to accurately portray (as much as possible given the length constraints in item construction) the contrasting (but not necessarily diametrically opposed) positions thought to be held by the utilitarians and preservationists. Some questions are randomly reversed in direction to help offset response bias. Respondents are classified as preservationist, utilitarian, or neutral based on their cumulative scores within each category of questions. Persons scoring low (below 27) on the utilitarian questions are classified as utilitarian. Persons scoring low (below 27) on the preservationist questions are classified as preservationists. Persons not falling within either category are categorized as neutral.

Once the respondents are classified as utilitarian, preservationist, or neutral, selected demographics are cross-tabbed with the use of SPSS to evaluate possible correlations and comparisons.

Items designed to tap the major dimensions identified in the current forest management debate are included in this survey. Some questions are designed to represent extreme positions of the two forest perspectives. Thus, some of the questions do not necessarily reflect the views of the average person. Statements in this part are scored as strongly agree, mildly agree, mildly disagree, strongly disagree, and no opinion.

An attempt has been made, to the extent feasible, to include items covering the full spectrum of the forest management debate to ensure content validity. Items were developed with the guidance of the work of Duerr and Duerr (1971) on doctrines and tenets of faith in the forestry profession. These include the following: The Doctrine of Timber Primacy, The Doctrine of Sustained Yield, The Doctrine of the Long Run, and The Doctrine of Absolute Standards, The Doctrine of Science Application.

Also relied heavily upon were the elements presented by Beus and Dunlap (1990). In that study, the paradigms were organized into six major dimensions. We focused specifically on two of those dimensions, Domination of Nature vs. Harmony with Nature and Exploitation vs. Restraint. We further expanded those paradigms specifically applicable to this research into two attitudinal categories: utilitarian and preservationists. In some cases, questions cut across dimensions to some degree (not surprising, and to an extent unavoidable, given that any representation of key elements of paradigms were somewhat arbitrary). Some of the items were clearly value oriented, while others focused more on beliefs about forest practices or issues (Rokeach 1973). This was done

purposefully as both values and beliefs are crucial elements of individuals' paradigmatic positions (Dunlap and Van Liere 1978; Cotgrove 1982; Milbrath 1984).

The classical utilitarian view of forest management is that forests are to be used to benefit human economic welfare. The classical preservationists view is that forests should be preserved and that the impact of man on the forest environment should be minimal. These are the two attitudinal categories that are measured in part one of the questionnaire.

Part two of the questionnaire was designed to measure the degree of importance attached to specific forest management activities. Ratings on a scale from one to four of the importance of thirteen statements pertaining to use of forest resources were obtained from the respondents. Statements in this part are scored as very important, somewhat important, not important, and no opinion.

Levels of inter-and intra-organizational agreement and disagreement over the objectives were also measured. Responses of both attitudinal groups were analyzed to see if their forest-management beliefs and values are organized in an internally consistent manner as one would expect if the responses reflect logically coherent paradigms. The relative levels of consistency across the attitudinal groups are examined, since research on social movement participants and interest group members has found that activists tend to have more consistent belief systems than do non-activists. Information gathered in this part of the survey will assist forest managers in making decisions based on stakeholders' desires and the intensity of those desires. Additionally, information regarding the levels of agreement and disagreement between and among organizational stakeholders was important when deciding on specific management objectives. Information from this section will also inform the forest managers which environmental and professional

organization are actively involved in the public management debate in Alabama.

Part three of the questionnaire was designed to measure the respondent's perceived degree of importance attached to specific forest management activities by the Forest Service. Ratings on a scale from one to four of the importance of thirteen statements pertaining to use of the resource were obtained from the respondents. Statements in this part were scored as very important, somewhat important, not important, and no opinion.

Levels of inter-and intra-organizational agreement and disagreement regarding these perceptions were also measured. Information from this section will assist forest managers in understanding and evaluating stakeholders' perceptions regarding USDA Forest Service actions. Understanding stakeholders' perceptions of what an organization does and wants is often as important as what that organization actually does. An organization's public image is an extremely important factor in determining its effectiveness and public support. If organizations are to effectively formulate and implement goals and objectives, they must understand stakeholder perceptions.

Part four of the questionnaire was designed to measure the respondents' perception of the public participation process as implemented by the Forest Service in Alabama. A choice of six descriptive statements was presented, ranging in concept from a decision process closed to public influence to a process completely open to influence. This scale, adapted from Arnstein's (1969) "ladder of citizen participation," asked the respondents to react to a set of statements ranging from "Public involvement is used to gain support for predetermined decisions" to the other extreme, "The public has the final say in the decision-making process." Presumably, respondents seeing the decision process as closed would view involvement purely as a device of the agency, whereas

those who saw the process as completely open would feel there has been considerable citizen influence on the final solution.

Respondents were also asked the method of public involvement they have used in the past, such as writing a letter, attending a Forest Service sponsored meeting, or signing a petition. Respondents were also asked how the Forest Service might enhance participation in public involvement.

A preliminary version of this survey instrument was pretested on a sample of approximately 50 college students enrolled primarily in forestry classes. Twenty-five percent of the students questioned were outside the forestry major. Attitudinal questions were tested for internal consistency using corrected item-total correlations (Muller 1986; Zeller and Carmines 1980). Items that had very low corrected item-total correlations were eliminated, and other questions that respondents, or knowledgeable reviewers, indicated were ambiguous were reworded in an effort to make them clear.

### Survey Implementation

Once the final survey instrument was selected, copies were mailed to individuals on the USDA Forest Service in Alabama's Environmental Impact Statement (EIS) list, or as it is sometimes called, the Land Management Planning Activity List. Returned questionnaires were used as the informational base for this research. The EIS list for the National Forests in Alabama is maintained at the forest supervisors office in Montgomery, Alabama. The list consists of names and addresses of people, primarily Alabamians, who have expressed an interest in national forest land management planning through various means. The list also includes the names and addresses of individuals the Forest Service deems important and who should be informed of management activities.

This list is required by law to be maintained by various federal land management agencies for the purpose of information dissemination and public record.

Unlike most studies in the past which survey randomly selected individuals, a decision was made to survey those individuals already involved or most likely to become involved in the public participation process. When legislators or forest managers must make decisions regarding forest management activities, they are more likely to listen to those actively involved in public participation efforts. Legislators and forest managers tend not to appreciate or understand the circumstances of those who cannot or will not make a comparable commitment.

The survey was limited to these individuals for two reasons. First, they have been involved in Forest Service public participation efforts. They are more likely to contribute to future public participation efforts within the state of Alabama.

Implementation of the survey followed Dillman's (1978) total design method. Two weeks after sending an initial letter in May of 1996, announcing the upcoming survey, the actual survey, a cover letter, and a stamped-addressed return envelope was mailed to each individual. Three weeks after this mailing, follow-up questionnaires were sent to all individuals not responding by way of a returned questionnaire. Response rates were respectable, considering the pool of select respondents. Of the 312 surveys that were sent, 197 viable questionnaires were returned for a response rate of 63 percent. This high response rate is not unusual considering the individuals surveyed.

#### Analysis of the Data

In part one of the survey, a five-point scale was placed at the end of each question with five representing an undecided or neutral position. Respondents were asked to circle

one number for each item. This section of the survey instrument measured internal consistency and ideological coherence among various forest stakeholders as well as measuring specific values and perceptions. The sum-total answers were used as an informational index score for each respondent. Scoring on the informational index was arranged so that persons agreeing with the utilitarian-based statements would score low on those items, and persons disagreeing with those statements would score high. The same scoring applies to the preservationist-based questions.

An individual who circled (1) strongly agree, for statements 1, 3, 5, 7, 8, 11, 14, 18, and 19 would have a total score of nine on the utilitarian responses. This represented the strongest utilitarian score possible. An individual who circled (4) strongly disagree for statements 1, 3, 5, 7, 8, 11, 14, 18, and 19, would have a total score of 45 (4 was re-tabulated for a value of 5) on the utilitarian responses. This represented the weakest utilitarian score possible. Individuals scoring between 9 and 26 on the utilitarian questions were classified as utilitarians. A person scoring between 9 and 14 was classified as a strong utilitarian. A person scoring between 15 and 26 was classified as a moderate utilitarian.

Conversely, an individual who circled (1) strongly agree, for statements 2, 4, 6, 9, 12, 13, 15, 16, and 17 would have a total score of 9 on the preservationist items. This represented the strongest preservationist score possible. An individual circled (4) strongly disagree for questions 2, 4, 6, 9, 12, 13, 15, 16, and 17, would have a total score of 45 (4 was re-tabulated for a value of 5) on the preservationist responses. This represented the weakest preservationist score possible. Individuals scoring between 9 and 26 on the preservationist questions were classified as preservationists. A person scoring between 9

and 14 was classified as a strong preservationist. A person scoring between 15 and 26 was classified as a moderate preservationist.

Although five represented a neutral score on the questionnaire, 5 was re-coded so it represented a sum total of 3, 3 represented a sum total of 4, and 4 represented a sum total of 5 for computer tabulation purposes. This resulted in a possible range score of 9 to 45 for the utilitarian responses and a possible range score of 9 to 45 for the preservationist responses, with a low score representing strong endorsement and a high score representing a weak endorsement. Once a total score was tabulated, it was subsequently divided by 9 to get an average (mean) score. Respondents with a mean score between 1.0 and 2.9 within an attitudinal category were subsequently classified within that category. Respondents not classified under as utilitarian or preservationist were classified as neutral. These range responses and mean scores also allowed us to cross-check for respondents who may have scored high in both areas, thereby allowing us to modify our tabulations if necessary. Questions 10 and 20 were considered neutral questions for the purposes of this research and were not necessarily included in statistical tabulations.

Individuals not classified as either utilitarians or preservationists were classified as neutral. While certainly it is understandable that a person classified as a preservationist may not be diametrically opposed as it relates to utilitarian scoring, individuals whose cumulative score fell within both ideological preferences were eliminated. There was only one individual whose score fell within both ideological preferences; therefore, that individual's questionnaire was eliminated from the survey.

Demographic and organizational information was computed with the assistance of SPSS statistical programming, primarily using cross tabulations. Regional differences were tabulated based on the respondent's answer to the question "Name the county in

which you reside." The state was divided into three regions, and based on respondents' answers they were placed in one of those regions. Out-of-state respondents were eliminated from this category.

In part two of the survey a four-point scale was placed at the end of each question with 4 representing no opinion or a neutral position. Respondents were asked to circle one number for each item. This section of the survey instrument measured the relative importance of an activity to the respondent. Scores were tabulated so that the more important a management activity to the respondent, the lower the score the management activity received. A management activity with an average means score of 1.5 was more important to the respondents than a management activity that received an average mean score of 2.8. The management activities receiving 4 were calculated as zero within mean score tabulations.

Degrees of organizational and regional congruency were based on which answer received the highest percent of selection among the organizational or regional membership. If 53 percent of the Sierra Club selected "somewhat important" under wilderness preservation, then the Sierra Club had a congruency rating of 53 percent under wilderness preservation.

Answers in part three of the questionnaire were tabulated as they were in part two of the questionnaire except that answers represented the respondents' perceptions of the importance of these activities to the Forest Service. Answers in part four and part five of the questionnaire were based on summary totals.

A variety of analysis such as cross tabulations, summary totals, Likert's Scale, means, levels of significance, and averages were used to interpret the data. The use of the analysis not only allowed us to assess the appropriateness of combining individuals items

into a composite measure, but they also enable us to compare levels of consistency across various samples. The use of the SPSS statistical analysis and data management system was primary in evaluating attitude orientations in part one of the questionnaire; in evaluating and prioritizing preferred management objectives in part two; in evaluating and prioritizing perceived management objectives as well as determining levels of congruency and divergency in part three; in prioritizing perceptions of public input, evaluating methods of public participation, and preferred methods of participation in part four; and delineating various demographic factors in measuring associations.

## Chapter Three

### Exploring Basic Attitudes

A Nationwide poll in 1989 found that 97 percent of the population had formed an opinion on "maintaining trees and forests"; 43 percent believed the country was doing a good job in such an undertaking, while 54 percent thought it was not. In the same year, 86 percent of those polled nationally had formed an opinion on "cutting trees down and leaving dry land"; 54 percent indicated that this practice was a very serious problem for the nation, whereas 32 percent thought that it was not. Similarly, 94 percent of the population recognized deforestation as a forestry issue in 1989; 78 percent judged the issue to be of sufficient concern to warrant at least prompt action by the government. (Americans for the Environment 1989).

A Nationwide poll in 1978 acknowledged the general public's ability to relate to specific forestry issues: 59 percent were of the opinion that national forest reforestation efforts should be expanded, 47 percent wanted more incentives for private forest landowners, and 21 percent urged restrictions on national forest timber harvesting. In the same year, 81 percent of those polled recognized and viewed wildlife habitat as an important use of national forests, and 70 percent considered timber production to be an important use (Cheek 1978). Ten years later, in 1988, a large proportion of the general public was still cognizant of forest and related wilderness issues: 47 percent argued that wilderness should be preserved at the expense of developing new energy sources, 42 percent said it should not ( Americans for the Environment 1989). In 1985, 55 percent of the public viewed acid rain as a serious problem for forests (American Forest Institute 1985).

The purpose of this chapter is to examine attitudes towards forest management of the Alabamians surveyed in the context of utilitarian and preservationist perspectives.

More specifically, there are two objectives. The first is to determine the extent to which respondents are utilitarian or preservationist in their basic orientations. The second is to characterize utilitarians and preservationist in terms of certain social characteristics.

In addition to measuring the attitudinal orientation of the respondents, we will evaluate possible associations between attitudinal orientation and selected demographics. Additionally it is hypothesized that those favoring utilitarian-oriented activities will give greater weight to local needs over national needs.

### Identifying Utilitarians and Preservationists

Techniques for measuring associations with socio-cultural paradigms are not yet widely agreed upon in the social science literature. In light of this, as noted before, a modified version of Cotgrove's (1982) and Milbrath's (1984) use of bipolar items that portray the respective positions of the two paradigms as anchor points on a multipoint scale was selected for use. Unlike Cotgrove and Milbrath, bipolar questions that portray the respective positions of the two paradigms were placed at various points throughout the questionnaire.

Table 3.1 reports the proportion of respondents classified as utilitarians. Individuals with a cumulative score of 9-13 on the utilitarian questions were classified as strong utilitarians and given a score of 1.00. Individuals with a cumulative score of 14-24 on the utilitarian questions were classified as moderate utilitarians and given a score of 2.00. For utilitarian evaluation purposes, only those individuals falling within the 1.00 and 2.00 range are categorized as utilitarians.

Nine (4.5 percent) of all respondents, or 13.0 percent of those classified as utilitarians, are classified as strong utilitarians; fifty-nine (30 percent) of all respondents, or 87 percent of those classified as utilitarians are classified as moderate utilitarians. For

Table 3.1. Strength of Utilitarian Attitudes Among Respondents

| Score | N   | All Respondents % | Utilitarian % |
|-------|-----|-------------------|---------------|
| 1.00  | 9   | 4.5               | 13.0          |
| 2.00  | 59  | 30.0              | 87.0          |
| 3.00  | 27  | 13.7              |               |
| 4.00  | 55  | 28.0              |               |
| 5.00  | 47  | 23.8              |               |
| Total | 197 | 100.0             | 100.0         |

1.00 = very strong utilitarian orientation

2.00 = moderate utilitarian orientation

our purposes we combine these two groups into one category of utilitarians. Therefore, sixty-eight, or 34.5 percent of all respondents are classified as utilitarians. These findings suggest that definite, yet moderate, utilitarian attitudinal preferences exist among respondents.

Table 3.2 indicates what proportion of respondents may be classified as preservationist. Individuals with a cumulative score of 9-13 on the preservationist questions were classified as strong preservationists and given a score of 1.00. Individuals with a cumulative score of 14-24 on the preservationist questions were classified as moderate preservationists and given a score of 2.00.

Forty-two (21.3 percent) of all respondents are classified as strong preservationists. Sixty-two (31.5 percent) of all respondents are classified as moderate preservationists. For our purposes we combine the two groups into one category of preservationists. Therefore, one hundred and four, or 52.8 percent of the respondents, are classified as preservationists. These findings suggest that definite and strong preservationist preferences exist among respondents. This is especially true in that 21.3

Table 3.2. Strength of Preservationist Attitudes Among Respondents

| Score | N   | All Respondents % | Preservationist % |
|-------|-----|-------------------|-------------------|
| 1.00  | 42  | 21.3              | 40.0              |
| 2.00  | 62  | 31.5              | 60.0              |
| 3.00  | 31  | 15.7              |                   |
| 4.00  | 56  | 28.4              |                   |
| 5.00  | 6   | 3.1               |                   |
| Total | 197 | 100.0             | 100.0             |

1.00 = very strong preservationist orientation

2.00 = moderate preservationist orientation

percent of the respondents are strong preservationist as compared to the 4.5 percent who are strong utilitarians.

Individuals not classified as either utilitarian or preservationist are classified as neutrals.

Table 3.3 is a summary classification of respondents' attitudes. Of the respondents, over half (52.80), percent, are classified as preservationist, and the remaining 34.5 percent and 12.7 percent respectively are classified as utilitarian and neutral. These numbers are reflective of historical trends in that preservationists tend to be more actively involved in public participation efforts than do individuals classified as utilitarians (Borelli 1988; Lancaster 1991).

Table 3.3. Summary Classification of Respondent's Attitudinal Responses

| Attitude        | N   | All Respondents % |
|-----------------|-----|-------------------|
| Preservationist | 104 | 53%               |
| Neutral         | 25  | 13%               |
| Utilitarian     | 68  | 34%               |
| Total           | 197 | 100.0%            |

### Interpretation

One might reasonably presume that Alabama is a utilitarian-oriented state.

Alabama's forest industry since 1978 is the state's largest industry. In 1995 it produced approximately \$13.2 billion in products. Yet, these results show strong support for views on forest management policy that are associated with preservationist-oriented attitudes, thus departing from traditional values assumed to dominate forest management practices within the state.

Attitudinal orientation regarding the management of natural resources and the environment is often categorized on two ends of a spectrum, as anthropocentric, or utilitarian, and biocentric, or preservationist in their foundation (Brown and Harris 1992). The Gallup Report (1989) indicated that "environmentalism" was growing nationwide, with more than 75 percent of the population claiming to be environmentalists. Researchers frequently identify the shift with changes in factors such as age, gender, education, and place of residence (Milbrath 1984, Dunlap 1992).

Though there are contradictions in the literature regarding associations between environmental attitudinal orientation and selected demographics, there is little disagreement regarding the association between education and attitudinal orientation. The higher the level of education the more likely the individuals will be preservationists in their orientation. Studies with similar components on attitudes toward the environment have generally revealed that individuals with higher education are more preservationist-oriented than the less well-educated (Jones and Dunlap 1992; Van Liere and Dunlap 1980); younger people tend to be more preservationist-oriented than older people (Buttel 1978; Van Liere and Dunlap 1980; Milbrath 1984); whites are more environmentally-oriented than blacks (Milbrath 1984); women are more preservationist-oriented than men

(Van Liere and Dunlap 1980; Merchant 1984; Milbrath 1984; Hamilton 1985; Blocker and Eckberg 1989; Fortmann and Kusel 1990; Flynn 1994); people employed in the service industries are more preservationist-oriented than those who produce and sell material goods such as forest or agricultural products (Milbrath 1984); and urban residents are more preservationist-oriented than their rural counterparts (Buttel and Flinn 1974; Van Liere and Dunlap 1980; Converse 1981; Jones and Dunlap 1992).

Conversely, there are some studies that contradict some of these findings. One finds that race and gender are relatively poor predictors of environmental concern, because correlations are typically not significant and quite inconsistent. However, when differences emerge, it is the nonwhites who are generally found to be more preservationist-oriented than whites. (Hershey and Hill 1977, 1978; Taylor 1989; Milbrath 1984). Other studies have found that urban residents are more utilitarian-oriented and less concerned about the environment than rural residents (Gressman and Potter 1977; Van Liere and Dunlap 1978). Chickering (1983) found no difference in environmental concern between urban and rural residents, and Fortmann and Kusel (1990) found that residential status does not have a significant effect on environmental attitudes in regard to forests. Despite the wide variability of results, most studies do suggest that there are place-of-residence differences in environmental attitudes. According to Milbrath, (1984), empirical research does not support the conjecture of some, such as Tucker (1982) and a Congressional report (NFMA 1982), that environmentalism is an upper-class movement.

In general, as the population includes more educated and urban individuals born after World War II and as society pays more attention to the views of women, a stronger environmental orientation has become part of the contemporary American social culture.

Public attitudes toward management of federal forest lands must be understood within this general context.

In light of these studies, what kinds of people are participating in forest planning in Alabama? What background characteristics are associated with what attitude toward forest management?

### Respondent Characteristics and Attitudes

To better understand the association of respondent characteristics with forest management orientations in Alabama and to determine the degree to which these findings are reflective or consistent with similar studies we examined the following respondent characteristics in relation to management orientation were examined.

Survey results must be considered in light of baseline total attitudinal percentages; Utilitarians 34 percent; Neutrals 13 percent; Utilitarians 53 percent.

### Education

Table 3.4 examines the attitudinal differences between those classified as utilitarian, preservationist, and neutral in regard to levels of education. Higher education generally has been found to be positively associated with preservationist attitudes (Jones and Dunlap 1992; Milbrath 1984; Van Liere and Dunlap 1980). Our results showed very moderate support regarding this association. Although those with preservationists-oriented attitudes were dominant among individuals having advanced degrees, utilitarians were dominant among those having college degrees. Preservationists dominated the "some college" category and utilitarians dominated the "high school education" category.

This was an exceptionally high percentage of college educated respondents and clearly does not reflect the public at large. This suggests that individuals without some level of college education are not well represented in the public participation process. This also reinforces the claim that many individuals actively involved in public participation as it relates to forest management, especially those individuals classifying themselves as preservationist, are well educated.

Since some of the individuals on the EIS mailing list were placed on the list by the Forest Service and due to the low number of individuals categorized under "high school", efforts should be made to increase the involvement of individuals without college training.

Table 3.4. Education and Attitudes on Forest Policy

|                            | High School |       | Some College |        | College Degree |        | Advanced Deg |        |
|----------------------------|-------------|-------|--------------|--------|----------------|--------|--------------|--------|
|                            | %           | N     | %            | N      | %              | N      | %            | N      |
| Utilitarian<br>N = 67      | 57%         | N = 4 | 17%          | N = 5  | 54%            | N = 42 | 20%          | N = 16 |
| Neutral<br>N = 25          | 43%         | N = 3 | 0            |        | 13%            | N = 10 | 15%          | N = 12 |
| Preservationist<br>N = 103 |             | 0     | 83%          | N = 24 | 33%            | N = 26 | 65%          | N = 53 |
| Total<br>N = 195           | 100%        | N = 7 | 100%         | N = 29 | 100%           | N = 78 | 100%         | N = 81 |

### Age

Much of the forestry-related attitudinal literature finds that young people tend to be more preservationist and environmentally-oriented than older people (Jones and Dunlap 1992; Van Liere and Dunlap 1980). Results of this study do not necessarily

support those findings. Individual between the ages of 21-30 years old, the youngest age group, were about evenly split regarding their attitudinal orientation. None of the other age groups exhibited any significant probabilities that age had a substantial affect upon attitudinal orientation. Results do not support any significant associations between age and attitudinal orientation.

The highest percent (62 percent) of those classified as preservationists were in the 41 to 50 year-old age group and the highest percent (45 percent) of those classified as utilitarians were in the 21 to 30 year old age group.

Table 3.5. Age and Attitudes on Forest Policy

|                            | 21-30 yrs |        | 31-40 yrs |        | 41-50 yrs |        | 51-60 yrs |        | 61 yrs and over |        |
|----------------------------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------------|--------|
|                            | %         | N      | %         | N      | %         | N      | %         | N      | %               | N      |
| Utilitarian<br>N = 68      | 45%       | N = 5  | 33%       | N = 11 | 31%       | N = 18 | 38%       | N = 23 | 31%             | N = 11 |
| Neutral<br>N = 25          | 0         |        | 12%       | N = 4  | 7%        | N = 4  | 15%       | N = 9  | 23%             | N = 8  |
| Preservationist<br>N = 104 | 55%       | N = 6  | 55%       | N = 18 | 62%       | N = 36 | 47%       | N = 36 | 46%             | N = 16 |
| Total<br>N = 197           | 100%      | N = 11 | 100%      | N = 33 | 100%      | N = 58 | 100%      | N = 58 | 100%            | N = 35 |

### Race

There have been few studies investigating the influence of race on attitudes regarding forest management or environmental concerns. Yet when race was considered (Jones and Dunlap 1992), it emerged as a relatively poor predictor of environmental concern, both because correlations typically are not significant and because findings are quite inconsistent. However, in the few instances where differences emerged it was the nonwhites who generally were found to be more environmentally concerned than whites,

in contrast to the findings of other studies (Hershey and Hill's 1977 - 1978; Milbrath 1989; Taylor 1989). Results of the survey in regards to the relationship between race and attitudes regarding forest management are presented in Table 3.6.

Due to the limited number of nonwhite respondents, generalization about attitudes based on race is unwarranted. However the point can be made that numerically: there are more nonwhite preservationists (15) than nonwhites utilitarian respondents (2).

This also suggests that there is a limited number of minority participants in the forest management public participation process in Alabama. Because of the small number of nonwhites among respondents, racial differences are not taken into account in the remainder of the analysis.

### Gender

As indicated in Table 3.7, gender appears to have a significant bearing on forest attitudinal orientation. These results were anticipated in that the majority of studies relating to the association between gender and environmental attitudes suggest that women are more likely to be preservationists oriented than men.

The data presented in Table 3.7 shows that women are twice as likely to be preservationists-oriented than are men. Men on the other hand, are four times more likely to be utilitarian than women. When making intragroup comparisons, women are ten times more likely to be preservationists-oriented than utilitarian-oriented, with little indecisiveness between the two orientations (3 percent). Men on the other hand, are nearly evenly split between the two orientations. Men also exhibit a higher degree indecisiveness (15 percent) between the orientations.

Table 3.6. Race and Attitudes on Forest Policy

|                            | Black |       | White |         | Other |        |
|----------------------------|-------|-------|-------|---------|-------|--------|
|                            | %     | N     | %     | N       | %     | N      |
| Utilitarian<br>N = 64      | 12%   | N = 1 | 36%   | N = 62  | 10%   | N = 1  |
| Neutral<br>N = 24          | 12%   | N = 1 | 13%   | N = 23  |       | 0      |
| Preservationist<br>N = 102 | 76%   | N = 6 | 51%   | N = 87  | 90%   | N = 9  |
| Total<br>N = 190           | 100%  | N = 8 | 100%  | N = 172 | 100%  | N = 10 |

Table 3.7. Gender and Attitudes on Forest Policy

|                            | Male |         | Female |        |
|----------------------------|------|---------|--------|--------|
|                            | %    | N       | %      | N      |
| Utilitarian<br>N = 65      | 39%  | N = 62  | 9%     | N = 3  |
| Neutral<br>N = 25          | 15%  | N = 24  | 3%     | N = 1  |
| Preservationist<br>N = 103 | 46%  | N = 72  | 89%    | N = 31 |
| Total<br>N = 193           | 100% | N = 158 | 100%   | N = 35 |

### Residence

As indicated previously, many studies support the generalization that residents of urban areas are significantly more concerned with the environment than rural residents, although there is some variability in scholarly views. Table 3.8 presents data for Alabama.

Our findings support only moderately the findings that suggest urban residents are more likely to be preservationists than utilitarian in their orientation. This finding holds true for residents living in areas with more than 10,000 people. Yet, when looking at areas with less than 500 people (farm/rural), we find that respondents are more likely to be preservationists than utilitarians. It was only in the areas having between 500 - 10,000 people that respondents were more likely to be utilitarians than preservationists.

The high number of respondents in this study having advanced degrees suggests that many of the rural/farm residents are employed outside the typical farming occupations which further suggests that such communities are diversified with residents employed in a variety of occupations.

Table 3.8. Residence and Attitudes on Forest Policy

|                           | Farm/Rural |        | Town<br>(500 - 10,000) |        | City<br>(10,001 - 100,00) |        | City<br>(>100,001) |        |
|---------------------------|------------|--------|------------------------|--------|---------------------------|--------|--------------------|--------|
|                           | %          | N      | %                      | N      | %                         | N      | %                  | N      |
| Utilitarian<br>N = 67     | 27%        | N = 15 | 64%                    | N = 30 | 27%                       | N = 14 | 20%                | N = 8  |
| Neutral<br>N = 25         | 12%        | N = 7  | 6%                     | N = 3  | 12%                       | N = 6  | 3%                 | N = 9  |
| Preservationist<br>N = 12 | 61%        | N = 34 | 30%                    | N = 14 | 61%                       | N = 31 | 57%                | N = 23 |
| Total<br>N = 194          | 100%       | N = 56 | 100%                   | N = 47 | 100%                      | N = 51 | 100%               | N = 40 |

### Employment in Forestry

It is reasonable to expect that persons employed in forestry are more likely to hold utilitarian than preservationists attitudes. Data presented in Table 3.9 support this expectation.

As shown in Table 3.9, 74 percent of those employed in forestry related employment hold utilitarian attitudes as compared to 12 percent maintaining preservationists' attitudes. Those individuals classified as neutral were nearly evenly divided regarding their employment in forestry and their attitudinal orientation.

Respondents employed in other than forestry related employment were seven times more likely to hold preservationists' attitudes than utilitarian attitudes.

Table 3.9. Employment in Forestry and Attitudes on Forest Policy

|                            | YES<br>Forest related<br>employment |        | NO<br>Other than forest related<br>employment |         |
|----------------------------|-------------------------------------|--------|-----------------------------------------------|---------|
|                            | %                                   | N      | %                                             | N       |
| Utilitarian<br>N = 66      | 74%                                 | N = 54 | 10%                                           | N = 12  |
| Neutral<br>N = 24          | 14%                                 | N = 10 | 12%                                           | N = 14  |
| Preservationist<br>N = 100 | 12%                                 | N = 9  | 78%                                           | N = 91  |
| Total<br>N = 190           | 100%                                | N = 73 | 100%                                          | N = 117 |

### Regional Location

Although national forests are managed and governed on a federal level, regional, or even local desires, are often the focal point of contention for the management of these

national lands. Alabama's forest industry, which is the state's largest, and also the state's largest exporter, (Alabama Forestry Association 1997) is divided along regional lines within the state. Forest industry activity is heaviest in the southern region of the state, followed by the middle region of the state, with the northern region of the state being the least active. In light of this, one might expect that forest management attitudes would be divided along these regional lines of forest industry activity.

Table 3.10 presents data that reflect the regional differences in forest policy attitudes. As expected, respondents from the northern section of the state show a definite bias toward the preservationist perspective with a five-to-one differential when compared to the utilitarian perspective. Contrarily, respondents from the southern region of the state indicate a definite bias toward the utilitarian perspective with a three-to-one differential when compared to the preservationist perspective. The central region of the state is divided fairly evenly between the utilitarian and preservationist perspectives. Out-of-state respondents were evenly split between the two attitudinal perspectives. Only 10.6 percent of those classified as preservationist live in the southern region of the state as compared to 40.4 percent and 38.5 percent in the middle and northern regions of the state, respectively. Forest attitudinal differences coincide rather closely with forest industry activity within the state.

#### Organizational Affiliation

Respondents were asked to indicate their membership in relevant trade and professional associations and environmental organizations. Prevalent among the former are the Society of American Foresters and the Alabama Forestry Association, and among the latter the Wildlife Federation, the Wilderness Society, the Audubon Society, the

Table 3.10. Regional Location and Attitudes on Forest Policy

|                            | North |        | Central |        | Southern |        | Out-of-state |        |
|----------------------------|-------|--------|---------|--------|----------|--------|--------------|--------|
|                            | %     | N      | %       | N      | %        | N      | %            | N      |
| Utilitarian<br>N = 68      | 9%    | N = 5  | 43%     | N = 35 | 48%      | N = 21 | 37%          | N = 7  |
| Neutral<br>N = 25          | 14%   | N = 7  | 6%      | N = 5  | 27%      | N = 12 | 5%           | N = 1  |
| Preservationist<br>N = 104 | 77%   | N = 40 | 51%     | N = 42 | 25%      | N = 11 | 58%          | N = 11 |
| Total<br>N = 197           | 100%  | N = 52 | 100%    | N = 82 | 100%     | N = 44 | 100%         | N = 19 |

Sierra Club, and the Nature Conservancy. Respondents were divided into four groups: members only of trade or professional groups; members only of environmental groups; members of both groups; and members of neither group. Based upon the nature of the groups, there is a basis for expecting that the utilitarian perspective would be strongly associated with membership in trade or professional associations and that the preservationist perspective would be strongly associated with membership in environmental groups. Those with membership in both groups or neither should show mixed association.

Membership in a trade or professional group or environmental organization has a significant association with attitudinal orientation. Membership in a trade or professional group tends to be associated with a utilitarian attitude and membership in an environmental organization tends to be associated with the preservationist perspective. As indicated in Table 3.11, 69 percent of respondents classified as utilitarian are members of a trade or professional group as compared to 15 percent of preservationists. Conversely, only 12 percent of those classified as utilitarian hold membership in an

environmental organization as compared to 71 percent of those classified as preservationists. These findings suggest almost half of those participating in public participation efforts are affiliated with an environmental or professional organization.

Another concern is that of cross-membership between attitudinal orientations. Additional analysis of organizational affiliations is presented in Table 3.12. There were a minimal number of respondents (32) that maintained membership in both a preservationist-oriented organization and a utilitarian-oriented organization. There is minimal attitudinal inter-organizational membership among these respondents. These facts suggests that attitudinal orientation is a significant factor in organizational membership. Of the 32 cross-membership respondents, 12 were utilitarians, seven were neutral, and 13 were preservationists. The remaining 66 respondents (16 utilitarians, 13 neutrals, and 37 preservationists) did not maintain membership in any of the listed organizations. This lends some support to the suggestion that there is minimal diversity of attitudinal orientations among the membership makeup of both the professional/trade and environmental organizations. Though some may suggest that organized interest maintains a stronghold over public participation efforts, these findings show that those not maintaining membership in a listed organization are numerically participating about equally. In light of the high percentage of respondents not affiliated with a listed organization, their attitudinal orientation based on complementary organized interests can not be identified.

Table 3.11. Organizational Affiliation and Attitudes on Forest Policy

|                           | Member of a<br>trade/professional<br>association<br>% |      |                            | Member of an<br>environmental<br>organization<br>% |      |
|---------------------------|-------------------------------------------------------|------|----------------------------|----------------------------------------------------|------|
|                           | YES                                                   | NO   |                            | YES                                                | NO   |
| Utilitarian<br>N = 67     | 69%                                                   | 15%  | Utilitarian<br>N = 67      | 17%                                                | 50%  |
| Neutral<br>N = 25         | 11%                                                   | 14%  | Neutral<br>N = 25          | 12%                                                | 13%  |
| Preservationist<br>N = 99 | 20%                                                   | 71%  | Preservationist<br>N = 102 | 71%                                                | 37%  |
| Total<br>N = 191          | 100%                                                  | 100% | Total<br>N = 194           | 100%                                               | 100% |

Table 3.12. Cross Membership Affiliation and Attitudes on Forest Policy

|                 |                                             |     | Member of Environmental Organization |    |       |
|-----------------|---------------------------------------------|-----|--------------------------------------|----|-------|
|                 |                                             |     | YES                                  | NO | TOTAL |
| Utilitarian     | Member of Trade or Professional Association | YES | 12                                   | 36 | 48    |
|                 |                                             | NO  | 2                                    | 16 | 18    |
|                 | Total                                       |     | 14                                   | 52 | 66    |
| Neutral         | Member of Trade or Professional Association | YES | 7                                    | 1  | 8     |
|                 |                                             | NO  | 4                                    | 13 | 17    |
|                 | Total                                       |     | 11                                   | 14 | 25    |
| Preservationist | Member of Trade or Professional Association | YES | 13                                   | 1  | 14    |
|                 |                                             | NO  | 47                                   | 37 | 84    |
|                 | Total                                       |     | 60                                   | 38 | 98    |

### Local versus National Needs

The foregoing analysis has focused on social variables. One essentially political variable was included in the questionnaire. Basically concerning political philosophy, it asked the respondents whether local needs should outweigh national needs in establishing forest policy. The question taps into the debate that focuses on a variation of the community and government versus individualism and markets dichotomy. It seems that the preservationist perspective has a national focus and is more holistic in nature. Conversely, the utilitarian perspective seems to fit with an emphasis on local and regional

needs, especially as they relate to local and regional markets. A summary of the responses related to local and national needs are presented in Table 3.13.

Clearly, the preservationist-oriented respondents have a more national focus than the utilitarian respondents. Those respondents classified as neutral are more evenly divided than are those with definite attitudinal biases. These results are not surprising in that local needs, as they relate to forest utilization, are often perceived as being tied to the local economy, whereas preservationist desires are usually not so directly intertwined with the local or regional economy.

Table 3.13. Local Needs Versus National Needs

|                              | Strongly agree |        | Mildly agree |        | No opinion |       | Mildly disagree |        | Strongly disagree |
|------------------------------|----------------|--------|--------------|--------|------------|-------|-----------------|--------|-------------------|
|                              | %              | N      | %            | N      | %          | N     | %               | N      |                   |
| Utilitarian %<br>N = 68      | 37%            | N = 14 | 59%          | N = 38 | 0          |       | 39%             | N = 14 | 4% N = 2          |
| Neutral %<br>N = 25          | 21%            | N = 8  | 11%          | N = 7  | 0          |       | 11%             | N = 4  | 11% N = 6         |
| Preservationist %<br>N = 104 | 42%            | N = 16 | 30%          | N = 19 | 100%       | N = 7 | 0% N = 18       |        | 85% N = 44        |
| Total %<br>N = 197           | 100%           | N = 38 | 100%         | N = 64 | 100%       | N = 7 | 100%            | N = 36 | 100% N = 52       |

### Conclusions

In examining the attitudes of Alabamians towards forest management from a utilitarian, preservationist, and neutral perspective, we see that slightly over half of the respondents can be classified as preservationist, with 40 percent of them classified as strong preservationists. The utilitarians comprised 34 percent of the respondents with 13

percent of them classified as strong utilitarians. Only 13 percent of the respondents are classified as neutral. Though most of the respondents are moderate, or somewhat mixed, in their attitudinal orientation, the preservationists exhibit the strongest attitudinal orientations of the three groups.

After reviewing many demographic studies such as the one done by Milbrath (1984) that concluded that young people are more environmentally oriented than their elders, females are more environmentally oriented than males, people employed in service industries are more environmentally oriented than those who produce or sell material goods, and that environmentalists are better educated than those who are not considered staunch environmentalists, we find that Alabamians are fairly reflective of such studies, though not necessarily to the same degree. In this study, more educated, average younger age, female, and urban residents tended to be more preservationist-oriented than the less educated, older, male, rural residents, who reflected a more utilitarian-oriented attitude. Findings also indicated that individuals with preservationist-oriented attitudes tended to be more actively involved in the public participation efforts as they relate to the forest management debate.

When analyzing the specific questions, of the twenty questions asked, Question #6, "Scientists and policy makers should recognize that there are limits to what nature can provide and adjust their expectations accordingly," was the question in which there was the greatest agreement between the two attitudinal perspectives. The question then becomes, "What are the agreed-upon limits of nature?"

Question #13, "More national forest land should be left uncut regardless of timber profitability or productivity," was the question in which there was the greatest

disagreement between the two perspectives. This has traditionally been the nexus from which most forest management debates originate.

While the majority of respondents have definite opinions regarding their attitudinal orientation, most of those opinions fell within the moderate range of either the utilitarian or preservationist ideology. Only 6.1 percent of the respondents are classified as strong utilitarians and 15.7 percent as strong preservationists. Only 12.7 percent were considered neutral, which suggests that a majority of the respondents have definite forest management attitudes.

Four of the five background characteristic results supported expectations concerning variations in attitudinal orientation. Education, age, gender, and residence all reflect similar findings in previous studies. The only exception was race. Due to the low number of minority respondents, generalizations about race could not be made.

Findings under the heading of education do support previous findings that preservationist tend to have more formal education than do utilitarians, but this might be slightly misleading. The primary differences in education were the differences between a college degree and an advanced degree. Preservationist had a higher percent of advanced degree respondents than did the utilitarians. Those classified as neutral were somewhat evenly divided between college degree and advanced degree.

Findings under the classification of age do support some prior findings that preservationist tend to be younger. Preservationists in Alabama were slightly younger than utilitarians, but the differences were modest.

One finding among Alabamians that is clear, which supports findings in previous studies, is that women are more preservationist-oriented than men.

This chapter revealed that target groups can be identified by socio-demographic characteristics. Citizens participating in public participation efforts on the national forests in Alabama are, for the most part, well educated, middle aged, diverse in gender but not in racial makeup, fairly evenly distributed within the state, live in rural areas and large cities, and are involved in organized interest as it relates to forest management. This suggest that these participants are often well informed regarding natural-resource matters, and, therefore, could make important contributions to the agency's decision-making process.

The findings show that members of major national environmental organizations are active participants in the national forest public participation process in the state of Alabama. Although a slight majority of the individuals were members of organized interest, almost half of the forest planning participants represented themselves. In light of this, the Forest Service is challenged to identify participation methods that reach well beyond organized interests. Identifying respondents based on attitudinal interest, as opposed to organizational membership, increases the chances of identifying management practices that will receive the greatest support.

Another major finding is that mean scores on this set of questions, in combination, are very effective in predicting patterns of response to attitudinal orientation in Alabama. In fact, accuracy in assigning respondents to either a utilitarian or preservationist orientation is significant when education, age, gender, region of the state, and residence are known, in combination. These facts suggests that public response to forest management can be enhanced by examining a relatively modest number of variables. To the extent that this is the case, highly predictive models may be able to assist in the study of public response to proposed forest management activities.

Data in this study highlighted specific attitudinal differences underlying the two largest attitudinal orientations: preservation or environmental interests and utilitarian or timber interests. Understanding the political arena better and knowing the political views of participants may help forest managers understand people's attitudes toward particular resource issues. People are also an important resource. Empirically derived information can help forest managers understand the public more accurately and can help participation officers design programs for the population in general and for specific groups.

The prevailing view of Environmental Impact Statement (EIS) participants, especially when region is taken into account, suggests that non-commodity forest values must be incorporated more strongly into federal forest management practices, along with commodity uses. The utilitarian-preservationist forest management debate shows no signs of decline and will likely achieve greater significance and attention if environmental constraints and socioeconomic problems continue to plague forestry. Contributing to a better understanding of the nature of the roots of this debate can be an important contribution to political and forest scientists.

## Chapter Four

### Views on Forest Uses

The benefits which flow from forested public lands are the result of an enormous array of policies, programs, and management strategies that have been developed over the years. Many of them have been the result of the intense public debate which invariably surrounds the search for the public interest in regard to public lands. Legislative mandates such as the Multiple Use Sustained Yield Act, the Endangered Species Act, the Wilderness Act, and the Outdoor Recreation Resources Review Act all place certain requirements on the Forest Service when making management decisions. Always sought, but never actually found, the ambiguity of the public interest is made more tangible when debates occur over specific public land use and management issues. In all such debates, the questions that are eventually focused on are: What is the public interest? What are the points of agreement and disagreement?

Forest managers invariably are confronted with an enormous number of forest resource and management issues. In light of this, information regarding public preferences about forest uses is important. Social, economic, political, and biological resources are limited. If forest managers are to achieve optimal efficiency and effectiveness in the allocation of forest resources, they must have knowledge of stakeholder preferences and the relative importance of each selected forest management activity. Since not all such issues and choices can be addressed in full fashion, priorities must be established. Prioritizing forest management activities is also important in establishing coalition building, complementary interest, and anticipating who opposing groups might be. The merits and ultimate worthiness of a proposed forest management activity are often not judged on the basis of technical, economic, or social criteria.

Rather, the preferred choice of a management activity is one upon which most interests can agree. In pluralistic democracies, value is placed upon consensus seeking. What emerges may not be the most technically or economically correct approach to forest management, but it is likely to be the most agreed-upon approach to forest management.

This chapter determines the degree to which certain forest management activities are desired by the involved public, both individually and organizationally. A forest management priority list based on attitudinal preferences was examined. Inter-and intra-organizational congruency and divergency were also measured.

#### Basic Attitudes on Forest Management Activities

Respondents were asked to express their attitudes regarding various forest management activities. Table 4.1 presents overall rankings based on the number of respondents selecting "very important" for a particular forest management activity.

The rankings clearly show the strength of the preservationist perspective in Alabama among those involved in some way in policy discussions. Protecting water supplies and quality received the highest ranking with 155 "very important" selections. Hiking and wilderness was second with 106 very important selections. Protecting threatened and endangered species was third with 105 selections. Wilderness preservation was fourth with 103 selections. Preventing global climate change was fifth with 91 selections. Access to scenic areas was sixth with 88 selections. Maximum use of forest resources was seventh with 63 selections. Timber harvesting and sales was eighth with 61 selections. Attracting tourist was ninth with 60 selections. Economic growth and development was tenth with 53 selections. Roadside recreation was eleventh with 50 selections. Hunting was twelfth with 49 selections. Fishing was last with 47 selections.

Table 4.1. Overall Rankings of Selected Forest Uses

|                                              | Number of Very Important Selections | Overall Rank* |
|----------------------------------------------|-------------------------------------|---------------|
| Protecting water supply and quality          | 155                                 | 1             |
| Hiking and wilderness                        | 106                                 | 2             |
| Protecting threatened and endangered species | 105                                 | 3             |
| Wilderness preservation                      | 103                                 | 4             |
| Preventing global climate change             | 91                                  | 5             |
| Access to scenic areas                       | 88                                  | 6             |
| Maximum use of forest resources              | 63                                  | 7             |
| Timber harvesting and sales                  | 61                                  | 8             |
| Attracting tourism                           | 60                                  | 9             |
| Economic growth and development              | 53                                  | 10            |
| Roadside recreation                          | 50                                  | 11            |
| Hunting                                      | 49                                  | 12            |
| Fishing                                      | 47                                  | 13            |

\* Rankings are based on the number of respondents choosing a particular use category

Table 4.2 presents rankings based on degree of difference between utilitarian and preservationist mean scores. The lower the score the greater the degree of agreement between the two groups. The first column lists the activities from the greatest to least agreement. It also presents the relative rank attached to each forest management activity by the utilitarians and the preservationists.

The greatest agreement between the two groups was in the area of hunting. Though hunting ranked seventh in degree of importance among the utilitarians and tenth in degree of importance among the preservationists, it was the activity in which both groups attached essentially the same relative value. Both groups felt hunting was relatively unimportant when compared to other management activities.

Table 4.2. Rankings Based on Degree of Difference  
Between Utilitarian and Preservationist Mean Score

|                                                 | Degree of Difference<br>Between Utilitarian and<br>Preservationist Mean<br>Score | Utilitarian<br>Rank | Preservationist<br>Rank |
|-------------------------------------------------|----------------------------------------------------------------------------------|---------------------|-------------------------|
| Greatest Agreement                              |                                                                                  |                     |                         |
| Hunting                                         | .03                                                                              | 7                   | 10                      |
| Protecting water supply and quality             | .25                                                                              | 2                   | 1                       |
| Fishing                                         | .25                                                                              | 8                   | 9                       |
| Roadside recreation                             | .32                                                                              | 9                   | 8                       |
| Access to scenic areas                          | .47                                                                              | 6                   | 6                       |
| Attracting tourist                              | .53                                                                              | 10                  | 7                       |
| Economic growth and development                 | .78                                                                              | 4                   | 11                      |
| Protecting threatened and endangered<br>species | .87                                                                              | 6                   | 4                       |
| Maximum use of forest resources                 | 1.0                                                                              | 3                   | 12                      |
| Hiking and wilderness                           | 1.07                                                                             | 11                  | 2                       |
| Preventing global climate change                | 1.32                                                                             | 13                  | 5                       |
| Wilderness preservation                         | 1.34                                                                             | 12                  | 3                       |
| Timber harvesting and sales                     | 1.37                                                                             | 1                   | 13                      |
| Least Agreement                                 |                                                                                  |                     |                         |

Fishing and protecting water supply and quality tied for second in terms of agreement. Fishing, like hunting, was perceived by both groups as relatively unimportant. Conversely, protecting water supply and quality was ranked first in importance among the preservationists and second in importance among the utilitarians. Roadside recreation, access to scenic areas, and attracting tourists, ranked third, fourth, and fifth respectively.

As expected, the forest management activities over which there is the least agreement or greatest disagreement are those activities that have traditionally polarized utilitarians and preservationists: maximum use of forest resources and timber harvesting and sales valued by utilitarians; and wilderness preservation and hiking and wilderness valued by preservationists. Preventing global climate change was also a matter on which there was little agreement. This results from the fact that preventing global climate change requires the preservation of large forested areas. In regard to preservationists, the data allow an interesting observation to be made.

Dunlap and Heffernan (1975) hypothesized that involvement in outdoor activity is positively associated with pro-environmental attitudes and different types of outdoor recreation have varying levels of association with pro-environmental attitudes. Specifically the distinction is made between "appreciative" and "consumptive" recreation. Dunlap and Heffernan hypothesized that involvement in appreciative activities, such as hiking, is more strongly associated with environmental concerns, or the preservationist perspective, than participation in consumptive activities, such as hunting or fishing. This hypothesis is supported by the rationale that activities which do not disturb the natural setting, or appreciative activities, generate higher levels of protective concern than activities which take something from the environment, or consumptive activities. Based

on the findings of this study, the appreciative recreational activities such as hiking and wilderness, (ranked second in importance by preservationists) and wilderness preservation (ranked third by preservationists) are the activities ranked higher in importance by the preservationists and, at the same time, are ranked least important (eleventh and twelfth respectively) by the utilitarians. The consumptive recreational activities are the activities in which there is greatest agreement, probably due to the fact that they are considered the most neutral of those which have the most common ground. The preservationists see the activities as moderately important and the utilitarians see them as moderately unimportant.

### Organizational Perspectives

An alternative explanation of how forest resource policies are developed is group competition. Political processes leading to the selection of forest policies are thought not to involve individuals, but rather to involve organized groups of individuals, or interest groups. The latter are viewed as organized groups of people with common interests (such as recreational use of forests, or water flowing from forested areas). Members of interest groups share public policy objectives and generally agree on the means of achieving them. Public forest policies are viewed as the result of political struggles between interest groups. Which forest resource policy ultimately prevails depends on the groups' relative power, influence, and ability to press claims for their interests (usually at the expense of competing groups' interests). The role of the legislature is to ratify (enact into law) forest policies that result from the political equilibrium that is established through struggles between groups. In light of this it is important to identify the major groups -- those likely to aid or to hamper a policy's development-- involved in the public participation process of national forests in Alabama.

Interest groups are obviously important in shaping public policy. However, like other organizations, interest groups face problems. They must establish priorities for acting on the many issues that may be relevant to their interest. Interest groups are invariably confronted with many forest resource issues. Since they usually cannot address all issues in a responsible fashion, priorities must be established, which can be a challenging exercise for most interest groups.

Although few would admit it, interest groups seldom control their own destinies on matters of issue selection and issue timing. Their long-range planning of issue priorities very often becomes "it-all-depends" planning. When the Forest Service concludes, for example, that the time is ripe for a hearing on a forest management plan, the substance and timing of the plan's issuance are usually firmly established by the service. Interest groups must react accordingly. Similarly, when an adversary decides that the time has come to litigate a forest resource issue, the group's response must be consistent with court imposed schedules and issue scoping.

Although the respondents were asked specifically to rank forest management activities in terms of importance, rankings were determined by averaging the cumulative scores. The lower the score, the more important the activity. Organizations were selected for inclusion by identifying those for which a minimum of eighteen respondents indicated membership, and the general public category includes those respondents who were not members of a trade or professional organization, were not members of an environmental organization, were not employed in forestry or agriculture, and did not have an immediate family member employed in forestry or agriculture. The specific breakdown is recorded in Table 4.3.

Table 4.3. Selected Organizations and Number of Members Responding

|                               | Number Responding |
|-------------------------------|-------------------|
| Society of American Foresters | 32                |
| Alabama Forestry Association  | 39                |
| Wildlife Federation           | 26                |
| Wilderness Society            | 21                |
| Audubon Society               | 25                |
| Sierra Club                   | 30                |
| Nature Conservancy            | 26                |
| General Public                | 44*               |

\*Based on definition of general public

As shown in Table 4.4, preservationist oriented organizations maintain their strongest memberships in the northern and middle regions of the state. The utilitarian-oriented organizations maintain their strongest memberships in the southern and middle regions of the state.

Table 4.4. Regional Membership of Organization

|                               | North | Middle | South | Out-of-State |
|-------------------------------|-------|--------|-------|--------------|
| Society of American Foresters | 3     | 17     | 10    | 2            |
| Alabama Forestry Association  | 5     | 19     | 9     | 6            |
| Wildlife Federation           | 9     | 9      | 5     | 3            |
| Wilderness Society            | 9     | 7      | 3     | 2            |
| Audubon Society               | 8     | 12     | 3     | 2            |
| Sierra Club                   | 12    | 14     | 4     | 0            |
| Nature Conservancy            | 7     | 15     | 2     | 2            |
| General Public                | 20*   | 11*    | 11*   | 2*           |

\*Individuals who are not members of the listed organizations

Table 4.5 indicates, as one might expect, that trade and professional organizations were clearly utilitarian in orientation, and that environmental organizations were preservationist in orientation. These findings are quite important in that the general public indicated a high degree of preservationist attitudinal orientation.

Table 4.6 presents the mean score showing relative degree of importance attached to each activity for each organization and for the general public. The lower the mean score, the greater the degree of importance.

As anticipated, the membership of environmental organizations attached a higher degree of importance to the preservationist-oriented forest management activities and the membership of forestry organizations attached a higher degree of importance to the utilitarian-oriented forest management activities. In light of this, what is interesting is seeing the relative value attached to each activity when compared to other activities. For example, members of the Sierra Club had an average mean score of 1.03 (very important) for wilderness preservation, yet members of the Alabama Forestry Association had an

Table 4.5. Attitudes of Membership Organizations

|                               | Utilitarian | Neutral | Preservationist | Total |
|-------------------------------|-------------|---------|-----------------|-------|
| Society of American Foresters | 28          | 4       | 0               | 32    |
| Alabama Forestry Association  | 31          | 6       | 2               | 39    |
| Wildlife Federation           | 6           | 2       | 18              | 26    |
| Wilderness Society            | 4           | 1       | 16              | 21    |
| Audubon Society               | 0           | 4       | 21              | 25    |
| Sierra Club                   | 2           | 0       | 28              | 30    |
| Nature Conservancy            | 3           | 2       | 21              | 26    |
| General Public                | 6*          | 8*      | 30*             | 44    |

\*Individuals who are not members of the listed organizations

Table 4.6. Means of Forest Uses by Selected Organizations

|                                                    | Society of<br>American<br>Foresters | Alabama<br>Forestry<br>Association | Wildlife<br>Federation | Wilderness<br>Society | Audubon<br>Society | Sierra<br>Club | Nature<br>Conservancy | General<br>Public |
|----------------------------------------------------|-------------------------------------|------------------------------------|------------------------|-----------------------|--------------------|----------------|-----------------------|-------------------|
| Hunting                                            | 2.44                                | 2.11                               | 1.96                   | 2.57                  | 2.48               | 2.37           | 2.38                  | 1.81              |
| Fishing                                            | 2.44                                | 2.16                               | 1.96                   | 2.14                  | 2.20               | 2.10           | 2.04                  | 1.78              |
| Roadside recreation                                | 2.13                                | 2.15                               | 2.16                   | 2.14                  | 1.92               | 2.10           | 2.04                  | 1.90              |
| Hiking and wilderness                              | 2.19                                | 2.18                               | 1.40                   | 1.29                  | 1.16               | 1.00           | 1.31                  | 1.53              |
| Access to scenic areas                             | 1.94                                | 1.85                               | 1.40                   | 1.52                  | 1.44               | 1.50           | 1.46                  | 1.53              |
| Attracting tourism                                 | 2.34                                | 2.26                               | 1.87                   | 2.00                  | 1.96               | 1.90           | 1.85                  | 1.79              |
| Timber harvesting & sales                          | 1.56                                | 1.36                               | 2.19                   | 2.43                  | 2.68               | 2.63           | 2.33                  | 2.19              |
| Economic growth and<br>development                 | 1.72                                | 1.63                               | 2.23                   | 2.43                  | 2.54               | 2.53           | 2.20                  | 2.17              |
| Protection of water supply<br>and quality          | 1.34                                | 1.33                               | 1.19                   | 1.14                  | 1.04               | 1.10           | 1.00                  | 1.20              |
| Protection of threatened and<br>endangered species | 1.81                                | 2.05                               | 1.42                   | 1.24                  | 1.08               | 1.13           | 1.15                  | 1.65              |
| Preventing global climate<br>change                | 2.65                                | 2.50                               | 1.39                   | 1.55                  | 1.17               | 1.20           | 1.35                  | 1.67              |
| Wilderness preservation                            | 2.53                                | 2.49                               | 1.42                   | 1.52                  | 1.24               | 1.03           | 1.42                  | 1.56              |
| Maximum use of forest<br>resources                 | 1.43                                | 1.49                               | 2.31                   | 2.39                  | 2.48               | 2.68           | 2.46                  | 1.90              |

1 = very important 2 = somewhat important 3 = not important

average mean score of 2.49 (somewhat important). Members of the Society of American Foresters had an average mean score 1.43 (very important) for maximum use of resources, while members of the Audubon Society had an average mean score of 2.48 (somewhat important) for the same forest management activity. The general public had an average mean score of 1.56 (very important) for wilderness preservation and an average mean score of 1.90 (very important/somewhat important) for maximum use of forest resources. The scores of the general public on these two dichotomous forest management activities indicates less definitive support for either for the two (preservationist/utilitarian) attitudinal orientations than do those holding membership in an organization which exhibits strong support for one or the other. Yet when considering all the forest management choices, members of the general public attached greater value to the preservationist-oriented activities than to the utilitarian-oriented activities.

One concern that needs to be addressed at this point is the overlapping membership question. Though several respondents were members of more than one environmental and preservationist-oriented organization or were members of both the professional and utilitarian organizations, there is minimal overlapping membership between the two types of organizations. Table 4.7 presents data on cross membership patterns among the survey respondents.

Interpreting Table 4.7 may cause some confusion in that total membership totals were not cumulative totals of the columns under which they fall. There were some individuals who retain membership in more than two organizations causing their cross membership number to appear more than once. This is why total membership numbers on this table do not indicate column totals.

Table 4.7. Cross Membership Distribution by Organization

|                                     | Society of<br>American<br>Foresters | Alabama<br>Forestry<br>Association | Wildlife<br>Federation | Wilderness<br>Society | Audubon<br>Society | Sierra<br>Club | Nature<br>Conservancy |
|-------------------------------------|-------------------------------------|------------------------------------|------------------------|-----------------------|--------------------|----------------|-----------------------|
| Society of<br>American<br>Foresters | 0                                   | 18                                 | 1                      | 2                     | 3                  | 0              | 4                     |
| Alabama<br>Forestry<br>Association  | 18                                  | 0                                  | 4                      | 1                     | 5                  | 1              | 3                     |
| Wildlife<br>Federation              | 1                                   | 4                                  | 0                      | 6                     | 8                  | 6              | 12                    |
| Wilderness<br>Society               | 2                                   | 1                                  | 6                      | 0                     | 9                  | 11             | 8                     |
| Audubon<br>Society                  | 3                                   | 5                                  | 8                      | 9                     | 0                  | 14             | 10                    |
| Sierra Club                         | 0                                   | 1                                  | 6                      | 11                    | 14                 | 0              | 10                    |
| Nature<br>Conservancy               | 4                                   | 3                                  | 12                     | 8                     | 10                 | 10             | 0                     |
| Total<br>membership                 | 32                                  | 39                                 | 26                     | 21                    | 25                 | 30             | 26                    |

There was substantial intra-overlapping membership based on organizational orientation. In line with Table 3.12 (Affiliation and Attitudes on Forest Policy) there is minimal cross-membership outside the attitudinal ranks. Table 4.7 shows more specifically which organizations have cross-membership with each other. Overlapping membership was as high as 56 percent in the case of the Society of American Foresters and the Alabama Forestry Association and the Sierra Club and the Audubon Society. Since there was minimal overlapping membership between the preservationists oriented organizations and the utilitarian oriented organizations, there is minimal effect upon attitudinal analysis that contrasts the two major attitudinal groups. What Table 4.7 does suggests is that one may often be listening to many of the same individuals when dealing with different organizations within the same attitudinal group.

Table 4.8 shows the numeric rank attached to each forest management activity for each organization and the general public.

The two utilitarian-oriented organizations ranked selected forest uses as anticipated, with the utilitarian-oriented activities receiving the highest rankings. With the exception of protecting water supplies and quality, which was ranked as most important among all the organizations with the exception of the Sierra Club, the Society of American Foresters ranked maximum use of forest resources, timber harvesting and sales, and economic growth and development second, third, and fourth respectively. The Alabama Forestry Association ranked timber harvesting and sales, maximum use of forest resources, and economic growth and development second, third, and fourth, respectively. As for the other management choices, there was little difference in rankings between the Society of American Foresters and the Alabama Forestry Association. The average difference in rankings was between one and two places. As expected, wilderness

Table 4.8. Numeric Ranking of Forest Uses by Groups

|                                                    | Society of<br>American<br>Foresters | Alabama<br>Forestry<br>Association | Wildlife<br>Federation | Wilderness<br>Society | Audubon<br>Society | Sierra<br>Club | Nature<br>Conservancy | General<br>Public |
|----------------------------------------------------|-------------------------------------|------------------------------------|------------------------|-----------------------|--------------------|----------------|-----------------------|-------------------|
| Hunting                                            | 10                                  | 7                                  | 6                      | 10                    | 10                 | 9              | 11                    | 8                 |
| Fishing                                            | 10                                  | 9                                  | 6                      | 7                     | 9                  | 8              | 8                     | 6                 |
| Roadside recreation                                | 7                                   | 8                                  | 7                      | 7                     | 7                  | 8              | 8                     | 9                 |
| Hiking and wilderness                              | 8                                   | 12                                 | 3                      | 3                     | 3                  | 1              | 3                     | 2                 |
| Access to scenic areas                             | 6                                   | 5                                  | 3                      | 4                     | 6                  | 6              | 6                     | 2                 |
| Attracting tourism                                 | 9                                   | 11                                 | 5                      | 6                     | 8                  | 7              | 7                     | 7                 |
| Timber harvesting &<br>sales                       | 3                                   | 2                                  | 8                      | 9                     | 12                 | 11             | 10                    | 11                |
| Economic growth and<br>development                 | 4                                   | 4                                  | 9                      | 9                     | 11                 | 10             | 9                     | 10                |
| Protection of water<br>supply and quality          | 1                                   | 1                                  | 1                      | 1                     | 1                  | 3              | 1                     | 1                 |
| Protection of threatened<br>and endangered species | 5                                   | 6                                  | 4                      | 2                     | 2                  | 4              | 2                     | 4                 |
| Preventing global<br>climate change                | 12                                  | 13                                 | 2                      | 5                     | 4                  | 5              | 4                     | 5                 |
| Wilderness<br>preservation                         | 11                                  | 12                                 | 4                      | 4                     | 5                  | 2              | 5                     | 3                 |
| Maximum use of forest<br>resources                 | 2                                   | 3                                  | 10                     | 8                     | 10                 | 12             | 12                    | 9                 |

1 = most important choice; 10 = least important choice

preservation and preventing global climate change, which requires the preservation of tree ecosystems, were the two activities that ranked least important by members of utilitarian organizations.

The five preservationist-oriented organizations also ranked selected forest uses as anticipated, with the preservationist-oriented activities receiving the highest rankings. Protection of threatened and endangered species ranked second among the majority of preservationist-oriented organizations; hiking and wilderness ranked third; and wilderness preservation and preventing global climate change tied for fourth. Timber harvesting and sales and maximum use of forest resources ranked eleventh and twelfth respectively among the preservationist-oriented organizations. This is in contrast to the rankings for the utilitarian-oriented organizations who ranked timber harvesting and sales and maximum use of forest resources high on the list of priorities.

Attracting tourism, roadside recreation, fishing, and hunting ranked seventh, eighth, ninth and tenth, collectively, among the organizational rankings. Although these activities were the ones of least contention, none of them ranked high in terms of forest management priorities. What they do agree upon, and what this does determine, is the relative importance of these activities. It is the activities that rank high among organizational desires that are of greatest contention.

### Regional Perspective

Four national forests make up the National Forests in Alabama. The Bankhead National Forest is located in the northern region of the state, the Talladega and Tuskegee National Forests are located primarily in the middle region of the state, and the Conecuh National Forest is located in the southern region of the state. The Bankhead National

Forest, which is located in the northern region of the state, has a higher percent of wilderness areas and hardwoods than does the Conecuh National Forest which is located in the southern region of the state. Additionally, the southern region has a higher concentration of pine forest and wood-based industries.

Data in Table 4.9 shows a regional perspective and the relative importance of each forest management activity by region of the state.

Based on mean scores of selected management activities, it is obvious that different regions of the state have different attitudinal orientations. The northern region of the state had lower mean scores for preservationist-oriented activities than did the southern region. The lower mean scores indicated a higher preservationists orientation among respondents. The scores also coincide with the geographical location of wilderness areas and the concentration of wood based industries within the state. The northern region of the state has more Forest Service wilderness areas and hardwood forest when compared to the southern region of the state. Respondents in the northern region of the state had an average mean score of 1.25 for wilderness preservation, and an average mean score of 1.29 for hiking and wilderness. Conversely, the southern region of the state, where the timber industry is heaviest, scored 2.11 and 2.05 respectively for the same activities. The middle region of the state scored between the two other regions for the same activities, 1.73 for wilderness preservation and 1.57 for hiking and wilderness.

When utilitarian activities were evaluated, the southern region of the state averaged lower mean scores. The southern region of the state scored 1.64 for maximum use of forest resources and 1.91 for timber harvesting and sales, while the northern region scored 2.29 and 2.47 respectively for the same activities. For the most part, there was a

Table 4.9. Means of Selected Forest Uses by Region

|                                                 | Northern<br>Region | Middle<br>Region | Southern<br>Region |
|-------------------------------------------------|--------------------|------------------|--------------------|
| Hunting                                         | 2.20               | 2.19             | 2.07               |
| Fishing                                         | 2.04               | 2.23             | 1.93               |
| Roadside recreation                             | 1.96               | 2.02             | 2.21               |
| Hiking and wilderness                           | 1.29               | 1.57             | 2.05               |
| Access to scenic areas                          | 1.61               | 1.67             | 1.73               |
| Attracting tourism                              | 2.02               | 1.88             | 2.05               |
| Timber harvesting & sales                       | 2.47               | 2.07             | 1.91               |
| Economic growth & development                   | 2.22               | 2.06             | 2.02               |
| Protection of water supply and quality          | 1.17               | 1.22             | 1.27               |
| Protection of threatened and endangered species | 1.40               | 1.55             | 1.80               |
| Preventing global climate change                | 1.37               | 1.96             | 1.98               |
| Wilderness preservation                         | 1.25               | 1.73             | 2.11               |
| Maximum use of forest resources                 | 2.29               | 2.11             | 1.64               |

gradual shift in priorities based on attitudinal orientation as one moved from north to south, with the middle region of the state usually scoring between the two. With the exception of fishing and attracting tourism, the northern and southern regions of the state always had the low/ high scores.

Table 4.10 shows the ranking of forest use preferences by region. Respondents from the northern region of the state, who were more preservationist-oriented in attitudes, reinforced evidence of this disposition by selecting preservationist-oriented activities as the top priority rankings. Wilderness preservation, hiking and wilderness, and preventing global climate change ranked second, third, and fourth respectively. This region's rankings of selected forest management activities coincides with its strong preservationist

Table 4.10. Rankings of Selected Forest Uses by Region

|                                                 | Northern<br>Region | Middle<br>Region | Southern<br>Region |
|-------------------------------------------------|--------------------|------------------|--------------------|
| Hunting                                         | 10                 | 12               | 10                 |
| Fishing                                         | 9                  | 13               | 6                  |
| Roadside recreation                             | 7                  | 8                | 12                 |
| Hiking and wilderness                           | 3                  | 3                | 9                  |
| Access to scenic areas                          | 6                  | 4                | 3                  |
| Attracting tourism                              | 8                  | 6                | 9                  |
| Timber harvesting & sales                       | 13                 | 10               | 5                  |
| Economic growth & development                   | 11                 | 9                | 8                  |
| Protection of water supply and quality          | 1                  | 1                | 1                  |
| Protection of threatened and endangered species | 5                  | 2                | 4                  |
| Preventing global climate change                | 4                  | 7                | 7                  |
| Wilderness preservation                         | 2                  | 5                | 11                 |
| Maximum use of forest resources                 | 12                 | 11               | 2                  |

orientation. Respondents from the middle region of the state, who were moderately preservationist-oriented in their attitudes, were also moderately preservationist-oriented in ranking forest management activities. Protecting threatened and endangered species, hiking and wilderness, and access to scenic areas ranked second, third, and fourth respectively. Respondents from the southern region of the state, who were the least preservationist-oriented in their attitudinal orientation when compared to the other regions of the state, were also the least preservationist-oriented in ranking selected forest uses. Maximum use of forest resources and timber harvesting and sales ranked second and fifth respectively, yet neither of these two activities ranked within the top five choices of the other two regions of the state. The southern region's rankings of selected

forest management activities coincides with its utilitarian orientation.

When the utilitarian forest uses such as timber harvesting and sales, maximum use of forest resources, and economic growth and development are grouped together, respondents in the southern region of the state ranked each of these activities higher than did respondents in other regions of the state. High rankings of preservationist-oriented activities such as protection of threatened and endangered species, preventing global climate change, wilderness preservation, and hiking and wilderness, were somewhat evenly divided between the northern and middle regions of the state. These findings based on regional interests are important in that, not only are there national agendas that must be addressed, there are regional, state and local interests that must be addressed in the management of national forests.

### On Congruence

Congruence or degree of agreement is of fundamental importance to interest groups. Organizations with low degrees of congruence regarding substantive issues of importance to the organization will soon experience dissension within the membership, lose organizational effectiveness and support, lose members, and will eventually cease to exist.

Poor selection of issues may foster ill-conceived group actions. Interest groups may become involved in too many issues. They may act on issues of little importance to group members, so politicians may ignore them without fear of electoral retribution. A related problem is that with heterogeneous interest groups, particularly professional societies, it is difficult to establish criteria for action that is acceptable to all members.

In fact, many issues may prove so divisive that no official position can be adopted that is acceptable to the entire membership.

Controlling interest group representatives presents another problem. Difficulties may arise when individual members or staff speak on behalf of the group without official approval. Regional or local chapters may also present problems because they sometimes wish to adopt positions of local or regional interest which may run contrary to those supported by the national societies.

Selection of issues for interest group attention is influenced by a group's often deep-seated wish to present a united front. Leaders and staff will often reject involvement in an issue, however important it may be to society in general, if there is evidence that the issue would be divisive among the membership. The Society of American Foresters, for example, would have an especially difficult time securing membership approval for advocating legislative designation of a specific forest wilderness on public forest land or for promoting public regulation of forest practices of private forest land owners. Opinions among the society's membership are much too diverse to allow agreement on such issues, and consensus would thus be very unlikely.

Being faced with innumerable obstacles to prioritize does not mean, however, that interest groups abandon systematic thinking about which preferences they will assert. They most certainly do attempt to prioritize issues.

When leaders of organizations comment on a specific forest management issue, are they speaking from the standpoint of organizational consensus or are they speaking as individuals who happen to be the president or spokesperson for that group? It is important for decision makers to have some knowledge of organizational consensus when making forest management choices.

To determine the degree of agreement among members of organizations and among the public, we used the answer that had the highest percent of member selection on each question. In this part of the survey, members were asked to circle one of possible four answers; very important, somewhat important, not important, or no opinion. Of the four possible answers: the answer with the highest percent of membership selection was used to indicate the highest degree of agreement (congruence). For example, on the issue of hunting, 53.1 percent of the Society of American Foresters selected not important, which was the answer with the highest selection among the membership. On the issue of hunting, 56 percent, which was the highest selection of the Audubon Society, selected not important.

Table 4.11 shows the degree of congruency or level of internal agreements for each organization according to the four possible options based on use or activities.

The Society of American Foresters (SAF) has the highest degree of agreement (consensus) on the activities of preventing global climate change, 74.2 percent (not important); protecting water supplies and quality, 65.6 percent (very important); roadside recreation, 60 percent (somewhat important); maximum use of forest resources, 56.7 percent (very important); and wilderness preservation, 56.3 percent (not important). Of the three management activities members of the society deemed important, two were utilitarian-oriented. Surprisingly, timber harvesting and sales received only a 50 percent consensus rating and were deemed only somewhat important. Members of the society are in greater agreement on issues they feel are not important than they are on issues they feel are important. When it came to the primary preservationist-oriented management activities, the ratings were mixed between somewhat important and not important.

Table 4.11. Intra-Organization Concurrence

|                                                    | Society of<br>American<br>Foresters | Alabama<br>Forestry<br>Association | Wildlife<br>Federation                                         | Wilderness<br>Society | Audubon<br>Society | Sierra<br>Club | Nature<br>Conservancy | General<br>Public |
|----------------------------------------------------|-------------------------------------|------------------------------------|----------------------------------------------------------------|-----------------------|--------------------|----------------|-----------------------|-------------------|
| Hunting                                            | ni<br>53.1                          | si<br>56.8                         | vi<br>38.5                                                     | ni<br>66.7            | ni<br>56.0         | ni<br>53.3     | ni<br>50.0            | vi<br>40.7        |
| Fishing                                            | ni<br>53.1                          | si<br>56.8                         | si<br>73.1                                                     | si<br>47.6            | si<br>56.0         | si<br>50.0     | si<br>65.4            | si<br>46.6        |
| Roadside recreation                                | si<br>60.0                          | si<br>43.6                         | ni<br>44.0                                                     | si<br>57.1            | si<br>44.0         | si<br>56.7     | si<br>48.0            | si<br>46.7        |
| Hiking and wilderness                              | si<br>43.8                          | si<br>46.2                         | vi<br>76.0                                                     | vi<br>76.2            | vi<br>84.0         | vi<br>100      | vi<br>80.8            | vi<br>58.6        |
| Access to scenic areas                             | si<br>50.0                          | si<br>59.0                         | vi<br>68.0                                                     | vi<br>57.1            | vi<br>68.0         | vi<br>60.0     | vi<br>57.7            | si<br>53.3        |
| Attracting tourism                                 | si<br>51.7                          | si<br>52.6                         | vi<br>41.7                                                     | si<br>42.9            | si<br>37.5         | si<br>43.3     | vi/si<br>38.5         | vi<br>41.4        |
| Timber harvesting & sales                          | si<br>50.0                          | vi<br>71.8                         | ni<br>50.0                                                     | ni<br>61.9            | ni<br>80.0         | ni<br>76.7     | ni<br>50.0            | ni<br>44.1        |
| Economic growth and<br>development                 | vi<br>46.9                          | vi/si<br>46.2                      | si<br>46.2                                                     | ni<br>57.1            | ni<br>58.3         | ni<br>60.0     | si/ni<br>40.0         | si<br>42.4        |
| Protection of water supply and<br>quality          | vi<br>65.6                          | vi<br>66.7                         | vi<br>80.0                                                     | vi<br>85.7            | vi<br>96.0         | vi<br>90.0     | vi<br>100             | vi<br>80.0        |
| Protection of threatened and<br>endangered species | si<br>50.0                          | Ni<br>35.9                         | Vi<br>65.4                                                     | Vi<br>76.2            | Vi<br>92.0         | Vi<br>86.7     | Vi<br>84.6            | Si<br>55.0        |
| Preventing global climate change                   | ni<br>74.2                          | Ni<br>61.1                         | Vi<br>73.9                                                     | Vi<br>65.0            | Vi<br>83.3         | Vi<br>80.0     | Vi<br>80.8            | Vi<br>50.0        |
| Wilderness preservation                            | ni<br>56.3                          | Ni<br>56.4                         | Vi<br>73.1                                                     | Vi<br>66.7            | Vi<br>84.0         | Vi<br>96.7     | Vi<br>76.9            | Vi<br>57.6        |
| Maximum use of forest resources                    | vi<br>56.7                          | Vi<br>59.0                         | Ni<br>57.7                                                     | Ni<br>55.6            | Ni<br>60.9         | Ni<br>75.0     | Ni<br>62.5            | Si<br>43.3        |
| vi = very important                                | si = somewhat important             | ni = not important                 | vi/si or si/ni = tie score between the two indicated responses |                       |                    |                |                       |                   |

Although the Alabama Forestry Association is in general agreement with the Society of American Foresters on the importance of various utilitarian-oriented activities, it expressed stronger feelings in support of timber harvesting and sales than did the society. Of the three management activities the association deemed as not important, all three were preservationist-oriented. It is in greater agreement on the issues they feel are important as opposed to the issues they feel are not important: Timber harvesting and sales, 71.8 percent (very important); protecting water supplies and quality, 66.7 percent (very important); preventing global climate change, 61.1 percent (not important); access to scenic areas, 59.9 percent (somewhat important); and maximum use of forest resources, 59.9 percent (very important). Conversely there is only moderate agreement on the issues of protecting threatened and endangered species and roadside recreation, 35.9 percent (not important) and 43.6 percent (somewhat important) respectively.

By far, the preservationist-oriented organizations were in much greater agreement regarding the importance of selected activities than were the utilitarian organizations. As a whole, the preservationist organizations were in greater agreement regarding what they felt was important than what they felt was not important, yet when it came to utilitarian-oriented activities they were in general agreement that these activities were not important. Omitting protection of water supplies and quality, which received the highest degrees of agreement among the preservationist organizations, averaging 80-100 percent (very important) agreement, the Wildlife Federation indicated hiking and wilderness was very important (76.0 percent). The Wilderness Society indicated hiking and wilderness and protecting threatened and endangered species was very important (76.2 percent).

The Audubon Society indicated protecting threatened and endangered species was very important (92.0 percent). The Sierra Club indicated hiking and wilderness was very

important (100 percent). The Nature Conservancy indicated that protecting threatened and endangered species was very important (84.6 percent).

With the exception of the 80 percent congruency level for protection of water supplies and quality, the general public's consensus rating averaged around 50 percent, which was lower than any of the congruency levels for the organizations.

Table 4.12 indicates that preservationist-oriented organizations all rated higher in percent of agreement than did the utilitarian-oriented organizations regarding choices of national forest uses.

The Sierra Club averaged the highest degree of agreement (71.4 percent) regarding the choices of forest management practices; the Audubon Society was second with an agreement rating of (69.2 percent); the Nature Conservancy was third at (64.2 percent); the Wilderness Society was fourth at (62.7 percent); the Wildlife Federation was fifth at (60.6 percent); the Alabama Forestry was sixth at (54.8 percent), and the Society of American Foresters was seventh at (54.7 percent). All organizations rated higher than the general public which had an agreement rating of (50.8 percent).

Membership in an organization brought about a higher degree of agreement (congruency) than nonmembership. The overall average for those holding membership in an organization is 62.5 percent, which is higher than the average for those who are not affiliated with an organization, 50.7 percent for the general public.

Results of the attitudinal studies indicate the northern region of the state is highly preservationist in its orientation, the middle region was somewhat divided with the preservationist holding the slight majority, and that the southern regions of the state had the highest relative percent of utilitarians when compared to the rest of the regions within the state. In light of these results it is important to know the relative degrees of congruency which would support findings of regional attitudinal orientations and the

degree of support attached to each region. Data presented in Table 4.13 shows the degree of congruency of each activity by geographic area.

Table 4.12. Degrees of Group Congruence

|                               | %    |
|-------------------------------|------|
| Sierra Club                   | 71.4 |
| Audubon Society               | 69.2 |
| Nature Conservancy            | 64.2 |
| Wilderness Society            | 62.7 |
| Wildlife Federation           | 60.6 |
| Alabama Forestry Association  | 54.8 |
| Society of American Foresters | 54.7 |
| General Public                | 50.8 |

Table 4.13 shows the degree of congruency of each activity for each geographic area. The northern region is not only high in its preservationist orientation, but also has a very high degree of agreement on preservationist-oriented activities as indicated by scores on wilderness preservation, 84.6 percent (very important), hiking and wilderness, 78.4 percent (very important), preventing global climate change, 73.5 percent (very important), and protecting threatened and endangered species, 67.3 percent (very important).

The middle region of the state, while moderately preservationist in its orientation, is near evenly divided in degree of agreement on forest management activities. Other than a 78.0 percent (very important) degree of agreement on the protection of water supplies and quality, the degree of agreement on the other activities fell between a high score of 56.1 percent (very important) for protecting threatened and endangered species to

Table 4.13. Indicators of Intra-Regional Agreement

|                                                 | Northern<br>Region | Middle<br>Region | Southern<br>Region |
|-------------------------------------------------|--------------------|------------------|--------------------|
| Hunting                                         | vi<br>47.1         | ni<br>42.3       | si<br>43.2         |
| Fishing                                         | si<br>50.0         | si<br>48.7       | si<br>43.2         |
| Roadside recreation                             | si<br>41.2         | si<br>55.6       | si<br>45.2         |
| Hiking and wilderness                           | vi<br>78.4         | vi<br>52.4       | ni<br>38.1         |
| Access to scenic areas                          | vi<br>58.8         | si<br>52.4       | si<br>54.5         |
| Attracting tourism                              | ni<br>41.7         | ni<br>52.6       | si<br>50.0         |
| Timber harvesting & sales                       | ni<br>58.8         | ni<br>42.7       | vi<br>40.9         |
| Economic growth & development                   | si<br>42.0         | vi<br>36.6       | si<br>38.6         |
| Protection of water supply and quality          | vi<br>82.7         | vi<br>78.0       | vi<br>72.7         |
| Protection of threatened and endangered species | vi<br>67.3         | vi<br>56.1       | si<br>52.3         |
| Preventing global climate change                | vi<br>73.5         | vi<br>42.1       | vi<br>35.0         |
| Wilderness preservation                         | vi<br>84.6         | vi<br>54.3       | si<br>43.2         |
| Maximum use of forest resources                 | ni<br>47.1         | ni<br>44.3       | vi<br>50.0         |

a low of 36.6 percent (very important) for economic growth and development. Though the most moderate region of the state in its attitudinal orientation, the middle region of the state demonstrates only moderate consensus over the span of forest management choices.

The southern region of the state, while more utilitarian in its orientation than the other regions, indicated only a moderate degree of consensus on management activities.

Other than a 72.7 percent (very important) degree of agreement on the protection of water supplies and quality, the degree of agreement among the other activities fell between a high score of 54.5 percent (somewhat important) for access to scenic areas, to a low of 35.0 percent (very important) for preventing global climate change. The southern region of the state, like the middle region of the state, features only moderate consensus over the span of forest management choices.

Table 4.14 presents the overall degrees of regional congruence. Those living in the northern region of the state had the highest average degree of regional congruency at 59.4 percent. The middle region of the state indicated a 50.62 percent degree of congruence, and the southern region indicated a 46.68 degree of congruence.

Table 4.14. Degrees of Regional Congruence

|                 | %     |
|-----------------|-------|
| Northern region | 59.48 |
| Middle region   | 50.62 |
| Southern region | 46.68 |

### Conclusion

Preservation of natural resources is recognized by some as desirable and by others as a waste of valuable resources. Based upon the findings in the previous part of the analysis that the majority of those responding are preservationist in their attitudinal orientation, it is not surprising to find that the preservationist-oriented activities are the ones most desired. Based on the history of the preservationist/utilitarian debate, it is not surprising to find that timber harvesting and sales, wilderness preservation, and maximum use of forest resources are the issues over which there is the greatest disagreement.

Preservation of water supplies and quality was by far the most desired and agreed upon forest management activity. The majority of both attitudinal groups agree on the primary importance of this forest management activity. This is not surprising because water is a primary and necessary component for sustaining life. Once the issue of preserving water supplies and quality is addressed, the desired forest management activity is chosen based on attitudinal groupings.

Hiking and wilderness, protecting threatened and endangered species, and wilderness preservation followed as the most valued management activities. This is directly correlated to the larger number of preservationist-oriented respondents. Those indicating a utilitarian interest selected timber harvesting and sales as their management options of choice.

In light of this, it is not surprising that the greatest disagreements regarding desired management practices between the two general attitudinal groups are timber harvesting and wilderness preservation. The practices indicating the least disagreement were protecting water supplies and quality, fishing, and roadside recreation, though the latter two were not considered priority activities by either group.

Respondents in the northern region of the state had the strongest preservationist attitudes, and their priorities of desired forest management activities confirmed that finding. After preservation of water supplies and quality, the desired management activities were wilderness preservation, hiking and wilderness, and preventing global climate change. The middle region of the state, though less preservationist in attitude, selected protection of threatened and endangered species, hiking and wilderness, and access to scenic areas as their second, third, and fourth priorities. The southern region of the state, in which respondents indicated the least preservationist attitude, selected

maximum use of forest resources, access to scenic areas, and protection of threatened species as their second, third, and fourth choices. All these desired forest management activities, and their related priority, typify the forest management attitudes associated with each group and each region based on prior findings.

These findings also support the suggestion that interest groups are heavily involved in Forest Service public participation efforts and that membership in these organizations brings about increased consensus on the issues. Membership, especially in a preservationist-oriented organization, brings about greater consensus on the issues when compared to those who do not maintain membership within organizations.

These findings suggests that there are intrastate differences and that state regional constituents place differing attitudes on desired management practices on federal forest lands. They further show that regional attitudes may not reflect attitudes in other parts of the state. These differences become significant as national legislators, especially those representing state interest, formulate laws affecting federal lands.

The Forest Service is a national organization with national agendas and directives. Considering the varied and often incompatible desires of local, state, regional, and national constituencies, the Forest Service is confronted with the daunting task of ultimately deciding how scarce resources are allocated, used, and managed. To add to the complexity of allocating public resources, the Forest Service is bound by biological, political, economic, and social constraints. It is the lack of understanding by the public of these additional constraints that hampers the Forest Service in implementing management objectives.

## Chapter 5

### Perceptions of Forest Service Priorities

Probably more forest managers have failed due to public relation problems than because of technical limitations. The whole idea of public relations, public involvement, agency reputation, and evaluation of policies all center in stakeholders' perceptions. Perceptions link the idea of the way others regard us and the way we want to be perceived.

### Perceived Basic Forest Service Dispositions

When diverse stakeholders are involved in the management of federal lands, controversy is inevitable. Information regarding the way in which an agency is perceived helps managers anticipate controversy instead of waiting to react to emotional charges with facts and figures. It is important to understand how an organization and/or its actions are perceived by the public and important stakeholders. If the Forest Service finds that interest groups, or the public perceives, for example, certain issues to be commonly important to the Forest Service a powerful impetus exists to move the issue to prominence as an institutional agenda item. In light of this, respondents were asked to circle the response that most closely indicated their perceptions of how important selected forest management activities were to the Forest Service in Alabama as it decides policies and plans for managing national forest. Table 5.1 presents overall rankings based on the number of respondents selecting "very important" for a particular forest management activity.

With the exception of protecting water supplies and quality and protecting threatened and endangered species, the rankings clearly show that the majority of

Table 5.1. Overall Rankings of Selected Forest Uses

|                                              | Number of Very<br>Important Selections | Overall Rank* |
|----------------------------------------------|----------------------------------------|---------------|
| Protecting water supply and quality          | 112                                    | 1             |
| Timber harvesting and sales                  | 105                                    | 2             |
| Protecting threatened and endangered species | 97                                     | 3             |
| Maximum use of forest resources              | 90                                     | 4             |
| Hiking and wilderness                        | 90                                     | 4             |
| Economic growth and development              | 81                                     | 5             |
| Wilderness preservation                      | 76                                     | 6             |
| Access to scenic areas                       | 74                                     | 7             |
| Hunting                                      | 65                                     | 8             |
| Roadside recreation                          | 53                                     | 9             |
| Attracting tourism                           | 52                                     | 10            |
| Preventing global climate change             | 49                                     | 11            |
| Fishing                                      | 44                                     | 12            |

respondents feel that the Forest Service in Alabama places a higher priority on utilitarian rather than preservationist uses, although some of those are highly ranked, as it decides policies and plans for managing national forest lands. Even though protecting water supplies and quality received the highest ranking with 112 "very important" selections, this was 43 less than that reported in chapter 4, (155 very important selections), indicating that 43 fewer people thought it was as important to them as it was to the Forest Service. Timber harvesting and sales was second with 105 "very important" selections, indicating a strong utilitarian perception by the respondents regarding Forest Service management plans and policies. This was qualified in that protecting threatened and

endangered species was third with 97 selections. Maximum use of forest resources and hiking and wilderness tied for fourth with 90 selections. Economic growth and development was fifth with 81 selections.

Table 5.2 presents the mean score difference in perceptions attached to each forest management activity between the utilitarians and preservationists. The lower the difference the greater the agreement in perception between the two groups. The first column lists the activities from greatest to least agreement. It also presents the relative perceived rank attached to each forest management activity by the utilitarians and the preservationists.

Table 5.2. Rankings Based on Degree of Agreement

|                                              | Degree of Difference<br>Between Utilitarian and<br>Preservationist Mean<br>Score | Utilitarian<br>Rank | Preservationist<br>Rank |
|----------------------------------------------|----------------------------------------------------------------------------------|---------------------|-------------------------|
| Greatest Agreement                           |                                                                                  |                     |                         |
| Preventing global climate change             | 0                                                                                | 12                  | 12                      |
| Timber harvesting and sales                  | .01                                                                              | 4                   | 1                       |
| Hiking and wilderness                        | .07                                                                              | 3                   | 2                       |
| Wilderness preservation                      | .10                                                                              | 8                   | 8                       |
| Fishing                                      | .14                                                                              | 9                   | 10                      |
| Economic growth and development              | .19                                                                              | 11                  | 4                       |
| Maximum use of forest resources              | .21                                                                              | 10                  | 3                       |
| Hunting                                      | .23                                                                              | 5                   | 9                       |
| Access to scenic areas                       | .26                                                                              | 3                   | 6                       |
| Roadside recreation                          | .27                                                                              | 6                   | 11                      |
| Protecting threatened and endangered species | .31                                                                              | 2                   | 5                       |
| Attracting tourist                           | .46                                                                              | 7                   | 13                      |
| Protecting water supply and quality          | .63                                                                              | 1                   | 7                       |
| Least Agreement                              |                                                                                  |                     |                         |

The greatest level of agreement between the two groups was on preventing global climate change. Both groups perceived preventing global climate change as unimportant to the Forest Service. When it came to timber harvesting and sales, both groups perceived this to be relatively important to the Forest Service. The utilitarians ranked it fourth and the preservationists ranked it first. Interestingly enough, both groups perceived hiking and wilderness as being important to the Forest Service. The utilitarians ranked it third and the preservationists ranked it second. This is due in part to successful public demands to increase hiking and wilderness areas within national forests in recent years. However, when asked to rank the importance of wilderness preservation to the Forest Service, both groups ranked it eighth. Wilderness preservation standing alone, when compared to simply hiking and wilderness, is perceived as a major undertaking requiring setting aside and/or purchasing much larger areas of forest land than might otherwise be required for hiking and wilderness areas already in place. Criteria for reserving wilderness land in the United States has been rather fluid, ranging from no evidence of human habitation or alteration of the environment to little evidence of recent human activity in an area and for the most part has been implemented on a state-by-state basis as opposed to a formulated national implementation process.

With the exception of hiking and wilderness, both groups perceive Forest Service bias as favoring the other management preferences. The preservationists perceive the Forest Service as placing a higher priority on utilitarian uses, such as timber harvesting and sales, maximum use of forest resources, and economic growth and development, than do the utilitarians who perceive the Forest Service as placing these same activities much lower on their priority scale than do preservationists.

### Organizational Perspectives

Interest groups are inevitably involved in the public participation process. Therefore, it is important to know their perceptions of agency priorities. Perceptions held by interest groups are important in that perceptions are connected to the construction of public identity. Perceptions, not necessarily facts, are what interest groups convey and attempt to get others to believe. Interest group perceptions are often the determining factors that direct their involvement. It is also these perceptions upon which they choose to persuade others to become involved. If interest group perceptions are different from those the agency wants to portray, the agency needs to do a better job at conveying its purposes and intentions.

Table 5.3 presents the means score for the relative degree of perceived importance to the Forest Service attached to each activity for each selected organization and for the general public.

For the most part, Table 5.3 supports the contention that preservationists perceive the Forest Service as attaching a slightly higher degree of importance to utilitarian-oriented management activities than to preservationist-oriented activities, and the utilitarians perceive the Forest Service as attaching a slightly higher degree of importance to preservationist-oriented management activities than to utilitarian oriented management activities. Yet the plurality of the evidence suggests both groups perceive that all the selected management activities are fairly important to the Forest Service.

Outside of protecting water supplies and quality, the utilitarian-oriented organizations felt that preservationist-oriented activities such as protection of threatened and endangered species, hiking and wilderness, and access to scenic areas were most important to the Forest Service. Utilitarian-oriented activities such as timber harvesting and sales and maximum use of forest resources fell further down the scale of perceived

Table 5.3. Means of Perceived Forest Service Priorities by Selected Organizations

|                                                    | Society of<br>American<br>Foresters | Alabama<br>Forestry<br>Association | Wildlife<br>Federation | Wilderness<br>Society | Audubon<br>Society | Sierra<br>Club | Nature<br>Conservancy | General<br>Public |
|----------------------------------------------------|-------------------------------------|------------------------------------|------------------------|-----------------------|--------------------|----------------|-----------------------|-------------------|
| Hunting                                            | 1.72                                | 1.70                               | 1.54                   | 1.71                  | 1.96               | 1.87           | 1.73                  | 1.68              |
| Fishing                                            | 1.79                                | 1.84                               | 1.88                   | 1.86                  | 2.08               | 2.17           | 1.85                  | 1.75              |
| Roadside recreation                                | 1.59                                | 1.65                               | 1.80                   | 1.89                  | 1.91               | 2.14           | 1.71                  | 2.03              |
| Hiking and wilderness                              | 1.48                                | 1.54                               | 1.35                   | 1.67                  | 1.68               | 1.89           | 1.62                  | 1.54              |
| Access to scenic areas                             | 1.48                                | 1.54                               | 1.62                   | 1.74                  | 1.43               | 1.79           | 1.64                  | 1.76              |
| Attracting tourism                                 | 1.86                                | 2.00                               | 2.00                   | 2.00                  | 1.87               | 2.33           | 2.12                  | 1.96              |
| Timber harvesting & sales                          | 1.55                                | 1.57                               | 1.92                   | 1.17                  | 1.63               | 1.28           | 1.62                  | 1.69              |
| Economic growth and<br>development                 | 1.97                                | 1.95                               | 1.96                   | 1.95                  | 1.80               | 1.53           | 1.65                  | 1.81              |
| Protection of water supply<br>and quality          | 1.21                                | 1.22                               | 1.21                   | 1.67                  | 1.60               | 1.89           | 1.71                  | 1.54              |
| Protection of threatened and<br>endangered species | 1.32                                | 1.32                               | 1.29                   | 1.67                  | 1.56               | 1.86           | 1.71                  | 1.68              |
| Preventing global climate<br>change                | 2.14                                | 2.18                               | 1.73                   | 2.20                  | 2.08               | 2.33           | 2.15                  | 2.09              |
| Wilderness preservation                            | 1.68                                | 1.69                               | 1.38                   | 1.86                  | 1.76               | 2.04           | 2.08                  | 1.78              |
| Maximum use of forest<br>resources                 | 1.93                                | 2.03                               | 2.04                   | 2.21                  | 1.87               | 1.64           | 1.84                  | 1.52              |

1 = very important 2 = somewhat important 3 = not important

importance, although these activities were perceived to be of some importance to the Forest Service.

The preservationist-oriented organizations were somewhat mixed in their perceptions of Forest Service priorities. Though some preservationist-oriented activities were perceived as important to the Forest Service, timber harvesting and sales was the activity that was perceived as most important overall.

The general public perceptions were mixed. While the utilitarian-oriented activities such as the maximum use of forest resources and timber harvesting and sales ranked first and fourth respectively, preservationist-oriented activities such as hiking and wilderness and protecting threatened and endangered species ranked second and third respectively. With the exception of roadside recreation and preventing global climate change, the general public perceives all the selected forest management activities as fairly important to the Forest Service. When combined, three of the utilitarian uses — timber harvesting and sales, economic growth and development, and maximum use of forest resources — received an average mean score of 1.67 from the general public. When three preservationist-oriented uses — hiking and wilderness, protecting threatened and endangered species, and wilderness preservation — were combined, the average mean score for the general public was 1.66. Even more importantly, the general public does not perceive the Forest Service as being biased towards either attitudinal orientation.

Table 5.4 shows the numeric rank attached to each forest management activity for each organization and the general public.

The two utilitarian-oriented groups, the Society of American Foresters and the Alabama Forestry Association, perceive the Forest Service as placing a much lower priority on utilitarian-oriented management activities than preservationist-oriented

Table 5.4. Numeric Rankings of Perceived Forest Service Importance by Group

|                                                    | Society of<br>American<br>Foresters | Alabama<br>Forestry<br>Association | Wildlife<br>Federation | Wilderness<br>Society | Audubon<br>Society | Sierra<br>Club | Nature<br>Conservancy | General<br>Public |
|----------------------------------------------------|-------------------------------------|------------------------------------|------------------------|-----------------------|--------------------|----------------|-----------------------|-------------------|
| Hunting                                            | 7                                   | 7                                  | 5                      | 2                     | 10                 | 6              | 5                     | 3                 |
| Fishing                                            | 8                                   | 8                                  | 9                      | 4                     | 11                 | 10             | 7                     | 5                 |
| Roadside recreation                                | 5                                   | 5                                  | 8                      | 5                     | 9                  | 9              | 4                     | 10                |
| Hiking and wilderness                              | 3                                   | 3                                  | 3                      | 1                     | 5                  | 7              | 1                     | 2                 |
| Access to scenic areas                             | 3                                   | 3                                  | 6                      | 3                     | 1                  | 4              | 2                     | 6                 |
| Attracting tourism                                 | 9                                   | 10                                 | 12                     | 7                     | 8                  | 11             | 9                     | 9                 |
| Timber harvesting & sales                          | 4                                   | 4                                  | 10                     | 2                     | 4                  | 1              | 1                     | 4                 |
| Economic growth and<br>development                 | 11                                  | 9                                  | 11                     | 6                     | 7                  | 2              | 3                     | 8                 |
| Protection of water supply and<br>quality          | 1                                   | 1                                  | 1                      | 1                     | 3                  | 7              | 4                     | 2                 |
| Protection of threatened and<br>endangered species | 2                                   | 2                                  | 2                      | 1                     | 2                  | 5              | 4                     | 3                 |
| Preventing global climate<br>change                | 12                                  | 12                                 | 7                      | 8                     | 11                 | 11             | 10                    | 11                |
| Wilderness preservation                            | 6                                   | 6                                  | 4                      | 4                     | 6                  | 8              | 8                     | 7                 |
| Maximum use of forest<br>resources                 | 10                                  | 11                                 | 13                     | 9                     | 8                  | 3              | 6                     | 1                 |

1 = most important 13 = least important

activities. With the exception of timber harvesting and sales, the preservationist-oriented organizations perceive the Forest Service as fairly equitable in selecting management practices that fall within the two major orientations. The exception to the preservationist-oriented organizations are the Sierra Club and the Nature Conservancy, for which there are fairly high perceptions of a Forest Service emphasis on utilitarian-oriented activities. The general public fluctuates in terms of their perceptions of Forest Service importance. Utilitarian-oriented activities, such as maximum use of forest resources and timber harvesting and sales, ranked one and four respectively, while hiking and wilderness and protecting threatened and endangered species ranked second and third respectively. Thus, the general public perceives Forest Service priorities as mixed.

### Regional Perspectives

As noted earlier in the research, there are definite attitudinal orientation and desired forest management objective differences based on regional variance. Are these same differences evident as they relate to perceptions of Forest Service priorities? Table 5.5 presents data to help answer this question. They show the perceptions of importance attached to each management activity by region.

Based on mean scores of selected management activities, it is obvious that different regions of the state have different perceptions of what is important to the Forest Service. The northern region of the state had lower mean scores for utilitarian-oriented activities — timber harvesting and sales, economic growth and development, and maximum use of forest resources — than the middle and southern regions, indicating residents believe that the Forest Service deems utilitarian-oriented activities to be more important. The middle region of the state provides lower mean scores for

Table 5.5. Means of Perceived Forest Service Preferences by Region

|                                                 | Northern<br>Region | Middle<br>Region | Southern<br>Region |
|-------------------------------------------------|--------------------|------------------|--------------------|
| Hunting                                         | 1.88               | 1.84             | 1.60               |
| Fishing                                         | 2.02               | 1.98             | 1.64               |
| Roadside recreation                             | 2.19               | 1.79             | 1.71               |
| Hiking and wilderness                           | 1.90               | 1.46             | 1.71               |
| Access to scenic areas                          | 1.96               | 1.65             | 1.60               |
| Attracting tourism                              | 2.35               | 1.93             | 1.73               |
| Timber harvesting & sales                       | 1.54               | 1.62             | 1.71               |
| Economic growth & development                   | 1.78               | 1.82             | 1.90               |
| Protection of water supply and quality          | 1.88               | 1.54             | 1.21               |
| Protection of threatened and endangered species | 1.84               | 1.55             | 1.67               |
| Preventing global climate change                | 2.38               | 2.09             | 1.97               |
| Wilderness preservation                         | 1.96               | 1.73             | 1.83               |
| Maximum use of forest resources                 | 1.59               | 1.93             | 1.59               |

preservationist-oriented activities — hiking and wilderness, protecting threatened and endangered species, and wilderness preservation — than the northern or southern regions, indicating a belief that the Forest Service values preservationist-oriented activities as more important.

The southern region reported the highest mean score on two of the three most utilitarian-oriented management activities — timber harvesting and sales and economic growth and development — indicating a perception that the Forest Service places less of a priority on these activities than did the northern or middle regions of the state.

Differences in the rankings of each activity by geographical regions are presented in Table 5.6. The northern region of the state, which was more preservationist-oriented in its attitudinal evaluations than the other two regions of the state, perceived the Forest Service

Table 5.6. Numeric Rankings on Perceived Forest Service Importance by Region

|                                                 | Northern<br>Region | Middle<br>Region | Southern<br>Region |
|-------------------------------------------------|--------------------|------------------|--------------------|
| Hunting                                         | 5                  | 9                | 3                  |
| Fishing                                         | 8                  | 11               | 4                  |
| Roadside recreation                             | 9                  | 7                | 8                  |
| Hiking and wilderness                           | 6                  | 1                | 6                  |
| Access to scenic areas                          | 7                  | 5                | 3                  |
| Attracting tourism                              | 10                 | 10               | 7                  |
| Timber harvesting & sales                       | 1                  | 4                | 6                  |
| Economic growth & development                   | 3                  | 8                | 10                 |
| Protection of water supply and quality          | 5                  | 2                | 1                  |
| Protection of threatened and endangered species | 4                  | 3                | 5                  |
| Preventing global climate change                | 11                 | 12               | 11                 |
| Wilderness preservation                         | 7                  | 6                | 9                  |
| Maximum use of forest resources                 | 2                  | 10               | 2                  |

as giving a higher priority to utilitarian-oriented management activities than did the other two regions of the state. Timber harvesting and sales, maximum use of forest resources, and economic growth and development were perceived as being the top three priorities, respectively, of Forest Service management.

The middle region of the state, which was less preservationist-oriented than the northern region of the state and less utilitarian-oriented than the southern region of the state, perceived the Forest Service as giving slight priority to preservationist-oriented management activities. The middle regions of the state perceived less preservationists bias on the part of the Forest Service than did the southern region and they also perceived less utilitarian bias on the part of the Forest Service than did the northern region of the state. Hiking and wilderness, protection of threatened and endangered species, and timber harvesting and sales, ranked first, third, and fourth, respectively.

The southern region of the state, which was more utilitarian-oriented than the other two regions of the state, was mixed regarding its perceptions of Forest Service management priorities. Protecting water supplies and quality, maximum use of forest resources, access to scenic areas, and fishing, ranked first, second, third, and fourth, respectively. This mix in perception of attitudinal priorities indicates that the southern region perceives less oriented partiality on the part of the Forest Service than do the other two regions of the state.

### On Congruence

In the previous chapter, the nature and importance of congruence of views within interest groups was addressed. This section examined the degree of congruency, or level of internal agreement within each organization, regarding perceptions of Forest Service management.

Table 5.7 shows congruency for each management activity for each listed organization. The Society of American Foresters' degree of congruency, as it relates to perceptions of the importance of utilitarian-oriented activities to the Forest Service, was

Table 5.7. Intra-Organizational Congruence based on Perceptions

|                                                     | Society of<br>American<br>Foresters | Alabama<br>Forestry<br>Association | Wildlife<br>Federation | Wilderness<br>Society | Audubon<br>Society | Sierra<br>Club | Nature<br>Conservancy | General<br>Public |
|-----------------------------------------------------|-------------------------------------|------------------------------------|------------------------|-----------------------|--------------------|----------------|-----------------------|-------------------|
| Hunting                                             | si<br>51.7                          | si<br>64.9                         | vi<br>53.8             | si<br>52.4            | si<br>64.0         | si<br>60.0     | si<br>65.4            | vi<br>45.8        |
| Fishing                                             | si<br>58.6                          | si<br>78.4                         | si<br>73.1             | si<br>76.2            | si<br>68.0         | si<br>63.3     | si<br>84.6            | si<br>54.2        |
| Roadside recreation                                 | si<br>58.6                          | si<br>59.5                         | si<br>56.0             | si<br>68.4            | si<br>65.2         | si<br>71.4     | si<br>54.2            | si<br>42.4        |
| Hiking and wilderness*                              | vi<br>62.1                          | vi<br>51.4                         | vi<br>65.2             | vi<br>54.2            | vi<br>48.0         | si<br>39.3     | vi/si<br>45.8         | vi<br>54.2        |
| Access to scenic areas                              | vi<br>55.2                          | si<br>54.1                         | vi/si<br>45.8          | vi<br>47.4            | vi<br>60.9         | si<br>57.1     | vi<br>48.0            | si<br>48.3        |
| Attracting tourism                                  | si<br>51.7                          | si<br>56.8                         | si<br>50.0             | si<br>52.4            | si<br>62.5         | si<br>46.7     | si<br>48.0            | vi<br>35.1        |
| Timber harvesting & sales**                         | vi/si<br>48.3                       | vi<br>51.4                         | vi<br>38.5             | vi<br>47.6            | vi<br>58.3         | vi<br>75.9     | vi<br>53.6            | vi<br>53.4        |
| Economic growth and development**                   | vi/si<br>34.5                       | vi/si<br>35.1                      | vi/si<br>34.6          | vi<br>38.1            | si<br>64.0         | vi<br>53.3     | vi<br>46.2            | vi<br>40.7        |
| Protection of water supply and quality              | vi<br>79.3                          | vi<br>78.4                         | vi<br>83.3             | vi<br>57.1            | vi<br>64.0         | vi<br>46.4     | vi<br>54.2            | vi<br>62.7        |
| Protection of threatened and<br>endangered species* | vi<br>72.4                          | vi<br>75.7                         | vi<br>79.2             | vi<br>57.1            | vi<br>64.0         | vi<br>50.0     | vi<br>54.2            | vi/si<br>44.1     |
| Preventing global climate change                    | ni<br>42.9                          | ni<br>42.4                         | vi<br>59.1             | ni<br>50.0            | si/ni<br>36.0      | ni<br>50.0     | ni<br>50.0            | ni<br>38.2        |
| Wilderness preservation*                            | vi<br>50.0                          | vi<br>47.2                         | vi<br>66.7             | vi<br>42.9            | vi<br>52.0         | ni<br>39.3     | ni<br>50.0            | vi<br>42.4        |
| Maximum use of forest resources**                   | vi<br>37.0                          | ni<br>36.1                         | ni<br>40.0             | ni<br>47.4            | vi<br>43.5         | vi<br>53.6     | vi<br>44.0            | vi<br>59.3        |

vi = very important    si = somewhat important    ni = not important

vi/si or si/ni = tie score between the two indicated responses

\* Primary preservationist-oriented activity

\*\* Primary utilitarian-oriented activity

low to moderate. Congruency levels for the three primary utilitarian-oriented activities ranged from a low of 34.5 percent for economic growth and development to a high of 48.3 percent for timber harvesting and sales. The congruency levels for the three primary preservationist-oriented activities were much higher, ranging from a low of 50 percent for wilderness preservation to a high of 72.4 for protecting threatened and endangered species. This suggests that the membership is in greater agreement regarding their perceptions of the importance of preservationist-oriented activities than they are regarding the importance of utilitarian-oriented activities on the part of the Forest Service. This also supports the findings that the SAF feels that the Forest Service is slightly biased in favor of preservationist-orientated management.

The Alabama Forestry Association's degree of congruency, as it relates to perceptions of the importance of utilitarian-oriented activities for the Forest Service, was low to moderate. Congruency levels for the three primary utilitarian-oriented activities ranged from a low of 35.1 percent for economic growth and development to a high of 51.4 percent for timber harvesting and sales. The congruency levels for the three primary preservationist-oriented activities were much higher, ranging from a low of 47.2 percent for wilderness preservation to a high of 75.7 for protecting threatened and endangered species. This suggest that the membership is in greater agreement regarding its perceptions of the importance of preservationist-oriented activities than they are regarding the importance of utilitarian-oriented activities on the part of the Forest Service. This also supports the findings that the AFA feels the Forest Service is slightly biased in favor of preservationist-orientated management.

The preservationist-oriented organizations' degrees of congruency, as they relate to perceptions of the importance of utilitarian-oriented activities to the Forest Service,

were generally moderate, averaging from lows in the low forties to highs in the mid and high fifties. Congruency levels for the three primary preservationist-oriented activities were slightly higher, ranging from lows in the mid forties to highs in the high fifties. This suggests that members within these organizations are in greater agreement regarding their perceptions of the importance of preservationist-oriented activities to the Forest Service than they are regarding the importance of utilitarian-oriented activities of the Forest Service. The scores also suggest that the preservationist-oriented organizations have a slightly higher degree of congruency than do the utilitarian-oriented organizations.

The general public's levels of congruency, when compared to the utilitarian-oriented organizations, were higher on the primary utilitarian-oriented activities, but the general public's levels of congruency were lower than the utilitarian-oriented organizations on the primary preservationist-oriented activities. This suggests that the general public does not perceive a preservationist bias on the part of the Forest Service to the same degree that the utilitarian-oriented organizations do. Overall the general public's levels of agreement were lower than the utilitarian organizations.

The general public's level of congruency, when compared to the preservationist-oriented organizations, on the primary utilitarian-oriented activities was mixed, and the general public's levels of congruency, when compared to the preservationist organizations, on the primary preservationist-oriented activities were also mixed. This suggests that the general public does not perceive the utilitarian bias on the part of the Forest Service as do preservationist organizations.

Overall the general public's levels of agreement were lower than the preservationist organizations.

Data presented in Table 5.8 show that the Audubon Society had the highest degree of agreement (57.7 percent) regarding the perceived importance of selected forest management practices to the Forest Service. The Wildlife Federation was second with an agreement rating of 57.3 percent; the Alabama Forestry Association was third with 56.2 percent; the Sierra Club was fourth with 54.3 percent, and the Society of American Foresters was fifth with 54.0 percent.

Table 5.8. Degrees of Organizational Congruence (Agreement)  
Regarding Perceptions of Forest Service Management Priorities

|                               | %     |
|-------------------------------|-------|
| Audubon Society               | 57.7% |
| Wildlife Federation           | 57.3% |
| Alabama Forestry Association  | 56.2% |
| Sierra Club                   | 54.3% |
| Society of American Foresters | 54.0% |
| Nature Conservancy            | 53.7% |
| Wilderness Society            | 53.0% |
| General Public                | 47.7% |

Table 5.9 compares the differences in degrees of congruency between desired management objectives based on stakeholders' preferences and management objectives based on perceptions of Forest Service priorities. When comparing average congruency levels of desired management objectives of selected organizations with those of perceived Forest Service objectives, we find higher levels of congruency regarding desired objectives for all organizations except the Alabama Forestry Association. The general

public had the lowest level of congruency in both desired management objectives and perceived Forest Service objectives.

All the preservationist-oriented organizations have higher levels of congruency than do the utilitarian-oriented organizations. This is not surprising in that professional societies such as the Society of American Foresters are composed of professionals who typically are employed in the natural resources area. Membership in environmental organizations is independent of employment. As a result these groups often are less cohesive than other groups when considering, adopting, or acting on management preferences.

Table 5.9. Comparisons of Degrees of Group Congruence

|                               | Desired Management<br>Objectives<br>Chapter 4 | Perceived Management<br>Objectives<br>Chapter 5 |
|-------------------------------|-----------------------------------------------|-------------------------------------------------|
| Sierra Club                   | 71.42%                                        | 54.3%                                           |
| Audubon Society               | 69.23%                                        | 57.7%                                           |
| Nature Conservancy            | 64.25%                                        | 53.7%                                           |
| Wilderness Society            | 62.75%                                        | 53.0%                                           |
| Wildlife Federation           | 60.58%                                        | 57.3%                                           |
| Alabama Forestry Association  | 54.78%                                        | 56.2%                                           |
| Society of American Foresters | 54.72%                                        | 54.0%                                           |
| General Public                | 50.75%                                        | 47.7%                                           |

These results support the contention that congruency levels are higher for organized interest than they are for non-organized interest (general public). The overall congruency average for those holding membership in an organization is 55.1 percent,

which is higher than the average for those who are not affiliated with an organization, 47.7 percent.

Table 5.10 shows the degree of congruency of each activity for each geographic area. The data presented provide some indication of regional congruency in regard to various management activities. Of the three regions of the state, the southern regions had the lowest level of congruency which would indicate that the southern region of the state might be the most receptive or open to change or debate. This table also provides some indication of the intensity to which certain management activities might receive the most or least support.

The degree of congruency for each geographical area is indicated in Table 5.11. The overall levels of congruency based on regional differences are moderate. Although the middle region of the state had the highest levels of congruency, the other two regions were not far behind. The moderate levels of congruency indicate fairly definite regional perceptions.

### Summary

Respondent perceptions of Forest Service management in Alabama are mixed in that overall perceptions of the top seven perceived management objectives were both utilitarian and preservationist in nature. Timber harvesting and sales and maximum use of forest resources ranked second and fourth in terms of perceived importance to the Forest Service, while protecting threatened and endangered species and hiking and wilderness ranked third and fifth in perceived importance to the Forest Service. This suggest that overall, the Forest Service is perceived as being flexible in its selection of management objectives based on attitudinal orientation. Only when respondents are

Table 5.10. Intra-Regional Agreement

|                                                 | Northern<br>Region | Middle<br>Region | Southern<br>Region |
|-------------------------------------------------|--------------------|------------------|--------------------|
| Hunting                                         | si<br>56.0         | si<br>54.3       | vi<br>52.4         |
| Fishing                                         | si<br>62.0         | si<br>73.2       | vi/si<br>45.2      |
| Roadside recreation                             | si<br>55.3         | si<br>58.8       | si<br>50.0         |
| Hiking and wilderness                           | si<br>44.9         | vi<br>58.8       | vi/si<br>42.9      |
| Access to scenic areas                          | si<br>52.2         | vi<br>48.8       | si<br>59.5         |
| Attracting tourism                              | ni<br>54.2         | si<br>45.7       | si<br>52.5         |
| Timber harvesting & sales                       | vi<br>62.5         | vi<br>53.1       | vi<br>45.2         |
| Economic growth & development                   | vi<br>44.0         | vi<br>42.7       | si<br>38.1         |
| Protection of water supply and quality          | vi<br>38.0         | vi<br>63.8       | vi<br>78.6         |
| Protection of threatened and endangered species | si<br>40.0         | vi<br>62.5       | vi<br>47.6         |
| Preventing global climate change                | ni<br>53.2         | ni<br>38.3       | vi<br>36.1         |
| Wilderness preservation                         | si<br>36.0         | vi<br>50.0       | si<br>43.9         |
| Maximum use of forest resources                 | vi<br>57.1         | vi<br>42.5       | vi<br>56.1         |

vi = very important    si = somewhat important    ni = not important    vi/si = very important/somewhat important

Table 5.11. Levels of Respondent Congruence Delineated by Region

|                 | %      |
|-----------------|--------|
| Middle region   | 53.2%  |
| Northern region | 50.48% |
| Southern region | 49.8%  |

categorized according to organizational affiliation or region of the state is there definite bias perceived in Forest Service management.

Those respondents within the general public classification were mixed in their perceptions of Forest Service priorities. While they felt maximum use of forest resources and timber harvesting and sales was important to the Forest Service, they also felt hiking and wilderness and protecting threatened and endangered species were also important to the Forest Service.

For the most part, perceptions of Forest Service management priorities fell along attitudinal orientation lines. The utilitarian-oriented organizations felt the Forest Service in Alabama favored preservation-oriented management activities over utilitarian-oriented activities, and the preservationist-oriented organizations felt the Forest Service favored utilitarian-oriented management activities over preservationist-oriented activities. The utilitarian-oriented organizations did not perceive as strong an attitudinal bias as did the preservationist-oriented regarding their perceptions of Forest Service bias. This would suggest that the preservationist-oriented organizations do not see themselves as aligned with Forest Service management as do the utilitarian-oriented organizations.

Regional perceptions, like many of the organizational perceptions, fell along attitudinal lines. The northern region of the state, which is preservationist-oriented, perceived the Forest Service as having a utilitarian bias, and the southern region of the

state, which is utilitarian-oriented, perceived the Forest Service as having a slight preservationist bias. The middle region of the state, which is slightly preservationist-oriented, had somewhat mixed perceptions regarding Forest Service priorities, yet preservationist-oriented activities were perceived as the dominant activities of choice for the Forest Service

These findings suggest preservationists perceive the Forest Service as having a utilitarian bias regarding forest management decisions, and conversely the utilitarians perceive the Forest Service as having a preservationists bias when it comes to the selection of forest management activities. The general public on the other hand perceives a more neutral, less biased, approach by the Forest Service when it comes to the selection of forest management activities.

Congruency levels based on perceptions were moderate with levels ranging in the fiftieth percentile. The average degree of congruency was less for perceptions than they were for selected management activities. People are in greater agreement regarding their desired objectives than they are regarding the perceptions of others. The average congruency level for the general public was below the average for the selected organizations. This reinforces previous findings that membership in an organization brings about greater congruency.

The southern region of the state still had the lowest average congruency (49.8 percent) when compared to the other two regions of the state. What is interesting is the average congruency level under "perceived" Forest Service management is higher than the average for "desired" management activities (46.6 percent). Obviously there is greater agreement regarding perceived forest service objectives than there is for selected management activities. Average congruency levels for the middle region of the state

regarding their perceptions of Forest Service management objectives versus their own desired management objectives were about the same (50.6 percent desired objectives) and (50.4 percent perceived Forest Service objectives).

The moderate levels of congruency within these organizations suggest that the organizations themselves are not unified in their perceptions of Forest Service priorities. In light of this, the Forest Service has a good opportunity to influence, modify, and work with individuals to enhance its image of providing equitable participation by all stakeholders.

#### A Comparative Note

The preceding chapter set out the preferences of respondents on forest management practices and this chapter reported their views on Forest Service priorities. The purpose of this section is to further highlight the differences between preferences and perceptions by examining the degree of divergence between what people wanted and what they perceived to be important to the Forest Service.

Table 5.12 compares the differences between the number of respondents selecting “very important” for each management activity in Chapter 4 (desired management activity) and the number of respondents selecting “very important” for the same management activities in Chapter 5 (perceived Forest Service priorities). The differences in rank between the selections in Chapter 4 and Chapter 5 are also compared as they related to selected management activities.

Respondents, overall, indicated that preservationist-oriented activities such as hiking and wilderness, protecting threatened and endangered species, wilderness preservation, and preventing global climate change were the preferred management

Table 5.12. Respondent Difference in Chapter 4 (Desired) and Chapter 5 (Perceived) Selections

|                                                 | Number of Respondents Selecting<br>Very Important |                                                        | Difference<br>Between<br>Chapter 4 and<br>Chapter 5<br>Selections |  | Management Activity Rank                         |                                                           | Difference<br>Between<br>Chapter 4 and Chapter 5<br>Selections |   |
|-------------------------------------------------|---------------------------------------------------|--------------------------------------------------------|-------------------------------------------------------------------|--|--------------------------------------------------|-----------------------------------------------------------|----------------------------------------------------------------|---|
|                                                 | Chapter 4<br>Desired<br>Management<br>Activities  | Chapter 5<br>Perceived<br>Forest Service<br>Priorities |                                                                   |  | Chapter 4<br>Desired<br>Management<br>Activities | Chapter 5<br>Perceived<br>Forest<br>Service<br>Priorities |                                                                |   |
| Timber harvesting and sales                     | 61                                                | 105                                                    | 44                                                                |  | 8                                                | 2                                                         |                                                                | 6 |
| Protecting water supply and quality             | 155                                               | 112                                                    | 43                                                                |  | 1                                                | 1                                                         |                                                                | 0 |
| Preventing global climate change                | 91                                                | 49                                                     | 42                                                                |  | 5                                                | 11                                                        |                                                                | 6 |
| Economic growth and development                 | 53                                                | 81                                                     | 28                                                                |  | 10                                               | 5                                                         |                                                                | 5 |
| Maximum use of forest resources                 | 63                                                | 90                                                     | 27                                                                |  | 7                                                | 4                                                         |                                                                | 3 |
| Wilderness preservation                         | 103                                               | 76                                                     | 27                                                                |  | 4                                                | 6                                                         |                                                                | 2 |
| Hunting                                         | 49                                                | 65                                                     | 16                                                                |  | 12                                               | 8                                                         |                                                                | 4 |
| Hiking and wilderness                           | 106                                               | 90                                                     | 16                                                                |  | 2                                                | 4                                                         |                                                                | 2 |
| Access to scenic areas                          | 88                                                | 74                                                     | 14                                                                |  | 6                                                | 7                                                         |                                                                | 1 |
| Protecting threatened and<br>endangered species | 105                                               | 97                                                     | 8                                                                 |  | 3                                                | 3                                                         |                                                                | 0 |
| Attracting tourists                             | 60                                                | 52                                                     | 8                                                                 |  | 9                                                | 10                                                        |                                                                | 1 |
| Fishing                                         | 47                                                | 44                                                     | 3                                                                 |  | 13                                               | 12                                                        |                                                                | 1 |
| Roadside recreation                             | 50                                                | 53                                                     | 3                                                                 |  | 11                                               | 9                                                         |                                                                | 2 |

activities. Yet when it came to perceived Forest Service priorities, perceptions were mixed. Timber harvesting and sales and maximum use of forest resources, as well as protecting threatened and endangered species and hiking and wilderness were perceived as being roughly of equal importance to the Forest Service.

Based upon the direction of change, respondents placed greater importance on the preservationist-oriented activities than they perceived the Forest Service to do, and they placed less importance on the utilitarian-oriented activities than they perceived the Forest Service to do. The majority of respondents felt the Forest Service was more utilitarian-oriented than they themselves. Of the six activities with the highest degree of divergence, all indicated a utilitarian orientation on the part of the Forest Service. The greatest divergence was on timber harvesting and sales. Forty-four more respondents indicated that they felt the Forest Service placed greater importance on timber harvesting and sales than they did themselves. One hundred and fifty-five respondents indicated that protecting water supplies and quality was very important to them, while only one hundred and twelve indicated they felt it was very important to the Forest Service. Even when looking at overall rank differences, we see again the direction of rankings indicates a perceived utilitarian bias on the part of the Forest Service.

Table 5.13 shows the mean difference between preferences and perceptions by selected organizations for selected forest management activities. The + sign indicates an activity in which organization members reported that a particular management activity was more important to them than to the Forest Service.

These results support the preceding findings that preservationist-oriented activities are, overall, the preferred choice. The preservationist-oriented organizations view the Forest Service as having a fairly strong utilitarian bias, and the utilitarian-oriented organization view the Forest Service as having a slight preservationist bias. The general

Table 5.13. Difference in Mean Between Preferences and Perceptions for Selected User Groups

|                                                    | Society of<br>American<br>Foresters | Alabama<br>Forestry<br>Association | Wildlife<br>Federation | Wilderness<br>Society | Audubon<br>Society | Sierra<br>Club | Nature<br>Conservancy | General<br>Public |
|----------------------------------------------------|-------------------------------------|------------------------------------|------------------------|-----------------------|--------------------|----------------|-----------------------|-------------------|
| Hunting                                            | .72                                 | .41                                | .42                    | .86                   | .52                | .50            | .65                   | .13               |
| Fishing                                            | .65                                 | .32                                | .08                    | .38                   | .12                | +.07           | .19                   | .03               |
| Roadside recreation                                | .54                                 | .50                                | .39                    | .25                   | .10                | +.04           | .33                   | +.13              |
| Hiking and wilderness                              | .71                                 | .64                                | .05                    | +.38                  | +.52               | +.89           | +.31                  | +.01              |
| Access to scenic areas                             | .46                                 | .31                                | +.22                   | +.22                  | .01                | +.29           | +.18                  | +.23              |
| Attracting tourism                                 | .48                                 | .26                                | +.13                   | 0                     | .09                | +.43           | +.27                  | +.17              |
| Timber harvesting & sales                          | .01                                 | +.23                               | .27                    | .72                   | 1.05               | 1.35           | .61                   | .50               |
| Economic growth and<br>development                 | +.25                                | +.32                               | .27                    | .48                   | .74                | 1.00           | .55                   | .36               |
| Protection of water supply and<br>quality          | .13                                 | .11                                | +.02                   | +.53                  | +.56               | +.79           | +.71                  | +.34              |
| Protection of threatened and<br>endangered species | .47                                 | .73                                | .13                    | +.43                  | +.48               | +.73           | +.56                  | +.03              |
| Preventing global climate<br>change                | .51                                 | .32                                | +.34                   | +.65                  | +.91               | +.113          | +.80                  | +.42              |
| Wilderness preservation                            | .85                                 | .80                                | .04                    | +.34                  | +.52               | +.101          | +.66                  | +.22              |
| Maximum use of forest<br>resources                 | +.50                                | +.54                               | .27                    | .19                   | .61                | 1.04           | .62                   | .38               |

+ Indicates they think it's more important to them than they perceive it to be to the Forest Service

public indicated a perceived utilitarian bias on the part of the Forest Service. The greatest divergence was between three of the primary utilitarian management activities and three of the primary preservationist oriented activities.

Table 5.14 shows the difference in rank between respondents' desired management activities and the perceived rank in importance of those same activities to the Forest Service. The larger the number the greater the difference in rank between desired and perceived. The activities over which the greatest divergency existed were those activities most closely associated with the attitudinal orientation of the organization itself and those activities most closely associated organizations having opposing attitudinal orientations.

The general public displayed moderate divergence between preferences and perceptions when it came to maximum use of forest resources and timber harvesting and sales. The sharp differences in rank suggest that these may be areas in which the Forest Service needs to do a better job in projecting an image less susceptible to perceived attitudinal bias.

Table 5.15 shows the mean difference between preference and perception selections by region. The + sign indicates an activity in which the region feels this particular management activity was more important to them than to the Forest Service.

The northern region of the state favored preservationist-oriented activities, and in turn perceived the Forest Service as favoring utilitarian-oriented activities. The greatest divergence was between three of the primary utilitarian management activities and three of the primary preservationist oriented activities.

The middle and southern regions of the state showed only moderate divergence between their selected management activities and those perceived to be important to the Forest Service.

Table 5.14. Difference in Rank Between Preferences and Perceptions for Selected User Groups

|                                                    | Society of<br>American<br>Foresters | Alabama<br>Forestry<br>Association | Wildlife<br>Federation | Wilderness<br>Society | Audubon<br>Society | Sierra<br>Club | Nature<br>Conservancy | General<br>Public |
|----------------------------------------------------|-------------------------------------|------------------------------------|------------------------|-----------------------|--------------------|----------------|-----------------------|-------------------|
| Hunting                                            | 3                                   | 0                                  | 1                      | 8                     | 0                  | 3              | 6                     | 3                 |
| Fishing                                            | 2                                   | 1                                  | 3                      | 3                     | 2                  | 2              | 1                     | 1                 |
| Roadside recreation                                | 2                                   | 3                                  | 1                      | 2                     | 2                  | 1              | 4                     | 1                 |
| Hiking and wilderness                              | 5                                   | 7                                  | 0                      | 2                     | 2                  | 6              | 2                     | 0                 |
| Access to scenic areas                             | 3                                   | 2                                  | 3                      | 1                     | 5                  | 2              | 4                     | 4                 |
| Attracting tourism                                 | 0                                   | 1                                  | 7                      | 1                     | 0                  | 4              | 2                     | 2                 |
| Timber harvesting & sales                          | 1                                   | 2                                  | 2                      | 1                     | 8                  | 10             | 9                     | 7                 |
| Economic growth and<br>development                 | 7                                   | 5                                  | 2                      | 3                     | 4                  | 8              | 6                     | 2                 |
| Protection of water supply and<br>quality          | 0                                   | 0                                  | 0                      | 0                     | 2                  | 4              | 3                     | 1                 |
| Protection of threatened and<br>endangered species | 3                                   | 4                                  | 2                      | 1                     | 0                  | 1              | 2                     | 1                 |
| Preventing global climate<br>change                | 0                                   | 1                                  | 5                      | 3                     | 7                  | 6              | 6                     | 6                 |
| Wilderness preservation                            | 5                                   | 6                                  | 0                      | 0                     | 1                  | 6              | 2                     | 4                 |
| Maximum use of forest<br>resources                 | 8                                   | 8                                  | 3                      | 1                     | 2                  | 2              | 6                     | 8                 |

Table 5.15. Difference in Means by Region Between Preferences and Perceptions

|                                                 | Northern<br>Region | Middle<br>Region | Southern<br>Region |
|-------------------------------------------------|--------------------|------------------|--------------------|
| Hunting                                         | .32                | .35              | .47                |
| Fishing                                         | .02                | .25              | .29                |
| Roadside recreation                             | +.23               | .23              | .42                |
| Hiking and wilderness                           | +.61               | .11              | .34                |
| Access to scenic areas                          | +.35               | .02              | .13                |
| Attracting tourism                              | +.33               | +.05             | .32                |
| Timber harvesting & sales                       | .93                | .45              | .20                |
| Economic growth & development                   | .44                | .24              | .12                |
| Protection of water supply and quality          | +.71               | +.32             | .06                |
| Protection of threatened and endangered species | +.44               | 0                | .13                |
| Preventing global climate change                | +.101              | +.13             | .01                |
| Wilderness preservation                         | +.71               | 0                | .28                |
| Maximum use of forest resources                 | .70                | .18              | .05                |

+Indicates they think it's more important to them than they perceive it to be to the Forest Service

Table 5.16 looks at the difference in levels of congruency between selected management activities and perceived importance of those same management activities to the Forest Service for selected organizations.

The preservationist-oriented organizations were in greater agreement regarding selected forest management activities than were the utilitarian-oriented organizations. The general public indicated the least degree of agreement which suggest that membership within an organization brings about greater agreement, at least regarding common desired objectives.

Degrees of congruency regarding perceptions of Forest Service priorities were lower than they were for selected management activities. Degrees of congruency for the preservationist-oriented organizations were about the same in this category as they were for the utilitarian-oriented organizations. Even the general public's degree of congruency was lower in this category. This suggest that people are in greater agreement about what they want than they are regarding the perceptions of others.

The category of differences suggests that although the preservationist-oriented organizations demonstrate a higher degree of congruency regarding selected forest management activities than do the other organizations and the general public, their degree of divergence between what they selected and what they perceived the Forest Service to want is much higher than it is for utilitarian-oriented organizations or the general public. The degree of divergency between what they want and what they perceive is higher than it is for others. Even though the general public had a lower congruency level than did the preservationist- oriented organizations, their degree of divergence between what they preferred, and what they perceived the Forest Service to favor, was much lower. So too, were the results among the utilitarian-oriented organizations. Their degree of divergence

between selected and desired was much lower than it was for the preservationist-oriented organizations.

Table 5.16. Differences in Sum Total Averages, Measure of Congruence and Divergence of Selected Organizations

|                               | Preference<br>Congruencies<br>(%) | Perception<br>Congruencies<br>(%) | Difference<br>Between<br>3 and 4 (%) |
|-------------------------------|-----------------------------------|-----------------------------------|--------------------------------------|
| Society of American Foresters | 54.7%                             | 54.2%                             | 1%                                   |
| Alabama Forestry Association  | 54.7%                             | 56.2%                             | 1%                                   |
| Wildlife Federation           | 60.5%                             | 57.3%                             | 3%                                   |
| Wilderness Society            | 62.7%                             | 53%                               | 10%                                  |
| Audubon Society               | 69.2%                             | 57.7%                             | 11%                                  |
| Sierra Club                   | 71.4%                             | 54.3%                             | 17%                                  |
| Nature Conservancy            | 64.2%                             | 53.7%                             | 12%                                  |
| General Public                | 50.7%                             | 47.7%                             | 3%                                   |

Table 5.17 looks at the difference in levels of congruency between selected management activities and perceived importance of those same management activities to the Forest Service regions.

The northern region of the state had the higher degree of congruency on selected management activities than did any other region in the state. It also had a higher degree of congruency on selected management activities than it did for perceived importance to the Forest service. Yet, at the same time, the northern region of the state had the highest degree of divergence of any region of the state. They are in greater agreement about what they want than they are regarding perceptions of others. Conversely, the middle and

Table 5.17. Differences in Sum Total Averages, Measure of Congruence and Divergence Regions of the State

|        | Preferences | Perceptions | Differences |
|--------|-------------|-------------|-------------|
| North  | 59.4%       | 50.4%       | 9%          |
| Middle | 50.6%       | 53.2%       | 3%          |
| South  | 46.6%       | 49.8%       | 3%          |

southern regions of the state are in greater agreement regarding their perceptions of Forest Service importance than they are regarding what they want in terms of selected forest management activities.

### Conclusions

Interest groups that operate as part of the nation's forestry community have a deep-seated concern about how forest resources are used and managed. Such matters of concern about the use and management of forests are preceded by important group decisions. Among the matters that must be addressed are: what issues should be addressed, prioritizing issues, coalition building, complementary interest, and conflicting and opposing interest. Interest groups often experience internal problems and difficulty which affect their ability to express policy preferences and to interact favorably with policymakers. Specific symptoms of such difficulty are manifest in trying to decide or focus on issues that are narrow in scope, either in subject or geographically, not wasting time and limited finances on issues that are of concern to only a few members, and trying to present a united front to the public and policymakers in order to maintain political clout.

Interest groups in this study exhibited focus on issues important to them. Preservationist- oriented interest groups exhibited respectable congruency levels (66 percent) regarding management practices they preferred and on issues of which they disapproved. Utilitarian-oriented interest groups exhibited moderate congruency levels of (54 percent) on issues they preferred and on issues of which they disapproved. The general public exhibited lower congruency levels (51 percent) than either the preservationist or the utilitarian-oriented groups. These findings suggest that preservationists and utilitarians are fairly united and focused regarding priority issues. Coalition building, complementary interest, and opposing interest were divided along attitudinal orientations.

Interest groups in this study exhibited a moderate focus on issues they perceive important to the Forest Service. Preservationist-oriented organizations exhibited moderate congruency levels ( 54 percent) regarding their perceptions of Forest Service priorities. Likewise, utilitarians exhibited moderate congruency levels (55 percent) regarding their perceptions of Forest Service priorities. Once again, the general public exhibited lower congruency levels (51 percent) than either the preservationists or the utilitarians. These findings suggest that preservationist and utilitarians are fairly united and focused regarding priority issues. Coalition building, complementary interest, and opposing interest are divided along attitudinal orientations.

If interest group perceptions of what is important to the Forest Service do not reflect the reality of what the Forest Service intends, or is actually doing, then efforts must be enhanced on the part of the Forest Service to get their message out. Perceptions can be as important as facts, in some cases. Perceptions go a long way in evaluating a particular issue. If interest groups and public perceptions fall short of factual information,

then the Forest Service may find itself spending considerably more time and effort on changing its image as opposed to actually implementing management objectives.

Knowledge of such findings is important to the Forest Service in estimating interest group cohesiveness to particular management practices. It also helps in determining which issues will likely polarize or unify various interest groups concerning proposed management practices.

Differences between the general public's desires and what they perceive Forest Service priorities were moderate. Public desires were primarily preservationists, yet their perceptions of Forest Service priorities were mixed. Maximum use of forest resources and timber harvesting and sales rank first and fourth regarding perceptions, yet the protection of water supply and quality and hiking and wilderness ranked second. Protecting threatened and endangered species and hunting ranked third. These mixed rankings suggests that the public does not perceive the Forest Service as managing national forest land along specific attitudinal lines. The Multiple-Use Act of 1960 mandates that the Forest Service manage national forest lands for multiple uses, not for limited of single use. Perceptions of the general public suggest the Forest Service is doing a good job of not managing national forests lands exclusively for utilitarian or preservationists uses. Although the general public desires were somewhat preservationists in orientation, their perceptions of Forest Service priorities were less biased.

Differences between desires and perceptions along regional lines ran parallel with organizational desires and perceptions. The northern region of the state which has the highest percent of preservationists and desired preservationists-oriented management activities perceived the Forest Service as having a moderate utilitarian bias. Conversely,

the southern region of the state, which had the highest percent of utilitarians, perceived the Forest Service as having a slight preservationists bias.

Overall, perceptions of Forest Service management, from the general public's perspective, as it relates to attitudinal bias, is positive. Positive in the sense that the general public does not perceive a consistent strong attitudinal bias on the part of the Forest Service regarding selected forest management options. Although select organizations, regions of the state, and the general public did express attitudinal biases regarding desired management objectives, the multiple-use perception expressed on the part of the general public coincides with Forest Service mandates.

Unfortunately, perceptions of select organizations and regions of the state will be difficult to change unless the Forest Service implements their desired management objectives and, in doing so, will possibly alienate those who hold the opposite attitudinal orientation.

## Chapter Six

### Public Participation Efforts in Alabama

Public participation in Forest Service management in Alabama has been formally implemented by the Forest Service primarily by two methods: hosting forums and hosting open house meetings. In addition to hosting forums and open house meetings, the Forest Service has solicited and received input by way of stakeholders' letters, phone calls and petitions, and input from civic and corporate leaders.

As with most policies that provide for public participation and input, periodic evaluation of the implementation process is imperative. Is the process satisfactory to those involved? How can the process be improved? This chapter examines these questions.

### Views on Forest Service Public Participation Efforts

U.S. forest management has been viewed as a contributor to and protector of our precious natural resources. Increasingly, however, the Forest Service is being criticized for its over- emphasis on wood production and its lack of sensitivity to the needs of an increasingly diverse set of forest stakeholders (Behan 1975; Duerr 1986). Those who defend and extol the virtues of present implementation of public involvement by the Forest Service and those who are critical of it appear to hold positions that are often nearly antithetical. Defenders claim that the system is working well overall and that the Forest Service is doing a good job of knowing what the diverse public wants (Giltmier 1891; McGuire 1985). They claim, further, that public participation efforts, as implemented, are being well received by the majority of forest stakeholders. Many defenders of present public involvement techniques believe that problems can be traced to

a few misguided extremist who do not know what the public really wants and really do not speak for the majority of diverse forest stakeholders. Many critics, on the other hand, believe present Forest Service public involvement techniques are flawed in that the Forest Service is not in tune with the majority of diverse forest stakeholders and that timber interests still dominate public involvement. In short, it appears that these two camps — critics and advocates of Forest Service public involvement techniques—differ dramatically in their views of current Forest Service management.

The Forest Service is, and has been for some time, under a legislative mandate to include public participation as part of its decision-making process. Many view this mandate as purely a procedural mechanism which has little, if any, influence on Forest Service management decisions. Some feel this process, as implemented, is closed to public influence. Making the public feel as though the process was open, with all suggestions being given due consideration, presumably became a major purpose of the Forest Service in Alabama's public involvement effort. Indeed throughout the public administration literature, citizen participation in various forms has often been recommended as a way of finding mutual goals, reducing conflict, and generating trust and legitimation necessary for agency survival and growth (Pfeffer 1981, Irland 1975, Thompson 1967).

Forest administrators at each national forest are given broad discretionary latitude regarding the formulation and implementation of the participation process. Therefore, public participation efforts are often unique to a particular forest. Due to the multiple-use possibilities associated with each forest, there will always be some who are pleased, and others who are not pleased with the process. Those who are satisfied with what the forest is doing will more likely be satisfied and those who are not satisfied with current

management objectives will likely not be satisfied with the process. In light of this, what is important is examining who is and who is not satisfied with the process, the degree to which there is satisfaction and dissatisfaction with the process, and what can be done to improve the process.

This chapter examines stakeholders' perceptions of current public participation efforts in Alabama, the method(s) by which they participate in the process, and suggested methods for improving the participation process. To measure perceptions of the process, we sought respondent impressions on the degree to which the public involvement process in Alabama is open and shared or closed and predetermined.

A choice of seven descriptive statements, ranging in concept from a decision process closed to public influence to a process completely open to influence, was used to measure respondents' perceptions of the participation process as implemented by the Forest Service. This scale, adapted from the "Ladder of Citizen Participation," (Arnstein 1969), asked the respondents to react to a set of statements ranging from "public involvement is used to gain support for predetermined decisions" to the other extreme, "The public has the final say in the decision-making process within the state of Alabama." Presumably, participants seeing the decision process as closed will view involvement purely as a device of the agency, whereas those who see the process as completely open will feel there is considerable citizen influence on the final solution.

To determine the method of participation respondents used, we asked them to select their method from several methods that have been employed on national forests in Alabama. Respondents were also asked how the Forest Service in Alabama could enhance participation in public involvement by selecting from several choices.

## Overall Assessment

Table 6.1 shows the number of respondents selecting each question that most closely fits perceptions of the participation process. The results suggest that perceptions of the public involvement process are mixed.

Table 6.1. Respondent's Perceptions of Public Involvement as Implemented by the Forest Service in Alabama

| Survey Question                                                                                                                       | Number of Respondents Answering Yes to Survey Question |                                         |
|---------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-----------------------------------------|
|                                                                                                                                       | Total respondents                                      | Percent total respondents answering yes |
| The Forest Service in Alabama does a good job of balancing public views and opinions in light of existing laws and regulations        | 45                                                     | 26%                                     |
| Though it may go through the motions, in my opinion, the Forest Service pays no attention to public views and does what it wants to   | 41                                                     | 24%                                     |
| Views of interest groups are given more weight than those of others who participate in the public involvement process                 | 33                                                     | 19%                                     |
| The involvement process allows the public to communicate effectively with the Forest Service and to exercise some degree of influence | 27                                                     | 16%                                     |
| Only select members of the public can influence Forest Service decisions through their involvement                                    | 11                                                     | 6%                                      |
| Public views determine forest policy and plans                                                                                        | 9                                                      | 5%                                      |
| The public exercises significant influence over Forest Service policy and plans through the involvement process                       | 6                                                      | 4%                                      |
|                                                                                                                                       | N = 172                                                | 100%                                    |

Respondents are evenly split over the issue of an opened or closed participation process. A significant majority of respondents fall on both ends of the open or closed spectrum. Some feel the process is completely open, and others feel the process is completely closed. Still a significant number of respondents fell somewhere in the middle indicating a moderate view. This suggests that the Forest Service has room for improving and enhancing its public participation process.

To further determine who specifically views the process as open or closed and to see if views are delineated along attitudinal lines, we analyzed the responses based on attitudinal orientation. Table 6.2 analyzes responses by basic orientation.

Table 6.2. Respondent's Perceptions of Public Involvement Based on Attitudinal Orientation

| Survey Question                                                                                                                       | Number of<br>Utilitarian<br>Responses | Number of<br>Preservationist<br>Responses | Number of<br>Neutral<br>Responses |
|---------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|-------------------------------------------|-----------------------------------|
| The Forest Service in Alabama does a good job of balancing public views and opinions in light of existing laws and regulations        | 22                                    | 9                                         | 13                                |
| Public views determine forest policy and plans                                                                                        | 7                                     | 2                                         | 0                                 |
| The public exercises significant influence over Forest Service policy and plans through the involvement process                       | 2                                     | 3                                         | 1                                 |
| The involvement process allows the public to communicate effectively with the Forest Service and to exercise some degree of influence | 6                                     | 20                                        | 1                                 |
| Views of interest groups are given more weight than those of others who participate in the public involvement process                 | 14                                    | 15                                        | 4                                 |
| Only select members of the public can influence Forest Service decisions through their involvement                                    | 2                                     | 9                                         | 0                                 |
| Though it may go through the motions, in my opinion, the Forest Service pays no attention to public views and does what it wants to   | 4                                     | 37                                        | 0                                 |
|                                                                                                                                       | N = 57                                | N = 95                                    | N = 19                            |

These responses suggest that utilitarians, and those classified as neutral, view the process more favorably (open) than do preservationists. The majority of utilitarians feel there is considerable citizen influence upon Forest Service management decisions, while at the same time, almost half of them feel that desires or opinions of interest groups are given more weight than others. Even though the utilitarian-oriented organizations perceived the Forest Service as giving more weight to preservationist-oriented activities, they still had a more favorable impression of the public involvement process than did preservationists.

The preservationists indicated a more closed perception of the public involvement process. They too indicated that the desires or opinions of interest groups are given more weight than others. Presumably, participants seeing the decision process as closed would view involvement purely as a device of the agency, whereas those who see the process as open would feel there had been considerable citizen influence on the final solution. These results coincide with the findings that the preservationist-oriented organizations perceived the Forest Service as giving higher priority to utilitarian-oriented management activities than to preservationist-oriented management activities.

Even though both utilitarians and preservationists perceive the Forest Service as placing a higher priority on opposing management objectives, the utilitarians, overall, had a more favorable view of the participation efforts as implemented by the Forest Service process. The preservationists indicated stronger dissatisfaction with the process.

### Organizational and Regional Perspectives

The public participation process as viewed by selected organizations is summarized in Table 6.3. The utilitarian-oriented organizations perceived the public

Table 6.3. Perceptions of Public Participation by Selected Organizations

| Survey Question                                                                                                                       | Society of<br>American<br>Foresters<br>N = 29 | Alabama<br>Forestry<br>Association<br>N = 34 | Wildlife<br>Federation<br>N = 22 | Wilderness<br>Society<br>N = 20 | Audubon<br>Society<br>N = 23 | Sierra<br>Club<br>N = 26 |
|---------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|----------------------------------------------|----------------------------------|---------------------------------|------------------------------|--------------------------|
| The Forest Service in Alabama does a good job of balancing public views and opinions in light of existing laws and regulations        | 33%                                           | 36%                                          | 14%                              | 16%                             | 26%                          | 5%                       |
| Public views determine forest policy and plans                                                                                        | 11%                                           | 12%                                          | 9%                               | 5%                              | 0%                           | 0%                       |
| The public exercises significant influence over Forest Service policy and plans through the involvement process                       | 11%                                           | 4%                                           | 5%                               | 5%                              | 5%                           | 8%                       |
| The involvement process allows the public to communicate effectively with the Forest Service and to exercise some degree of influence | 14%                                           | 4%                                           | 22%                              | 19%                             | 17%                          | 16%                      |
| Views of interest groups are given more weight than those of others who participate in the public involvement process                 | 23%                                           | 27%                                          | 22%                              | 5%                              | 9%                           | 9%                       |
| Only select members of the public can influence Forest Service decisions through their involvement                                    | 0%                                            | 7%                                           | 6%                               | 15%                             | 9%                           | 16%                      |
| Though it may go through the motions, in my opinion, the Forest Service pays no attention to public views and does what it wants to   | 8%                                            | 10%                                          | 22%                              | 35%                             | 34%                          | 46%                      |

participation process of the Forest Service as being significantly more open than did the preservationist-oriented organizations. The majority of the membership in the Society of American Foresters and the Alabama Forestry Association, which are both utilitarian-oriented, viewed the process for the most part as open. Conversely, the majority of the membership in the Sierra Club and the Nature Conservancy, which are both preservationist-oriented, viewed the process as primarily closed. Results of this table fall in line with the attitudinal orientation of the organization.

The general public was somewhat evenly divided regarding its perceptions of an open or closed process. Interestingly, 21 percent of respondents who were not members of an environmental or professional organization or who were not employed or have an immediate family member employed in the forest industry felt the Forest Service had an interest group bias.

Perceptions of the process based on regional responses are presented in Table 6.4. The northern region of the state has the most closed view of the participation process and the southern region of the state has the most open view. The middle region of the state was more evenly divided between an open and closed process, yet they (middle region) perceived a moderate interest group bias on the part of the Forest Service. The southern region of the state, which had the highest percent of utilitarians, felt the process for the most part was open. These perceptions coincide with the regional attitudinal orientation of the state.

### Other Perspectives

The effects that demographic factors such as region of the state, age, gender, education, place of residence, or employment, have on perceptions of the public

Table 6.4. Perceptions of the Public Involvement Process Based on State Regional Delineations

| Survey Question                                                                                                                       | Northern<br>Region | Middle<br>Region | Southern<br>Region |
|---------------------------------------------------------------------------------------------------------------------------------------|--------------------|------------------|--------------------|
| The Forest Service in Alabama does a good job of balancing public views and opinions in light of existing laws and regulations        | 12%                | 25%              | 40%                |
| Public views determine forest policy and plans                                                                                        | 5%                 | 4%               | 9%                 |
| The public exercises significant influence over Forest Service policy and plans through the involvement process                       | 0                  | 5%               | 7%                 |
| The involvement process allows the public to communicate effectively with the Forest Service and to exercise some degree of influence | 26%                | 16%              | 0                  |
| Views of interest groups are given more weight than those of others who participate in the public involvement process                 | 9%                 | 21%              | 24%                |
| Only select members of the public can influence Forest Service decisions through their involvement                                    | 3%                 | 8%               | 12%                |
| Though it may go through the motions, in my opinion, the Forest Service pays no attention to public views and does what it wants to   | 45%                | 21%              | 8%                 |
|                                                                                                                                       | 100%               | 100%             | 100%               |

involvement process in Alabama are limited at best. Many of these factors have been shown to have crude predictive value in such areas as attitudinal orientation and activity preference, but none relating to the perceptions of the public participation process.

Due to the discretionary nature of the public involvement process on Forest Service lands in Alabama, generalizations about perceptions of the participation process, based on specific demographic factors, cannot be made at this point. Only when demographic factors are combined or in combination with attitudinal-orientation can there be generalizations made or predictive value added. The perceptions of public participation are more closely aligned with attitudinal orientation than by any one demographic factor.

When perceptions are delineated by region of the state, we see that the northern region of the state, which was more preservationist-oriented than the middle region of the state, which was more preservationist-oriented than the southern region of the state, had the highest number of respondents selecting a closed process. Conversely, the southern region of the state, which the highest percent of utilitarians, also had the highest percent of those selecting an open process. Once again, the middle of the state was more evenly split between the two extremes.

Perceptions also varied by age groups. Table 6.5 presents data that show the age of the respondents provided little indication of how one might view the public participation process. Other than the 21-30 age group, all other age groups were evenly split regarding the open or closed nature of the process. There were only nine respondents in the 21-30 age group; therefore, we can only state that 66 percent of them viewed the process as closed.

Table 6.5. Perceptions of the Public Involvement Process Based on Respondent's Age

| Survey Question                                                                                                                       | 21-30 yrs | 31-40 yrs | 41-50 yrs | 51-60 yrs | 60+ yrs | Total   |
|---------------------------------------------------------------------------------------------------------------------------------------|-----------|-----------|-----------|-----------|---------|---------|
| The Forest Service in Alabama does a good job of balancing public views and opinions in light of existing laws and regulations        | 0         | 5         | 11        | 17        | 11      | 44      |
| Public views determine forest policy and plans                                                                                        | 0         | 3         | 4         | 2         | 0       | 9       |
| The public exercises significant influence over Forest Service policy and plans through the involvement process                       | 0         | 0         | 1         | 3         | 2       | 6       |
| The involvement process allows the public to communicate effectively with the Forest Service and to exercise some degree of influence | 3         | 6         | 9         | 5         | 4       | 27      |
| Views of interest groups are given more weight than those of others who participate in the public involvement process                 | 2         | 13        | 9         | 6         | 3       | 33      |
| Only select members of the public can influence Forest Service decisions through their involvement                                    | 0         | 2         | 4         | 5         | 0       | 11      |
| Though it may go through the motions, in my opinion, the Forest Service pays no attention to public views and does what it wants to   | 4         | 1         | 12        | 16        | 8       | 41      |
|                                                                                                                                       | N = 9     | N = 30    | N = 50    | N = 54    | N = 28  | N = 171 |

Results of Table 6.6 support the attitudinal-orientation findings in previous tables. Females were highly preservationist-oriented; preservationists viewed the process as closed, and the majority of females viewed the process as closed. Men were more evenly split than females regarding their attitudinal-orientation, yet the majority of the men were utilitarian.

This coincides with findings in this table in that men were more evenly split than women regarding their perceptions of an open or closed process. Men were more utilitarian than preservationist oriented, and more utilitarians viewed the process as open. A higher percentage of men view the process as open rather than closed.

Table 6.6. Perceptions of Public Involvement Based on Respondent's Gender

| Survey Question                                                                                                                       | Male    | Female | Total   |
|---------------------------------------------------------------------------------------------------------------------------------------|---------|--------|---------|
| The Forest Service in Alabama does a good job of balancing public views and opinions in light of existing laws and regulations        | 40      | 4      | 44      |
| Public views determine forest policy and plans                                                                                        | 8       | 1      | 9       |
| The public exercises significant influence over Forest Service policy and plans through the involvement process                       | 5       | 1      | 6       |
| The involvement process allows the public to communicate effectively with the Forest Service and to exercise some degree of influence | 20      | 6      | 26      |
| Views of interest groups are given more weight than those of others who participate in the public involvement process                 | 25      | 7      | 32      |
| Only select members of the public can influence Forest Service decisions through their involvement                                    | 10      | 1      | 11      |
| Though it may go through the motions, in my opinion, the Forest Service pays no attention to public views and does what it wants to   | 29      | 11     | 40      |
|                                                                                                                                       | N = 137 | N = 31 | N = 168 |

Perceptions based on education and place of residence are presented in Tables 6.7 and 6.8. Education and place of residence were not good predictors of how the process was viewed. Respondents in both categories were somewhat evenly split regarding their perceptions of the participation process.

In contrast, perceptions of the process by employment in forestry, Table 6.9, did show some marked delineation, thereby, providing moderate association value. This is not unexpected considering the utilitarian nature of the forest industry and the fact that utilitarians in this study perceive themselves as more aligned with the Forest Service management objectives than preservationists. Had the preservationists perceived themselves as more aligned with Forest Service objectives in Alabama than did the utilitarians, the likelihood of their having a more positive perception of the participation process would have increased. There appears to be a relationship between perceived alignment in management objectives and ones view of the participation process.

Table 6.7. Perceptions of Public Involvement Based on Respondent's Education

| Survey Question                                                                                                                       | High School | Some College | College Grad | Adv Degree | Total   |
|---------------------------------------------------------------------------------------------------------------------------------------|-------------|--------------|--------------|------------|---------|
|                                                                                                                                       |             |              |              |            |         |
| The Forest Service in Alabama does a good job of balancing public views and opinions in light of existing laws and regulations        | 2           | 7            | 14           | 21         | 44      |
| Public views determine forest policy and plans                                                                                        | 0           | 2            | 7            | 0          | 9       |
| The public exercises significant influence over Forest Service policy and plans through the involvement process                       | 0           | 1            | 0            | 5          | 6       |
| The involvement process allows the public to communicate effectively with the Forest Service and to exercise some degree of influence | 0           | 3            | 12           | 12         | 27      |
| Views of interest groups are given more weight than those of others who participate in the public involvement process                 | 2           | 3            | 20           | 8          | 33      |
| Only select members of the public can influence Forest Service decisions through their involvement                                    | 0           | 1            | 3            | 7          | 11      |
| Though it may go through the motions, in my opinion, the Forest Service pays no attention to public views and does what it wants to   | 1           | 9            | 11           | 19         | 40      |
|                                                                                                                                       | N = 5       | N = 26       | N = 67       | N = 72     | N = 170 |

Table 6.8. Perceptions of Public Involvement Based on Respondent's Resident Population

| Survey Question                                                                                                                       | Farm/Rural | City<br>1K-10K | City<br>10,001 - 50K | City<br>50,001+ | Total |
|---------------------------------------------------------------------------------------------------------------------------------------|------------|----------------|----------------------|-----------------|-------|
| The Forest Service in Alabama does a good job of balancing public views and opinions in light of existing laws and regulations        | 4          | 15             | 10                   | 15              | 44    |
| Public views determine forest policy and plans                                                                                        | 3          | 5              | 0                    | 1               | 9     |
| The public exercises significant influence over Forest Service policy and plans through the involvement process                       | 0          | 2              | 1                    | 3               | 6     |
| The involvement process allows the public to communicate effectively with the Forest Service and to exercise some degree of influence | 14         | 2              | 7                    | 4               | 27    |
| Views of interest groups are given more weight than those of others who participate in the public involvement process                 | 8          | 7              | 4                    | 13              | 32    |
| Only select members of the public can influence Forest Service decisions through their involvement                                    | 3          | 2              | 2                    | 4               | 11    |
| Though it may go through the motions, in my opinion, the Forest Service pays no attention to public views and does what it wants to   | 17         | 7              | 10                   | 7               | 41    |
|                                                                                                                                       | N = 49     | N = 40         | N = 34               | N = 47          | N 170 |

Table 6.9 Perceptions of Public Involvement Based on Respondent's Employment in Forestry

| Survey Question                                                                                                                       | Yes    | No      | Total   |
|---------------------------------------------------------------------------------------------------------------------------------------|--------|---------|---------|
| The Forest Service in Alabama does a good job of balancing public views and opinions in light of existing laws and regulations        | 22     | 20      | 42      |
| Public views determine forest policy and plans                                                                                        | 7      | 1       | 8       |
| The public exercises significant influence over Forest Service policy and plans through the involvement process                       | 1      | 5       | 6       |
| The involvement process allows the public to communicate effectively with the Forest Service and to exercise some degree of influence | 11     | 15      | 26      |
| Views of interest groups are given more weight than those of others who participate in the public involvement process                 | 16     | 16      | 32      |
| Only select members of the public can influence Forest Service decisions through their involvement                                    | 3      | 8       | 11      |
| Though it may go through the motions, in my opinion, the Forest Service pays no attention to public views and does what it wants to   | 6      | 35      | 41      |
|                                                                                                                                       | N = 66 | N = 100 | N = 166 |

### An Assessment

This section of the survey was used to determine the method of participation respondents used the most and their preferred method of participation. Respondents were asked, "Which of the following ways have you participated in the public involvement process," and, "Which form of public participation would you suggest to enhance participation in public involvement." Table 6.10 indicates how they have participated in the process, and Table 6.11 indicates their suggested form of enhancement.

Table 6.10 indicates the type of involvement the respondents have been engaged in. Writing the Forest Service and/or local politicians, coupled with attending Forest Service sponsored meetings, are the most popular forms of public involvement. Personally talking to a Forest Service representative was the type of participation that most of the respondents indicated under other. The cumulative totals are larger than the

Table 6.10. Respondent's Method of Participation in Public Involvement

| I Have Participated in Public Involvement by:     |    |
|---------------------------------------------------|----|
| Calling or sending a letter to the Forest Service | 87 |
| Attending a Forest Service sponsored meeting      | 87 |
| Calling or writing a politician                   | 80 |
| Signing a petition                                | 52 |
| Other                                             | 35 |

number of respondents participating due to several respondents circling more than one response.

Table 6.11 indicates that respondents feel participation in public involvement may be enhanced through the combination of hosting forums that allow broad and

representative sectors to share their views and hosting open house meetings that allow for exchange of information. These are often very expensive and time-consuming forms of public participation.

Table 6.11. The Forest Service in Alabama May Enhance Participation in Public

| Involvement by:                                                                 |     |
|---------------------------------------------------------------------------------|-----|
| Hosting forums that allow broad and representative sectors to share their views | 90  |
| Hosting open house meetings that allow for exchange of information              | 110 |
| Mixture of one and two                                                          | 157 |

### Conclusion

Utilitarian-oriented respondents and organizations tended to have a more favorable perception of public involvement as implemented by the Forest Service in Alabama, even though they felt the views of interest groups are given more weight. They view the process as an open process with the public being a substantive player in the process.

On the other hand, preservationist-oriented respondents and organizations tended to have a moderate to less favorable perception of the public involvement process. They tended to feel that only select members of the public can influence Forest Service decisions. This indicates a more closed view of the process.

Respondents falling in the neutral category had a favorable perception of Forest Service public participation efforts. Respondents in the general public category were mixed in their perceptions of the process with the majority having a favorable perception.

Regional differences were evident with the northern section of the state having a less favorable perception of the public involvement process than did the middle and southern regions. The northern region of the state tended to view the process as closed with limited to no substantive public participation. The middle and southern regions of the state tended to view the process as open with moderate to substantial substantive public input.

Regional results can be associated with regional attitudinal location and regional perceptions. Utilitarians and utilitarian-oriented organizational memberships are higher in the south than they are in the north. There was less divergence between utilitarian desires and utilitarian-oriented organizational desires and their perceptions of Forest Service priorities than was the divergence between preservationists and preservationist-oriented organizations. This suggests greater agreement between utilitarians and the Forest Service than between preservationists and the Forest Service. Differences in perceptions of Forest Service priorities translates into differences in perceptions of the public involvement process. If utilitarians see themselves in greater agreement with the Forest Service than do preservationists, they are more likely to have a more favorable perception of the participation process.

Both the southern and middle regions indicated a strong interest-group bias on the part of the Forest Service as it related to the public involvement process. This suggests that the Forest Service needs to increase efforts to diminish perceptions that interest groups have greater influence in the decision-making process than other stakeholders within these regions. Results also suggest that improvements in the perception of the public involvement process are more critical in the northern and middle regions of the state.

Perceptions based on demographics, other than gender, and to a slight degree age, were largely inconclusive in regard to views on the process. Women tended to be preservationists, and preservationists tended not to have a positive perception of the process.

By and large, findings in this section suggests that the Forest Service has to do a better job to improve its public participation image among women, preservationists, and individuals living in the northern region of the state. Unfortunately, perceptions of public participation efforts are often measured by the implementation of a particular or desired management activity and not on the basis of fairness in the process itself.

The majority of respondents fall somewhere in the middle, which indicates their perceptions are easier to modify than respondents who feel the process is completely closed. Some may never view the process as open until they get tangible results in the forests.

## Chapter Seven

### Summary and Implications

The results of this study reveal several important findings in regards the participants, their attitudinal orientation, their desires, their perceptions on Forest Service management objectives, their method of participation, and suggested methods to improve participation. Preservationist-oriented participants outnumber utilitarians participants nearly 2 to 1, and preservationist-oriented organizations outnumber utilitarian-oriented organizations nearly 3 to 1 in the public participation process in Alabama. Preservationist-oriented respondents were also more likely to have stronger adherence to attitudinal ideologies than were utilitarians.

Demographic correlates regarding attitudinal orientation in this study provided moderate predictive value and in part support past studies that suggests there are associations. White, middle-age, professional males dominate the participation process while females and other minorities have limited involvement. This study supported other findings that women and those with high levels of education tend to be preservationist in their attitudinal orientation. Other respondent characteristics and attitude associations such as age, residence, and race, were inclusive regarding one's attitudinal orientation. This study did not contradict prior studies that suggested that utilitarians more strongly support local needs over national needs.

The general public, along with regional and national, environmental and professional interest groups, is actively involved in the debates regarding use of the National Forests. Environmental interest groups such as the Wildlife Federation, the Sierra Club, and the Wilderness Society, as well as professional interest groups such as, the Society of American Foresters and the Alabama Forestry Association, are at the forefront of the debates, yet their numbers do not dominate respondent populations. One

very revealing point in this study was the attitudinal delineation of the state along geographic lines. The northern section of the state was primarily preservationist; the middle region of the state was slightly preservationist, and the southern region of the state was primarily utilitarian. These geographic delineations parallel the concentration of forestry industry within the state, with the southern region of the state having the highest concentration of forest industry.

Protecting water supply and quality, hiking and wilderness, protecting threatened and endangered species, and wilderness preservation were the top four overall preferred forest management activities. The choice of these preservationist-oriented management activities was due in part to the larger number of preservationist-oriented respondents participating in the survey. As one might expect, utilitarian-oriented individuals and organizations preferred utilitarian-oriented forest management activities, and preservationist-oriented individuals and organizations preferred preservationist-oriented activities. Utilitarian-oriented respondents preferred timber harvesting and sales, protection of water supplies and quality, maximum use of forest resources, and economic growth and development as their top four choices. Whereas the preservationist-oriented respondents preferred protecting water supplies and quality, hiking and wilderness, wilderness preservation, and protecting threatened and endangered species as their top four choices. Protecting water supply and quality was the exception to the rule in both cases in that this may not have been perceived as an attitudinal oriented activity, but rather an activity of necessity, even though it requires preservationists oriented management.

As expected, activities over which there was the greatest disagreement between the utilitarians and preservationists were the primary activities of choice for each respective attitudinal grouping. Hunting, fishing and roadside recreation were the

activities in which there was the greatest agreement, or least disagreement, yet none of them rank high in terms of attitudinal oriented activities of choice.

Organizations expressing the strongest attitudinal orientation were Alabama Forestry Association for the utilitarian orientation and the Sierra Club for the preservationists orientation. Respondents classified within the category of "general public" tended to be preservationist-oriented and selected preservationists-oriented activities as their primary activities of choice.

Preservationist-oriented respondents and organizations perceived Forest Service management as favoring utilitarian-oriented activities over preservationist-oriented activities. Conversely, utilitarian-oriented respondents and organizations perceived Forest Service management as favoring preservationist-oriented activities over utilitarian-oriented activities, but to a lesser degree than did the preservationists. Average congruency levels among respondents holding membership in an environmental or professional organization on specific management objectives were higher than they were for the general public.

Congruency levels for perceived Forest Service management objectives were lower than they were for desired management objectives. This suggest that organizations have greater agreement when it comes to what they want versus what they perceive others to want.

Overall, perceptions of efforts by the Forest Service regarding public participation were rather favorable. On the average, utilitarian-oriented respondents and organizations perceived the public participation as open to moderately open and the preservationist-oriented respondents and organization perceived the process as being closed to moderately open. This suggest that utilitarians have a more favorable view of the

process, yet this did not translate into their seeing themselves in significant agreement with perceived Forest Service management objectives.

Most respondents participated in the public participation process by writing or sending a letter to Forest Service management or by attending a Forest Service sponsored meeting. Responses suggests that the Forest Service gives more weight to interest groups and select individuals. This is often the perception, due to interest-group dominance at public hearings. The Forest Service might improve on this negative perception by making sure views of the general public are aired equally during public meetings. The Forest Service might also improve perceptions and enhance public participation by involving the public earlier in the formulation stage. If fairly complete plans are presented to the public merely for select public approval, creditably is diminished. Allowing the public to feel they have substantive input in the forward process or flow of management decisions increases the likelihood of overall management acceptance.

### Meanings for Forest Policy and Management

The voices being heard primarily through public participation efforts by the Forest Service in Alabama are preservationist-oriented, white, well-educated, males, who live in the northern and middle regions of the state and perceive a utilitarian preference on the part of Forest Service management. They have mixed feelings about the openness of current public participation efforts. The major question that still remains is: are there problems with the public participation process itself, or with subsequent Forest Service implementation as a result of the process? If the problems are with the process itself, the Forest Service has room for modification. If the problems are with the often noncompatable results, then negative perceptions will continue to surround the process.

The Forest Service needs to improve efforts to increase female and minority participation in the process. Until efforts are made to increase participation of these groups in the process, the process as a whole will be viewed as noninclusive and partisan. The lack of minority, female, individuals under forty, and those without a college degree presently involved in public participation efforts in Alabama suggests that the Forest Service needs to intensify its efforts to increase the number of respondents from these categories. Although, white, middle-age, professional males dominate the profession of forestry within the state, this may not be a reflective category of forests stakeholders.

Since preservationists perceived themselves in less agreement with Forest Service management objectives, increased efforts should be implemented to decrease negative perceptions. Protecting water supplies and quality was by far the most preferred management activity. Therefore, reasonable efforts should be made to select management activities that complement this preferred activity as part of the overall management scheme.

Numerous respondents indicated membership within several national environmental and professional organizations. This suggests that public participation efforts in Alabama are connected with various national agendas. In light of this, local or regional concerns and issues may become part of a much larger national agenda.

Coalition building, complementary interest, and opposing groups are easily identified, based on organizational means scores relating to the various selected activities, yet these interest must be considered in light of congruency levels for the various organizations. Average congruency levels ranged from a high of 71.42 percent for the Sierra Club to a low of 54.72 percent for the Society of American Foresters. This suggests that the Forest Service has a better chance of improving the perceptions of

organized interest regarding Forest Service activities than it does in changing their organizational desires. This also allows the Forest Service to predict issues over which they might receive strong support versus moderate support or strong opposition versus moderate opposition from an organization. The study also revealed that those maintaining membership within an organization were in greater agreement than those who did not. These findings support previous studies that find membership within an organization tends to bring about greater agreement over the issues as they relate to organizational purpose as opposed to nonmembership.

Although data in this study highlight the underlying differences in attitudinal orientation between the two primary groups, it also highlights the fact that many individuals do not fit neatly within either group (neutral). These are individuals who remain moderate on most issues and are fairly satisfied with current practices. Understanding the views of participants over an array of issues may help forest managers understand people's attitudes toward particular resource issues.

### Implications for the Forest Service

Empirically derived information can help forest managers understand the public more accurately and can help participation officers design programs for the population in general and for specific groups. Public sentiment, expressed and gathered as citizens participate in decision processes, is a particularly important input because it helps identify the attitudes that people attach to the alternative goods and services that national forests might provide. Sentiment serves as a necessary guide to achieving more acceptable resource decisions. In addition, public participation in decision making is a source of satisfaction, meaning, and identity for the citizens involved. The increasing tendency for

citizens to challenge resource decisions at public meetings, in court cases, and through legislative proposals indicates that some segments of the public feel excluded from policy making.

This study revealed that the attitudinal orientation of individuals and organizations can be identified by public participation officers on national forests, and activities can be planned to solicit their involvement. These target groups can be identified by socio-demographic characteristics, preferred forest management activities, and preferred method of participation.

How can the Forest Service in Alabama deal constructively with the opinions of the public? Most important is the need to face reality. Forests cannot be everything for everybody. In devising programs to provide the desired mix of benefits, resource managers must consider many factors, technical as well as social-political. These include, among other things, resource inventory and capability data on soil, water, timber, forage, and scenery; legal and budgetary constraints; and potential economic impacts, just to name a few. Americans are more compelled to become involved in public forestry as opposed to private forest management. Public support for the preservation of national forests is broad and deep. Millions of people see themselves as activists in the environmental movement. Americans desire environmental quality and say they are willing to pay for it, although there are serious questions about who must pay and how much. Public sentiment must be recognized. Any forestry policy that runs counter to pro-environment opinion risks becoming a public problem, damaging the profession's credibility, and reducing the latitude accorded forestry by the public. Natural resource managers need to demonstrate to the public that forestry is consistent with public sentiment for environmental protection. They also need to get involved in presenting

management strategies that are important for maintaining ecological sustainability.

The public thinks non-commodity uses are beneficial. Wilderness, recreation, wildlife, and hiking are symbols of environmental quality, embracing much that is positive about forestry. Increased efforts should be made to inform the public about forestry's contributions outside the areas of timber production and fire protection. Activities such as watershed management, wetlands protection, and environmental education must be emphasized. Nevertheless, the public should also be made aware of the benefits that are derived from commodity production such as jobs and tax revenues.

One final important finding is that individuals prefer a variety of participatory methods. Individuals suggest that a wider range of participatory methods and more open participation methods should be employed by the Forest Service. It also appears that the public prefers interactive participation methods that involve two-way communication and shared decision-making. In the future, the Forest Service should anticipate the need to offer forums that provide greater opportunities to involve individuals. Both the public and the USDA Forest Service have "a long way to go" in working with each other. Hopefully, the information presented in this study will be part of a long-term educational process for both parties and will contribute to better understanding and improved management decisions. It is ultimately the job of the forester to implement and decide which mix of societal desires are most beneficial. The overriding objective of public involvement must be to arrive at more acceptable resource management decisions. Public input is not an end in itself but a means to better decisions. Understanding public surveys is a good start.

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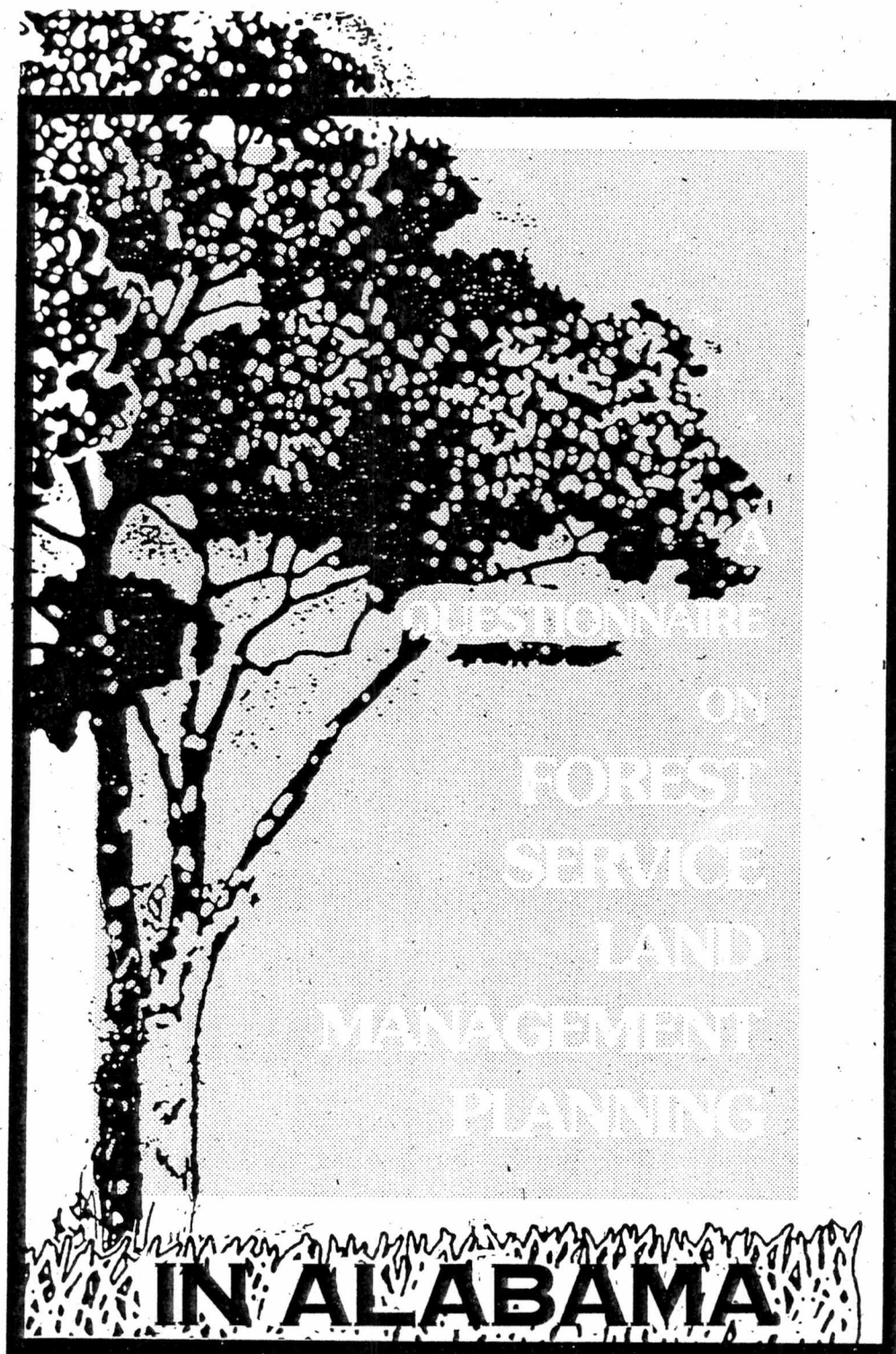
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## APPENDICES

## Appendix A. Questionnaire Cover



## Appendix B. Attitudinal Questions

Listed below are several *views* regarding forestry in the state of Alabama. For each view please circle the appropriate number that corresponds with your views.

1 = STRONGLY AGREE  
3 = MILDLY DISAGREE

2 = MILDLY AGREE  
4 = STRONGLY DISAGREE 5 = NO OPINION

- |                                                                                                                                                                                                  |   |   |   |   |   |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---|---|---|---|
| 1. The primary goal of Forest Service policy in Alabama should be to maximize the productivity, efficiency and profitability of forests. ....                                                    | 1 | 2 | 3 | 4 | 5 |
| 2. National forests are precious national resources that should be protected and preserved for future generations and for ecological security. ....                                              | 1 | 2 | 3 | 4 | 5 |
| 3. Modern forestry is a minor cause of ecological problems and needs only to be fine-tuned periodically in order to be ecologically sound. ....                                                  | 1 | 2 | 3 | 4 | 5 |
| 4. National forests in Alabama should be diversified to include a large variety of trees regardless of profitability. ....                                                                       | 1 | 2 | 3 | 4 | 5 |
| 5. Trees are crops like corn, wheat, and rice, and should be harvested like any other farm product. ....                                                                                         | 1 | 2 | 3 | 4 | 5 |
| 6. Scientists and policy makers should recognize that there are limits to what nature can provide and adjust their expectations accordingly. ....                                                | 1 | 2 | 3 | 4 | 5 |
| 7. The historic abundance and relatively low price of wood in the United States are evidence that American forestry is very successful. ....                                                     | 1 | 2 | 3 | 4 | 5 |
| 8. Forest scientists should develop advanced synthetic fertilizers, herbicides, and pesticides in order to maintain adequate levels of production and costs on national forest lands. ....       | 1 | 2 | 3 | 4 | 5 |
| 9. Land and trees are the sources of all life and should therefore be strictly conserved. ....                                                                                                   | 1 | 2 | 3 | 4 | 5 |
| 10. Forest scientists and policy makers should expand efforts to develop biotechnologies and other innovations in order to increase wood and energy supplies. ....                               | 1 | 2 | 3 | 4 | 5 |
| 11. Scientists and policy makers should understand that the key to forestry's future success lies in the continued development of advanced technologies that will overcome nature's limits. .... | 1 | 2 | 3 | 4 | 5 |
| 12. Modern forestry is a major cause of ecological problems and must be greatly modified to become ecologically sound. ....                                                                      | 1 | 2 | 3 | 4 | 5 |
| 13. More national forest land should be left uncut regardless of timber profitability or productivity. ....                                                                                      | 1 | 2 | 3 | 4 | 5 |
| 14. National forests in Alabama should be managed to grow commercial tree species for maximum productivity and profitability. ....                                                               | 1 | 2 | 3 | 4 | 5 |
| 15. Forest scientists, primarily, should only use natural regeneration, select tree cutting and biological pest controls when managing forest lands. ....                                        | 1 | 2 | 3 | 4 | 5 |
| 16. The primary goal of Forest Service policy in Alabama should be to maintain diverse habitats for plants and animals. ....                                                                     | 1 | 2 | 3 | 4 | 5 |
| 17. The loss of prime forest land, soil erosion, water pollution, etc. are evidence that U.S. forestry is not nearly as successful as many believe it to be. ....                                | 1 | 2 | 3 | 4 | 5 |
| 18. National forests in Alabama should be managed for productivity and profitability and not managed or preserved like national parks. ....                                                      | 1 | 2 | 3 | 4 | 5 |
| 19. National forests in Alabama should be managed first and foremost like a business for profit. ....                                                                                            | 1 | 2 | 3 | 4 | 5 |
| 20. Local needs should outweigh national needs. ....                                                                                                                                             | 1 | 2 | 3 | 4 | 5 |

## Appendix C. Desired Management Objectives

How important are the following national forest  
uses in Alabama to YOU?

1 = VERY IMPORTANT  
3 = NOT IMPORTANT

2 = SOMEWHAT IMPORTANT  
4 = NO OPINION

|                                                  |   |   |   |   |
|--------------------------------------------------|---|---|---|---|
| 1. Hunting                                       | 1 | 2 | 3 | 4 |
| 2. Fishing                                       | 1 | 2 | 3 | 4 |
| 3. Roadside recreation                           | 1 | 2 | 3 | 4 |
| 4. Hiking and wilderness                         | 1 | 2 | 3 | 4 |
| 5. Access to scenic areas                        | 1 | 2 | 3 | 4 |
| 6. Attracting tourists                           | 1 | 2 | 3 | 4 |
| 7. Timber harvesting and sales                   | 1 | 2 | 3 | 4 |
| 8. Economic growth and development               | 1 | 2 | 3 | 4 |
| 9. Protecting water supplies and quality         | 1 | 2 | 3 | 4 |
| 10. Protecting threatened and endangered species | 1 | 2 | 3 | 4 |
| 11. Preventing global climate change             | 1 | 2 | 3 | 4 |
| 12. Wilderness preservation                      | 1 | 2 | 3 | 4 |
| 13. Maximum use of forest resources              | 1 | 2 | 3 | 4 |

Please rank the five most important uses to YOU

1st \_\_\_\_\_ 2nd \_\_\_\_\_ 3rd \_\_\_\_\_ 4th \_\_\_\_\_ 5th \_\_\_\_\_

## Appendix D. Perceived Management Objectives

In your estimation, how important are the following uses to the FOREST SERVICE in Alabama as it decides policies and plans for managing national forest lands?

|                                                                        | 1 = VERY IMPORTANT<br>3 = NOT IMPORTANT | 2 = SOMEWHAT IMPORTANT<br>4 = NO OPINION |   |   |
|------------------------------------------------------------------------|-----------------------------------------|------------------------------------------|---|---|
| 1. Hunting                                                             | 1                                       | 2                                        | 3 | 4 |
| 2. Fishing                                                             | 1                                       | 2                                        | 3 | 4 |
| 3. Roadside recreation                                                 | 1                                       | 2                                        | 3 | 4 |
| 4. Hiking and wilderness                                               | 1                                       | 2                                        | 3 | 4 |
| 5. Access to scenic areas                                              | 1                                       | 2                                        | 3 | 4 |
| 6. Attracting tourists                                                 | 1                                       | 2                                        | 3 | 4 |
| 7. Timber harvesting and sales                                         | 1                                       | 2                                        | 3 | 4 |
| 8. Economic growth and development                                     | 1                                       | 2                                        | 3 | 4 |
| 9. Protecting water supplies and quality                               | 1                                       | 2                                        | 3 | 4 |
| 10. Protecting threatened and endangered species of plants and animals | 1                                       | 2                                        | 3 | 4 |
| 11. Preventing global climate change                                   | 1                                       | 2                                        | 3 | 4 |
| 12. Wilderness preservation                                            | 1                                       | 2                                        | 3 | 4 |
| 13. Maximum use of forest resources                                    | 1                                       | 2                                        | 3 | 4 |

Please rank the five important uses to the Forest Service

1st \_\_\_\_\_ 2nd \_\_\_\_\_ 3rd \_\_\_\_\_ 4th \_\_\_\_\_ 5th \_\_\_\_\_

## Appendix E. Perceptions of Participation Process

Below are several statements about the public involvement process of the Forest Service in Alabama. Please indicate which one of the following statements you agree with the most by circling the appropriate response.

1. The Forest Service in Alabama does a good job of balancing public views and opinions in light of existing laws and regulations.
2. Public views determine forest policy and plans.
3. The public exercises significant influence over Forest Service policy and plans through the involvement process.
4. The involvement process allows the public to communicate effectively with the Forest Service and to exercise some degree of influence.
5. Views of interest groups are given more weight than those of others who participate in the public involvement process.
6. Only select members of the public can influence Forest Service decisions through their involvement.
7. Though it may go through the motions, in my opinion, the Forest Service pays no attention to public views and does what it wants to.

Please add any comments you wish to make on the Forest Service's public involvement process on an additional sheet.

I have participated in public involvement by:

1. Calling or sending a letter to the Forest Service.
2. Attending a Forest Service sponsored meeting.
3. Calling or writing a politician.
4. Signing a petition.
5. Other

The Forest Service in Alabama may enhance participation in public involvement by:

- (1) Hosting forums that allow broad and representative sectors to share their views.
- (2) Hosting open house meetings that allow for exchange of information.
- (3) Mixture of 1 & 2.

## Appendix F. Demographic and Profile Questions

## PERSONAL PROFILE

(Please circle where appropriate)

- (1) Age: 0 - 20    21 - 30    31 - 40    41 - 50    51 - 60    60+
- (2) What is your sex?    Female    Male
- (3) Race:    Black    White    Other
- (4) What is your highest level of education? Circle choice.  
       Grade School                      Some High School  
       High School Diploma            Some College  
       College Degree                    Advanced Degree
- (5) Which of the following best describes where you live?  
       City of 100,00+            50 - 100,000            10 - 50,000  
       5 - 10,000                1 - 5,000                Less than 1,000  
       Rural area                On farm
- (6) Name the county in which you reside:
- (7) Do you own:            Less than 1 acre;            1-10 acres;  
       11-50 acres;            51-100 acres;            100+ acres of land?
- (8) Do you rent:            1-10 acres;            11-50 acres;  
       51-100 acres;            100+ acres of land?
- (9) Are you employed in agriculture?    yes    no  
       Are you employed in forestry?        yes    no
- (9a) If your answer is yes, what is your occupation?
- (10) Is any member of your immediate family employed in agriculture?    yes    no
- (10a) If your answer is yes, what is their relationship to you and what is their occupation?
- (11) Are you a member of any forestry-related professional or trade organization?    yes    no  
       If yes, please name the organization(s).
- (12) Are you a member of any environmental or conservation group such as the National Wildlife Federation, Wilderness Society, Audubon Society, Sierra Club, Trout Unlimited, The Nature Conservancy, etc.?    yes    no  
       If your answer is yes, what organization(s)?
- (13) Do you hunt at least twice a year?    yes    no
- (14) Do you fish at least twice a year?    yes    no
- (15) Do you participate in any governmental land management cost-sharing program?    yes    no  
       If yes, please name the program.
- (16) Do you live adjacent to or near any of the National Forest in Alabama?

## VITA

Michael S. Heard was born in Chattanooga, Tennessee April 6, 1956. He attended public schools in the public school system of Chattanooga, Tennessee, where he graduated from Riverside High School in 1973. He entered Tuskegee Institute in August of 1973 where he enrolled in the pre-forestry program. He completed the program in May of 1975 and subsequently entered the forestry program at the University of Tennessee, Knoxville. He received the Bachelor of Science in Forestry in June of 1978. After working as a professional forester for five years and park ranger for two years, he entered the Master's program in Forestry at the University of Tennessee, Knoxville, where he received his Master's degree in May of 1987. In August of 1987 he entered the University of Tennessee College of Law, where he received his Doctor of Jurisprudence in August of 1990. After graduating from law school, he was employed by the University of Tennessee, Knoxville, Department of Forestry, Wildlife, and Fisheries as a program coordinator. During his employment with the University of Tennessee he entered the doctoral program in political science. The doctoral degree was received in December 1998.

He is presently employed as an assistant professor at Alabama A&M University in Huntsville, Alabama.